



CITY OF MERCED

Meeting Agenda

City Council Chamber
Merced Civic Center
2nd Floor
678 W. 18th Street
Merced, CA 95340

City Council/Public Finance and Economic Development Authority/Parking Authority

Monday, October 7, 2019

6:00 PM

Council Chambers, 2nd Floor, Merced Civic
Center, 678 W. 18th Street, Merced, CA 95340

Closed Session at 5:30 PM / Regular Meeting at 6:00 PM

NOTICE TO PUBLIC

WELCOME TO THE MEETING OF THE MERCED CITY COUNCIL

At least 72 hours prior to each regular City Council meeting, a complete agenda packet is available for review on the City's website at www.cityofmerced.org or at the City Clerk's Office, 678 W. 18th Street, Merced, CA 95340. All public records relating to an open session item that are distributed to a majority of the Council will be available for public inspection at the City Clerk's Office during regular business hours. Spanish and Hmong interpreters are available at every regular meeting.

PUBLIC COMMENT: OBTAIN SPEAKER CARD FROM THE CITY CLERK

Members of the audience who wish to address the City Council are requested to complete a speaker card available at the podium against the right-hand side of the Council Chamber. Please submit the completed card to the City Clerk before the item is called, preferably before the meeting begins.

INDIVIDUALS WITH DISABILITIES

Accommodation for individuals with disabilities may be arranged by contacting the City Clerk at (209) 388-8650. Assisted hearing devices are available for meetings held in the Council Chamber.

A. CLOSED SESSION ROLL CALL

B. CLOSED SESSION

The legislative body shall provide the public with an opportunity to address the body on any item described in Closed Session [Government Code Section 54954.3(a)].

- B.1.** [19-583](#) **SUBJECT: CONFERENCE WITH LEGAL COUNSEL - INITIATION OF LITIGATION** Initiation of Litigation pursuant to Government Code section 54956.9(d)(4): (1) case

C. CALL TO ORDER

C.1. Invocation - Bruce Metcalf, Merced Rescue Mission

C.2. Pledge of Allegiance to the Flag

D. ROLL CALL

D.1. In accordance with Government Code 54952.3, it is hereby announced that the City Council sits either simultaneously or serially as the Parking Authority and the Public Financing and Economic Development Authority. City Council members receive a monthly stipend of \$20.00 by Charter for sitting as the City Council; and the Mayor receives an additional \$50.00 each month as a part of the adopted budget and Resolution 1975-37. The members of the Parking Authority and the Public Financing and Economic Development Authority receive no compensation.

E. REPORT OUT OF CLOSED SESSION

F. CEREMONIAL MATTERS

F.1. [19-556](#) **SUBJECT:** Proclamation - Domestic Violence Awareness Month

REPORT IN BRIEF

Received by a representative of the Valley Crisis Center.

F.2. [19-595](#) **SUBJECT:** Proclamation - Hispanic Heritage Month

REPORT IN BRIEF

Received by Rene Gutierrez, President of the Hispanic Chamber of Commerce.

G. WRITTEN PETITIONS AND COMMUNICATIONS

H. ORAL COMMUNICATIONS

Members of the public who wish to speak on any matter not listed on the agenda may speak during this portion of the meeting and will be allotted 5 minutes. The Mayor may, at his discretion, reduce the time to 3 minutes if there are more than 3 speakers, in order to accommodate as many speakers as possible. State law prohibits the City Council from acting at this meeting on any matter raised during the public comment period. Members of the public who wish to speak on a matter that is listed on the agenda will be called upon to speak during discussion of that item.

I. CONSENT CALENDAR

Adoption of the Consent Calendar may be made by one motion of the City Council, provided that any Council member, individual, or organization may request removal of an item from the Consent Calendar for separate consideration. If a request for removal of an item from the Consent Calendar has been received, the item will be discussed and voted on separately.

I.1. [19-489](#) **SUBJECT: Reading by Title of All Ordinances and Resolutions**

REPORT IN BRIEF

Ordinances and Resolutions which appear on the public agenda shall be determined to have been read by title and a summary title may be read with further reading waived.

RECOMMENDATION

City Council - Adopt a motion waiving the reading of Ordinances and Resolutions, pursuant to Section 412 of the Merced City Charter.

I.2. [19-562](#) **SUBJECT: Information-Only Contracts for the Month of September 2019**

REPORT IN BRIEF

Notification of awarded Non-Public Works contracts under \$32,000 and of Public Works contracts under \$70,939.

I.3. [19-578](#) **SUBJECT: Approval of City Council/Public Financing and Economic Development/Parking Authority Meeting Minutes of September 3, 2019**

REPORT IN BRIEF

Official adoption of previously held meeting minutes.

RECOMMENDATION

City Council/Public Financing and Economic Development/Parking Authority - Adopt a motion approving the meeting minutes of September 3, 2019.

I.4. [19-540](#) **SUBJECT: Authorization to Set a Public Hearing for November 4, 2019 for Introduction of Ordinances, Adopting the 2019 California Building and Fire Codes with Amendments, if Any**

REPORT IN BRIEF

Set a Public Hearing for November 4, 2019 for the purpose of introducing and adopting the 2019 California Building and Fire Codes with Amendments, if any.

RECOMMENDATION

City Council - Adopt a motion setting a Public Hearing on November 4, 2019, to consider introducing and adopting the 2019 California Building and Fire Codes and Amendments thereto.

I.5. [19-481](#)

SUBJECT: Award of Bid and Approval of Construction Contract with Phase 1 Construction for the Cooper Avenue Sanitary Sewer Lift Station Construction, Project No. 114004, in the Amount of \$755,825 and Approval of a Professional Services Agreement with Provost and Pritchard Engineering Group, Inc., for Engineering Design Services in the Amount of \$23,694

REPORT IN BRIEF

Considers awarding a contract in the amount of \$755,825 to Phase 1 Construction to perform the Cooper Avenue sanitary sewer lift station construction and approving the professional services agreement with Provost and Pritchard Engineering Group, Inc. for engineering design services in the amount of \$23,694.

RECOMMENDATION

City Council - Adopt a motion:

A. Awarding the bid for the Cooper Avenue Sanitary Sewer Lift Station Construction, Project No. 114004, to Phase 1 Construction in the amount of \$755,825; and,

B. Approving an amendment to an agreement for professional services with Provost and Pritchard Engineering Group, Inc., in the amount of \$23,694 for engineering design services; and,

C. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents and to approve change orders not to exceed 10% of the total construction contract.

I.6. [19-392](#)

SUBJECT: Approval of Professional Services Agreement with Gaetke Medical Corporation and 1582, LLC to Provide Comprehensive Occupational Medical Physicals in an Amount Not to Exceed \$60,000 and Waiving the Competitive Bidding Requirement

REPORT IN BRIEF

Considers entering into a three year agreement with Gaetke Medical Corporation and 1582, LLC for the purpose of providing comprehensive occupational medical physicals of fire suppression personnel and waiving

the competitive bidding requirements.

RECOMMENDATION

City Council - Adopt a motion:

A. Approving a professional services agreement with Gaetke Medical Corporation and 1582, LLC in an amount not to exceed \$60,000, for the purpose of providing comprehensive occupational medical physicals of fire suppression personnel for a three year term, with a one year renewal option; and,

B. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents; and,

C. Waiving the competitive bidding requirements.

I.7. [19-589](#)

SUBJECT: Acceptance and Appropriation of Settlement Funding in the Amount of \$3,092.84 from the LexisNexis Coplogic Solutions to Assist with Communication Needs of the Police Department

REPORT IN BRIEF

Considers accepting and appropriating settlement funding in the amount of \$3,092.84 from LexisNexis Coplogic Solutions to assist with communication needs of the Police Department.

RECOMMENDATION

City Council - Adopt a motion accepting settlement funds from the LexisNexis Coplogic Solutions and increasing revenue in account 001-1006-360.01-01 in the amount of \$3,093 and appropriating the same to account 001-1006-522.12-00.

I.8. [19-585](#)

SUBJECT: Authorization to Modify the Personnel/Budget Allocation in the City Attorney's Department to Reflect a City Attorney, a Deputy City Attorney, a Deputy/Senior Deputy City Attorney, an Office Administrator/Paralegal and a Legal Administrative Assistant

REPORT IN BRIEF

Modification to the Personnel/Budget Allocation in the City Attorney's Department.

RECOMMENDATION

City Council - Adopt a motion adopting **Resolution 2019-64, A** Resolution of the City Council of the City of Merced, California, Amending

the Personnel/Budget Allocation in the City Attorney Department to Reflect a City Attorney, a Deputy City Attorney, a Deputy/Senior Deputy City Attorney, a Legal Administrative Assistant and a Paralegal Office Administrator to be filled by the incumbent Paralegal effective June 21, 2019.

I.9. [19-591](#)

SUBJECT: Approval of the First Amendment to the Agreement with the Lew Edwards Group in the Additional Amount of \$53,000 and the Total not to Exceed Contracted Amount of \$82,000 to Develop a Public Education Strategy Related to the Possible Extension of Measure C

REPORT IN BRIEF

Considers the approval of the First Amendment to the Agreement with the Lew Edwards Group for an additional amount of \$53,000 and the Total Contracted Amount not to exceed \$82,000 to develop a public education strategy related to the possible extension of Measure C.

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving the First Amendment to the Agreement with the Lew Edwards Group for an amount not to exceed \$82,000 related to the extension of Measure C; and,
- B. Approving a Supplemental Appropriation in the amount of \$53,000 of the unappropriated fund balance in Fund 061-Measure C to provide funding for the amended agreement;
- D. Provide staff direction on areas within the Public Education Strategy Related to the Possible Extension of Measure C; and,
- C. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

I.10. [19-555](#)

SUBJECT: Approval of First Amendment to Elevator Maintenance Agreement with ThyssenKrupp Elevator Corporation in the Amount of \$1,015 Monthly for the Term Ending June 30, 2020 for Maintenance of Seven Elevators Located at the Civic Center, Ralph Shannon Parade, Merced Center Parking Garage, and Police Station

REPORT IN BRIEF

Considers approving a First Amendment with ThyssenKrupp Elevator Corporation in the amount of \$1,015 monthly and extending the agreement

term through June 30, 2020, for maintenance of seven elevators located at the Civic Center, Ralph Shannon Arcade, Merced Center Parking Garage, and Police Station.

RECOMMENDATION

City Council - Adopt a motion approving the first amendment to elevator maintenance agreement with ThyssenKrupp Elevator Corporation in the amount of \$1,015 monthly, and authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

I.11. [19-539](#)

SUBJECT: Acceptance and Appropriation of Grant Funding in the Amount of \$1,000 for FY 2020 Merced County First Five Community Engagement Event Sponsorship Program for Tiny Tots 4th Annual Halloween Pumpkin Party

REPORT IN BRIEF

Considers accepting and appropriating grant funding in the amount of \$1,000 from Merced County First Five for the 4th Annual Tiny Tots Halloween Pumpkin Party.

RECOMMENDATION

City Council - Adopt a motion:

A. Accepting grant funds from Merced County First Five and increasing revenue in account 024-1226-360-02-01 - Creative Skills-Contributions and Donations in the amount of \$1,000; and,

B. Appropriating the same to account 024-1226-542-29-00 - Creative Skills-Supplies and Services; and,

C. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

I.12. [19-550](#)

SUBJECT: Authorization to Accept Volunteer Labor and 21 Donated Trees Valued at Approximately \$2,300 from Clean Earth a Harsco Company at the Applegate Park and Zoo on October 19, 2019 for Clean Earth Day Tree Planting Event

REPORT IN BRIEF

Considers approving acceptance of labor and materials valued at approximately \$2,300 for new trees at Applegate Park and Zoo from Clean Earth a Harsco Company for their Clean Earth Day tree planting

event on October 19, 2019.

RECOMMENDATION

City Council - Adopt a motion accepting a donation from Clean Earth a Harsco Company for volunteer labor and 21 trees valued at approximately \$2,300 at Applegate Park and Zoo on October 19, 2019 for Clean Earth Day tree planting event.

I.13. [19-551](#)

SUBJECT: Approval of Recreation and Parks Commission's Recommendation to Accept a Donation of a Tile Mosaic Artwork Installation at the Applegate Park Merced Open Air Theater (MOAT) by Monica Modest

REPORT IN BRIEF

Considers approving the Recreation and Parks Commission's recommendation to accept a donation of a tile mosaic artwork installation at the Applegate Park Merced Open Air Theater (MOAT) from Monica Modest.

RECOMMENDATION

City Council - Adopt a motion approving the Recreation and Park Commission's recommendation to accept a donation of a tile mosaic artwork installation from Monica Modest, to be placed at the Applegate Park Merced Open Air Theater (MOAT); and, authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

I.14. [19-568](#)

SUBJECT: Approval of Recreation and Parks Commission's Recommendation to Grant a Request by the Deaf and Hard of Hearing Service Center for the Co-Sponsored Rental Rate for the Merced Senior Community Center on December 14, 2019 for its Annual Holiday Celebration

REPORT IN BRIEF

Considers approving the Recreation and Parks Commission's recommendation to approve a request for the co-sponsored rate for the rental of the Merced Senior Community Center by the Deaf and Hard of Hearing Service Center to hold its annual Holiday Celebration on December 14, 2019.

RECOMMENDATION

City Council - Adopt a motion approving the Recreation and Park Commission's recommendation to rent the Merced Senior Community

Center to the Deaf and Hard of Hearing Service Center (DHHSC) on December 14, 2019, at the co-sponsored rental rate.

I.15. [19-577](#)

SUBJECT: Second Reading and Final Adoption of Ordinance Amending Section 9.08.020 Regarding Cardrooms and Amending CUP #1216, Merced Poker Room, and CUP #1219, Poker Flats Casino (AKA Golden Valley Casino) to Reflect the Number of Card Tables Allowed Pursuant to State Regulations

REPORT IN BRIEF

Second reading and final adoption of an Ordinance amending the number of card tables allowed within the City of Merced from sixteen (16) to twelve (12) in compliance with state regulations.

RECOMMENDATION

City Council - Adopt a motion adopting **Ordinance 2503**, an Ordinance of the City Council of the City of Merced, California, amending Section 9.08.020 "Cardrooms," of the Merced Municipal Code.

J. PUBLIC HEARINGS

Members of the public who wish to speak on public hearings listed on the agenda will be heard when the Public Hearing is opened, except on Public Hearing items previously heard and closed to public comment. After the public has commented, the item is closed to further public comment and brought to the Council for discussion and action. Further comment will not be received unless requested by the Council.

J.1. [19-384](#)

SUBJECT: Public Hearing and Adoption of Resolution Granting a Certificate of Public Convenience and Necessity for McHenry Protective Services

REPORT IN BRIEF

Considers approving a Resolution granting and issuing a certificate of public convenience and necessity to McHenry Protective Services.

RECOMMENDATION

City Council - Adopt a motion approving **Resolution 2019-49**, a Resolution of the City Council of the City of Merced, California, granting a certificate of public convenience and necessity to McHenry Protective and Investigative Services.

J.2. [19-438](#)

SUBJECT: Public Hearing and Adoption of Resolution Granting a Certificate of Public Convenience and Necessity for Stonewall Private

Security Services

REPORT IN BRIEF

Considers approving a Resolution to grant and issue a certificate of public convenience and necessity to Stonewall Private Security Services.

RECOMMENDATION

City Council - Adopt a motion approving **Resolution 2019-50**, a Resolution of the City Council of the City of Merced, California, granting a certificate of public convenience and necessity to Stonewall Private Security Services.

J.3. [19-508](#)

SUBJECT: Public Hearing and Adoption of Resolution Granting a Certificate of Public Convenience and Necessity for First Alarm Security & Patrol, Inc.

REPORT IN BRIEF

Considers approving a resolution to grant and issue a certificate of public convenience and necessity to First Alarm Security & Patrol, Inc.

RECOMMENDATION

City Council - Adopt a motion approving **Resolution 2019-59**, a Resolution of the City Council of the City of Merced, California, granting a certificate of public convenience and necessity to First Alarm Security & Patrol, Inc.

J.4. [19-541](#)

SUBJECT: Public Hearing for Approving a Mitigated Negative Declaration for Environmental Review #19-18 and Potential Introduction of an Ordinance, Approving Zone Change #426 and Adoption of a Resolution Approving General Plan Amendment #19-02 Changing the Zoning and General Plan Designations for Approximately 0.52 Acres of Land Generally Located on the East Side of McKee Road Approximately 360 Feet South of Yosemite Avenue and the Appeal of the Planning Commission's Denial of Conditional Use Permit #1231 to Allow a Mixed-Use Project to be Constructed at the Southeast Corner of Yosemite Avenue and McKee Road

REPORT IN BRIEF

Considers approving a Mitigated Negative Declaration for Environmental Review #19-18, and introducing an Ordinance, General Plan Amendment #19-03, Zone Change #426, and an appeal of the Planning Commission's denial of Conditional Use Permit #1231 for a mixed-use project.

RECOMMENDATION

General Plan Amendment #19-02 and Zone Change #426

City Council - Adopt a motion:

A. Adopting **Resolution 2019-63**, a Resolution of the City Council of the City of Merced, California, approving a Mitigated Negative Declaration for General Plan Amendment #19-02 and Zone Change #426, approving General Plan Amendment #19-02 to change the General Plan Designation from Low Density Residential (LD) to Neighborhood Commercial (CN) for approximately 0.52 acres of land generally located on the east side of McKee Road approximately 360 feet south of Yosemite Avenue, and approving a Legislative Action Agreement for the same; and,

B. Introducing **Ordinance 2504**, an Ordinance of the City Council of the City of Merced, California, amending the Official Zoning Map by rezoning approximately 0.52 acres of land generally located on the east side of McKee Road, approximately 360 feet south of Yosemite Avenue from R-1-6 to Neighborhood Commercial (C-N); and,

C. Authorizing the City Manager or the Assistant City Manager to execute the Legislative Action Agreement.

Conditional Use Permit #1231

A. Open the public hearing and hear all testimony regarding the appeal; and,

B. Close the public hearing; and,

C. Provide direction to staff regarding Findings to grant or deny the appeal.

J.5. [19-548](#)

SUBJECT: Public Hearing and Adoption of Resolution to Abandon a Sewer Easement and Working Easement at 3600 G Street, Generally Located on the Northeast Corner of G Street and Yosemite Avenue (Vacation #19-04)

REPORT IN BRIEF

Considers the abandonment of an old sewer easement and working easement at 3600 G Street.

RECOMMENDATION

City Council - Adopt a motion adopting **Resolution 2019-61**, a

Resolution of the City Council of the City of Merced, California, ordering the vacation of a sewer easement and working easement at the northeast corner of G Street and Yosemite Avenue (Vacation #19-04).

J.6. [19-561](#)

SUBJECT: Public Hearing and Potential Introduction of Ordinance to Revise Park Hours and Amending Section 14.04.070 - Hours - Permits to Reflect Approved New Park Hours

REPORT IN BRIEF

Public Hearing regarding revision of park hours and update of Code of Ordinances Title 14, Chapter 14.04, Amending Section 14.04.070 - Hours - Permits.

RECOMMENDATION

City Council - Adopt a motion introducing **Ordinance 2505**, an Ordinance of the City Council of the City of Merced, California, amending Section 14.04.070, "Hours - Permit," of the Merced Municipal Code regarding City parks.

K. REPORTS

K.1. [19-546](#)

SUBJECT: Adoption of Resolutions for Calling a Special Election for March 3, 2020 for the Purpose of Placing a Ballot Measure Before the Voters to Amend Various Sections of the City of Merced Charter and Requesting the Merced County Board of Supervisors Consolidate Said Election with the Statewide Primary Election Being Held on the Same Date

REPORT IN BRIEF

Consideration of Resolutions Calling a March 3, 2020 Special Municipal Election for the purpose of placing a measure on the ballot regarding amending various sections of the City of Merced Charter and requesting the County Board of Supervisors consolidate the City's election with the Statewide Primary Election being held on the same date.

RECOMMENDATION

City Council - Adopt a motion:

A. Adopting **Resolution 2019-67**, a Resolution of the City Council of the City of Merced, California, calling a Special Municipal Election to be held on March 3, 2020, for the Purpose of Submitting a Ballot Measure to Amend Various Sections of the City of Merced Charter to the Electorate; and,

B. Adopting **Resolution 2019-68**, a Resolution of the City Council of the City of Merced, California, requesting that the Board of Supervisors of the County of Merced, California provide for the consolidation of a Special Municipal Election and a Ballot Measure with the Statewide Primary Election to be held on March 3, 2020; and,

C. Approving the form and ballot question of the City Council sponsored Measure; and,

D. Directing the City Manager/City Clerk and the City Attorney's Office to execute documents appropriate to carry out the tasks necessary for the Special Municipal Election and to take actions related thereto; **or**,

E. Directing staff to make adjustments to the form or number of ballot questions being proposed, suggesting any language changes to the items going before the electorate and directing staff to return to the October 21, 2019 meeting for final adoption of the amended resolutions.

L. BUSINESS

L.1. [19-600](#)

SUBJECT: Mayor Murphy's Request to Discuss Naming a Park After a Member of the Hmong Community

REPORT IN BRIEF

Mayor Murphy's request to discuss naming a park after a member of the Hmong Community pursuant to City Council Administrative Policies and Procedures C-1.

RECOMMENDATION

It is requested Council give staff direction on this item.

L.2. [19-601](#)

SUBJECT: Mayor Murphy's Request to Discuss Hosting a Stage of the Amgen Tour of California Bike Race

REPORT IN BRIEF

Mayor Murphy's request to discuss hosting the Amgen Bike Tour pursuant to City Council Administrative Policies and Procedures C-1.

RECOMMENDATION

It is requested Council give staff direction on this item.

L.3. [19-586](#)

SUBJECT: Discussion on, and Potential Appointments to, the City of Merced Planning Commission (3 Vacancies)

REPORT IN BRIEF

Considers options for appointing individuals to the City of Merced Planning Commission.

RECOMMENDATION

City Council - Adopt a motion:

A. Directing staff to schedule a Special Meeting to conduct interviews of Planning Commission applicants; **or**,

B. Appointing a City Council subcommittee to complete interviews of the applicants and make recommendations to the full Council at the next Regular Meeting; **or**,

C. Appointing one, two or three of the qualified applicants to the open seats either by Council District or At-Large at Council discretion; **or**,

D. Continuing this item to a future meeting (specify date in motion).

L.4. [19-545](#)

SUBJECT: City Council Position on League of California Cities Resolutions

REPORT IN BRIEF

Provides direction to the City's official League of California Cities voting delegate on two proposed League Resolutions.

RECOMMENDATION

City Council - Adopt a motion stating the City's position on each of the two proposed League Resolutions and directing the City's official League voting delegate to cast votes as such at the League's Annual Business Meeting on Friday, October 18, 2019, at the Long Beach Convention Center.

L.5. [19-543](#)

SUBJECT: Request to Add Item to Future Agenda

REPORT IN BRIEF

Provides members of the City Council to request that an item be placed on a future City Council agenda for initial consideration by the City Council.

L.6. [19-544](#)

SUBJECT: City Council Comments

REPORT IN BRIEF

Provides an opportunity for the Mayor and/or Council Member(s) to make a brief announcement on any activity(ies) she/he has attended on behalf of the City and to make a brief announcement on future community events and/or activities. The Brown Act does not allow discussion or action by the legislative body under this section.

M. ADJOURNMENT



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item B.1.

Meeting Date: 10/7/2019

SUBJECT: CONFERENCE WITH LEGAL COUNSEL - INITIATION OF LITIGATION Initiation of Litigation pursuant to Government Code section 54956.9(d)(4): (1) case



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item F.1.

Meeting Date: 10/7/2019

SUBJECT: Proclamation - Domestic Violence Awareness Month

REPORT IN BRIEF

Received by a representative of the Valley Crisis Center.

ATTACHMENTS

1. Domestic Violence Awareness Proclamation



Proclamation

- WHEREAS, 1 in 3 women and 1 in 7 men have experienced some form of physical violence by an intimate partner in their lifetime and,
- WHEREAS, women are not the only targets; men, young children and the elderly also are counted among the victims, and, sadly, emotional scars are often permanent; and
- WHEREAS, 1 in 15 children are exposed to intimate partner violence each year, and 90% of these children are eyewitnesses to this violence, and,
- WHEREAS, domestic violence violates an individual's privacy, dignity, security and humanity, the impact of domestic violence is wide ranging, dramatically affecting the lives of individuals, families, our community, and our nation, and,
- WHEREAS, Merced County, is not isolated from the reality of domestic violence, our young people are reporting dating abuse at rates similar to youth nationwide, dating abuse and domestic violence occurs in a pattern that can be passed down through generations, and,
- WHEREAS, Intimate Partner Violence is estimated to cost the U.S. economy between \$5.8 billion and \$12.6 billion annually, up to 0.125% of the national gross domestic product, and,
- WHEREAS, in the United States an average of 20 people per minute experience intimate partner physical violence every minute, this equates to 10 billion abuse victims annually, and,
- WHEREAS, Valley Crisis Center works to prevent domestic violence through program aimed at creating protective environments and promoting healthy peer-to-peer relationships, and, has chosen to place the focus on prevention programs during the National Domestic Violence Awareness Month.

NOW, THEREFORE, I, MIKE MURPHY, Mayor of the City of Merced hereby recognize the month of October 2019 as "Domestic Violence Awareness Month" and urge all citizens to actively participate in the scheduled activities and programs, which work toward improving victim safety and hold perpetrators of domestic violence accountable for their actions against individuals and our society as a whole.

Signed this 7th day of October 2019.

Mike Murphy, Mayor of Merced



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item F.2.

Meeting Date: 10/7/2019

SUBJECT: Proclamation - Hispanic Heritage Month

REPORT IN BRIEF

Received by Rene Gutierrez, President of the Hispanic Chamber of Commerce.

ATTACHMENTS

1. Hispanic Heritage Month Proclamation



Proclamation

WHEREAS, Hispanic Heritage Month is a national celebration held annually from September 15th to October 15th where we recognize and celebrate the history, culture, and contributions made by Hispanic and Latino Americans. This tradition began in 1968 as Hispanic Heritage Week under President Lyndon Johnson and later was expanded to be a month-long celebration by President Ronald Regan in 1988; and,

WHEREAS, The commencement date of September 15th is important because it marks the anniversary of Independence for Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua followed by the Independence of Mexico on September 16th and the Independence of Chile on September 18th; and,

WHEREAS, The Central Valley is rich with Hispanic and Latino cultures. The City of Merced is made up of 49.6% Hispanics. UC Merced is designated as a Hispanic-Serving Institution, their student body is made up of 54.7% Hispanics; and,

WHEREAS, The Merced County Hispanic Chamber will host an Inaugural Celebrando Nuestra Cultura celebration showcasing Hispanic artisan crafts, food and music. The goal of this event is to connect students and residents with the Hispanic culture and traditions. This event is organized by the Merced County Hispanic Chamber of Commerce, Building Healthy Communities, United Way and MercadoLatinX209.

NOW, THEREFORE, I, MIKE MURPHY, Mayor of the City of Merced, on behalf of the City Council, do hereby proclaim September 15th – October 15th 2019 to be Hispanic Heritage Month.

Signed this 7th day of October, 2019.

Mike Murphy, Mayor of Merced



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item I.1.

Meeting Date: 10/7/2019

SUBJECT: Reading by Title of All Ordinances and Resolutions

REPORT IN BRIEF

Ordinances and Resolutions which appear on the public agenda shall be determined to have been read by title and a summary title may be read with further reading waived.

RECOMMENDATION

City Council - Adopt a motion waiving the reading of Ordinances and Resolutions, pursuant to Section 412 of the Merced City Charter.



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item I.2.

Meeting Date: 10/7/2019

Report Prepared by: Kirkland Greene, Records Clerk II

SUBJECT: Information-Only Contracts for the Month of September 2019

REPORT IN BRIEF

Notification of awarded Non-Public Works contracts under \$32,000 and of Public Works contracts under \$70,939.

AUTHORITY

Pursuant to the authority delegated to the City Manager on behalf of the City by Article XI, Section 1109, of the Merced City Charter to execute Public Works contracts under the adjusted FY 2019-2020 threshold of \$70,939.00, and Chapter 3.04.080 - 3.04.110 of the Merced Municipal Code to execute Non-Public Works contracts under the adjusted FY 2019-2020 threshold of \$32,000.00, the contracts listed on the attached table were entered into by the City.

ATTACHMENTS

1. "Information-Only" Contracts Table for September 2019

Exhibit 1 – Table of Contracts

10/7/2019 City Council Meeting

Page 1 of 2

Department/Division	Vendor	Purpose/Location	Amount
0403 – Information Technology	Granicus, LLC	First Amendment to the Subscription Agreement for govAccess Website Design, Implementation, and Migration to Include the City's Intranet Website (<i>at no cost</i>).	(No funds.)
0403 – Information Technology	CDW Direct, LLC / Cradlepoint, Inc.	Customer Service Agreement (Order Form) for Three-Year Subscription Renewal of Cradlepoint Cloud Services to Provide Remote Connectivity Support.	\$ 200.00
1201 – Recreation and Parks	Maria Ochoa	Leisure Class Agreement for Independent Contractor Services to Conduct Folklórico Dance Classes, from July 1, 2019 through June 30, 2020.	\$ 1,000.00
1201 – Recreation and Parks	Boys and Girls Club of Merced, Inc.	Agreement for Professional Services to Provide Youth Enrichment Services in Connection With "Spring Break Camp" (event held April 22-25, 2019).	\$ 2,500.00
1201 – Recreation and Parks	Merced Youth Connect, Inc.	Agreement for Professional Services to Promote a Healthy Community Connection Through the Merced Youth Connect App in Order to Increase Awareness and Community Engagement.	\$ 2,500.00
1201 – Recreation and Parks	Naomi Sukenik (DBA: Play Adventures)	Agreement for Professional Services to Provide Youth Enrichment Services in Connection With Two Camps to Be Held During Fiscal Year 2019-2020.	\$ 2,500.00
1201 – Recreation and Parks	Merced County Arts Council, Inc.	Agreement for Professional Services in Connection With a Youth Enrichment Project (Summer Youth Arts Camp: July 8 - 26, 2019).	\$ 5,000.00
1108 – WWTP	Machado Backhoe, Inc.	Clean and deepen approx. 4,000 LF in tail water ditch; clean and reshape tail water basin; replace 18" culvert pipe. Statement of Services (PO #135925).	\$11,411.49
1205 – Zoo	Jon Klingborg, DVM (DBA: Valley Animal Hospital)	Agreement for Veterinary Services at Applegate Zoo for Fiscal Year 2019-2020.	\$12,000.00

Copies of all of the contracts listed above are available in the City Clerk's Office.

Exhibit 1 – Table of Contracts (Continued)10/7/2019 City Council Meeting

Page 2 of 2

1108 – WWTP	Bulldog Painting, Inc.	Painting of daft tank equipment, plant pump water station, and tertiary pump station at the Wastewater Treatment Plant (WWTP). Statement of Services (PO #136072).	\$12,760.00
1107 – PW - Sewer Systems	Madera Carports, Inc.	25' x 26' structure, with sides and ends enclosed; 10' x 10' roll-up front end, engineering plans and forklift shipping included. (Statement of Services, PO #136011.)	\$12,931.47
0701 – Finance	Seevers Jordan Ziegenmeyer, GP (DBA: Integra Realty Resources)	Agreement for Professional Services to Provide Appraisal Services in Connection With a Project to Refinance Community Facilities District (CFD) No. 2006-1 (Moraga of Merced) Bonds.	\$15,000.00
1122 – PW - Trees	CA Dept. of Forestry & Fire Protection (CAL FIRE)	Memorandum of Understanding (MOU) for the Conservation Camp Program Project to Provide for Vegetation Removal in and Along the City of Merced's Waterways, Parks, Roads, Walking Paths, and Bike Paths.	\$15,500.00
1104 – PW - Streets	Cen-Pac Engineering, Inc.	Removal and replacement of 11 existing in-road lights in crosswalk at 23 rd St. & “G” St.; remove and install one whole assembly adjacent to manhole. Replace damaged section(s) of wiring. Statement of Services (PO #135891).	\$26,103.00
1001 – Police	Critical Incident Videos, LLC	Agreement for Professional Services to Provide Video Consultant and Production Services for FY 2019-2020.	\$30,000.00
0702 – Purchasing	Maida Miranda (DBA: Minuteman Press, Merced)	Agreement for Supplies and Services to Provide for the Supply and Delivery of Stationary Printed Supplies at the Request of the City (three-year term).	\$30,000.00
1108 – WWTP	Kroeker, Inc.	Crush approx. 2,000 tons of debris; clean up trash and rebar, separating into onsite dumpsters at the Wastewater Treatment Plant. Statement of Services (PO #136071).	\$32,000.00
0803 – Inspection Services	Commercial Construction Company of Merced, Inc.	Demolition of flooring and wall for access to install bracing at 636 West Main Street; excavate form and pour concrete footings. (Statement of Services, PO #135890.)	\$34,475.00
1102 – PW - Administration	Taylor Backhoe Service, Inc.	Remove curb, gutter, and traffic signs; adjust utility box to grade; install 6" curb and gutter, 4" sidewalk, and ADA handicap ramp. (South side Grogan Ave. near West Ave.) Statement of Services (PO #136034).	\$43,295.05

Copies of all of the contracts listed above are available in the City Clerk's Office.



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item I.3.

Meeting Date: 10/7/2019

SUBJECT: Approval of City Council/Public Financing and Economic Development/Parking Authority Meeting Minutes of September 3, 2019

REPORT IN BRIEF

Official adoption of previously held meeting minutes.

RECOMMENDATION

City Council/Public Financing and Economic Development/Parking Authority - Adopt a motion approving the meeting minutes of September 3, 2019.

ALTERNATIVES

1. Approve as recommended; or,
2. Approve, subject to amendments.

ATTACHMENTS

1. Minutes of September 3, 2019



CITY OF MERCED

City Council Chamber
Merced Civic Center
2nd Floor
678 W. 18th Street
Merced, CA 95340

Minutes

City Council/Public Finance and Economic Development Authority/Parking Authority

Tuesday, September 3, 2019

6:00 PM

A. CLOSED SESSION ROLL CALL

Present: 5 - Mayor Mike Murphy, Council Member Kevin Blake, Council Member Matthew Serratto, Council Member Delray Shelton, and Council Member Fernando Echevarria

Absent: 2 - Mayor Pro Tempore Anthony Martinez, and Council Member Jill McLeod

B. CLOSED SESSION

Mayor MURPHY called the Closed Session to order at 5:01 PM.

Clerk's Note: Mayor Pro Tempore MARTINEZ arrived to Closed Session at 5:03 PM.

B.1. **SUBJECT:** CONFERENCE WITH REAL PROPERTY NEGOTIATORS - Property: APN 059-240-081; Agency Negotiator: Frank Quintero, Director, Economic Development; Negotiating Parties: Mark Persico, Merced Designated Local Authority and City of Merced and; Under Negotiation: Price and Terms of Payment

B.2. **SUBJECT:** CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION Significant Exposure to Litigation pursuant to Government Code section 54956.9(d)(2): (1) case

Clerk's Note: Council adjourned from Closed Session at 5:34 PM.

C. CALL TO ORDER

Mayor MURPHY called the Regular Meeting to order at 6:00 PM.

C.1. Invocation - Al Schaap, Gateway Church

The invocation was delivered by Al SCHAAP from Gateway Church.

C.2. Pledge of Allegiance to the Flag

Council Member ECHEVARRIA led the Pledge of Allegiance to the Flag.

D. ROLL CALL

Present: 7 - Mayor Pro Tempore Anthony Martinez, Mayor Mike Murphy, Council Member Kevin Blake, Council Member Jill McLeod, Council Member Matthew Serratto, Council Member Delray Shelton, and Council Member Fernando Echevarria

Absent: 0

D.1. In accordance with Government Code 54952.3, it is hereby announced that the City Council sits either simultaneously or serially as the Parking Authority and the Public Financing and Economic Development Authority. City Council members receive a monthly stipend of \$20.00 by Charter for sitting as the City Council; and the Mayor receives an additional \$50.00 each month as a part of the adopted budget and Resolution 1975-37. The members of the Parking Authority and the Public Financing and Economic Development Authority receive no compensation.

E. REPORT OUT OF CLOSED SESSION

There was no report.

F. WRITTEN PETITIONS AND COMMUNICATIONS

The Clerk's Office received a letter from Michael BELLUOMINI regarding item J.2. Citizens Advisory Charter Review Final Report to City Council to Place Possible Amendments to Sections 400, 402, 604, 7xx, 707, 711, and 1112 of the City of Merced Charter on the March 2020 Primary Ballot and a letter from Patricia VAZQUEZ-TOPETE regarding item H.8. Adoption of Resolution Recognizing the Importance of the 2020 Census and Ensuring a Complete, Fair, and Accurate Count of all Californians; copies were placed at the dais and are available in the Clerk's Office.

G. ORAL COMMUNICATIONS

Necola ADAMS, Merced - spoke on the first annual Merced County Nut Festival.

Sair LARA, Merced - spoke on the improvements with the homeless issue at Applegate Park but also stated some issues the neighbors are still having.

Clerk's Note: Council Member MCLEOD arrived to the Regular Meeting at 6:10 PM.

Fernando AGUILAR, Merced - invited Council to the 209th Mexican Independence Celebration.

H. CONSENT CALENDAR

Items H.8. Adoption of Resolution Recognizing the Importance of the 2020 Census and Ensuring a Complete, Fair, and Accurate Count of all

Californians and H.11. Authorization to Purchase Nine Budgeted Fleet Vehicles, Including One Caterpillar Backhoe from Holt of California for \$131,128.90, Two Articulating Overcenter Aerial Devices (Tree Trimming Trucks) from Altec Industries for \$144,515 each, One Street Sweeper from Municipal Maintenance Equipment for \$299,992.14, One Front Loader Refuse Truck and Four Side Loader Refuse Trucks from Ruckstell for \$1,415,798.13; and to Waive the Competitive Bidding Requirement to Allow the Purchases to be Made Through a Cooperative Purchasing Agreement with Sourcewell; were pulled for separate consideration.

Approval of the Consent Agenda

A motion was made by Council Member Blake, seconded by Council Member Shelton, to approve the Consent Agenda. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0

H.1. SUBJECT: Reading by Title of All Ordinances and Resolutions

REPORT IN BRIEF

Ordinances and Resolutions which appear on the public agenda shall be determined to have been read by title and a summary title may be read with further reading waived.

RECOMMENDATION

City Council - Adopt a motion waiving the reading of Ordinances and Resolutions, pursuant to Section 412 of the Merced City Charter.

This Consent Item was approved.

H.2. SUBJECT: Information-Only Contracts for the Month of August 2019

REPORT IN BRIEF

Notification of awarded Non-Public Works contracts under \$32,000 and of Public Works contracts under \$70,939.

This Consent Item was approved.

H.3. SUBJECT: Approval of City Council/Public Financing and

Economic Development/Parking Authority Meeting Minutes of
August 5, 2019

REPORT IN BRIEF

Official adoption of previously held meeting minutes.

RECOMMENDATION

City Council/Public Financing and Economic

Development/Parking Authority - Adopt a motion approving the meeting minutes of August 5, 2019.

This Consent Item was approved.

H.4.

SUBJECT: Approval of a Three (3) Year Lease Agreement with James G. Moulton, Trustee, and Lynda S. Moulton, Trustee, for a 9,000 Square Foot Facility with Initial Base Rent of \$5,475/NNN Per Month and the Option to Extend for an Additional Three (3) Years

REPORT IN BRIEF

Considers approving a three-year lease agreement with James G. Moulton and Lynda S. Moulton for property to be utilized by the Merced Police Department.

RECOMMENDATION

City Council - Adopt a motion approving the lease agreement between the City of Merced and James G. Moulton, Trustee, and Lynda S. Moulton, Trustee and authorizing the City Manager, the Assistant City Manager, or the Finance Office to make necessary adjustments and execute the document.

This Consent Item was approved.

H.5.

SUBJECT: Adoption of Resolution Extending the Participation in the Abandoned Vehicle Abatement Program (AVA) with Merced County Association of Governments (MCAG) for the Period of August 1, 2020 Through July 31, 2030

REPORT IN BRIEF

Considers approving a resolution between the Merced County Association of Governments (MCAG) and the City of Merced to continue to participate in the Abandoned Vehicle Abatement program (AVA) for an additional 10 year period. (See attachment 1)

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving **Resolution 2019-45**, a Resolution of the City Council of the City of Merced, California, establishing service authority for abandoned vehicle abatement; and,
- B. Authorizing the City Manager or the Assistant City Manager to execute the agreement; and,
- C. Authorizing the Finance Officer to make the appropriate budget adjustments.

This Consent Item was approved.

H.6.

SUBJECT: Approval of a Pooled Cash Loan Not to Exceed \$7,720,000 and Current Year Payment Amount, in Order to Repay the Department of Finance (DOF) Based on the Approved Settlement Agreement Related to the Dissolution of the City of Merced Redevelopment Agency

REPORT IN BRIEF

Considers approving a pooled cash loan not to exceed \$7,720,000 and current year payment amounts in order to repay the Department of Finance based on the approved Settlement Agreement related to the dissolution of the City of Merced Redevelopment Agency.

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving a pooled cash loan not to exceed \$7,720,000; and,
- B. Approving the use of RDA residual in the amount of \$1,297,953 plus interest towards the first payment; and,
- C. Approving the use of \$500,000 from Fund 017 Development Services towards the first payment; and,
- D. Authorizing the City Manager or the Assistant City Manager to the execute all necessary documents; and,
- E. Authorizing the Finance Officer to make the necessary budget adjustments.

This Consent Item was approved.

H.7.

SUBJECT: Authorization to Submit a Formal Letter of Intent to Purchase for the Property Located at the Corner of Childs Avenue and B Street from the County of Merced for the Childs Court Apartments

REPORT IN BRIEF

Considers approving the formal letter of intent to purchase the property located at the corner of Childs Avenue and B Street from the County of Merced to support the Childs Court Apartment development.

RECOMMENDATION

City Council - Adopt a motion authorizing the City Manager or the Assistant City Manager to sign the formal "Notice of Intent" letter to purchase the property located at 1137 B Street from the County of Merced.

This Consent Item was approved.

H.9.

SUBJECT: Adoption of Resolution Declaring the Intent to Abandon a Sewer Easement and Working Easement at 3600 G Street, Generally Located on the Northeast Corner of G Street and Yosemite Avenue, and Setting a Public Hearing for October 7, 2019 (Vacation #19-04)

REPORT IN BRIEF

Considers the abandonment of an old sewer easement and working easement at 3600 G Street.

RECOMMENDATION

City Council - Adopt a motion adopting **Resolution 2019-55**, a Resolution of the City Council of the City of Merced, California, declaring its intention to vacate a sewer easement and working easement at 3600 G Street, generally located on the northeast corner of G Street and Yosemite Avenue (Vacation #19-04) and setting time and place for Public Hearing.

This Consent Item was approved.

H.10.

SUBJECT: Adoption of Resolution Approving the Cypress Terrace 6, Phase A - Final Map 5366 for 18 Single-Family Lots, Generally Located on the West Side of N Street, North of Gerard Avenue, and

the Approval of the Subdivision Agreement for Cypress Terrace 6,
Phase A

REPORT IN BRIEF

Considers the approval of Final Map #5366 for 18 single-family lots, generally located on the west side of N Street (extended), north of Gerard Avenue (extended), and the Subdivision Agreement for Cypress Terrace 6, Phase A.

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving **Resolution 2019-57**, a Resolution of the City Council of the City of Merced, California, approving the final subdivision map for the Cypress Terrace 6, Phase A Subdivision (#5366); and,
- B. Approving the subdivision agreement for Cypress Terrace 6, Phase A; and,
- C. Authorizing the City Manager or the Assistant City Manager to execute the subdivision agreement.

This Consent Item was approved.

H.12.

SUBJECT: Adoption of Motion Receiving and Filing the Biennial Audit of the Sewer System Management Plan as Required by the State Water Resources Control Board

REPORT IN BRIEF

Considers the filing of the biennial audit of the Sewer System Management Plan.

RECOMMENDATION

City Council - Adopt a motion receiving and filing the biennial audit of the Sewer System Management Plan as required by the State Water Resources Control Board.

This Consent Item was approved.

H.8.

SUBJECT: Adoption of Resolution Recognizing the Importance of the 2020 Census and Ensuring a Complete, Fair, and Accurate Count of all Californians

REPORT IN BRIEF

The City Council of the City of Merced is asked to recognize the importance of the 2020 U.S. Census and support helping to ensure a complete, fair, and accurate count of all Californians.

RECOMMENDATION

City Council - Adopt a motion adopting **Resolution 2019-53**, a Resolution of the City Council of the City of Merced, California, recognizing the importance of the 2020 Census and supporting the efforts to help ensure a complete, fair, and accurate count of all Californians.

Patricia RAMOS-ANDERSON, Merced - requested to pull this item to discuss the 2020 Census.

Council Member MCLEOD and Ms. RAMOS-ANDERSON discussed the importance of the Census count and how the data is evaluated.

A motion was made by Council Member McLeod, seconded by Mayor Pro Tempore Martinez, that this agenda item be approved. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0

H.11.

SUBJECT: Authorization to Purchase Nine Budgeted Fleet Vehicles, Including One Caterpillar Backhoe from Holt of California for \$131,128.90, Two Articulating Overcenter Aerial Devices (Tree Trimming Trucks) from Altec Industries for \$144,515 each, One Street Sweeper from Municipal Maintenance Equipment for \$299,992.14, One Front Loader Refuse Truck and Four Side Loader Refuse Trucks from Ruckstell for \$1,415,798.13; and to Waive the Competitive Bidding Requirement to Allow the Purchases to be Made Through a Cooperative Purchasing Agreement with Sourcewell

REPORT IN BRIEF

Considers authorizing a waiver of competitive bidding requirement pursuant to Merced Municipal Code Section 3.04.210 to purchase nine currently budgeted and Council approved fleet vehicles through the government procurement program Sourcewell.

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving the purchase of one Caterpillar Backhoe Loader in the amount of \$131,428.90 from Holt of California; and,
- B. Approving the purchase of two Articulating Overcenter Aerial Devices (Tree Trimming Trucks) in the amount of \$144,515.00 each from Altec Industries; and,
- C. Approving the purchase of one Schwarze Street Sweeper in the amount of \$299,992.14 from Municipal Maintenance Equipment; and,
- D. Approving the purchase of one Front Loader Refuse Truck in the amount of \$256,307.28 and Four Side Loader Refuse Trucks in the amount of \$1,159,490.85 from Ruckstell California Sales Co, Inc.; and,
- E. Waiving the City's competitive bidding requirement as permitted by Merced Municipal Code section 3.04.210 and authorizing the purchases to be made with cooperative purchase agreements through Sourcewell, a government procurement program; and,
- F. Authorizing the City Manager or the Assistant Manager to execute any necessary documents for the purchases specified above, the Finance Officer to make the appropriate budget adjustments and City Buyer to issue the Purchase Orders.

Council Member SERRATTO pulled this item to ask about the number of tree trimming crews the City has.

Public Works Operations Manager Wallace BROUGHTON stated that the City has multiple tree trimming crews.

A motion was made by Council Member Serratto, seconded by Council Member Blake, that this agenda item be approved. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0

I. PUBLIC HEARINGS

- I.1. **SUBJECT:** Public Hearing Regarding Appeal of Planning Commission Approval of Commercial Cannabis Business Permit #18-14R Filed by Jiva Life, LLC

REPORT IN BRIEF

Request by Jiva Life, LLC. to appeal and reverse the Planning Commission's approval of Commercial Cannabis Business Permit (CCBP) #18-14R for Harvest of Merced.

RECOMMENDATION

City Council - Adopt a motion:

- A. Option A - To affirm the Planning Commission's approval of CCBP #18-14R:

Adopting **Resolution 2019-__**, a Resolution of the City Council of the City of Merced, California, granting commercial cannabis business permit #18-14R to allow Harvest of Merced, LLC. to operate a retail dispensary for medicinal and adult use cannabis and cannabis-related products, including delivery services, at 863 W. 15th Street, and making certain findings in connection therewith; or,

- B. Option B - To reverse the Planning Commission's approval of CCBP #18-14R:

Adopting **Resolution 2019-__**, a Resolution of the City Council of the City of Merced, California, denying commercial cannabis business permit #18-14R to allow Harvest of Merced, LLC. to operate a retail dispensary for medicinal and adult use cannabis and cannabis-related products, including delivery services, at 863 W. 15th Street, and making certain findings in connection therewith.

Principal Planner Michael HREN gave a slide show presentation on the Commercial Cannabis Business Permit #18-14R.

Mayor MURPHY opened the Public Hearing at 6:33 PM.

Mayor MURPHY explained the time limits and protocol for the hearing to the appellant and applicant.

Appellant Jiva Life LLC was represented by Chad WENKE and Nathan

PUTNEY.

Mr. WENKE and Mr. PUTNEY stated that they are appealing to preserve their right to continue an ongoing discussion with the City and to discuss their concerns regarding the legitimacy and transparency of the appeal and permit process.

Applicant Harvest of Merced was represented by Douglas SMURR.

Mr. SMURR spoke in response to the appellant and requested Council approve Harvest of Merced the Commercial Cannabis Business Permit.

Jiva Life LLC rebuttal:

Mr. PUTNEY reiterated that he would like Council to consider either reversing the Planning Commission's approval of Commercial Cannabis Business Permit #18-14R to Harvest of Merced or to continue this item for further discussion.

Harvest of Merced rebuttal:

Mr. SMURR spoke on the timeliness of the appeal and encouraged Council to approve the Commercial Cannabis Permit to Harvest of Merced.

Mayor MURPHY closed the Public Hearing at 6:48 PM.

Council discussed the Cannabis Ordinance, navigating the process of Commercial Cannabis Permits, and the grounds of the appeal.

A motion was made by Council Member Blake, seconded by Council Member McLeod, to approve Option A to affirm the Planning Commission's approval of Commercial Cannabis Business Permit #18-14R and adoption of Resolution 2019-56. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0

J. REPORTS

J.1.

SUBJECT: Acceptance of Court Approved Receivership Reimbursements, Appropriation of \$29,341 to the Substandard

Housing Special Recovery Fund for Fiscal Year 19/20, and
Authorization for Continuous Appropriation to Said Fund of Costs
Recovered by the Code Enforcement Task Force

REPORT IN BRIEF

Authorizes acceptance and appropriation of reimbursements for City costs and fees from Court-approved receiverships for public nuisance abatement pursuant to the Substandard Building Abatement Program in FY 19/20.

RECOMMENDATION

City Council - Adopt a motion:

A. Accepting reimbursements from the Court appointed Receiver and authorizing appropriation of \$29,341 to account 077-1005-522-29-00 (Substandard Housing Special Recovery) for FY 19/20; and,

B. Authorizing any receipts of Substandard, Dangerous, or Nuisance abatement and cost recovery funds for FY 19/20 to be approved for appropriation on a continuous basis to the Substandard Housing Fund; and,

C. Authorizing the Finance Officer to make the necessary budget adjustments.

City Attorney Phaedra NORTON, Code Enforcement Officers Jackie HICKS, and Ruby SANTIAGO gave a slide show presentation on Code Enforcement and Task Force.

Council, Police Lieutenant Alan WARD, and Ms. NORTON discussed the impact of the work that has been done, an update on a blighted property, the commonalities of those who are not in compliance, and services for those in need.

A motion was made by Council Member McLeod, seconded by Council Member Blake, that this agenda item be approved. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0

J.2.

SUBJECT: Citizens Advisory Charter Review Committee Final Report
to City Council to Place Possible Amendments to Sections 400, 402,

604, 7XX, 707, 711, and 1112 of the City of Merced Charter on the
March 2020 Primary Ballot

REPORT IN BRIEF

Considers the final report from the Citizens Advisory Charter Review Committee for possible placement of recommended amendments to the City of Merced Charter on the March 2020 Primary Ballot.

RECOMMENDATION

City Council - Adopt a motion:

A. Accepting the final report and recommendations of the Citizens Advisory Charter Review Committee to amend various sections of the City of Merced Charter and directing staff to return to the October 7, 2019 City Council Meeting with the ballot question(s) and Resolutions for calling an election; or,

B. Accepting the final report with Council suggested changes to the recommendations of the Citizens Advisory Charter Review Committee to amend various sections of the City of Merced Charter and directing staff to return to the October 7, 2019 City Council Meeting with the ballot question(s) and Resolutions for calling an election.

Charter Review Committee Chair Shane SMITH gave a slide show presentation on the Charter Review Final Report.

Council Member ECHEVARRIA and Mr. SMITH discussed the Council compensation and district representation.

Eric MOORE, Merced - spoke on adding a mission statement as part of the Charter, Council compensation, adding language in the Charter regarding a licensed California CPA requirement for the Finance Officer, adding an internal auditor, adding all Boards and Commissions to the Charter, and adding a Police Commission to the Charter as well.

Patricia RAMOS-ANDERSON, Merced - spoke on the importance of District representation and Council compensation.

Council Member MCLEOD discussed representation and the Charter Officers roles.

Council thanked the Committee Members for their time and effort.

Clerk's Note: After the motion was made, Council continued discussing

the proposed amendments to the Charter and the number of ballot questions that should be proposed.

A motion was made by Mayor Murphy, seconded by Council Member Blake, to bring a single ballot question to the October 7, 2019 meeting for the March Primary election. The motion carried by the following vote:

Aye: 5 - Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Shelton, and Council Member Echevarria

No: 2 - Mayor Pro Tempore Martinez, and Council Member Serratto

Absent: 0

K. BUSINESS

K.1. **SUBJECT:** Personnel Board Appointment (1)

REPORT IN BRIEF

Consider appointing one individual to the Personnel Board.

RECOMMENDATION

City Council - Adopt a motion appointing Dorothea "Lynn" White to serve as a member of the Personnel Board to a seat with a term expiration of July 1, 2022.

Applicant Dorothea Lynn WHITE, Merced - spoke on her interest in being appointed to the Personnel Board.

A motion was made by Council Member Blake, seconded by Council Member Shelton, to appoint Dorothea Lynn White to the Personnel Board. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0

K.2. **SUBJECT:** Request to Add Item to Future Agenda

REPORT IN BRIEF

Provides members of the City Council the opportunity to request that an item be placed on a future City Council agenda for initial consideration by the City Council.

Council Member BLAKE requested an update on the Park Hours Ordinance.

Assistant City Manager Stephanie DIETZ stated that the Park Hours Ordinance will be placed on the October 7th Council Meeting for Council consideration.

Mayor MURPHY requested to add an item on hosting a Bike Race in Merced and the naming of a Merced Park after someone from the Hmong Community.

K.3.

SUBJECT: City Council Comments

REPORT IN BRIEF

Provides an opportunity for the Mayor and/or Council Member(s) to make a brief announcement on any activity(ies) she/he has attended on behalf of the City and to make a brief announcement on future community events and/or activities. The Brown Act does not allow discussion or action by the legislative body under this section.

Council Member MARTINEZ reported on attending the UC Merced Town Hall Meeting and the Recreation and Parks Commission Meeting.

Council Member SHELTON reported on attending a lunch meeting with Moua TAO from the Lao Family, the Playhouse Merced Gala, meeting with NAACP President Allen BROOKS, and the Measure V meeting.

Council Member ECHEVARRIA reported on meeting with the City Manager Steve CARRIGAN and meeting with Congressman COSTA.

Mayor MURPHY reported on attending a follow up meeting on establishing a Sister City, the Charter Review meeting, a Rotary BBQ, the Merced County Association of Governments workshop, the Cat Crawl event, and the Project Endure event. He spoke on the upcoming Police Officer Swearing-In event and the upcoming Merced Feast event.

L. ADJOURNMENT

Clerk's Note: The Regular Meeting adjourned at 8:32 PM.

A motion was made by Council Member McLeod, seconded by Council Member Blake, to adjourn the Regular Meeting. The motion carried by the following vote:

Aye: 7 - Mayor Pro Tempore Martinez, Mayor Murphy, Council Member Blake, Council Member McLeod, Council Member Serratto, Council Member Shelton, and Council Member Echevarria

No: 0

Absent: 0



ADMINISTRATIVE REPORT

Agenda Item I.4.

Meeting Date: 10/7/2019

Report Prepared by: Janet German, Secretary III, Fire Dept.

SUBJECT: Authorization to Set a Public Hearing for November 4, 2019 for Introduction of Ordinances, Adopting the 2019 California Building and Fire Codes with Amendments, if Any

REPORT IN BRIEF

Set a Public Hearing for November 4, 2019 for the purpose of introducing and adopting the 2019 California Building and Fire Codes with Amendments, if any.

RECOMMENDATION

City Council - Adopt a motion setting a Public Hearing on November 4, 2019, to consider introducing and adopting the 2019 California Building and Fire Codes and Amendments thereto.

ALTERNATIVES

1. Approve as recommended by staff; or,
2. Approve, subject to conditions other than recommended by staff; or,
3. Refer to staff for reconsideration of specific items; or,
4. Continue to a future meeting; or,
5. Deny the request.

AUTHORITY

Charter of the City of Merced, Section 412, Adoption of ordinances and resolutions.

CITY COUNCIL PRIORITIES

The setting of the public hearing is consistent with the city's operating principal to promote Public Safety, livability and economic vitality as provided for in the FY 19/20 Adopted Budget.

DISCUSSION

Staff is requesting City Council to set a public hearing for November 4, 2019, to introduce Ordinances adopting Title 24, Parts 1-12 of the California Code of Regulations, referred to as the California Building Code, as the referenced Building and Fire Codes for the City of Merced.

IMPACT ON CITY RESOURCES

None. Costs associated with codification of the proposed ordinances and enforcement of its provisions will be absorbed by the adopted budget.



ADMINISTRATIVE REPORT

Agenda Item I.5.

Meeting Date: 10/7/2019

Report Prepared by: Joseph D. Angulo, Environmental Project Manager, Engineering

SUBJECT: Award of Bid and Approval of Construction Contract with Phase 1 Construction for the Cooper Avenue Sanitary Sewer Lift Station Construction, Project No. 114004, in the Amount of \$755,825 and Approval of a Professional Services Agreement with Provost and Pritchard Engineering Group, Inc., for Engineering Design Services in the Amount of \$23,694

REPORT IN BRIEF

Considers awarding a contract in the amount of \$755,825 to Phase 1 Construction to perform the Cooper Avenue sanitary sewer lift station construction and approving the professional services agreement with Provost and Pritchard Engineering Group, Inc. for engineering design services in the amount of \$23,694.

RECOMMENDATION

City Council - Adopt a motion:

- A. Awarding the bid for the Cooper Avenue Sanitary Sewer Lift Station Construction, Project No. 114004, to Phase 1 Construction in the amount of \$755,825; and,
- B. Approving an amendment to an agreement for professional services with Provost and Pritchard Engineering Group, Inc., in the amount of \$23,694 for engineering design services; and,
- C. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents and to approve change orders not to exceed 10% of the total construction contract.

ALTERNATIVES

- 1. Approve, as recommended by staff; or,
- 2. Approve, subject to modifications as conditioned by City Council; or,
- 3. Refer to staff for reconsideration of specific items; or,
- 4. Deny.

AUTHORITY

Charter of the City of Merced, Section 200 et seq.

Municipal Code Chapter 3.04, Article IV - Public Works Contracts. Every project involving an expenditure of more than sixty-nine thousand, eight hundred and thirty- three dollars (\$69,833) for the construction or improvements of public buildings, works, streets, drains, sewers, utilities, parks, and playgrounds shall be let by contract to the lowest responsive and responsible bidder after notice

by publication in the official newspaper by one or more insertions, the first of which shall be at least ten days before the time for opening bids.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

Cooper Avenue Lift Station

The Cooper Avenue Lift Station is located approximately 2200 feet west of the intersection of Cooper Avenue and Highway 59 in the City's Western Industrial District. The Station receives wastewater from the surrounding businesses that then flows easterly along Cooper Avenue, south along Highway 59, and eventually to the Wastewater Treatment Plant located approximately 2.5 miles southwest of the City.

The Station is experiencing excessive pump cycling, with associated increased maintenance costs, and it is under-capacity for the quantity of received wastewater. In addition, the facility does not have an emergency backup generator. In the case of an electrical power outage, Public Works staff must transport and monitor a mobile emergency generator to ensure proper station operation. Staff recommend replacing the approximately 40-year old sewer facility with a new lift station in the same location.

On September 18, 2017, the Council awarded the lift station design services contract to Provost and Pritchard Engineering Group, Inc. The project generally consists of: a subgrade wet well sump assembly with associated entrance hatch, water pumps, electrical service, emergency backup generator, supervisory controls and data acquisition (SCADA) system, and surrounding chain-link fence.

Provost and Pritchard Engineering Group, Inc., under the direction of City staff, prepared plans and specifications for the work. The project was advertised and the bids were opened on August 15, 2019, with the following results:

1. Phase 1 Construction (Atwater*)	\$ 755,825
2. Rolfe Construction (Atwater*)	\$ 800,915
3. MidCal Pipeline and Utilities, Inc. (Merced*)	\$ 870,160
4. Smith Construction Company, Inc. (Fresno)	\$ 921,915
5. RTC Construction Management, Inc. (Merced*)	\$ 926,933
6. TNT Industrial Contractors, Inc. (Sacramento)	\$ 939,202
7. Floyd Johnston Construction, Inc. (Clovis)	\$1,044,689

(* fixed office in Merced County and active City of Merced business license qualifies contractor as a

certified Local Business Enterprise)

The engineers estimate was \$624,000.

The following is the proposed budget for the project:

Construction	\$ 755,825
Contingency (10%)	\$ 75,582
Engineering, Testing, Inspection (5%)	\$ 37,791
Total	\$ 869,198

Provost and Pritchard Engineering Group, Inc., Design Contract Amendment

The contract amendment under consideration is necessary to reimburse Provost and Pritchard Engineering Group, Inc for the following additional costs:

1. After the original design contract was awarded it was discovered that the existing sewer lift station was not located on a dedicated easement. This required additional research and survey activities to confirm the new sewer lift station layout. In addition, staff erroneously provided Airport Industrial District sewer flow data to the design engineers. After discovery, this necessitated recalculating the Western Industrial District (Cooper Avenue) sewer flow quantities for design parameters.
2. The City transmitted a utility notification to the Merced Irrigation District (MID) for the pending construction project. MID subsequently informed the City that they had several underground electrical conduits traversing the subject area. Several lines are located on an easement that was previously unknown to staff. One set of underground lines were not located on MID's easement but several feet north of the boundary. This situation necessitated Provost and Pritchard Engineering Group, Inc. staff to remobilize to the site and confirm the locations of the easement and conduits. In early 2019, MID subsequently relocated their northerly lines onto their easement, and the new sewer lift station design was completed.

IMPACT ON CITY RESOURCES

This project was established as a Capital Improvement Project and account 553-1108-637.65-00-114004 contains sufficient funding to complete the project.

ATTACHMENTS

1. Location Map
2. Site Map
3. Construction Contract
4. Contract Amendment

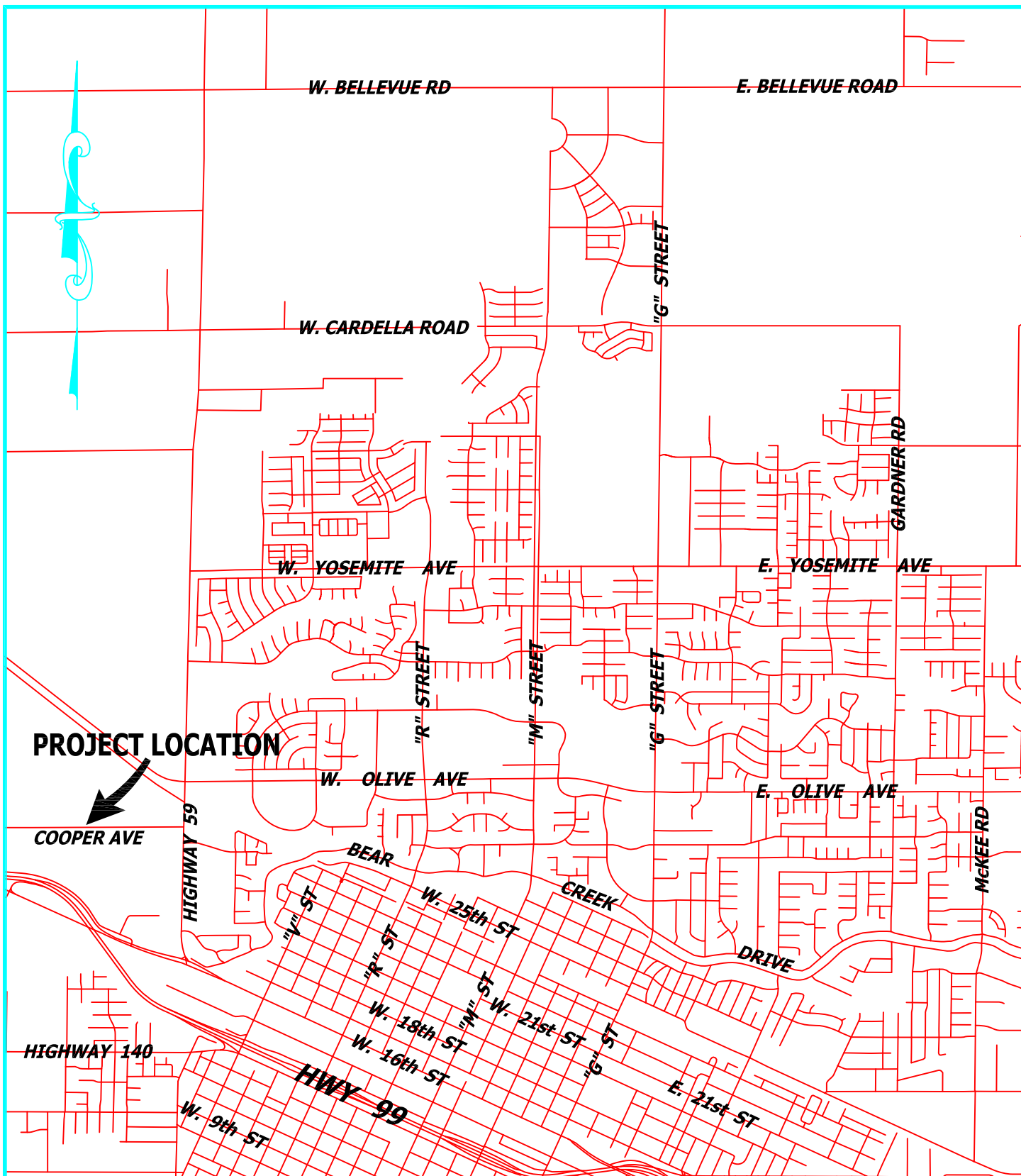


FIGURE 1 - LOCATION MAP

NO SCALE

PROJECT NO. 114004
Cooper Avenue Lift Station Upgrade



GENERAL CONSTRUCTION CONTRACT

THIS CONTRACT made on _____, by and between the CITY OF MERCED, a municipal corporation of the State of California, hereinafter called the Owner, and PHASE 1 CONSTRUCTION, hereinafter called the Contractor:

WITNESSETH:

That the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree with each other, as follows:

1. CONTRACT DOCUMENTS. The complete contract consists of the following documents, to wit:

- (1) This General Construction Contract;
- (2) Faithful Performance Bond;
- (3) Laborers and Materialmens Bond;
- (4) Guaranty;
- (5) Special Provisions for PROJECT NO. 114004;
- (6) Amendments to the Standard Specifications;
- (7) Project Plans;
- (8) Standard Specifications;
- (9) City Standards;
- (10) Proposal;
- (11) Instructions to Bidders;
- (12) Notice Inviting Bids;
- (13) Bidder's Bond;
- (14) Notice of Determination of Prevailing Wages;
- (15) List of Subcontractors and Material Dealers; and
- (16) Safety Provisions.

Any and all obligations of the Owner and the Contractor are fully set forth and described therein.

All of the above documents are intended to cooperate so that any work called for in one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents. The documents comprising the complete contract are sometimes hereinafter referred to as the Contract Documents. In case of conflict between any of the documents, the order of documents first listed above shall be the order of precedence's, with the first item listed having the highest precedence.

2. THE WORK. Said Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, transportation, and material necessary to perform and complete in a good and workmanlike manner all work of improvement in accordance with Contract Documents in the manner designated in, and in strict conformity with, the Plans and Specifications for PROJECT NO. 114004, which said Plans and Specifications are entitled, "COOPER AVENUE SANITARY SEWER LIFT STATION," for construction in Merced County in Merced, and which were included in the award of bid made by the City Council of the City of Merced on _____, 2019.

It is understood and agreed that said tools, equipment, apparatus, facilities, labor, transportation and material, except materials to be supplied by the City as designated in the Contract Documents, shall be furnished and said work performed and completed as required in said Plans and Specifications under the sole direction and control of the Contractor, and subject to inspection and approval of the Owner or its representative. The Owner hereby designates the City Engineer as its representative for the purpose of this Contract.

3. **CONTRACT PRICE.** The Owner agrees to pay, and the Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and doing all work contemplated and embraced in this agreement to wit:

ITEM NO.	ITEM	UNIT OF MEASURE	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	ITEM TOTAL (IN FIGURES)
1	Mobilization/Demobilization	LS	1	\$ 42,000.00	\$ 42,000.00
2	Traffic Control	LS	1	\$ 3,500.00	\$ 3,500.00
3	Bypass Pumping	LS	1	\$ 22,500.00	\$ 22,500.00
4	Worker Protection	LS	1	\$ 6,500.00	\$ 6,500.00
5	Demolition [Removal: (E) Wet well, Pump Vault Controls, Piping, etc.]	LS	1	\$ 36,800.00	\$ 36,800.00
6	Remove Curb and Gutter	LF	34	\$ 100.00	\$ 3,400.00
7	Remove Asphalt Pavement	SF	22	\$ 100.00	\$ 2,200.00
8	Sanitary Sewer Lift Station (F&I)	LS	1	\$ 132,500.00	\$ 132,500.00
9	Concrete Lining for Corrosion Protection (F&I)	VF	22	\$ 500.00	\$ 11,000.00
10	6-inch DIP Bends and Fittings (F&I)	LS	1	\$ 8,500.00	\$ 8,500.00
11	6-inch DIP Valves (F&I)	LS	1	\$ 10,500.00	\$ 10,500.00
12	6-inch DIP (F&I)	LF	50	\$ 200.00	\$ 10,000.00
13	12-inch SDR 35 PVC Pipe (F&I)	LF	32	\$ 500.00	\$ 16,000.00
14	¾-inch C200 DR 18 PVC Waterline & Hose Bib (F&I)	LS	1	\$ 1,500.00	\$ 1,500.00
15	1-inch Water Meter (F&I)	EA	1	\$ 700.00	\$ 700.00
16	Back Flow Preventer (F&I)	EA	1	\$ 1,500.00	\$ 1,500.00
17	48-inch Sanitary Sewer Manhole	LS	1	\$ 6,500.00	\$ 6,500.00
18	Pumping Bypass Assembly (F&I)	LS	1	\$ 7,500.00	\$ 7,500.00
19	Electrical (controls, wiring and appurtenances; F&I)	LS	1	\$ 272,200.00	\$ 272,200.00
20	Emergency Generator (F&I)	LS	1	\$ 62,000.00	\$ 62,000.00

21	Minor Concrete, Driveway Approach, Curb and Gutter (F&I)	SF	1510	\$ 40.00	\$ 60,400.00
22	Asphalt Replacement (F&I)	SF	87	\$ 25.00	\$ 2,175.00
23	Aggregate Base (F&I)	SF	1800	\$ 12.00	\$ 21,600.00
24	Fencing and Gate	LF	205	\$ 70.00	\$ 14,350.00

Legend: LS = Lump Sum, LF = Linear Foot, SF = Square Foot, VF = Vertical Foot, EA = Each

Total of Items 1 Through 24 \$755,825

4. **TERMINATION.** If the Contractor should be adjudged as bankrupt or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his subcontractors should violate any of the provisions of the Contract Documents, the Owner may serve written notice upon him and his surety

of its intention to terminate the Contract; such notice to contain the reasons for such intention to terminate the Contract, and, unless within ten (10) days after serving of such notice such violation shall cease and satisfactory arrangements for correction thereof be made, the Contract shall, upon the expiration of said ten (10) days, cease and terminate.

In the event of any such termination, the Owner shall immediately serve written notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and perform the Contract; provided however, that if the surety within fifteen (15) days after the serving upon it of notice of termination does not give the Owner written notice of its intention to take over and perform the Contract or does not commence performance thereof within thirty (30) days from the date of the serving of such notice, the Owner may take over the work and prosecute the same to completion by contract or by any other method it may deem advisable, for the account and at the expense of the Contractor, and the Contractor and his surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may, without liability for so doing, take possession of and utilize in completing the work such materials, appliances, plant, and other property belonging to the Contractor as may be on the site of the work and necessary therefor.

5. **NOTICE AND SERVICE THEREOF.** Any notice from one party to the other under the Contract shall be in writing and shall be dated and signed by the party giving such notice, or by a duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in the following manner; namely, (a) if the notice is given to the Owner, per personal delivery thereof to the City Engineer of said Owner, or by depositing the same in the United States mails enclosed in a sealed envelope, addressed to the Owner, postage prepaid and registered; (b) if the notice is given to the Contractor, by personal delivery thereof to said Contractor or to his duly authorized representative at the site of the project, or by depositing the same in the United States mails enclosed in a sealed envelope, addressed to said Contractor at P.O. BOX 665, ATWATER, CA 95301, postage prepaid and registered; and (c) if the notice is given to the surety or any other person, by personal delivery to such surety or other person, or by depositing the same in the United States mails enclosed in a sealed envelope, addressed to such surety or person, as the case may be, at the address of such surety or person last communicated by him to the party giving the notice, postage prepaid and registered.

6. ASSIGNMENT OF CONTRACT. Neither the Contract nor any part thereof, nor moneys due, or to become due thereunder, may be assigned by the Contractor without the prior written approval of the Owner.

7. CONTRACT SECURITY. The Contractor shall furnish a surety bond in an amount at least equal to 100 percent of the contract price as security for the faithful performance of this Contract. The Contractor shall also furnish a separate surety bond in an amount at least equal to 100 percent of the contract price as security for the payment of all persons for furnishing materials, provisions, provender, or other supplies used in, upon, for, or about the performance of the work contracted to be done, or for performing any work or labor thereon of any kind, and for the payment of amounts due under the Unemployment Insurance Code with respect to such work or labor in connection with this Contract, and for the payment of a reasonable attorney's fee to be fixed by the court in case suit is brought upon the bond.

8. INSURANCE. The Contractor shall not commence work under this Contract until he has obtained all insurance required by Section 7-3 of the Standard Specifications for Public Works Construction (1997 Edition), as amended, and such insurance has been approved by the City Attorney of Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been so obtained and approved. Contractor shall furnish the Owner with satisfactory proof of the carriage of insurance required, and there shall be a specific contractual liability endorsement extending the Contractor's coverage to include the contractual liability assumed by the Contractor pursuant to this Contract, and particularly paragraph 9 hereof. Said insurance obtained by the Contractor shall be primary and noncontributory as to any insurance maintained by owner. ***Endorsement for additional insured shall be submitted on Standard form CG 20101185. Endorsement forms CG 20101001 and CG 20371001, when used together, are acceptable in lieu of CG 20101185 for Public Works projects.*** Any policy of insurance required of the Contractor under this Contract shall also contain an endorsement providing that thirty (30) days' notice must be given in writing to the Owner of any pending change in the limits of liability or of any cancellation or modification of the policy.

The Contractor shall furnish the City a policy or certificate of liability insurance in which the City is the named insured or is named as an additional insured with the Contractor. Notwithstanding any inconsistent statement in the policy or any subsequent endorsement attached thereto, the City shall be the insured or named as an additional insured covering the work, whether liability is attributable to the Contractor or the City. The policy shall insure the City, its officers, employees and agents while acting within the scope of their duties on the work, against all claims arising out of or in connection with the work.

The Contractor may file insurance acceptable to the City covering more than one project. The coverage shall provide the following minimum limits:

Bodily Injury...	\$500,000.00	each person
	\$1,000,000.00	each occurrence
	\$1,000,000.00	aggregate products and completed operations
Property Damage...	\$250,000.00	each occurrence
	\$500,000.00	aggregate

A combined single limit policy with aggregate limits in the amount of \$1,250,000.00 will be considered equivalent to the required minimum limits.

The Contractor will require all subcontractors to take out and maintain bodily injury liability and property damage liability in the amounts stated above.

The Contractor and subcontractors shall save, keep and hold harmless the City, its officers and agents from all damages, costs or expenses in law or equity that may at any time arise or be set up because of damages to property, or of personal injury received by reason of or in the course of performing work, which may be caused by any willful or negligent act or omission by the Contractor, any of the Contractor's employees, or any subcontractor. The City will not be liable for any accident, loss or damage to the work prior to its completion and acceptance.

All liability insurance policies shall bear an endorsement or shall have attached a rider whereby it is provided that, in the event of expiration or proposed cancellation of such policies for any reason whatsoever, the Agency shall be notified by registered mail, return receipt requested, giving sufficient time before the date thereof to comply with the applicable law or statute, but in no event less than thirty (30) days before expiration or cancellation is effective.

All insurance required by this section shall be from a California admitted insurance company.

The cost of this insurance shall be included in the Contractor's bid.

CANCELLATION CLAUSE

NOTE: The standard form used by insurance carriers will not be acceptable unless the word "endeavor" is crossed out where the paragraph states, "The issuing company will (endeavor to) mail . . ." A portion of the last paragraph should be crossed out, which states, "but failure to mail such notice shall impose no obligation or liability of any kind upon the company."

9. **HOLD HARMLESS.** The Contractor will indemnify, defend with counsel selected by the Owner, save, keep, and hold harmless, the Owner and all officers, employees, and agents thereof from all damages, costs, or expenses, in law or in equity, that may at any time arise or be set up because of personal injury or damage to property sustained by any person or persons by reason of, or in the course of the performance of said work, or by reason of any infringement or alleged infringement of the patent rights of any person or persons, firm or corporation, in consequence of the use in, on, or about said work, of any article or material supplied or installed under this Contract. It is understood that the duty of Contractor to indemnify and hold harmless includes the duty to defend as set forth in Section 2778 of the California Civil Code. Notwithstanding the above, the Contractor shall, wherever it is necessary, keep and maintain at his sole cost and expense during the course of his operations under this Contract such warnings, signs, and barriers as may be required to protect the public. The provisions of the preceding sentence shall not impose any liability upon the Owner and are for the express benefit of the general public.

Acceptance by City of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Contractor acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.

It is expressly understood that Contractor is an independent contractor and that its employees shall not be employees of or have any contractual relationship with the City. Contractor shall be responsible for the payment of all taxes, workers' compensation insurance and unemployment insurance. Should Contractor desire any insurance protection, the Contractor is to acquire such protection at its expense.

In the event that Contractor or any employee, agent, or subcontractor of Contractor providing services under this Agreement is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Contractor shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

10. ACCIDENT PREVENTION. Precaution shall be exercised at all times for protection of persons (including employees) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment, and other hazards shall be guarded or eliminated in accordance with the safety provisions of the Construction Safety Orders issued by the Industrial Accident Commission of the State of California.

11. PAYMENT. The Owner will make partial and final payment to the Contractor in accordance with Section 9-3.2 of the Standard Specifications, as amended, except that the Owner will retain the five percent (5%) of the final payment amount until the expiration of thirty-five (35) days from the date of recording by Owner of notice of acceptance of completion of all work covered by this Contract, if such notice be recorded within ten (10) days after the acceptance of completion of such Contract; or, if such notice be not so recorded within ten (10) days, until the expiration of ninety-five (95) days after the acceptance of completion of such work of improvement, at which time and not before, Owner shall pay to Contractor the whole of the remaining five percent (5%) of said contract price so held back as provided.

The payment of progress payments by the Owner shall not be construed as an absolute acceptance of the work done up to the time of such payments, but the entire work is to be subjected to the inspection and approval of the Owner and subject to whatever inspection and approval may be required by law.

12. CALIFORNIA LABOR CODE. The Contractor is aware of, and hereby agrees to comply with Sections 1770, 1773, 1776, and 1777.5 of the California Labor Code.

13. SUBSTITUTION OF SECURITIES FOR WITHHELD AMOUNTS. Pursuant to Section 22,300 of the Public Contracts Code of the State of California, securities may be substituted for any moneys withheld by a public agency to ensure performance under a contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the public agency, or with a State or Federally-chartered bank as the escrow agent, who shall pay such moneys to the Contractor upon satisfactory completion of the Contract.

Securities eligible for substitution under this section shall include those listed in Section 16430 of the Government Code of the State of California, or bank or savings and loan certificate of deposit.

The Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

Any escrow agreement entered into pursuant to this section shall contain, as a minimum, the following provisions:

- (a) The amount of securities to be deposited;
- (b) The terms and conditions of conversion to cash in case of the default of the Contractor; and
- (c) The termination of the escrow upon completion of the Contract.

14. TRENCHES AND EXCAVATIONS. Should the Contractor be required to dig trenches or other excavations that extend deeper than four (4) feet below the surface, then the following clauses shall apply:

- (a) The Contractor shall promptly, and before the following conditions are disturbed, notify the City in writing of any:
 - (1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law;
 - (2) Subsurface or latent physical conditions at the site differing from those indicated;
 - (3) Unknown physical conditions at the site of any unusual nature different materially from those ordinarily encountered, and generally recognized as inherent in work of the character provided for in the contract.
- (b) The City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ or do involve hazardous waste and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work, shall issue a change order under the procedures described in this contract.
- (c) In the event that a dispute arises between the City and the Contractor whether the conditions materially differ or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of or time required for performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

15. CLAIMS. This clause applies to all Contractor claims of three hundred seventy-five thousand dollars (\$375,000), or less, which arise out of this contract.

- (a) "Claim" means a separate demand by the Contractor for (1) a time extension, (2) payment of money or damages arising from work done by, or on behalf of, the Contractor pursuant to this contract, and payment of which is not otherwise expressly provided for or the Contractor not otherwise entitled to, or (3) an amount the payment of which is disputed by the City.
- (b) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing herein shall extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.
- (c) For claims of less than fifty thousand dollars (\$50,000), the City shall respond in writing to any written claim within forty-five (45) days of receipt of the claim or may request, in writing within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the City may have against the Contractor.
 - (1) If additional information is thereafter required, it shall be requested and provided upon mutual agreement of the City and the Contractor.

- (2) The City's written response to the claim as further documented shall be submitted to the Contractor within fifteen (15) days after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.
- (d) For claims of over fifty thousand dollars (\$50,000) and less than, or equal to, three hundred seventy-five thousand dollars (\$375,000), the City shall respond in writing to all written claims within sixty (60) days of receipt of the claim or may request, in writing within thirty (30) days of receipt of the claim, any additional documentation supporting the claim, or relating to defenses or claims the City may have against the Contractor.
 - (1) If additional information is thereafter required, it shall be requested and provided upon mutual agreement of the City and the Contractor.
 - (2) The City's written response to the claim as further documented shall be submitted to the Contractor within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater
- (e) If the Contractor disputes the City's written response, or the City fails to respond within the time prescribed, the Contractor may so notify the City, in writing, either within fifteen (15) days of receipt of the City's response, or within fifteen (15) days of the City's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the City shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.
- (f) If, following the meet and confer conference, the claim or any portion remains in dispute, the Contractor may file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title I of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the Contractor submits its written claim pursuant to Subdivision (b) until the time the claim is denied, including any period of time utilized by the meet and confer conference.
- (g) The following procedures shall be followed for all civil actions filed to resolve claims subject to this clause:
 - (1) Within sixty (60) days, but no earlier than thirty (30) days following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within fifteen (15) days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.
 - (2) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986 (Article 3 commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil

Procedure shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

- (3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.
- (h) The City shall not fail to pay money as to any portion of a claim which is undisputed, except as otherwise provided in this contract.
- (i) In any suit filed under Section 20104.4, the City shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

IN WITNESS WHEREOF, three (3) identical counterparts of this Contract, each of which shall for all purposes be deemed an original thereof, have been duly executed by the parties hereinabove named, on the day and year first herein written.

ATTEST:

CITY OF MERCED, a Municipal Corporation
(Herein called Owner)

By: _____
Deputy City Clerk

By: _____
City Manager

APPROVED AS TO FORM:

PHASE 1 CONSTRUCTION
(Herein called Contractor)

By: _____
City Attorney

By: _____
Contractor

ACCOUNT DATA:

TAXPAYER I.D. NO: 20-4258971

Project No. **114004**

VENDOR NUMBER: 15960

Project Account Number(s) / Amount

ADDRESS: P.O. Box 665

553-1108-637.65-00-114004 \$755,825.00

Atwater, CA 95301

PHONE: (209) 358-7122

FAX: _____

EMAIL: terry@phase1construction.com

By: _____
Finance Officer Verification

(SEAL)

FIRST AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

THIS FIRST AMENDMENT TO AGREEMENT is made and entered into this ____ day of _____, 2019, by and between the City of Merced, a California Charter Municipal Corporation, whose address of record is 678 West 18th Street, Merced, California 95340, ("City"), and Provost & Pritchard Engineering Group, Inc., a California Corporation, whose address of record is 3341 M Street, Merced California 95348-2714, ("Consultant").

WHEREAS, City is undertaking a project to replace a sewer lift station; and

WHEREAS, City and Consultant have previously entered into an Agreement for Professional Services ("Agreement") dated September 18, 2017; and

WHEREAS, City and Consultant desire to amend the Agreement to modify the scope of services in connection with said project.

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants hereinafter recited, agree as follows:

1. Section 22, "ADDITIONAL WORK," is hereby added to the Agreement to read as follows:

"SECTION 22. ADDITIONAL WORK. Consultant shall perform the additional work outlined in the proposal from Consultant to City dated August 2, 2019, attached hereto as Exhibit "1".

2. Section 23, "ADDITIONAL COMPENSATION," is hereby added to the Agreement to read as follows:

"SECTION 23. ADDITIONAL COMPENSATION. City shall pay to Consultant the not to exceed additional sum of Twenty-Three Thousand Six Hundred Ninety-Four Dollars (\$23,694.00) for the additional work described in the proposal attached hereto as Exhibit "1" and in accordance with the rates set forth on Exhibit "1."

3. Except as herein amended, the Agreement dated September 18, 2017, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this First Amendment to Agreement to be executed on the date first above written.


CITY OF MERCED
A California Charter Municipal
Corporation

BY: _____
City Manager

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Deputy City Clerk

APPROVED AS TO FORM:

BY:  8/23/19
City Attorney Date

ACCOUNT DATA:

BY: _____
Verified by Finance Officer

CONSULTANT
PROVOST & PRITCHARD
ENGINEERING GROUP, INC.,
A California Corporation

BY: Matthew W Kemp
(Signature)

Matthew W. Kemp, P.E.
(Typed Name)

Its: Vice President
(Title)

BY: _____
(Signature)

(Typed Name)

Its: _____
(Title)

Taxpayer I.D. No. 94-2187078

ADDRESS: 3341 M Street
Merced, CA 95348-2714

TELEPHONE: (209) 809-2300

FAX: (209) 809-2290

E-MAIL: dtraina@ppeng.com

August 2, 2019

Joseph Angulo
City of Merced
678 West 18th Street
Merced, CA 95340

**RE: Additional Phase Amendment for Cooper Avenue Lift Station
Job No. 1511-17-003, Phase DES**

Dear Mr. Angulo:

Provost & Pritchard (P&P) has been working with the City of Merced to design a new lift station on Cooper Avenue. In the process of doing so, two separate unexpected issues arose, both affecting the design process and requiring additional work which was outside of the original scope of services. The paragraphs below provide descriptions of the situations and additional work. We have also provided a table with a breakdown of the additional fees to complete the work.

The first situation occurred when it was found that the existing lift station was not on a documented easement. The City requested that Provost & Pritchard investigate, determine how much space was needed, and develop an exhibit showing the proposed easement location. P&P investigated the existing easement, evaluated the space needs and prepared an exhibit showing the easement needed for the proposed lift station.

Additionally, the data given to P&P for the flows into the lift station wasn't representative of the flows needed for design. There were two industries listed that did not flow to the Cooper Avenue lift station. The report had been submitted at the time this was discovered so the design team had to redo the report to correct this oversight. P&P analyzed the new data, revised pump selection including coordination with the pump manufacturer and analyzed the downstream system.

The second situation occurred when the team was notified by Merced Irrigation District (MID) that they had electrical conductors that traversed our site. This discovery required rework of the site and surveying.

MID provided a recorded easement showing the boundaries of their easement. In late July 2018 it was determined that there was a possibility that the conductors were outside of the easement, so the conductors were potholed and located. Information regarding the elevation was also obtained so we could determine if there was a conflict with the crossing between the conductors and force main. P&P sent a field survey crew to accurately locate these utilities so the lift station could be built without interfering with them. The survey data was plotted on the site plan and the conductors did interfere with the lift station and they were outside of the MID easement.

P&P developed three options for dealing with this conflict and presented them to the City. Option 3 was selected by the City which included the need for MID to relocate some of their conductors. The City also indicated that it was MID's desire to have the transformer next to their switchgear. As a result of this a P&P's team laid out the site and needed to split the electrical equipment into

two locations. Ultimately the decision was for the transformer to be inside the fence. The final layout shows this configuration.

The following table presents the associated costs for completing the additional work. We have also attached a detailed spreadsheet with a breakdown of these costs.

Phase DES - Budget Amendment	
Current Budget:	\$97,170
Easement:	\$8,700
MID Conflicts:	\$15,000
New Budget:	\$120,870

The signature below hereby authorizes a change in the time and materials budget for Phase DES:

Please sign, date and return to Dena Traina at Provost & Pritchard Consulting Group by emailing dtraina@ppeng.com.

Client: City of Merced

Provost & Pritchard Engineering Group, Inc.
dba Provost & Pritchard Consulting Group

By:

By:


Name/Title:

Name/Title: Matthew Kemp, PE C66088
Vice President

Date Signed:

Date Signed: August 2, 2019

APPROVED AS TO FORM:


Schuyler Campbell
Dep. City Attorney

COST BREAKDOWN FO CHANGE ORDER CITY OF MERCED
Estimated Staffing Plan and Cost Breakdown



TASK	Principal Engineer IV	Senior Engineer IV	1 man survey	Assistant Technician (II)	Associate Technician (III)	Senior Technician (III)	Associate Technician (IV)	Assistant Engineer (I)	Total Hours	Mileage	Expenses	15%			0%	
												Subtotal Labor	Subtotal Reimb w/Mark Up	Subtotal	Conting.	Total Fee
1 Easement	TRINA	ARMSTRONG	1 man survey	Davis	Williamson	Porter	GUDINO	teVelde	35	0.580		\$3,735	\$0	\$3,735	\$0	\$3,735
2 Revise Basis of Design Report	1	24.9	0	0	0	0	0	0	26			\$4,314	\$0	\$4,314	\$0	\$4,314
3 Project Management	10.5	0	0	0	0	0	0	0	11			\$2,153	\$0	\$2,153	\$0	\$2,153
4 MID Conflicts Survey	1	0	6	6	6	0	0	0	19			\$2,407	\$0	\$2,407	\$0	\$2,407
5 Potholing	1	0	0	0	0	0	0	0	1		1523	\$205	\$1,751	\$1,956	\$0	\$1,956
6 Development & Presentation of 3 Options	4	2	0	0	0	2	4	8	20			\$2,610	\$0	\$2,610	\$0	\$2,610
7 Revised Plans & Specifications	4	8	0	0	0	6	12	24	54			\$6,520	\$0	\$6,520	\$0	\$6,520
8	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
9	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
10	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
11	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
12	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
13	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
14	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
15	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
16	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
17	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
18	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
19	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
20	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
21	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
22 Recoup proposal	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
23 Project Management	0	0	0	0	0	0	0	0	0			\$0	\$0	\$0	\$0	\$0
Total units	21.5	37.9	6	6	6	8	36	44	165	0						
Total \$	\$4,408	\$6,254	\$990	\$540	\$672	\$1,120	\$3,780	\$4,180		\$0	\$1,523	\$21,943	\$1,751		\$0	\$23,694
												\$21,943	\$1,751		\$0	\$23,694



ADMINISTRATIVE REPORT

Agenda Item I.6.

Meeting Date: 10/7/2019

Report Prepared by: Janet German, Secretary, Fire Dept.

SUBJECT: Approval of Professional Services Agreement with Gaetke Medical Corporation and 1582, LLC to Provide Comprehensive Occupational Medical Physicals in an Amount Not to Exceed \$60,000 and Waiving the Competitive Bidding Requirement

REPORT IN BRIEF

Considers entering into a three year agreement with Gaetke Medical Corporation and 1582, LLC for the purpose of providing comprehensive occupational medical physicals of fire suppression personnel and waiving the competitive bidding requirements.

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving a professional services agreement with Gaetke Medical Corporation and 1582, LLC in an amount not to exceed \$60,000, for the purpose of providing comprehensive occupational medical physicals of fire suppression personnel for a three year term, with a one year renewal option; and,
- B. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents; and,
- C. Waiving the competitive bidding requirements.

ALTERNATIVES

- 1. Approve as recommended by staff; or,
- 2. Approve, subject to conditions other than as recommended by staff; or,
- 3. Deny; or,
- 4. Refer to staff for reconsideration of specific items; or,
- 5. Continue to a future City Council meeting.

AUTHORITY

CCR §5192 Hazardous Waste Operations and Emergency Response
29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
29 CFR 1910.134 Respiratory Protection
29 CFR 1910.95, Occupational Noise Exposure
29 CFR 1910.1030, Bloodborne Pathogens
NFPA 1582 Standard on Comprehensive Occupational Medical Program for Fire Departments
NFPA 1583 Standard on Health Related Fitness Programs for Fire Department Members

Merced Fire Department Policy 1023 Wellness and Fitness Program
Charter of the City of Merced, Section 200
MMC 3.04.210 Exemptions from Competitive Bidding

CITY COUNCIL PRIORITIES

Public Safety as provided for in the 2019-20 Adopted Budget.

DISCUSSION

Gaetke Medical Corporation and 1582, LLC specialize in providing mobile NFPA medical physical examinations on site as well as providing the examinations at one of Merced's fire stations on a shift rotation basis, thereby eliminating logistical, fiscal and scheduling concerns, all while improving/enhancing our employee physical examinations and increasing efficiencies.

Background

Firefighting is physically taxing, dangerous, stressful, and firefighters face extreme physical demands on the job with their greatest dangers being their safety and health.

Nearly half of all firefighter fatalities occur as a result of medical emergencies. The severe physical nature of firefighting and the harsh environmental conditions under which firefighters must perform their duties dramatically increases their susceptibility to stress and overexertion. Many of these deaths could potentially be avoided through early detection of underlying medical conditions by participation in an annual routine medical examination, which includes commonplace non-invasive medical testing.

The National Fire Protection Association (NFPA) is a non-profit organization, advocating for the elimination of death, injury, property, and economic loss due to fire, electrical and related hazards by the development of codes and standards. To reduce the risk of heart attacks and sudden cardiac arrest among firefighters, the NFPA has developed the NFPA 1582 guideline entitled "Standard on Medical Requirements for Fire Fighters and Information for Fire Department Physicians". NFPA 1582 recommends a thorough examination to include vision testing, audiometry, pulmonary function testing, a complete blood count, urinalysis, and biochemical (blood) test battery be conducted on a periodic basis according to the age of the fire fighter. Currently, firefighter pre-employment and annual medical/physical exams do not meet this guideline.

The City of Merced Fire Department is not legally required to follow NFPA 1582's guidelines/standards on medical requirement for persons performing firefighting tasks, however, the department has an obligation to its members to implement preventative measures to reduce the risk of on the job heart attacks and sudden cardiac arrest amongst its firefighters.

Therefore, like many other fire suppression agencies, to improve the health and wellness, and fitness of its firefighters, the department strives to protect its member's health and wellness by using its interpretation of NFPA 1582 as a foundational starting point for its annual medical examinations. Full implementation of NFPA 1582's guidelines would require formal agreements (Memorandum of Understanding, Side Letters, Policies, etc.) with the City, Labor Group and City Council's adoption of

NFPA's standards as well identifying as a funding source for the cost of full implementation.

Any healthcare provider performing the pre-employment and annual medical/physical exams needs to be intimately familiar NFPA 1582 and other applicable standards and to be able to competently interpret and execute them. The provider should also understand the physiological demands of firefighting and the resulting health risks that research demonstrates firefighters are most prone to. The department needs to be confident in the provider's ability to make informed, correct, decisions that may influence careers and impact its ability to safely provide life saving service to Merced.

The best way to diminish the effects of any diseases, illnesses or injuries is to detect them as early as possible. This is especially true for firefighters who, in many cases, are at a greater risk for certain diseases, illnesses, and injuries than the general population.

A copy of NFPA 1582 has been attached for your review. Put simply, NFPA 1582's medical guidelines for the physical examination are extensive and far more comprehensive than the exams currently being performed. Additionally, as noted earlier, due to the intricacies of NFPA 1582, the medical provider needs intimate knowledge to properly apply the exam. Due to the esoteric guidelines, it becomes readily apparent that a specialist is needed to perform the comprehensive medical examinations. Therefore, the fire department is requesting to exercise the exemption by competitive bidding process and to execute a professional services agreement with Gaetke Medical Corporation and 1582, LLC for its annual occupational medical evaluation of candidates and current public safety employees consistent with the fire department's recommendation of NFPA 1582, 29 CFR 1910.120, and State of California Regulations CCR §5192.

The fire department has researched the use of its current medical provider and found that the services are not cost effective. Currently, employees are required to go offsite to a physician's office in Merced, which causes a minimum of three employee's to be put out of service or on delayed service when responding to emergency calls. Additionally, they physician's office does not possess the resources to offer all of the needed services at one location and they are not specialized in providing medical examinations for firefighters.

The fire department desires to enter into an agreement with Gaetke Medical Corporation and 1582, LLC. ARC Health & Wellness is the Management Services Organization for Gilbert, Gaetke and Associates of Nevada, MD, LTD, a Nevada Corporation. Gaetke Medical Corporation was established as a separate California Professional Corporation to serve the CA clients due to the strict corporate practice of medicine laws in the State of CA. 1582, LLC is the Management Services Organization for Gaetke Medical Corporation and organized to service clients in the State of CA. 1582, LLC was founded in 2018 focusing exclusively on NFPA 1582 medical exams for out-of-state Nevada Fire Departments. Any California clients will fall under the Gaetke Medical Corporation, which will be managed by 1582, LLC as per the advice of their legal counsel.

In summary, the recruitment and retention of the best qualified and physically fit workforce is one of the top priorities of the City of Merced. The use of preplacement and comprehensive medical exams performed by a specialized physician for physically demanding occupations such as firefighting are good business practices and are also recommended by NFPA 1582 and NFPA 1583.

IMPACT ON CITY RESOURCES

No appropriation of funds is needed. Funding is available within the FY2019-20 approved budget.. Annually, funds will be requested for all future fiscal years applicable to the agreement and any subsequent renewals.

ATTACHMENTS

1. CCR §5192 Hazardous Waste Operations and Emergency Response
2. 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
3. 29 CFR 1910.134 Respiratory Protection
4. 29 CFR 1910.95, Occupational Noise Exposure
5. 29 CFR 1910. 1030, Bloodborne Pathogens
6. NFPA 1582 Standard on Comprehensive Occupational Medical Program for Fire Departments
7. NFPA 1583 Standard on Health Related Fitness Programs for Fire Department Members
8. Merced Fire Department Policy 1023 Wellness and Fitness Program
9. Agreement for Professional Services
10. Client List

This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at https://www.dir.ca.gov/od_pub/disclaimer.html.

Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 109. Hazardous Substances and Processes

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§5192. Hazardous Waste Operations and Emergency Response, Appendix C

Appendices to 5192

Hazardous Waste Operations and Emergency Response

NOTE: The following appendices serve as non-mandatory guidelines to assist employees and employers in complying with the appropriate requirements of this section. However, subsection 5192(g) makes mandatory in certain circumstances the use of Level A and Level B PPE protection.

Compliance Guidelines

(Non-Mandatory)

1. Occupational Safety and Health Program: Each hazardous waste site clean-up effort will require an occupational safety and health program headed by the site coordinator or the employer's representative. The purpose of the program will be the protection of employees at the site and will be an extension of the employer's overall safety and health program. The program will need to be developed before work begins on the site and implemented as work proceeds as stated in subsection (b). The program is to facilitate coordination and communication of safety and health issues among personnel responsible for the various activities which will take place at the site. The program will provide the means for identifying and controlling worksite hazards and the means for monitoring program effectiveness. It will provide the overall means for planning and implementing the needed safety and health training and job orientation of employees, who will be working at the site. The program will need to cover the responsibilities and authority of the site coordinator or the employer's manager on the site for the safety and health of employees at the site, and the relationships with contractors or support services as to what each employer's safety and health responsibilities are for their employees on the site. Each contractor on the site needs to have its own safety and health program so structured that it will smoothly interface with the program of the site coordinator or principal contractor.

Also those employers involved with treating, storing or disposal of hazardous waste as covered in subsection (p) must have implemented a safety and health program for their employees. This program is to include the hazard communication program required in subsection (p)(1) and the training required in subsections (p)(7) and (p)(8) as parts of the employer's comprehensive overall safety and health program. This program is to be in writing.

Each site or workplace safety and health program will need to include the following: (1) Policy statements of the line of authority and accountability for implementing the program, the objectives of the program, and the role of

the site safety and health supervisor or manager and staff; (2) means or methods for the development of procedures for identifying and controlling workplace hazards at the site; (3) means or methods for the development and communication to employees of the various plans, work rules, standard operating procedures and practices that pertain to individual employees and supervisors; (4) means for the training of supervisors and employees to develop the needed skills and knowledge to perform their work in a safe and healthful manner; (5) means to anticipate and prepare for emergency situations; and (6) means for obtaining information feedback to aid in evaluating the program and for improving the effectiveness of the program. The management and employees should be trying continually to improve the effectiveness of the program thereby enhancing the protection being afforded those working on the site.

Accidents on the site should be investigated to provide information on how such occurrences can be avoided in the future. When injuries or illnesses occur on the site or workplace, they will need to be investigated to determine what needs to be done to prevent this incident from occurring again. Such information will need to be used as feedback on the effectiveness of the program and the information turned into positive steps to prevent any reoccurrence. Receipt of employee suggestions or complaints relating to safety and health issues involved with site or workplace activities is also a feedback mechanism that can be used effectively to improve the program and may serve in part as an evaluative tool(s).

For the development and implementation of the program to be the most effective, professional safety and health personnel should be used. Personnel such as, but not necessarily limited to Certified Safety Professionals, Board Certified Industrial Hygienists, or Registered Professional Safety Engineers are good examples of professional stature for safety and health managers who will administer the employer's program.

2. Training: The training programs for employees subject to the requirements of subsection (e) of this standard should address: The safety and health hazards employees should expect to find on hazardous waste clean-up sites; what control measures or techniques are effective for those hazards; what monitoring procedures are effective in characterizing exposure levels; what makes an effective employer's safety and health program; what a site safety and health plan should include; hands on training with personal protective equipment and clothing they may be expected to use; the contents of the OSHA standard relevant to the employee's duties and function; and employee's responsibilities under OSHA and other regulations. Supervisors will need training in their responsibilities under the safety and health program and its subject areas such as the spill containment program, the personal protective equipment program, the medical surveillance program, the emergency response plan, and other areas.

The training programs for employees subject to the requirements of subsection (p) of this standard should address: The employer's safety and health program elements impacting employees; the hazard communication program; the medical surveillance program; the hazards and the controls for such hazards that employees need to know for their job duties and functions. All require annual refresher training.

The training programs for employees covered by the requirements of subsection (q) of this standard should address those competencies required for the various levels of response such as: The hazards associated with hazardous substances; hazard identification and awareness; notification of appropriate persons; the need for and use of personal protective equipment including respirators; the decontamination procedures to be used; preplanning activities for hazardous substance incidents including the emergency response plan; company standard operating procedures for hazardous substance emergency responses; the use of incident command system; and other subjects. Hands-on training should be stressed whenever possible. Critiques done after an incident which include an evaluation of what worked and what did not, and how could the incident be better handled the next time may be counted as training time.

For hazardous materials specialists (usually members of hazardous materials teams), the training should address the care, use, and/or testing of chemical protective clothing including totally encapsulating suits; the medical surveillance program; the standard operating procedures for the hazardous materials team including the use of plugging and patching equipment; and other subject areas.

Officers and leaders who may be expected to be in charge at an incident should be fully knowledgeable of their company's incident command system. They should know where and how to obtain additional assistance and be familiar with the local district's emergency response plan and the state emergency response plan.

Specialist employees such as technical experts, medical experts, or environmental experts that work with hazardous materials in their regular jobs, who may be sent to the incident scene by the shipper, manufacturer, or governmental agency to advise and assist the person in charge of the incident should have training on an annual basis. Their training should include the care and use of personal protective equipment (PPE) including respirators; knowledge of the incident command system and how they are to relate to it; and those areas needed to keep them current in their respective field as it relates to safety and health involving specific hazardous substances.

Those skilled support personnel, such as employees who work for public works departments or equipment operators who operate bulldozers, sand trucks, backhoes, etc., who may be called to the incident scene to provide emergency support assistance, should have at least a safety and health briefing before entering the area of potential or actual exposure. These skilled support personnel, who have not been a part of the emergency response plan and do not meet the training requirements, should be made aware of the hazards they face and should be provided all necessary protective clothing and equipment required for their tasks.

There are two National Fire Protection Association standards, NFPA 472--Standard for Professional Competence of Responders to Hazardous Material Incidents and NFPA 471--Recommended Practice for Responding to Hazardous Material Incidents, which are excellent resource documents to aid fire departments and other emergency response organizations in developing their training program materials. NFPA 472 provides guidance on the skills and knowledge needed for first responder awareness level, first responder operations level, HAZMAT technicians, and HAZMAT specialists. It also offers guidance for the officer corps who will be in charge of hazardous substance incidents.

3. Decontamination: Decontamination procedures should be tailored to the specific hazards of the site and may vary in complexity and number of steps, depending on the level of hazard and the employee's exposure to the hazard. Decontamination procedures and PPE decontamination methods will vary depending upon the specific substance, since one procedure or method may not work for all substances. Evaluation of decontamination methods and procedures should be performed, as necessary, to assure that employees are not exposed to hazards by reusing PPE. References in Appendix D may be used for guidance in establishing an effective decontamination program. In addition, the U.S. Coast Guard's Manual, Policy Guidance for Response to Hazardous Chemical Releases, U.S. Department of Transportation, Washington, DC (COMDTINST M16465.30) is a good reference for establishing an effective decontamination program.

4. Emergency response plans: The state, along with designated districts within the state, will be developing or have developed local emergency response plans. These state and district plans should be utilized in the emergency response plans called for in this standard. Each employer should assure that its emergency response plan is compatible with the local plan. The major reference being used to aid in developing the state and local district plans is the Hazardous Materials Emergency Planning Guide, NRT-1.

The current Emergency Response Guidebook from the U.S. Department of Transportation, CMA's CHEMTREC, and the Fire Service Emergency Management Handbook may also be used as resources.

Employers involved with treatment, storage, and disposal facilities for hazardous waste, which have the required contingency plan called for by their permit, would not need to duplicate the same planning elements. Those items of the emergency response plan that are properly addressed in the contingency plan may be substituted into the emergency response plan required in 8 CCR 5192 or otherwise kept together for employer and employee use.

5. Personal protective equipment programs: The purpose of personal protective clothing and equipment (PPE) is to shield or isolate individuals from the chemical, physical, and biologic hazards that may be encountered at a hazardous substance site.

As discussed in Appendix B, no single combination of protective equipment and clothing is capable of protecting against all hazards. Thus PPE should be used in conjunction with other protective methods and its effectiveness evaluated periodically. The use of PPE can itself create significant worker hazards, such as heat stress, physical and psychological stress, and impaired vision, mobility, and communication. For any given situation, equipment and clothing should be selected that provide an adequate level of protection. However, over-protection, as well as under-protection, can be hazardous and should be avoided where possible.

Two basic objectives of any PPE program should be to protect the wearer from safety and health hazards, and to prevent injury to the wearer from incorrect use and/or malfunction of the PPE. To accomplish these goals, a comprehensive PPE program should include hazard identification; medical monitoring; environmental surveillance; selection, use, maintenance, and decontamination of PPE; and its associated training.

The written PPE program should include policy statements, procedures, and guidelines. Copies should be made available to all employees, and a reference copy should be made available at the worksite. Technical data on equipment, maintenance manuals, relevant regulations, and other essential information should also be collected and maintained.

6. Incident command system (ICS): Subsection 5192(q)(3)(B) requires the implementation of an ICS. The ICS is an organized approach to effectively control and manage operations at an emergency incident. The individual in charge of the ICS is the senior official responding to the incident. The ICS was originated by the California fire service. During large complex fires involving several companies and many pieces of apparatus, a command post would be established. This enabled one individual to be in charge of managing the incident, rather than having several officers from different companies making separate, and sometimes conflicting, decisions. The individual in charge of the command post would delegate responsibility for performing various tasks to subordinate officers. Additionally, all communications were routed through the command post to reduce the number of radio transmissions and eliminate confusion. However, strategy, tactics, and all decisions were made by one individual.

The ICS is also implemented for emergency response to all incidents, both large and small, that involve hazardous substances.

For a small incident, the individual in charge of the ICS may perform many tasks of the ICS. There may not be any, or little, delegation of tasks to subordinates. For example, in response to a small incident, the individual in charge of the ICS, in addition to normal command activities, may become the safety officer.

To illustrate the operation of the ICS, the following scenario might develop during a small incident, such as an overturned tank truck with a small leak of flammable liquid.

The first responding senior officer would implement and take command of the ICS. That person would size-up the incident and determine if additional personnel and apparatus were necessary; would determine what actions to take to control the leak; and determine the proper level of personal protective equipment. If additional assistance is not needed, the individual in charge of the ICS would implement actions to stop and control the leak using the fewest number of personnel that can effectively accomplish the tasks. The individual in charge of the ICS then would designate himself as the safety officer and two other employees as a back-up in case rescue may become necessary. In this scenario, decontamination procedures may not be necessary.

A large complex incident may require many employees and difficult, time-consuming efforts to control. In these situations, the individual in charge of the ICS will want to delegate different tasks to subordinates in order to maintain a span of control that will keep the number of subordinates that are reporting, to a manageable level.

Delegation of tasks at large incidents may be by location, where the incident scene is divided into sectors, and subordinate officers coordinate activities within the sector that they have been assigned.

Delegation of tasks can also be by function. Five major functional areas (Incident Command, Operations, Planning, Logistic, and Finance) are activated at major incidents addressing such issues as: medical services;

evacuation; water supply; resources (equipment, apparatus); media relations; safety; and site control (integrate activities with police for crowd and traffic control). Also for a large incident, the individual in charge of the ICS will designate several employees as back-up personnel; and a number of safety officers to monitor conditions and recommend safety precautions.

Therefore, no matter what size or complexity an incident may be, by implementing an ICS there will be one individual in charge who makes the decisions and gives directions; and, all actions, and communications are coordinated through one central point of command. Such a system should reduce confusion, improve safety, organize and coordinate actions, and should facilitate effective management of the incident.

The details of the ICS as well as several different scenarios are incorporated into the California Hazardous Material Incident Contingency Plan (HMICP) developed by the State's Office of Emergency Services (OES). The HMICP is written primarily for agencies of the State of California to guide them in understanding the state's role in hazardous material emergencies. Secondly, the HMICP is anticipated to be utilized by local and federal governments, and private organizations to clarify their roles and relationships concerning hazardous material emergencies. This plan should be used for pre-incident planning; or during a hazardous material emergency for guidance and clarification where a state agency has responsibility (i.e., State Agency Coordination) or jurisdiction (i.e., on the right of way of a state highway), or the incident exceeds local resources beyond those of the SARA Title III Regional Plan.

7. Site Safety and Control Plans: The safety and security of response personnel and others in the area of an emergency response incident site should be of primary concern to the incident commander. The use of a site safety and control plan could greatly assist those in charge of assuring the safety and health of employees on the site.

A comprehensive site safety and control plan should include the following: Summary analysis of hazards on the site and a risk analysis of those hazards; site map or sketch; site work zones (clean zone, transition or decontamination zone, work or hot zone); use of the buddy system; site communications; command post or command center; standard operating procedures and safe work practices; medical assistance and triage area; hazard monitoring plan (air contaminant monitoring, etc.); decontamination procedures and area; and other relevant areas. This plan should be a part of the employer's emergency response plan or an extension of it to the specific site.

8. Medical surveillance program: Workers handling hazardous substances may be exposed to toxic chemicals, safety hazards, biologic hazards, and radiation. Therefore, a medical surveillance program is essential to assess and monitor worker's health and fitness for employment in hazardous waste operations and during the course of work; to provide emergency and other treatment as needed; and to keep accurate records for future reference.

The Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities developed by the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (Federal OSHA), the U.S. Coast Guard (USCG), and the Environmental Protection Agency (EPA), October 1985, provides an excellent example of the types of medical testing that should be done as part of a medical surveillance program.

9. New Technology and Spill Containment Programs: Where hazardous substances may be released by spilling from a container that will expose employees to the hazards of the material, the employer will need to implement a program to contain and control the spilled material. Diking and ditching, as well as use of absorbents like diatomaceous earth, are traditional techniques which have proven to be effective over the years. However, in recent years new products have come into the marketplace, the use of which complement and increase the effectiveness of these traditional methods. These new products also provide emergency responders and other with additional tools or agents to use to reduce the hazards of spilled materials.

These agents can be rapidly applied over a large area and can be uniformly applied or otherwise can be used to build a small dam, thus improving the workers' ability to control spilled material. These application techniques enhance the intimate contact between the agent and the spilled material allowing for the quickest effect by the

agent or quickest control of the spilled material. Agents are available to solidify liquid spilled materials, to suppress vapor generation from spilled materials, and to do both. Some special agents, which when applied as recommended by the manufacturer, will react in a controlled manner with the spilled material to neutralize acids or caustics, or greatly reduce the level of hazard of the spilled material.

There are several modern methods and devices for use by emergency response personnel or others involved with spill control efforts to safely apply spill control agents to control spilled material hazards. These include portable pressurized applicators similar to hand-held portable fire extinguishing devices, and nozzle and hose systems similar to portable fire fighting foam systems which allow the operator to apply the agent without having to come into contact with the spilled material. The operator is able to apply the agent to the spilled material from a remote position.

The solidification of liquids provides for rapid containment and isolation of hazardous substance spills. By directing the agent at run-off points or at the edges of the spill, the reactant solid will automatically create a barrier to slow or stop the spread of the material. Clean-up of hazardous substances is greatly improved when solidifying agents, acid or caustic neutralizers, or activated carbon adsorbents are used. Properly applied, these agents can totally solidify liquid hazardous substances or neutralize or absorb them, which results in materials which are less hazardous and easier to handle, transport, and dispose of. The concept of spill treatment, to create less hazardous substances, will improve the safety and level of protection of employees working at spill clean-up operations or emergency response operations to spills of hazardous substances.

The use of vapor suppression agents for volatile hazardous substances, such as flammable liquids and those substances which present an inhalation hazard, is important for protecting workers. The rapid and uniform distribution of the agent over the surface of the spilled material can provide quick vapor knockdown. There are temporary and long-term foam-type agents which are effective on vapors and dusts, and activated carbon adsorption agents which are effective for vapor control and soaking-up of the liquid. The proper use of hose lines or hand-held portable pressurized applicators provides good mobility and permits the worker to deliver the agent from a safe distance without having to step into the untreated spilled material. Some of these systems can be recharged in the field to provide coverage of larger spill areas than the design limits of a single charged applicator unit. Some of the more effective agents can solidify the liquid flammable hazardous substances and at the same time elevate the flashpoint above 14°F so the resulting substance may be handled as a nonhazardous waste material if it meets the U.S. Environmental Protection Agency's 40 CFR Part 261 requirements (See particularly § 261.21).

All workers performing hazardous substance spill control work are expected to wear the proper protective clothing and equipment for the materials present and to follow the employer's established standard operating procedures for spill control. All involved workers need to be trained in the established operating procedures; in the use and care of spill control equipment; and in the associated hazards and control of such hazards of spill containment work.

These new tools and agents are the things that employers will want to evaluate as part of their new technology program. The treatment of spills of hazardous substances or wastes at an emergency incident as part of the immediate spill containment and control efforts is sometimes acceptable to EPA and a permit exception is described in 40 CFR § 264.1(g)(8) and 265.1(c)(11).

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By Standard Number / 1910.120 - Hazardous waste operations and emergency response.

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- **Part Number:** 1910
 - **Part Number Title:** Occupational Safety and Health Standards
 - **Subpart:** 1910 Subpart H
 - **Subpart Title:** Hazardous Materials
 - **Standard Number:** 1910.120
 - **Title:** Hazardous waste operations and emergency response.
 - **GPO Source:** e-CFR
-

1910.120(a)

Scope, application, and definitions. --

1910.120(a)(1)

Scope. This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards:

1910.120(a)(1)(i)

Clean-up operations required by a governmental body, whether Federal, state local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority Site List (NPL), state priority site lists, sites recommended for the EPA NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained);

1910.120(a)(1)(ii)

Corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 *et seq*);

1910.120(a)(1)(iii)

Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;

1910.120(a)(1)(iv)

Operations involving hazardous waste that are conducted at treatment, storage, disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations; and

1910.120(a)(1)(v)

Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.

1910.120(a)(2)

Application.

1910.120(a)(2)(i)

All requirements of Part 1910 and Part 1926 of Title 29 of the Code of Federal Regulations apply pursuant to their terms to hazardous waste and emergency response operations whether covered by this section or not. If there is a conflict or overlap, the provision more protective of employee safety and health shall apply without regard to 29 CFR 1910.5(c)(1).

1910.120(a)(2)(ii)

Hazardous substance clean-up operations within the scope of paragraphs (a)(1)(i) through (a)(1)(iii) of this section must comply with all paragraphs of this section except paragraphs (p) and (q).

1910.120(a)(2)(iii)

Operations within the scope of paragraph (a)(1)(iv) of this section must comply only with the requirements of paragraph (p) of this section.

*Notes and Exceptions:***1910.120(a)(2)(iii)(A)**

All provisions of paragraph (p) of this section cover any treatment, storage or disposal (TSD) operation regulated by 40 CFR parts 264 and 265 or by state law authorized under RCRA, and required to have a permit or interim status from EPA pursuant to 40 CFR 270.1 or from a state agency pursuant to RCRA.

1910.120(a)(2)(iii)(B)

Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR parts 264, 265 and 270 ("excepted employers") are not covered by paragraphs (p)(1) through (p)(7) of this section. Excepted employers who are required by the EPA or state agency to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by paragraph (p)(8) of this section, and cannot be exempted by (p)(8)(i) of this section.

1910.120(a)(2)(iii)(C)

If an area is used primarily for treatment, storage or disposal, any emergency response operations in that area shall comply with paragraph (p) (8) of this section. In other areas not used primarily for treatment, storage, or disposal, any emergency response operations shall comply with paragraph (q) of this section. Compliance with the requirements of paragraph (q) of this section shall be deemed to be in compliance with the requirements of paragraph (p)(8) of this section.

1910.120(a)(2)(iv)

Emergency response operations for releases of, or substantial threats of releases of, hazardous substances which are not covered by paragraphs (a)(1)(i) through (a)(1)(iv) of this section must only comply with the requirements of paragraph (q) of this section.

1910.120(a)(3)*Definitions --*

Buddy system means a system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide rapid assistance to employees in the event of an emergency.

Clean-up operation means an operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared-up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment.

Decontamination means the removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

Emergency response or responding to emergencies means a response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses within the scope of this standard. Responses to releases of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

Facility means (A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any water-borne vessel.

Hazardous materials response (HAZMAT) team means an organized group of employees, designated by the employer, who are expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. The team members perform responses to releases or potential releases of hazardous substances for the purpose of control or stabilization of the incident. A HAZMAT team is not a fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.

Hazardous substance means any substance designated or listed under (A) through (D) of this definition, exposure to which results or may result in adverse effects on the health or safety of employees:

[A] Any substance defined under section 103(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (42 U.S.C. 9601).

[B] Any biologic agent and other disease causing agent which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring.

[C] Any substance listed by the U.S. Department of Transportation as hazardous materials under 49 CFR 172.101 and appendices; and

[D] Hazardous waste as herein defined.

Hazardous waste means --

[A] A waste or combination of wastes as defined in 40 CFR 261.3, or

[B] Those substances defined as hazardous wastes in 49 CFR 171.8.

Hazardous waste operation means any operation conducted within the scope of this standard.

Hazardous waste site or *Site* means any facility or location within the scope of this standard at which hazardous waste operations take place.

Health hazard means a chemical or a pathogen where acute or chronic health effects may occur in exposed employees. It also includes stress due to temperature extremes. The term *health hazard* includes chemicals that are classified in accordance with the Hazard Communication Standard, 29 CFR 1910.1200, as posing one of the following hazardous effects: Acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); aspiration toxicity or simple asphyxiant. (See Appendix A to § 1910.1200—Health Hazard Criteria (Mandatory) for the criteria for determining whether a chemical is classified as a health hazard.)

IDLH or *Immediately dangerous to life or health* means an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would interfere with an individual's ability to escape from a dangerous atmosphere.

Oxygen deficiency means that concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

Permissible exposure limit means the exposure, inhalation or dermal permissible exposure limit specified in 29 CFR Part 1910, Subparts G and Z.

Published exposure level means the exposure limits published in "NIOSH Recommendations for Occupational Health Standards" dated 1986, which is incorporated by reference as specified in § 1910.6, or if none is specified, the exposure limits published in the standards specified by the American Conference of Governmental Industrial Hygienists in their publication "Threshold Limit Values and Biological Exposure Indices for 1987-88" dated 1987, which is incorporated by reference as specified in § 1910.6.

Post emergency response means that portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the site has begun. If post emergency response is performed by an employer's own employees who were part of the initial emergency response, it is considered to be part of the initial response and not post emergency response. However, if a group of an employer's own employees, separate from the group providing initial response, performs the clean-up operation, then the separate group of employees would be considered to be performing post-emergency response and subject to paragraph (q)(11) of this section.

Qualified person means a person with specific training, knowledge and experience in the area for which the person has the responsibility and the authority to control.

Site safety and health supervisor (or official) means the individual located on a hazardous waste site who is responsible to the employer and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

Small quantity generator means a generator of hazardous wastes who in any calendar month generates no more than 1,000 kilograms (2,205) pounds of hazardous waste in that month.

Uncontrolled hazardous waste site means an area identified as an uncontrolled hazardous waste site by a governmental body, whether Federal, state, local or other where an accumulation of hazardous substances creates a threat to the health and safety of individuals or the environment or both. Some sites are found on public lands such as those created by former municipal, county or state landfills where illegal or poorly managed waste disposal has taken place. Other sites are found on private property, often belonging to generators or former generators of hazardous substance wastes. Examples of such sites include, but are not limited to, surface impoundments, landfills, dumps, and tank or drum farms. Normal operations at TSD sites are not covered by this definition.

1910.120(b)

Safety and health program.

NOTE TO (b): Safety and health programs developed and implemented to meet other federal, state, or local regulations are considered acceptable in meeting this requirement if they cover or are modified to cover the topics required in this paragraph. An additional or separate safety and health program is not required by this paragraph.

1910.120(b)(1)

General.

1910.120(b)(1)(i)

Employers shall develop and implement a written safety and health program for their employees involved in hazardous waste operations. The program shall be designed to identify, evaluate, and control safety and health hazards, and provide for emergency response for hazardous waste operations.

1910.120(b)(1)(ii)

The written safety and health program shall incorporate the following:

1910.120(b)(1)(ii)(A)

An organizational structure;

1910.120(b)(1)(ii)(B)

A comprehensive workplan;

1910.120(b)(1)(ii)(C)

A site-specific safety and health plan which need not repeat the employer's standard operating procedures required in paragraph (b)(1)(ii)(F) of this section;

1910.120(b)(1)(ii)(D)

The safety and health training program;

1910.120(b)(1)(ii)(E)

The medical surveillance program;

1910.120(b)(1)(ii)(F)

The employer's standard operating procedures for safety and health; and

1910.120(b)(1)(ii)(G)

Any necessary interface between general program and site specific activities.

1910.120(b)(1)(iii)

Site excavation. Site excavations created during initial site preparation or during hazardous waste operations shall be shored or sloped as appropriate to prevent accidental collapse in accordance with Subpart P of 29 CFR Part 1926.

1910.120(b)(1)(iv)

Contractors and sub-contractors. An employer who retains contractor or sub-contractor services for work in hazardous waste operations shall inform those contractors, sub-contractors, or their representatives of the site emergency response procedures and any potential fire, explosion, health, safety or other hazards of the hazardous waste operation that have been identified by the employer's information program.

1910.120(b)(1)(v)

Program availability. The written safety and health program shall be made available to any contractor or subcontractor or their representative who will be involved with the hazardous waste operation; to employees; to employee designated representatives; to OSHA personnel, and to personnel of other Federal, state, or local agencies with regulatory authority over the site.

1910.120(b)(2)

Organizational structure part of the site program. --

1910.120(b)(2)(i)

The organizational structure part of the program shall establish the specific chain of command and specify the overall responsibilities of supervisors and employees. It shall include, at a minimum, the following elements:

1910.120(b)(2)(i)(A)

A general supervisor who has the responsibility and authority to direct all hazardous waste operations.

1910.120(b)(2)(i)(B)

A site safety and health supervisor who has the responsibility and authority to develop and implement the site safety and health plan and verify compliance.

1910.120(b)(2)(i)(C)

All other personnel needed for hazardous waste site operations and emergency response and their general functions and responsibilities.

1910.120(b)(2)(i)(D)

The lines of authority, responsibility, and communication.

1910.120(b)(2)(ii)

The organizational structure shall be reviewed and updated as necessary to reflect the current status of waste site operations.

1910.120(b)(3)

Comprehensive workplan part of the site program. The comprehensive workplan part of the program shall address the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives.

1910.120(b)(3)(i)

The comprehensive workplan shall address anticipated clean-up activities as well as normal operating procedures which need not repeat the employer's procedures available elsewhere.

1910.120(b)(3)(ii)

The comprehensive workplan shall define work tasks and objectives and identify the methods for accomplishing those tasks and objectives.

1910.120(b)(3)(iii)

The comprehensive workplan shall establish personnel requirements for implementing the plan.

1910.120(b)(3)(iv)

The comprehensive workplan shall provide for the implementation of the training required in paragraph (e) of this section.

1910.120(b)(3)(v)

The comprehensive workplan shall provide for the implementation of the required informational programs required in paragraph (i) of this section.

1910.120(b)(3)(vi)

The comprehensive workplan shall provide for the implementation of the medical surveillance program described in paragraph (f) of this section.

1910.120(b)(4)

Site-specific safety and health plan part of the program. --

1910.120(b)(4)(i)

General. The site safety and health plan, which must be kept on site, shall address the safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection.

1910.120(b)(4)(ii)

Elements. The site safety and health plan, as a minimum, shall address the following:

1910.120(b)(4)(ii)(A)

A safety and health risk or hazard analysis for each site task and operation found in the workplan.

1910.120(b)(4)(ii)(B)

Employee training assignments to assure compliance with paragraph (e) of this section.

1910.120(b)(4)(ii)(C)

Personal protective equipment to be used by employees for each of the site tasks and operations being conducted as required by the personal protective equipment program in paragraph (g)(5) of this section.

1910.120(b)(4)(ii)(D)

Medical surveillance requirements in accordance with the program in paragraph (f) of this section.

1910.120(b)(4)(ii)(E)

Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment to be used.

1910.120(b)(4)(ii)(F)

Site control measures in accordance with the site control program required in paragraph (d) of this section.

1910.120(b)(4)(ii)(G)

Decontamination procedures in accordance with paragraph (k) of this section.

1910.120(b)(4)(ii)(H)

An emergency response plan meeting the requirements of paragraph (l) of this section for safe and effective responses to emergencies, including the necessary PPE and other equipment.

1910.120(b)(4)(ii)(I)

Confined space entry procedures.

1910.120(b)(4)(ii)(J)

A spill containment program meeting the requirements of paragraph (j) of this section.

1910.120(b)(4)(iii)

Pre-entry briefing. The site specific safety and health plan shall provide for pre-entry briefings to be held prior to initiating any site activity, and at such other times as necessary to ensure that employees are apprised of the site safety and health plan and that this plan is being followed. The information and data obtained from site characterization and analysis work required in paragraph (c) of this section shall be used to prepare and update the site safety and health plan.

1910.120(b)(4)(iv)

Effectiveness of site safety and health plan. Inspections shall be conducted by the site safety and health supervisor or, in the absence of that individual, another individual who is knowledgeable in occupational safety and health, acting on behalf of the employer as necessary to determine the effectiveness of the site safety and health plan. Any deficiencies in the effectiveness of the site safety and health plan shall be corrected by the employer.

1910.120(c)

Site characterization and analysis --

1910.120(c)(1)

General. Hazardous waste sites shall be evaluated in accordance with this paragraph to identify specific site hazards and to determine the appropriate safety and health control procedures needed to protect employees from the identified hazards.

1910.120(c)(2)

Preliminary evaluation. A preliminary evaluation of a site's characteristics shall be performed prior to site entry by a qualified person in order to aid in the selection of appropriate employee protection methods prior to site entry. Immediately after initial site entry, a more detailed evaluation of the site's specific characteristics shall be

performed by a qualified person in order to further identify existing site hazards and to further aid in the selection of the appropriate engineering controls and personal protective equipment for the tasks to be performed.

1910.120(c)(3)

Hazard identification. All suspected conditions that may pose inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH) or other conditions that may cause death or serious harm shall be identified during the preliminary survey and evaluated during the detailed survey. Examples of such hazards include, but are not limited to, confined space entry, potentially explosive or flammable situations, visible vapor clouds, or areas where biological indicators such as dead animals or vegetation are located.

1910.120(c)(4)

Required information. The following information to the extent available shall be obtained by the employer prior to allowing employees to enter a site:

1910.120(c)(4)(i)

Location and approximate size of the site.

1910.120(c)(4)(ii)

Description of the response activity and/or the job task to be performed.

1910.120(c)(4)(iii)

Duration of the planned employee activity.

1910.120(c)(4)(iv)

Site topography and accessibility by air and roads.

1910.120(c)(4)(v)

Safety and health hazards expected at the site.

1910.120(c)(4)(vi)

Pathways for hazardous substance dispersion.

1910.120(c)(4)(vii)

Present status and capabilities of emergency response teams that would provide assistance to on-site employees at the time of an emergency.

1910.120(c)(4)(viii)

Hazardous substances and health hazards involved or expected at the site and their chemical and physical properties.

1910.120(c)(5)

Personal protective equipment. Personal protective equipment (PPE) shall be provided and used during initial site entry in accordance with the following requirements:

1910.120(c)(5)(i)

Based upon the results of the preliminary site evaluation, an ensemble of PPE shall be selected and used during initial site entry which will provide protection to a level of exposure below permissible exposure limits and published exposure levels for known or suspected hazardous substances and health hazards and which will provide protection against other known and suspected hazards identified during the preliminary site evaluation.

If there is no permissible exposure limit or published exposure level, the employer may use other published studies and information as a guide to appropriate personal protective equipment.

1910.120(c)(5)(ii)

If positive-pressure self-contained breathing apparatus is not used as part of the entry ensemble, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least five minute's duration shall be carried by employees during initial site entry.

1910.120(c)(5)(iii)

If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site an ensemble providing equivalent to Level B PPE shall be provided as minimum protection, and direct reading instruments shall be used as appropriate for identifying IDLH conditions. (See Appendix B for guidelines on Level B protective equipment.)

1910.120(c)(5)(iv)

Once the hazards of the site have been identified, the appropriate PPE shall be selected and used in accordance with paragraph (g) of this section.

1910.120(c)(6)

Monitoring. The following monitoring shall be conducted during initial site entry when the site evaluation produces information which shows the potential for ionizing radiation or IDLH conditions, or when the site information is not sufficient reasonably to eliminate these possible conditions:

1910.120(c)(6)(i)

Monitoring with direct reading instruments for hazardous levels of ionizing radiation.

1910.120(c)(6)(ii)

Monitoring the air with appropriate direct reading test equipment for (i.e., combustible gas meters, detector tubes) for IDLH and other conditions that may cause death or serious harm (combustible or explosive atmospheres, oxygen deficiency, toxic substances.)

1910.120(c)(6)(iii)

Visually observing for signs of actual or potential IDLH or other dangerous conditions.

1910.120(c)(6)(iv)

An ongoing air monitoring program in accordance with paragraph (h) of this section shall be implemented after site characterization has determined the site is safe for the start-up of operations.

1910.120(c)(7)

Risk identification. Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances shall be identified. Employees who will be working on the site shall be informed of any risks that have been identified. In situations covered by the Hazard Communication Standard, 29 CFR 1910.1200, training required by that standard need not be duplicated.

NOTE TO PARAGRAPH (c)(7). - Risks to consider include, but are not limited to:

[a] Exposures exceeding the permissible exposure limits and published exposure levels.

[b] IDLH Concentrations.

- [c] Potential Skin Absorption and Irritation Sources.
- [d] Potential Eye Irritation Sources.
- [e] Explosion Sensitivity and Flammability Ranges.
- [f] Oxygen deficiency.

1910.120(c)(8)

Employee notification. Any information concerning the chemical, physical, and toxicologic properties of each substance known or expected to be present on site that is available to the employer and relevant to the duties an employee is expected to perform shall be made available to the affected employees prior to the commencement of their work activities. The employer may utilize information developed for the hazard communication standard for this purpose.

1910.120(d)

Site control. --

1910.120(d)(1)

General. Appropriate site control procedures shall be implemented to control employee exposure to hazardous substances before clean-up work begins.

1910.120(d)(2)

Site control program. A site control program for protecting employees which is part of the employer's site safety and health program required in paragraph (b) of this section shall be developed during the planning stages of a hazardous waste clean-up operation and modified as necessary as new information becomes available.

1910.120(d)(3)

Elements of the site control program. The site control program shall, as a minimum, include: A site map; site work zones; the use of a "buddy system"; site communications including alerting means for emergencies; the standard operating procedures or safe work practices; and, identification of the nearest medical assistance. Where these requirements are covered elsewhere they need not be repeated.

1910.120(e)

Training. --

1910.120(e)(1)

General.

1910.120(e)(1)(i)

All employees working on site (such as but not limited to equipment operators, general laborers and others) exposed to hazardous substances, health hazards, or safety hazards and their supervisors and management responsible for the site shall receive training meeting the requirements of this paragraph before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards, and they shall receive review training as specified in this paragraph.

1910.120(e)(1)(ii)

Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

1910.120(e)(2)

Elements to be covered. The training shall thoroughly cover the following:

1910.120(e)(2)(i)

Names of personnel and alternates responsible for site safety and health;

1910.120(e)(2)(ii)

Safety, health and other hazards present on the site;

1910.120(e)(2)(iii)

Use of personal protective equipment;

1910.120(e)(2)(iv)

Work practices by which the employee can minimize risks from hazards;

1910.120(e)(2)(v)

Safe use of engineering controls and equipment on the site;

1910.120(e)(2)(vi)

Medical surveillance requirements including recognition of symptoms and signs which might indicate over exposure to hazards; and

1910.120(e)(2)(vii)

The contents of paragraphs (G) through (J) of the site safety and health plan set forth in paragraph (b)(4)(ii) of this section.

1910.120(e)(3)

Initial training.

1910.120(e)(3)(i)

General site workers (such as equipment operators, general laborers and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off the site, and a minimum of three days actual field experience under the direct supervision of a trained experienced supervisor.

1910.120(e)(3)(ii)

Workers on site only occasionally for a specific limited task (such as, but not limited to, ground water monitoring, land surveying, or geophysical surveying) and who are unlikely to be exposed over permissible exposure limits and published exposure limits shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

1910.120(e)(3)(iii)

Workers regularly on site who work in areas which have been monitored and fully characterized indicating that exposures are under permissible exposure limits and published exposure limits where respirators are not necessary, and the characterization indicates that there are no health hazards or the possibility of an emergency developing, shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

1910.120(e)(3)(iv)

Workers with 24 hours of training who are covered by paragraphs (e)(3)(ii) and (e)(3)(iii) of this section, and who become general site workers or who are required to wear respirators, shall have the additional 16 hours and two days of training necessary to total the training specified in paragraph (e)(3)(i).

1910.120(e)(4)

Management and supervisor training. On-site management and supervisors directly responsible for, or who supervise employees engaged in, hazardous waste operations shall receive 40 hours initial training, and three days of supervised field experience (the training may be reduced to 24 hours and one day if the only area of their responsibility is employees covered by paragraphs (e)(3)(ii) and (e)(3)(iii)) and at least eight additional hours of specialized training at the time of job assignment on such topics as, but not limited to, the employer's safety and health program and the associated employee training program, personal protective equipment program, spill containment program, and health hazard monitoring procedure and techniques.

1910.120(e)(5)

Qualifications for trainers. Trainers shall be qualified to instruct employees about the subject matter that is being presented in training. Such trainers shall have satisfactorily completed a training program for teaching the subjects they are expected to teach, or they shall have the academic credentials and instructional experience necessary for teaching the subjects. Instructors shall demonstrate competent instructional skills and knowledge of the applicable subject matter.

1910.120(e)(6)

Training certification. Employees and supervisors that have received and successfully completed the training and field experience specified in paragraphs (e)(1) through (e)(4) of this section shall be certified by their instructor or the head instructor and trained supervisor as having completed the necessary training. A written certificate shall be given to each person so certified. Any person who has not been so certified or who does not meet the requirements of paragraph (e)(9) of this section shall be prohibited from engaging in hazardous waste operations.

1910.120(e)(7)

Emergency response. Employees who are engaged in responding to hazardous emergency situations at hazardous waste clean-up sites that may expose them to hazardous substances shall be trained in how to respond to such expected emergencies.

1910.120(e)(8)

Refresher training. Employees specified in paragraph (e)(1) of this section, and managers and supervisors specified in paragraph (e)(4) of this section, shall receive eight hours of refresher training annually on the items specified in paragraph (e)(2) and/or (e)(4) of this section, any critique of incidents that have occurred in the past year that can serve as training examples of related work, and other relevant topics.

1910.120(e)(9)

Equivalent training. Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training required in paragraphs (e)(1) through (e)(4) of this section shall not be required to provide the initial training requirements of those paragraphs to such employees and shall provide a copy of the certification or documentation to the employee upon request. However, certified employees or employees with equivalent training new to a site shall receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site. Equivalent training includes any academic training or the training that existing employees might have already received from actual hazardous waste site experience.

1910.120(f)

Medical surveillance --

1910.120(f)(1)

General. Employees engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section and not covered by (a)(2)(iii) exceptions and employers of employees specified in paragraph (q)(9) shall institute a medical surveillance program in accordance with this paragraph.

1910.120(f)(2)

Employees covered. The medical surveillance program shall be instituted by the employer for the following employees:

1910.120(f)(2)(i)

All employees who are or may be exposed to hazardous substances or health hazards at or above the established permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year;

1910.120(f)(2)(ii)

All employees who wear a respirator for 30 days or more a year or as required by § 1910.134;

1910.120(f)(2)(iii)

All employees who are injured, become ill or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation; and

1910.120(f)(2)(iv)

Members of HAZMAT teams.

1910.120(f)(3)

Frequency of medical examinations and consultations. Medical examinations and consultations shall be made available by the employer to each employee covered under paragraph (f)(2) of this section on the following schedules:

1910.120(f)(3)(i)

For employees covered under paragraphs (f)(2)(i), (f)(2)(ii), and (f)(2)(iv);

1910.120(f)(3)(i)(A)

Prior to assignment;

1910.120(f)(3)(i)(B)

At least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biennially) is appropriate;

1910.120(f)(3)(i)(C)

At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months.

1910.120(f)(3)(i)(D)

As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that the employee has been

injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation;

1910.120(f)(3)(i)(E)

At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

1910.120(f)(3)(ii)

For employees covered under paragraph (f)(2)(iii) and for all employees including of employers covered by paragraph (a)(1)(iv) who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or exposed during an emergency incident to hazardous substances at concentrations above the permissible exposure limits or the published exposure levels without the necessary personal protective equipment being used:

1910.120(f)(3)(ii)(A)

As soon as possible following the emergency incident or development of signs or symptoms;

1910.120(f)(3)(ii)(B)

At additional times, if the examining physician determines that follow-up examinations or consultations are medically necessary.

1910.120(f)(4)

Content of medical examinations and consultations.

1910.120(f)(4)(i)

Medical examinations required by paragraph (f)(3) of this section shall include a medical and work history (or updated history if one is in the employee's file) with special emphasis on symptoms related to the handling of hazardous substances and health hazards, and to fitness for duty including the ability to wear any required PPE under conditions (i.e., temperature extremes) that may be expected at the work site.

1910.120(f)(4)(ii)

The content of medical examinations or consultations made available to employees pursuant to paragraph (f) shall be determined by the attending physician. The guidelines in the *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* (See Appendix D, reference # 10) should be consulted.

1910.120(f)(5)

Examination by a physician and costs. All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

1910.120(f)(6)

Information provided to the physician. The employer shall provide one copy of this standard and its appendices to the attending physician and in addition the following for each employee:

1910.120(f)(6)(i)

A description of the employee's duties as they relate to the employee's exposures,

1910.120(f)(6)(ii)

The employee's exposure levels or anticipated exposure levels.

1910.120(f)(6)(iii)

A description of any personal protective equipment used or to be used.

1910.120(f)(6)(iv)

Information from previous medical examinations of the employee which is not readily available to the examining physician.

1910.120(f)(6)(v)

Information required by §1910.134.

1910.120(f)(7)

Physician's written opinion.

1910.120(f)(7)(i)

The employer shall obtain and furnish the employee with a copy of a written opinion from the examining physician containing the following:

1910.120(f)(7)(i)(A)

The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response, or from respirator use.

1910.120(f)(7)(i)(B)

The physician's recommended limitations upon the employees assigned work.

1910.120(f)(7)(i)(C)

The results of the medical examination and tests if requested by the employee.

1910.120(f)(7)(i)(D)

A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

1910.120(f)(7)(ii)

The written opinion obtained by the employer shall not reveal specific findings or diagnoses unrelated to occupational exposure.

1910.120(f)(8)

Recordkeeping.

1910.120(f)(8)(i)

An accurate record of the medical surveillance required by paragraph (f) of this section shall be retained. This record shall be retained for the period specified and meet the criteria of 29 CFR 1910.1020.

1910.120(f)(8)(ii)

The record required in paragraph (f)(8)(i) of this section shall include at least the following information:

1910.120(f)(8)(ii)(A)

The name and social security number of the employee;

1910.120(f)(8)(ii)(B)

Physicians' written opinions, recommended limitations and results of examinations and tests;

1910.120(f)(8)(ii)(C)

Any employee medical complaints related to exposure to hazardous substances;

1910.120(f)(8)(ii)(D)

A copy of the information provided to the examining physician by the employer, with the exception of the standard and its appendices.

1910.120(g)

Engineering controls, work practices, and personal protective equipment for employee protection. Engineering controls, work practices and PPE for substances regulated in Subpart Z. (i) Engineering controls, work practices, personal protective equipment, or a combination of these shall be implemented in accordance with this paragraph to protect employees from exposure to hazardous substances and safety and health hazards.

1910.120(g)(1)

Engineering controls, work practices and PPE for substances regulated in Subparts G and Z.

1910.120(g)(1)(i)

Engineering controls and work practices shall be instituted to reduce and maintain employee exposure to or below the permissible exposure limits for substances regulated by 29 CFR Part 1910, to the extent required by Subpart Z, except to the extent that such controls and practices are not feasible.

NOTE TO PARAGRAPH (g)(1)(i): Engineering controls which may be feasible include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment. Work practices which may be feasible are removing all non-essential employees from potential exposure during opening of drums, wetting down dusty operations and locating employees upwind of possible hazards.

1910.120(g)(1)(ii)

Whenever engineering controls and work practices are not feasible, or not required, any reasonable combination of engineering controls, work practices and PPE shall be used to reduce and maintain to or below the permissible exposure limits or dose limits for substances regulated by 29 CFR Part 1910, Subpart Z.

1910.120(g)(1)(iii)

The employer shall not implement a schedule of employee rotation as a means of compliance with permissible exposure limits or dose limits except when there is no other feasible way of complying with the airborne or dermal dose limits for ionizing radiation.

1910.120(g)(1)(iv)

The provisions of 29 CFR, subpart G, shall be followed.

1910.120(g)(2)

Engineering controls, work practices, and PPE for substances not regulated in Subparts G and Z. An appropriate combination of engineering controls, work practices, and personal protective equipment shall be used to reduce and maintain employee exposure to or below published exposure levels for hazardous substances and health hazards not regulated by 29 CFR Part 1910, Subparts G and Z. The employer may use

the published literature and SDS as a guide in making the employer's determination as to what level of protection the employer believes is appropriate for hazardous substances and health hazards for which there is no permissible exposure limit or published exposure limit.

1910.120(g)(3)

Personal protective equipment selection.

1910.120(g)(3)(i)

Personal protective equipment (PPE) shall be selected and used which will protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.

1910.120(g)(3)(ii)

Personal protective equipment selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

1910.120(g)(3)(iii)

Positive pressure self-contained breathing apparatus, or positive pressure air-line respirators equipped with an escape air supply shall be used when chemical exposure levels present will create a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

1910.120(g)(3)(iv)

Totally-encapsulating chemical protective suits (protection equivalent to Level A protection as recommended in Appendix B) shall be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.

1910.120(g)(3)(v)

The level of protection provided by PPE selection shall be increased when additional information or site conditions show that increased protection is necessary to reduce employee exposures below permissible exposure limits and published exposure levels for hazardous substances and health hazards. (See Appendix B for guidance on selecting PPE ensembles.)

NOTE TO PARAGRAPH (g)(3): The level of employee protection provided may be decreased when additional information or site conditions show that decreased protection will not result in hazardous exposures to employees.

1910.120(g)(3)(vi)

Personal protective equipment shall be selected and used to meet the requirements of 29 CFR Part 1910, Subpart I, and additional requirements specified in this section.

1910.120(g)(4)

Totally-encapsulating chemical protective suits.

1910.120(g)(4)(i)

Totally-encapsulating suits shall protect employees from the particular hazards which are identified during site characterization and analysis.

1910.120(g)(4)(ii)

Totally-encapsulating suits shall be capable of maintaining positive air pressure. (See Appendix A for a test method which may be used to evaluate this requirement.)

1910.120(g)(4)(iii)

Totally-encapsulating suits shall be capable of preventing inward test gas leakage of more than 0.5 percent. (See Appendix A for a test method which may be used to evaluate this requirement.)

1910.120(g)(5)

Personal protective equipment (PPE) program. A personal protective equipment program, which is part of the employer's safety and health program required in paragraph (b) of this section or required in paragraph (p)(1) of this section and which is also a part of the site-specific safety and health plan shall be established. The PPE program shall address the elements listed below. When elements, such as donning and doffing procedures, are provided by the manufacturer of a piece of equipment and are attached to the plan, they need not be rewritten into the plan as long as they adequately address the procedure or element.

1910.120(g)(5)(i)

PPE selection based upon site hazards,

1910.120(g)(5)(ii)

PPE use and limitations of the equipment,

1910.120(g)(5)(iii)

Work mission duration,

1910.120(g)(5)(iv)

PPE maintenance and storage,

1910.120(g)(5)(v)

PPE decontamination and disposal,

1910.120(g)(5)(vi)

PPE training and proper fitting,

1910.120(g)(5)(vii)

PPE donning and doffing procedures,

1910.120(g)(5)(viii)

PPE inspection procedures prior to, during, and after use,

1910.120(g)(5)(ix)

Evaluation of the effectiveness of the PPE program, and

1910.120(g)(5)(x)

Limitations during temperature extremes, heat stress, and other appropriate medical considerations.

1910.120(h)

Monitoring. --

1910.120(h)(1)

General.

1910.120(h)(1)(i)

Monitoring shall be performed in accordance with this paragraph where there may be a question of employee exposure to hazardous concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment so that employees are not exposed to levels which exceed permissible exposure limits, or published exposure levels if there are no permissible exposure limits, for hazardous substances.

1910.120(h)(1)(ii)

Air monitoring shall be used to identify and quantify airborne levels of hazardous substances and safety and health hazards in order to determine the appropriate level of employee protection needed on site.

1910.120(h)(2)

Initial entry. Upon initial entry, representative air monitoring shall be conducted to identify any IDLH condition, exposure over permissible exposure limits or published exposure levels, exposure over a radioactive material's dose limits or other dangerous condition such as the presence of flammable atmospheres, oxygen-deficient environments.

1910.120(h)(3)

Periodic monitoring. Periodic monitoring shall be conducted when the possibility of an IDLH condition or flammable atmosphere has developed or when there is indication that exposures may have risen over permissible exposure limits or published exposure levels since prior monitoring. Situations where it shall be considered whether the possibility that exposures have risen are as follows:

1910.120(h)(3)(i)

When work begins on a different portion of the site.

1910.120(h)(3)(ii)

When contaminants other than those previously identified are being handled.

1910.120(h)(3)(iii)

When a different type of operation is initiated (e.g., drum opening as opposed to exploratory well drilling.)

1910.120(h)(3)(iv)

When employees are handling leaking drums or containers or working in areas with obvious liquid contamination (e.g., a spill or lagoon.)

1910.120(h)(4)

Monitoring of high-risk employees. After the actual clean-up phase of any hazardous waste operation commences; for example, when soil, surface water or containers are moved or disturbed; the employer shall monitor those employees likely to have the highest exposures to those hazardous substances and health hazards likely to be present above permissible exposure limits or published exposure levels by using personal sampling frequently enough to characterize employee exposures. The employer may utilize a representative sampling approach by documenting that the employees and chemicals chosen for monitoring are based on the criteria stated in the first sentence of this paragraph. If the employees likely to have the highest exposure are over permissible exposure limits or published exposure limits, then monitoring shall continue to determine all employees likely to be above those limits. The employer may utilize a representative sampling approach by documenting that the employees and chemicals chosen for monitoring are based on the criteria stated above.

NOTE TO PARAGRAPH (h): It is not required to monitor employees engaged in site characterization operations covered by paragraph (c) of this section.

1910.120(i)

Informational programs. Employers shall develop and implement a program which is part of the employer's safety and health program required in paragraph (b) of this section to inform employees, contractors, and subcontractors (or their representative) actually engaged in hazardous waste operations of the nature, level and degree of exposure likely as a result of participation in such hazardous waste operations. Employees, contractors and subcontractors working outside of the operations part of a site are not covered by this standard.

1910.120(j)

Handling drums and containers --

1910.120(j)(1)

General.

1910.120(j)(1)(i)

Hazardous substances and contaminated, liquids and other residues shall be handled, transported, labeled, and disposed of in accordance with this paragraph.

1910.120(j)(1)(ii)

Drums and containers used during the clean-up shall meet the appropriate DOT, OSHA, and EPA regulations for the wastes that they contain.

1910.120(j)(1)(iii)

When practical, drums and containers shall be inspected and their integrity shall be assured prior to being moved. Drums or containers that cannot be inspected before being moved because of storage conditions (i.e., buried beneath the earth, stacked behind other drums, stacked several tiers high in a pile, etc.) shall be moved to an accessible location and inspected prior to further handling.

1910.120(j)(1)(iv)

Unlabeled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.

1910.120(j)(1)(v)

Site operations shall be organized to minimize the amount of drum or container movement.

1910.120(j)(1)(vi)

Prior to movement of drums or containers, all employees exposed to the transfer operation shall be warned of the potential hazards associated with the contents of the drums or containers.

1910.120(j)(1)(vii)

U.S. Department of Transportation specified salvage drums or containers and suitable quantities of proper absorbent shall be kept available and used in areas where spills, leaks, or ruptures may occur.

1910.120(j)(1)(viii)

Where major spills may occur, a spill containment program, which is part of the employer's safety and health program required in paragraph (b) of this section, shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

1910.120(j)(1)(ix)

Drums and containers that cannot be moved without rupture, leakage, or spillage shall be emptied into a sound container using a device classified for the material being transferred.

1910.120(j)(1)(x)

A ground-penetrating system or other type of detection system or device shall be used to estimate the location and depth of buried drums or containers.

1910.120(j)(1)(xi)

Soil or covering material shall be removed with caution to prevent drum or container rupture.

1910.120(j)(1)(xii)

Fire extinguishing equipment meeting the requirements of 29 CFR Part 1910, Subpart L, shall be on hand and ready for use to control incipient fires.

1910.120(j)(2)

Opening drums and containers. The following procedures shall be followed in areas where drums or containers are being opened:

1910.120(j)(2)(i)

Where an airline respirator system is used, connections to the source of air supply shall be protected from contamination and the entire system shall be protected from physical damage.

1910.120(j)(2)(ii)

Employees not actually involved in opening drums or containers shall be kept a safe distance from the drums or containers being opened.

1910.120(j)(2)(iii)

If employees must work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation shall be placed between the employee and the drums or containers being opened to protect the employee in case of accidental explosion.

1910.120(j)(2)(iv)

Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment shall be located behind the explosion-resistant barrier.

1910.120(j)(2)(v)

When there is a reasonable possibility of flammable atmospheres being present, material handling equipment and hand tools shall be of the type to prevent sources of ignition.

1910.120(j)(2)(vi)

Drums and containers shall be opened in such a manner that excess interior pressure will be safely relieved. If pressure cannot be relieved from a remote location, appropriate shielding shall be placed between the employee and the drums or containers to reduce the risk of employee injury.

1910.120(j)(2)(vii)

Employees shall not stand upon or work from drums or containers.

1910.120(j)(3)

Material handling equipment. Material handling equipment used to transfer drums and containers shall be selected, positioned and operated to minimize sources of ignition related to the equipment from igniting vapors released from ruptured drums or containers.

1910.120(j)(4)

Radioactive wastes. Drums and containers containing radioactive wastes shall not be handled until such time as their hazard to employees is properly assessed.

1910.120(j)(5)

Shock sensitive wastes. As a minimum, the following special precautions shall be taken when drums and containers containing or suspected of containing shock-sensitive wastes are handled:

1910.120(j)(5)(i)

All non-essential employees shall be evacuated from the area of transfer.

1910.120(j)(5)(ii)

Material handling equipment shall be provided with explosive containment devices or protective shields to protect equipment operators from exploding containers.

1910.120(j)(5)(iii)

An employee alarm system capable of being perceived above surrounding light and noise conditions shall be used to signal the commencement and completion of explosive waste handling activities.

1910.120(j)(5)(iv)

Continuous communications (i.e., portable radios, hand signals, telephones, as appropriate) shall be maintained between the employee-in-charge of the immediate handling area and both the site safety and health supervisor and the command post until such time as the handling operation is completed. Communication equipment or methods that could cause shock sensitive materials to explode shall not be used.

1910.120(j)(5)(v)

Drums and containers under pressure, as evidenced by bulging or swelling, shall not be moved until such time as the cause for excess pressure is determined and appropriate containment procedures have been implemented to protect employees from explosive relief of the drum.

1910.120(j)(5)(vi)

Drums and containers containing packaged laboratory wastes shall be considered to contain shock-sensitive or explosive materials until they have been characterized.

Caution: Shipping of shock sensitive wastes may be prohibited under U.S. Department of Transportation regulations. Employers and their shippers should refer to 49 CFR 173.21 and 173.50.

1910.120(j)(6)

Laboratory waste packs. In addition to the requirements of paragraph (j)(5) of this section, the following precautions shall be taken, as a minimum, in handling laboratory waste packs (lab packs):

1910.120(j)(6)(i)

Lab packs shall be opened only when necessary and then only by an individual knowledgeable in the inspection, classification, and segregation of the containers within the pack according to the hazards of the wastes.

1910.120(j)(6)(ii)

If crystalline material is noted on any container, the contents shall be handled as a shock-sensitive waste until the contents are identified.

1910.120(j)(7)

Sampling of drum and container contents. Sampling of containers and drums shall be done in accordance with a sampling procedure which is part of the site safety and health plan developed for and available to employees and others at the specific worksite.

1910.120(j)(8)

Shipping and transport.

1910.120(j)(8)(i)

Drums and containers shall be identified and classified prior to packaging for shipment.

1910.120(j)(8)(ii)

Drum or container staging areas shall be kept to the minimum number necessary to safely identify and classify materials and prepare them for transport.

1910.120(j)(8)(iii)

Staging areas shall be provided with adequate access and egress routes.

1910.120(j)(8)(iv)

Bulking of hazardous wastes shall be permitted only after a thorough characterization of the materials has been completed.

1910.120(j)(9)

Tank and vault procedures.

1910.120(j)(9)(i)

Tanks and vaults containing hazardous substances shall be handled in a manner similar to that for drums and containers, taking into consideration the size of the tank or vault.

1910.120(j)(9)(ii)

Appropriate tank or vault entry procedures as described in the employer's safety and health plan shall be followed whenever employees must enter a tank or vault.

1910.120(k)

Decontamination --

1910.120(k)(1)

General. Procedures for all phases of decontamination shall be developed and implemented in accordance with this paragraph.

1910.120(k)(2)

Decontamination procedures.

1910.120(k)(2)(i)

A decontamination procedure shall be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.

1910.120(k)(2)(ii)

Standard operating procedures shall be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

1910.120(k)(2)(iii)

All employees leaving a contaminated area shall be appropriately decontaminated; all contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.

1910.120(k)(2)(iv)

Decontamination procedures shall be monitored by the site safety and health supervisor to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

1910.120(k)(3)

Location. Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

1910.120(k)(4)

Equipment and solvents. All equipment and solvents used for decontamination shall be decontaminated or disposed of properly.

1910.120(k)(5)

Personal protective clothing and equipment.

1910.120(k)(5)(i)

Protective clothing and equipment shall be decontaminated, cleaned, laundered, maintained or replaced as needed to maintain their effectiveness.

1910.120(k)(5)(ii)

Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove that clothing and proceed to shower. The clothing shall be disposed of or decontaminated before it is removed from the work zone.

1910.120(k)(6)

Unauthorized employees. Unauthorized employees shall not remove protective clothing or equipment from change rooms.

1910.120(k)(7)

Commercial laundries or cleaning establishments. Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposures to hazardous substances.

1910.120(k)(8)

Showers and change rooms. Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirements of 29 CFR 1910.141. If temperature conditions prevent the effective use of water, then other effective means for cleansing shall be provided and used.

1910.120(l)

Emergency response by employees at uncontrolled hazardous waste sites --

1910.120(l)(1)

Emergency response plan.

1910.120(l)(1)(i)

An emergency response plan shall be developed and implemented by all employers within the scope of paragraphs (a)(1)(i) through (ii) of this section to handle anticipated emergencies prior to the commencement of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, OSHA personnel and other governmental agencies with relevant responsibilities.

1910.120(l)(1)(ii)

Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan complying with 29 CFR 1910.38.

1910.120(l)(2)

Elements of an emergency response plan. The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following:

1910.120(l)(2)(i)

Pre-emergency planning.

1910.120(l)(2)(ii)

Personnel roles, lines of authority, training, and communication.

1910.120(l)(2)(iii)

Emergency recognition and prevention.

1910.120(l)(2)(iv)

Safe distances and places of refuge.

1910.120(l)(2)(v)

Site security and control.

1910.120(l)(2)(vi)

Evacuation routes and procedures.

1910.120(l)(2)(vii)

Decontamination procedures which are not covered by the site safety and health plan.

1910.120(l)(2)(viii)

Emergency medical treatment and first aid.

1910.120(l)(2)(ix)

Emergency alerting and response procedures.

1910.120(l)(2)(x)

Critique of response and follow-up.

1910.120(l)(2)(xi)

PPE and emergency equipment.

1910.120(l)(3)

Procedures for handling emergency incidents.

1910.120(l)(3)(i)

In addition to the elements for the emergency response plan required in paragraph (l)(2) of this section, the following elements shall be included for emergency response plans:

1910.120(l)(3)(i)(A)

Site topography, layout, and prevailing weather conditions.

1910.120(l)(3)(i)(B)

Procedures for reporting incidents to local, state, and federal governmental agencies.

1910.120(l)(3)(ii)

The emergency response plan shall be a separate section of the Site Safety and Health Plan.

1910.120(l)(3)(iii)

The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

1910.120(l)(3)(iv)

The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

1910.120(l)(3)(v)

The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

1910.120(l)(3)(vi)

An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to speed communication, and to begin emergency procedures.

1910.120(l)(3)(vii)

Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

1910.120(m)

Illumination. Areas accessible to employees shall be lighted to not less than the minimum illumination intensities listed in the following Table H-120.1 while any work is in progress:

TABLE H-120.1. -- MINIMUM ILLUMINATION INTENSITIES IN FOOT-CANDLES	
Foot-candles	Area or operations
5	General site areas.
3	Excavation and waste areas, accessways, active storage areas, loading platforms, refueling, and field maintenance areas.
5	Indoors: warehouses, corridors, hallways, and exitways.
5	Tunnels, shafts, and general underground work areas; (Exception: minimum of 10 foot-candles is required at tunnel and shaft heading during drilling, mucking, and scaling. Mine Safety and Health Administration approved cap lights shall be acceptable for use in the tunnel heading.
10	General shops (e.g., mechanical and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms.
30	First aid stations, infirmaries, and offices.

1910.120(n)

Sanitation at temporary workplaces --

1910.120(n)(1)

Potable water.

1910.120(n)(1)(i)

An adequate supply of potable water shall be provided on the site.

1910.120(n)(1)(ii)

Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.

1910.120(n)(1)(iii)

Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose.

1910.120(n)(1)(iv)

Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

1910.120(n)(2)

Nonpotable water.

1910.120(n)(2)(i)

Outlets for nonpotable water, such as water for firefighting purposes shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

1910.120(n)(2)(ii)

There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing nonpotable water.

1910.120(n)(3)

Toilet facilities.

1910.120(n)(3)(i)

Toilets shall be provided for employees according to Table H-120.2.

TABLE H-120.2. -- TOILET FACILITIES	
Number of employees	Minimum number of facilities
20 or fewer	One.
More than 20, fewer than 200	One toilet seat and 1 urinal per 40 employees.
More than 200	One toilet seat and 1 urinal per 50 employees.

1910.120(n)(3)(ii)

Under temporary field conditions, provisions shall be made to assure not less than one toilet facility is available.

1910.120(n)(3)(iii)

Hazardous waste sites, not provided with a sanitary sewer, shall be provided with the following toilet facilities unless prohibited by local codes:

1910.120(n)(3)(iii)(A)

Chemical toilets;

1910.120(n)(3)(iii)(B)

Recirculating toilets;

1910.120(n)(3)(iii)(C)

Combustion toilets; or

1910.120(n)(3)(iii)(D)

Flush toilets.

1910.120(n)(3)(iv)

The requirements of this paragraph for sanitation facilities shall not apply to mobile crews having transportation readily available to nearby toilet facilities.

1910.120(n)(3)(v)

Doors entering toilet facilities shall be provided with entrance locks controlled from inside the facility.

1910.120(n)(4)

Food handling. All food service facilities and operations for employees shall meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located.

1910.120(n)(5)

Temporary sleeping quarters. When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted.

1910.120(n)(6)

Washing facilities. The employer shall provide adequate washing facilities for employees engaged in operations where hazardous substances may be harmful to employees. Such facilities shall be in near proximity to the worksite; in areas where exposures are below permissible exposure limits and which are under the controls of the employer; and shall be so equipped as to enable employees to remove hazardous substances from themselves.

1910.120(n)(7)

Showers and change rooms. When hazardous waste clean-up or removal operations commence on a site and the duration of the work will require six months or greater time to complete, the employer shall provide showers and change rooms for all employees exposed to hazardous substances and health hazards involved in hazardous waste clean-up or removal operations.

1910.120(n)(7)(i)

Showers shall be provided and shall meet the requirements of 29 CFR 1910.141(d)(3).

1910.120(n)(7)(ii)

Change rooms shall be provided and shall meet the requirements of 29 CFR 1910.141(e). Change rooms shall consist of two separate change areas separated by the shower area required in paragraph (n)(7)(i) of this section. One change area, with an exit leading off the worksite, shall provide employees with a clean area where they can remove, store, and put on street clothing. The second area, with an exit to the worksite, shall provide employees with an area where they can put on, remove and store work clothing and personal protective equipment.

1910.120(n)(7)(iii)

Showers and change rooms shall be located in areas where exposures are below the permissible exposure limits and published exposure levels. If this cannot be accomplished, then a ventilation system shall be provided that will supply air that is below the permissible exposure limits and published exposure levels.

1910.120(n)(7)(iv)

Employers shall assure that employees shower at the end of their work shift and when leaving the hazardous waste site.

1910.120(o)

New technology programs.

1910.120(o)(1)

The employer shall develop and implement procedures for the introduction of effective new technologies and equipment developed for the improved protection of employees working with hazardous waste clean-up operations, and the same shall be implemented as part of the site safety and health program to assure that employee protection is being maintained.

1910.120(o)(2)

New technologies, equipment or control measures available to the industry, such as the use of foams, absorbents, absorbents, neutralizers, or other means to suppress the level of air contaminants while excavating the site or for spill control, shall be evaluated by employers or their representatives. Such an evaluation shall be done to determine the effectiveness of the new methods, materials, or equipment before implementing their use on a large scale for enhancing employee protection. Information and data from manufacturers or suppliers may be used as part of the employer's evaluation effort. Such evaluations shall be made available to OSHA upon request.

1910.120(p)

Certain Operations Conducted Under the Resource Conservation and Recovery Act of 1976 (RCRA).

Employers conducting operations at treatment, storage and disposal (TSD) facilities specified in paragraph (a)(1)(iv) of this section shall provide and implement the programs specified in this paragraph. See the "Notes and Exceptions" to paragraph (a)(2)(iii) of this section for employers not covered.

1910.120(p)(1)

Safety and health program. The employer shall develop and implement a written safety and health program for employees involved in hazardous waste operations that shall be available for inspection by employees, their representatives and OSHA personnel. The program shall be designed to identify, evaluate and control safety and health hazards in their facilities for the purpose of employee protection, to provide for emergency response meeting the requirements of paragraph (p)(8) of this section and to address as appropriate site analysis, engineering controls, maximum exposure limits, hazardous waste handling procedures and uses of new technologies.

1910.120(p)(2)

Hazard communication program. The employer shall implement a hazard communication program meeting the requirements of 29 CFR 1910.1200 as part of the employer's safety and program.

NOTE TO §1910.120 - The exemption for hazardous waste provided in 1910.1200 is applicable to this section.

1910.120(p)(3)

Medical surveillance program. The employer shall develop and implement a medical surveillance program meeting the requirements of paragraph (f) of this section.

1910.120(p)(4)

Decontamination program. The employer shall develop and implement a decontamination procedure meeting the requirements of paragraph (k) of this section.

1910.120(p)(5)

New technology program. The employer shall develop and implement procedures meeting the requirements of paragraph (o) of this section for introducing new and innovative equipment into the workplace.

1910.120(p)(6)

Material handling program. Where employees will be handling drums or containers, the employer shall develop and implement procedures meeting the requirements of paragraphs (j)(1)(ii) through (viii) and (xi) of this section, as well as (j)(3) and (j)(8) of this section prior to starting such work.

1910.120(p)(7)

Training program --

1910.120(p)(7)(i)

New employees. The employer shall develop and implement a training program which is part of the employer's safety and health program, for employees exposed to health hazards or hazardous substances at TSD operations to enable the employees to perform their assigned duties and functions in a safe and healthful manner so as not to endanger themselves or other employees. The initial training shall be for 24 hours and refresher training shall be for eight hours annually. Employees who have received the initial training required by this paragraph shall be given a written certificate attesting that they have successfully completed the necessary training.

1910.120(p)(7)(ii)

Current employees. Employers who can show by an employee's previous work experience and/or training that the employee has had training equivalent to the initial training required by this paragraph, shall be considered as meeting the initial training requirements of this paragraph as to that employee. Equivalent training includes the training that existing employees might have already received from actual site work experience. Current employees shall receive eight hours of refresher training annually.

1910.120(p)(7)(iii)

Trainers. Trainers who teach initial training shall have satisfactorily completed a training course for teaching the subjects they are expected to teach or they shall have the academic credentials and instruction experience necessary to demonstrate a good command of the subject matter of the courses and competent instructional skills.

1910.120(p)(8)

Emergency response program --

1910.120(p)(8)(i)

Emergency response plan. An emergency response plan shall be developed and implemented by all employers. Such plans need not duplicate any of the subjects fully addressed in the employer's contingency planning required by permits, such as those issued by the U.S. Environmental Protection Agency, provided that the contingency plan is made part of the emergency response plan. The emergency response plan shall be a written portion of the employer's safety and health program required in paragraph (p)(1) of this section. Employers who will evacuate their employees from the worksite location when an emergency occurs and who do not permit any of their employees to assist in handling the emergency are exempt from the requirements of paragraph (p)(8) if they provide an emergency action plan complying with 29 CFR 1910.38.

1910.120(p)(8)(ii)

Elements of an emergency response plan. The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following areas to the extent that they are not addressed in any specific program required in this paragraph:

1910.120(p)(8)(ii)(A)

Pre-emergency planning and coordination with outside parties.

1910.120(p)(8)(ii)(B)

Personnel roles, lines of authority, training, and communication.

1910.120(p)(8)(ii)(C)

Emergency recognition and prevention.

1910.120(p)(8)(ii)(D)

Safe distances and places of refuge.

1910.120(p)(8)(ii)(E)

Site security and control.

1910.120(p)(8)(ii)(F)

Evacuation routes and procedures.

1910.120(p)(8)(ii)(G)

Decontamination procedures.

1910.120(p)(8)(ii)(H)

Emergency medical treatment and first aid.

1910.120(p)(8)(ii)(I)

Emergency alerting and response procedures.

1910.120(p)(8)(ii)(J)

Critique of response and follow-up.

1910.120(p)(8)(ii)(K)

PPE and emergency equipment.

1910.120(p)(8)(iii)

Training.

1910.120(p)(8)(iii)(A)

Training for emergency response employees shall be completed before they are called upon to perform in real emergencies. Such training shall include the elements of the emergency response plan, standard operating procedures the employer has established for the job, the personal protective equipment to be worn and procedures for handling emergency incidents.

Exception #1: an employer need not train all employees to the degree specified if the employer divides the work force in a manner such that a sufficient number of employees who have responsibility to control emergencies have the training specified, and all other employees, who may first respond to an emergency incident, have sufficient awareness training to recognize that an emergency response situation exists and that they are instructed in that case to summon the fully trained employees and not attempt control activities for which they are not trained.

Exception #2: An employer need not train all employees to the degree specified if arrangements have been made in advance for an outside fully-trained emergency response team to respond in a reasonable period and all employees, who may come to the incident first, have sufficient awareness training to recognize that an emergency response situation exists and they have been instructed to call the designated outside fully-trained emergency response team for assistance.

1910.120(p)(8)(iii)(B)

Employee members of TSD facility emergency response organizations shall be trained to a level of competence in the recognition of health and safety hazards to protect themselves and other employees. This would include training in the methods used to minimize the risk from safety and health hazards; in the safe use of control equipment; in the selection and use of appropriate personal protective equipment; in the safe operating procedures to be used at the incident scene; in the techniques of coordination with other employees to minimize risks; in the appropriate response to over exposure from health hazards or injury to themselves and other employees; and in the recognition of subsequent symptoms which may result from over exposures.

1910.120(p)(8)(iii)(C)

The employer shall certify that each covered employee has attended and successfully completed the training required in paragraph (p)(8)(iii) of this section, or shall certify the employee's competency for certification of training shall be recorded and maintained by the employer.

1910.120(p)(8)(iv)

Procedures for handling emergency incidents.

1910.120(p)(8)(iv)(A)

In addition to the elements for the emergency response plan required in paragraph (p)(8)(ii) of this section, the following elements shall be included for emergency response plans to the extent that they do not repeat any information already contained in the emergency response plan:

1910.120(p)(8)(iv)(A)(1)

Site topography, layout, and prevailing weather conditions.

1910.120(p)(8)(iv)(A)(2)

Procedures for reporting incidents to local, state, and federal governmental agencies.

1910.120(p)(8)(iv)(B)

The emergency response plan shall be compatible and integrated with the disaster, fire and/or emergency response plans of local, state, and federal agencies.

1910.120(p)(8)(iv)(C)

The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.

1910.120(p)(8)(iv)(D)

The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.

1910.120(p)(8)(iv)(E)

An employee alarm system shall be installed in accordance with 29 CFR 1910.165 to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to speed

communication; and to begin emergency procedures.

1910.120(p)(8)(iv)(F)

Based upon the information available at time of the emergency, the employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

1910.120(q)

Emergency response program to hazardous substance releases. This paragraph covers employers whose employees are engaged in emergency response no matter where it occurs except that it does not cover employees engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section. Those emergency response organizations who have developed and implemented programs equivalent to this paragraph for handling releases of hazardous substances pursuant to section 303 of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. 11003) shall be deemed to have met the requirements of this paragraph.

1910.120(q)(1)

Emergency response plan. An emergency response plan shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The plan shall be in writing and available for inspection and copying by employees, their representatives and OSHA personnel. Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan in accordance with 29 CFR 1910.38.

1910.120(q)(2)

Elements of an emergency response plan. The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following areas to the extent that they are not addressed in any specific program required in this paragraph:

1910.120(q)(2)(i)

Pre-emergency planning and coordination with outside parties..

1910.120(q)(2)(ii)

Personnel roles, lines of authority, training, and communication.

1910.120(q)(2)(iii)

Emergency recognition and prevention.

1910.120(q)(2)(iv)

Safe distances and places of refuge.

1910.120(q)(2)(v)

Site security and control.

1910.120(q)(2)(vi)

Evacuation routes and procedures.

1910.120(q)(2)(vii)

Decontamination.

1910.120(q)(2)(viii)

Emergency medical treatment and first aid.

1910.120(q)(2)(ix)

Emergency alerting and response procedures.

1910.120(q)(2)(x)

Critique of response and follow-up.

1910.120(q)(2)(xi)

PPE and emergency equipment.

1910.120(q)(2)(xii)

Emergency response organizations may use the local emergency response plan or the state emergency response plan or both, as part of their emergency response plan to avoid duplication. Those items of the emergency response plan that are being properly addressed by the SARA Title III plans may be substituted into their emergency plan or otherwise kept together for the employer and employee's use.

1910.120(q)(3)

Procedures for handling emergency response.

1910.120(q)(3)(i)

The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS assisted by the senior official present for each employer.

NOTE TO PARAGRAPH (q)(3)(i). - The "senior official" at an emergency response is the most senior official on the site who has the responsibility for controlling the operations at the site. Initially it is the senior officer on the first-due piece of responding emergency apparatus to arrive on the incident scene. As more senior officers arrive (i.e., battalion chief, fire chief, state law enforcement official, site coordinator, etc.) the position is passed up the line of authority which has been previously established.

1910.120(q)(3)(ii)

The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.

1910.120(q)(3)(iii)

Based on the hazardous substances and/or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations, and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet, at a minimum, the criteria contained in 29 CFR 1910.156(e) when worn while performing fire fighting operations beyond the incipient stage for any incident.

1910.120(q)(3)(iv)

Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response, until such time that the individual in charge of the ICS determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to employees.

1910.120(q)(3)(v)

The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of two or more.

1910.120(q)(3)(vi)

Back-up personnel shall be standing by with equipment ready to provide assistance or rescue. Qualified basic life support personnel, as a minimum, shall also be standing by with medical equipment and transportation capability.

1910.120(q)(3)(vii)

The individual in charge of the ICS shall designate a safety officer, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.

1910.120(q)(3)(viii)

When activities are judged by the safety officer to be an IDLH and/or to involve an imminent danger condition, the safety officer shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions needed to be taken to correct these hazards at the emergency scene.

1910.120(q)(3)(ix)

After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

1910.120(q)(3)(x)

When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet U.S. Department of Transportation and National Institute for Occupational Safety and Health criteria.

1910.120(q)(4)

Skilled support personnel. Personnel, not necessarily an employer's own employees, who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that cannot reasonably be performed in a timely fashion by an employer's own employees, and who will be or may be exposed to the hazards at an emergency response scene, are not required to meet the training required in this paragraph for the employer's regular employees. However, these personnel shall be given an initial briefing at the site prior to their participation in any emergency response. The initial briefing shall include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are

to be performed. All other appropriate safety and health precautions provided to the employer's own employees shall be used to assure the safety and health of these personnel.

1910.120(q)(5)

Specialist employees. Employees who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and who will be called upon to provide technical advice or assistance at a hazardous substance release incident to the individual in charge, shall receive training or demonstrate competency in the area of their specialization annually.

1910.120(q)(6)

Training. Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:

1910.120(q)(6)(i)

First responder awareness level. First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

1910.120(q)(6)(i)(A)

An understanding of what hazardous substances are, and the risks associated with them in an incident.

1910.120(q)(6)(i)(B)

An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.

1910.120(q)(6)(i)(C)

The ability to recognize the presence of hazardous substances in an emergency.

1910.120(q)(6)(i)(D)

The ability to identify the hazardous substances, if possible.

1910.120(q)(6)(i)(E)

An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.

1910.120(q)(6)(i)(F)

The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

1910.120(q)(6)(ii)

First responder operations level. First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to

respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level and the employer shall so certify:

1910.120(q)(6)(ii)(A)

Knowledge of the basic hazard and risk assessment techniques.

1910.120(q)(6)(ii)(B)

Know how to select and use proper personal protective equipment provided to the first responder operational level.

1910.120(q)(6)(ii)(C)

An understanding of basic hazardous materials terms.

1910.120(q)(6)(ii)(D)

Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.

1910.120(q)(6)(ii)(E)

Know how to implement basic decontamination procedures.

1910.120(q)(6)(ii)(F)

An understanding of the relevant standard operating procedures and termination procedures.

1910.120(q)(6)(iii)

Hazardous materials technician. Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

1910.120(q)(6)(iii)(A)

Know how to implement the employer's emergency response plan.

1910.120(q)(6)(iii)(B)

Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.

1910.120(q)(6)(iii)(C)

Be able to function within an assigned role in the Incident Command System.

1910.120(q)(6)(iii)(D)

Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.

1910.120(q)(6)(iii)(E)

Understand hazard and risk assessment techniques.

1910.120(q)(6)(iii)(F)

Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.

1910.120(q)(6)(iii)(G)

Understand and implement decontamination procedures.

1910.120(q)(6)(iii)(H)

Understand termination procedures.

1910.120(q)(6)(iii)(I)

Understand basic chemical and toxicological terminology and behavior.

1910.120(q)(6)(iv)

Hazardous materials specialist. Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency in the following areas and the employer shall so certify:

1910.120(q)(6)(iv)(A)

Know how to implement the local emergency response plan.

1910.120(q)(6)(iv)(B)

Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.

1910.120(q)(6)(iv)(C)

Know the state emergency response plan.

1910.120(q)(6)(iv)(D)

Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.

1910.120(q)(6)(iv)(E)

Understand in-depth hazard and risk techniques.

1910.120(q)(6)(iv)(F)

Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.

1910.120(q)(6)(iv)(G)

Be able to determine and implement decontamination procedures.

1910.120(q)(6)(iv)(H)

Have the ability to develop a site safety and control plan.

1910.120(q)(6)(iv)(I)

Understand chemical, radiological and toxicological terminology and behavior.

1910.120(q)(6)(v)

On scene incident commander. Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

1910.120(q)(6)(v)(A)

Know and be able to implement the employer's incident command system.

1910.120(q)(6)(v)(B)

Know how to implement the employer's emergency response plan.

1910.120(q)(6)(v)(C)

Know and understand the hazards and risks associated with employees working in chemical protective clothing.

1910.120(q)(6)(v)(D)

Know how to implement the local emergency response plan.

1910.120(q)(6)(v)(E)

Know of the state emergency response plan and of the Federal Regional Response Team.

1910.120(q)(6)(v)(F)

Know and understand the importance of decontamination procedures.

1910.120(q)(7)

Trainers. Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

1910.120(q)(8)

Refresher training.

1910.120(q)(8)(i)

Those employees who are trained in accordance with paragraph (q)(6) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

1910.120(q)(8)(ii)

A statement shall be made of the training or competency, and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency.

1910.120(q)(9)

Medical surveillance and consultation.

1910.120(q)(9)(i)

Members of an organized and designated HAZMAT team and hazardous materials specialist shall receive a baseline physical examination and be provided with medical surveillance as required in paragraph (f) of this section.

1910.120(q)(9)(ii)

Any emergency response employees who exhibit signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident either immediately or subsequently, shall be provided with medical consultation as required in paragraph (f)(3)(ii) of this section.

1910.120(q)(10)

Chemical protective clothing. Chemical protective clothing and equipment to be used by organized and designated HAZMAT team members, or to be used by hazardous materials specialists, shall meet the requirements of paragraphs (g)(3) through (5) of this section.

1910.120(q)(11)

Post-emergency response operations. Upon completion of the emergency response, if it is determined that it is necessary to remove hazardous substances, health hazards and materials contaminated with them (such as contaminated soil or other elements of the natural environment) from the site of the incident, the employer conducting the clean-up shall comply with one of the following:

1910.120(q)(11)(i)

Meet all the requirements of paragraphs (b) through (o) of this section; or

1910.120(q)(11)(ii)

Where the clean-up is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of the following: 29 CFR 1910.38, 1910.134, 1910.1200, and other appropriate safety and health training made necessary by the tasks they are expected to perform such as personal protective equipment and decontamination procedures.

APPENDICES TO §1910.120 - HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE

NOTE: The following appendices serve as non-mandatory guidelines to assist employees and employers in complying with the appropriate requirements of this section. However paragraph 1910.120(g) makes mandatory in certain circumstances the use of Level A and Level B PPE protection.

[61 FR 9227, March 7, 1996; 67 FR 67964, Nov. 7, 2002; 71 FR 16672, April 3, 2006; 76 FR 80738, Dec. 27, 2011; 77 FR 17776, March 26, 2012; 78 FR 9313, Feb. 8, 2013]

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- **Part Number:** 1910
- **Part Title:** Occupational Safety and Health Standards
- **Subpart:** I
- **Subpart Title:** Personal Protective Equipment
- **Standard Number:** 1910.134
- **Title:** Respiratory Protection.
- **Appendix:** A , B-1 , B-2 , C , D
- **GPO Source:** e-CFR

This section applies to General Industry (part 1910), Shipyards (part 1915), Marine Terminals (part 1917), Longshoring (part 1918), and Construction (part 1926).

1910.134(a)

Permissible practice.

1910.134(a)(1)

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section.

1910.134(a)(2)

A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protection program, which shall include the requirements outlined in paragraph (c) of this section. The program shall cover each employee required by this section to use a respirator.

1910.134(b)

Definitions. The following definitions are important terms used in the respiratory protection standard in this section.

Air-purifying respirator means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Assigned protection factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by this section.

Atmosphere-supplying respirator means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Canister or cartridge means a container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Demand respirator means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

Emergency situation means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.

Employee exposure means exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-service-life indicator (ESLI) means a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-only respirator means a respirator intended to be used only for emergency exit.

Filter or air purifying element means a component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering facepiece (dust mask) means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

Fit factor means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit test means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual. (See also Qualitative fit test QLFT and Quantitative fit test QNFT.)

Helmet means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

High efficiency particulate air (HEPA) filter means a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Hood means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately dangerous to life or health (IDLH) means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Interior structural firefighting means the physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage. (See 29 CFR 1910.155)

Loose-fitting facepiece means a respiratory inlet covering that is designed to form a partial seal with the face.

Maximum use concentration (MUC) means the maximum atmospheric concentration of a hazardous substance from which an employee can be expected to be protected when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC can be determined mathematically by multiplying the assigned protection factor specified for a respirator by the required OSHA permissible exposure limit, short-term exposure limit, or ceiling limit. When no OSHA exposure limit is available for a hazardous substance, an employer must determine an MUC on the basis of relevant available information and informed professional judgment.

Negative pressure respirator (tight fitting) means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen deficient atmosphere means an atmosphere with an oxygen content below 19.5% by volume.

Physician or other licensed health care professional (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by paragraph (e) of this section.

Positive pressure respirator means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the

respirator.

Powered air-purifying respirator (PAPR) means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure demand respirator means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Qualitative fit test (QLFT) means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quantitative fit test (QNFT) means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Respiratory inlet covering means that portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

Self-contained breathing apparatus (SCBA) means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Service life means the period of time that a respirator, filter or sorbent, or other respiratory equipment provides adequate protection to the wearer.

Supplied-air respirator (SAR) or airline respirator means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

This section means this respiratory protection standard.

Tight-fitting facepiece means a respiratory inlet covering that forms a complete seal with the face.

User seal check means an action conducted by the respirator user to determine if the respirator is properly seated to the face.

1910.134(c)

Respiratory protection program. This paragraph requires the employer to develop and implement a written respiratory protection program with required worksite-specific procedures and elements for required respirator use. The program must be administered by a suitably trained program administrator. In addition, certain program elements may be required for voluntary use to prevent potential hazards associated with the use of the respirator. The Small Entity Compliance Guide contains criteria for the selection of a program administrator and a sample program that meets the requirements of this paragraph. Copies of the Small Entity Compliance Guide will be available on or about April 8, 1998 from the Occupational Safety and Health Administration's Office of Publications, Room N 3101, 200 Constitution Avenue, NW, Washington, DC, 20210 (202-219-4667).

1910.134(c)(1)

In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. The employer shall include in the program the following provisions of this section, as applicable:

1910.134(c)(1)(i)

Procedures for selecting respirators for use in the workplace;

1910.134(c)(1)(ii)

Medical evaluations of employees required to use respirators;

1910.134(c)(1)(iii)

Fit testing procedures for tight-fitting respirators;

1910.134(c)(1)(iv)

Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;

1910.134(c)(1)(v)

Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators;

1910.134(c)(1)(vi)

Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators;

1910.134(c)(1)(vii)

Training of employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations;

1910.134(c)(1)(viii)

Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance; and

1910.134(c)(1)(ix)

Procedures for regularly evaluating the effectiveness of the program.

1910.134(c)(2)

Where respirator use is not required:

1910.134(c)(2)(i)

An employer may provide respirators at the request of employees or permit employees to use their own respirators, if the employer determines that such respirator use will not in itself create a hazard. If the employer determines that any voluntary respirator use is permissible, the employer shall provide the respirator users with the information contained in Appendix D to this section ("Information for Employees Using Respirators When Not Required Under the Standard"); and

1910.134(c)(2)(ii)

In addition, the employer must establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator, and that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user. Exception: Employers are not required to include in a written respiratory protection program those employees whose only use of respirators involves the voluntary use of filtering facepieces (dust masks).

1910.134(c)(3)

The employer shall designate a program administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

1910.134(c)(4)

The employer shall provide respirators, training, and medical evaluations at no cost to the employee.

1910.134(d)

Selection of respirators. This paragraph requires the employer to evaluate respiratory hazard(s) in the workplace, identify relevant workplace and user factors, and base respirator selection on these factors. The paragraph also specifies appropriately protective respirators for use in IDLH atmospheres, and limits the selection and use of air-purifying respirators.

1910.134(d)(1)

General requirements.

1910.134(d)(1)(i)

The employer shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.

1910.134(d)(1)(ii)

The employer shall select a NIOSH-certified respirator. The respirator shall be used in compliance with the conditions of its certification.

1910.134(d)(1)(iii)

The employer shall identify and evaluate the respiratory hazard(s) in the workplace; this evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Where the employer cannot identify or reasonably estimate the employee exposure, the employer shall consider the atmosphere to be IDLH.

1910.134(d)(1)(iv)

The employer shall select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

1910.134(d)(2)

Respirators for IDLH atmospheres.

1910.134(d)(2)(i)

The employer shall provide the following respirators for employee use in IDLH atmospheres:

1910.134(d)(2)(i)(A)

A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or

1910.134(d)(2)(i)(B)

A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

1910.134(d)(2)(ii)

Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

1910.134(d)(2)(iii)

All oxygen-deficient atmospheres shall be considered IDLH. Exception: If the employer demonstrates that, under all foreseeable conditions, the oxygen concentration can be maintained within the ranges specified in Table II of this section (i.e., for the altitudes set out in the table), then any atmosphere-supplying respirator may be used.

1910.134(d)(3)

Respirators for atmospheres that are not IDLH.

1910.134(d)(3)(i)

The employer shall provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations.

1910.134(d)(3)(i)(A)

Assigned Protection Factors (APFs) Employers must use the assigned protection factors listed in Table 1 to select a respirator that meets or exceeds the required level of employee protection. When using a combination respirator (e.g., airline respirators with an air-purifying filter), employers must ensure that the assigned protection factor is appropriate to the mode of operation in which the respirator is being used.

Table 1. -- Assigned Protection Factors⁵

Type of respirator ^{1, 2}	Quarter mask	Half mask	Full facepiece	Helmet/hood	Loose-fitting facepiece
1. Air-Purifying Respirator	5	³ 10	50	.....	.....
2. Powered Air-Purifying Respirator (PAPR)	.....	50	1,000	⁴ 25/1,000	25
3. Supplied-Air Respirator (SAR) or Airline Respirator					
• Demand mode	.....	10	50	.....	.....
• Continuous flow mode	.....	50	1,000	⁴ 25/1,000	25
• Pressure-demand or other positive-pressure mode	.....	50	1,000	.....	.....
4. Self-Contained Breathing Apparatus (SCBA)					
• Demand mode	.....	10	50	50	.....
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)	.....	.....	10,000	10,000	.....

Notes:

¹Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

²The assigned protection factors in Table 1 are only effective when the employer implements a continuing, effective respirator program as required by this section (29 CFR 1910.134), including training, fit testing, maintenance, and use requirements.

³This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

⁴The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators, and receive an APF of 25.

⁵These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by 29 CFR 1910 subpart Z, employers must refer to the appropriate substance-specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by 29 CFR 1910.134 (d)(2)(ii).

1910.134(d)(3)(i)(B)

Maximum Use Concentration (MUC)

1910.134(d)(3)(i)(B)(1)

The employer must select a respirator for employee use that maintains the employee's exposure to the hazardous substance, when measured outside the respirator, at or below the MUC.

1910.134(d)(3)(i)(B)(2)

Employers must not apply MUCs to conditions that are immediately dangerous to life or health (IDLH); instead, they must use respirators listed for IDLH conditions in paragraph (d)(2) of this standard.

1910.134(d)(3)(i)(B)(3)

When the calculated MUC exceeds the IDLH level for a hazardous substance, or the performance limits of the cartridge or canister, then employers must set the maximum MUC at that lower limit.

1910.134(d)(3)(ii)

The respirator selected shall be appropriate for the chemical state and physical form of the contaminant.

1910.134(d)(3)(iii)

For protection against gases and vapors, the employer shall provide:

1910.134(d)(3)(iii)(A)

An atmosphere-supplying respirator, or

1910.134(d)(3)(iii)(B)

An air-purifying respirator, provided that:

1910.134(d)(3)(iii)(B)(1)

The respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or

1910.134(d)(3)(iii)(B)(2)

If there is no ESLI appropriate for conditions in the employer's workplace, the employer implements a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. The employer shall describe in the respirator program the information and data relied upon and the basis for the canister and cartridge change schedule and the basis for reliance on the data.

1910.134(d)(3)(iv)

For protection against particulates, the employer shall provide:

1910.134(d)(3)(iv)(A)

An atmosphere-supplying respirator; or

1910.134(d)(3)(iv)(B)

An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air-purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or

1910.134(d)(3)(iv)(C)

For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

TABLE I. -- ASSIGNED PROTECTION FACTORS
[RESERVED]

TABLE II

Altitude (ft.)	Oxygen deficient Atmospheres (% O ₂) for which the employer atmosphere may rely on supplying respirators
Less than 3,001	16.0-19.5
3,001-4,000	16.4-19.5
4,001-5,000	17.1-19.5
5,001-6,000	17.8-19.5
6,001-7,000	18.5-19.5
7,001-8,000 ¹	19.3-19.5.

¹Above 8,000 feet the exception does not apply. Oxygen-enriched breathing air must be supplied above 14,000 feet.

1910.134(e)

Medical evaluation. Using a respirator may place a physiological burden on employees that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the employee. Accordingly, this paragraph specifies the minimum requirements for medical evaluation that employers must implement to determine the employee's ability to use a respirator.

1910.134(e)(1)

General. The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. The employer may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

1910.134(e)(2)

Medical evaluation procedures.

1910.134(e)(2)(i)

The employer shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire.

1910.134(e)(2)(ii)

The medical evaluation shall obtain the information requested by the questionnaire in Sections 1 and 2, Part A of Appendix C of this section.

1910.134(e)(3)

Follow-up medical examination.

1910.134(e)(3)(i)

The employer shall ensure that a follow-up medical examination is provided for an employee who gives a positive response to any question among questions 1 through 8 in Section 2, Part A of Appendix C or whose initial medical examination demonstrates the need for a follow-up medical examination.

1910.134(e)(3)(ii)

The follow-up medical examination shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

1910.134(e)(4)

Administration of the medical questionnaire and examinations.

1910.134(e)(4)(i)

The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire shall be administered in a manner that ensures that the employee understands its content.

1910.134(e)(4)(ii)

The employer shall provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

1910.134(e)(5)

Supplemental information for the PLHCP.

1910.134(e)(5)(i)

The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

1910.134(e)(5)(i)(A)

(A) The type and weight of the respirator to be used by the employee;

1910.134(e)(5)(i)(B)

The duration and frequency of respirator use (including use for rescue and escape);

1910.134(e)(5)(i)(C)

The expected physical work effort;

1910.134(e)(5)(i)(D)

Additional protective clothing and equipment to be worn; and

1910.134(e)(5)(i)(E)

Temperature and humidity extremes that may be encountered.

1910.134(e)(5)(ii)

Any supplemental information provided previously to the PLHCP regarding an employee need not be provided for a subsequent medical evaluation if the information and the PLHCP remain the same.

1910.134(e)(5)(iii)

The employer shall provide the PLHCP with a copy of the written respiratory protection program and a copy of this section.

Note to Paragraph (e)(5)(iii): When the employer replaces a PLHCP, the employer must ensure that the new PLHCP obtains this information, either by providing the documents directly to the PLHCP or having the documents transferred from the former PLHCP to the new PLHCP. However, OSHA does not expect employers to have employees medically reevaluated solely because a new PLHCP has been selected.

1910.134(e)(6)

Medical determination. In determining the employee's ability to use a respirator, the employer shall:

1910.134(e)(6)(i)

Obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

1910.134(e)(6)(i)(A)

Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;

1910.134(e)(6)(i)(B)

The need, if any, for follow-up medical evaluations; and

1910.134(e)(6)(i)(C)

A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

1910.134(e)(6)(ii)

If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, the employer shall provide a PAPR if the PLHCP's medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then the employer is no longer required to provide a PAPR.

1910.134(e)(7)

Additional medical evaluations. At a minimum, the employer shall provide additional medical evaluations that comply with the requirements of this section if:

1910.134(e)(7)(i)

An employee reports medical signs or symptoms that are related to ability to use a respirator;

1910.134(e)(7)(ii)

A PLHCP, supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated;

1910.134(e)(7)(iii)

Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or

1910.134(e)(7)(iv)

A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

1910.134(f)

Fit testing. This paragraph requires that, before an employee may be required to use any respirator with a negative or positive pressure tight-fitting facepiece, the employee must be fit tested with the same make, model, style, and size of respirator that will be used. This paragraph specifies the kinds of fit tests allowed, the procedures for conducting them, and how the results of the fit tests must be used.

1910.134(f)(1)

The employer shall ensure that employees using a tight-fitting facepiece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) as stated in this paragraph.

1910.134(f)(2)

The employer shall ensure that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.

1910.134(f)(3)

The employer shall conduct an additional fit test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

1910.134(f)(4)

If after passing a QLFT or QNFT, the employee subsequently notifies the employer, program administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator facepiece and to be retested.

1910.134(f)(5)

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of this section.

1910.134(f)(6)

QLFT may only be used to fit test negative pressure air-purifying respirators that must achieve a fit factor of 100 or less.

1910.134(f)(7)

If the fit factor, as determined through an OSHA-accepted QNFT protocol, is equal to or greater than 100 for tight-fitting half facepieces, or equal to or greater than 500 for tight-fitting full facepieces, the QNFT has been passed with that respirator.

1910.134(f)(8)

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

1910.134(f)(8)(i)

Qualitative fit testing of these respirators shall be accomplished by temporarily converting the respirator user's actual facepiece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator facepiece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator facepiece.

1910.134(f)(8)(ii)

Quantitative fit testing of these respirators shall be accomplished by modifying the facepiece to allow sampling inside the facepiece in the breathing zone of the user, midway between the nose and mouth. This requirement shall be accomplished by installing a permanent sampling probe onto a surrogate facepiece, or by using a sampling adapter designed to temporarily provide a means of sampling air from inside the facepiece.

1910.134(f)(8)(iii)

Any modifications to the respirator facepiece for fit testing shall be completely removed, and the facepiece restored to NIOSH-approved configuration, before that facepiece can be used in the workplace.

1910.134(g)

Use of respirators. This paragraph requires employers to establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres or in interior structural firefighting situations.

1910.134(g)(1)

Facepiece seal protection.

1910.134(g)(1)(i)

The employer shall not permit respirators with tight-fitting facepieces to be worn by employees who have:

1910.134(g)(1)(i)(A)

Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or

1910.134(g)(1)(i)(B)

Any condition that interferes with the face-to-facepiece seal or valve function.

1910.134(g)(1)(ii)

If an employee wears corrective glasses or goggles or other personal protective equipment, the employer shall ensure that such equipment is worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

1910.134(g)(1)(iii)

For all tight-fitting respirators, the employer shall ensure that employees perform a user seal check each time they put on the respirator using the procedures in Appendix B-1 or procedures recommended by the respirator manufacturer that the employer demonstrates are as effective as those in Appendix B-1 of this section.

1910.134(g)(2)

Continuing respirator effectiveness.

1910.134(g)(2)(i)

Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the employer shall reevaluate the continued effectiveness of the respirator.

1910.134(g)(2)(ii)

The employer shall ensure that employees leave the respirator use area:

1910.134(g)(2)(ii)(A)

To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or

1910.134(g)(2)(ii)(B)

If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or

1910.134(g)(2)(ii)(C)

To replace the respirator or the filter, cartridge, or canister elements.

1910.134(g)(2)(iii)

If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, the employer must replace or repair the respirator before allowing the employee to return to the work area.

1910.134(g)(3)

Procedures for IDLH atmospheres. For all IDLH atmospheres, the employer shall ensure that:

1910.134(g)(3)(i)

One employee or, when needed, more than one employee is located outside the IDLH atmosphere;

1910.134(g)(3)(ii)

Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;

1910.134(g)(3)(iii)

The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;

1910.134(g)(3)(iv)

The employer or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;

1910.134(g)(3)(v)

The employer or designee authorized to do so by the employer, once notified, provides necessary assistance appropriate to the situation;

1910.134(g)(3)(vi)

Employee(s) located outside the IDLH atmospheres are equipped with:

1910.134(g)(3)(vi)(A)

Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either

1910.134(g)(3)(vi)(B)

Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or

1910.134(g)(3)(vi)(C)

Equivalent means for rescue where retrieval equipment is not required under paragraph (g)(3)(vi)(B).

1910.134(g)(4)

Procedures for interior structural firefighting. In addition to the requirements set forth under paragraph (g)(3), in interior structural fires, the employer shall ensure that:

1910.134(g)(4)(i)

At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times;

1910.134(g)(4)(ii)

At least two employees are located outside the IDLH atmosphere; and

1910.134(g)(4)(iii)

All employees engaged in interior structural firefighting use SCBAs.

Note 1 to paragraph (g): One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as incident commander in charge of the emergency or safety officer, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident.

Note 2 to paragraph (g): Nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.

1910.134(h)

Maintenance and care of respirators. This paragraph requires the employer to provide for the cleaning and disinfecting, storage, inspection, and repair of respirators used by employees.

1910.134(h)(1)

Cleaning and disinfecting. The employer shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The employer shall ensure that respirators are cleaned and disinfected using the procedures in Appendix B-2 of this section, or procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness. The respirators shall be cleaned and disinfected at the following intervals:

1910.134(h)(1)(i)

Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition;

1910.134(h)(1)(ii)

Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals;

1910.134(h)(1)(iii)

Respirators maintained for emergency use shall be cleaned and disinfected after each use; and

1910.134(h)(1)(iv)

Respirators used in fit testing and training shall be cleaned and disinfected after each use.

1910.134(h)(2)

Storage. The employer shall ensure that respirators are stored as follows:

1910.134(h)(2)(i)

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

1910.134(h)(2)(ii)

In addition to the requirements of paragraph (h)(2)(i) of this section, emergency respirators shall be:

1910.134(h)(2)(ii)(A)

Kept accessible to the work area;

1910.134(h)(2)(ii)(B)

Stored in compartments or in covers that are clearly marked as containing emergency respirators; and

1910.134(h)(2)(ii)(C)

Stored in accordance with any applicable manufacturer instructions.

1910.134(h)(3)

Inspection.

1910.134(h)(3)(i)

The employer shall ensure that respirators are inspected as follows:

1910.134(h)(3)(i)(A)

All respirators used in routine situations shall be inspected before each use and during cleaning;

1910.134(h)(3)(i)(B)

All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and

1910.134(h)(3)(i)(C)

Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

1910.134(h)(3)(ii)

The employer shall ensure that respirator inspections include the following:

1910.134(h)(3)(ii)(A)

A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and

1910.134(h)(3)(ii)(B)

A check of elastomeric parts for pliability and signs of deterioration.

1910.134(h)(3)(iii)

In addition to the requirements of paragraphs (h)(3)(i) and (ii) of this section, self-contained breathing apparatus shall be inspected monthly. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. The employer shall determine that the regulator and warning devices function properly.

1910.134(h)(3)(iv)

For respirators maintained for emergency use, the employer shall:

1910.134(h)(3)(iv)(A)

Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator; and

1910.134(h)(3)(iv)(B)

Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.

1910.134(h)(4)

Repairs. The employer shall ensure that respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

1910.134(h)(4)(i)

Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;

1910.134(h)(4)(ii)

Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and

1910.134(h)(4)(iii)

Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

1910.134(i)

Breathing air quality and use. This paragraph requires the employer to provide employees using atmosphere-supplying respirators (supplied-air and SCBA) with breathing gases of high purity.

1910.134(i)(1)

The employer shall ensure that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration accords with the following specifications:

1910.134(i)(1)(i)

Compressed and liquid oxygen shall meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and

1910.134(i)(1)(ii)

Compressed breathing air shall meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:

1910.134(i)(1)(ii)(A)

Oxygen content (v/v) of 19.5-23.5%;

1910.134(i)(1)(ii)(B)

Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;

1910.134(i)(1)(ii)(C)

Carbon monoxide (CO) content of 10 ppm or less;

1910.134(i)(1)(ii)(D)

Carbon dioxide content of 1,000 ppm or less; and

1910.134(i)(1)(ii)(E)

Lack of noticeable odor.

1910.134(i)(2)

The employer shall ensure that compressed oxygen is not used in atmosphere-supplying respirators that have previously used compressed air.

1910.134(i)(3)

The employer shall ensure that oxygen concentrations greater than 23.5% are used only in equipment designed for oxygen service or distribution.

1910.134(i)(4)

The employer shall ensure that cylinders used to supply breathing air to respirators meet the following requirements:

1910.134(i)(4)(i)

Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 180);

1910.134(i)(4)(ii)

Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air; and

1910.134(i)(4)(iii)

The moisture content in the cylinder does not exceed a dew point of -50 deg.F (-45.6 deg.C) at 1 atmosphere pressure.

1910.134(i)(5)

The employer shall ensure that compressors used to supply breathing air to respirators are constructed and situated so as to:

1910.134(i)(5)(i)

Prevent entry of contaminated air into the air-supply system;

1910.134(i)(5)(ii)

Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F (5.56 deg.C) below the ambient temperature;

1910.134(i)(5)(iii)

Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions.

1910.134(i)(5)(iv)

Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. The tag shall be maintained at the compressor.

1910.134(i)(6)

For compressors that are not oil-lubricated, the employer shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.

1910.134(i)(7)

For oil-lubricated compressors, the employer shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

1910.134(i)(8)

The employer shall ensure that breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. No asphyxiating substance shall be introduced into breathing air lines.

1910.134(i)(9)

The employer shall use only the respirator manufacturer's NIOSH-approved breathing-gas containers, marked and maintained in accordance with the Quality Assurance provisions of the NIOSH approval for the SCBA as issued in accordance with the NIOSH respirator-certification standard at 42 CFR part 84.

1910.134(j)

Identification of filters, cartridges, and canisters. The employer shall ensure that all filters, cartridges and canisters used in the workplace are labeled and color coded with the NIOSH approval label and that the label is not removed and remains legible.

1910.134(k)

Training and information. This paragraph requires the employer to provide effective training to employees who are required to use respirators. The training must be comprehensive, understandable, and recur annually, and more often if necessary. This paragraph also requires the employer to provide the basic information on respirators in Appendix D of this section to employees who wear respirators when not required by this section or by the employer to do so.

1910.134(k)(1)

The employer shall ensure that each employee can demonstrate knowledge of at least the following:

1910.134(k)(1)(i)

Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;

1910.134(k)(1)(ii)

What the limitations and capabilities of the respirator are;

1910.134(k)(1)(iii)

How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;

1910.134(k)(1)(iv)

How to inspect, put on and remove, use, and check the seals of the respirator;

1910.134(k)(1)(v)

What the procedures are for maintenance and storage of the respirator;

1910.134(k)(1)(vi)

How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and

1910.134(k)(1)(vii)

The general requirements of this section.

1910.134(k)(2)

The training shall be conducted in a manner that is understandable to the employee.

1910.134(k)(3)

The employer shall provide the training prior to requiring the employee to use a respirator in the workplace.

1910.134(k)(4)

An employer who is able to demonstrate that a new employee has received training within the last 12 months that addresses the elements specified in paragraph (k)(1)(i) through (vii) is not required to repeat such training provided that, as required by paragraph (k)(1), the employee can demonstrate knowledge of those element(s). Previous training not repeated initially by the employer must be provided no later than 12 months from the date of the previous training.

1910.134(k)(5)

Retraining shall be administered annually, and when the following situations occur:

1910.134(k)(5)(i)

Changes in the workplace or the type of respirator render previous training obsolete;

1910.134(k)(5)(ii)

Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or

1910.134(k)(5)(iii)

Any other situation arises in which retraining appears necessary to ensure safe respirator use.

1910.134(k)(6)

The basic advisory information on respirators, as presented in Appendix D of this section, shall be provided by the employer in any written or oral format, to employees who wear respirators when such use is not required by this section or by the employer.

1910.134(l)

Program evaluation. This section requires the employer to conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult employees to ensure that they are using the respirators properly.

1910.134(l)(1)

The employer shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

1910.134(l)(2)

The employer shall regularly consult employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

1910.134(l)(2)(i)

Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);

1910.134(l)(2)(ii)

Appropriate respirator selection for the hazards to which the employee is exposed;

1910.134(l)(2)(iii)

Proper respirator use under the workplace conditions the employee encounters; and

1910.134(l)(2)(iv)

Proper respirator maintenance.

1910.134(m)

Recordkeeping. This section requires the employer to establish and retain written information regarding medical evaluations, fit testing, and the respirator program. This information will facilitate employee involvement in the respirator program, assist the employer in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

1910.134(m)(1)

Medical evaluation. Records of medical evaluations required by this section must be retained and made available in accordance with 29 CFR 1910.1020.

1910.134(m)(2)

Fit testing.

1910.134(m)(2)(i)

The employer shall establish a record of the qualitative and quantitative fit tests administered to an employee including:

1910.134(m)(2)(i)(A)

The name or identification of the employee tested;

1910.134(m)(2)(i)(B)

Type of fit test performed;

1910.134(m)(2)(i)(C)

Specific make, model, style, and size of respirator tested;

1910.134(m)(2)(i)(D)

Date of test; and

1910.134(m)(2)(i)(E)

The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.

1910.134(m)(2)(ii)

Fit test records shall be retained for respirator users until the next fit test is administered.

1910.134(m)(3)

A written copy of the current respirator program shall be retained by the employer.

1910.134(m)(4)

Written materials required to be retained under this paragraph shall be made available upon request to affected employees and to the Assistant Secretary or designee for examination and copying.

1910.134(n)

Effective date. Paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section become effective November 22, 2006.

1910.134(o)

Appendices. Compliance with Appendix A, Appendix B-1, Appendix B-2, Appendix C, and Appendix D to this section are mandatory.

[63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998; 71 FR 16672, April 3, 2006; 71 FR 50187, August 24, 2006; 73 FR 75584, Dec. 12, 2008; 76 FR 33606, June 8, 2011]

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By Standard Number / 1910.95 - Occupational noise exposure.

-
- **Part Number:** 1910
 - **Part Number Title:** Occupational Safety and Health Standards
 - **Subpart:** 1910 Subpart G
 - **Subpart Title:** Occupational Health and Environmental Control
 - **Standard Number:** 1910.95
 - **Title:** Occupational noise exposure.
 - **Appendix:** A; B; C; D; E; F; G; H; I
 - **GPO Source:** e-CFR
-

1910.95(a)

Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows:

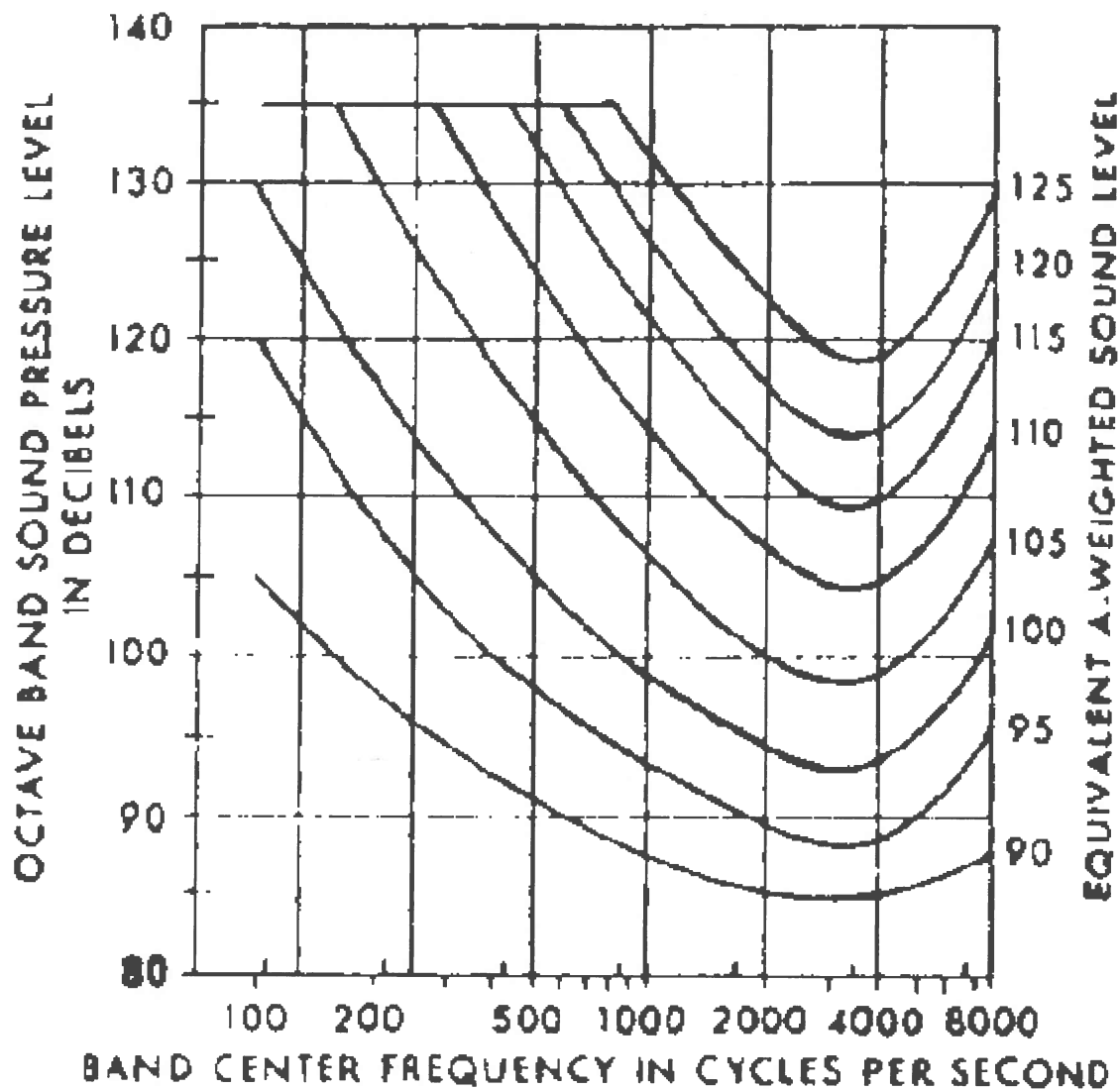


FIGURE G-9

Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table 1.G-16.

1910.95(b)(1)

When employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

1910.95(b)(2)

If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES (1)

Duration per day, hours	Sound level dBA slow response
8.....	90
6.....	92
4.....	95
3.....	97
2.....	100
1 1/2	102
1.....	105
1/2	110
1/4 or less.....	115

Footnote(1) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C(1)/T(1) + C(2)/T(2) + C(n)/T(n)$ exceeds unity, then, the mixed exposure should be considered to exceed the limit value. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level. Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

1910.95(c)

"Hearing conservation program."

1910.95(c)(1)

The employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent. For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.

1910.95(c)(2)

For purposes of paragraphs (c) through (n) of this section, an 8-hour time-weighted average of 85 decibels or a dose of fifty percent shall also be referred to as the action level.

1910.95(d)

"Monitoring."

1910.95(d)(1)

When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall develop and implement a monitoring program.

1910.95(d)(1)(i)

The sampling strategy shall be designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.

1910.95(d)(1)(ii)

Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the employer shall use representative personal sampling to comply with the monitoring requirements of this paragraph unless the employer can show that area sampling produces equivalent results.

1910.95(d)(2)(i)

All continuous, intermittent and impulsive sound levels from 80 decibels to 130 decibels shall be integrated into the noise measurements.

1910.95(d)(2)(ii)

Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.

1910.95(d)(3)

Monitoring shall be repeated whenever a change in production, process, equipment or controls increases noise exposures to the extent that:

1910.95(d)(3)(i)

Additional employees may be exposed at or above the action level; or

1910.95(d)(3)(ii)

The attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet the requirements of paragraph (j) of this section.

1910.95(e)

"Employee notification." The employer shall notify each employee exposed at or above an 8-hour time-weighted average of 85 decibels of the results of the monitoring.

1910.95(f)

"Observation of monitoring." The employer shall provide affected employees or their representatives with an opportunity to observe any noise measurements conducted pursuant to this section.

1910.95(g)

"Audiometric testing program."

1910.95(g)(1)

The employer shall establish and maintain an audiometric testing program as provided in this paragraph by making audiometric testing available to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels.

1910.95(g)(2)

The program shall be provided at no cost to employees.

1910.95(g)(3)

Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining and checking calibration and proper functioning of the audiometers being used. A technician who operates microprocessor audiometers does not need to be certified. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or physician.

1910.95(g)(4)

All audiograms obtained pursuant to this section shall meet the requirements of Appendix C: "Audiometric Measuring Instruments."

1910.95(g)(5)

"Baseline audiogram."

1910.95(g)(5)(i)

Within 6 months of an employee's first exposure at or above the action level, the employer shall establish a valid baseline audiogram against which subsequent audiograms can be compared.

1910.95(g)(5)(ii)

"Mobile test van exception." Where mobile test vans are used to meet the audiometric testing obligation, the employer shall obtain a valid baseline audiogram within 1 year of an employee's first exposure at or above the action level. Where baseline audiograms are obtained more than 6 months after the employee's first exposure at or above the action level, employees shall wear hearing protectors for any period exceeding six months after first exposure until the baseline audiogram is obtained.

1910.95(g)(5)(iii)

Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise.

1910.95(g)(5)(iv)

The employer shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

1910.95(g)(6)

"Annual audiogram." At least annually after obtaining the baseline audiogram, the employer shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.

1910.95(g)(7)

"Evaluation of audiogram."

1910.95(g)(7)(i)

Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift as defined in paragraph (g)(10) of this section has occurred. This comparison may be done by a technician.

1910.95(g)(7)(ii)

If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.

1910.95(g)(7)(iii)

The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. The employer shall provide to the person performing this evaluation the following information:

1910.95(g)(7)(iii)(A)

A copy of the requirements for hearing conservation as set forth in paragraphs (c) through (n) of this section;

1910.95(g)(7)(iii)(B)

The baseline audiogram and most recent audiogram of the employee to be evaluated;

1910.95(g)(7)(iii)(C)

Measurements of background sound pressure levels in the audiometric test room as required in Appendix D: Audiometric Test Rooms.

1910.95(g)(7)(iii)(D)

Records of audiometer calibrations required by paragraph (h)(5) of this section.

1910.95(g)(8)

"Follow-up procedures."

1910.95(g)(8)(i)

If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift as defined in paragraph (g)(10) of this section has occurred, the employee shall be informed of this fact in writing, within 21 days of the determination.

1910.95(g)(8)(ii)

Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that the following steps are taken when a standard threshold shift occurs:

1910.95(g)(8)(ii)(A)

Employees not using hearing protectors shall be fitted with hearing protectors, trained in their use and care, and required to use them.

1910.95(g)(8)(ii)(B)

Employees already using hearing protectors shall be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.

1910.95(g)(8)(ii)(C)

The employee shall be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if the employer suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.

1910.95(g)(8)(ii)(D)

The employee is informed of the need for an otological examination if a medical pathology of the ear that is unrelated to the use of hearing protectors is suspected.

1910.95(g)(8)(iii)

If subsequent audiometric testing of an employee whose exposure to noise is less than an 8-hour TWA of 90 decibels indicates that a standard threshold shift is not persistent, the employer:

1910.95(g)(8)(iii)(A)

Shall inform the employee of the new audiometric interpretation; and

1910.95(g)(8)(iii)(B)

May discontinue the required use of hearing protectors for that employee.

1910.95(g)(9)

"Revised baseline." An annual audiogram may be substituted for the baseline audiogram when, in the judgment of the audiologist, otolaryngologist or physician who is evaluating the audiogram:

1910.95(g)(9)(i)

The standard threshold shift revealed by the audiogram is persistent; or

1910.95(g)(9)(ii)

The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiogram.

1910.95(g)(10)

"Standard threshold shift."

1910.95(g)(10)(i)

As used in this section, a standard threshold shift is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

1910.95(g)(10)(ii)

In determining whether a standard threshold shift has occurred, allowance may be made for the contribution of aging (presbycusis) to the change in hearing level by correcting the annual audiogram according to the procedure described in Appendix F: "Calculation and Application of Age Correction to Audiograms."

1910.95(h)

"Audiometric test requirements."

1910.95(h)(1)

Audiometric tests shall be pure tone, air conduction, hearing threshold examinations, with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000, and 6000 Hz. Tests at each frequency shall be taken

separately for each ear.

1910.95(h)(2)

Audiometric tests shall be conducted with audiometers (including microprocessor audiometers) that meet the specifications of, and are maintained and used in accordance with, American National Standard Specification for Audiometers, S3.6-1969, which is incorporated by reference as specified in Sec. 1910.6.

1910.95(h)(3)

Pulsed-tone and self-recording audiometers, if used, shall meet the requirements specified in Appendix C: "Audiometric Measuring Instruments."

1910.95(h)(4)

Audiometric examinations shall be administered in a room meeting the requirements listed in Appendix D: "Audiometric Test Rooms."

1910.95(h)(5)

"Audiometer calibration."

1910.95(h)(5)(i)

The functional operation of the audiometer shall be checked before each day's use by testing a person with known, stable hearing thresholds, and by listening to the audiometer's output to make sure that the output is free from distorted or unwanted sounds. Deviations of 10 decibels or greater require an acoustic calibration.

1910.95(h)(5)(ii)

Audiometer calibration shall be checked acoustically at least annually in accordance with Appendix E: "Acoustic Calibration of Audiometers." Test frequencies below 500 Hz and above 6000 Hz may be omitted from this check. Deviations of 15 decibels or greater require an exhaustive calibration.

1910.95(h)(5)(iii)

An exhaustive calibration shall be performed at least every two years in accordance with sections 4.1.2; 4.1.3.; 4.1.4.3; 4.2; 4.4.1; 4.4.2; 4.4.3; and 4.5 of the American National Standard Specification for Audiometers, S3.6-1969. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this calibration.

1910.95(i)

"Hearing protectors."

1910.95(i)(1)

Employers shall make hearing protectors available to all employees exposed to an 8-hour time-weighted average of 85 decibels or greater at no cost to the employees. Hearing protectors shall be replaced as necessary.

1910.95(i)(2)

Employers shall ensure that hearing protectors are worn:

1910.95(i)(2)(i)

By an employee who is required by paragraph (b)(1) of this section to wear personal protective equipment; and

1910.95(i)(2)(ii)

By any employee who is exposed to an 8-hour time-weighted average of 85 decibels or greater, and who:

1910.95(i)(2)(ii)(A)

Has not yet had a baseline audiogram established pursuant to paragraph (g)(5)(ii); or

1910.95(i)(2)(ii)(B)

Has experienced a standard threshold shift.

1910.95(i)(3)

Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors provided by the employer.

1910.95(i)(4)

The employer shall provide training in the use and care of all hearing protectors provided to employees.

1910.95(i)(5)

The employer shall ensure proper initial fitting and supervise the correct use of all hearing protectors.

1910.95(j)

"Hearing protector attenuation."

1910.95(j)(1)

The employer shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. The employer shall use one of the evaluation methods described in Appendix B: "Methods for Estimating the Adequacy of Hearing Protection Attenuation."

1910.95(j)(2)

Hearing protectors must attenuate employee exposure at least to an 8-hour time-weighted average of 90 decibels as required by paragraph (b) of this section.

1910.95(j)(3)

For employees who have experienced a standard threshold shift, hearing protectors must attenuate employee exposure to an 8-hour time-weighted average of 85 decibels or below.

1910.95(j)(4)

The adequacy of hearing protector attenuation shall be re-evaluated whenever employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation. The employer shall provide more effective hearing protectors where necessary.

1910.95(k)

"Training program."

1910.95(k)(1)

The employer shall train each employee who is exposed to noise at or above an 8-hour time weighted average of 85 decibels in accordance with the requirements of this section. The employer shall institute a training program and ensure employee participation in the program.

1910.95(k)(2)

The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes.

1910.95(k)(3)

The employer shall ensure that each employee is informed of the following:

1910.95(k)(3)(i)

The effects of noise on hearing;

1910.95(k)(3)(ii)

The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care; and

1910.95(k)(3)(iii)

The purpose of audiometric testing, and an explanation of the test procedures.

1910.95(l)

"Access to information and training materials."

1910.95(l)(1)

The employer shall make available to affected employees or their representatives copies of this standard and shall also post a copy in the workplace.

1910.95(l)(2)

The employer shall provide to affected employees any informational materials pertaining to the standard that are supplied to the employer by the Assistant Secretary.

1910.95(l)(3)

The employer shall provide, upon request, all materials related to the employer's training and education program pertaining to this standard to the Assistant Secretary and the Director.

1910.95(m)

"Recordkeeping" -

1910.95(m)(1)

"Exposure measurements." The employer shall maintain an accurate record of all employee exposure measurements required by paragraph (d) of this section.

1910.95(m)(2)

"Audiometric tests."

1910.95(m)(2)(i)

The employer shall retain all employee audiometric test records obtained pursuant to paragraph (g) of this section:

1910.95(m)(2)(ii)

This record shall include:

1910.95(m)(2)(ii)(A)

Name and job classification of the employee;

1910.95(m)(2)(ii)(B)

Date of the audiogram;

1910.95(m)(2)(ii)(C)

The examiner's name;

1910.95(m)(2)(ii)(D)

Date of the last acoustic or exhaustive calibration of the audiometer; and

1910.95(m)(2)(ii)(E)

Employee's most recent noise exposure assessment.

1910.95(m)(2)(ii)(F)

The employer shall maintain accurate records of the measurements of the background sound pressure levels in audiometric test rooms.

1910.95(m)(3)

"Record retention." The employer shall retain records required in this paragraph (m) for at least the following periods.

1910.95(m)(3)(i)

Noise exposure measurement records shall be retained for two years.

1910.95(m)(3)(ii)

Audiometric test records shall be retained for the duration of the affected employee's employment.

1910.95(m)(4)

"Access to records." All records required by this section shall be provided upon request to employees, former employees, representatives designated by the individual employee, and the Assistant Secretary. The provisions of 29 CFR 1910.1020 (a)-(e) and (g)-(i) apply to access to records under this section.

1910.95(m)(5)

"Transfer of records." If the employer ceases to do business, the employer shall transfer to the successor employer all records required to be maintained by this section, and the successor employer shall retain them for the remainder of the period prescribed in paragraph (m)(3) of this section.

1910.95(n)

"Appendices."

1910.95(n)(1)

Appendices A, B, C, D, and E to this section are incorporated as part of this section and the contents of these appendices are mandatory.

1910.95(n)(2)

Appendices F and G to this section are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

1910.95(o)

"Exemptions." Paragraphs (c) through (n) of this section shall not apply to employers engaged in oil and gas well drilling and servicing operations.

[39 FR 23502, June 27, 1974, as amended at 46 FR 4161, Jan. 16, 1981; 46 FR 62845, Dec. 29, 1981; 48 FR 9776, Mar. 8, 1983; 48 FR 29687, June 28, 1983; 54 FR 24333, June 7, 1989; 61 FR 5507, Feb. 13, 1996; 61 FR 9227, March 7, 1996; 71 FR 16672, April, 3, 2006; 73 FR 75584, Dec. 12, 2008]

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- **Part Number:** 1910
- **Part Title:** Occupational Safety and Health Standards
- **Subpart:** Z
- **Subpart Title:** Toxic and Hazardous Substances
- **Standard Number:** 1910.1030
- **Title:** Bloodborne pathogens.
- **Appendix:** A
- **GPO Source:** e-CFR

1910.1030(a)

Scope and Application. This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

1910.1030(b)

Definitions. For purposes of this section, the following shall apply:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Engineering Controls means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Handwashing Facilities means a facility providing an adequate supply of running potable water, soap, and single-use towels or air-drying machines.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

Needleless systems means a device that does not use needles for:

- (1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;
- (2) The administration of medication or fluids; or
- (3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials means

- (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
- (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and
- (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as needles, human bites, cuts, and abrasions.

Personal Protective Equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially

infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharps with engineered sharps injury protections means a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

1910.1030(c)

Exposure Control -

1910.1030(c)(1)

Exposure Control Plan.

1910.1030(c)(1)(i)

Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

1910.1030(c)(1)(ii)

The Exposure Control Plan shall contain at least the following elements:

1910.1030(c)(1)(ii)(A)

The exposure determination required by paragraph (c)(2),

1910.1030(c)(1)(ii)(B)

The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

1910.1030(c)(1)(ii)(C)

The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

1910.1030(c)(1)(iii)

Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.20(e).

1910.1030(c)(1)(iv)

The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:

1910.1030(c)(1)(iv)(A)

Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

1910.1030(c)(1)(iv)(B)

Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

1910.1030(c)(1)(v)

An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

1910.1030(c)(1)(v)

The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

1910.1030(c)(2)

Exposure Determination.

1910.1030(c)(2)(i)

Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

1910.1030(c)(2)(i)(A)

A list of all job classifications in which all employees in those job classifications have occupational exposure;

1910.1030(c)(2)(i)(B)

A list of job classifications in which some employees have occupational exposure, and

1910.1030(c)(2)(i)(C)

A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

1910.1030(c)(2)(ii)

This exposure determination shall be made without regard to the use of personal protective equipment.

1910.1030(d)

Methods of Compliance -

1910.1030(d)(1)

General. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

1910.1030(d)(2)

Engineering and Work Practice Controls.

1910.1030(d)(2)(i)

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.

1910.1030(d)(2)(ii)

Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

1910.1030(d)(2)(iii)

Employers shall provide handwashing facilities which are readily accessible to employees.

1910.1030(d)(2)(iv)

When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.

1910.1030(d)(2)(v)

Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

1910.1030(d)(2)(vi)

Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

1910.1030(d)(2)(vii)

Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

1910.1030(d)(2)(vii)(A)

Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

1910.1030(d)(2)(vii)(B)

Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

1910.1030(d)(2)(viii)

Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

1910.1030(d)(2)(viii)(A)

Puncture resistant;

1910.1030(d)(2)(viii)(B)

Labeled or color-coded in accordance with this standard;

1910.1030(d)(2)(viii)(C)

Leakproof on the sides and bottom; and

1910.1030(d)(2)(viii)(D)

In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.

1910.1030(d)(2)(ix)

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

1910.1030(d)(2)(x)

Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

1910.1030(d)(2)(xi)

All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

1910.1030(d)(2)(xii)

Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

1910.1030(d)(2)(xiii)

Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

1910.1030(d)(2)(xiii)(A)

The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

1910.1030(d)(2)(xiii)(B)

If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

1910.1030(d)(2)(kiii)(C)

If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

1910.1030(d)(2)(xiv)

Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

1910.1030(d)(2)(xv)(A)

A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

1910.1030(d)(2)(xv)(B)

The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

1910.1030(d)(3)

Personal Protective Equipment -

1910.1030(d)(3)(i)

Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

1910.1030(d)(3)(ii)

Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

1910.1030(d)(3)(iii)

Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

1910.1030(d)(3)(iv)

Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

1910.1030(d)(3)(v)

Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

1910.1030(d)(3)(vi)

If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

1910.1030(d)(3)(vii)

All personal protective equipment shall be removed prior to leaving the work area.

1910.1030(d)(3)(viii)

When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

1910.1030(d)(3)(ix)

Gloves. Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

1910.1030(d)(3)(ix)(A)

Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

1910.1030(d)(3)(ix)(B)

Disposable (single use) gloves shall not be washed or decontaminated for re-use.

1910.1030(d)(3)(ix)(C)

Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

1910.1030(d)(3)(ix)(D)

If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

1910.1030(d)(3)(ix)(D)(1)

Periodically reevaluate this policy;

1910.1030(d)(3)(ix)(D)(2)

Make gloves available to all employees who wish to use them for phlebotomy;

1910.1030(d)(3)(ix)(D)(3)

Not discourage the use of gloves for phlebotomy; and

1910.1030(d)(3)(ix)(D)(4)

Require that gloves be used for phlebotomy in the following circumstances:

1910.1030(d)(3)(ix)(D)(4)(i)

When the employee has cuts, scratches, or other breaks in his or her skin;

1910.1030(d)(3)(ix)(D)(4)(ii)

When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

1910.1030(d)(3)(ix)(D)(4)(iii)

When the employee is receiving training in phlebotomy.

1910.1030(d)(3)(x)

Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

1910.1030(d)(3)(xi)

Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

1910.1030(d)(3)(xii)

Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).

1910.1030(d)(4)

Housekeeping -

1910.1030(d)(4)(i)

General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

1910.1030(d)(4)(ii)

All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

1910.1030(d)(4)(iii)(A)

Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

1910.1030(d)(4)(iii)(B)

Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

1910.1030(d)(4)(iii)(C)

All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

1910.1030(d)(4)(iii)(D)

Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.

1910.1030(d)(4)(iii)(E)

Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

1910.1030(d)(4)(iii)

Regulated Waste -

1910.1030(d)(4)(iii)(A)

Contaminated Sharps Discarding and Containment.

1910.1030(d)(4)(iii)(A)(1)

Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

1910.1030(d)(4)(iii)(A)(1)(i)

Closable;

1910.1030(d)(4)(iii)(A)(1)(ii)

Puncture resistant;

1910.1030(d)(4)(iii)(A)(1)(iii)

Leakproof on sides and bottom; and

1910.1030(d)(4)(iii)(A)(1)(iv)

Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

1910.1030(d)(4)(iii)(A)(2)

During use, containers for contaminated sharps shall be:

1910.1030(d)(4)(iii)(A)(2)(i)

Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

1910.1030(d)(4)(iii)(A)(2)(ii)

Maintained upright throughout use; and

1910.1030(d)(4)(iii)(A)(2)(iii)

Replaced routinely and not be allowed to overfill.

1910.1030(d)(4)(iii)(A)(3)

When moving containers of contaminated sharps from the area of use, the containers shall be:

1910.1030(d)(4)(iii)(A)(3)(i)

Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

1910.1030(d)(4)(iii)(A)(3)(ii)

Placed in a secondary container if leakage is possible. The second container shall be:

1910.1030(d)(4)(iii)(A)(3)(ii)(A)

Closable;

1910.1030(d)(4)(iii)(A)(3)(ii)(B)

Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping, and

1910.1030(d)(4)(iii)(A)(3)(ii)(C)

Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

1910.1030(d)(4)(iii)(A)(4)

Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.

1910.1030(d)(4)(iii)(B)

Other Regulated Waste Containment -

1910.1030(d)(4)(iii)(B)(1)

Regulated waste shall be placed in containers which are:

1910.1030(d)(4)(iii)(B)(2)(i)

Closable;

1910.1030(d)(4)(iii)(B)(2)(ii)

Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

1910.1030(d)(4)(iii)(B)(2)(iii)

Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and

1910.1030(d)(4)(iii)(B)(2)(iv)

Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

1910.1030(d)(4)(iii)(B)(2)

If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

1910.1030(d)(4)(iii)(B)(2)(i)

Closable;

1910.1030(d)(4)(iii)(B)(2)(ii)

Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

1910.1030(d)(4)(iii)(8)(2)(iii)

Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

1910.1030(d)(4)(iii)(8)(2)(iv)

Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

1910.1030(d)(4)(iii)(c)

Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

1910.1030(d)(4)(iv)

Laundry.

1910.1030(d)(4)(v)(A)

Contaminated laundry shall be handled as little as possible with a minimum of agitation.

1910.1030(d)(4)(v)(A)(1)

Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

1910.1030(d)(4)(v)(A)(2)

Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

1910.1030(d)(4)(v)(A)(3)

Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

1910.1030(d)(4)(v)(B)

The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

1910.1030(d)(4)(v)(C)

When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

1910.1030(e)

HIV and HBV Research Laboratories and Production Facilities.

1910.1030(e)(1)

This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

1910.1030(e)(2)

Research laboratories and production facilities shall meet the following criteria:

1910.1030(e)(2)(i)

Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

1910.1030(e)(2)(ii)

Special Practices.

1910.1030(e)(2)(iii)(A)

Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

1910.1030(e)(2)(ii)(B)

Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

1910.1030(e)(2)(ii)(C)

Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

1910.1030(e)(2)(ii)(D)

When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

1910.1030(e)(2)(iii)(E)

All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

1910.1030(e)(2)(iii)(F)

Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

1910.1030(e)(2)(iii)(G)

Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

1910.1030(e)(2)(iii)(H)

Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

1910.1030(e)(2)(iii)(I)

Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

1910.1030(e)(2)(iii)(J)

Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

1910.1030(e)(2)(iii)(K)

All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

1910.1030(e)(2)(iii)(L)

A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

1910.1030(e)(2)(iii)(M)

A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

1910.1030(e)(2)(iii)

Containment Equipment.

1910.1030(e)(2)(iii)(A)

Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

1910.1030(e)(2)(iii)(e)

Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

1910.1030(e)(3)

HIV and HBV research laboratories shall meet the following criteria:

1910.1030(e)(3)(i)

Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

1910.1030(e)(3)(ii)

An autoclave for decontamination of regulated waste shall be available.

1910.1030(e)(4)

HIV and HBV production facilities shall meet the following criteria:

1910.1030(e)(4)(i)

The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

1910.1030(e)(4)(ii)

The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

1910.1030(e)(4)(iii)

Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

1910.1030(e)(4)(iv)

Access doors to the work area or containment module shall be self-closing.

1910.1030(e)(4)(v)

An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

1910.1030(e)(4)(vi)

A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

1910.1030(e)(5)

Training Requirements. Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(x).

1910.1030(f)

Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up -

1910.1030(f)(1)

General.

1910.1030(f)(1)(i)

The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

1910.1030(7)(1)(i)

The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

1910.1030(7)(1)(i)(A)

Made available at no cost to the employee;

1910.1030(7)(1)(i)(B)

Made available to the employee at a reasonable time and place;

1910.1030(7)(1)(i)(C)

Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

1910.1030(7)(1)(i)(D)

Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (i).

1910.1030(7)(2)(iii)

The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

1910.1030(7)(2)

Hepatitis B Vaccination.

1910.1030(7)(2)(i)

Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vi)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series; antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

1910.1030(7)(2)(ii)

The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

1910.1030(7)(2)(iii)

If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employee shall make available hepatitis B vaccination at that time.

1910.1030(7)(2)(iv)

The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in appendix A.

1910.1030(7)(2)(v)

If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

1910.1030(7)(3)

Post-exposure Evaluation and Follow-up. Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

1910.1030(7)(3)(i)

Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

1910.1030(7)(3)(ii)

Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

1910.1030(7)(3)(iii)(A)

The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

1910.1030(f)(3)(i)(B)

When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

1910.1030(f)(3)(i)(C)

Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

1910.1030(f)(3)(iii)

Collection and testing of blood for HBV and HIV serological status;

1910.1030(f)(3)(iii)(A)

The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

1910.1030(f)(3)(iii)(B)

If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

1910.1030(f)(3)(iv)

Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

1910.1030(f)(3)(v)

Counseling; and

1910.1030(f)(3)(vi)

Evaluation of reported illnesses.

1910.1030(f)(4)

Information Provided to the Healthcare Professional.

1910.1030(f)(4)(i)

The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

1910.1030(f)(4)(ii)

The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

1910.1030(f)(4)(ii)(A)

A copy of this regulation;

1910.1030(f)(4)(ii)(B)

A description of the exposed employee's duties as they relate to the exposure incident;

1910.1030(f)(4)(ii)(C)

Documentation of the route(s) of exposure and circumstances under which exposure occurred;

1910.1030(f)(4)(ii)(D)

Results of the source individual's blood testing, if available; and

1910.1030(f)(4)(ii)(E)

All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

1910.1030(f)(5)

Healthcare Professional's Written Opinion. The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

1910.1030(f)(5)(i)

The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

1910.1030(f)(5)(iv)

The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

1910.1030(f)(5)(iv)(A)

That the employee has been informed of the results of the evaluation; and

1910.1030(f)(5)(iv)(B)

That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

1910.1030(f)(5)(iii)

All other findings or diagnoses shall remain confidential and shall not be included in the written report.

1910.1030(f)(6)

Medical Recordkeeping. Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

1910.1030(g)

Communication of Hazards to Employees -

1910.1030(g)(1)

Labels and Signs -

1910.1030(g)(1)(i)

Labels.

1910.1030(g)(1)(i)(A)

Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

1910.1030(g)(1)(i)(B)

Labels required by this section shall include the following legend:



BIOHAZARD

1910.1030(g)(1)(i)(C)

These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

1910.1030(g)(1)(i)(D)

Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

1910.1030(g)(1)(i)(E)

Red bags or red containers may be substituted for labels.

1910.1030(g)(1)(i)(F)

Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).

1910.1030(g)(1)(i)(G)

Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

1910.1030(g)(1)(i)(H)

Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

1910.1030(g)(1)(ii)(1)

Regulated waste that has been decontaminated need not be labeled or color-coded.

1910.1030(g)(1)(ii)

Signs.

1910.1030(g)(1)(iii)(A)

The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:



BIOHAZARD

(Name of the Infectious Agent)
(Special requirements for entering the area)
(Name, telephone number of the laboratory director or other responsible person.)

1910.1030(g)(1)(iii)(B)

These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

1910.1030(g)(2)

Information and Training.

1910.1030(g)(2)(i)

The employer shall train each employee with occupational exposure in accordance with the requirements of this section. Such training must be provided at no cost to the employee and during working hours. The employer shall institute a training program and ensure employee participation in the program.

1910.1030(g)(2)(ii)

Training shall be provided as follows:

1910.1030(g)(2)(iii)(A)

At the time of initial assignment to tasks where occupational exposure may take place;

1910.1030(g)(2)(iii)(B)

At least annually thereafter.

1910.1030(g)(2)(iii)

[Reserved]

1910.1030(g)(2)(iv)	<i>Annual training for all employees shall be provided within one year of their previous training.</i>
1910.1030(g)(2)(v)	<i>Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.</i>
1910.1030(g)(2)(vi)	<i>Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.</i>
1910.1030(g)(2)(vii)	<i>The training program shall contain at a minimum the following elements:</i>
1910.1030(g)(2)(vii)(A)	<i>An accessible copy of the regulatory text of this standard and an explanation of its contents;</i>
1910.1030(g)(2)(vii)(B)	<i>A general explanation of the epidemiology and symptoms of bloodborne diseases;</i>
1910.1030(g)(2)(vii)(C)	<i>An explanation of the modes of transmission of bloodborne pathogens;</i>
1910.1030(g)(2)(vii)(D)	<i>An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;</i>
1910.1030(g)(2)(vii)(E)	<i>An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;</i>
1910.1030(g)(2)(vii)(F)	<i>An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;</i>
1910.1030(g)(2)(vii)(G)	<i>Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;</i>
1910.1030(g)(2)(vii)(H)	<i>An explanation of the basis for selection of personal protective equipment;</i>
1910.1030(g)(2)(vii)(I)	<i>Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;</i>
1910.1030(g)(2)(vii)(J)	<i>Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;</i>
1910.1030(g)(2)(vii)(K)	<i>An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;</i>
1910.1030(g)(2)(vii)(L)	<i>Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;</i>
1910.1030(g)(2)(vii)(M)	<i>An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and</i>

1910.1030(g)(2)(vi)(N)

An opportunity for interactive questions and answers with the person conducting the training session.

1910.1030(g)(2)(viii)

The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

1910.1030(g)(2)(ix)

Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

1910.1030(g)(2)(ix)(A)

The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

1910.1030(g)(2)(ix)(B)

The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

1910.1030(g)(2)(ix)(C)

The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

1910.1030(h)

Recordkeeping -

1910.1030(h)(1)

Medical Records.

1910.1030(h)(1)(i)

The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

1910.1030(h)(1)(ii)

This record shall include:

1910.1030(h)(1)(ii)(A)

The name and social security number of the employee;

1910.1030(h)(1)(ii)(B)

A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

1910.1030(h)(1)(ii)(C)

A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

1910.1030(h)(1)(ii)(D)

The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

1910.1030(h)(1)(ii)(E)

A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(i)(B)(C) and (D).

1910.1030(h)(1)(iii)

Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are:

1910.1030(h)(1)(iii)(A)

Kept confidential; and

1910.1030(h)(1)(iii)(B)

Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

1910.1030(h)(1)(iv)

The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020

1910.1030(h)(2)

Training Records.

1910.1030(h)(2)(i)

Training records shall include the following information:

1910.1030(h)(2)(i)(A)

The dates of the training sessions;

1910.1030(h)(2)(i)(B)

The contents or a summary of the training sessions;

1910.1030(h)(2)(i)(C)

The names and qualifications of persons conducting the training; and

1910.1030(h)(2)(i)(D)

The names and job titles of all persons attending the training sessions.

1910.1030(h)(2)(ii)

Training records shall be maintained for 3 years from the date on which the training occurred.

1910.1030(h)(3)

Availability.

1910.1030(h)(3)(i)

The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

1910.1030(h)(3)(ii)

Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

1910.1030(h)(3)(iii)

Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

1910.1030(h)(4)

Transfer of Records. The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

1910.1030(h)(5)

Sharps injury log.

1910.1030(h)(5)(i)

he employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1910.1030(h)(5)(i)(A)

The type and brand of device involved in the incident.

[1910.1030\(n\)\(5\)\(i\)\(8\)](#)

The department or work area where the exposure incident occurred, and

[1910.1030\(n\)\(5\)\(i\)\(c\)](#)

An explanation of how the incident occurred.

[1910.1030\(n\)\(5\)\(ii\)](#)

The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR part 1904.

[1910.1030\(n\)\(5\)\(iii\)](#)

The sharps injury log shall be maintained for the period required by 29 CFR 1904.33.

[1910.1030\(i\)](#)

Dates -

[1910.1030\(i\)\(1\)](#)

Effective Date. The standard shall become effective on March 6, 1992.

[1910.1030\(i\)\(2\)](#)

The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

[1910.1030\(i\)\(3\)](#)

Paragraphs (g)(2) Information and Training and (h) Recordkeeping of this section shall take effect on or before June 4, 1992.

[1910.1030\(i\)\(4\)](#)

Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g)(1) Labels and Signs of this section, shall take effect July 6, 1992.

[56 FR 64004, Dec. 06, 1991, as amended at 57 FR 12717, April 13, 1992; 57 FR 29206, July 1, 1992; 61 FR 5507, Feb. 13, 1996; 66 FR 5325 Jan., 18, 2001; 71 FR 16672 and 16673, April 3, 2006; 73 FR 75586, Dec. 12, 2008; 76 FR 33608, June 8, 2011; 76 FR 80740, Dec. 27, 2011; 77 FR 19934, April 3, 2012]

➔ [Next Standard \(1910.1030 App A\)](#)

➔ [Regulations \(Standards - 29 CFR\) - Table of Contents](#)



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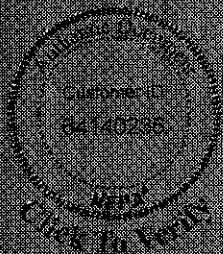
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NFPA®

1582

**Standard on
Comprehensive Occupational
Medical Program for
Fire Departments**

2018



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NFPA® 1582

Standard on

Comprehensive Occupational Medical Program for Fire Departments

2018 Edition

This edition of NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, was prepared by the Technical Committee on Fire Service Occupational Safety and Health. It was issued by the Standards Council on August 1, 2017, with an effective date of August 21, 2017, and supersedes all previous editions.

This document has been amended by one or more Tentative Interim Amendments (TIAs) and/or Errata. See "Codes & Standards" at www.nfpa.org for more information.

This edition of NFPA 1582 was approved as an American National Standard on August 21, 2017.

Origin and Development of NFPA 1582

The initial mandatory medical requirements for candidates for fire fighter were in the 1974 edition of NFPA 1001, *Standard on Professional Qualifications for Fire Fighter*. When the first edition of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, was issued in 1987, it required all members engaged in emergency operation to be examined by a physician at least annually and suggested the medical examination be developed and administered by the fire department physician in recognition of the specific requirements of the members' activities.

In the late 1980s, members of the Technical Committee on Fire Fighter Professional Qualifications (responsible for NFPA 1001) and members of the Technical Committee on Fire Service Occupational Safety and Health (responsible for NFPA 1500) formed a working group to develop a new standard on medical requirements for fire fighters.

The first edition of NFPA 1582 was titled *Standard on Medical Requirements for Fire Fighters* and was issued in 1992 under the responsibility of the Fire Service Occupational Safety and Health Committee. A subsequent edition was issued in 1997. The 2000 edition was titled *Standard on Medical Requirements for Fire Fighters and Information for Fire Department Physicians*, in recognition of the increasing amount of guidance being provided in the document to persons serving as fire department physicians.

The title of the 2003 edition was changed to *Standard on Comprehensive Occupational Medical Program for Fire Departments* to reflect a comprehensive occupational medical program. The document included references to the IAFC-IAFF Fire Service Joint Labor-Management Wellness-Fitness Initiative, and to NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Fighters*. These two documents outline a health-related fitness program that is medically validated against NFPA 1582. The 2003 edition delineated between medical issues of a candidate seeking to become a fire fighter, and those of incumbents currently performing the tasks of fire fighting. The intent with incumbents with a medical condition is to rehabilitate them and only restrict them from performing those essential job tasks where their injury or illness would affect the safety of themselves or others on their crew.

In the 2007 edition, new requirements were added to both the chapter on medical evaluation for candidates and the chapter on specific evaluation of medical conditions in incumbents to allow persons with diabetes to enter the fire service or continue performing essential job tasks associated with fire fighting if they meet defined criteria. All the medical conditions that govern whether a person can become a fire fighter and the specific medical conditions of incumbents that affect their ability to perform certain essential job tasks were reviewed and updated, if appropriate, based on current medical research and knowledge.

For the 2013 edition, the committee, with the assistance of several task groups and subject matter experts in specialty areas with regard to medical conditions, updated many of the medical requirements to reflect current practices. Some of the areas that were addressed were that of diabetes, metabolic syndrome, prosthetic adjuncts, hearing aids, and cochlear implants, as well as pregnancy and reproductive system concerns. Also developed for the 2013 edition was a new annex designed to assist the end user with the subject of pregnancy. The committee, with the assistance of the International Association of Fire Fighters, provided an updated Annex C, which contains the protocols for the evaluation of fitness for members. The committee also updated some of the medical requirements relating to hypertension, anticoagulants, TB testing, and screening for cancer.

For the 2018 edition, the committee, with the assistance of several task groups and subject matter experts in specialty areas with regard to medical conditions, has updated many of the medical requirements to reflect current practices. Some of the areas that were addressed were lung function, spinal injuries/conditions, and seizure disorders. A new section was added to the annual fitness evaluation regarding lung function performance. The committee updated all of the annex material in order to provide the best guidance and references for physicians and fire departments.

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Committee Scope: This Committee shall have primary responsibility for documents on occupational safety and health in the working environment of the fire service. The Committee shall also have responsibility for documents related to medical requirements for fire fighters, and the professional qualifications for Fire Department Safety Officer.

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Standard on

Comprehensive Occupational Medical Program for Fire Departments

2018 Edition

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Information on referenced publications can be found in Chapter 2 and Annex F.

Chapter 1 Administration

1.1 Scope. This standard contains descriptive requirements for a comprehensive occupational medical program for fire departments.

▲ **1.1.1*** The medical requirements in this standard are applicable to fire department candidates and members whose job descriptions as defined by the authority having jurisdiction (AHJ) are outlined in NFPA 1001; NFPA 1002; NFPA 1003; NFPA 1006; NFPA 1021; and NFPA 1051.

1.1.2 This standard provides information and guidance for physicians and other health care providers responsible for fire department occupational medical programs.

▲ **1.1.3** These requirements are applicable to public, governmental, military, private, and industrial fire department organi-

zations providing rescue, fire suppression, hazardous materials mitigation, special operations, and other emergency services.

1.1.4 This standard shall not apply to industrial fire brigades that also can be known as emergency brigades, emergency response teams, fire teams, plant emergency organizations, or mine emergency response teams.

1.2 Purpose. The purpose of this standard is to outline an occupational medical program that, when implemented in a fire department, will reduce the risk and burden of fire service occupational morbidity and mortality while improving the health, and thus the safety and effectiveness, of fire fighters operating to protect civilian life and property.

1.2.1 Accordingly, the standard specifies the following information:

- (1) Minimal medical requirements for candidates as delineated in Chapter 6
- (2) Occupational medical and fitness evaluations for members as delineated in Chapters 7 and 8
- (3) Information regarding fire department activities and essential job tasks that assist the department physician in providing proper medical support for members
- (4) Methods and types of data that must be collected to sustain comprehensive occupational medical programs for fire departments

1.2.2* The implementation of the medical requirements outlined in this standard ensures that candidates and current members are medically capable of performing their required duties and will reduce the risk of occupational injuries and illnesses.

1.2.3 Nothing herein is intended to restrict any jurisdiction from exceeding these minimum requirements.

1.3 Implementation.

1.3.1 For candidates, the medical requirements of this standard shall be implemented when this standard is adopted by an AHJ on an effective date specified by the AHJ.

1.3.2* When this standard is adopted by a jurisdiction, date(s) shall be set for members to achieve compliance by establishing a phase-in schedule for compliance with specific requirements, if needed.

▲ **1.3.3*** The fire department risk management plan as described in NFPA 1500 shall include implementation of a comprehensive occupational medical program that is compliant with this standard.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, 2013 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 edition.

NFPA 1003, *Standard for Airport Fire Fighter Professional Qualifications*, 2015 edition.

NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*, 2017 edition.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*, 2014 edition.

NFPA 1051, *Standard for Wildland Fire Fighter Professional Qualifications*, 2016 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2018 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System*, 2008 edition.

NFPA 1581, *Standard on Fire Department Infection Control Program*, 2015 edition.

NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Department Members*, 2015 edition.

NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*, 2015 edition.

2.3 Other Publications.

2.3.1 ANSI Publications. American National Standards Institute, Inc., 25 West 43rd Street, 4th Floor, New York, NY 10036.

ANSI Z24.5, *Audiometric Device Testing*, 1951.

2.3.2 CDC Publications. Centers for Disease Control and Prevention, 1600 Clifton Road, Atlanta, GA 30333.

"Measles, Mumps, and Rubella — Vaccine Use and Strategies for Elimination of Measles, Rubella, and Congenital Rubella Syndrome and Control of Mumps: Recommendations of the Advisory Committee on Immunization Practices (ACIP)," *Morbidity and Mortality Weekly Report*, May 19, 1998, 47 (No. RR-8): 1-57.

"Poliomyelitis Prevention in the United States: Updated Recommendations of the Advisory Committee on Immunization Practices (ACIP)," *Morbidity and Mortality Weekly Report*, 49(No. RR-5):1-22, May 19, 2000.

2.3.3 U.S. Government Publications. U.S. Government Publishing Office, Washington, DC 20402.

Title 29, Code of Federal Regulations, Part 1910.95, "Occupational noise exposure," 1996.

Title 29, Code of Federal Regulations, Part 1910.120, "Hazardous waste operations and emergency response," 2002.

Title 29, Code of Federal Regulations, Part 1910.134, "Respiratory protection," 1998.

Title 29, Code of Federal Regulations, Part 1910.1020, "Access to employee exposure and medical records," 1996.

Title 29, Code of Federal Regulations, Part 1910.1030, "Bloodborne pathogens," 2001.

U.S. Dept. of Health & Human Services, National Heart, Lung and Blood Institute, *Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC 7), 2004

2.3.4 Other Publications.

International Council of Ophthalmology, "International Clinical Diabetic Retinopathy Disease Severity Scale," San Francisco, CA, October 2002, <http://www.icoph.org/standards/pdrdetail.html>.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2018 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.2.4 Should. Indicates a recommendation or that which is advised but not required.

3.3 General Definitions.

3.3.1 Candidate. A person who has submitted an application to become a member of the fire department. [1500, 2018]

3.3.2 Category A Medical Condition. See 3.3.14.1.

3.3.3 Category B Medical Condition. See 3.3.14.2.

3.3.4 Emergency Medical Services. The provision of treatment, such as first aid, cardiopulmonary resuscitation, basic life support, advanced life support, and other pre-hospital procedures including ambulance transportation to patients. [1500, 2018]

3.3.5 Essential Job Task. Task or assigned duty that is critical to successful performance of the job. (See Chapter 5 and Section 9.1.)

3.3.6 Evaluation. See 3.3.15, Medical Evaluation.

3.3.7* Fire Department. An organization providing rescue, fire suppression, and related activities, including any public, governmental, private, industrial, or military organization engaging in this type of activity. [1002, 2017]

3.3.8 Fire Department Physician. A licensed doctor of medicine or osteopathy who has been designated by the fire department to provide professional expertise in the areas of occupational safety and health as they relate to emergency services.

3.3.9 Functional Capacity Evaluation. An assessment of the correlation between that individual's capabilities and the essential job tasks.

3.3.10 Health and Fitness Coordinator. A person who, under the supervision of the fire department physician, has been designated by the department to coordinate and be responsible for the health and fitness programs of the department.

3.3.11 Health and Safety Committee. A representative group of individuals who serve along with the fire department physician and health and fitness coordinator, and is chaired by the fire department health and safety officer, who oversee the implementation of the fire department occupational safety and health program.

3.3.12 Health and Safety Officer. The member of the fire department assigned and authorized by the fire chief as the manager of the safety and health program. [1500, 2018]

3.3.13 Infection Control Program. The fire department's formal policy and implementation of procedures relating to the control of infectious and communicable disease hazards where employees, patients, or the general public could be exposed to blood, body fluids, or other potentially infectious materials in the fire department work environment. [1500, 2018]

3.3.14 Medical Condition Classifications.

3.3.14.1 Category A Medical Condition. A medical condition that would preclude a person from performing as a member in a training or emergency operational environment by presenting a significant risk to the safety and health of the person or others.

3.3.14.2 Category B Medical Condition. A medical condition that, based on its severity or degree, could preclude a person from performing as a member in a training or emergency operational environment by presenting a significant risk to the safety and health of the person or others.

3.3.15 Medical Evaluation. The analysis of information for the purpose of making a determination of medical certification. Medical evaluation includes a medical examination.

3.3.16 Medical Examination. An examination performed or directed by the fire department physician.

3.3.17 Medically Certified. A determination by the fire department physician that the candidate or current member meets the medical requirements of this standard.

3.3.18* Member. A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. [1500, 2018]

3.3.19 Occupational Safety and Health Program. An occupation specific program, implemented to reduce the risks associated with the occupation, that outlines the components of a program and the roles and responsibilities of the fire department and its members.

4.1.2 The medical evaluations and any additional medical tests ordered by the fire department physician shall be provided at no cost to the members.

4.1.2.1* This obligation shall not extend to medical tests beyond the basic medical evaluation for candidates.

Δ **4.1.3*** The fire department shall have an officially designated physician who shall be responsible for guiding, directing, and advising the members with regard to their health, fitness, and suitability for duty as required by NFPA 1500.

4.1.4* The fire department shall ensure that the fire department physician is a licensed doctor of medicine or osteopathy who has completed residency training in an accredited medical training program and/or is American Boards of Medical Specialties (ABMS) or American Osteopathic Association (AOA) board certified or international equivalent.

4.1.5 The fire department shall provide the fire department physician with a fire service overview, current job descriptions, and the essential job tasks required for all fire department positions and ranks.

Δ **4.1.6** The fire department shall provide the fire department physician with the department's organizational statement that outlines types and levels of services provided by the department, in accordance with NFPA 1500.

4.1.7* The types and levels of services provided by the fire department shall dictate for candidates and members the essential job tasks that pertain to its members and shall therefore be correlated to the medical requirements outlined in this standard.

4.1.8 For the purpose of conducting medical evaluations, the fire department shall assist the fire department physician to understand the physiological and psychological demands placed on members as well as the environmental conditions under which they must perform and the personal protective equipment (PPE) they must wear during various types of emergency operations.

4.1.9 The fire department shall ensure member access to evaluation by medical specialists, medical and/or surgical treatment, rehabilitation, and any other intervention prescribed by a medical provider, in consultation with the fire department physician, following an injury or illness resulting from a member's participation in fire department functions.

4.1.10 The fire department shall require that the fire department health and safety officer and the health and fitness coordinator maintain a liaison relationship with the fire department physician to ensure that all aspects of the comprehensive occupational medical program are actively engaged.

4.1.11 The fire department shall ensure employee privacy and confidentiality regarding medical conditions identified during the medical evaluation except as required by law.

4.1.12 Where possible, the fire department shall provide alternate duty position for members when the fire department physician recommends temporary work restrictions.

4.1.13 Medical Record Keeping.

4.1.13.1* The fire department comprehensive occupational medical program shall include collection and maintenance of a confidential medical and health information system for members.

Chapter 4 Roles and Responsibilities

4.1 Fire Department Responsibilities.

4.1.1 The fire department shall establish a comprehensive occupational medical program that includes medical evaluations for candidates and members. (See Annex B.)

4.1.13.2 All medical record keeping shall comply with the requirements of 29 CFR 1910.1020, "Access to employee exposure and medical records," and other applicable regulations and laws.

4.1.14 The provisions of 4.1.13 shall apply to all health and medical records regarding individual members and to all methods of communicating or transferring the information contained in these records, including written, oral, electronic, and any other means of communication.

4.2 Fire Department Physician Responsibilities.

4.2.1 The fire department physician shall fulfill the following responsibilities:

- (1) Understand the physiological, psychological, and environmental demands placed on fire fighters
- (2) Evaluate fire department candidates and members to identify medical conditions that could affect their ability to safely respond to and participate in emergency operations
- (3) Utilize the essential job task descriptions supplied by the fire department to determine a candidate's or a member's medical certification
- (4) Identify and report the presence of Category A or disqualifying Category B medical conditions if present in candidates
- (5) Inform the fire chief or his/her designee whether or not the candidate or current member is medically certified to safely perform the essential job tasks
- (6) Report the results of the medical evaluation to the candidate or current member, including any medical condition(s) identified during the medical evaluation, and the recommendation as to whether the candidate or current member is medically certified to safely perform the essential job tasks
- (7) Forward copies of any abnormal results along with patient instructions regarding primary care follow-up to candidates or current members who were instructed to seek (as appropriate) medical follow-up to address any medical conditions, or lab abnormalities, identified during the medical evaluation
- (8) Review results of the annual occupational fitness evaluation as described in Chapter 8
- (9) Provide or arrange for a prescriptive rehabilitation and/or fitness program when indicated to aid a member's recovery from illness or injury and enhance his/her ability to safely perform essential job tasks
- (10) **Participate in injury prevention and health promotion programs for fire fighters**

4.2.2 When medical evaluations are conducted by a physician or medical provider other than the fire department physician, the evaluation shall be reviewed and approved by the fire department physician.

4.2.3 The fire department physician shall review individual medical evaluations and aggregate data from member evaluations in order to detect evidence of occupational exposure(s) or clusters of occupational disease.

4.2.4 The fire department physician shall be a member of the Fire Department Occupational Safety and Health Committee chaired by the health and safety officer as required by NFPA 1500.

4.2.5 The fire department physician shall provide medical supervision for the fire department fitness, return-to-duty rehabilitation, and physical conditioning programs as required by NFPA 1583.

4.2.6* The fire department physician shall ensure adequate on-scene medical support at the incident scene rehabilitation sector for members during emergency operations as required by NFPA 1500; NFPA 1561; and NFPA 1584.

4.2.7 The fire department physician shall provide supervision for the fire department infection control program as required by NFPA 1581.

4.3 Candidate and Member Responsibilities. Each candidate or member shall adhere to the following requirements:

- (1) Cooperate, participate, and comply with the medical evaluation process
- (2) Provide complete and accurate information to the fire department physician and other authorized medical care provider(s)
- (3) Report any occupational exposure such as exposure to hazardous materials or toxic substances and exposure to infectious or contagious diseases
- (4) Report to the fire department physician any medical condition that could interfere with the ability of the individual to safely perform essential job tasks, such as illness or injury, use of prescription or nonprescription drugs, and pregnancy

4.4 Confidentiality of Medical Information.

4.4.1* Specific information concerning medical diagnosis shall be released by the fire department physician only with written permission from the candidate or member, and/or as required by law.

4.4.2 No fire department personnel, other than the fire department physician or appropriate medical staff, shall have access to another member's medical records without the express written consent of that member.

Chapter 5 Essential Job Tasks

5.1 Essential Job Tasks and Descriptions.

5.1.1 The fire department shall evaluate the following 14 essential job tasks against the types and levels of emergency services provided to the local community by the fire department, the types of structures and occupancies in the community, and the configuration of the fire department to determine which tasks apply to their department members and candidates:

- (1)* While wearing personal protective ensembles and self-contained breathing apparatus (SCBA), performing fire-fighting tasks (e.g., hoseline operations, extensive crawling, lifting and carrying heavy objects, ventilating roofs or walls using power or hand tools, forcible entry), rescue operations, and other emergency response actions under stressful conditions, including working in extremely hot or cold environments for prolonged time periods
- (2) Wearing an SCBA, which includes a demand valve-type positive-pressure facepiece or HEPA filter mask, which requires the ability to tolerate increased respiratory workloads

- (3) Exposure to toxic fumes, irritants, particulates, biological (infectious) and nonbiological hazards, and heated gases, despite the use of personal protective ensembles and SCBA
- (4) Depending on the local jurisdiction, climbing six or more flights of stairs while wearing a fire protective ensemble, including SCBA, weighing at least 50 lb (22.6 kg) or more and carrying equipment/tools weighing an additional 20 to 40 lb (9 to 18 kg)
- (5) Wearing a fire protective ensemble, including SCBA, that is encapsulating and insulated, which will result in significant fluid loss that frequently progresses to clinical dehydration and can elevate core temperature to levels exceeding 102.2°F (39°C)
- (6) While wearing personal protective ensembles and SCBA, searching, finding, and rescue-dragging or carrying victims ranging from newborns to adults weighing over 200 lb (90 kg) to safety despite hazardous conditions and low visibility
- (7) While wearing personal protective ensembles and SCBA, advancing water-filled hoselines up to 2 ½ in. (65 mm) in diameter from fire apparatus to occupancy [approximately 150 ft (50 m)], which can involve negotiating multiple flights of stairs, ladders, and other obstacles
- (8) While wearing personal protective ensembles and SCBA, climbing ladders, operating from heights, walking or crawling in the dark along narrow and uneven surfaces that might be wet or icy, and operating in proximity to electrical power lines or other hazards
- (9) Unpredictable emergency requirements for prolonged periods of extreme physical exertion without benefit of warm-up, scheduled rest periods, meals, access to medication(s), or hydration
- (10) Operating fire apparatus or other vehicles in an emergency mode with emergency lights and sirens
- (11) Critical, time-sensitive, complex problem solving during physical exertion in stressful, hazardous environments, including hot, dark, tightly enclosed spaces, that is further aggravated by fatigue, flashing lights, sirens, and other distractions
- (12) Ability to communicate (give and comprehend verbal orders) while wearing personal protective ensembles and SCBA under conditions of high background noise, poor visibility, and drenching from hoselines and/or fixed protection systems (sprinklers)
- (13) Functioning as an integral component of a team, where sudden incapacitation of a member can result in mission failure or in risk of injury or death to civilians or other team members
- (14) Working in shifts, including during nighttime, that can extend beyond 12 hours

5.1.2 The fire department shall provide the fire department physician with the list of essential job tasks, as developed per 5.1.1, to be used in the medical evaluation of members and candidates.

5.1.3 The fire department physician shall consider the physical, physiological, intellectual, and psychological demands of the occupation when evaluating the candidate's or member's ability to perform the essential job tasks.

5.2 Essential Job Tasks for Specialized Teams.

- ▲ **5.2.1** If the fire department operates specialized teams such as hazardous materials units, self-contained underwater breathing

apparatus (SCUBA) teams, technical rescue teams, emergency medical services (EMS) teams, or units supporting tactical law enforcement operations, the fire department shall identify for each team it operates the additional essential job tasks and specialized personal protective equipment (PPE) not specified in 5.1.1(1) through 5.1.1(13) that would apply to the members of that team.

5.2.2 The fire department shall also provide the fire department physician with the list of additional essential job tasks and specialized PPE specific to each specialized team.

5.2.3 When performing the medical evaluation of members of a specialized team, the fire department physician shall also consider the following:

- (1) Additional medical and/or physical requirements that are related to the job tasks being performed by the team that are not enumerated in this standard
- (2) The impact on members of having to wear or utilize specialized PPE that can increase weight, environmental isolation, sensory deprivation, and/or dehydration potential above levels experienced with standard fire suppression PPE

Chapter 6 Medical Evaluations of Candidates

6.1 Medical Evaluation. A medical evaluation of a candidate shall be conducted prior to the candidate being placed in training programs or fire department emergency response activities.

6.1.1* The medical evaluation of a candidate shall include a medical history, examination, and any laboratory tests required to detect physical or medical condition(s) that could adversely affect his/her ability to safely perform the essential job tasks outlined in 5.1.1.

6.1.2* This standard shall provide specific requirements for candidates based on medical conditions that can affect a candidate's ability to safely perform the essential job tasks of a fire fighter.

6.2 Medical Conditions Affecting Ability to Safely Perform Essential Job Tasks.

6.2.1 Medical conditions that can affect a candidate's ability to safely perform essential job tasks shall be designated either Category A or Category B.

6.2.2 Candidates with Category A medical conditions shall not be certified as meeting the medical requirements of this standard.

6.2.3 Candidates with Category B medical conditions shall be certified as meeting the medical requirements of this standard only if they can perform the essential job tasks without posing a significant safety and health risk to themselves, members, or the public.

6.3 Head and Neck.

6.3.1 Head.

6.3.1.1 Category A medical conditions shall include the following:

- (1) Defect of skull preventing helmet use or leaving underlying brain unprotected from trauma
- (2) Any skull or facial deformity that would not allow for a successful fit test for respirators used by that department

- (3) Any head condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.3.1.2 Category B medical conditions shall include the following:

- (1)* Deformities of the skull such as depressions or exostoses
- (2)* Deformities of the skull associated with evidence of disease of the brain, spinal cord, or peripheral nerves
- (3)* Loss or congenital absence of the bony substance of the skull

6.3.2 Neck.

6.3.2.1 Category A medical conditions shall include any neck condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

6.3.2.2 Category B medical conditions shall include the following:

- (1)* Thoracic outlet syndrome
- (2)* Congenital cysts, chronic draining fistulas, or similar lesions
- (3)* Contraction of neck muscles

6.4 Eyes and Vision.

6.4.1 Category A medical conditions shall include the following:

- (1)* Far visual acuity ~~worse~~ than 20/40 binocular, corrected with contact lenses or spectacles, or far visual acuity ~~worse~~ than 20/100 binocular for wearers of hard contacts or spectacles, uncorrected
- (2)* Color perception — monochromatic vision resulting in inability to use imaging devices such as thermal imaging cameras
- (3)* Monocular vision
- (4) Any eye condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.4.2 Category B medical conditions shall include the following:

- (1)* Diseases of the eye such as retinal detachment, progressive retinopathy, or optic neuritis
- (2)* Ophthalmological procedures such as radial keratotomy, Lasik procedure, or repair of retinal detachment
- (3) Peripheral vision in the horizontal meridian of less than 110 degrees in the better eye or any condition that significantly affects peripheral vision in *both* eyes
- (4) ~~Amblyopia~~

6.5* Ears and Hearing.

6.5.1 Category A medical conditions shall include the following:

- (1) Chronic vertigo or impaired balance as demonstrated by the inability to tandem gait walk
- (2) On audiometric testing, ~~without the aid of a hearing assistance device~~, average hearing loss in the unaided better ear ~~worse~~ than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI Z24.5, *Audiometric Device Testing*
- (3) Any ear condition or hearing impairment that results in the candidate not being able to safely perform one or more of the essential job tasks

6.5.2 Category B medical conditions shall include the following:

- (1)* Unequal hearing loss
- (2) Average uncorrected hearing deficit at the test frequencies 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz ~~worse~~ than 40 dB in either ear
- (3) Atresia, stenosis, or tumor of the auditory canal
- (4)* External otitis, recurrent
- (5)* Agenesia or traumatic deformity of the auricle
- (6)* Mastoiditis or surgical deformity of the mastoid
- (7)* ~~Ménière's disease~~, labyrinthitis, or tinnitus
- (8)* Otitis media, recurrent
- (9) Surgical procedures to correct or improve hearing or other conditions of the ear

6.6 Dental.

6.6.1 Category A medical conditions shall include any dental condition that results in inability to safely perform one or more of the essential job tasks.

6.6.2 Category B medical conditions shall include the following:

- (1)* Diseases of the jaws or associated tissues
- (2)* Orthodontic appliances
- (3)* Oral tissues, extensive loss
- (4)* Relationship between the mandible and maxilla that interferes with satisfactory postorthodontic replacement or ability to use protective equipment

6.7 Nose, Oropharynx, Trachea, Esophagus, and Larynx.

6.7.1 Category A medical conditions shall include the following:

- (1)* Tracheostomy
- (2)* Aphonia
- (3) Any nasal, oropharyngeal, tracheal, esophageal, or laryngeal condition that results in inability to safely perform one or more of the essential job tasks, including fit testing for respirators ~~used by the fire department and SCBA for fire and hazmat operations~~

6.7.2 Category B medical conditions shall include the following:

- (1)* Congenital or acquired deformity
- (2)* Allergic rhinitis
- (3) Epistaxis, recurrent
- (4)* Sinusitis, recurrent
- (5)* Dysphonia
- (6) Anosmia
- (7) Tracheal stenosis
- (8) Nasopharyngeal polyposis
- (9)* Obstructive apneas (e.g., sleep apnea) if unresponsive to treatment

6.8 Lungs and Chest Wall.

6.8.1 Category A medical conditions shall include the following:

- (1) Active hemoptysis
- (2) Current empyema
- (3) Pulmonary hypertension
- (4) Active tuberculosis
- (5)* A forced vital capacity (FVC) or forced expiratory volume in 1 second (FEV₁) less than 70 percent predicted even independent of disease

- (6)* Obstructive lung diseases (e.g., emphysema, chronic bronchitis, asthma) with an absolute FEV₁/FVC less than 0.70 and with either the FEV₁ below normal or both the FEV₁ and the FVC below normal (i.e., less than 0.80) (see references in Section F.2)
- (7)* Hypoxemia oxygen saturation less than 90 percent at rest or exercise desaturation by 4 percent or to less than 90 percent exercise testing indicated when resting oxygen is less than 94 percent but greater than 90 percent
- (8)* Asthma, including reactive airways disease requiring bronchodilator or corticosteroid therapy at least once in the previous 2 years, unless the candidate can meet the requirement in 6.8.1.1
- (9) Any pulmonary condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- (10) Lung transplant
- (11) Obstructive sleep apnea with excessive daytime sleepiness, unless all the following criteria are met:
 - (1) Successful treatment
 - (2) Documentation of compliance with CPAP, for sleep study with an oral appliance, or of sleep study after surgery
 - (3) No excessive daytime sleepiness with treatment

6.8.1.1* A candidate who has been diagnosed with asthma or has in the past required bronchodilator, corticosteroid, or anti-inflammatory therapy (e.g., a leukotriene receptor antagonist, such as montelukast) shall be evaluated by a pulmonologist or other expert in asthmatic lung diseases, such as an allergist, to determine if the candidate meets all the following:

- (1) The applicant denies bronchospasm during exertion, temperature/humidity extremes, or irritant exposures.
- (2) The applicant denies the use of bronchodilator rescue medications during exertion, temperature/humidity extremes, or irritant exposures.
- (3) The applicant's asthma has not required systemic corticosteroids, emergency room treatment, or hospital admission in the past 2 years.
- (4) Allergen avoidance or desensitization has been successful.
- (5) Spirometry demonstrates adequate reserve (FVC and FEV₁ greater than or equal to 90 percent) and no bronchodilator response measured off all bronchodilators on the day of testing.
- (6) Normal or negative response to provocative challenge testing [e.g., cold air, exercise (12 METs), methacholine (PC₂₀ greater than 8 is considered normal because response at dose greater than 8 mg/ml might not be clinically significant), histamine, mannitol, or hypertonic saline] or negative response to exercise challenge.

6.8.1.1.1 Challenge testing shall be performed off all anti-inflammatory medications (e.g., inhaled or oral steroids, leukotriene receptor antagonists) for 4 weeks preceding the test, off all antihistamines (e.g., oral allergy medications) for 1 week, and off all bronchodilators on the day of testing.

Δ 6.8.2 Category B medical conditions shall include the following:

- (1)* Pulmonary resection surgery, chest wall surgery, and pneumothorax
- (2) Pleural effusion
- (3)* Fibrothorax, chest wall deformity, and diaphragm abnormalities

- (4)* Interstitial lung diseases
- (5)* Pulmonary vascular diseases or history of pulmonary embolism
- (6)* Bronchiectasis, if abnormal pulmonary function or recurrent infections
- (7) Infectious diseases of the lung or pleural space
- (8) Cystic fibrosis
- (9) Central or obstructive apnea (e.g., sleep apnea)

6.9 Aerobic Capacity.

6.9.1* Category A medical conditions shall include an aerobic capacity less than 12 metabolic equivalents (METs) (12 METs = 42 mL O₂/kg/min).

6.10 Heart and Vascular System.

6.10.1 Heart.

6.10.1.1 Category A medical conditions shall include the following:

- (1)* Clinically significant coronary artery disease, including history of myocardial infarction, angina pectoris, coronary artery bypass surgery, coronary angioplasty, and similar procedures
- (2)* Cardiomyopathy or congestive heart failure, including signs or symptoms of compromised left or right ventricular function or rhythm, including dyspnea, S3 gallop, peripheral edema, enlarged ventricle, abnormal ejection fraction, and/or inability to increase cardiac output with exercise
- (3)* Acute pericarditis, endocarditis, or myocarditis
- (4)* Syncope, recurrent
- (5)* Any medical condition requiring an automatic implantable cardiac defibrillator, unless the condition no longer requires an automatic implantable cardiac defibrillator, or a medical history of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease, or cardiomyopathy
- (6) Third-degree atrioventricular block
- (7)* Cardiac pacemaker, if the applicant is pacemaker-dependent
- (8) Hypertrophic cardiomyopathy, including idiopathic hypertrophic subaortic stenosis
- (9) Any cardiac condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- (10) Heart transplant

Δ 6.10.1.2 Category B medical conditions shall include the following:

- (1)* Valvular lesions of the heart, including prosthetic valves
- (2)* Recurrent supraventricular or atrial tachycardia, flutter, or fibrillation
- (3)* Left bundle branch block
- (4) Second-degree atrioventricular block in the absence of structural heart disease
- (5) Sinus pause of more than 3 seconds
- (6)* Ventricular arrhythmia (history or presence of multifocal PVCs or nonsustained ventricular tachycardia on resting EKG with or without symptoms; history or presence of sustained ventricular tachycardia with or without symptoms)
- (7)* Cardiac hypertrophy
- (8)* History of a congenital abnormality
- (9)* Chronic pericarditis, endocarditis, or myocarditis

- (10) Brugada syndrome
- (11) Long QT syndrome
- (12) Arrhythmogenic right ventricular cardiomyopathy
- (13) Cardiac pacemaker, if the applicant is not pacemaker-dependent
- (14) Coronary artery disease, if not covered by 6.10.1.1

6.10.2 Vascular System.

6.10.2.1 Category A medical conditions shall include the following:

- (1) Hypertension
 - (a)* Uncontrolled or poorly controlled hypertension
 - (b)* Hypertension with evidence of end organ damage
- (2)* Thoracic or abdominal aortic aneurysm
- (3) Carotid artery stenosis or obstruction resulting in greater than or equal to 50 percent reduction in blood flow
- (4)* Peripheral vascular disease resulting in symptomatic claudication
- (5) Any other vascular condition that results in inability to safely perform one or more of the essential job tasks

6.10.2.2 Category B medical conditions shall include the following:

- (1) Vasospastic phenomena such as Raynaud's phenomenon
- (2)* Thrombophlebitis, thrombosis, or varicosities
- (3)* Chronic lymphedema due to lymphadenopathy or venous valvular incompetency
- (4)* Congenital or acquired lesions of the aorta or major vessels
- (5)* Circulatory instability as indicated by orthostatic hypotension, persistent tachycardia, and peripheral vasomotor disturbances
- (6) History of surgical repair of aneurysm of the heart or major vessel

6.11 Abdominal Organs and Gastrointestinal System.

6.11.1 Category A medical conditions shall include the following:

- (1) Presence of uncorrected inguinal/femoral hernia, if symptomatic
- (2) Any gastrointestinal condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.11.2 Category B medical conditions shall include the following:

- (1)* Cholecystitis
- (2)* Gastritis
- (3)* GI bleeding
- (4)* Acute hepatitis
- (5) Hernia including the following:
 - (a) Uncorrected umbilical, ventral, or incisional hernia if significant risk exists for infection or strangulation
 - (b) Significant symptomatic hiatal hernia if associated with asthma, recurrent pneumonia, chronic pain, or chronic ulcers
 - (c)* Surgically corrected hernia more than 3 months after surgical correction
- (6)* Inflammatory bowel disease or irritable bowel syndrome
- (7)* Intestinal obstruction
- (8)* Pancreatitis

- (9) Diverticulitis
- (10)* History of gastrointestinal surgery
- (11)* Peptic or duodenal ulcer or Zollinger-Ellison syndrome
- (12)* Asplenia
- (13)* Cirrhosis, hepatic or biliary
- (14)* Chronic active hepatitis

6.12 Metabolic Syndrome.

6.12.1* Category A medical conditions shall include metabolic syndrome with aerobic capacity less than 12 METs.

6.12.2 Category B medical conditions shall include metabolic syndrome with aerobic capacity 12 METs or greater.

6.13 Reproductive System. See B.1.2.1.

6.13.1 Category A medical conditions shall include any genital condition that results in inability to safely perform one or more of the essential job tasks.

6.13.2 Category B medical conditions shall include the following:

- (1)* Pregnancy, for its duration
- (2) Dysmenorrhea
- (3) Endometriosis, ovarian cysts, or other gynecologic conditions
- (4) Testicular or epididymal mass

6.14 Urinary System.

6.14.1 Category A medical conditions shall include the following:

- (1) Renal failure or insufficiency requiring continuous ambulatory peritoneal dialysis (CAPD) or hemodialysis
- (2) Any urinary condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- (3) Chronic kidney disease of Stage 4 or greater [glomerular filtration rate (GFR) < 1 oz/min (30 ml/min)]

6.14.2 Category B medical conditions shall include the following:

- (1) Diseases of the kidney
- (2) Diseases of the ureter, bladder, or prostate

6.15 Spine and Axial Skeleton.

Δ 6.15.1 Category A medical conditions shall include the following:

- (1) Scoliosis of thoracic or lumbar spine with angle greater than or equal to 40 degrees
- (2) Any spinal or skeletal condition producing sensory or motor deficit(s) or pain due to radiculopathy or nerve compression
- (3) Any spinal or skeletal condition causing pain that frequently or recurrently requires narcotic analgesic medication
- (4) Cervical vertebral fractures with multiple vertebral body compression greater than 25 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (i.e., partial, moderate, severe), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery

- (5) Thoracic vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (e.g., severe — with or without surgery), abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery
- (6) Lumbosacral vertebral fractures with vertebral body compression greater than 50 percent; evidence of posterior element involvement, nerve root damage, disc involvement, dislocation (i.e., partial, moderate, severe), fragmentation, abnormal exam, ligament instability, symptomatic, and/or less than 6 months post injury or less than 1 year since surgery
- (7) History of spine surgery or injury that results in the candidate not being able to safely perform one or more of the essential job tasks

6.15.2 Category B medical conditions shall include the following:

- (1) Congenital or developmental malformations of the back, particularly those that can cause instability, neurological deficits, pain, or limit flexibility
- (2) Scoliosis with angle less than 40 degrees
- (3) Arthritis of the cervical, thoracic, or lumbosacral spine
- (4) Facet tropism, high lumbosacral angle, hyperlordosis, Schmorl's nodes, Scheuermann's disease, spina bifida occulta, spondylolisthesis, spondylolysis, or transitional vertebrae
- (5) History of infections or infarcts in the spinal cord, epidural space, vertebrae, or axial skeletal joints
- (6) History of disectomy or laminectomy or vertebral fractures

6.16 Extremities.

6.16.1 Category A medical conditions shall include the following:

- (1) Joint replacement, unless all the following conditions are met:
 - (a) Normal range of motion without history of dislocations post-replacement
 - (b) Repetitive and prolonged pulling, bending, rotations, kneeling, crawling, and climbing without pain or impairment
 - (c) No limiting pain
 - (d) Evaluation by an orthopedic specialist who concurs that the candidate can complete all essential job tasks listed in Chapter 5
- (2) Amputation or congenital absence of upper-extremity limb (hand or higher)
- (3) Amputation of either thumb proximal to the mid-proximal phalanx
- (4) Amputation or congenital absence of lower-extremity limb (foot or above) unless the candidate meets all of the following conditions:
 - (a) Stable, unilateral below-the-knee (BKA) amputation with at least the proximal third of the tibia present for a strong and stable attachment point with the prosthesis
 - (b) Fitted with a prosthesis that will tolerate the conditions present in fire fighting when worn in conjunction with standard fire-fighting PPE

- (c) At least 6 months of prosthetic use in a variety of activities with no functional difficulties
- (d) Amputee limb healed with no significant inflammation, persistent pain, necrosis, or indications of instability at the amputee limb attachment point
- (e) No significant psychosocial issues pertaining to the loss of limb or use of prosthesis
- (f) Evaluated by a prosthetist or orthopedic specialist with expertise in the fitting and function of prosthetic limbs who concurs that the candidate can complete all essential job tasks listed in Chapter 5, including wearing personal protective ensembles and SCBA while climbing ladders, operating from heights, and walking or crawling in the dark along narrow and uneven surfaces that may be wet or icy
- (g) Has passed the department's applicant physical ability test as a condition of appointment without accommodations or modification of the protocol

- (5) Chronic nonhealing or recent bone grafts
- (6) History of more than one dislocation of shoulder without surgical repair or with history of recurrent shoulder disorders within the last 5 years with pain or loss of motion, and with or without radiographic deviations from normal
- (7) Any extremity condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.16.2 Category B medical conditions shall include the following:

- (1)* History of shoulder dislocation with surgical repair
- (2) Significant limitation of function of shoulder, elbow, wrist, hand, or finger due to weakness, reduced range of motion, atrophy, unequal length, absence, or partial amputation
- (3) Significant lack of full function of hip, knee, ankle, foot, or toes due to weakness, reduced range of motion, atrophy, unequal length, absence, or partial amputation
- (4)* History of meniscectomy or ligamentous repair of knee
- (5)* History of intra-articular, malunited, or nonunion of upper or lower extremity fracture
- (6)* History of osteomyelitis, septic, or rheumatoid arthritis
- (7) Bone hardware such as metal plates or rods supporting bone during healing

6.17 Neurological Disorders.

6.17.1 Category A medical conditions shall include the following:

- (1) All single unprovoked seizures and epileptic conditions, including simple partial, complex partial, generalized, and psychomotor seizure disorders other than the seizure disorders meeting all of the following conditions:
 - (a) No seizures for the most recent consecutive 5 years after single unprovoked seizure
 - (b) No seizures for the most recent consecutive 10 years if the applicant was diagnosed with epilepsy
 - (c) Currently on a stable regimen of antiepileptic drugs for the most recent 5 years, or on no antiepileptic drugs for the most recent 5 years
 - (d) Normal neurological examination results
 - (e) Normal brain MRI results
 - (f) Normal awake and asleep photic stimulation and hyperventilation EEG study results
 - (g) A definitive statement from a qualified neurological specialist that the candidate meets the criteria

specified in 6.17.1(1) and is neurologically cleared for fire-fighting training and the performance of a fire fighter's essential job task

- (2) Ataxias of heredo-degenerative type
- (3) Cerebral arteriosclerosis as evidenced by a history of transient ischemic attack, reversible ischemic neurological deficit, or ischemic stroke
- (4) Hemiparalysis or paralysis of a limb
- (5)* Multiple sclerosis with activity or evidence of progression within the previous 3 years
- (6)* Myasthenia gravis with activity or evidence of progression within the previous 3 years
- (7) Progressive muscular dystrophy or atrophy
- (8) Uncorrected cerebral aneurysm
- (9) Dementia (e.g., Alzheimer's and other neurodegenerative diseases) with symptomatic loss of function or cognitive impairment (e.g., less than or equal to 28 on Mini-Mental Status Exam)
- (10) Parkinson's disease and other movement disorders resulting in uncontrolled movements, bradykinesia, or cognitive impairment (e.g., less than or equal to 28 on Mini-Mental Status Exam)
- (11) Narcolepsy with cataplexy
- (12) Narcolepsy with persistent excessive daytime sleepiness despite medical treatment
- (13) Amyotrophic lateral sclerosis (ALS)
- (14) Any neurological condition that results in the candidate not being able to safely perform one or more of the essential job tasks

• **6.17.2** Category B medical conditions shall include the following:

- (1) Congenital malformations
- (2)* Migraine
- (3) Clinical disorders with paresis, dyscoordination, deformity, abnormal motor activity, abnormality of sensation, or complaint of pain
- (4) History of subarachnoid or intraparenchymal hemorrhage
- (5) Abnormalities from recent head injury such as severe cerebral contusion or concussion
- (6) Provoked seizure

6.18 Skin.

6.18.1 Category A medical conditions shall include the following:

- (1) Metastatic or locally extensive basal or squamous cell carcinoma or melanoma
- (2) Any dermatologic condition that would not allow for a successful fit test for any respirator required by the fire department
- (3) Any dermatologic condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.18.2 Category B medical conditions shall include the following:

- (1)* Skin conditions of a chronic or recurrent nature (eczema, cystic acne, psoriasis) that cause skin openings or inflammation or irritation of the skin surface
- (2)* Surgery or skin grafting
- (3)* Mycosis fungoides
- (4)* Cutaneous lupus erythematosus
- (5)* Raynaud's phenomenon

- (6)* Scleroderma (skin)
- (7)* Vasculitic skin lesions
- (8)* Atopic dermatitis/eczema
- (9)* Contact or seborrheic dermatitis
- (10)* Stasis dermatitis
- (11)* Albinism, Darier's disease, ichthyosis, Marfan syndrome, neurofibromatosis, and other genetic conditions
- (12)* Folliculitis, pseudo-folliculitis, miliaria, keloid folliculitis
- (13)* Hidradenitis suppurativa, furuncles, carbuncles, or Grade IV acne (cystic)
- (14)* Mechano-bullous disorders (epidermolysis bullosa, Hailey pemphigus, porphyria, pemphigoid)
- (15)* Urticaria or angioedema

6.19 Blood and Blood-Forming Organs.

6.19.1 Category A medical conditions shall include the following:

- (1) Hemorrhagic states requiring replacement therapy
- (2) Sickle cell disease (homozygous)
- (3) Clotting disorders
- (4) Any hematological condition that results in inability to safely perform one or more of the essential job tasks

6.19.2 Category B medical conditions shall include the following:

- (1) Anemia
- (2) Leukopenia
- (3) Polycythemia vera
- (4) Splenomegaly
- (5) History of thromboembolic disease
- (6) Any other hematological condition that results in inability to safely perform essential job tasks

6.20 Endocrine and Metabolic Disorders.

Δ **6.20.1** Category A medical conditions shall include the following:

- (1)* Type 1 diabetes mellitus, unless a candidate meets all of the following criteria:
 - (a) Is maintained by a physician knowledgeable in current management of diabetes mellitus on a basal/bolus (can include subcutaneous insulin infusion pump) regimen using insulin analogs.
 - (b) Has demonstrated over a period of at least 6 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the erratic meal schedules, sleep disruption, and high aerobic and anaerobic workloads intrinsic to fire fighting.
 - (c) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
 - (d) Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)

- (e) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy might be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
 - (f) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 MET) by ECG and cardiac imaging.
 - (g) Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of fire fighting as described in 5.1.1, allowing the fire department physician to determine whether the candidate meets the following criteria:
 - i. Is being successfully maintained on a regimen consistent with 6.20.1(1)(a) and 6.20.1(1)(b).
 - ii. Has had hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
 - iii. Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
 - iv.* Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year, with no more than two episodes of severe hypoglycemia in the preceding 3 years.
 - v. Is certified not to have a medical contraindication to fire-fighting training and operations.
 - (2) Insulin-requiring Type 2 diabetes mellitus, unless a candidate meets all of the following criteria:
 - (a) Is maintained by a physician knowledgeable in current management of diabetes mellitus.
 - (b) Has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the erratic meal schedules, sleep disruption, and high aerobic and anaerobic workloads intrinsic to fire fighting.
 - (c) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
 - (d) Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
 - (e) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
 - (f) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METS) by ECG and cardiac imaging.
 - (g) Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of fire fighting as described in 5.1.1, allowing the fire department physician to determine whether the candidate meets the following criteria:
 - i. Is maintained on a stable insulin regimen and has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels despite varied activity schedules through nutritional therapy and insulin administration.
 - ii. Has had hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
 - iii. Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
 - iv.* Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year, with no more than two episodes of severe hypoglycemia in the preceding 3 years.
 - v. Is certified not to have a medical contraindication to fire-fighting training and operations.
 - (3) Any endocrine or metabolic condition that results in the candidate not being able to safely perform one or more of the essential job tasks
- 6.20.2** Category B medical conditions shall include the following:
- (1)* Diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance
 - (2) Nutritional deficiency diseases or other metabolic disorder

- (3) Diabetes mellitus, not on insulin therapy, but controlled by diet, exercise, and/or oral hypoglycemic agents unless all of the following are met:
 - (a) Has had hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. A hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels. This shall include evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
 - (b) If on oral hypoglycemic agents, has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding year.
 - (c) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
 - (d) Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
 - (e) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
 - (f) Normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METs) by ECG and cardiac imaging.

6.21 Systemic Diseases and Miscellaneous Conditions.

6.21.1 Category A medical conditions shall include any systemic condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

6.21.2 Category B medical conditions shall include the following:

- (1) Connective tissue disease, such as dermatomyositis, systemic lupus erythematosus, scleroderma, and rheumatoid arthritis
- (2)* History of thermal, chemical, or electrical burn injury with residual functional deficit
- (3) Documented evidence of a predisposition to or history of heat illness, rhabdomyolysis, metabolic acidosis, or exertion-related incapacitation

6.22 Tumors and Malignant Diseases.

6.22.1 Category A medical conditions shall include the following:

- (1) Malignant disease that is newly diagnosed, untreated, or currently being treated, or under active surveillance due

to the increased risk for reoccurrence, unless not interfering with the performance of the essential job tasks

- (2) Any tumor or similar condition that results in the candidate not being able to safely perform one or more of the essential job tasks

6.22.2 Category B medical conditions shall be evaluated on the basis of an individual's current physical condition and on the staging and prognosis of the malignancy (i.e., likelihood that the disease will recur or progress), and include the following:

- (1)* Benign tumors
- (2)* History of CNS tumor or malignancy
- (3)* History of head and neck malignancy
- (4)* History of lung cancer
- (5)* History of GI or GU malignancy
- (6)* History of bone or soft tissue tumors or malignancies
- (7)* History of hematological malignancy

6.23 Psychiatric Conditions.

6.23.1 Category A medical conditions shall include any psychiatric condition that results in the candidate not being able to safely perform one or more of the essential job tasks.

6.23.2 Category B medical conditions shall include the following:

- (1) A history of psychiatric condition or substance abuse problem
- (2) Requirement for medications that increase an individual's risk of heat stress, or other interference with the ability to safely perform essential job tasks

6.24 Chemicals, Drugs, and Medications.

6.24.1 Category A medical conditions shall include those that require chronic or frequent treatment with any of the following medications or classes of medications:

- (1) Narcotics, including methadone
- (2) Sedative-hypnotics
- (3)* Full-dose or low-dose anticoagulation medications or any drugs that prolong prothrombin time (PT), partial thromboplastin time (PTT), or international normalized ratio (INR)
- (4) Beta-adrenergic blocking agents at doses that prevent a normal cardiac rate response to exercise, high-dose diuretics, or central acting antihypertensive agents (e.g., clonidine)
- (5)* Respiratory medications: inhaled bronchodilators, inhaled corticosteroids, systemic corticosteroids, theophylline, and leukotriene receptor antagonists (e.g., montelukast)
- (6) High-dose corticosteroids for chronic disease
- (7) Anabolic steroids
- (8) Any chemical, drug, or medication that results in the candidate not being able to safely perform one or more of the essential job tasks

6.24.1.1 Tobacco use shall be a Category A medical condition (where allowed by law).

6.24.1.2 Evidence of illegal drug use detected through testing, conducted in accordance with Substance Abuse and Mental Health Service Administration (SAMHSA), shall be a Category A medical condition.

6.24.1.3 Evidence of clinical intoxication or a measured blood alcohol level that exceeds the legal definition of intoxication according to the AHJ at the time of medical evaluation shall be a Category A medical condition.

6.24.2* Category B medical conditions shall include the use of the following:

- (1) Cardiovascular agents
- (2) Stimulants
- (3) Psychiatric medications
- (4) Other than high-dose systemic corticosteroids
- (5) Antihistamines
- (6) Muscle relaxants
- (7) Leukotriene receptor antagonists (e.g., **montelukast**) used for allergies that do not affect the lower respiratory system

Chapter 7 Occupational Medical Evaluation of Members

7.1 General.

7.1.1 The fire department shall establish and maintain a confidential occupational medical evaluation program for members.

7.1.2 Occupational medical evaluations shall be conducted as a baseline for surveillance and annually thereafter.

7.1.3* An occupational medical evaluation shall be performed following a member's occupational exposure, illness, injury, or protracted absence from the job.

7.1.3.1 The scope of that evaluation shall be determined by the fire department physician after reviewing the type and severity of the condition.

7.1.4 The components of the medical evaluations shall conform to all applicable U.S. OSHA standards, including 29 CFR 1910.120, "Hazardous waste operations and emergency response"; 29 CFR 1910.134, "Respiratory protection"; 29 CFR 1910.95, "Occupational noise exposure"; and 29 CFR 1910.1030, "Bloodborne pathogens."

7.2 Member Education Regarding Occupational Medical Evaluation Program.

7.2.1 The fire department, the fire department physician, and member organizations where they exist shall be responsible to convey the purposes and importance of the annual occupational medical evaluation to members and to the AHJ.

7.2.2 The purpose of the annual occupational medical evaluation of members shall include but cannot be limited to the following:

- (1) Identifying conditions that interfere with a member's physical or mental ability to safely perform essential job tasks without undue risk of harm to self or others
- (2) Monitoring the effects of exposure to specific biological, physical, or chemical agents on individual members
- (3) Detecting changes in a member's health that can be related to harmful working conditions
- (4) Detecting patterns of disease or injury occurrence in the workforce that could indicate underlying work-related problems
- (5)* Providing members with information about their current health, promoting wellness, and referring them for appropriate further evaluation and treatment

- (6) Providing members with information and education about occupational hazards
- (7) Providing a cost-effective investment in work-related disease prevention, early detection, and health promotion for members
- (8) Complying with federal, state, provincial, local, and/or other jurisdictional requirements

7.3 Timing of the Annual Occupational Medical Evaluation of Members.

7.3.1 All members shall receive a baseline medical evaluation after hiring and prior to performing fire fighter emergency functions and at least annually thereafter.

7.3.2 The baseline medical evaluation shall include the components of the annual occupational medical evaluation not performed as part of the candidate medical evaluation, provided the candidate medical evaluation was performed within the past 12 months.

7.3.3 The annual evaluation shall be completed every 12 months (± 3 months).

7.3.4 Annual medical evaluations shall be compared to baseline and subsequent evaluations to identify clinically relevant changes.

7.3.5 The interval requirements for performance of the annual occupational medical evaluation shall not preclude more frequent medical evaluations of members for new or recurring conditions when requested by the member, fire department physician, or AHJ.

7.4 Components of the Annual Occupational Medical Evaluation of Members.

7.4.1 All components listed in Section 7.5 through Section 7.7 shall be included in the baseline and annual occupational medical evaluations of members.

7.4.2 It shall be acceptable for certain components of the annual occupational medical evaluation to be performed by a member's private physician, provided full results are forwarded in the required time frame to the fire department physician.

7.4.3 Each medical evaluation shall include a medical history (including exposure history), physical examination, blood tests, urinalysis, vision tests, audiograms, spirometry, chest x-ray (as indicated), ECG, cancer screening (as indicated), and immunizations and infectious disease screening (as indicated).

7.4.4 Tests for illegal drugs shall not be performed as part of the annual medical evaluation.

7.5 Medical History.

7.5.1* A medical history questionnaire shall be completed by each member to provide baseline information with which to compare future medical concerns.

7.5.2 An annual medical history questionnaire, which includes changes in health status and known occupational exposures since the previous annual evaluation, shall be completed by each member to provide follow-up information.

7.5.3 Information on the questionnaire and interval concerns shall be reviewed with each member by the fire department physician or designated medical evaluator.

7.6 Physical Examination. The annual physical examination shall include each of the following components:

- (1) Vital signs [temperature, pulse, and respiratory rate, and blood pressure (BP)]
 - (a) BP shall be measured according to the recommendations of the *Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC 7)
- (2) Head, eyes, ears, nose, and throat (HEENT)
- (3) Neck
- (4) Cardiovascular
- (5) Pulmonary
- (6) Breast
- (7) Gastrointestinal with digital rectal exam as clinically indicated
- (8) Hernia
- (9) Lymph nodes
- (10) Neurological
- (11) Musculoskeletal
- (12)* Skin (includes screening for cancers)
- (13) Vision

7.7 Ancillary Tests.

7.7.1* Blood Tests. Blood tests shall be performed for fire fighters, at minimum, every three years for those under the age of 40, and every year for those over the age of 40, and shall include the following:

- (1) CBC with differential, RBC indices and morphology, and platelet count
- (2) Electrolytes (Na, K, Cl, HCO₃, or CO₂)
- (3) Renal function (BUN, creatinine)
- (4) Glucose
- (5) Liver function tests (ALT, AST, direct and indirect bilirubin, alkaline phosphatase)
- (6) Total cholesterol, HDL, LDL, clinically useful lipid ratios (e.g., percent LDL), and triglycerides

7.7.2 Urine Laboratory Tests. The urine laboratory tests required shall include the following:

- (1) Dipstick analysis for glucose, ketones, leukocyte esterase, protein, blood, and bilirubin
- (2) Microscopic analysis for RBC, WBC, casts, and crystals if indicated by results of dipstick analysis
- (3) Analysis for occupational chemical exposure if indicated

7.7.3* Audiology. Hearing thresholds shall be assessed annually in each ear at each of the following frequencies:

- (1) 500 Hz
- (2) 1000 Hz
- (3) 2000 Hz
- (4) 3000 Hz
- (5) 4000 Hz
- (6) 6000 Hz
- (7) 8000 Hz

7.7.3.1 The fire department physician or other qualified medical evaluator shall compare audiogram results obtained during yearly evaluations with baseline and subsequent test results.

7.7.3.2 Standard threshold shifts shall be corrected for age as permitted by OSHA.

7.7.4 Spirometry.

7.7.4.1* Pulmonary function testing (spirometry) shall be conducted annually to measure the member's forced vital capacity (FVC), forced expiratory volume in 1 second (FEV₁), and the absolute FEV₁/FVC ratio.

7.7.4.2 The fire department physician or other qualified medical evaluator shall compare spirometry results obtained during yearly evaluations with baseline and subsequent test results.

7.7.4.3* FEV₁ and FVC results shall be expressed as the absolute value (liters or milliliters) and as percent predicted adjusted for gender, age, height, and ethnicity using NHANES III normative equations.

7.7.5 Chest Radiographs.

7.7.5.1 Chest x-rays shall include an initial baseline and shall be repeated as medically indicated.

7.7.5.2 The fire department physician or other qualified medical evaluator shall compare any chest radiographs with baseline and subsequent radiographs.

7.7.6 Electrocardiograms (ECGs).

7.7.6.1 A resting 12-lead ECG shall be performed as part of the baseline medical evaluation and shall be performed annually after age 40 or as clinically indicated.

7.7.6.2 The fire department physician or other qualified medical evaluator shall compare baseline and subsequent ECGs.

7.7.6.3 The fire department physician or other qualified medical evaluator shall compare baseline and subsequent stress tests, when available, to identify clinically relevant changes.

7.7.7 Risk Stratification.

7.7.7.1 Asymptomatic fire fighters 40 years of age or older with no known atherosclerotic cardiovascular disease (ASCVD) shall be assessed annually for their 2-year and 10-year risks of ASCVD, defined as coronary death, nonfatal myocardial infarction, or fatal or nonfatal stroke.

7.7.7.2 Asymptomatic fire fighters younger than 40 years of age known to be at high risk for ASCVD shall be assessed for coronary artery disease.

7.7.7.3 The 10-year Heart Risk Calculator created by the American College of Cardiology/American Heart Association (ACC/AHA) shall be used to generate a 10-year risk of ASCVD, taking into consideration the individual's age, sex, race, total cholesterol, high density lipoprotein (HDL) cholesterol, systolic blood pressure, blood pressure-lowering medication use, diabetes status, and smoking status.

7.7.7.3.1* Intermediate Risk.

7.7.7.3.1.1 Those assessed as being at intermediate risk (i.e., 10 to <20 percent risk of ASCVD over the next 10 years) shall be further evaluated using symptom-limiting exercise stress testing (EST) with or without imaging [e.g., echocardiography, technetium (^{99m}Tc) sestamibi study] to at least 12 METs.

7.7.7.3.1.2 Negative ESTs shall be repeated at least every 2 to 5 years or as clinically indicated, and positive tests shall be referred to a cardiologist for further evaluation and treatment.

N 7.7.7.3.2 High Risk. Those assessed as being at high risk (i.e., ≥20 percent risk of ASCVD over the next 10 years) shall be referred to a cardiologist for further evaluation and treatment.

N 7.7.7.4* The Framingham Heart Study 2-year risk prediction score sheets shall be used to generate a 2-year risk of ASCVD, using all of the factors described in 7.7.7.3 except race.

N 7.7.7.4.1 Intermediate Risk. Those assessed as being at intermediate risk (i.e., 2 to 4 percent risk of ASCVD over the next 2 years) shall follow the same evaluation in 7.7.7.3.1.

N 7.7.7.4.2 High Risk. Those assessed as being at high risk (i.e., ≥4 percent risk of ASCVD over the next 2 years) shall be referred to a cardiologist for further evaluation and treatment.

7.7.8 Mammography.

Δ 7.7.8.1 Mammography shall be performed on each female member bi-annually for those over the age of 40 and annually for those over the age 50 or as clinically indicated.

7.7.8.2 A qualified radiologist shall compare mammograms to prior mammograms.

7.7.8.3 The fire department physician shall compare mammography reports to prior reports.

Δ 7.7.9 Immunizations and Infectious Disease Screening. The following infectious disease immunizations or infectious disease screenings shall be provided, as indicated:

- (1)* Tuberculosis (TB) screening — baseline, by either tuberculin skin testing using the tuberculin purified protein derivative (PPD) or the tuberculin blood test (interferon gamma release assay); subsequent tuberculosis screening to be performed annually or at a frequency according to CDC guidelines unless the member has a history of positive tuberculin screening test, in which case CDC guidelines for management and subsequent chest radiographic surveillance apply
- (2) Hepatitis C virus screening — baseline and following occupational exposure
- (3) Hepatitis B virus vaccinations and titers — as specified in CDC guidelines; laboratory confirmation of immunity to be tested 1–2 months after completion of the vaccination 3 dose series
- (4)* Tetanus/diphtheria /pertussis (Tdap) vaccine — can be given once to replace the Td booster every 10 years or the 5-year wound management Td dose
- (5)* Measles, mumps, rubella vaccine (MMR) — in absence of documented immunity, two doses of MMR to be administered according to current immunization guidelines
- (6) Polio vaccine — a single booster of IPV for members traveling to endemic areas in the line of duty, or as outlined in the *Morbidity and Mortality Weekly Report* article, “Poliomyelitis Prevention in the United States: Updated Recommendations of the Advisory Committee on Immunization Practices (ACIP)”
- (7) Hepatitis A vaccine
- (8) Varicella vaccine — offered to all non-immune personnel
- (9) Influenza vaccine (seasonal and novel) — offered to all personnel annually
- (10) HIV screening — available to all personnel

7.7.9.1 Pre-screening and immunization against biological threat agents shall be made available to members following CDC guidelines or recommendations.

7.7.9.2* All members shall be offered immunizations against infectious diseases as required by the AHJ and by 29 CFR 1910.1030, “Bloodborne Pathogens.”

7.7.9.3 The fire department physician shall ensure that all members are offered currently recommended immunizations.

7.7.10 Post-Exposure Bloodborne Pathogen Testing.

7.7.10.1 Physicians who care for members shall follow current CDC recommendations for post-exposure prophylaxis (PEP) for bloodborne pathogen (BBP) exposures.

7.7.10.2* There shall be a written protocol for members who present with BBP exposures.

7.7.11 HIV Testing. HIV testing shall be offered on a confidential basis as part of post-exposure protocols and as requested by the fire department physician or member.

7.7.11.1 All results from HIV tests shall be provided directly to the member and shall be maintained by the physician as confidential documents.

7.7.11.2 Results from HIV tests shall not be forwarded to any local, state, provincial, national, or international authorities or databases unless mandated by public health statutes.

7.7.12 Heavy Metal Evaluation.

7.7.12.1 Baseline testing for heavy metals shall be required when indicated by known exposure or substantial risk.

7.7.12.2 Evaluations shall be performed following known exposures, for recurrent exposures, or where required under federal, state, or provincial regulations.

7.7.13 Colon Cancer Screening.

7.7.13.1 Fecal occult blood testing risks and benefits shall be discussed with all members above the age of 40, or earlier if clinically indicated.

7.7.13.2* Colonoscopy services shall be recommended to all members above the age of 50, or earlier if clinically indicated and repeated at regular intervals.

7.7.14* Prostate Cancer. Due to increased prostate cancer risk, the fire department physician shall discuss the risks and benefits of prostate cancer screening, including prostate-specific antigen (PSA) testing, with all male fire fighters beginning at age 50 and annually thereafter.

N 7.7.14.1 For male fire fighters of African-American heritage who are at a higher risk for prostate cancer, the physician shall discuss the risks and benefits of prostate cancer screening, including PSA testing, beginning at age 40 and annually thereafter.

N 7.7.15 Lung Cancer Screening.

N 7.7.15.1 Low-dose computed tomography (LDCT) shall be performed annually on fire fighters over the age of 55 who have a 30-pack-a-year smoking history and currently smoke or have quit within the past 15 years.

N 7.7.15.2 Screening shall be discontinued once a fire fighter has not smoked cigarettes for 15 years or is too ill to benefit.

N 7.7.16 Cervical Cancer Screening.

N 7.7.16.1 Female fire fighters shall be screened for cervical cancer with cytology (Pap smear) every 3 years or screened for a combination of cytology and human papillomavirus (HPV) testing every 5 years.

N 7.7.17 Testicular Cancer Screening.

N 7.7.17.1 A baseline examination shall be performed by a health care provider.

N 7.7.18 Bladder Cancer Screening.

N 7.7.18.1 Urine shall be evaluated for blood (hematuria).

N 7.7.18.2 A positive dipstick for hematuria shall require a follow-up and referral which could involve upper tract imaging, cystoscopy, and/or urine cytology.

N 7.7.19 Oral Cancer Screening.

N 7.7.19.1 The entire mouth shall be examined for signs of oral and oropharyngeal cancers.

N 7.7.20 Thyroid Cancer Screening.

N 7.7.20.1 Physical exam for palpable nodules shall be part of the annual physical examination.

N 7.7.21 Sleep Disturbance Screening.

N 7.7.21.1 Screening for sleep disorders using a validated questionnaire, such as the Berlin Questionnaire or Epworth Sleepiness Scale, shall be provided annually.

N 7.7.21.2* For fire fighters with a high index of suspicion for a sleep disorder based on questionnaires or biometric data, the physician shall discuss the risks and benefits of testing and treatment.

N 7.7.22* Cancer and Cardiovascular Disease Risk Reduction.

N 7.7.22.1 The fire department physician shall annually inform members of the heightened risks of cardiovascular disease and various types of cancer associated with fire fighting.

N 7.7.22.2 In addition to medical screening for these entities as outlined in this standard, the member shall be apprised of occupational routes of hazardous exposures related to fire fighting, as well as common signs, symptoms, and preventive measures for both cardiovascular disease and cancers.

N 7.7.23 Occupational Stress Awareness Consultation.

N 7.7.23.1 The fire department physician shall, during the annual physical, inform the member of, and assess for the heightened risks of, stress associated with occupational exposures related to fire fighting.

N 7.7.23.2 The fire department physician shall make the member aware of common adverse signs and symptoms of occupational stress, inform the member of practices that might limit the damaging effects of occupational stress, and provide the member with referral to licensed behavioral health specialists trained to recognize and treat stress-related disorders in first responders as indicated.

Chapter 8 Annual Occupational Fitness Evaluation of Members

8.1 Weight and Body Composition.

8.1.1* Body weight shall be measured and recorded annually.

8.1.2 A body composition evaluation including the following shall be conducted on personnel solely for the purpose of departmental health surveillance:

- (1)* Circumferential measurements
- (2) Hydrostatic weighing or Bod-Pod
- (3)* Skinfold measurements
- (4) Bio impedance analysis

8.2 Annual Fitness Evaluation.

8.2.1 A mandatory fitness evaluation that is not punitive or competitive shall be conducted annually as part of an individualized program.

8.2.1.1 All component results of the mandatory fitness evaluation shall be used to establish an individual's baseline or measured against the individual's previous assessments and not against any standard or norm.

8.2.2 The mandatory fitness evaluation shall include a mandatory pre-evaluation procedure and the components in 8.2.2.1 through 8.2.2.4. *(For additional information, see Annex C.)*

8.2.2.1* An evaluation of aerobic capacity shall be performed after appropriate medical evaluation.

8.2.2.1.1 Testing shall be conducted using an appropriate maximal or submaximal protocol *(see C.2.1.2 and C.2.1.1)*. Bicycle ergometry is not appropriate because it underestimates true aerobic capacity and is not work-task specific.

8.2.2.1.2* At levels below 12 METs, a firefighter shall be counseled to improve his/her fitness.

N 8.2.2.1.3 At levels below 10 METs, participation in a prescribed aerobic fitness program shall be required.

8.2.2.1.4 At levels at or below 8 METs, a prescribed aerobic fitness program shall be required, and the AHJ shall be advised to consider restriction from essential job tasks 1, 2, 4, 5, 6, 7, 8, 9, and 13.

8.2.2.2 An evaluation of muscular strength shall be conducted using each of the following protocols:

- (1) Grip strength evaluation *(See C.2.1.5 for the protocol.)*
- (2) Leg strength evaluation *(See C.2.1.6 for the protocol.)*
- (3) Arm strength evaluation *(See C.2.1.7 for the protocol.)*

8.2.2.3 An evaluation of muscular endurance shall be conducted using each of the following protocols:

- (1) Push-up evaluation *(See C.2.1.9 for the protocol.)*
- (2) Curl-up evaluation *(See C.2.1.11 for the protocol.)*

8.2.2.4 An evaluation of flexibility shall be conducted using the sit-and-reach protocol. *(See C.2.1.12 for the protocol.)*

Chapter 9 Essential Job Tasks — Specific Evaluation of Medical Conditions in Members

9.1 Essential Job Tasks.

9.1.1 The essential job tasks listed by number in this chapter are the same as those listed in Chapter 5 and shall be validated by the fire department as required by Chapter 5.

Δ 9.1.2 The fire department physician shall use the list of essential job tasks in evaluating the ability of a member with specific medical conditions to perform specific job tasks.

Δ 9.1.3 Essential job tasks referenced throughout this chapter by number only shall correspond to the following model list:

- (1)* Wearing personal protective ensemble and SCBA, performing fire-fighting tasks (e.g., hoseline operations, extensive crawling, lifting and carrying heavy objects, ventilating roofs or walls using power or hand tools, forcible entry), rescue operations, and other emergency response actions under stressful conditions, including working in extremely hot or cold environments for prolonged time periods
- (2) Wearing an SCBA, which includes a demand valve-type positive-pressure facepiece or HEPA filter masks, which requires the ability to tolerate increased respiratory workloads
- (3) Exposure to toxic fumes, irritants, particulates, biological (i.e., infectious) and nonbiological hazards, and/or heated gases, despite the use of personal protective ensembles and SCBA
- (4) Depending on the local jurisdiction, climbing six or more flights of stairs while wearing fire protective ensemble weighing at least 50 lb (22.6 kg) or more and carrying equipment/tools weighing an additional 20 to 40 lb (9 to 18 kg)
- (5) Wearing fire protective ensemble that is encapsulating and insulated, which will result in significant fluid loss that frequently progresses to clinical dehydration and can elevate core temperature to levels exceeding 102.2°F (39°C)
- (6) Wearing personal protective ensemble and SCBA, searching, finding, and rescue-dragging or carrying victims ranging from newborns to adults weighing over 200 lb (90 kg) to safety despite hazardous conditions and low visibility
- (7) Wearing personal protective ensemble and SCBA, advancing water-filled hoselines up to 2 ½ in. (65 mm) in diameter from fire apparatus to occupancy [approximately 150 ft (50 m)], which can involve negotiating multiple flights of stairs, ladders, and other obstacles
- (8) Wearing personal protective ensemble and SCBA, climbing ladders, operating from heights, walking or crawling in the dark along narrow and uneven surfaces, and operating in proximity to electrical power lines and/or other hazards
- (9) Unpredictable emergency requirements for prolonged periods of extreme physical exertion without benefit of warm-up, scheduled rest periods, meals, access to medication(s), or hydration
- (10) Operating fire apparatus or other vehicles in an emergency mode with emergency lights and sirens
- (11) Critical, time-sensitive, complex problem solving during physical exertion in stressful, hazardous environments, including hot, dark, tightly enclosed spaces, that is

further aggravated by fatigue, flashing lights, sirens, and other distractions

- (12) Ability to communicate (i.e., give and comprehend verbal orders) while wearing personal protective ensembles and SCBA under conditions of high background noise, poor visibility, and drenching from hoselines and/or fixed protection systems (e.g., sprinklers)
- (13) Functioning as an integral component of a team, where sudden incapacitation of a member can result in mission failure or in risk of injury or death to civilians or other team members
- (14) Working in shifts, including during nighttime, that can extend beyond 12 hours

9.2 Special Teams.

Δ 9.2.1 In addition to essential job tasks specified in 9.1.3(1) through 9.1.3(13), members of specialized teams such as hazardous materials units, SCUBA teams, technical rescue teams, EMS teams, or units supporting tactical law enforcement operations shall be evaluated for their ability to perform essential job tasks and wear specialized PPE related to the duties of those specialized teams.

9.2.2 The fire department shall define those essential job tasks and shall provide the fire department physician with a description of the risks associated with those tasks and specialized PPE as well as any additional medical and/or physical requirements that are not enumerated in this standard.

9.2.3 In defining those tasks, the fire department shall consider the impact on the members required to wear or utilize specialized PPE that can increase weight, environmental isolation, sensory deprivation, and/or dehydration potential above levels experienced with standard fire suppression PPE.

Δ 9.3 Fire Department Physician Roles. After individually evaluating the member and the member's medical records, including job-related medical rehabilitation records, the fire department physician shall recommend restricting members from performing only those specific job tasks that cannot be safely performed by the member given his/her medical condition.

9.3.1 The fire department physician shall perform an individualized assessment of the fire department member.

Δ 9.3.2* The fire department shall, on a case-by-case basis, provide the AHJ a statement that documents the specific essential job task(s) (see 9.1.3) the member shall be restricted from performing.

Δ 9.3.3* The fire department physician shall not comment on whether or not the member can continue employment in the fire department.

9.3.4 There shall be no blanket exclusions.

9.3.5 The AHJ shall determine whether or not the restrictions put forth by the fire department physician can or cannot be accommodated.

9.4* Cardiovascular Disorders.

9.4.1 Cardiovascular disorders shall include any disorder of the cardiovascular system including but not limited to supraventricular or ventricular arrhythmias (abnormal heart beats), coronary artery disease, and cardiac muscle disease or valve disease.

9.4.2 If the member has any cardiovascular disorders, the member shall be individually evaluated in accordance with 9.4.3 through 9.4.23 to determine if the disorders compromise the member's ability to safely perform the essential job tasks.

9.4.3 Coronary Artery Disease.

9.4.3.1* Physician Evaluation. The following clinical conditions referable to coronary artery disease, including a history of myocardial infarction, coronary artery bypass surgery, coronary angioplasty with or without stent placement, or similar procedures, compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department unless all of the following are present:

- (1) Absence of angina pectoris, even if relieved by medication
- (2) Absence of significant stenosis in any coronary artery (i.e., greater than 70 percent lumen diameter narrowing) following treatment
- (3) Normal left ventricular ejection fraction as measured by radionuclide scan, contrast ventriculography, or echocardiography
- (4) Maximal exercise tolerance of at least 12 METs
- (5) Absence of exercise-induced ischemia, ventricular arrhythmias, or conduction abnormalities observed by radionuclide stress test during an evaluation reaching a workload of at least 12 METs
- (6) Control of modifiable risk factor(s) for acute coronary plaque rupture (e.g., tobacco use, hypertension despite treatment, hypercholesterolemia with cholesterol greater than or equal to 180 or low density lipoproteins greater than or equal to 100 despite treatment, or glycosylated hemoglobin greater than 8 percent despite exercise and/or weight reduction)
- (7) At least 6 months since most recent myocardial infarction
- (8) At least 6 months since coronary artery bypass surgery
- (9) At least 3 months since most recent angioplasty — with or without stent placement
- (10) Completion of cardiac rehab, if indicated

9.4.3.2 Physician Guidance. The physician shall consider the following when evaluating a member:

- (1) Evaluation of coronary artery disease requires a stress test with imaging and/or coronary angiogram and some assessment of left ventricular function. Following a myocardial infarction or a coronary revascularization procedure, a radionuclide stress test shall be performed to evaluate exercise tolerance and the presence of exercise-induced myocardial ischemia or ventricular arrhythmias.
- (2) Reports of left ventricular ejection fraction for evaluation of 9.4.3.1(3) should include "normal" values for the lab performing the test and formal interpretation by a cardiologist.
- (3) Workload demands of fire fighting have been shown to exceed the levels shown in 9.4.3.1(4).

9.4.4 Congestive Heart Failure.

9.4.4.1 Physician Evaluation. Congestive heart failure due to any etiology including any disease leading to a lower than normal left or right ventricular ejection fraction, even if corrected by medication, compromises the member's ability to safely perform essential job tasks 1, 2, 4, 7, 9, and 13, and the physi-

cian shall report the applicable job limitations to the fire department.

9.4.4.2 Physician Guidance. The physician shall consider that if the heart failure is due to a reversible process that ultimately results in no abnormality in cardiac performance off all cardiac medications (e.g., hyperthyroidism, anemia), then a history of congestive heart failure does not permanently prevent a member from safely performing the essential job tasks.

9.4.5 Restrictive Cardiomyopathy and Constrictive Pericarditis.

9.4.5.1 Physician Evaluation. Restrictive cardiomyopathy and constrictive pericarditis when resulting in heart failure compromise the member's ability to safely perform essential job tasks 1, 2, 4, 7, and 9, and the physician shall report the applicable job limitations to the fire department.

9.4.6 Acute Pericarditis, Acute Endocarditis, and Acute Myocarditis.

9.4.6.1 Physician Evaluation. Acute pericarditis, acute endocarditis, and acute myocarditis compromise the member's ability to safely perform essential job tasks 1, 4, 5, 6, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department.

9.4.7 Chronic Pericarditis, Endocarditis, or Myocarditis.

9.4.7.1 Physician Evaluation. Chronic pericarditis, endocarditis, or myocarditis when resulting in heart failure or significant valvular incompetence or arrhythmias compromises the member's ability to safely perform essential job tasks 1, 4, 5, 6, 7, and 13, and the physician shall report the applicable job limitations to the fire department.

9.4.7.2 Physician Guidance. Members with pericarditis, endocarditis, or myocarditis shall be carefully assessed for cardiac function, rhythm, and valvular competence at least annually by cardiac echo or other noninvasive or invasive monitoring in consultation with a cardiologist.

9.4.8 Hypertrophic Obstructive Cardiomyopathy.

9.4.8.1 Physician Evaluation. Hypertrophic obstructive cardiomyopathy (HCM) (including idiopathic hypertrophic subaortic stenosis) can compromise the member's ability to safely perform essential job tasks 1 and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.4.8.2 Physician Guidance. HCM is associated with life-threatening arrhythmias and sudden cardiac death without previous symptoms of heart failure. In specific populations of patients with cardiomyopathies under normal environmental conditions, the following risk factors for sudden cardiac death shall be considered by the physician:

- (1) Unexplained syncope
- (2) History of cardiac arrest
- (3) Sustained ventricular tachycardia (VT)
- (4) Nonsustained VT (3 beats or more of at least 120 beats/minute documented on a Holter monitor)
- (5) Left ventricle thickness of 30 mm or more on echocardiogram
- (6)* Abnormal systolic blood pressures during the exercise stress test (EST), defined as either a failure to increase by at least 20 mm Hg or a drop of at least 20 mm Hg during effort

9.4.9 Recurrent Syncope.

9.4.9.1* Physician Evaluation. Recurrent syncope compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

9.4.10 Pacemaker or Automatic Implantable Defibrillator.

9.4.10.1* Physician Evaluation. A medical condition requiring a pacemaker or automatic implantable defibrillator—unless the member is not pacemaker-dependent or the condition no longer requires an automatic implantable cardiac defibrillator—compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

9.4.11 Mitral Valve Stenosis.

9.4.11.1 Physician Evaluation. Moderate to severe mitral valve stenosis defined as valve area less than or equal to 1.5 cm² or pulmonary artery systolic pressure greater than 35 mm Hg compromises the member's ability to safely perform essential job tasks 1, 4, 5, 7, and 9, and the physician shall report the applicable job limitations to the fire department.

9.4.12 Mitral Valve Insufficiency.

9.4.12.1 Physician Evaluation. Moderate to severe mitral valve insufficiency, defined as the presence of left ventricular dysfunction, compromises the member's ability to safely perform essential job tasks 1, 4, 5, 7, and 9, and the physician shall report the applicable job limitations to the fire department.

9.4.12.2 Physician Guidance. Mitral valve prolapse only interferes with safe performance of critical job tasks if associated with arrhythmias or if moderate to severe mitral regurgitation is present.

9.4.13 Aortic Valve Stenosis.

9.4.13.1 Physician Evaluation. Moderate to severe aortic valve stenosis defined as mean aortic valvular gradient greater than or equal to 20 mm Hg and/or valve area less than or equal to 1.0 cm² compromises the member's ability to safely perform essential job tasks 1, 4, 5, 6, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department.

9.4.14 Aortic Valve Insufficiency.

9.4.14.1 Physician Evaluation. Moderate to severe aortic valve insufficiency when the cause of left ventricular dysfunction compromises the member's ability to safely perform essential job tasks 1, 4, 7, and 9, and the physician shall report the applicable job limitations to the fire department.

9.4.15 Prosthetic Cardiac Valves.

9.4.15.1 Physician Evaluation. Prosthetic cardiac valves compromise the member's ability to safely perform essential job task 8 if anticoagulation is required and essential job tasks 1, 4, 6, 7, and 9 if left ventricular dysfunction is present, and the physician shall report the applicable job limitations to the fire department.

9.4.16 Wolff-Parkinson-White (WPW) Syndrome.

9.4.16.1* Physician Evaluation.

N 9.4.16.1.1 Wolff-Parkinson-White (WPW) syndrome with structural heart disease compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

N 9.4.16.1.2 WPW syndrome with a history of supraventricular tachycardia (SVT) compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department, unless the member has been treated with ablation and has no inducible arrhythmias as demonstrated by electrophysiology testing.

9.4.17 Other Supraventricular Arrhythmias, Atrial Fibrillation, or Atrial Flutter.

9.4.17.1* Physician Evaluation. Other supraventricular arrhythmias, atrial fibrillation, or atrial flutter when persistent (even if rate controlled) or if anticoagulation is required compromise the member's ability to safely perform essential job task 13 and essential job task 8 if anticoagulation is required, and the physician shall report the applicable job limitations to the fire department.

9.4.17.2 Physician Guidance. The physician shall consider that if the atrial fibrillation is recurrent but self-limited off cardiac medications, there is no evidence of ischemia, and the echocardiogram reveals both a normal mitral valve and a normal-sized left atrium, then the member might be able to safely perform full duties. Paroxysmal atrial tachycardia can sometimes be resolved with modification of diet or treatment of other underlying noncardiac conditions.

9.4.18 Ventricular Arrhythmias and Ectopy.

9.4.18.1 Physician Evaluation.

9.4.18.1.1 The physician shall evaluate the member to determine if a history of ventricular arrhythmias (e.g., ventricular tachycardia and ventricular fibrillation) compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

9.4.18.1.2 A history of ventricular ectopy might compromise the member's ability to safely perform essential job task 13, and after evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.4.18.2 Physician Guidance. The physician shall consider the following when evaluating the member:

- (1) A history of ventricular arrhythmias, including ventricular tachycardia or ventricular fibrillation, poses significant risk for life-threatening sudden incapacitation in the presence of structural abnormalities, functional abnormalities, or ectopy that occurs during exercise.
- (2) A history of ventricular ectopy might pose a significant risk for life-threatening sudden incapacitation if structural or ischemic heart disease is present or if ventricular ectopy increases during exercise.
- (3) Holter monitoring (i.e., 24-hour ECG recording) might show ventricular ectopy but should show no evidence of ventricular arrhythmias.
- (4) Echocardiograph must show normal function and no evidence of structural abnormalities.

- (5) Stress testing off cardiac medications must show no evidence for ischemia, ventricular tachycardia, or ventricular fibrillation.
- (6) Premature ventricular contractions (PVCs) should resolve with increasing levels of exercise up to 12 METs.

9.4.19 Atrioventricular Block.

9.4.19.1 Physician Evaluation.

9.4.19.1.1 Third-degree or complete atrioventricular block compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

9.4.19.1.2 Other types of atrioventricular block with sinus pause greater than 3 seconds, left bundle branch block, right bundle branch block, or second-degree Type I atrioventricular block might compromise the member's ability to safely perform job task 13 if cardiac structural (i.e., coronary arteries, valves, myocardium) abnormalities are present, if left ventricular function is abnormal, or if heart rate does not increase with exercise in the absence of a mechanical pacemaker, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.4.20 Hypertension.

N 9.4.20.1 Stage 1 Hypertension.

9.4.20.1.1* Physician Evaluation.

N 9.4.20.1.1.1 Members with stage 1 hypertension shall be referred to their primary care physician to ensure that their blood pressure is controlled and to screen for end-organ organ damage.

N 9.4.20.1.1.2 End-organ damage, or a 10 percent or greater risk of ASCVD over the next 10 years determined by using the ACC/AHA Heart Risk Calculator, compromises the member's ability to safely perform essential job tasks 1, 5, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department, unless a symptom-limiting cardiac exercise test to 12 METs is performed with normal results every 1 to 3 years.

N 9.4.20.2 Stage 2 Hypertension.

N 9.4.20.2.1 Physician Evaluation.

Δ 9.4.20.2.1.1 Stage 2 hypertension (i.e., systolic pressure greater than or equal to 160 mm Hg or diastolic pressure greater than or equal to 100 mm Hg) compromises the member's ability to safely perform essential job tasks 1, 5, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department.

N 9.4.20.2.1.2 Once the physician has acted in accordance with 9.4.20.2.1.1, if the member's blood pressure is subsequently controlled, end-organ damage and risk of ASCVD over the next 10 years shall be assessed by using the ACC/AHA Heart Risk Calculator.

N 9.4.20.2.1.3 End-organ damage, or a 10 percent or greater risk of ASCVD over the next 10 years determined by using the ACC/AHA Heart Risk Calculator, compromises the member's ability to safely perform essential job tasks 1, 5, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department, unless a symptom-limiting cardiac exercise

test to 12 METs is performed with normal results every 1 to 3 years.

9.4.21 Metabolic Syndrome.

9.4.21.1* Members with metabolic syndrome are at increased risk for cardiovascular ischemic disease, diabetes, and accelerated hypertension and shall undergo a stress test with imaging; if the results are abnormal or the member is unable to achieve a symptom limiting cardiac exercise test to 12 METs every 1 to 3 years, the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, 9, 10, and 13 will be compromised.

9.4.22 Cardiac Congenital Abnormality.

9.4.22.1 Physician Evaluation. A history of a cardiac congenital abnormality that has been treated by surgery but with residual complications or that has not been treated by surgery, leaving residuals or complications, might compromise the member's ability to safely perform essential job tasks 1, 4, 5, 6, 7, 9, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.4.23 Cardiac Hypertrophy.

9.4.23.1 Physician Evaluation. Cardiac hypertrophy without a normal response to exercise of the heart might compromise the member's ability to safely perform essential job task 13 and other job functions due to limitations of endurance, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.4.23.2* Physician Guidance. The physician shall consider that this condition can result in the potential for sudden incapacitation in addition to hypertension.

9.4.24 Heart Transplant.

9.4.24.1 Physician Evaluation. Cardiac transplantation prevents a normal rise in heart rate and increases risk of syncope and sudden cardiac death and therefore shall be considered as compromising the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, 9, 10, and 13.

9.4.24.2 Physician Guidance. The physician shall consider that this condition can result in the potential for sudden incapacitation and that the many immunosuppressive drugs required to prevent rejection increase the likelihood for infection.

9.5 Vascular Disorders.

9.5.1 Vascular disorders shall refer to any disorder of the vascular (arterial or venous) system including but not limited to aneurysm, peripheral vascular insufficiency, and thromboembolic disease.

9.5.2 If the member has any vascular disorders, the member shall be individually evaluated in accordance with 9.5.3 through 9.5.11 to determine if the disorders compromise the member's ability to safely perform the essential job tasks, recognizing that heart rate, blood pressure, and shear forces on vessel walls are increased when performing many of the essential job tasks, increasing the risk of acute dissection, rupture, and/or embolic phenomena that even in a normal environment can result in life-threatening sudden incapacitation.

9.5.3 Aortic Aneurysm.

9.5.3.1 Physician Evaluation. Aortic aneurysm (thoracic aortic aneurysm of any size or abdominal aortic aneurysm greater than or equal to 4 cm) compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 13, and the physician shall report the applicable job limitations to the fire department.

9.5.3.2 Physician Guidance. When evaluating a member with an abdominal aortic aneurysm less than 4 cm, the physician shall recognize that treatment requires careful control of blood pressure and regular follow-up with cardiac imaging.

9.5.3.2.1 A minimum of 6 months post-surgical repair of any aortic aneurysm shall be required before the member can be evaluated for return-to-duty status.

9.5.4 Carotid Artery Disease.

9.5.4.1 Physician Evaluation. Carotid artery disease when symptomatic and/or reduction in blood flow of greater than 70 percent is present compromises the member's ability to safely perform job task 13, and the physician shall report the applicable job limitations to the fire department.

9.5.5 Thoracic Outlet Syndrome.

9.5.5.1 Physician Evaluation. Thoracic outlet syndrome (symptomatic) compromises the member's ability to safely perform essential job tasks 1 and 13, and the physician shall report the applicable job limitations to the fire department.

9.5.6 Peripheral Vascular Disease.

9.5.6.1 Physician Evaluation. Peripheral vascular disease (arterial or venous) when symptomatic (claudication) or severe peripheral edema is present compromises the member's ability to safely perform essential job tasks 1, 4, 5, 7, and 9, and the physician shall report the applicable job limitations to the fire department.

9.5.7 Thrombophlebitis.

9.5.7.1 Physician Evaluation.

9.5.7.1.1 Thrombophlebitis or deep venous thrombosis that is recurrent or persistent or requires anticoagulation compromises the member's ability to safely perform essential job tasks 1, 4, 5, 7, and 9, and the physician shall report the applicable job limitations to the fire department.

9.5.7.1.2 Full-dose or low-dose anticoagulation compromises the member's ability to safely perform essential job task 8, and the physician shall report the applicable job limitations to the fire department.

9.5.8 Circulatory Instability.

9.5.8.1 Physician Evaluation. Circulatory instability as indicated by orthostatic hypotension or persistent tachycardia compromises the member's ability to safely perform essential job tasks 1, 5, 9, and 13, and the physician shall report the applicable job limitations to the fire department.

9.5.9 Peripheral Vascular Disease.

9.5.9.1 Physician Evaluation. Peripheral vascular disease, such as severe Raynaud's phenomenon, might compromise the member's ability to safely perform essential job tasks (e.g., under certain conditions, including cold weather), and after

further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.5.10 Lymphedema.

9.5.10.1 Physician Evaluation. Chronic, severe lymphedema or massive edema of any type (e.g., due to lymphadenopathy, severe venous valvular incompetency, endocrine abnormalities, or low flow states) compromises the member's ability to safely perform essential job tasks 1, 4, 5, and 8, and the physician shall report the applicable job limitations to the fire department.

9.5.11 Lesions of Aorta or Major Vessels.

9.5.11.1 Physician Evaluation.

9.5.11.1.1 Congenital or acquired lesions of the aorta or major blood vessels might interfere with circulation and prevent the safe performance of essential job tasks 1, 4, and 7 due to limitations of endurance, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.5.11.1.2 Congenital or acquired lesions of the aorta or major blood vessels could increase the potential for life-threatening sudden incapacitation, which might compromise the member's ability to safely perform essential job task 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.6* Endocrine and Metabolic Disorders.

9.6.1 Endocrine and metabolic disorders shall include disorders of the hypothalamic-pituitary-thyroid-adrenal axis.

9.6.2 If the member has any endocrine and metabolic disorders, the member shall be individually evaluated in accordance with 9.6.3 through 9.6.7 to determine if the disorders compromise the member's ability to safely perform the essential job tasks.

9.6.3 Type 1 Diabetes Mellitus That Requires Treatment with Insulin.

9.6.3.1* Physician Evaluation. Type 1 diabetes mellitus that requires treatment with insulin compromises the member's ability to safely perform essential job tasks 5, 9, and 13, and the physician shall report the applicable job limitations to the fire department, unless the member meets all of the following criteria:

- (1) Is maintained by a physician knowledgeable in current management of diabetes mellitus on a basal/bolus (can include subcutaneous insulin infusion pump) regimen using insulin analogs.
- (2) Has demonstrated over a period of at least 6 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the member's experience and history dealing with erratic meal schedules, sleep disruption, and high aerobic and anaerobic workloads intrinsic to fire fighting.

- (3) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
- (4) Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
- (5) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
- (6) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METs) by ECG and cardiac imaging.
- (7) Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of fire fighting as described in Section 9.1, allowing the fire department physician to determine whether the member meets the following criteria:
 - (a) Is maintained on a stable basal/bolus regimen using insulin analogs and has demonstrated over a period of at least 6 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration despite varied activity schedules.
 - (b) Has had hemoglobin A1C measured at least four times a year (intervals of two to three months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. Hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels, including evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
 - (c) Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
 - (d) Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year, with no more than two episodes of severe hypoglycemia in the preceding 3 years.
 - (e) Is certified not to have a medical contraindication to fire-fighting training and operations.

9.6.3.2 Physician Guidance. When evaluating a member with Type 1 diabetes mellitus, the physician shall recognize that episodes of severe hypoglycemia are associated with an increased risk of subsequent episodes and that hypoglycemia can interfere with cognitive function and judgment. Presence of microvascular and neurological complications of diabetes might increase the risk of hypoglycemic events.

9.6.4 Type 2 Diabetes Mellitus That Requires Treatment with Insulin.

9.6.4.1* Physician Evaluation. Type 2 diabetes mellitus that requires treatment with insulin compromises the member's ability to safely perform essential job tasks 5, 9, and 13, and the physician shall report the applicable job limitations to the fire department, unless the member meets all of the following criteria:

- (1) Is maintained by a physician knowledgeable in current management of diabetes mellitus.
- (2) Has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels through nutritional therapy and insulin administration. Assessment of this shall take into consideration the member's experience and prior history dealing with the erratic meal schedules, sleep disruption, and high aerobic and anaerobic workloads intrinsic to fire fighting.
- (3) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
- (4) Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
- (5) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
- (6) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METs) by ECG and cardiac imaging.
- (7) Has a signed statement and medical records from an endocrinologist or a physician with demonstrated knowledge in the current management of diabetes mellitus as well as knowledge of the essential job tasks and hazards of fire fighting as described in Section 9.1, allowing the fire department physician to determine whether the member meets the following criteria:
 - (a) Is maintained on a stable insulin regimen and has demonstrated over a period of at least 3 months the motivation and understanding required to closely monitor and control capillary blood glucose levels despite varied activity schedules through nutritional therapy and insulin administration.
 - (b) Has had hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. Hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels, including evidence of a set

schedule for blood glucose monitoring and a thorough review of data from such monitoring.

- (c) Does not have an increased risk of hypoglycemia due to alcohol use or other predisposing factors.
- (d) Has had no episodes of severe hypoglycemia (defined as requiring assistance of another) in the preceding 1 year, with no more than one episode of severe hypoglycemia in the preceding 5 years.
- (e) Is certified not to have a medical contraindication to fire-fighting training and operations.

9.6.4.2 Physician Guidance. When evaluating a member with Type 2 diabetes mellitus, the physician shall recognize that episodes of severe hypoglycemia are considered the best predictors of an increased risk of subsequent episodes and hypoglycemia interferes with cognitive function and judgment.

9.6.5 Diabetes Mellitus That Does Not Require Insulin Therapy.

9.6.5.1 Physician Evaluation. Diabetes mellitus that does not require insulin therapy and that is controlled by diet, exercise, and/or oral hypoglycemic agents compromises the member's ability to safely perform essential job tasks 5, 9, and 13, and the physician shall report the applicable job limitations to the fire department, unless the member meets all of the following criteria:

- (1) Has had hemoglobin A1C measured at least four times a year (intervals of 2 to 3 months) over the last 12 months prior to evaluation if the diagnosis of diabetes has been present over 1 year. Hemoglobin A1C reading of 8 percent or greater shall trigger a medical evaluation to determine if a condition exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels, shall including evidence of a set schedule for blood glucose monitoring and a thorough review of data from such monitoring.
- (2) If on oral hypoglycemic agents, has had no episodes of severe hypoglycemia (defined as requiring assistance of another in the preceding year).
- (3) Has a dilated retinal exam by a qualified ophthalmologist or optometrist that shows no higher grade of diabetic retinopathy than microaneurysms, as indicated on the International Clinical Diabetic Retinopathy Disease Severity Scale.
- (4) Has normal renal function based on a calculated creatinine clearance greater than 60 mL/min and absence of proteinuria. (Creatinine clearance can be calculated by use of the Cockcroft-Gault or similar formula. Proteinuria is defined as 24-hour urine excretion of greater than or equal to 300 mg protein or greater than or equal to 300 mg of albumin per gram of creatinine in a random sample.)
- (5) Has no autonomic or peripheral neuropathy. (Peripheral neuropathy is determined by diminished ability to feel the vibration of a 128 cps tuning fork or the light touch of a 10-gram monofilament on the dorsum of the great toe proximal to the nail. Autonomic neuropathy can be determined by evidence of gastroparesis, postural hypotension, or abnormal tests of heart rate variability.)
- (6) Has normal cardiac function without evidence of myocardial ischemia on cardiac stress testing (to at least 12 METs) by ECG and cardiac imaging.

9.6.6 Nutritional Deficiencies.

9.6.6.1 Physician Evaluation. Nutritional deficiencies, including those caused by congenital or acquired disorders of metabolism, might compromise the member's ability to safely perform essential job tasks 1, 5, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.6.6.2 Physician Guidance. When evaluating a member with nutritional deficiencies, the physician shall perform an assessment of severity and functional impact and should include percent of ideal body weight, body mass index (BMI), muscle strength, endurance, energy levels, and abilities to feed, hydrate, and absorb essential nutrients pre- and post-fire activities.

9.6.7 Diseases of the Adrenal Gland, Pituitary Gland, Parathyroid Gland, or Thyroid Gland.

9.6.7.1 Physician Evaluation. Untreated or inadequately controlled diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland of clinical significance compromise the member's ability to safely perform essential job tasks 1, 5, and 9, and the physician shall report the applicable job limitations to the fire department.

9.6.7.2 Physician Guidance. When evaluating a member, the physician shall recognize that clinically controlled diseases of the adrenal gland, pituitary gland, parathyroid gland, or thyroid gland with normal exam and serum levels do not compromise the member's ability to safely perform essential job tasks.

9.7* Lung, Chest Wall, and Respiratory Disorders.

9.7.1 Lung, chest wall, and respiratory disorders shall include disorders of breathing and the exchange of respiratory gases (oxygen and carbon dioxide), central neurologic control of respiratory drive, nose, sinuses, throat, pharynx, larynx, trachea, airways, lungs, pleura, and chest wall.

9.7.2 When evaluating a member for lung, chest wall, and respiratory disorders, the physician shall consider the following:

- (1) Efficient breathing and respiratory gas exchange is required for essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13.
- (2) Wearing protective clothing increases the oxygen consumption required to safely perform these tasks and, therefore, increases the respiratory workload.
- (3) SCBA is a positive-pressure demand valve respirator that provides a barrier against the inhalation of noxious/toxic gases and particulate matter but at increased metabolic cost due to its weight and increased respiratory workload (resistance and dead space).
- (4) If respiratory function or gas exchange is already compromised (increased work of breathing from structural or functional abnormalities, hypoxia, and/or hypercapnia) prior to the performance of essential job tasks, then the increased oxygen demand of strenuous physical exertion, while wearing a personal protective ensemble and/or SCBA, leads to early onset of fatigue or respiratory insufficiency.
- (5) Lung, chest wall, and respiratory disorders can compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13.

9.7.3 If the member has any lung, chest wall, or respiratory disorders, the member shall be individually evaluated in accordance with 9.7.4 through 9.7.24 to determine if the disorders compromise the member's ability to safely perform the essential job tasks.

9.7.4 Tracheostomy.

9.7.4.1 Physician Evaluation. Tracheostomy compromises the member's ability to safely wear SCBA (essential job task 2), communicate effectively due to oropharyngeal dysfunction (essential job task 12), and effectively clear secretions or inhaled particulate matter (essential job task 3), and the physician shall report the applicable job limitations to the fire department.

9.7.4.2 Physician Guidance. The physician shall consider that a member with a history of tracheostomy that is now sealed and without persistent respiratory disease or dysfunction does not prevent safe performance of essential job tasks.

9.7.5 Chronic Cough.

9.7.5.1 Physician Evaluation. Chronic cough with or without hemoptysis might compromise the member's ability to safely wear SCBA (essential job task 2) and to safely perform in an irritant environment (essential job task 3), and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.5.2 Physician Guidance. The physician shall consider the severity of the cough, the impact of irritants and SCBA use on cough severity, and the impact of cough severity on the ability to safely wear SCBA and perform strenuous exertion. The cause of chronic cough and/or hemoptysis needs to be evaluated, as the underlying conditions can also produce increased work of breathing, gas exchange abnormalities, or airway hyperreactivity.

9.7.6* Asthma.

9.7.6.1 Physician Evaluation. Asthma compromises the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department, unless the following provisions are met:

- (1) The member has no bronchospasm during exertion, temperature/humidity extremes, irritant exposures, fire activities, or hazmat activities.
- (2) The member does not use bronchodilator rescue medications during exertion, temperature/humidity extremes, irritant exposures, fire activities, or hazmat activities.
- (3) A review of the member's fire department records (e.g., training, operations, rehabilitation, and medical) verifies that no asthmatic episodes have occurred during fire suppression or hazardous materials operations or training.
- (4) The member's asthma has not required systemic corticosteroids, emergency room treatment, or hospital admission in the past 2 years.
- (5) The member shows adequate reserve in pulmonary function (i.e., FVC and FEV₁ greater than or equal to 90 percent) and no bronchodilator response measured off all bronchodilators on the day of testing.
- (6)* The member has a normal or negative response of less than 20 percent decline in FEV₁ from baseline for provocative challenge testing or less than 18 percent decline in FEV₁ from baseline for exercise challenge testing using cold air, methacholine (PC₂₀ greater than 8 is considered normal, as response at dose greater than 8 mg might not be clinically significant), histamine, mannitol, or exercise.

- (7) Failure to wear an SCBA during all phases of fire suppression places an asthmatic fire fighter at risk for sudden incapacitation.
- (8) The member has a signed statement from a pulmonary or asthma specialist, knowledgeable in the essential job tasks and hazards of fire fighting, that the member meets the criteria specified in 9.7.6.1(1) through 9.7.6.1(5) and can safely perform essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13 without the use of bronchodilator rescue medications.

9.7.6.2 Physician Guidance. The physician shall consider the following when evaluating the member's asthmatic condition:

- (1) Exposures to exertion, temperature extremes, cold dry air from SCBA, combustion by-products, irritants, and particulate matter are all potent provokers of asthma attacks.
- (2) Bronchodilator medications are not adequate maintenance therapy to control symptoms in the irritant environment of the fireground or hazardous materials incident scene because their use has not been approved by the FDA for use on the fireground or hazardous materials incident scene and because several studies have implicated the frequent use of beta-agonists (i.e., short- and long-acting bronchodilators) as an independent predictor or risk for sudden death and myocardial infarction in the United States, Canada, Britain, New Zealand, and Australia.
- (3) There is a high probability that acute hyperreactivity in this environment can induce immediate or progressive clinical asthma (i.e., bronchospasm and wheeze) that can lead to sudden incapacitation from status asthmaticus and/or cardiac ischemia. There are no studies that support or deny that asthma in this environment can be prevented or adequately controlled by anti-inflammatory medications (e.g., inhaled corticosteroids, cromolyn, leukotriene modifiers). It is not acceptable to use or rely on bronchodilator medications for this purpose because in a hazardous environment, SCBA cannot be removed to use a rescue inhaler, and there are no studies that support or deny that their use is preventive or effective in a fire/smoke environment.
- (4) The member's work history, as well as clinical findings on annual evaluation, should be used as an assessment of the member's practical ability to safely perform the essential job tasks.

9.7.7* Allergic Lower Respiratory Disorders.

9.7.7.1 Physician Evaluation. Allergic lower respiratory disorders might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.7.2 Physician Guidance. The physician shall consider that allergic lower respiratory disorder, a term used to define asthma (clinical reversible bronchospasm), is triggered by a known allergic insult and once triggered these patients have demonstrable airway hyperreactivity for weeks to months; it can be recurrent and/or become permanent.

9.7.8* Chronic Obstructive Airways Diseases.

9.7.8.1 Physician Evaluation. Chronic obstructive airways diseases (e.g., chronic bronchitis, emphysema), if moderate to severe (i.e., absolute FEV₁/FVC ratio less than or equal to 0.70 and an FEV₁ less than 70 percent predicted), compromises the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department unless the following provisions are met:

- (1) The FEV₁ is 50 percent or greater.
- (2) The member has no bronchospasm during exertion, temperature/humidity extremes, SCBA use, irritant exposures, fire activities, or hazmat activities.
- (3) The member does not require daily bronchodilator therapy.
- (4) The member has experienced continuous tobacco cessation for more than 3 months.
- (5) The member has not required systemic corticosteroids, emergency room treatment, or hospital admission for pulmonary disease, including chronic bronchitis or pneumonia, in the past 2 years.
- (6) The member can perform an exercise test to 12 METs without exercise-induced evidence for the following:
 - (a) Bronchospasm (i.e., a decline FEV₁ of more than 13 percent from baseline)
 - (b) Oxygen desaturation (i.e., a fall in oxygen saturation on room air by 4 percent from baseline or to 94 percent or less)
 - (c) Cardiac ischemia or clinically significant arrhythmias
- (7) There is no evidence of pulmonary hypertension on echocardiography.

9.7.9 Hypoxemic Disorders.

Δ 9.7.9.1 Physician Evaluation. Hypoxemic disorders, when moderate to severe (i.e., oxygen saturation less than 90 percent or a Po₂ less than 65 mm Hg, measured at rest and corrected to sea level on room air), or the presence of significant exercise desaturation (i.e., a fall in oxygen saturation by 4 percent from baseline or to less than 90 percent) compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 7, and 13, and the physician shall report the applicable job limitations to the fire department.

Δ 9.7.9.2 Physician Guidance. The physician shall recognize the following situations when evaluating the member:

- (1) A resting oxygen saturation of 90 percent to 93 percent corrected to sea level requires measurement at exercise to 12 METs determine if desaturation (i.e., decrease in oxygen saturation by greater than or equal to 4 percent from baseline or to less than 90 percent) occurs.
- (2) Hypoxia can be the result of central regulatory disturbances, obstructive sleep apnea, asthma, chronic obstructive airways diseases, interstitial lung disease, pulmonary hypertension, chronic pulmonary embolism, and so forth.
- (3) In this environment, gas exchange abnormalities and respiratory insufficiency no matter the cause have the potential for life-threatening sudden incapacitation from cardiopulmonary insufficiency.

9.7.10 Hypercapnic Disorders.

9.7.10.1 Physician Evaluation. Hypercapnic disorders (elevated carbon dioxide with serum P_{CO2} greater than or equal to 45 mm Hg) found during evaluation of respiratory complaints or disease compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, and 13, and the physician shall report the applicable job limitations to the fire department.

9.7.10.2 Physician Guidance. The physician shall consider that hypercapnia can be the result of central regulatory disturbance, medications, obstructive sleep apnea, severe asthma, end-stage chronic obstructive airways diseases, or end-stage interstitial lung disease. In this environment, gas exchange abnormalities and respiratory insufficiency no matter the cause have the potential for life-threatening sudden incapacitation from cardiopulmonary insufficiency.

9.7.11 Pulmonary Hypertension.

9.7.11.1 Physician Evaluation. Pulmonary hypertension compromises the member's ability to safely perform essential job tasks 1, 3, 4, 7, and 13, and the physician shall report the applicable job limitations to the fire department. *[For further details see sections on hypoxia (9.7.9), pulmonary embolism (9.7.20), and cardiac valve dysfunction (9.4.11).]*

9.7.12 Tracheal Stenosis.

9.7.12.1 Physician Evaluation. Tracheal stenosis might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, and 12 if pulmonary dysfunction is reduced (FVC less than 60 percent of predicted or abnormal inspiratory flow volume loop) or if the underlying cause of the stenosis prevents the successful and safe performance of the essential job tasks, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.13 Pulmonary Resection Surgery, Chest Wall Surgery, or Traumatic Pneumothorax.

9.7.13.1 Physician Evaluation.

9.7.13.1.1 If the member has had pulmonary resection surgery, chest wall surgery, and/or traumatic pneumothorax, the physician shall evaluate the member for full recovery from the surgery with full pulmonary function testing (PFT), including spirometry, lung volumes, diffusion, and hemoglobin oxygen saturation.

9.7.13.1.2 Abnormal PFTs or decreased gas exchange might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 7, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.13.2 Physician Guidance. The physician shall consider the following when evaluating the member:

- (1) Pulmonary function tests should be performed after adequate healing and pain resolution and clearance by the thoracic surgeon; generally, this is 4 weeks after thoracoscopic surgery and 6 to 8 weeks after open-chest surgery.
- (2) Pulmonary function tests should be either normal or show only a minimal restrictive disorder without evidence for interstitial disease or gas exchange abnormalities.

- (3) Moderate to severe restriction (i.e., FVC less than 60 percent of predicted with an absolute FEV₁/FVC ratio greater than or equal to 0.90) or hypoxia compromises the member's ability to safely perform essential job tasks unless a more complete evaluation of gas exchange and exercise capacity shows the ability to exercise at a workload of 12 METs without evidence of exercise hemoglobin oxygen desaturation.

9.7.14* Spontaneous Pneumothorax.

9.7.14.1 Physician Evaluation. Spontaneous pneumothorax, when present, might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 7, and 13 due to pain and dyspnea, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.14.2 Physician Guidance. The physician shall consider that members with a history of spontaneous pneumothorax and cystic/bullous disease (e.g., as demonstrated on chest CT scan) whose essential job task 4 includes SCUBA diving cannot safely perform this task since pressure changes during diving can induce recurrence.

9.7.15 Fibrothorax, Chest Wall Deformity, and/or Diaphragm Abnormalities.

9.7.15.1 Physician Evaluation. Fibrothorax, chest wall deformity, and/or diaphragm abnormalities might compromise the member's ability to safely perform essential job tasks 2, 4, and 7, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.15.2 Physician Guidance. The physician shall consider that moderate to severe restriction (FVC less than 60 percent of predicted with an absolute FEV₁/FVC ratio greater than or equal to 0.90) compromises the member's ability to safely perform essential job tasks unless a more complete evaluation of gas exchange and exercise capacity shows the ability to exercise at a workload of 12 METs without evidence of hypoxia or exercise hemoglobin oxygen desaturation.

9.7.16* Pleural Effusions.

9.7.16.1 Physician Evaluation. Pleural effusions might compromise the member's ability to safely perform essential job tasks 2, 4, and 7, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.17 Bronchiectasis and/or Bronchiolitis Obliterans.

9.7.17.1 Physician Evaluation. Bronchiectasis and/or bronchiolitis obliterans might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, and 7, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.17.2 Physician Guidance. The physician shall consider that the ability to safely perform essential job tasks is based on symptom (frequent productive cough, wheezing, and/or dyspnea) and disease severity (chest CT scan demonstrating multilobar disease and pulmonary function tests demonstrating moderate to severe obstructive or restrictive dysfunction or gas exchange abnormalities).

9.7.18 Interstitial Lung Diseases.

9.7.18.1 Physician Evaluation. Interstitial lung diseases including pneumoconiosis (anthracosis, silicosis, asbestosis), hypersensitivity pneumonitis, eosinophilic pneumonitis, idiopathic pulmonary fibrosis, inhalation pneumonitis, and extensive pulmonary infections might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, and 7, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.18.2 Physician Guidance. The physician shall consider that moderate to severe restriction (FVC less than 60 percent of predicted with an absolute FEV₁/FVC ratio greater than or equal to 0.90) compromises the member's ability to safely perform essential job tasks unless a more complete evaluation of gas exchange and exercise capacity shows the ability to exercise at a workload of 12 METs without evidence of hypoxia or exercise hemoglobin oxygen desaturation.

9.7.19 Sarcoidosis.

9.7.19.1 Physician Evaluation. Sarcoidosis resulting in moderate or severe pulmonary dysfunction, significant visual impairment, cardiac dysfunction (cardiomyopathy or arrhythmia) at rest or exercise, other moderate to severe end-organ dysfunction, or the need for current treatment with systemic corticosteroids compromises the member's ability to safely perform essential job tasks 1, 2, 3, 4, 7, 8, and 13, and the physician shall report the applicable job limitations to the fire department.

9.7.19.2 Physician Guidance. The physician shall consider the following when evaluating a member with sarcoidosis:

- (1) Most patients with sarcoidosis are asymptomatic with abnormal chest imaging studies but normal function.
- (2) If functional assessment by individual examination, pulmonary function tests, ECG, Holter ECG, and echocardiogram are normal, the member is capable of safely performing essential job tasks.
- (3) Moderate to severe restriction (i.e., FVC less than 60 percent of predicted with an absolute FEV₁/FVC ratio greater than or equal to 0.90) compromises the member's ability to safely perform essential job tasks unless a more complete evaluation of gas exchange and exercise capacity shows the ability to exercise at a workload of 12 METs without evidence of exercise hemoglobin oxygen desaturation.
- (4) Cardiac function should be formally assessed with echocardiography, Holter ECG, and ECG.

9.7.20 Pulmonary Embolism.

9.7.20.1 Physician Evaluation.

9.7.20.1.1 Acute, recent, recurrent, or chronic pulmonary embolism requiring anticoagulation compromises the member's ability to safely perform essential job task 8, and the physician shall report the applicable job limitations to the fire department.

9.7.20.1.2 Moderate to severe pulmonary dysfunction (restriction or gas exchange abnormalities) or pulmonary hypertension is rare but if present compromises the member's ability to safely perform essential job tasks 1, 2, 4, and 7, and the physician shall report the applicable job limitations to the fire department.

9.7.21 Disorders of Respiratory Regulation.

9.7.21.1 Physician Evaluation. Disorders of respiratory regulation can result in gas exchange abnormalities that might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 7, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.7.21.2 Physician Guidance. The physician shall consider that conditions including but not limited to obstructive sleep apnea, central apnea, and disordered central breathing regulation require evaluation of medical history, physical exam, pulmonary function tests, gas exchange, exercise tests, sleep tests, and other tests as deemed necessary.

9.7.22 Cystic Lung Diseases.

9.7.22.1 Physician Evaluation.

9.7.22.1.1 Cystic lung diseases (e.g., congenital bullous disease, pneumatocele, blebs, cystic fibrosis) with significant abnormalities on chest film or moderate to severe pulmonary dysfunction (FVC less than 60 percent predicted or gas exchange abnormalities) compromise the member's ability to safely perform essential job tasks 1, 2, and 4, and the physician shall report the applicable job limitations to the fire department.

9.7.22.1.2 Members shall be restricted from SCUBA diving if disease is moderate to severe on chest CT imaging, even if pulmonary function tests are normal.

9.7.23 Tuberculosis. See Section 9.8.

9.7.24 Lung Cancer. See Section 9.17.

9.7.25 Lung Transplant.

9.7.25.1 Physician Evaluation. Lung function post-lung transplantation shall be considered as compromising a member's ability to safely perform essential job tasks (1, 2, 4, 5, 6, 7, 8, 9, 10, 13).

9.8 Infectious Diseases.

9.8.1 Infectious diseases shall include systemic, local, acute, and chronic infections as well as post-infectious processes.

9.8.2 When evaluating a member for infectious diseases, the physician shall consider the following:

- (1) Many infections interfere with control of body temperature, hydration, and nutritional status.
- (2) Many infections also produce severe pain, muscle weakness, compromise mobility, and/or ability to safely perform heavy physical exertion.
- (3) Members must be able to safely interact with other fire fighters and civilians without posing a significant public health risk due to contagious disease.
- (4) Acute and/or self-limited infectious processes can require temporary work restriction. Examples include influenza or upper respiratory tract infection, which can interfere with safe performance of essential job tasks 2 and 3, or acute dermatitis, which would interfere with safe performance of essential job task 3.
- (5) Following resolution of these acute processes, members can return to full duty.

9.8.3 If the member has any infectious diseases, the member shall be individually evaluated in accordance with 9.8.4 through 9.8.12 to determine if the diseases compromise the member's ability to safely perform the essential job tasks.

9.8.4 Skin Infections and Draining Ulcers or Cysts.

9.8.4.1 Physician Evaluation. Skin infections and draining ulcers or cysts might compromise the member's ability to wear PPE (essential job tasks 2 and 5) or present too high a risk for exposure to infectious agents and toxins (essential job task 3), and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.8.5 Upper or Lower Respiratory Infections.

9.8.5.1 Physician Evaluation. Upper or lower respiratory infections that result in excessive cough, inability to use SCBA, or pulmonary dysfunction might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, and 7, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.8.6 Ear Infections.

9.8.6.1 Physician Evaluation. Ear infections that interfere with balance and/or hearing might compromise the member's ability to safely perform essential job tasks 8 and 12, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.8.7 Gastrointestinal Infections.

9.8.7.1 Physician Evaluation. Gastrointestinal infections including parasites that result in dehydration or frequent use of toilet facilities at least temporarily might compromise the member's ability to safely perform essential job tasks 1, 5, 8, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.8.8 Kidney or Urinary Infections.

9.8.8.1 Physician Evaluation. Kidney or urinary infections that result in dehydration or the frequent use of toilet facilities might compromise the member's ability to safely perform essential job tasks 1, 5, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.8.9* Infection That Results in Dizziness, Weakness, Significant Weight Loss, or Pain.

9.8.9.1 Physician Evaluation. Any infection that results in dizziness, significant weakness, significant weight loss, or significant pain limiting functional capacity compromises the member's ability to safely perform essential job tasks 1, 5, 8, and 9, and the physician shall report the applicable job limitations to the fire department.

9.8.10* Active Pulmonary Tuberculosis.

9.8.10.1 Physician Evaluation. Active pulmonary tuberculosis, by posing a public health risk to the community and other members, compromises the member's ability to safely perform essential job tasks 2, 4, 5, and 12, and the physician shall report the applicable job limitations to the fire department.

9.8.11* Hepatitis.

9.8.11.1 Physician Evaluation. Hepatitis, specifically infectious diseases of the liver caused by viruses including but not limited to A, B, C, D, and E, and the treatment of hepatitis might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 7, 9, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.8.11.2 Physician Guidance. Medical management of members following occupational exposure or development of any viral hepatitis shall conform to the current CDC guidelines, which includes recommendations for restriction from various types of duty. [See 7.7.9(2).]

9.8.12* Human Immunodeficiency Virus (HIV) Infection.

9.8.12.1 Physician Evaluation. If the member has been diagnosed with human immunodeficiency virus (HIV) infection, the physician shall evaluate the member to determine if the member can perform the essential job tasks.

9.8.12.1.1 AIDS and significant organ damage or dysfunction resulting from HIV infection compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 7, 8, and 9 due to debilitation, and the physician shall report the applicable job limitations to the fire department.

9.8.12.1.2 Anemia, cardiopulmonary dysfunction, or neurologic dysfunction compromises the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 9, and 13, and the physician shall report the applicable job limitations to the fire department.

9.8.12.1.3 Peripheral neuropathy compromises the member's ability to safely perform essential job tasks 1, 3, and 5, and the physician shall report the applicable job limitations to the fire department.

9.8.12.1.4 Dementia compromises the member's ability to safely perform essential job tasks 1, 11, and 12, and the physician shall report the applicable job limitations to the fire department.

9.9* Spine Disorders.

9.9.1 Spine disorders shall include conditions of the cervical, thoracic, and lumbosacral spine such as strains, fractures, and discogenic disease as well as cord, cauda equina, and paraspinous syndromes.

9.9.2 When evaluating a member for spine disorders, the physician shall consider the following:

- (1) Fire fighters with active, ongoing, or recurrent spinal disorders can have difficulty due to reduced motor strength, sensation, and flexibility as well as problems with fatigue, coordination, gait, and equilibrium.

- (2) The personal protective ensemble and SCBA can place the fire fighter's spine at a biomechanical disadvantage due to added weight and altered center of gravity.

9.9.3 If the member has any spine disorders, the member shall be individually evaluated in accordance with 9.9.4 through 9.9.9 to determine if the disorders compromise the member's ability to safely perform the essential job tasks.

9.9.4 Spinal Fusion.

9.9.4.1 Physician Evaluation. Spinal fusion that results in the member not being able to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 13 shall be reported to the fire department by the physician.

9.9.5 Ankylosing Spondylitis.

9.9.5.1 Physician Evaluation. Ankylosing spondylitis might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.9.6 Spinal Condition with Significant Radiculopathy.

9.9.6.1 Physician Evaluation. Spinal condition with significant radiculopathy resulting in peripheral motor weakness, loss of strength, loss of sensation, and loss of reflexes affecting endurance, strength, flexibility, pain, and/or gait disturbances compromises the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 13, and the physician shall report the applicable job limitations to the fire department.

9.9.7 Use of Narcotics or Muscle Relaxants.

9.9.7.1 Physician Evaluation. The use of narcotics or muscle relaxants to treat any spinal condition compromises the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 13, and the physician shall report the applicable job limitations to the fire department.

9.9.7.2 Physician Guidance. The physician shall consider that medication-induced somnolence, discoordination, and/or disequilibrium compromise a member's ability to safely operate in hazardous environments.

9.9.8 Spine Structural Abnormality, Fracture, or Dislocation.

9.9.8.1 Physician Evaluation. Spine structural abnormality, fracture, or dislocation that causes progressive or recurrent impairment might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 13 due to limitations of endurance, strength, flexibility, or pain, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.9.8.2 Physician Guidance. The physician shall consider that spinal structural abnormality, a fracture, or a dislocation can also result in ligament instability, increasing the risk for future dislocation and neurologic compromise.

9.9.9 Herniation of Nucleus Pulposus.

9.9.9.1 Physician Evaluation. Herniation of nucleus pulposus or a history of laminectomy, discectomy, or single-level fusion might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 13 due to pain or limitations of endurance, strength, or flexibility, and after further

evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10* Orthopedic Disorders.

9.10.1 Orthopedic disorders shall include injuries and illnesses involving upper extremities, pelvis, and lower extremities including nerves, muscles, tendons, joints, and bones.

9.10.2 When evaluating a member for orthopedic disorders, the physician shall consider the following:

- (1) Fire fighters with active, ongoing, or recurrent orthopedic disorders can have difficulty due to reduced motor strength, sensation, and flexibility as well as problems with fatigue, coordination, gait, and equilibrium.
- (2) The personal protective ensemble and SCBA can place the fire fighter's involved extremity (upper or lower) at a biomechanical disadvantage due to added weight and altered center of gravity.
- (3) Certain medications (narcotics and muscle relaxants) used to treat orthopedic conditions can produce or worsen somnolence, discoordination, and disequilibrium.

9.10.3 If the member has any orthopedic disorders, the member shall be individually evaluated in accordance with 9.10.4 through 9.10.20 to determine if the disorders compromise the member's ability to safely perform the essential job tasks.

9.10.4 Amputation of Arm, Hand, or Thumb.

9.10.4.1 Physician Evaluation. Amputation of an arm, hand, or thumb compromises the member's ability to safely perform essential job tasks 1, 2, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.4.2 Physician Guidance. When evaluating a member with an amputation of the arm, hand, or thumb, the physician shall consider the following:

- (1) The amputation of these limbs or joints impairs grip and other physical abilities required to safely perform essential job tasks.
- (2) Prosthetic limbs do not provide adequate function to safely perform these essential job tasks rapidly in a life-threatening, unforgiving environment.

9.10.5 Amputation of Leg.

9.10.5.1 Physician Evaluation. Amputation of a leg above the knee compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.5.2 Physician Guidance.

N 9.10.5.2.1 When evaluating a member with an amputation of a leg (above or below the knee) or entire foot, the physician shall consider the following:

- (1) The amputation of these limbs or joints significantly impacts ambulation and other weight-bearing activities required to safely perform essential job tasks.
- (2) Prosthetic limbs might not provide adequate function to safely perform these essential job tasks in an immediately dangerous to life and health (IDLH) environment.

N 9.10.5.2.2 To safely perform the essential job tasks in Chapter 5, an incumbent with a below-the-knee (BKA) amputation

and a state-of-the-art prosthesis shall meet all of the following requirements:

- (1) A stable, unilateral BKA with at least the proximal third of the tibia present for a strong and stable attachment point with the prosthesis
- (2) Fitted with a prosthesis that will tolerate the conditions present in fire fighting, when worn in conjunction with standard fire-fighting PPE
- (3) At least 6 months of prosthetic use in a variety of physically demanding activities with no functional difficulties
- (4) The amputee limb is healed with no significant inflammation, persistent pain, necrosis, or indications of instability at the amputee limb attachment point
- (5) Demonstrates no disabling psychosocial issues pertaining to the loss of limb and/or use of prosthesis
- (6) Evaluated by a prosthetist or orthopedic specialist with expertise in the fitting and function of prosthetic limbs who concurs that the candidate can complete all essential job tasks listed in Chapter 9, including wearing personal protective ensembles and SCBA while climbing ladders, operating from heights, and walking or crawling in the dark along narrow and uneven surfaces that might be wet or icy

9.10.6 Amputation of Finger(s) Other than Thumb.

9.10.6.1 Physician Evaluation. Amputation of finger(s) other than a thumb might compromise the member's ability to safely perform essential job tasks 1, 2, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.6.2 Physician Guidance. The physician shall consider that the amputation of these limbs or joints might interfere with grip and other physical abilities required to safely perform essential job tasks.

9.10.7 Amputation of Partial Foot or Toe(s).

9.10.7.1 Physician Evaluation. Amputation of a partial foot or toe(s) might compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.7.2 Physician Guidance. The physician shall consider that the amputation of these limbs or joints might prevent ambulation and other physical abilities required to safely perform essential job tasks.

9.10.8 Dislocation of a Joint.

9.10.8.1 Physician Evaluation. Single episode of joint dislocation or dislocation with residual limitation of motion (depending upon degree) might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.8.2 Physician Guidance. The physician shall consider that successful surgery for shoulder dislocation, if range of motion and strength were intact, would not interfere with the safe performance of essential job tasks.

9.10.9 Recurrent Joint Dislocation of a Major Joint.

9.10.9.1 Physician Evaluation. Recurrent joint dislocation of a major joint (e.g., shoulder) compromises the member's ability to safely perform essential job tasks 1, 2, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.9.2 Physician Guidance. When evaluating a member for recurrent joint dislocation, the physician shall consider the following:

- (1) Unrepaired, repeated joint dislocations indicate an unstable shoulder or hip, which can easily dislocate leading to sudden incapacitation, placing the member or the person depending on the member at life-threatening risk.
- (2) Post-surgical repair, the member can safely perform essential job tasks if joint exam shows full functional motion, strength, and stability.

9.10.10 Ligament and/or Meniscus Knee Disease.

9.10.10.1 Physician Evaluation. Ligament and/or meniscus knee disease with symptoms of locking, buckling, or giving-way compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.10.2 Physician Guidance. When evaluating a member for ligament and/or meniscus knee disease, the physician shall consider the following:

- (1) Ligament and/or meniscus knee disease can lead to sudden incapacitation, placing the member or the person depending on the member at life-threatening risk.
- (2) Post-surgical repair, the member can safely perform essential job tasks if joint exam shows full functional motion, strength, and stability.

9.10.11 Joint Replacements or Artificial Joints.

9.10.11.1 Physician Evaluation. Joint replacements or artificial joints compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.11.2 Physician Guidance. When evaluating a member with joint replacements or artificial joints, the physician shall verify that all of the following conditions are met:

- (1) Normal range of motion without history of dislocations post-replacement
- (2) Repetitive and prolonged pulling, bending, rotations, kneeling, crawling and climbing without pain or impairment
- (3) No limiting pain
- (4) An evaluation by an orthopedic specialist concurring that the incumbent can complete all essential job tasks listed in Chapter 9

9.10.12 Limitation of Joint Motion.

9.10.12.1 Physician Evaluation. Limitation of joint motion (depending upon degree) might compromise the member's ability to safely perform essential job tasks 1, 2, 4, 6, 7, and 8 due to reduced flexibility, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.13 Joint Reconstruction.

9.10.13.1 Physician Evaluation. Joint reconstruction in cases where there is significant residual limitation of motion or strength compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.13.2 Physician Guidance. The physician shall consider that surgery for a torn anterior cruciate ligament or meniscus can interfere with safe performance of essential job tasks 1, 4, 6, 7, and 8 if quadriceps strength is reduced or if the knee is unstable or develops pain or swelling when stressed.

9.10.14 Fractures.

9.10.14.1 Physician Evaluation. Fracture(s) might compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.14.2 Physician Guidance. When evaluating a member with a fracture, the physician shall consider the following:

- (1) Fractures, including hip fractures requiring internal fixation, should not interfere with safe performance of essential job tasks as long as the radiograph demonstrates healing and exam is normal.
- (2) Non-union fractures are not healed, and members cannot safely perform essential job tasks 1, 4, 6, 7, and 8 until union is achieved.

9.10.15 Appliances.

9.10.15.1 Physician Evaluation. Appliances (screws, pins, and/or metal plates) might compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.15.2 Physician Guidance. When evaluating a member with appliances, the physician shall consider the following:

- (1) If the appliances are superficial, they could lead to perforation of the skin under the normal abrasive conditions of fire fighting.
- (2) If the underlying condition responsible for the surgical implantation has healed, surgical consultation is advised to determine the risk-benefit analysis for removing the appliance.
- (3) After removing the appliance, radiographic evidence of bone healing at approximately 6 months post-removal should be obtained before the member is allowed to safely perform the essential tasks.

9.10.16 Bone Grafts.

9.10.16.1 Physician Evaluation. Bone grafts might compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.10.16.2 Physician Guidance. The physician shall consider that bone grafts, if well healed, do not interfere with the safe

performance of job tasks as long as the radiograph demonstrates healing and the exam is normal.

9.10.17 Chronic Osteoarthritis or Traumatic Arthritis.

9.10.17.1 Physician Evaluation. Chronic osteoarthritis or traumatic arthritis resulting in frequent episodes of pain and/or reduced range of motion, strength, or endurance compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.18 Inflammatory Arthritis.

9.10.18.1 Physician Evaluation. Inflammatory arthritis (in cases where it is severe, recurrent, or a progressive illness or associated with deformity or limitation of range of motion), which can result in frequent episodes of pain, reduced strength, and reduced flexibility, compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.19 Complex Regional Pain Syndrome.

9.10.19.1 Physician Evaluation. Complex regional pain syndrome, where pain is severe, narcotics or muscle relaxants are required, or strength/flexibility is limited, compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.10.20 Osteomyelitis or Septic Arthritis.

9.10.20.1 Physician Evaluation. Osteomyelitis or septic arthritis, if active and causing pain, local drainage, systemic infection, and/or increased risk for pathologic or traumatic fractures, compromises the member's ability to safely perform essential tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.11 Disorders Involving the Gastrointestinal Tract and Abdominal Viscera.

9.11.1 Disorders involving the gastrointestinal (GI) tract and abdominal viscera shall include conditions of the abdominal wall and peritoneum, as well as esophagus, stomach, small bowel, colon, mesenteric structures, and intra-abdominal organs.

9.11.2 If the member has any disorders involving the gastrointestinal tract and abdominal viscera, the member shall be individually evaluated for the likelihood of inadequate nutrition, a propensity for symptomatic dehydration, anemia, or incapacitating pain syndromes.

9.11.3 Where the following GI disorders result in the complications defined in 9.11.2, the physician shall evaluate the member's ability to safely perform essential job tasks 1, 4, 6, 7, 9, and 13, and after the evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department:

- (1) Cholecystitis
- (2) Gastritis
- (3) GI bleeding
- (4) Inflammatory bowel disease or irritable bowel syndrome
- (5) Intestinal obstruction
- (6) Pancreatitis
- (7) Diverticulitis

- (8) History of gastrointestinal surgery
- (9) Gastric or other GI ulcers, including Zollinger-Ellison syndrome
- (10) Cirrhosis
- (11) Splenectomy, if healed, does not compromise the member's ability to safely perform essential job tasks. To prevent infections, Pneumovax® is recommended at regular intervals.
- (12) Hernias, such as the following:
 - (a) Hernias of the abdominal wall, especially inguinal and femoral hernias, might compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, and 13 due to the risk of incarceration and bowel strangulation during heavy exertion and lifting.
 - (b) Large ventral hernias have a low risk of incarceration but can weaken the abdominal wall musculature and might compromise the member's ability to safely perform essential job tasks 1, 4, 6, and 7.
 - (c) Umbilical hernias that are small and asymptomatic will not generally interfere with fire-fighting duties.
 - (d) Abdominal wall hernias at any site that have been surgically corrected do not prevent otherwise qualified members from safely performing essential fire-fighting tasks, provided the incision site is well healed and the surgeon has cleared the member for full lifting.

9.11.4 Renal Disease. Chronic kidney disease of Stage 4 or greater [glomerular filtration rate (GFR) < 1 oz/min (30 ml/min)], hemodialysis or continuous ambulatory peritoneal dialysis compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

9.12 Medical Conditions Involving Head, Eyes, Ears, Nose, Neck, or Throat.

9.12.1* Physician Evaluation.

9.12.1.1 If the member has any medical conditions involving the head, eyes, ears, nose, neck, or throat, the member shall be individually evaluated for conditions that interfere with the member's ability to comfortably wear and be protected by the fire fighter's protective ensemble and that might compromise the member's ability to safely perform essential job tasks 2, 4, 5, and 13.

9.12.1.2 After the evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.12.2 Physician Guidance. When evaluating a member with medical conditions involving the head, eyes, ears, nose, neck, or throat, the physician shall consider the following:

- (1) Deformities of the skull associated with evidence of disease of the brain, spinal cord, or peripheral nerves can result in the potential for sudden incapacitation and the inability to properly wear protective equipment.
- (2) Contraction of head and neck muscles can interfere with wearing of protective equipment, impair speech, or otherwise compromise a member's ability to safely perform essential job tasks.

9.12.3 Disorders of the Eyes or Vision.

9.12.3.1* Physician Evaluation. Disorders of the eyes or vision, including the following might compromise the member's ability to safely perform essential job tasks 6, 8, 10, or 11, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department:

- (1)* Far visual acuity worse than 20/40 in each eye corrected with contact lens or spectacles, and far visual acuity uncorrected worse than 20/100 binocular for wearers of hard contacts or spectacles.
- (2)* Monocular vision, stereopsis without fusional capacity, night blindness, or loss of peripheral vision (i.e., horizontal field of vision less than 110 degrees in each eye) compromise the member's ability to safely perform essential job task 10.
- (3) Far visual acuity worse than 20/100 in the worse eye, corrected or uncorrected, compromises the member's ability to safely perform essential job task 10.
- (4) Peripheral vision in the horizontal meridian of less than 110 degrees in the better eye, or any condition that significantly affects peripheral vision in both eyes.
- (5) Near visual acuity less than 20/40 binocular, uncorrected or corrected.

N 9.12.3.1.1 Successful soft contact lens wearers shall not be subject to the uncorrected standard in 9.12.3.1(1) if the member has been wearing soft contact lenses for more than 6 months with good tolerance.

9.12.3.2 Physician Guidance. The physician shall consider that new monocular vision requires a minimum of 6 months for depth perception accommodation in order to safely perform other essential job tasks.

9.12.4 Abnormal Hearing.

9.12.4.1* Physician Evaluation. Abnormal hearing that impairs a member's ability to hear and understand the spoken voice under conditions of high background noise, or hear, recognize, and directionally locate cries or audible alarms, compromises the member's ability to safely perform essential job tasks 2, 6, 8, 10, 12, and 13, and the physician shall report the applicable job limitations to the fire department.

N 9.12.4.2* Minimum Hearing Standard. The use of hearing aids or other hearing assistive devices shall be used by members who, on audiometric testing, have an average hearing loss in the unaided better ear better than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz when the audiometric device is calibrated to ANSI Z24.5, *Audiometric Device Testing*.

N 9.12.4.3 Physician Guidance.

N 9.12.4.3.1 Hearing assistive devices shall not be used during audiometric testing.

N 9.12.4.3.2 Hearing assistive devices shall be used by someone who meets 9.12.4.2.

N 9.12.4.3.3 If the device fails, the member shall still have sufficient hearing acuity to meet 9.12.4.2, the minimum hearing standard.

9.12.5 Vertigo, Ataxia, or Disturbance of Gait and Balance.

9.12.5.1* Physician Evaluation. Any condition causing chronic or recurring vertigo, ataxia, or other disturbance of

gait and balance compromises the member's ability to safely perform essential job tasks 1, 8, 10, and 13, and the physician shall report the applicable job limitations to the fire department.

9.12.6 Nose, Nasopharynx, Oropharynx, or Dental Structures.

9.12.6.1* Physician Evaluation. Any deformity or disease of the nose, nasopharynx, oropharynx, or dental structures, including anosmia and sinusitis, might compromise the member's ability to safely perform essential job tasks 2, 3, 5, 8, 12, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.12.6.2* Physician Guidance. Obstructive sleep apnea, if not properly treated, might compromise the member's ability to safely perform essential job tasks 2, 3, 5, 8, 12, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.13* Neurologic Disorders.

9.13.1 Neurologic disorders shall refer to ongoing, chronic, or recurrent disorders that impair an individual's neurological functions, including central regulation, cognitive abilities, strength, perception, reflexes, coordination, gait, and equilibrium.

9.13.2 If the member has any neurologic disorder that significantly impairs the member's neurologic functions, including central regulation, cognitive abilities, strength, perception, reflexes, coordination, gait, and equilibrium, the member shall be individually evaluated in accordance with 9.13.3 through 9.13.11 to determine if the disorders compromise the member's ability to safely perform the essential job tasks.

9.13.3 Ataxias.

9.13.3.1 Physician Evaluation. Ataxias of the hereditary or degenerative type compromise a member's ability to safely perform essential job tasks 1, 4, 6, 7, and 8, and the physician shall report the applicable job limitations to the fire department.

9.13.4 Cerebrovascular Disease.

9.13.4.1* Physician Evaluation. Cerebrovascular disease as evidenced by documented episodes of focal, reversible, or neurological impairment might interfere with the member's ability to safely perform essential job tasks 1 through 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.13.4.1.1 Cerebrovascular disease as evidenced by documented episodes of focal, reversible, or neurological impairment, if irreversible, compromises the member's ability to safely perform essential job tasks 1 through 13, and the physician shall report the applicable job limitations to the fire department, unless all of the following criteria are met:

- (1) At least 12 months since last transient ischemic attack, if risk factors are controlled and member is treated with an antiplatelet agent
- (2) At least 12 months since last ischemic stroke (or longer, depending on estimated risk of seizure)

- (3) No decreased sensation or weakness that interferes with essential job tasks
- (4) No physical or cognitive limitations that interfere with essential job tasks

9.13.4.1.2 Cerebrovascular disease as evidenced by documented episodes of focal, reversible, or neurological impairment, if requiring anticoagulation treatment, compromises the member's ability to safely perform essential job task 8, and the physician shall report the applicable job limitations to the fire department.

9.13.5 Neuromuscular, Demyelinating, and Other Progressive Neurologic Diseases.

9.13.5.1* Physician Evaluation. Neuromuscular, demyelinating, and other progressive neurologic diseases compromise the member's ability to safely perform essential job tasks 1, 4, 6, 7, 8, 12, and 13, and the physician shall report the applicable job limitations to the fire department, unless the member is free of clinical disease for 3 years and annual evaluation by a specialist concludes that cognitive function and neurologic exam are normal and the member is on no drugs that can impair job function.

9.13.5.2 Physician Guidance. The physician shall consider that this category refers to but is not limited to multiple sclerosis, myasthenia gravis, muscular dystrophies, Huntington's chorea, amyotrophic lateral sclerosis, and bulbar palsy.

9.13.6 Single Unprovoked Seizure and Epileptic Conditions.

9.13.6.1* Physician Evaluation. Single unprovoked seizure and epileptic conditions, including simple, partial complex, generalized, and psychomotor seizure disorders, compromise the member's ability to safely perform essential job tasks 8, 9, 10, 11, and 13, and the physician shall report the applicable job limitations to the fire department unless the member meets all of the following provisions:

- (1) No seizures for the most recent consecutive 5 years after single unprovoked seizure.
- (2) No seizures for the most recent consecutive 10 years if the applicant was diagnosed with epilepsy.
- (3) Currently on a stable regimen of antiepileptic drugs for the most recent 5 years, or on no antiepileptic drugs for the most recent 5 years.
- (4) Neurological examination is normal.
- (5) Brain MRI is normal.
- (6) Awake and asleep EEG studies with photic stimulation and hyperventilation are normal.

9.13.7 History of Cerebral Vascular Bleeding.

9.13.7.1* Physician Evaluation. Cerebral vascular bleeding compromises the member's ability to safely perform essential job tasks 1, 4, 6, 7, 8, 9, 10, 11, 12, and 13, and the physician shall report the applicable job limitations to the fire department unless all of the following criteria are met:

- (1) The cause of bleeding is surgically corrected (when indicated).
- (2) Physical exam, including blood pressure, is normal.
- (3) Studies (e.g., imaging and EEG) are normal off antiepileptic drugs.

- (4) There has been at least 12 months since last hemorrhagic stroke or subarachnoid hemorrhage or longer, depending on the estimated risk of seizure.
- (5) There is no decreased sensation or weakness that interferes with essential job tasks.
- (6) There are no physical or cognitive limitations that interfere with essential job tasks.

9.13.8 Head Trauma.

9.13.8.1* Physician Evaluation. Head trauma including concussion, brain contusion, subarachnoid hemorrhage, subdural, and/or epidural hematoma might compromise the member's ability to safely perform essential job tasks 1 through 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.13.8.2 Physician Guidance. The physician shall consider having the member evaluated and cleared to return to duty by a qualified neurosurgeon or neurologist following significant head trauma.

9.13.9 CNS Tumors.

9.13.9.1 Physician Evaluation. CNS tumors, depending on their location and the size of the mass, might compromise the member's ability to safely perform essential job tasks 1 through 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.13.9.2 Physician Guidance. The physician shall consider that after successful resection of a CNS tumor a member can safely return to duty with a neurosurgeon's certification if exam and imaging studies are normal (except for surgical site) and EEG shows no epileptic activity off all anti-convulsant medications.

9.13.9.2.1 Where applicable, metastatic workup shall be negative.

9.13.10 Parkinson's and Other Diseases with Tremor.

9.13.10.1 Physician Evaluation. Parkinson's and other diseases with functionally significant tremor or abnormal gait or balance compromise the member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 9, and the physician shall report the applicable job limitations to the fire department.

9.13.10.2 Physician Guidance.

9.13.10.2.1 The physician shall evaluate gait, balance, movement, and medications required to maintain function.

9.13.10.2.2 The impact of the operational environment including heat, hazards, stress, and exertion shall be considered and specifically addressed.

9.13.11 Progressive Dementia.

9.13.11.1 Physician Evaluation. Progressive dementia (e.g., Alzheimer's) compromises the member's ability to safely perform essential job tasks 1 through 13, and the physician shall report the applicable job limitations to the fire department.

N 9.13.12 Narcolepsy. Narcolepsy with cataplexy or narcolepsy with persistent excessive daytime sleepiness despite medical treatment compromises the member's ability to safely perform essential job task 13, and the physician shall report the applicable job limitations to the fire department.

9.14* Psychiatric and Psychologic Disorders.

9.14.1 Psychiatric and psychologic disorders shall include acute, ongoing, chronic, or recurrent disorders that impair psychological or emotional function.

9.14.2 Specific Psychiatric Disorders.

N 9.14.2.1 An anxiety disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) Compliance with treatment, if indicated
- (2) No disqualifying side effects from treatment
- (3) Treatment of comorbidities (including substance abuse and sleep disorders)
- (4) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.2 Bipolar disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) Compliance with treatment, if indicated
- (2) No disqualifying side effects from treatment
- (3) Ongoing evaluation by a health care provider (after return to work)
- (4) Treatment of comorbidities (including substance abuse and sleep disorders)
- (5) No suicide attempts in the past 12 months
- (6) No manic episodes in the past 12 months
- (7) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.3 A depressive disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) Compliance with treatment, if indicated
- (2) No disqualifying side effects from treatment
- (3) Ongoing evaluation by a health care provider (after return to work)
- (4) Treatment of comorbidities (including substance abuse and sleep disorders)
- (5) No suicide attempts in the past 12 months
- (6) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.4 Post-traumatic stress disorder (PTSD) might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) Compliance with treatment, if indicated
- (2) No disqualifying side effects from treatment
- (3) Treatment of comorbidities (including substance abuse and sleep disorders)
- (4) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.5 A delusional disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) No psychotic symptoms in the past 6 months
- (2) Compliance with treatment, if indicated
- (3) No disqualifying side effects from treatment
- (4) Treatment of comorbidities (including substance abuse and sleep disorders)
- (5) No suicide attempts in the past 12 months
- (6) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.6 Brief psychotic disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) No psychotic symptoms in the past 6 months
- (2) Compliance with treatment, if indicated
- (3) No disqualifying side effects from treatment
- (4) Treatment of comorbidities (including substance abuse and sleep disorders)
- (5) No suicide attempts in the past 12 months
- (6) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.7 Schizophreniform disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all of the following conditions are met:

- (1) No psychotic symptoms in the past 6 months
- (2) Compliance with treatment, if indicated
- (3) No disqualifying side effects from treatment
- (4) No suicide attempts in the past 12 months
- (5) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.8 Schizophrenia might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a psychiatrist or a licensed doctoral-level psychologist before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all following conditions are met:

- (1) No psychotic symptoms in the past 6 months
- (2) Compliance with treatment, if indicated
- (3) No disqualifying side effects from treatment
- (4) Treatment of comorbidities (including substance abuse and sleep disorders)
- (5) No suicide attempts in the past 12 months
- (6) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

N 9.14.2.9 Schizoaffective disorder might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, 11, 12, and 13, and after further evaluation by a qualified mental health provider before the member returns to work, the physician shall report any applicable job limitations to the fire department unless all following conditions are met:

- (1) No disqualifying side effects from treatment
- (2) No manic episodes in the past 12 months
- (3) No suicide attempts in the past 12 months
- (4) Evaluation that the member's condition does not interfere with the safe performance of his/her duties

9.15* Substance Abuse.

9.15.1 Substance abuse shall refer to the frequent and/or persistent use of alcohol or other substances causing the following:

- (1) Failure to fulfill major obligations either at work or at home
- (2) Verifiable physical or emotional harm to the member
- (3) Recurrent legal problems
- (4) Exacerbation of social and/or other interpersonal problems

9.15.2 If the member has any substance abuse problem, the member shall be referred for counseling/treatment and individually evaluated in accordance with 9.15.3 through 9.15.4 to determine if the problem compromises the member's ability to safely perform the essential job tasks.

9.15.3 DSM 5 Criteria.

9.15.3.1 Physician Evaluation. Substance abuse disorder according to DSM 5 criteria compromises the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13, and the physician shall report the applicable job limitations to the fire department.

9.15.3.2 Physician Guidance.

9.15.3.2.1 The physician shall use medical evaluations, supervisory evaluations, and/or performance evaluations coupled with urine screening and blood toxicology to form a basis for determining and documenting substance abuse.

9.15.3.2.2 Although there is a high recidivism rate with treatment, members shall be offered counseling/treatment because substance abuse disorder is a treatable illness.

9.15.4 Methadone Maintenance.

9.15.4.1 Physician Evaluation. Methadone maintenance interferes with cognitive functions, energy, coordination, and equilibrium of the member, and therefore compromises the member's ability to safely perform essential job tasks 1, 4, 5, 7, 8, 10, and 11, and the physician shall report the applicable job limitations to the fire department.

9.16 Medications.

9.16.1 Medications shall include prescribed and over-the-counter medications.

9.16.2 When evaluating a member, the physician shall recognize that the medications in Section 9.16 are listed because of noteworthy side effects that might interfere with the performance of essential job tasks.

9.16.3 If the member is taking medications, the member shall be individually evaluated in accordance with 9.16.4 through 9.16.12 to determine if the medications compromise the member's ability to safely perform the essential job tasks.

9.16.4 Anticoagulation.

9.16.4.1 Physician Evaluation. Full-dose or low-dose anticoagulation or any drugs that prolong prothrombin time, partial thromboplastin time, or international normalized ratio (INR) compromise the member's ability to perform essential job task 8 due to the risk of internal bleeding from trauma with potential for rapid incapacitation from shock or central nervous system hemorrhage, and the physician shall report the applicable job limitations to the fire department.

9.16.5 Narcotics.

9.16.5.1 Physician Evaluation. Narcotics compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 due to alterations in mental status including vigilance, judgment, and other neurologic functions, and the physician shall report the applicable job limitations to the fire department.

9.16.6 Muscle Relaxants.

9.16.6.1 Physician Evaluation. Muscle relaxants compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 due to alterations in mental status and other neurologic functions, and the physician shall report the applicable job limitations to the fire department.

9.16.7 Sedatives and Hypnotics.

9.16.7.1 Physician Evaluation. Sedatives and hypnotics (including benzodiazepines, dronabinol, and medical marijuana) compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 due to alterations in mental status, vigilance, judgment, and other neurologic functions, and the physician shall report the applicable job limitations to the fire department.

9.16.8 Psychiatric Medications.

9.16.8.1 Physician Evaluation. Psychiatric medications might compromise the member's ability to safely perform essential job tasks 5, 8, 11, and 13 due to increased risk of heat stress, movement disorders, and somnolence, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.16.9 Anti-Hypertensive Agents.

9.16.9.1 Physician Evaluation. Certain classes of anti-hypertensive agents (e.g., beta-blockers, high-dose diuretics, and central agents such as clonidine) might compromise the member's ability to safely perform essential job tasks 5 and 8 due to risk for dehydration, electrolyte disorders, lethargy, and disequilibrium, and the physician shall report the applicable job limitations to the fire department.

9.16.9.2 Physician Guidance. If the member is on beta-blockers, high-dose diuretics, or central agents such as clonidine, the physician shall refer the member back to his/her physician for consideration of a change in anti-hypertensive medications.

9.16.9.2.1 Once stable off these medications, the member shall be medically re-evaluated for duty.

9.16.9.2.2 Calcium channel blockers shall be acceptable as anti-hypertensive medications, but if used for other cardiac reasons, refer to Section 9.4.

9.16.10 High-Dose Corticosteroids.

9.16.10.1 Physician Evaluation. High-dose corticosteroids for chronic disease compromise the member's ability to safely perform essential job tasks 5 and 8 due to the underlying disease or the risk for dehydration, electrolyte disorders, myopathy, altered sensorium, and/or lethargy, and the physician shall report the applicable job limitations to the fire department.

9.16.10.2 Physician Guidance. If the member is on systemic corticosteroids, other than high-dose corticosteroids, the physician shall refer the member back to his/her physician for consideration of the underlying disease that might compromise the member's ability to safely perform the essential job tasks.

9.16.11 Anabolic Steroids.

9.16.11.1 Physician Evaluation. Anabolic steroids compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 due to alterations in mental status including vigilance, judgment, and other neurologic functions, and the physician shall report the applicable job limitations to the fire department.

9.16.12 Other Medications.

9.16.12.1 Physician Evaluation. The physician shall evaluate the member to determine if other medications might compromise the member's ability to safely perform essential job tasks 5, 8, 11, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.16.12.2 Physician Guidance. The physician shall consider that the member might require careful evaluation for increased risk of heat stress and other side effects of certain medications (e.g., MAOIs, phenothiazines, anti-cholinergics, tricyclic antidepressants), and shall ensure specialized annual follow-up of members taking these medications.

9.17 Tumors — Malignant or Benign.

9.17.1 Malignant conditions of any organ system can produce specific organ dysfunction or generalized debilitation.

9.17.2 When evaluating a member, the physician shall recognize that malignancy or its treatment can result in anemia, malnutrition, pain, and generalized weakness, temporarily or permanently compromising the member's ability to safely perform essential job tasks 1 through 13.

9.17.3 If the member has tumor, whether malignant or benign, the member shall be individually evaluated in accordance with 9.17.4 through 9.17.12 to determine if the tumors compromise the member's ability to safely perform the essential job tasks.

9.17.4 Benign Tumors.

9.17.4.1 Physician Evaluation. A benign tumor, depending on its location, might compromise the member's ability to safely perform essential job tasks 1 through 13, and after further eval-

uation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.4.2 Physician Guidance. The physician shall consider that benign tumors will compromise the member's ability to safely perform essential job tasks 1 through 13 only if the space-occupying lesion and/or its treatment affects energy levels or the involved organ system's function.

9.17.5 Acute Illness Related to Malignancy or Its Treatment.

9.17.5.1 Physician Evaluation. Acute illness related to malignancy or its treatment might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.5.2 Physician Guidance. The physician shall consider that acute illness related to malignancy or its treatment compromises the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 13 if low energy levels, anemia, weight loss, or specific aspects of that organ's dysfunction lead to debilitation.

9.17.6 Central Nervous System Tumors.

9.17.6.1 Physician Evaluation. Central nervous system tumors might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.6.2 Physician Guidance.

9.17.6.2.1 When evaluating the member for central nervous system tumors, the physician shall consider that central nervous system tumors compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 if low energy levels, anemia, undernutrition, weight loss, and specific organ dysfunction (seizures, loss of balance, inability to communicate, inability to process complicated commands in an emergency situation, weakness) are present or lead to a debilitated state affecting anaerobic and aerobic job tasks and the ability to wear personal protective ensembles and SCBA.

9.17.6.2.2 If treated successfully, the member shall undergo evaluation by a specialist who must certify that the exam is normal, imaging studies are normal (except for surgical site), and seizures have not occurred in the absence of anticonvulsant medications, and there is no further evidence of malignancy.

9.17.7 Head and Neck Malignancies.

9.17.7.1 Physician Evaluation. Head and neck malignancies might compromise the member's ability to safely perform essential job tasks 1 through 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.7.2 Physician Guidance.

9.17.7.2.1 When evaluating the member for head and neck malignancies, the physician shall consider that head and neck malignancies compromise the member's ability to safely perform essential job tasks 1 through 13 if low energy levels,

anemia, undernutrition, weight loss, inability to clear oral secretions, or other specific organ dysfunction interfere with respiration, communication, hydration, and/or eating.

9.17.7.2.2 If treated successfully, a member shall undergo evaluation by a specialist, who must certify that exam shows normal function, imaging studies show no tumor, and overall medical evaluation reveals no condition that might compromise safe performance of essential job tasks.

9.17.8 Lung Cancer.

9.17.8.1 Physician Evaluation. Lung cancer might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 8, 9, and 13, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.8.2 Physician Guidance.

9.17.8.2.1 When evaluating the member for lung cancer, the physician shall consider that lung cancer compromises the member's ability to safely perform job tasks if low energy levels, anemia, undernutrition, weight loss, weakness, paraneoplastic syndromes, or specific organ dysfunction (abnormal secretions, dyspnea, or pulmonary dysfunction interfering with or prohibiting use of SCBA or strenuous physical activities) are present.

9.17.8.2.2 If treated successfully, the member shall undergo evaluation by a specialist who must certify that the member has normal function, imaging studies show no tumor, and overall medical evaluation reveals no condition that might compromise safe performance of essential job tasks.

9.17.9 Gastrointestinal Malignancies.

9.17.9.1 Gastrointestinal malignancies might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.9.2 Physician Guidance.

9.17.9.2.1 When evaluating the member for gastrointestinal malignancies, the physician shall consider that gastrointestinal malignancies compromise the member's ability to safely perform job tasks if low energy levels, anemia, undernutrition, weight loss, weakness, paraneoplastic syndromes, or specific organ dysfunction (abnormal secretions or bowel function interfering with or prohibiting prolonged use of personal protective clothing or prohibiting strenuous physical activities) are present.

9.17.9.2.2 If treated successfully, the member shall undergo evaluation by a specialist who must certify that exam and gastrointestinal functioning appear to be normal (including nutrition intake and excretion), imaging studies show no tumor, and overall medical evaluation reveals no condition that could compromise safe performance of essential job tasks.

9.17.10 Genitourinary Malignancies.

9.17.10.1 Physician Evaluation. Genitourinary malignancies might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.10.2 Physician Guidance.

9.17.10.2.1 When evaluating the member with a history of genitourinary malignancy, the physician shall consider that genitourinary malignancies compromise the member's ability to safely perform job tasks if altered urinary function prevents prolonged activity without use of toilet facilities or if the underlying tumor has produced low energy levels, anemia, undernutrition, weight loss, or specific organ dysfunction.

9.17.10.2.2 If treated successfully, the member shall undergo evaluation by a specialist who must certify that exam is normal (including nutrition intake and excretion), imaging studies show no tumor, and overall medical evaluation reveals no condition that might compromise safe performance of essential job tasks.

9.17.11 Hematologic or Lymphatic Malignancies.

9.17.11.1 Physician Evaluation. Hematologic or lymphatic malignancies might compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 8, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.11.2 Physician Guidance.

9.17.11.2.1 When evaluating the member for hematologic or lymphatic malignancies, the physician shall consider that hematologic or lymphatic malignancies (e.g., leukemias, lymphomas) compromise the member's ability to safely perform essential job tasks 1, 2, 3, 4, 5, 7, 8, and 9 if anemia, lymphopenia, or thrombocytopenia is present or if adverse effects of treatment are present.

9.17.11.2.2 If treated successfully, the member shall undergo evaluation by a specialist who must certify that exam is normal, imaging and laboratory studies show no cancer, and overall medical evaluation reveals no condition that could compromise safe performance of essential job tasks.

9.17.12 Skin Cancer.

9.17.12.1 Physician Evaluation. Skin cancer might compromise the member's ability to safely perform essential job tasks 1, 3, 4, 5, 7, 8, and 9, and after further evaluation and a final medical determination of the member's condition, the physician shall report any applicable job limitations to the fire department.

9.17.12.2 Physician Guidance.

9.17.12.2.1 When evaluating the member for skin cancer, the physician shall consider that skin cancer that requires significant resection, chemotherapy or other systemic anti-neoplastic therapy, or that results in the loss of skin integrity, compromises the member's ability to safely perform job tasks because of low energy levels, anemia, undernutrition, and weight loss, as well as increased risk of burns, infection, dehydration, and heat rash while fire fighting and wearing PPE.

9.17.12.2.2 If treated successfully, the member shall undergo evaluation by a specialist who must certify that exam is normal, imaging and laboratory studies show no cancer, and overall medical evaluation reveals no condition that could compromise safe performance of essential job tasks.

9.18 Pregnancy and Reproductive Health.

9.18.1 Fire Departments shall make available to all male and female fire fighters educational materials outlining the risks from fire fighting on reproductive health.

9.18.2* It is recommended that members who become pregnant report the pregnancy immediately to the fire department physician. Once informed of the pregnancy the fire department physician shall inform the pregnant member of the numerous hazards to the pregnancy and the fetus encountered during routine fire fighting tasks.

9.18.2.1 If the member requests an alternative duty assignment in an environment deemed safe for the pregnancy and the fetus, the physician shall provide appropriate restrictions for essential job tasks 1, 3, 5, 6, 7, and 8 that are unsafe for her or her fetus.

9.18.3 During later stages of pregnancy the member will eventually be unable to safely perform essential job tasks 1, 2, 3, 4, 5, 6, 7, 8, and 9 due to issues with diminished aerobic capacity, balance, speed, and agility. As with any other member, when performance due to medical issues is of concern, the AHJ shall inform the fire department physician and a medical evaluation will be performed to determine the need for restricting the member from those activities that they are not able to safely perform.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.1.1 Some of the medical requirements in this standard are not applicable to candidates and members whose essential job tasks within the fire department are not described in NFPA 1001, NFPA 1002, NFPA 1003, NFPA 1006, NFPA 1021, and NFPA 1051. However, particular attention must be paid to the essential job tasks of individual candidates or members when applying this standard (for example, administrative staff personnel, some EMS personnel, fire/police, and others who do not have responsibility for structural fire fighting and are not required to wear personal protective ensembles and use SCBA). Medical requirements should reflect essential job tasks, and all might not be specifically addressed in this standard. (See also Chapter 5 and Chapter 9.)

A.1.2.2 A direct relationship exists between the medical requirements and the job description of members. The job description should include all essential job functions of members, both emergency and nonemergency. Members perform a variety of emergency operations including fire fighting, emergency medical care, hazardous materials mitigation, driving/operating fire apparatus, and special operations. Non-emergency duties can include, but are not limited to, training, station and vehicle maintenance, and physical fitness. Each fire department needs to identify and develop a written job description for members.

A.1.3.2 The specific determination of the authority having jurisdiction depends on the mechanism under which this standard is adopted and enforced. Where this standard is adopted voluntarily by a particular fire department for its own use, the authority having jurisdiction should be the fire chief or the

political entity that is responsible for the operation of the fire department. Where this standard is legally adopted and enforced by a body having regulatory authority over a fire department, such as federal, state, or local government or political subdivision, this body is responsible for making those determinations as the authority having jurisdiction. The compliance program should take into account the services the fire department is required to provide, the financial resources available to the fire department, the availability of personnel, the availability of trainers, and such other factors as will affect the fire department's ability to achieve compliance.

A.1.3.3 The most vital resource of any fire department is its members. This standard is to be implemented in a process aimed at improving member health and wellness. Due to the hazardous nature of the occupation, methods to reduce the risk of occupational injury, illness, and exposures to communicable diseases are warranted. Annual reports repeatedly indicate over 100 line-of-duty deaths and 100,000 occupational injuries and illnesses among career and volunteer fire fighters. Another concern is the fire fighters who experience disabling injuries or develop occupational diseases and conditions, which often have debilitating or fatal results, forcing them to leave their fire service activities. There is an increased risk of respiratory and heart disease in fire fighters and strong evidence of a link to some cancers and other conditions related to occupational exposures to carcinogens, toxic products of combustion, and hazardous materials.

Safety and health are two of the many components of the risk management process. The intent of this standard is to reduce the risk and burden of fire service occupational morbidity and mortality while improving the welfare of fire fighters. By implementing the medical requirements of this standard, a fire department commits to a process that evaluates and enhances the health and fitness for duty of members.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction;

at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

N A.3.3.7 Fire Department. The term *fire department* can include any public, governmental, private, industrial, or military organization engaging in this type of activity. [1002, 2017]

A.3.3.18 Member. A fire department member can be a full-time or part-time employee or a paid or unpaid volunteer, can occupy any position or rank within the fire department, and can engage in emergency operations. [1500, 2013]

A.4.1.2.1 Fire departments can require candidates to provide some form of medical clearance for candidate participation in pre-employment physical strength and agility tests. When there is such a requirement, the medical clearance forms should enumerate the tasks that the candidate will be asked to safely perform during the test.

N A.4.1.3 The physician plays a central role in all medical aspects of the Wellness Fitness Initiative (WFI). The following parameters should be considered in selecting a physician for this program:

- (1) The provider has experience in occupational medicine, including wellness and fitness health components related to fire fighting.
- (2) The provider is board-eligible or board-certified in a relevant specialty, such as emergency, family, internal, or occupational medicine.
- (3) The provider has experience in coordinating referrals to a variety of medical specialties for care of occupational injuries, cancer, cardiac and pulmonary issues, behavioral issues, and other health problems affecting fire fighters.
- (4) The provider should also be familiar with data collection, risk management, and environmental conditions relevant to Labor/Management Wellness Fitness Initiatives.

This standard contains a number of options that fire departments can implement to increase physician knowledge regarding fire fighter occupational hazards and their management. These include, but are not limited to, the following:

- (1) Providing the physician with an overview of all fire fighter essential job tasks and current job descriptions, as well as an outline of the types and levels of service provided by the department
- (2) Allow opportunities (e.g., participation in a ride along, presence at fire scenes) for the physician to better understand the physiological and psychological demands of fire fighters, their work conditions and environments, and their PPE requirements, though this might be difficult if the position is contracted out to a health care company
- (3) Ensuring that the physician has a thorough working knowledge of this standard and is actively engaged in the health and safety, behavioral health, rehabilitation, and wellness and fitness programs in their fire department
- (4) Ensuring that the physician remains current in the medical literature pertaining to the fire service and consensus clinical practice with relevant Continuing Medical Education (CME) credits

A.4.1.4 This physician should also have experience with running an occupational medicine program for public safety workers, preferably fire fighters.

Δ A.4.1.7 The fire department should provide the fire department physician with a representative list of essential job tasks for members of fire departments who wear personal protective

ensembles and SCBA to conduct fire-fighting operations. The tasks on this list should be verified by the fire department to be essential to the job under consideration for each individual candidate or member. A sample list based on NFPA 1001, NFPA 1002, NFPA 1003, NFPA 1006, NFPA 1021, and NFPA 1051 is provided in 5.1.1 and Section 9.1. An effective way to transmit this information to the physician is to use the list with checkboxes in front of each essential job task. This list is taken by a candidate or member to the medical provider at the time of medical evaluation. A check in the box indicates that there is no medical reason why an individual cannot safely perform that particular essential job task.

A.4.1.13.1 Suggested fields (data points) include but are not necessarily limited to the following:

- (1) Medical history including the following:
 - (a) Date of exam
 - (b) Medical history
 - (c) Smoking history
 - (d) Tobacco (smokeless) use
 - (e) Smoking in the past year
 - (f) Tobacco cessation program participation
 - (g) Alcohol use
 - (h) Family history of heart disease or cancer
 - (i) Personal history of past disease, disorders, or cancer
 - (j) Exercise history
- (2) Current medical and fitness results including the following:
 - (a) Blood pressure and heart rate
 - (b) ICD10 codes for physician assessment
 - (c) Height and weight
 - (d) Body composition (local recording only)
 - (e) Blood analysis results
 - (f) Urinalysis results
 - (g) Vision
 - (h) Hearing
 - (i) Spirometry
 - (j) Chest x-ray
 - (k) Resting electrocardiogram
 - (l) Cancer screening results
 - (m) Immunizations
 - (n) Aerobic capacity results
 - (o) Muscle strength results
 - (p) Muscle endurance results
 - (q) Flexibility results

Δ A.4.2.6 Incident scene rehabilitation is an important component of incident scene management that protects the health and safety of fire department members. NFPA 1500, and NFPA 1561, require the establishment of "rehab" during incident scene operations. A significant component of member rehabilitation is ongoing medical evaluation. The standard does not require the fire department physician to be at every incident but does require that the physician coordinate with the EMS medical director to provide protocols for medical evaluation and management of members in emergency incident rehab. This medical planning process ensures optimal medical support for members at the scene and should include criteria for transportation to a medical facility for additional evaluation and treatment. Fire departments can develop specific standard operating procedures establishing conditions under which fire department physician(s) are dispatched to emergency incidents. (See NFPA 1584.)

A.4.4.1 Confidentiality of all medical data is critical to the success of the program. Members need to feel assured that the information provided to the physician will not be inappropriately shared.

Δ A.5.1.1(1) A member, while wearing full protective clothing (turnout coat and pants, helmet, boots, and gloves) and SCBA, is required to safely perform a variety of fire-fighting tasks that require upper body strength and aerobic capacity. For those not familiar with fire suppression, the following specific details inherent to the activities in essential job task 1 are offered:

- (1) Lifting and carrying tools and equipment (e.g., axe, halligan tool, pike pole, chain saw, circular saw, rabbit tool, high-rise pack, and hose) that weigh between 7 lb and 20 lb (3.2 kg and 9 kg) and are used in a chopping motion over the head, extended in front of the body, or in a push/pull motion.
- (2) Advancing a 1½ in. (45 mm) or a 2½ in. (65 mm) diameter hose line, which requires lifting, carrying, and pulling the hose at grade, below or above grade, or up ladders. In addition to the weight of the hose itself, a 50 ft (15 m) section of charged 1½ in. (45 mm) hose contains approximately 90 lb (41 kg) of water, and a 50 ft (15 m) section of 2½ in. (65 mm) hose holds approximately 130 lb (59 kg) of water.
- (3) Performing forcible entry while utilizing tools and equipment (e.g., axe, halligan tool, chain saw, circular saw, or rabbit tool) that requires chopping, pulling, or operating these items to open doors, windows, or other barriers to gain access to victims or possible victims or to initiate fire-fighting operations.
- (4) Performing ventilation (horizontal or vertical) utilizing tools and equipment (e.g., axe, circular saw, chain saw, pike pole) while operating on a flat or pitched roof or operating off a ground or aerial ladder. This task requires the fire fighter to chop or push tools through roofs, walls, or windows.

Other tasks that could be performed can include search and rescue operations and other emergency response actions under stressful conditions, including working in extremely hot and cold environments for prolonged time periods.

A.6.1.1 The medical history should include the candidate's known health problems, such as major illnesses, surgeries, medication use, and allergies. Symptom review is also important for detecting early signs of illness. A medical history should also include a personal health history, a health habit history, an immunization history, and a reproductive history.

An occupational history should also be obtained to collect information about the person's past occupational and environmental exposures.

Δ A.6.1.2 Physical examination should include the following:

- (1) **Checking vital signs** [temperature, pulse, respiratory rate, and blood pressure (BP)]
- (2) **Head, eyes, ears, nose, and throat exams**
- (3) **Neck exam**
- (4) **Cardiovascular exam**
- (5) **Pulmonary exam**
- (6) **Breast exam**
- (7) **Gastrointestinal exam** (includes rectal exam for mass, occult blood)
- (8) **Genitourinary exam** (includes pap smear, testicular exam, rectal exam for prostate mass)

- (9) **Checking for hernias**
- (10) **Lymph nodes exam**
- (11) **Neurological exam**
- (12) **Musculoskeletal exam**
- (13) **Checking the skin** (includes screening for cancers)
- (14) **Vision testing**

BP should be measured according to the seven recommendations of the *Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* (JNC 7). BP should be measured with a properly calibrated and validated instrument. Patients should be seated quietly in a chair for at least 5 minutes, with their feet on the floor and the arm supported at heart level. appropriately sized cuff (cuff bladder encircling at least 80 percent of the arm) should be used to ensure accuracy, and at least two measurements should be made. Systolic BP is the point at which the first of two or more sounds is heard (phase 1), and diastolic BP is the point before the disappearance of sounds (phase 5).

Laboratory tests on candidates should include the following:

- (1) **Blood tests**, including the following:
 - (a) CBC with differential, RBC indices and morphology, and platelet count
 - (b) Electrolytes (Na, K, Cl, HCO₃, or CO₂)
 - (c) Renal function (BUN, creatinine)
 - (d) Glucose
 - (e) Liver function tests (ALT, AST, direct and indirect bilirubin, alkaline phosphatase)
 - (f) Total cholesterol, HDL, LDL, clinically useful lipid ratios (e.g., percent LDL), and triglycerides
- (2) **Urinalysis**, with a dipstick test for glucose, ketones, leukocyte esterase, protein, blood, and bilirubin.
- (3) **Audiology**. Hearing assessed in each ear at each of the following frequencies: 500 Hz, 1000 Hz, 2000 Hz, 3000 Hz, 4000 Hz, 6000 Hz, and 8000 Hz. Results should be corrected for age as permitted by OSHA. Baseline audiometry is performed in accordance with 29 CFR 1910.95, "Occupational Noise Exposure." The basics of this standard include the following:
 - (a) The first audiogram (for members, this will probably be done during their pre-placement exam) is the baseline audiogram.
 - (b) If a subsequent audiogram is better than the baseline, then that becomes the baseline. All audiograms should be done with no exposure to industrial noise for the preceding 14 hours.
- (4) **Spirometry**. Pulmonary function testing (spirometry) is conducted to measure the member's forced vital capacity (FVC), forced expiratory volume in 1 second (FEV₁), and the absolute FEV₁/FVC ratio. FEV₁ and FVC results will be expressed as the absolute value (liters or milliliters) and as percent predicted adjusted for gender, age, height, and ethnicity using NHANES III normative equations, with the acceptable threshold being 80 percent predicted. FEV₁/FVC ratio results are expressed as the absolute FEV₁ value divided by the absolute FVC value, with 0.71 as the acceptable threshold value being 0.71. However, because these norms are population-based, it is possible for individuals to be normal just below these thresholds or to have minimal but potentially significant abnormalities just above these thresholds. When percent predicted FEV₁ or FVC values are minimally below threshold (typically 74 percent to 79 percent of predicted), the lower limits of normal (LLN) for the appropriate population

can, at the discretion of the physician, be used instead of the 80 percent predicted threshold value. For example, the LLN might be more appropriate for taller and older individuals. (See F.2.5.)

- (5) Chest radiography (chest x-ray posterior-anterior and lateral views).
- (6) A resting 12-lead electrocardiogram (ECG). A resting 12-lead ECG.
- (7) Immunizations and infectious disease screening. The following infectious disease immunizations or infectious disease screenings are to be provided, as indicated:
 - (a) Tuberculosis screen, purified protein derivative (PPD) tuberculin skin test, or blood test.
 - (b) Hepatitis C virus screen (baseline)
 - (c) Hepatitis B virus vaccinations
 - (d) Tetanus, diphtheria, pertussis (TDAP) vaccine (booster every 10 years)
 - (e) Measles, mumps, rubella (MMR) vaccine
 - (f) Polio vaccine given to uniformed personnel if vaccination or disease is not documented
 - (g) Hepatitis A vaccine due to contaminated water exposures during normal firefighting activities, not just hazmat/rescue activities
 - (h) Varicella vaccine, offered to all nonimmune personnel
 - (i) Influenza vaccine, seasonal and novel, offered to all personnel

A.6.3.1.2(1) Deformities of the skull can result in the member's inability to properly wear protective equipment.

A.6.3.1.2(2) These deformities can result in the potential for sudden incapacitation, the inability to properly wear protective equipment, and the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.3.1.2(3) Loss of or congenital absence of the bony substance of the skull can result in the inability to properly wear protective equipment and the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.3.2.2(1) Thoracic outlet syndrome can result in frequent episodes of pain or inability to safely perform work.

A.6.3.2.2(2) Congenital cysts, chronic draining fistulas, or similar lesions can result in the inability to properly wear protective equipment and the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.3.2.2(3) The contraction of neck muscles can result in the inability to properly wear protective equipment and the inability to safely perform functions as a member due to limitation of flexibility.

A.6.4.1(1) Far visual acuity is at least 20/30 binocular, corrected with contact lenses or spectacles. Far visual acuity uncorrected is at least 20/40 binocular for wearers of hard contacts or spectacles. Successful long-term soft contact lens wearers (i.e., 6 months without a problem) are not subject to the uncorrected standard. Inadequate far visual acuity can result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations.

A.6.4.1(2) This does not refer to abnormal color perception such as red/green color blindness.

Persons with severe color vision loss will likely fail the acuity requirement. Formerly, color vision deficiency was listed as a

Category B medical condition. However, it is felt that within most cases this condition will not affect the ability of a member to safely perform the essential functions of his or her job. The fire service physician should consider the color vision deficiency of the individual and consider the color vision requirements of the member's job and reach an individual determination.

A.6.4.1(3) A DOT/CDL exemption can be applied for after passing a special test. But this exemption is not applicable to fire fighters because this exemption specifically excludes the driving of vehicles with passengers (e.g., fire trucks) and does not apply to emergency response driving.

A.6.4.2(1) These diseases of the eye can result in the failure to read placards and street signs or to see and respond to imminently hazardous situations.

A.6.4.2(2) Sufficient time (approximately 2 weeks for radial keratotomy and Lasik-type surgeries, and 3 months for retinal detachment) must have passed to allow stabilization of visual acuity and to ensure that there are no post-surgical complications. These ophthalmological procedures can result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations.

A.6.5 Currently, no hearing tests will allow the fire department physician to accurately predict whether the fire fighter will adequately be able to safely perform essential job duties. Job-specific hearing tests should be individualized for each department and its specific job functions. The following list of hearing-specific tasks can assist in direct development of hearing protocols:

- (1) Understanding spoken commands, both over the radio and while wearing SCBA
- (2) Hearing alarm signals, including building evacuation, low air alarm on the SCBA, and PASS alarms
- (3) Hearing and locating the source of calls for assistance from victims or other fire fighters

All of these tasks will need to be performed with reasonably simulated incident scene background noise and SCBA noise. The inability to hear sounds of low intensity or to distinguish voice from background noise can lead to failure to respond to imminently hazardous situations. (See 5.1.1.)

A.6.5.2(1) Unequal hearing can result in the inability to localize sounds, leading to failure in the ability to safely perform search and rescue and other localization tasks.

A.6.5.2(4) Severe external otitis — that is, recurrent loss of hearing — can result in the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

A.6.5.2(5) Severe agenesis or traumatic deformity of the auricle can result in the inability to properly wear protective equipment and the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

A.6.5.2(6) Severe mastoiditis or surgical deformity of the mastoid can result in the inability to properly wear protective equipment and the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

A.6.5.2(7) Ménière's syndrome or severe labyrinthitis can result in the potential for sudden incapacitation and the inability to safely perform job functions due to limitations of balance.

A.6.5.2(8) Otitis media (chronic) can result in frequent episodes of pain and the inability to hear sounds of low intensity or to distinguish voice from background noise, leading to failure to respond to imminently hazardous situations.

A.6.6.2(1) Diseases of the jaws or associated tissues can result in the inability to communicate effectively and/or to properly wear protective equipment.

A.6.6.2(2) The wearing of orthodontic appliances can result in the inability to communicate effectively and/or to properly wear protective equipment.

A.6.6.2(3) Extensive loss of oral tissues can result in the inability to properly wear protective equipment and the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.6.2(4) This condition can result in the inability to properly wear protective equipment and the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.7.1(1) A tracheostomy results in the inability to properly wear protective equipment, the inability to safely perform job functions due to limitations of endurance, and the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.7.1(2) Aphonia can result in the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.7.2(1) A congenital or acquired deformity can result in the inability to properly wear protective equipment.

A.6.7.2(2) Allergic rhinitis can result in frequent episodes of pain, the inability to safely perform work, and the inability to safely perform essential job tasks due to limitations of endurance.

A.6.7.2(4) Recurrent sinusitis can result in frequent episodes of pain and the inability to safely perform essential job tasks due to limitations of endurance and the inability to safely wear SCBA from facial pain, sinus congestion and/or coughing.

A.6.7.2(5) Severe dysphonia can result in the inability to communicate effectively due to oropharyngeal dysfunction.

A.6.7.2(9) Untreated obstructive sleep apnea is associated with fatigue, cognitive defects, pulmonary hypertension, hypertrophic heart disease, arrhythmias, and early onset dementia. These issues can reduce the ability to perform all essential job tasks. Risk factors for developing obstructive sleep apnea include male gender, increased body mass index (BMI), short/wide neck, and/or narrow throat. Screening questionnaires, such as the Berlin Questionnaire (assessing snoring, fatigue, obesity, and hypertension) can be used to determine those who require formal sleep testing. In those with obstructive sleep apnea, additional testing is required to determine the level of positive pressure (CPAP or BIPAP) required to overcome the obstruction. Compliance with treatment can be assessed using home monitoring devices attached to the CPAP or BIPAP machine. Target organ damage can be screened for by cardiac echo for evidence of pulmonary hypertension or right ventricular hypertrophy.

A.6.8.1(5) An FVC or FEV₁ of less than 70 percent prevents the safe use of SCBA due to increased minute ventilation

requirements leading to the earlier than expected depletion of air in the SCBA cylinder.

A.6.8.1(6) Chronic obstructive airways disease can result in the inability to safely perform essential job tasks due to limitations of endurance and the inability to safely wear SCBA. Obstruction is suspected when the absolute FEV₁/FVC ratio (using absolute values rather than percent predicted values) is equal to or less than 0.70. However, obstruction can also occur with normal FEV₁/FVC ratios due to airtrapping or mucous plugging. For most individuals, the definition of an abnormal FEV₁ or FVC is less than 80 percent predicted adjusted for gender, age, height, and ethnicity, using NHANES III. When percent predicted FEV₁ or FVC values are just below threshold (typically 74 percent to 79 percent of predicted), the LLN for the appropriate population can, at the discretion of the physician, be used. For example, the LLN might be more appropriate for taller and older individuals. In asymptomatic individuals with minimal reductions in spirometry measures (FEV₁, FVC, or the absolute FEV₁/FVC ratio), further evaluation (complete pulmonary function tests, exercise testing, or challenge testing) might be necessary to determine if essential tasks can be performed safely (*see references in Annex F*).

A.6.8.1(7) Hypoxemic disorders can result in the inability to safely perform essential job tasks due to limitations of endurance.

A.6.8.1(8) The term *asthma*, or *reactive airways dysfunction syndrome*, is not meant to include acute, nonrecurring bronchitis treated with bronchodilators for a period of only days to weeks. Recurrent or persistent allergic, irritant, exertional, or other forms of asthma are included. Bronchial asthma or reactive airways disease can result in frequent unpredictable episodes of shortness of breath and the potential for sudden incapacitation, leading to the inability to safely perform essential job tasks due to limitations of endurance. Acute hyperreactivity in the fire or hazardous materials environment can induce immediate or progressive clinical asthma (bronchospasm and wheeze), which can lead to sudden incapacitation from status asthmaticus and/or resulting cardiac ischemia. True asthma is a chronic condition with a clinical history of recurrent reversible bronchospasm or long-standing, persistent reversible bronchospasm. Based on the pathophysiology of this disease, it is reasonable that exposure to smoke irritants or exertion (especially while breathing cold dry SCBA air) on the fire ground or hazardous materials environment not only can lead to acute exacerbations but can also worsen the progression of the underlying obstructive inflammatory disease. If this occurs in an environment that is immediately dangerous to life and health (IDLH) (e.g., interior fire suppression or certain hazardous material operations), it can have potentially devastating consequences for the member, the team, or the mission. There are no studies that support or deny that asthma in this environment can be prevented or adequately controlled by anti-inflammatory medications (inhaled corticosteroids, cromolyn, leukotriene modifiers). It is not acceptable to use or rely on bronchodilator medications for this purpose for three reasons:

- (1) Their use is for rescue after attack and not for prevention of bronchospasm in an irritant environment.
- (2) There are no studies that support or deny that their use is effective in a fire/smoke environment.

- (3) Several studies have implicated the use of beta-agonists (short- and long-acting bronchodilators) as an independent risk for sudden death and myocardial infarction in the United States, Canada, Britain, New Zealand, and Australia. The presumed mechanism is catecholamine related, and catecholamines are already elevated while fighting fires.

A.6.8.1.1 Because the clinical definition of asthma is reversible bronchospasm, spirometry, or pulmonary function, testing performed in the absence of a clinical attack is expected to be normal and might not even show a bronchodilator response. Only if performed during an attack will spirometry or other pulmonary function tests show obstructive airway flow limitations. Therefore, in candidates who report that their bronchospasm was temporary and has resolved, spirometry should show adequate reserve (FVC and FEV₁ greater than or equal to 90 percent predicted) without significant bronchodilator response (less than 12 percent change and less than 200 mL increase) when performed off bronchodilators on the day of testing. For population studies, pulmonary function is considered normal when greater than or equal to 80 percent predicted, but for an individual with a history of asthmatic bronchospasm who is being considered for job tasks performed in a potentially irritant environment, it is reasonable diligence to require pulmonary function with a greater specificity for demonstrating adequate reserve (greater than or equal to 90 percent predicted). Challenge testing should also be performed to show no evidence for clinically significant airway hyperreactivity [i.e., to be normal or negative, there should be less than 20 percent decline in FEV₁ from baseline with cold air, methacholine (PC₂₀ greater than 8 is considered normal since response at dose greater than 8 mg might not be clinically significant), histamine, or mannitol. When challenge testing includes exercise alone, normal or negative should be less than 13 percent decline in FEV₁ from baseline]. Challenge testing should be performed off all anti-inflammatory medications (steroids and leukotriene antagonists) for 4 weeks preceding the test, off antihistamines for 1 week preceding the test, and off all bronchodilators the day of testing. Challenge testing should be performed only by an experienced specialist. It should not be performed in candidates without a history suggestive of asthma, since there is no indication for testing. It also should never be performed in candidates with abnormal pulmonary function, because these candidates have already demonstrated that they cannot safely perform essential job tasks, and further testing might induce life-threatening bronchospasm. Normal spirometry with adequate reserve, a negative challenge test [as described by the American Thoracic Society (ATS)], and no recent episode of bronchospasm off medications should be considered evidence that the candidate does not have clinically significant airway hyperactivity or asthma.

A.6.8.2(1) These conditions can result in the inability to safely perform essential job tasks due to limitations of strength or endurance and can result in the potential for sudden incapacitation.

A.6.8.2(3) Fibrothorax, chest wall deformity, and diaphragm abnormalities can result in the inability to safely perform essential job tasks due to limitations of endurance.

A.6.8.2(4) Interstitial lung diseases can result in the inability to safely perform essential job tasks due to limitations of endurance.

A.6.8.2(5) Pulmonary vascular diseases and pulmonary embolism can result in frequent episodes of pain and the inability to safely perform essential job tasks due to limitations of endurance and the potential for sudden incapacitation.

A.6.8.2(6) Bronchiectasis can result in the inability to safely perform essential job tasks due to limitations of endurance and frequent respiratory infections.

A.6.9.1 An evaluation of aerobic capacity should be performed after appropriate medical evaluation. Testing should be conducted using an appropriate maximal or submaximal protocol (e.g., see C.2.1 and C.2.1.1). Bicycle ergometry is not appropriate because it underestimates true aerobic capacity. A low aerobic capacity can be an indicator of, and is a risk factor for, ischemic heart disease. For fire fighting, 12 METs or greater is necessary based on several studies.

A.6.10.1.1(1) Angina pectoris can result in frequent episodes of pain or the inability to safely perform essential job tasks, progressive illness leading to functional impairment, and the potential for sudden incapacitation.

A.6.10.1.1(2) Heart failure can result in frequent episodes of pain or the inability to safely perform work, progressive illness leading to functional impairment, and the potential for sudden incapacitation.

A.6.10.1.1(3) These conditions can result in frequent episodes of pain or the inability to safely perform essential job tasks.

A.6.10.1.1(4) Recurrent syncope can result in the potential for sudden incapacitation.

A.6.10.1.1(5) A medical condition requiring an automatic implantable cardiac defibrillator can result in the potential for sudden incapacitation.

A.6.10.1.1(7) If the person is pacemaker-dependent, then the risk for sudden failure due to trauma is not acceptable. Those with cardiac pacemakers can have the potential for sudden incapacitation.

A.6.10.1.2(1) Specific recommendations include the following:

- (1) *Mitral stenosis.* Mitral stenosis is acceptable if in sinus rhythm and stenosis is mild — that is, valve area is greater than 1.5 cm² or pulmonary artery systolic pressure is less than 35 mm Hg.
- (2) *Mitral insufficiency.* Mitral insufficiency is acceptable if in sinus rhythm with normal left ventricular size and function.
- (3) *Aortic stenosis.* Aortic stenosis is acceptable if stenosis is mild — that is, mean aortic valvular pressure gradient is less than 20 mm Hg.
- (4) *Aortic regurgitation.* Aortic regurgitation is acceptable if left ventricular size is normal or slightly increased and systolic function is normal.
- (5) *Prosthetic valves.* Prosthetic valves are acceptable unless anticoagulation is in effect.

A.6.10.1.2(2) Recurrent paroxysmal tachycardia can result in the potential for sudden incapacitation and the inability to safely perform essential job tasks due to limitations of strength or endurance.

A.6.10.1.2(3) These blocks will result in disqualification unless exercise can be performed with an adequate heart rate response. They can result in the inability to safely perform

essential job tasks, and have the potential for sudden incapacitation.

A.6.10.1.2(6) Ventricular ectopy or nonsustained ventricular tachycardia can result in sudden incapacitation and the inability to safely perform job functions due to limitations of strength or endurance. Medical clearance requires the following:

- (1) An echocardiograph that shows normal function and no evidence of structural abnormalities
- (2) Stress testing with imaging to a workload of at least 12 METs off cardiac medications that shows no evidence of ischemia, ventricular tachycardia, or ventricular fibrillation. Premature ventricular contractions (PVCs) should resolve with increasing levels of exercise.

A.6.10.1.2(7) Hypertrophy of the heart can result in the potential for sudden incapacitation and the inability to safely perform essential job tasks due to limitations of endurance.

A.6.10.1.2(8) A history of a congenital abnormality that has been treated by surgery but with residual complications or that has not been treated by surgery, leaving residuals or complications, can result in frequent episodes of pain or the inability to safely perform essential job tasks and the potential for sudden incapacitation.

A.6.10.1.2(9) These conditions can result in the inability to safely perform job functions due to limitations of endurance.

A.6.10.2.1(1)(a) Uncontrolled or poorly controlled hypertension increases the risk of a sudden cardiac or cerebrovascular event. A sudden cardiac or cerebrovascular event would cause sudden incapacitation, which would interfere with the safe performance of essential job tasks. Uncontrolled or poorly controlled hypertension can be defined as the presence of end organ damage [see A.6.10.2.1(1)(b)] or stage 2 hypertension (BP systolic >160 mm Hg or BP diastolic >100 mm Hg). Individuals with stage 1 or stage 2 hypertension should be referred to their primary care physician for evaluation, lifestyle modification, and/or treatment. Patients with pre-hypertension should be counseled about appropriate lifestyle modification(s). After appropriate and successful management of stage 1 or stage 2 hypertension, a candidate can be re-evaluated after at least 1 month's time.

A.6.10.2.1(1)(b) Chronic hypertension can damage the eye (retinopathy), the kidneys (nephropathy), the vascular system (stroke, transient ischemic attack, peripheral artery disease), and the heart (left ventricular hypertrophy, heart failure). These hypertension complications are known as end organ damage. The cardiac and vascular complications are associated with an increased risk of sudden incapacitation and sudden cardiac death (Koren et al. 1991). Unfortunately, cardiac complications are frequently asymptomatic, and valid screening tests are not fast or inexpensive. Therefore, determining which candidates to screen for cardiac complications [such as ECG for left ventricular hypertrophy (LVH) or a measurement of left ventricular ejection fraction for heart failure] should be based on the severity and the duration of hypertension.

A.6.10.2.1(2) An aneurysm of the heart or major vessel, congenital or acquired, can result in the inability to safely perform essential job tasks and the potential for sudden incapacitation.

A.6.10.2.1(4) Peripheral vascular disease can impair sensation, can increase the likelihood of injury, and can result in frequent

episodes of pain or the inability to safely perform essential job tasks due to limitations of endurance.

A.6.10.2.2(2) Recurrent thrombophlebitis can result in frequent episodes of pain or the inability to safely perform essential job tasks and the inability to safely perform functions as a member due to limitations of endurance.

A.6.10.2.2(3) Chronic lymphedema can result in the inability to safely perform essential job tasks due to limitations of endurance.

A.6.10.2.2(4) Congenital or acquired lesions of the aorta or major vessels — for example, syphilitic aortitis, demonstrable atherosclerosis that interferes with circulation, and congenital acquired dilatation of the aorta — can result in the potential for sudden incapacitation and the inability to safely perform essential job tasks due to limitations of endurance.

A.6.10.2.2(5) Marked circulatory instability can result in the inability to safely perform job functions due to limitations of endurance and the inability to safely perform essential job tasks due to limitations of balance.

A.6.11.2(1) Cholecystitis (that which causes frequent pain due to stones or infection) can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(2) Gastritis (that which causes recurrent pain and impairment) can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(3) GI bleeding can cause fatigue and/or hemodynamic instability resulting in the inability to safely perform essential job tasks.

A.6.11.2(4) Acute hepatitis (until resolution of acute hepatitis as determined by clinical examination and appropriate laboratory testing) can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(5)(c) The member should be evaluated for persistent abnormality causing increased risk of infection and/or strangulation.

A.6.11.2(6) Inflammatory bowel disease (that which causes disabling pain or diarrhea) can result in frequent episodes of pain and the inability to safely perform essential job tasks. It is a progressive illness leading to functional impairment.

A.6.11.2(7) Intestinal obstruction (that is, recent obstruction with impairment) can result in frequent episodes of pain, the inability to safely perform essential job tasks, and the potential for sudden incapacitation.

A.6.11.2(8) Pancreatitis (chronic or recurrent) can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(10) A bowel resection (if frequent diarrhea precludes performance of duty) can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(11) A gastrointestinal ulcer (where symptoms are uncontrolled by drugs or surgery) can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(12) The member should be evaluated for underlying disease, history of trauma, or associated infections.

A.6.11.2(13) Cirrhosis, hepatic or biliary (that which is symptomatic or in danger of bleeding), can result in frequent episodes of pain and the inability to safely perform essential job tasks.

A.6.11.2(14) Chronic active hepatitis can result in weakness, general malaise, and the inability to safely perform essential job tasks.

Δ A.6.12.1 Metabolic syndrome includes three or more of the following components:

- (1) Abdominal obesity, defined as a waist circumference >40 in. (>102 cm) in men, >35 in. (>88 cm) in women
- (2) Triglycerides > 150 mg/dl
- (3) HDL cholesterol <40 mg/dl for men, <50 mg/dl for women
- (4) Blood pressure >135/85 mmHg
- (5) Fasting blood glucose >110 mg/dl.

Metabolic syndrome is associated with reduced aerobic capacity that interferes with the ability to safely train to be a fire fighter and to safely perform essential job tasks 2, 4, 5, 6, 7, 8, 9, 10, and 13. Metabolic syndrome is also an increased risk for cardiovascular disease, hypertension, and insulin resistant hyperglycemia.

A.6.13.2(1) Heavy physical exertion has been associated with spontaneous abortions. Lifting heavy objects should be avoided during pregnancy. Excessive heat, toxic chemicals and catecholamine surges have the potential for fetal harm.

A.6.16.2(1) The member should be evaluated for residual instability (subluxation) or significant limitation of motion.

A.6.16.2(4) The member should be evaluated for residual instability or laxity of ligament or intra-articular arthritis, which could cause instability in limb, inadequate range of motion, or increased pain or would limit crawling, kneeling, jumping, safe ladder use, or safe stretcher carrying.

A.6.16.2(5) The member should be evaluated for residual signs or symptoms (e.g., pain, swelling, atrophy, range of motion, gait).

A.6.16.2(6) The member should be evaluated for resulting functional impairment, disease activity, and chronicity.

A.6.17.1(5) The candidate should be free of clinical disease for 3 years, a neurologic exam should be normal, and the candidate should not require drugs that can impair ability to safely perform essential job tasks. In considering performance of essential job tasks, the impact of the operational environment (e.g., heat, stress, activity, variable night shifts) on exacerbations should be considered and specifically addressed by a neurological specialist so that an informed determination can be made by the fire department's medical officer.

A.6.17.1(6) The candidate should be free of clinical disease for 3 years and off all drug and other treatment. Cognitive function, neurologic exam, and respiratory status should all be normal, and the candidate should be free of disease exacerbations for 3 years and off all drug treatment.

A.6.17.2(2) Exam and imaging studies should be normal, and medications needed to control chronic pain should not affect neurologic or cardiac function (energy, cognitive ability, equilibrium, etc.). Examples include the following:

- (1) Neuropathy (cranial, peripheral, plexus, etc.). Motor and sensory neurologic exams and diagnostic/imaging studies

(as needed) should be normal, and medications needed to control pain should not affect nervous system function (energy, cognitive ability, equilibrium, etc.).

- (2) Myopathy and/or myositis. Motor strength is normal, pain is controlled without narcotics, renal function is normal, and neither heart nor diaphragm is involved.
- (3) History of infectious myoneuropathies (e.g., Guillain-Barré, post-botulism, post-polio syndrome). Cognitive function, neurologic exam, and diagnostic imaging studies (as needed) should be normal.

A.6.18.2(1) The candidate should be evaluated for severity, chronicity, pain, likelihood of serious occupational infectious exposure, requirement for continuous medication, and impairment of ability to safely perform essential job tasks.

A.6.18.2(2) The candidate should be evaluated for thinned, stretched skin that is at risk for easy breakdown, burn damage, abnormal sensations, or infection.

A.6.18.2(3) The candidate should be evaluated for systemic involvement, skin involvement that interferes with essential job tasks, or presence of localized complications such as fissures, weeping, or ulcerations, due to risk of burn injury and/or infection.

A.6.18.2(4) The candidate should be evaluated for associated systemic lupus, skin integrity, and Raynaud's phenomenon.

A.6.18.2(5) The candidate should be evaluated for functional limitation of hand and/or foot when exposed to cold or systemic involvement of skin, muscles, heart, lungs, or neurologic system that would compromise the safe performance of essential job tasks.

A.6.18.2(6) The candidate should be evaluated for sclerodactyly with significant loss of function or systemic involvement.

A.6.18.2(7) The candidate should be evaluated for associated leg swelling, loss of function, or systemic involvement.

A.6.18.2(8) The candidate should be evaluated for percent body involvement with redness and scaling, requirement for regular application of lubrication/medication, and/or potential effect on safe performance of essential job tasks.

A.6.18.2(9) The candidate should be evaluated for extent, severity, chronicity, and known precipitants with attention to potential risk of serious, occupational infectious exposures or other interference with safe performance of essential job tasks.

A.6.18.2(10) The candidate should be evaluated for swelling, redness, scaling, itching, weeping, and/or cracking, pain, loss of function (e.g., cannot stand for long periods of time), or ulceration.

A.6.18.2(11) The candidate should be evaluated for functional limitations, ability to wear helmet, SCBA other respirators required by the AHJ with proper fit-testing, and protective clothing, and requirements for continuous treatment.

A.6.18.2(12) The candidate should be evaluated for extent, chronicity, and interference with safe performance of essential job tasks.

A.6.18.2(13) The candidate should be evaluated for extent, chronicity, pain, ability to wear protective ensemble, and risk of occupational infectious exposure.

A.6.18.2(14) The candidate should be evaluated for extent and acuity of blistering, loss of function, aggravating agent(s) if known, ability to wear protective ensemble, ability to tolerate moderate, incidental, job-related trauma to skin, risk of occupational infectious exposure, or inability to safely perform essential job tasks.

A.6.18.2(15) The candidate should be evaluated for severity, chronicity, association with underlying medical condition, and requirement for medications (antihistamines) that interfere with the ability to safely perform essential job tasks.

Δ A.6.20.1(1) Type 1 diabetes was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. Type 1 diabetes develops when the body's immune system destroys pancreatic beta cells, the only cells in the body that make the hormone insulin, which regulates blood glucose. This form of diabetes usually strikes children and young adults, although disease onset can occur at any age. Type 1 diabetes accounts for 5 percent to 10 percent of all diagnosed cases of diabetes. In order to survive, people with Type 1 diabetes must have insulin delivered by a pump or injections.

Type 2 diabetes was previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes. Type 2 diabetes accounts for about 90 percent to 95 percent of all diagnosed cases of diabetes. It usually begins as insulin resistance, a disorder in which the cells do not use insulin properly. As the need for insulin rises, the pancreas gradually loses its ability to produce insulin. Type 2 diabetes is associated with older age, obesity, family history of diabetes, prior history of gestational diabetes, impaired glucose tolerance, physical inactivity, and race/ethnicity. Type 2 diabetes is increasingly being diagnosed in children and adolescents. Many people with Type 2 diabetes control their blood glucose by following a careful diet and exercise program, losing excess weight, and taking oral medication. Among adults with diagnosed diabetes, about 12 percent take both insulin and oral medications, 19 percent take insulin only, 53 percent take oral medications only, and 15 percent do not take either insulin or oral medications.

Risk of hypoglycemia (low blood sugar) remains the major concern in regard to those with diabetes being or becoming fire fighters. This risk is greatest in those with Type 1 diabetes.

In general, patients treated with oral diabetes medications are at little risk of significant hypoglycemia. Patients treated with metformin, alpha-glucosidase inhibitors, or thiazolidinediones alone or in combination with each other are at no risk of hypoglycemia, as these classes of drug do not increase insulin levels. Patients treated with sulfonylureas and related drugs have a risk of severe hypoglycemia less than 1 percent of the risk associated with insulin treatment. Patients treated with diet and exercise alone (no oral diabetes medications or insulin) are at no risk of hypoglycemia.

Fire fighting entails a unique set of conditions that need to be considered in regard to those with diabetes and the risks of hypoglycemia. Unpredictable meal schedules, periods of physical exertion, adrenergic stimulation, and sleep deprivation all present challenges to fire fighters with diabetes. There are occasions when there is no safe access to food or other forms of oral glucose while wearing respiratory protection in a hazardous environment, and the typical symptoms of hypoglycemia might not be recognized as easily in the midst of fighting a fire. As well, it is not always possible to exit a hazard zone rapidly enough to treat hypoglycemic symptoms when detected.

Members engaged in fire suppression are at greater risk than those engaged in other emergency activities (EMS, law enforcement) for this reason.

A review of current published data suggests that with careful individualized assessment it is possible to identify those with diabetes who can function fully as fire fighters and who do not present a significant risk to themselves, their fellow fire fighters, or to those they serve.

The individualized assessment process and criteria included in this standard were set up to assure that only those who are managing their diabetes conscientiously using the most up-to-date approaches would be eligible to be a fire fighter. In addition, certain patients have a greater tendency for significant hypoglycemia despite the quality of their diabetes management. Such individuals are not good candidates to be fire fighters and, accordingly, are excluded from service under the criteria in this standard.

This individualized assessment is possible in large part because a great deal of change has occurred in the treatment of diabetes in recent years. Previously patients used insulins that were somewhat unpredictable in the time course of their action and generally took two injections per day. Today, there are insulins that are far more predictable and are either very long acting and essentially treat only endogenous glucose production (and therefore do not depend on a patient eating on a regular schedule) or are very rapid and therefore can be administered directly before, during, or even shortly after one eats, significantly decreasing the chance of insulin being taken and then the meal being interrupted due to fire-fighting duties.

Regimens now referred to as "basal bolus" are composed of a very long-acting basal (or background) insulin, which controls glucose levels overnight and in the absence of glucose intake, and rapid-acting (bolus) insulins that are dosed just prior to, during, or even after meals based on blood glucose levels at that time, the amount of carbohydrate that the person expects to consume, and any anticipated change in physical activity patterns over the next number of hours.

These regimens have resulted in improved overall blood glucose control with significantly less risk of hypoglycemia for many patients.

Additional major advances in the size, speed, and sophistication of blood glucose meters provide for easy, accurate, and rapid assessment of blood glucose levels. Such monitoring techniques, as well as the generally increased self-awareness that accompanies consistent self-monitoring, enable the motivated fire fighter with diabetes to assess blood glucose levels and ingest a safety net of carbohydrates before entering a hazardous environment. Similarly, major advances in insulin delivery systems have greatly increased the ability of the motivated individual with diabetes to achieve a level of diabetes self-management consistent with the duties of fire fighting.

In order to get maximum effect from medical advances and to minimize the risk of hypoglycemia, patients with diabetes must check their blood glucose level frequently (as recommended based on factors such as type of therapy and glycemic history), review those results on a regular basis, and see their diabetes care provider regularly for discussion in regard to any necessary changes in treatment. Patient evaluation needs to look for any of the known risk factors for serious hypoglycemia

or evidence of any of the known microvascular (eye disease, kidney disease, or nerve disease) or macrovascular (cardiovascular disease, peripheral arterial disease) complications of diabetes. A 12 MET stress test is required because myocardial infarction remains the major cause of line-of-duty fatalities, and diabetes is a risk factor for myocardial ischemia, especially asymptomatic silent myocardial ischemia.

The individualized assessment described previously demands a very close and good working relationship between the patient and the diabetes care provider. The experience of those who care for current fire fighters with diabetes is that many are highly motivated and will do whatever it takes to perform their jobs at a high level and in a safe manner.

Recognizing that there is variability in the relationship between the hemoglobin A1C and the 3-month average blood glucose, we recommend that hemoglobin A1C levels greater than the 8 percent threshold in Sections 6 and 9 be confirmed by a second determination before action is taken.

The physician evaluating an individual with a hemoglobin A1C >8 percent should consider a discordance between the A1C and the 3-month average glucose if any of the following conditions exists:

- (1) A repeated value is below the threshold.
- (2) A single A1C determination is discordant with prior or subsequent determinations with no other evidence of deterioration in glycemic control.
- (3) The patient's reported capillary blood glucose determinations and/or venous glucose determinations in the physician's office are significantly lower than those reflected by the estimated average glucose (eAG) (eAG calculator available at <http://professional.diabetes.org/glucosecalculator.aspx>).
- (4) The patient has a personal or family history or other evidence of a hemoglobinopathy.
- (5) The patient is a member of an ethnic group with increased risk of hemoglobinopathy.

If the evaluating physician suspects that the A1C overestimates average blood glucose, further evaluation can include the following:

- (1) A repeat HbA1C
- (2) Prior HbA1C values
- (3) Serum fructosamine determination
- (4) Downloaded reports from a memory glucometer
- (5) Downloaded reports from a 72-hour continuous glucose monitor
- (6) Downloaded reports from a personal continuous glucose monitoring device

Possible explanations for discordance between the eAG based on A1C and the patient's true average glucose include the following:

- (1) *Assay Precision.* The American College of Pathology accepts variation within 7 percent in A1C assays. Thus, a person with an A1C of 8 percent might have a value between 7.5 percent and 8.5 percent on repeat testing of the same sample. [Cohen 2010]
- (2) *Hemoglobinopathies.* According to the National Diabetes Information Clearinghouse (NDIC): "With some assay methods, A1C tests in patients with hemoglobinopathies result in falsely high outcomes, overestimating actual average blood glucose levels for the previous 2 to

3 months. Physicians may then prescribe more aggressive treatments, resulting in increased episodes of hypoglycemia. Some assay methods used with some hemoglobinopathies may result in falsely low outcomes, leading to under-treatment of diabetes." Also according to the NDIC: "About one in 12 African Americans has sickle cell trait. About 14.7 percent of African Americans aged 20 years or older have diabetes. Therefore, many African Americans have both diabetes and sickle cell trait. People of Southeast Asian descent are at risk for having hemoglobin E (HbE), another hemoglobin variant."

- (3) *Interindividual Variation.*
- (4) *Clinical Studies.* A comparison of HbA1C with average glucose derived from 2 days of continuous monitoring and 3 months of 7 point glucose profiles at least three times a week. The confidence interval for average glucose with an A1C of 8 percent was 147–217 mg/dL. [Nathan 2008]
- (5) *RBC Lifespan:* Hemoglobin A1C levels are a "snapshot" of what is truly a rolling average. Subclinical variation in RBC lifespan can have a significant effect on the relationship between mean glucose and A1C, with increases in average RBC lifespan increasing net glycosylation and decreases (as in some hemoglobinopathies or in recovery from hemorrhage or anemia) decreasing net glycosylation. [Herman and Cohen 2010, Cohen 2008]
- (6) *RBC Glucose Transport.* Variations in transport across the RBC membrane result in different intracellular and extracellular glucose levels, thus affecting intracellular hemoglobin exposure to glucose and resultant glycosylation. [Khera 2008]
- (7) *Variations in Glycosylation Rates.* Patients vary in activity of the glycosylation reaction; genetically determined "high" and "low" rates of glycosylation have been described in a number of studies, explaining about one-third of interindividual variation in A1C levels. [Hudson 1999, Snieder 2001, Hempe 2002, Cohen 2006, Soranzo 2010]
- (8) *Interethnic Variation.* Numerous studies have identified the effect of ethnicity on the relationship between average glucose and A1C. In general, Caucasians have significantly lower A1C levels at comparable glucose. [Herman 2007, Cohen 2007, Viberti 2006, Herman 2009, Ziemer 2010, Kirk 2006]. This variability is independent of the effect of hemoglobinopathies noted in (2).

A.6.20.1(1)(g)iv. Episodes of severe hypoglycemia are associated with an increased risk of subsequent episodes. Hypoglycemia can interfere with cognitive function and judgment. Presence of microvascular and neurological complications of diabetes can increase the risk of hypoglycemic events.

A.6.20.1(2)(g)iv. Episodes of severe hypoglycemia might predict an increased risk of subsequent episodes. Hypoglycemia can interfere with cognitive function and judgment. Presence of microvascular and neurological complications of diabetes can increase the risk of hypoglycemic events.

A.6.20.2(1) The candidate should be evaluated for absence of orthostatic hypotension, electrolyte disorders, ability to maintain hydration during exercise under extreme environmental conditions, and normal thyroxine levels with supplementation.

A.6.21.2(2) Previous burn injury per se does not interfere with the essential job tasks of fire fighting. Extensive burn injury with or without the need for skin grafting can result in skin surfaces that are easily damaged, sensitive to chemical or

solvent exposure, or lacking in sweat or sebaceous glands. The candidate should be evaluated for heat or cold intolerance, range of motion and motor strength, and ability to wear personal protective clothing and equipment.

A.6.22.2(1) The candidate should be evaluated for space-occupying lesion, treatment, or sequelae affecting ability to perform essential job tasks.

A.6.22.2(2) The candidate should be evaluated for history or risk of seizure; residual effects on balance, coordination, strength, speech, judgment; and medication requirements.

A.6.22.2(3) The candidate should be evaluated for ability to wear SCBA and maintain nutrition and oral hydration.

A.6.22.2(4) The candidate should be evaluated for residual pulmonary function and medication requirements.

A.6.22.2(5) The candidate should be evaluated for abnormal bowel or urinary function that would interfere with emergency operations where toilet facilities are unavailable, the ability to maintain nutrition and hydration, and medication requirements.

A.6.22.2(6) The candidate should be evaluated for muscle strength, deformity interfering with function, or the ability to wear protective ensemble.

A.6.22.2(7) The candidate should be evaluated for anemia, leukopenia, or thrombocytopenia, or residual cardiac, pulmonary, GI, dermatological, or neurological effects of surgery, radiation, or chemotherapy.

A.6.24.1(3) Examples of anticoagulation medications include antithrombin (Atryn®), apixaban (Eliquis®), argatroban, bivalirudin (Angiomax®), dabigatran etexilate (Pradaxa®), dalteparin (Fragmin®), enoxaparin (Lovenox®), fondaparinux sodium (Arixtra®), rivaroxaban (Xarelto®), and warfarin sodium (Coumadin®).

Antiplatelet agents are not anticoagulation medications and do not lead to restrictions (unless the underlying medical condition does). Examples of antiplatelet agents include aspirin, combination aspirin–extended-release dipyridamole (Aggrenox®), clopidogrel bisulfate (Plavix®), prasugrel (Effient®), ticagrelor (Brilinta®), and ticlopidine hydrogen chloride (Ticlid®).

A.6.24.1(5) Leukotriene receptor antagonists are not Category A condition if used to treat conditions not affecting the lower respiratory system.

A.6.24.2 The candidate should be evaluated for an underlying condition requiring the medication and effects of medication that could affect ability to safely perform essential job tasks.

A.7.1.3 A department should set protocols regarding length of time absent from duty and/or medical conditions that require the department physician to evaluate a member. Physical therapy, strength training, work hardening, functional capacity evaluations, and alternate duty are all activities that can be helpful.

A.7.2.2(5) Universal agreement exists that wellness, fitness, and risk reduction for cardiovascular disease, pulmonary disease, and cancer can be reduced by tobacco abstinence, regular exercise, and control of weight, hypertension, cholesterol, and blood sugar. The annual medical evaluation should serve as one of many opportunities in the fire department to

modify these risk factors. Clearly, risk reduction is easier if there is early intervention and if the department promotes wellness and fitness. Tobacco cessation programs should be available to the member, and all fire department facilities should be tobacco-free zones. Control of weight, hypertension, cholesterol, and blood sugar are all improved with dietary education and regular exercise.

A.7.5.1 The Genetic Information Nondiscrimination Act (GINA) prohibits discrimination on the basis of genetic information (including family medical history). The Equal Opportunity Employment Commission (EEOC) has stated that collection of genetic information is only permitted in very limited circumstances, including voluntary wellness programs, and even then only with specific informed consent. Voluntary means that participation is not required and that employees will not be penalized for non-participation. For instance, if an employer requires an employee to submit family medical history to a medical provider, even if that provider will not in turn give that information to the employer, the disclosure is not voluntary and is considered a violation of GINA.

Even though it might prove to be useful to medical providers screening for potential medical conditions, fire fighters are not required to provide family medical history under this law. When collected, family medical history must only be utilized as part of a voluntary wellness and fitness program. Specifically, it cannot be used in employment decisions. In cases where such history is collected, the employee must sign a statement confirming that the information is being voluntarily disclosed. Additionally, the health care provider must maintain the individual's confidentiality and only report such information in aggregate terms so that it cannot be tracked back to the individual.

A.7.6(12) Studies have found increased risk for both melanoma and non-melanoma skin cancer in fire fighters. Comprehensive inspection of the skin, especially in sun-exposed areas, is recommended. Any suspicious lesions should be referred for dermatological assessment.

A.7.7.1 If performing these tests as part of an automated panel that includes additional tests is more cost-effective, it is acceptable to do so.

A.7.7.3 Baseline and annual audiometry is performed on each fire fighter. This should be done in accordance with 29 CFR 1910.95, "Occupational noise exposure." The basics of this standard include the following:

- (1) The first audiogram done (for members this will probably be done during their pre-placement exam) becomes the baseline audiogram.
- (2) If subsequent audiograms are better than the baseline, then the best one becomes the baseline. All audiograms should be done with no exposure to industrial noise for 14 hours.
- (3) Each subsequent audiogram is compared to the baseline audiogram (not to the previous year's) to determine if there is a threshold shift, which is an average loss of 10 dB or more at 2000 Hz, 3000 Hz, and 4000 Hz in either ear. This number should be corrected for presbycusis by age tables [see Table A.7.7.3(a) and Table A.7.7.3(b)]. Thus, for each of the three frequencies the baseline reading is subtracted from the current reading, and the presbycusis correction is subtracted from this result. The results from

- the three frequencies are averaged, and if this number is 10 or greater, then there is a threshold shift.
- (4) If there is a threshold shift, the AHJ must be notified. AHJs are responsible for initiating evaluation of personal protective equipment (PPE) and engineering controls.
 - (5) If there is a threshold shift, the member should be advised in writing and referral to an audiologist and/or an otolaryngologist should be made.
 - (6) If the threshold shift is determined to be permanent, then this audiogram becomes the “revised baseline.”

Table A.7.7.3(a) Age Correction Values in Decibels for Males

Years	Audiometric Test Frequency (Hz)				
	1000	2000	3000	4000	6000
≤20	5	3	4	5	8
21	5	3	4	5	8
22	5	3	4	5	8
23	5	3	4	6	9
24	5	3	5	6	9
25	5	3	5	7	10
26	5	4	5	7	10
27	5	4	6	7	11
28	6	4	6	8	11
29	6	4	6	8	11
30	6	4	6	9	12
31	6	4	7	9	13
32	6	5	7	10	14
33	6	5	7	10	14
34	6	5	8	11	15
35	7	5	8	11	15
36	7	5	9	12	16
37	7	6	9	12	17
38	7	6	9	13	17
39	7	6	10	14	18
40	7	6	10	14	19
41	7	6	10	14	20
42	8	7	11	16	20
43	8	7	12	16	21
44	8	7	12	17	22
45	8	7	13	18	23
46	8	8	13	19	24
47	8	8	14	19	24
48	9	8	14	20	25
49	9	9	15	21	26
50	9	9	16	22	27
51	9	9	16	23	28
52	9	10	17	24	29
53	9	10	18	25	30
54	10	10	18	26	31
55	10	11	19	27	32
56	10	11	20	28	34
57	10	11	21	29	35
58	10	12	22	31	36
59	11	12	22	32	37
≥60	11	13	23	33	38

Source: 29 CFR 1910.95.

Table A.7.7.3(b) Age Correction Values in Decibels for Females

Years	Audiometric Test Frequency (Hz)				
	1000	2000	3000	4000	6000
≤20	7	4	3	3	6
21	7	4	4	3	6
22	7	4	4	4	6
23	7	5	4	4	7
24	7	5	4	4	7
25	8	5	4	4	7
26	8	5	5	4	8
27	8	5	5	5	8
28	8	5	5	5	8
29	8	5	5	5	9
30	8	6	5	5	9
31	8	6	6	5	9
32	9	6	6	6	10
33	9	6	6	6	10
34	9	6	6	6	10
35	9	6	7	7	11
36	9	7	7	7	11
37	9	7	7	7	12
38	10	7	7	7	12
39	10	7	8	8	12
40	10	7	8	8	13
41	10	8	8	8	13
42	11	8	9	9	13
43	11	8	9	9	14
44	11	8	9	9	14
45	11	8	10	10	15
46	11	9	10	10	15
47	11	9	10	11	16
48	12	9	11	11	16
49	12	9	11	11	16
50	12	10	11	12	17
51	12	10	12	12	17
52	12	10	12	13	18
53	13	10	13	13	18
54	13	11	13	14	19
55	13	11	14	14	19
56	13	11	14	15	20
57	13	11	15	15	20
58	14	12	15	16	21
59	14	12	16	16	21
≥60	14	12	16	17	22

Source: 29 CFR 1910.95.

A.7.7.4.1 Pulmonary spirometry is an essential part of the annual medical evaluation of fire fighters wearing personal protective clothing and SCBA. Spirometric measures include the forced vital capacity (FVC), the forced expiratory volume in the first second of expiration (FEV₁), and the absolute FEV₁/FVC ratio calculated by dividing the FEV₁ by the FVC in liters. Other spirometric measures of small airway flow limitations [e.g., forced expiratory flow (FEF) 25 percent to 75 percent] should not be used for screening evaluations. For spirometric measurements to be properly interpreted, they need to be performed according to American Thoracic Society recommendations. Modern spirometry uses computer-assisted quality control of both calibration and testing procedures. FEV₁ and FVC results are expressed not only as absolute values (liters) but also as percent predicted adjusted for gender, age, height, and ethnicity. Currently, the preferred method uses NHANES III normative equations with the acceptable threshold being 80 percent predicted. When percent predicted FEV₁ or FVC values are minimally below threshold (typically 74 percent to 79 percent of predicted), the LLN for the appropriate population can, at the discretion of the physician, be used instead of the 80 percent predicted threshold value. For example, the LLN may be more appropriate for taller and older individuals. (See references in F.2.5.) However, because these norms are population-based, it is possible for individuals to be normal just below these thresholds or to have minimal but potentially significant abnormalities just above these thresholds. In asymptomatic individuals with minimal reductions in spirometry measures (FEV₁, FVC, or the absolute FEV₁/FVC ratio), further evaluation (complete pulmonary function tests, exercise testing, or challenge testing) can be necessary to determine if essential tasks can be performed safely. Such tests are not screening tests and therefore should be performed in a laboratory setting by an experienced specialist.

A.7.7.4.3 When the FVC or FEV₁ is reduced below 70 percent of predicted, substantial dysfunction is present. Moderate chronic obstructive pulmonary disease is considered to be present when the absolute FEV₁/FVC ratio is equal to or less than 0.70 and the FEV₁ is less than 70 percent predicted. Severe chronic obstructive pulmonary disease is considered to be present when the absolute FEV₁/FVC ratio is less than 0.70 and the FEV₁ is less than 30 percent predicted. Moderate to severe restriction is considered when the FVC is less than 60 percent predicted with an absolute FEV₁/FVC ratio greater than 0.90. Again, in certain cases, additional pulmonary function testing can be required, such as pre- and post-spirometry, lung volumes, diffusing capacity, exercise testing, and/or challenge testing. Because these tests are for diagnostic purposes, they should be performed in a laboratory setting by an experienced specialist. [Hankinson 1999]. For most individuals, the definition of an abnormal FEV₁ or FVC is less than 80 percent predicted adjusted for gender, age, height, and ethnicity using NHANES III. However, because these norms are population-based, it is possible for individuals to be normal just below these thresholds or to have minimal but potentially significant abnormalities just above these thresholds. When percent predicted FEV₁ or FVC values are just below threshold (typically 74 percent to 79 percent of predicted), the LLN for the appropriate population can, at the discretion of the physician, be used. For example, the LLN might be more appropriate for taller and older individuals. In asymptomatic individuals with minimal reductions in FEV₁ or FVC values (70 to 79 percent predicted) and a normal FEV₁/FVC ratio (0.71 to 0.90),

further evaluation (complete pulmonary function tests, exercise testing, or challenge testing) might be necessary to determine if essential tasks can be performed safely (see F.2.5).

NA.7.7.7.3.1 An exercise stress test (EST) provides valuable diagnostic, prognostic, and exercise tolerance (aerobic capacity) information. The EST should be conducted according to the American College of Cardiology/American Heart Association (ACC/AHA) protocol. Although the EST is frequently ended when the patient reaches 90% of the target heart rate [e.g., 90 percent \times (220 – age)], the ACC/AHA recommends a symptom-limiting end point. The test must be completed to 12 METS to ensure this level of cardiac work will not precipitate a sudden cardiac event. Individuals with a negative (normal) EST should be retested every 2 to 5 years based on individual clinical assessment and ASCVD risk scores.

Imaging with an EST increases the sensitivity and specificity of the test, but also significantly increases the costs. Stress echocardiography is the preferred imaging test for individuals with an abnormal resting ECG (e.g., left bundle branch block), left ventricular hypertrophy, or long-standing hypertension. Stress myocardial perfusion imaging might be indicated for asymptomatic individuals with diabetes mellitus or a strong family history of congenital heart defect (CHD).

There is increasing evidence that a coronary artery calcium (CAC) score can provide important clinical and prognostic information. A CAC score provides a structural assessment of coronary artery obstruction. When negative, the screening test provides a high level of assurance that no obstructing lesions in the coronary arteries are present (greater than 90 percent predictive value negative). A positive test prompts referral to a cardiologist for further evaluation and treatment, which typically includes an EST with imaging and/or cardiac catheterization. There is insufficient evidence to determine the frequency for a repeat CAC, but not less than 5 years would appear reasonable.

Defining the criteria for a positive or negative EST is beyond the scope of this document.

NA.7.7.7.4 See <https://www.framinghamheartstudy.org/risk-functions/coronary-heart-disease/2-year-risk.php>.

ΔA.7.7.9(1) An annual TB program should include the following:

- (1) Documentation of a two-step purified protein derivative (PPD) tuberculin skin test prior to this PPD, a 0 mm PPD within the past year, or a negative TB blood test for interferon gamma release assay within the past year. [Morbidity and Mortality Weekly Review, December 16, 2005, and NFPA 1581]
- (2) If the TB skin test (PPD) is used, the following is required:
 - (a) Placement of the PPD and subsequent reading by a trained, designated reader within 48 hours to 72 hours of placement. Members with a history of positive PPD should instead fill out a questionnaire and might be required to have a chest radiograph.
 - (b) PPD results should be documented in millimeters (mm). A test with no skin reaction should be recorded as 0 mm. PPD measurement should not include erythema and should include only induration in the axis perpendicular to the forearm.

- (c) A PPD skin test will be considered positive if the following conditions are present:
 - i. 5 mm or greater in a member who is immunosuppressed, who has a household contact with active tuberculosis, or who has an abnormal chest radiograph consistent with prior tuberculosis
 - ii. 10 mm or greater in a member with a normal immune system who has an increased probability of recent infection or has other clinical conditions that increase the risk for progression to active TB. This includes all members, because fire fighters are considered health care workers if they perform EMS or rescue activities.
 - iii. 5 mm increase from previous reading occurring within last 2 years.
- (3) TB blood tests are now readily available. Their cost effectiveness must be judged by considering the fact that false positives from atypical mycobacterium or BCG vaccination do not occur and that this test requires only one visit for blood drawing, thus eliminating a return visit for PPD skin test reading. False positives and false negatives can occur if the blood specimens are not properly obtained, handled, and processed prior to and after arrival in the laboratory.
- (4) If the PPD or the tuberculin skin test is positive (conversion), the following steps should be taken:
 - (a) Member fills out questionnaire.
 - (b) Member obtains chest x-ray.
 - (c) Member is evaluated for active disease.
 - (d) Member is evaluated for preventative therapy.
- (5) If active disease is suspected, the member should be removed from any duty until he/she has been determined to be noninfectious. This will occur when the diagnosis of tuberculosis is ruled out or, if confirmed, when adequate therapy has been instituted, the cough has resolved, and three consecutive sputum smears for acid-fast bacillus (AFB) on different days are negative.

In the event of an exposure to TB, the following steps should be taken:

- (1) Member without a recent PPD (in the last 6 months) should receive a PPD, tuberculin skin test, or TB blood test within 14 days of exposure. Members with a history of positive PPD, tuberculin skin test, or TB blood test, should fill out a TB questionnaire.
- (2) Another PPD, tuberculin skin test, or TB blood test and the questionnaire should be repeated 6 weeks to 12 weeks after the first PPD.
- (3) If the PPD skin test or TB blood test turns positive (conversion) or the questionnaire is positive, proceed as described in A.7.7.9(1)(5) and A.7.7.9(1)(6).

N A.7.7.9(4) The Tdap vaccine should not be administered for 2 years following a Td dose.

N A.7.7.9(5) Women who receive the MMR vaccine should not become pregnant for three months after the vaccination is administered.

A.7.7.9.2 For further guidelines and requirements, refer to local and state departments of health and the Centers for Disease Control (CDC); also see the references in F.2.6.

A.7.7.10.2 The BBP protocol should include the following elements:

- (1) Fact sheet that explains in lay language the risks of infection, the various prophylactic and therapeutic options, the testing and follow-up that will be needed, and recommendations for personal behavior (safe sex, blood donation, etc.) following an exposure
- (2) Classification table to determine the exposure type and recommendation for prophylaxis
- (3) Current recommendations of the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and Public Health Services
- (4) List of tests to be done on exposed member, including the following:
 - (a) HIV
 - (b) Hepatitis B surface antibody (HBsAb), if not previously known to be positive
 - (c) Hepatitis B surface antigen (HBsAg), if not previously known to be positive HBsAb
 - (d) Hepatitis C antibody (HCAb)
 - (e) If HIV prophylaxis is to be given, the following tests:
 - i. CBC
 - ii. Glucose, renal, and hepatic chemical function
 - iii. Pregnancy test for females
- (5) List of tests to be done on source patient, including the following:
 - (a) HIV
 - (b) HBsAg
 - (c) HCAb
- (6) If source is available, interview for HIV, hepatitis B, and hepatitis C risk/status
- (7) Determination of risk and need for post-exposure prophylaxis (PEP)
- (8) Member counseling regarding PEP medication(s) and side effects of treatment; a printed fact sheet for the member to review
- (9) PEP, if appropriate, given as soon as possible after the incident, preferably within 2 hours
- (10) Follow-up of members on prophylaxis for the duration of their treatment
- (11) Assessment of tetanus status and administration of dT booster, if appropriate
- (12) Assessment of hepatitis B status as follows:
 - (a) If previously immunized with a positive post-immunization titer, no further treatment is needed.
 - (b) If previously immunized, titer was negative, and source is HBsAg positive or high risk, give hepatitis B immune globulin (HBIG) as soon as possible, preferably within 24 hours, and give a dose of hepatitis B vaccine.
 - (c) If previously immunized and titer is unknown, draw titer and proceed as follows:
 - i. If titer is positive, no further treatment is needed.
 - ii. If titer is negative and source is HBsAg positive or high risk, then give HBIG as soon as possible, preferably within 24 hours, and give a dose of hepatitis B vaccine.

- iii. If previously immunized with negative titer and revaccinated with a negative titer, give HBIG immediately and a second dose 1 month later.
 - iv. If never immunized, give HBIG and begin hepatitis B vaccine series.
- (13) Follow-up instructions should include the following information:
- (a) Adverse events and side effects of PEP
 - (b) Signs and symptoms of retroviral illness (fever, adenopathy, rash)
 - (c) Appointments for follow-up blood work, including the following:
 - i. HIV at 6 weeks, 3 months, 6 months, and 9 months
 - ii. HBsAb and/or HCAb at 6 weeks, 3 months, and 6 months, if source is hepatitis B and/or hepatitis C positive
 - iii. Every other week CBC, renal, and liver function, if receiving PEP

NA.7.7.13.2 Fire department members are exposed to a variety of particulate materials, chemicals and asbestos which can increase the risk for colon cancer. Current research suggests that fire fighters are at increased risk of colorectal cancer. Health care providers should discuss the possible increased risk of colorectal cancer resulting from occupational exposures along with the risks and benefits of initiating screening at age 40 in fire fighters. If the fire fighter decides to start screening at age 40, fecal occult blood testing (FOBT) is the method recommended for use as it has the lowest risk for adverse patient events and is the most cost effective.

The USPSTF recommended screening methods for colorectal cancer include fecal occult blood testing, sigmoidoscopy, or colonoscopy beginning at age 50 and continuing until age 75. The risks and benefits of these screening methods vary. The USPSTF concludes there is insufficient evidence to assess the benefits and harms of computed tomographic colonography and fecal DNA testing as screening modalities for colorectal cancer.

The USPSTF concluded that screening programs incorporating fecal occult blood testing, sigmoidoscopy, or colonoscopy will all be effective in reducing mortality using any of the following 3 regimens, assuming 100% adherence to the same regimen for that period:

- (1) Annual screening with high-sensitivity fecal occult blood testing
- (2) Sigmoidoscopy every 5 years, with high-sensitivity fecal occult blood testing every 3 years
- (3) Screening colonoscopy every 10 years

Fecal occult blood testing uses stool specimens applied to guaiac cards by the patient at home that are sent to a laboratory for later analysis. Multiple different stool samples, usually three, from different days can increase the sensitivity of this colorectal cancer screening test. Diet restrictions apply to this test.

Colonoscopy is used to examine the full lining of the colon and rectum. During the colonoscopy, polyp removal or excising a small piece of tissue for biopsy may be performed if indicated. Colonoscopy should start at an earlier age (40 years) and/or be conducted more frequently if clinically indicated. A

colonoscopy shall also be performed, regardless of age or schedule, when FOBT results are positive or when there is a consistent change in bowel habits.

A.7.7.14 Screening for prostate cancer in asymptomatic men using the PSA test is controversial; however, studies suggest that fire fighters have increased rates of prostate cancer. Therefore, prostate screening using the PSA is indicated. There is consensus regarding the serial measurements of PSA, known as the PSA velocity, for comparison over time. An increase over time indicates an increased risk for prostate cancer. A PSA test might detect small cancers that would never become life-threatening. It is unclear whether the benefits of PSA screening outweigh the risks of follow-up cancer tests and cancer treatments. Several noncancerous conditions might result in an elevated PSA level, including benign prostatic hypertrophy (BPH) and other conditions related to acute or chronic inflammation. When testing reveals an elevated PSA level, it is important that the benefits and risks of prostate diagnostic procedures and treatment be discussed with the member.

NA.7.7.21.2 Fire fighters with a high index of suspicion for sleep disorders should be referred to a specialist for diagnostic sleep studies. See 9.12.6.2 for guidance regarding obstructive sleep apnea.

NA.7.7.22 The following information should be included in an annual program designed to educate fire fighters regarding reduction of risk for occupational cancer and cardiovascular disease:

- (1) Evidence of increased occupational risk
- (2) Lifestyle and occupational risk factors for cancer and cardiovascular disease
- (3) Strategies to reduce both occupational and lifestyle risk factors for cancer and cardiovascular disease, including, but not limited to, equipment cleaning, hygiene, and lifestyle modifications
- (4) Evidence-based medical screening for cancer and cardiovascular disease

Research has supported an increased risk for cardiovascular events and for many types of cancer in fire fighters. Risk reduction methods for prevention of both cardiovascular disease and cancer are similar and include the following:

- (1) Reduction of occupational exposure to carcinogens and particulates through hygiene methods
- (2) Proper use and maintenance of personal protective equipment
- (3) Elimination of nonoccupational exposure to carcinogens including, but not limited to, tobacco use
- (4) Optimization of health through lifestyle modification including, but not limited to, use of sunscreen and maintenance of optimal physical fitness and body weight

Awareness of the appropriate use of evidence-based screening tests is important for early detection of both cardiovascular disease and cancer.

The fire department physician should ensure the quality, accuracy, currency, and content of educational materials. This information can be disseminated using a variety of teaching methods including, but not limited to, in-person didactic classroom sessions, discussions, videotaped materials, or web-based modules. This should be supplemented with take-home written and/or web-based resources to ensure effective communication.

Examples of available resources for this information include, but are not limited to, the IAFF cancer awareness and prevention training course, which was developed in conjunction with the Firefighter Cancer Support Network, American Cancer Society, American Heart Association, American Lung Association, and IAFF/IAFC Wellness-Fitness Initiative.

A.8.1.1 Besides the methods of determination of body fat mentioned in 8.1.2, other, cruder methods have been used. Insurance companies have used height-weight tables to estimate risk of mortality. These tables of “ideal” weight for a given height simply reflect the norm for the U.S. population without consideration of relationship of the norm to health or fitness. Another means of determining obesity that has more scientific basis is the measurement of body mass index (BMI) or the Quetelet index. This is defined as body weight in kilograms divided by height in meters squared. Studies have shown that the Quetelet index correlates rather well ($r = 0.70$) with actual measurement of body fat from hydrostatic weighing — better than do height-weight tables. BMI also correlates with risks associated with obesity. Some experts feel that the major limitation of the BMI is that it is difficult to interpret to patients and to use in counseling about weight loss. It does have the advantage of being more precise than weight tables and of permitting comparison of populations. However, skinfold measurements correlate more highly with data from hydrostatic weighing, measuring percent body fat, and are thus more accurate for fat-related classification than the Quetelet index. Researchers from the Panel on Energy, Obesity, and Body Weight Standards have recommended that Table A.8.1.1 be used when using the Quetelet index for obesity classification.

The health risks associated with obesity begin in the range of 25 kg/m² to 30 kg/m². For example, someone with a large fat-free mass (e.g., a bodybuilder) would be classified by the Quetelet index as obese, though not to the same extent as he/she would be with relative weight or the height-weight tables. Another example of exception to this standard would be members of the Phoenix Fire Department, whose average BMI is 28. This would place the members in the mildly obese range, yet on their fitness evaluations they score in the excellent range.

A.8.1.2(1) A number of researchers have found that the ratio of waist-to-hip circumference (WHR) and the following circumference measurements are an accurate and convenient method of determining the type of obesity present:

- (1) Abdomen I (males) over the umbilicus
- (2) Abdomen II (females) just below the umbilicus, at the narrowest portion of the waistline below the ribs and above hips with the abdomen relaxed

The guide for measurement is as follows:

- (1) Hips at the widest part below the waist; landmark is the greater trochanter, feet together
- (2) Neck just below the larynx perpendicular to the long axis of the neck

Equations for body fat prediction from circumferences and height measured in inches are as follows:

Males ($N = 592$; $R = 90$; S.E. meas = 3.52 percent fat) percent fat = + [85.20969 × log (abdomen I circumference – neck circumference)] – [69.73016 × log (height)] + 37.26673

Females = + [161.27327 × log (abdomen II circumference + hip-neck circumference)] – [100.81032 × log (height)] – 69.55016

A.8.1.2(3) The most widely used method for determining obesity is based on the thickness of skinfolds. The measures, when performed correctly, have a high correlation ($r = 0.80+$) with body density from underwater weighing.

Many researchers in the United States (including those performing the large national surveys of the U.S. population that form the basis for normative data worldwide) take skinfold measurements on the right side of the body. U.K. and European investigators, on the other hand, tend to take measurements on the left side of the body. Most research, however, reveals that it matters little on which side measurements are taken.

A suggested way to conduct measurements is as follows:

- (1) As a general rule, those with little experience in skinfold measurement should mark the site to be measured with a black felt pen. A flexible steel tape can be used with sites when it is necessary to locate a bodily midpoint. With experience, however, the sites can be located without marking.
- (2) The measurer should feel the site prior to measurement, to familiarize himself and the person being measured with the area where the skinfold will be taken.
- (3) The skinfold should be firmly grasped by the thumb and index finger of the left hand and pulled away from the body. While this is usually easy with thin people, it is much harder with the obese and can be somewhat uncomfortable for the person being tested. The amount of tissue pinched up must be enough to form a fold with approximately parallel sides. The thicker the fat layer under the skin, the wider the necessary fold (and the more separation needed between thumb and index finger).
- (4) The caliper is held in the right hand, perpendicular to the skinfold and with the skinfold dial facing up and easily readable. The caliper heads should be placed $\frac{1}{4}$ in. to $\frac{1}{2}$ in. away from the fingers holding the skinfold, so that the pressure of the caliper will not be affected.
- (5) The skinfold caliper should not be placed too deep into the skinfold or too far away on the tip of the skinfold. Try to visualize where a true double fold of skin thickness is and place the caliper heads there. It is good practice to position the caliper arms one at a time, first the fixed arm on one side and then the lever arm on the other.
- (6) The dial is read approximately 4 seconds after the pressure from your hand has been released on the lever arm of the caliper jaw.

Table A.8.1.1 Quetelet Index for Obesity

BMI (kg/m ²)	Classifications
20–24.9	Desirable range for men and women
25–29.9	Grade 1 obesity
30–40	Grade 2 obesity
Greater than 40	Grade 3 obesity (morbid obesity)

- (7) A minimum of two measurements should be taken at each site. Measurements should be at least 15 seconds apart to allow the skinfold site to return to normal. If consecutive measurements vary by more than 1 mm, more should be taken until there is consistency.
- (8) Maintain the pressure with the thumb and forefinger throughout each measurement.
- (9) When measuring the obese, it can be impossible to elevate a skinfold with parallel sides, particularly over the abdomen. In this situation, try using both hands to pull the skinfold away while a partner attempts to measure the width. If the skinfold is too wide for the calipers, underwater weighing or another technique will have to be used.
- (10) Measurements should not be taken when the skin is moist because there is a tendency to grasp extra skin, obtaining inaccurately large values. Also measurements should not be taken immediately after exercise or when the person being measured is overheated, because the shift of body fluid to the skin will inflate normal skinfold size.
- (11) It takes practice to be able to grasp the same amount of skinfold consistently at the same location every time. Accuracy can be tested by having several technicians take the same measurements and comparing results. It can take up to 20 to 50 practice sessions to become proficient. Calipers should be accurately calibrated and have constant pressure of 10 g/mm² throughout the full measurement range. The accuracy of skinfold measurements can be reduced by many factors, including measurement at the wrong sites, inconsistencies among different calipers and testers, and the use of inconsistent equations. However, when testers practice together and take care to standardize their testing procedures, inconsistencies among testers can usually be held under 1 percent.

A.8.2.2.1 An appropriate target level should be to a predicted level of 12 METs or greater, which is necessary for firefighting activities.

A.8.2.2.1.2 A prescribed aerobic program might be a consideration.

Δ A.9.1.3(1) A member, while wearing full protective clothing (turnout coat and pants, helmet, boots, and gloves) and SCBA, is required to safely perform a variety of fire-fighting tasks that require upper body strength and aerobic capacity. For those not familiar with fire suppression, the following specific details inherent to the activities in essential job task 1 are offered:

- (1) Lifting and carrying tools and equipment (e.g., axe, halligan tool, pike pole, chain saw, circular saw, rabbit tool, high-rise pack, and hose) that weigh between 7 lb and 20 lb (3.2 kg and 9 kg) and are used in a chopping motion over the head, extended in front of the body, or in a push/pull motion.
- (2) Advancing a 1¼ in. (45 mm) or a 2½ in. (65 mm) diameter hose line, which requires lifting, carrying, and pulling the hose at grade, below or above grade, or up ladders. In addition to the weight of the hose itself, a 50 ft (15 m) section of charged 1¼ in. (45 mm) hose contains approximately 90 lb (41 kg) of water, and a 50 ft (15 m) section of 2½ in. (65 mm) hose holds approximately 130 lb (59 kg) of water.

- (3) Performing forcible entry while utilizing tools and equipment (e.g., axe, halligan tool, chain saw, circular saw, or rabbit tool) that requires chopping, pulling, or operating these items to open doors, windows, or other barriers to gain access to victims, possible victims, or to initiate fire-fighting operations.
- (4) Performing ventilation (horizontal or vertical) utilizing tools and equipment (e.g., axe, circular saw, chain saw, pike pole) while operating on a flat or pitched roof or operating off a ground or aerial ladder. This task requires the fire fighter to chop or push tools through roofs, walls, or windows.

Other tasks that could be performed can include search and rescue operations and other emergency response actions under stressful conditions, including working in extremely hot and cold environments for prolonged time periods.

A.9.3.2 Possible accommodations include but are not limited to changes in assignment, provision of special devices to assist the member in accommodating the medical disability, revision of standard operating procedures, and/or techniques.

A.9.3.3 What this chapter does is provide guidance to fire department physicians for determining a member's ability to medically and physically function using the individual medical assessment for the conditions listed in the chapter.

A.9.4 Fire-fighting activities have a high static component (i.e., inducing predominantly an increase in blood pressure) and a moderate to high dynamic component (i.e., inducing predominantly an increase in heart rate). Sports with a similar set of demands include wrestling, body building, and boxing. Recommendations made by the task force with respect to athletic activities that have these physical demands (high static, moderate dynamic) have been followed in this document.

Performance of the aerobic and anaerobic critical job tasks in a stressful, noxious fire or rescue environment with low oxygen, high carbon monoxide, and numerous toxic gases has significant risk for acutely aggravating pre-existing arrhythmias and cardiac ischemia (oxygen delivery) and decreasing cardiac valve or muscle function (oxygen supply). To protect from this environment requires that the fire fighter wear personal protective equipment (PPE) and SCBA. The PPE provides a thermal barrier at the cost of added weight, encapsulation, dehydration, and increased metabolic cost for a given workload. The SCBA is a positive pressure demand valve respirator that provides a barrier against the inhalation of noxious/toxic gases and particulate matter but at increased metabolic cost due to its weight and increased respiratory workload. Fire-fighting activities have a high static component (i.e., inducing predominantly an increase in blood pressure) and a moderate to high dynamic component (i.e., inducing predominantly an increase in heart rate). These factors increase physiologic stress and cardiac demand and can precipitate acute cardiac collapse, heart attack, syncope (blackout), or sudden death. In the absence of sudden death, the fact that the fire fighter was operating in an isolated, dangerous environment when a cardiac event occurred would make the subsequent risk for such an event leading to death unacceptably high for that fire fighter, for the civilian who depends upon that fire fighter, or for other fire fighters who not only depend upon that fire fighter but can also be called upon to rescue that fire fighter.

N A.9.4.3.1 The criteria listed in 9.4.3.1(1) through 9.4.3.1(6), including annual radionuclide stress tests, should be re-evaluated on an annual basis by the fire department physician.

A.9.4.8.2(6) Those without any of the above risk factors have a less than 1 percent risk of sudden death.

A.9.4.9.1 A first episode of syncope must be fully evaluated to determine that the underlying cause does not compromise a member's ability to safely perform job tasks. Underlying neurologic, cardiovascular, circulatory, and/or endocrine disturbance must be ruled out. If after evaluation there is no evidence for underlying disease, exam is normal, and there has been no reoccurrence, then the member need not be restricted from performing job tasks. If underlying disease is present and not reversible, then the member's ability to safely perform essential job tasks 1, 4, 5, 7, 8, 9, and 13 is compromised due to risk for life-threatening sudden incapacitation. *(For additional recommendations, see section relevant to the underlying disease.)* If recurrent and no underlying disease, then the member's ability to safely perform essential job tasks 1, 4, 5, 7, 8, 9, and 13 might be compromised.

A.9.4.10.1 This technology has not been FDA approved for operating effectively under conditions commonly found on the fire ground (electromagnetic interference). In addition, the requirement for pacemaker or implantable defibrillator defines the underlying cardiac condition as life-threatening. Many pacemakers do not have the ability to automatically increase heart rate upon demand during the critical job tasks performed on the fire ground.

A.9.4.16.1 Evaluation with ECG, Holter monitor, and/or stress test should be further supplemented with electrophysiologic study (EPS). If rapid supraventricular tachycardia is inducible and surgical ablation is successful, there is no medical reason to restrict the member from performing essential job task 13.

A.9.4.17.1 Even if rate controlled (with or without medication), the added catecholamine stress and dehydration produced when performing critical job tasks on the fire ground makes the potential for life-threatening sudden incapacitation associated with this rhythm disturbance too great a risk. If persistent or recurrent, these arrhythmias, even if rate controlled, can result in embolic events, which prevent the successful and safe performance of critical job tasks on the fire ground or during emergency responses.

Δ A.9.4.20.1.1 Members with prehypertension (systolic 120–139 mmHg or diastolic 80–89 mmHg), Stage 1 hypertension (systolic 140–159 mmHg or diastolic 90–99 mmHg), or stage 2 hypertension (systolic 160 mmHg or greater or diastolic 100 mmHg or greater) should be referred to their primary care physician for evaluation, lifestyle modification, and/or treatment.

(1) Members with stage I hypertension whose BP returns to either prehypertension or normal with lifestyle modification can return to an annual medical evaluation. For members with long-standing stage I hypertension whose BP has not been reduced, additional evaluation for possible end organ damage should be considered, including any or all of the following:

- (a) Complete patient history for symptoms of heart failure (e.g., shortness of breath upon exertion) or transient ischemic attacks (TIAs)
- (b) Dilated eye examination for retinopathy

(c) Blood creatinine measurement for nephropathy

(d) Tests for left ventricular hypertrophy (Use of the resting ECG to detect left ventricular hypertrophy is insensitive, e.g., 5 percent sensitivity, so echocardiogram is the currently accepted test for diagnosing left ventricular hypertrophy.)

(2) Chronic hypertension can damage the eye (retinopathy), the kidneys (nephropathy), the vascular system (stroke, TIA, or PAD), or the heart (left ventricular hypertrophy and heart failure). These hypertension complications are known as end organ damage. The cardiac and vascular complications are associated with an increased risk of sudden incapacitation and sudden cardiac death (Koren et al. 1991). With proper evaluation, lifestyle modification, and/or treatment, these complications can be avoided. Lifestyle modification includes weight reduction, dietary plan, reduction in dietary sodium, an increase in aerobic physical activity, and moderation in alcohol consumption [Chobanian 2003].

(3) Because of the high risk of a sudden cardiovascular events (e.g., due to undiagnosed cardiac disease), members with stage 2 hypertension should be restricted until their blood pressure can be brought under control. Once their blood pressure is brought under control, end stage organ complications should be regularly evaluated as described in A.9.4.20.1.1(2). The frequency of such evaluation is based on the severity and duration of their elevated blood pressure.

Δ A.9.4.21.1 Metabolic syndrome includes three or more of the following components:

- (1) Abdominal obesity, defined as a waist circumference >102 cm (>40 in.) in men or >88 cm (>35 in.) in women
- (2) Triglycerides >150 mg/dl
- (3) HDL cholesterol <40 mg/dl for men, <50 mg/dl for women
- (4) Blood pressure >135/85 mmHg
- (5) Fasting blood glucose >110 mg/dl

Members with metabolic syndrome should receive a cardiac stress. Members should be counseled as to lifestyle adjustments, receive an exercise prescription, and be referred to their personal physician for treatment of their elevated cholesterol, triglycerides, insulin resistant hyperglycemia, and/or hypertension.

N A.9.4.23.2 Obesity is independently predictive of cardiac hypertrophy.

A.9.6 All disorders of the hypothalamic-pituitary-adrenal axis can potentially affect fire fighters because these hormonal systems play an essential role in maintaining homeostasis when exposed to physiologic and emotional stress while performing critical tasks on the fire ground or during emergency operations. Homeostatic regulation is further impaired under conditions of extreme temperature and dehydration, both of which are common when performing the critical tasks of fire fighting while wearing personal protective clothing on the fire ground.

Without treatment, the risk of life-threatening dehydration, extreme alterations in body temperature, electrolyte disturbances, and muscle weakness while operating at a fire scene is unacceptably high. Mineralocorticoid deficiency also increases the risk of life-threatening hypotension and/or arrhythmias associated with exertion and dehydration. For this reason, untreated or uncorrected hypothalamic, hypopituitarism,

hypothyroidism, hyperthyroidism, thyroid storm, hypoadrenalism, hyperadrenalism, parathyroidism, and other disorders of thyroid and adrenal function threaten a member's ability to safely perform essential job tasks.

A.9.6.3.1 Type 1 diabetes was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. Type 1 diabetes develops when the body's immune system destroys pancreatic beta cells, the only cells in the body that make the hormone insulin, which regulates blood glucose. This form of diabetes usually strikes children and young adults, although disease onset can occur at any age. Type 1 diabetes can account for 5 percent to 10 percent of all diagnosed cases of diabetes. In order to survive, people with Type 1 diabetes must have insulin delivered by a pump or injections.

Type 2 diabetes was previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes. Type 2 diabetes can account for about 90 percent to 95 percent of all diagnosed cases of diabetes. It usually begins as insulin resistance, a disorder in which the cells do not use insulin properly. As the need for insulin rises, the pancreas gradually loses its ability to produce insulin. Type 2 diabetes is associated with older age, obesity, family history of diabetes, prior history of gestational diabetes, impaired glucose tolerance, physical inactivity, and race/ethnicity. Type 2 diabetes is increasingly being diagnosed in children and adolescents. Many people with Type 2 diabetes can control their blood glucose by following a careful diet and exercise program, losing excess weight, and taking oral medication. Among adults with diagnosed diabetes, about 12 percent take both insulin and oral medications, 19 percent take insulin only, 53 percent take oral medications only, and 15 percent do not take either insulin or oral medications.

Diabetic members should be carefully monitored for control of blood sugar because lack of glycemic control increases the risk for dehydration, hypotension, and target organ damage (e.g., myocardial infarction), which that can result in life-threatening sudden incapacitation during performance of critical job tasks. Such members should be monitored at regular intervals to ascertain that blood glucose and blood hemoglobin A1C levels remain under control. According to the American Diabetes Association 2010 guidelines, lowering hemoglobin A1C to below or around 7 percent has been shown to reduce microvascular and neuropathic complications of type I and type II diabetes. The recommendation for microvascular disease prevention in nonpregnant adults in general is for a hemoglobin A1C level of less than 7 percent. Exceptions to this 7 percent level would be any condition that exists in addition to diabetes that is responsible for the hemoglobin A1C not accurately reflecting average glucose levels (e.g., hemoglobinopathies such as sickle cell disease). Additional exceptions to this 7 level would occur in individuals already not meeting NFPA 1582 requirements (e.g., history of severe hypoglycemia or end organ complications). See reference in F.2.3.

With medical control of diabetes, the risk of hypoglycemia (low blood sugar) becomes a major concern in regard to those with diabetes being or becoming fire fighters. This risk is greatest in those with Type 1 diabetes.

In general, members treated with oral diabetes medications are at little risk of significant hypoglycemia. Members treated with metformin, alpha-glucosidase inhibitors, or thiazolidinediones alone or in combination with each other are at no risk of hypoglycemia, as these classes of drugs do not increase insulin levels. Members treated with **sulfonylureas** and related

drugs have a risk of severe hypoglycemia less than 1 percent of the risk associated with insulin treatment. Members treated with diet and exercise alone (no oral diabetes medications or insulin) are at no risk of hypoglycemia.

Fire fighting entails a unique set of conditions that need to be considered in regard to those with diabetes and the risks of hypoglycemia. Unpredictable meal schedules, periods of physical exertion, adrenergic stimulation, and sleep deprivation all present challenges to fire fighters with diabetes. There are occasions when there is no safe access to food or other forms of oral glucose while wearing respiratory protection in a hazardous environment, and the typical symptoms of hypoglycemia might not be recognized as easily in the midst of fighting a fire. As well, it is not always possible to exit a hazard zone rapidly enough to treat hypoglycemic symptoms when detected. Members engaged in fire suppression are at greater risk than those engaged in other emergency activities (EMS, law enforcement) for this reason.

A review of current published data suggests that with careful individualized assessment it is possible to identify those with diabetes who can function fully as fire fighters and who do not present a significant risk to themselves, their fellow fire fighters, or to those they serve.

The individualized assessment process and criteria included in this standard were set up to assure that only those who are managing their diabetes conscientiously using the most up-to-date approaches would be eligible to be a fire fighter. In addition, certain patients have a greater tendency for significant hypoglycemia despite the quality of their diabetes management. Such individuals would not be good candidates to be fire fighters and, accordingly, are excluded from service under the criteria in this standard.

This individualized assessment is possible in large part because a great deal of change has occurred in the treatment of diabetes in recent years. Previously, patients used insulins that were somewhat unpredictable in the time course of their action and generally took two injections per day. Today, there are insulins that are far more predictable and are either very long acting and essentially treat only endogenous glucose production (and therefore do not depend on a patient eating on a regular schedule) or are very rapid and therefore can be administered directly before, during, or even shortly after one eats, significantly decreasing the chance of insulin being taken and then the meal being interrupted due to fire fighting duties.

Regimens now referred to as "basal bolus" are composed of a very long-acting basal (or background) insulin, which controls glucose levels overnight and in the absence of glucose intake and rapid-acting (bolus) insulins that are dosed just prior to, during, or even after meals based on blood glucose levels at that time, the amount of carbohydrate that the person expects to consume, and any anticipated change in physical activity patterns over the next number of hours.

These regimens have resulted in improved overall blood glucose control with significantly less risk of hypoglycemia for many patients.

Additional major advances in the size, speed, and sophistication of blood glucose meters provide for easy, accurate, and rapid assessment of blood glucose levels. Such monitoring techniques, as well as the generally increased self-awareness that

accompanies consistent self-monitoring, enable the motivated fire fighter with diabetes to assess blood glucose levels and ingest a safety net of carbohydrates before entering a hazardous environment. Similarly, major advances in insulin delivery systems have greatly increased the ability of the motivated individual with diabetes to achieve a level of diabetes self-management consistent with the duties of fire fighting.

In order to get maximum effect from these medical advances, and to minimize the risk of hypoglycemia, members with diabetes must check their blood glucose level frequently (as recommended based on factors such as type of therapy and glycemic history), review these results on a regular basis, and see their diabetes care provider regularly for discussion in regard to any necessary changes in treatment. Member evaluation needs to look for any of the known risk factors for serious hypoglycemia or evidence of any of the known microvascular (eye disease, kidney disease, or nerve disease) or macrovascular (cardiovascular disease, peripheral arterial disease) complications of diabetes. A 12 MET stress test is required because myocardial infarction remains the major cause of line-of-duty fatalities, and diabetes (Type 1 and Type 2) is not only a risk factor for myocardial ischemia but also for silent myocardial ischemia.

The individualized assessment just described demands a very close and good working relationship between the member and the diabetes care provider. The experience of those who care for current fire fighters with diabetes is that this works for a highly motivated member who will do whatever it takes to perform his/her job at a high level and in a safe manner.

A.9.6.4.1 See A.9.6.3.1.

A.9.7 Theoretically, respiratory protection from this environment is afforded by SCBA use. Experience shows that SCBA are frequently taken off to improve visibility and that SCBA air supply is often insufficient to last for the entire fire operation (ingress, suppression, overhaul, and egress). Thus, performance of essential job tasks is regularly done for short time periods in a noxious fire or hazardous materials environment with high carbon monoxide, noxious/toxic gases, and irritants. Working in this environment has added potential for increasing carbon monoxide levels, decreasing oxygen levels, and reducing oxygen delivery, and the extent of this reduction and resulting risk is directly related to the degree of dysfunctional gas exchange already present prior to the performance of these essential job tasks. It also has potential for acutely aggravating pre-existing airway hyperreactivity commonly found in patients with asthma and other obstructive pulmonary conditions (bronchitis, etc.). Acute hyperreactivity in this environment is likely to induce immediate clinical asthma (bronchospasm and wheeze) with a significant increased work of breathing and gas exchange abnormalities. Respiratory insufficiency, no matter the cause, has the potential for arrhythmias, cardiac ischemia (oxygen delivery), decreased respiratory and cardiac function (oxygen delivery to tissues), acidosis, and life-threatening sudden incapacitation.

A.9.7.6 Asthma, defined as reversible bronchospasm, can be temporary or chronic. "Temporary asthma," more accurately referred to as acute bronchitis with wheezing, is a brief episode lasting days to months, usually following allergic or infectious exposure. When this occurs without prior history, it most likely will resolve over the next few weeks or months. Such temporary incidents, once resolved, do not compromise the member's ability to safely perform essential job tasks. In contrast, true

asthma is a chronic condition with a clinical history of recurrent reversible bronchospasm or longstanding, persistent reversible bronchospasm. For asthmatics, exposure to smoke or other irritants on the fire ground or a hazardous materials environment has a high probability of causing acute asthma attacks and can also worsen the progression of the underlying obstructive inflammatory disease. If this occurs in an environment that is immediately dangerous to life and health (e.g., interior fire suppression or certain hazardous materials operations), it can have potentially devastating consequences for the member, the team, or the mission. There are no studies that support or deny that asthma in this environment can be prevented or adequately controlled by anti-inflammatory medications (inhaled corticosteroids, cromolyn, leukotriene modifiers). It is not acceptable to use or rely on bronchodilator medications for this purpose because in a hazardous environment, SCBA cannot be removed to use a rescue inhaler. There are no studies that support or deny that the use of such medications is preventive or effective in a fire/smoke environment, and several studies have implicated the use of beta-agonists (short- and long-acting bronchodilators) as an independent risk for sudden death and myocardial infarction in the United States, Canada, Britain, New Zealand, and Australia.

Identifying asthmatics who are not only stable in a normal environment but also do not have asthmatic attacks in a fire or irritant environment is difficult. Because the clinical definition of asthma is reversible bronchospasm, spirometry or pulmonary function testing performed in the absence of a clinical attack is expected to be normal and might not even show a bronchodilator response. Only if performed during an attack will spirometry or other pulmonary function tests show obstructive airway flow limitations with a positive bronchodilator response (greater than 12 percent and 200 mL increase in FEV₁). Therefore, in these fire fighters who report good control without asthma exacerbations on the fire ground, spirometry should show adequate reserve (FVC and FEV₁ greater than or equal to 90 percent predicted), without significant bronchodilator response when performed off bronchodilators on the day of testing. For population studies, pulmonary function is considered normal when greater than or equal to 80 percent predicted, but for an individual with a history of asthmatic bronchospasm who is being considered for job tasks performed in a potentially irritant environment, it is reasonable diligence to require pulmonary function with a greater specificity for demonstrating adequate reserve (greater than or equal to 90 percent predicted). The first time this member is being evaluated for asthma control, challenge testing should be performed to demonstrate no evidence for clinically significant airway hyperreactivity [i.e., to be normal or negative there should be less than 20 percent decline in FEV₁ with provocative challenge testing to cold air, exercise (12 METs), or a methacholine (PC₂₀ greater than 8 is considered normal, as response at dose greater than 8 mg might not be clinically significant)]. Challenge testing should be performed off bronchodilators the day of testing. If the member reports good control only when taking prescribed control medications (inhaled corticosteroids, cromolyn, or leukotriene modifiers), then consideration should be given to continuing these medications during the testing. The member should not use bronchodilators (short- or long-acting bronchodilators) the day of testing because these medications could undermine the purpose of this test — that is, demonstrating normal pulmonary function without clinically significant bronchodilator response or airway hyperreactivity. Challenge testing should be performed only by an experienced

specialist. Testing should not be performed in members without a history suggestive of asthma, since there is no indication for testing. It should never be performed in members with moderate to severe pulmonary dysfunction, as these members have already demonstrated that they cannot safely perform essential job tasks, and further testing might induce life-threatening bronchospasm. Challenge testing should not be performed annually and should be repeated only if clinically indicated.

▲ A.9.7.6.1(6) If the member reports good control only when taking prescribed control anti-inflammatory medications (e.g., inhaled corticosteroids or cromolyn or oral leukotriene modifiers), then consideration should be given to continuing these medications during the testing. The member should not use bronchodilators (short- or long-acting bronchodilators) the day of testing because these medications can undermine the purpose of the test, that is, to demonstrate normal pulmonary function without clinically significant bronchodilator response or airway hyperreactivity. Provocative challenge testing should be performed the first time the member is evaluated for asthma and only if all the provisions in 9.7.6.1(1) through 9.7.6.1(7) indicate that the member's asthma is under acceptable control. Provocative challenge testing is not required annually and should be repeated only if clinically indicated.

A.9.7.7 A member with current or recent history of allergic-induced, reversible bronchospasm is no different from a non-allergic asthmatic in his/her ability to safely perform the essential job tasks associated with non-allergic irritant exposures, as the majority will remain hyperreactive for 4 to 8 weeks after allergic-induced bronchospasm. Two caveats exist. First, some members could have a distant history of allergic asthma, are unlikely to be exposed to this allergen again, or have successfully been desensitized by an allergist. These members, if asymptomatic off asthma medications for 2 months, can perform all essential job tasks with reasonable safety. If asthma is still suspected then the member should be evaluated as in 9.7.6. Provocative challenge testing should only be to general irritants (e.g., cold air, exercise, or methacholine). Specific allergen challenge testing should not be performed, as the risk for life-threatening asthma outweighs the benefit. Second, members can have allergic rhinitis, sinus or skin conditions without a history, or suspicion of clinical asthma. These members do not need specialized pulmonary testing.

A.9.7.8 Moderate to severe chronic obstructive pulmonary disease is characterized by an FEV₁/FVC ratio of 0.45 to 0.59 (absolute ratio rather than percent of predicted) and severe chronic obstructive pulmonary disease by an absolute FEV₁/FVC ratio equal to or less than 0.07 and an FEV₁ less than 0.70 percent predicted. Additional tests that can be of value are lung volumes, gas exchange parameters (diffusing capacity, oxygen saturation, arterial blood gases), chest radiograph, and chest CT scan. With moderate to severe chronic obstructive pulmonary disease, elevated respiratory workload and lack of respiratory reserve will not provide adequate gas exchange for the safe performance of essential job tasks. Working in this environment has the potential for increasing carbon monoxide levels, decreasing oxygen levels, and reducing oxygen delivery, and the extent of this reduction and resulting risk is directly related to the degree of dysfunctional gas exchange already present prior to the performance of essential job tasks. It also has the likely potential for acutely aggravating pre-existing airway hyperreactivity commonly found in patients with moderate to severe chronic obstructive pulmonary diseases (bronchi-

tis, etc.). Acute hyperreactivity in this environment can induce immediate or progressive clinical asthma (bronchospasm and wheeze) that can lead to sudden incapacitation from status asthmaticus and/or cardiac ischemia. In contrast, asymptomatic members with mild chronic obstructive pulmonary disease (an absolute FEV₁/FVC equal to or less than 0.70 and an FEV₁ above 70 percent predicted) and without airway hyperreactivity might be able to safely perform essential job tasks. However, if members with mild chronic obstructive pulmonary disease are symptomatic, especially during exercise or on the fire ground, then appropriate additional testing can be useful, including pre- and post-spirometry, lung volumes, gas exchange parameters (diffusing capacity, oxygen saturation, arterial blood gases), exercise testing, and/or provocative challenge testing.

A.9.7.14 Members who are otherwise qualified can safely resume fire-fighting duties as long as they have recovered from their pneumothorax (with or without surgery) and their pulmonary function has returned to acceptable limits. Most patients with spontaneous pneumothorax have cysts or bullous disease from congenital or infectious etiology. Some have bullous disease due to chronic pulmonary disease. Usually, those with congenital or infectious cause will have pulmonary function tests that are compatible with the safe use of SCBA while those with chronic pulmonary disease can have pulmonary function tests that are not compatible with the safe performance of essential job tasks 1, 2, 3, 4, 5, and 7. Regardless of cause, many (10 percent to 20 percent) will have a recurrence on the same side unless surgically corrected. After the pneumothorax has resolved, surgical correction of underlying cystic/bullous disease is not a prerequisite for returning to fire-fighting duty as long as pulmonary function allows for the safe use of SCBA.

A.9.7.16 Significant pleural effusions should be referred for diagnostic tests, as new or increasing effusions can be a sign of cardiac, liver, or renal disease, pneumonia, empyema, tuberculosis, or cancer. When these illnesses are severe enough to cause pleural effusions, they compromise the ability to safely perform essential job tasks due to limitations of endurance or inability to safely wear SCBA. If not the illnesses causing pleural effusions, then pulmonary function tests should be assessed. Moderate to severe restriction (FVC less than 60 percent of predicted with an absolute FEV₁/FVC ratio greater than or equal to 0.90) compromises the member's ability to safely perform essential job tasks unless a more complete evaluation of gas exchange and exercise capacity shows the ability to exercise at a workload of 12 METs without evidence of hypoxia or exercise desaturation.

A.9.8.9 After acute infection has resolved, the fire fighter can return to work if weight, muscle strength, cardiac function, and function of other involved organs have returned to levels required for safe performance of essential job tasks. Concepts used within this document for each of these organ systems should be applied here.

A.9.8.10 After active infection has resolved (e.g., sputum AFB or sputum culture negative for 3 successive days) and the fire fighter is no longer contagious (usually within 2 weeks of successful treatment), the fire fighter can return to work but perform only essential job tasks 1, 2, 3, 4, 5, 7, and 9 if weight, muscle strength, pulmonary function, and function of other involved organs have returned to acceptable levels for safe performance. Concepts used within this document for each of

these organ systems should be applied here. A positive tuberculin (PPD) skin test or a positive tuberculin blood test without symptoms and with a normal chest radiograph indicates exposure, and latent infection without evidence for active infection does not prevent a fire fighter from performing essential job tasks. Alternatively, a positive TB skin test (PPD) can be a false-positive from exposure to atypical mycobacterium or from prior BCG vaccination. The TB blood test does not produce these false positives, but experience with false negatives is limited [*Mortality and Morbidity Weekly Review*, December 16, 2005]. If conversion from negative to positive tuberculin test (PPD or blood test) occurred within the last 2 years, there is increased risk for the development of active contagious tuberculosis, which requires either treatment or frequent monitoring for symptoms and chest radiograph changes (annually for at least 2 years or during evaluation of current symptoms). Members on prophylactic treatment can perform all essential job tasks without restrictions. Treatment is a personal decision, but in its absence, monitoring with chest radiographs at prescribed intervals is mandatory because development of active disease is a public health hazard to other members and the public.

A.9.8.11 Hepatitis, when not acute or when chronic but without symptoms and without significant liver dysfunction or other organ system dysfunction, does not prevent the successful and safe performance of essential job tasks during fire fighting or EMS work. Hepatitis A, when not acute, is no longer a public health risk. Hepatitis B, C, and so forth, are bloodborne pathogens and are not a public health risk, as standard precautions to prevent the spread of bloodborne infections are a mandatory part of all emergency operations. Treatment to prevent Hepatitis C from progressing to liver insufficiency or failure (cirrhosis) is now available and FDA approved. Members receiving this treatment need to be regularly evaluated to determine their ability to safely perform their essential job tasks. This combination drug therapy protocol can produce dehydration, fatigue, depression, anemia, thrombocytopenia (bleeding disorder), and so forth.

A.9.8.12 HIV without AIDS does not prevent the successful and safe performance of essential job tasks during fire fighting or EMS work. HIV is a bloodborne pathogen and is not a public health risk, as standard precautions to prevent the spread of bloodborne infections are a mandatory part of all emergency operations. The fire fighter with AIDS but without significant organ dysfunction is able to safely perform essential job tasks after careful evaluation. Treatment to prevent AIDS from occurring when HIV infection occurs or to control the progression of AIDS is available and FDA approved. Members receiving this treatment need to be regularly evaluated to determine their ability to safely perform the essential job tasks on the fire ground, during emergency operations, and when wearing protective clothing. This combination drug therapy protocol can produce dehydration, fatigue, depression, anemia, thrombocytopenia (bleeding disorder), and so forth.

A.9.9 The personal protective ensemble and SCBA can place the fire fighter's spine at a biomechanical disadvantage due to added weight and altered center of gravity. Certain medications (narcotics and muscle relaxants) used to treat spinal conditions can frequently produce or worsen somnolence, discoordination, and disequilibrium. Neurologic dysfunction, regardless of cause, can produce sudden incapacitation, which when working in dangerous environments can result in life-threatening injuries.

A.9.10 Fire fighters with active, ongoing, or recurrent orthopedic disorders can have difficulty due to reduced motor strength, sensation, and flexibility as well as problems with fatigue, coordination, gait, and equilibrium. These physical abilities are required to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, and 13. The protective uniform and SCBA can place the fire fighter's involved extremity (upper or lower) at a biomechanical disadvantage due to added weight and altered center of gravity. Certain medications (narcotics and muscle relaxants) used to treat orthopedic conditions can produce or worsen somnolence, discoordination, and disequilibrium.

A.9.12.1 The fire fighter works in hazardous environments, both on the fire ground and during other emergency operations. Heavy debris can fall on the fire fighter. The helmet offers some protection when it fits well and is worn properly. The fire fighter with a defect in the skull is more vulnerable to head trauma and life-threatening sudden incapacitation. The fire fighter is also exposed to biological aerosols, particulates, smoke, and hazardous materials. Defects in the structure of the face, nose, mouth, or throat can prevent acceptable fit testing of a respirator (N-95, P-100, or SCBA).

A.9.12.3.1 Diseases of the eye such as retinal detachment, progressive retinopathy, optic neuritis (severe or progressive), macular degeneration, cataracts, and glaucoma can result in the failure to read placards and street signs or to see and respond to imminently hazardous situations. Evaluation of visual acuity and visual fields with consultation by an ophthalmologist is suggested.

Ophthalmological procedures such as radial keratotomy and repair of retinal detachment require sufficient time (approximately 2 weeks for radial keratotomy and Lasik-type surgery and 3 months for retinal detachment) to allow stabilization of visual acuity and to ensure that there are no post-surgical complications. Members should be cleared for duty by the ophthalmologic surgeon who understands the essential job tasks associated with fire fighting. These ophthalmological procedures can result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations.

The fire service physician should also consider any color vision deficiency of the member in view of the color vision requirements of the member's specific job in a given fire department.

A.9.12.3.1(1) Far visual acuity is at least 20/40 binocular, corrected with contact lens or spectacles. Far visual acuity uncorrected is at least 20/100 binocular for wearers of hard contacts or spectacles. Successful long-term soft contact lens wearers (i.e., 6 months without a problem) are not subject to the uncorrected standard. Inadequate far visual acuity can result in the failure to be able to read placards and street signs or to see and respond to imminently hazardous situations. Successful soft contact lens wearers are not subject to the uncorrected standard.

A.9.12.3.1(3) Most persons with monocular vision, after a 6-month accommodation period, are able to function well. There is some loss of depth perception and peripheral vision. The loss of depth perception has not been shown to be of a type that will affect a member's ability to safely perform essential fire-fighting tasks. Some very specialized tasks can be difficult to safely perform, and the fire service physician should consider the depth of field deficiency of the individual and

consider the depth of field requirements of the member's job in order to reach an individual determination. It should be noted that the FAA will award all classes of pilot's licenses to monocular pilots. The loss of peripheral vision is compensated for by increased scanning and head movements. There are studies that show some detriment of driving function in the driving lab. As of the writing of this section the DOT does not allow monocular persons to hold a commercial driver's license. In view of this and the increased dependence on visual cues when driving emergency vehicles, monocular fire fighters should be restricted from driving fire apparatus and other emergency vehicles.

- Δ A.9.12.4.1** Audiometric pure tone threshold testing includes the frequencies 500 Hz, 1000 Hz, 2000 Hz, 3000 Hz, 4000 Hz, and 6000 Hz. Tests are performed using audiometric instrumentation calibrated to ANSI S3.6, *Specification for Audiometers*.

Fire fighters should have adequate hearing to hear a victim cry for help, to hear a PASS alarm, to hear noises associated with imminent collapse, or to hear noise associated with changes in the fire pattern. Hearing and the ability to localize sounds is crucial in a fire-fighting environment where smoke often minimizes visual cues; and there is a high degree of background noise and stress-related distractions. Fire fighters should be able to hear fire department portable and vehicle radio communications. They should be able to hear, discriminate, and localize safety-related acoustic cues such as air horns, sirens, screams, collapsing walls, beams, timbers, or gas leaks to safely perform their critical job tasks during fire suppression and fire rescue.

These critical job tasks need to be safely performed under conditions of extreme background noise and SCBA noise as typically found at the incident scene. The inability to hear sounds of low intensity or to distinguish voice from background noise can lead to failure to respond to imminently hazardous situations and thus lead to life-threatening sudden incapacitation to the member or others depending on the member.

- N A.9.12.4.2** There are several reasons that the use of hearing assistive devices might not be appropriate for the hearing impaired member, including the following:

- (1) Hearing assistive devices do not restore normal hearing.
- (2) Hearing assistive devices cannot compensate for asymmetrical hearing loss, and thus will not totally resolve the difficulty in sound localization of those with asymmetric hearing loss.
- (3) Hearing assistive devices will improve hearing in noise (e.g., fire scene, rescue scene, traffic), but this noise will always be the most challenging environment for a hearing-impaired member.
- (4) It is unknown if hearing assistive devices will continue to function normally when exposed to the heat, moisture, and smoke of the fire scene.

Understanding the above limitations, hearing assistive devices will improve a hearing-impaired member's hearing functioning. Thus, it is the consensus of the technical committee that members should be allowed to use hearing assistive devices if their unaided average hearing loss in the unaided better ear is better than 40 decibels (dB) at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz. If the device fails, the member will still have sufficient hearing acuity to meet 9.12.4.2, the minimum hearing standard.

A.9.12.5.1 Intact gait and balance are required to safely perform critical tasks such as climbing stairs, carrying heavy items (tools, equipment, victims, stretchers), climbing ladders, and walking on narrow/elevated/inclined areas (roofs). A fire fighter's balance can be further stressed by the need to safely perform these critical job tasks wearing personal protective clothing and SCBA.

Any symptomatic balance disturbance, vertigo, change of gait and coordination, or history of these that has not resolved completely should be fully investigated. Examples include but are not limited to Ménière's syndrome, severe labyrinthitis, and cerebellar syndromes. Current use of medications needs careful evaluation to be certain that the condition is completely controlled and that the side effects of the medication do not impose additional unacceptable risks for the successful and safe performance of critical job tasks.

A.9.12.6.1 The face, nasal, oropharyngeal, and dental structures should be of sufficient structure and function to allow the proper use and fitting of required respiratory protection (N-95, P-100, SCBA) and other protective clothing and gear. These structures should allow sufficient function for proper nutrition, balance, communication, and respiration. Aphonia, severe dysphonia, or a speech pattern that prevents oral communication during fire or emergency operations should resolve or be corrected.

Anosmia (loss of smell) can interfere with the ability to safely perform critical tasks on the fire ground. Evaluation of anosmia is difficult, as objective testing is not available in most medical settings.

Recurrent sinusitis (severe, requiring repeated hospitalizations or repeat surgery) can interfere with the successful and safe performance of critical tasks due to inability to effectively wear SCBA and inability to safely perform other critical tasks during emergency operations due to limitations of pain, endurance, or respiration.

Severe and recurrent epistaxis can prevent successful and safe performance of critical tasks due to inability to wear SCBA on the fire ground.

Orthodontic and certain other maxillofacial appliances or prostheses can preclude safe and effective use of protective equipment and compromise nutritional or hydration status or ability to communicate.

Pharyngeal or laryngeal stenosis, mass, or accessory tissues can interfere with speech, communication, or respiration, which will not permit the successful and safe performance of critical tasks on the fire ground and during emergency operations, especially when wearing SCBA and personal protective clothing.

A.9.12.6.2 Untreated obstructive sleep apnea is associated with fatigue, cognitive defects, pulmonary hypertension, hypertrophic heart disease, arrhythmias, and early onset dementia. These issues can reduce the ability to perform all essential job tasks. Risk factors for developing obstructive sleep apnea include male gender, increased body mass index (BMI), short/wide neck, and/or narrow throat. Screening questionnaires, such as the Berlin Questionnaire (assessing snoring, fatigue, obesity and hypertension) can be used to determine those who require formal sleep testing. In those with obstructive sleep apnea, additional testing is required to determine the level of positive pressure (CPAP or BIPAP) required to overcome the

obstruction. Compliance with treatment can be assessed using home monitoring devices attached to the CPAP or BIPAP machine. Target organ damage can be screened for by cardiac echo for evidence of pulmonary hypertension or right ventricular hypertrophy.

A.9.13 Fire fighters with active, ongoing, or recurrent neurologic disorders can have difficulty following orders, communicating information, and working in a coordinated manner with workers, victims, and involved civilians (essential job tasks 11, 12, and 13). Fire fighters with neurologic disturbances can also have difficulty with fatigue, somnolence, cognitive function, motor strength, sensation, coordination, gait, and equilibrium, all required to safely perform essential job tasks. The fire fighter often is exposed to considerable stress (temperature, physical exertion, and psychological) during emergency operations. Stress conditions can exacerbate or highlight neurologic deficiencies when the fire fighter is performing essential job tasks rapidly during an emergency operation where there is little room for error and where such errors can have life-threatening consequences for the fire fighter, colleagues, or victims. Removing oneself from the scene, even temporarily, can significantly impact on the success of the operation. Medications used to treat neurologic conditions can frequently produce or worsen somnolence, discoordination, and/or disequilibrium.

A.9.13.4.1 Cerebral vascular insufficiency includes the spectrum of syndromes from transient ischemic attack (TIA) to stroke, and its cause should be investigated. If due to arteriovenous malformation, cerebral aneurysm, or bleeding, then see specific recommendations. If due to hypertension, then this is evidence of end organ disease. Stroke does not permit safe performance of essential job tasks (1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13) since the physiological stress associated with strenuous physical exertion can increase the likelihood for new strokes leading to life-threatening sudden incapacitation. Cerebral vascular insufficiency can affect control of respiration, cognitive abilities, communication, motor strength, sensation, coordination, and equilibrium. If stroke is due to embolic disease, then risk factors (hypercoagulable state, collagen vascular disease, carotid vascular disease, patent foramen ovale, cardiac disease) need to be evaluated. Ability to safely perform essential job tasks is based on an evaluation of current neurologic status, treatment, and any contributory underlying conditions. (For example, Warfarin and other anticoagulant treatment regimens do not allow the safe performance of essential job task 8.)

A.9.13.5.1 Myasthenia gravis could compromise a member's ability to safely perform essential job tasks 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13. In considering performance of essential job tasks, the impact of the operational environment (heat, stress, activity, duration, variable night shifts, etc.) on exacerbations should be considered and specifically addressed by a knowledgeable neurological specialist and the fire department physician. The neurologist must indicate that the member's cognitive function and neurological exam are normal and the member is off all drug treatment. The member cannot safely perform essential job tasks if there is evidence of respiratory muscle weakness or prior episode of respiratory muscle weakness in the last 3 years. The member cannot safely perform essential job tasks if on drug treatment for myasthenia including corticosteroids, cytotoxic drugs (e.g., Imuran®), and/or plasmapheresis; these treatments indicate that disease is still

active and likelihood for exacerbation and life-threatening sudden incapacitation exists during emergency operations.

A.9.13.6.1 Epilepsy is defined as the presence of "unprovoked, recurrent seizures — paroxysmal disorders of the central nervous system characterized by an abnormal cerebral neuronal discharge with or without loss of consciousness." Generalized, complex, partial, simple epilepsy, or recurrent seizures, even those that do not impair consciousness, prevent safe performance of essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 because of the uncertainty regarding how much of the brain could be involved and the risk of propagation to other regions of the brain, particularly in the highly epileptogenic environment of the fire ground.

Treatment of patients with epilepsy is only variably successful, with roughly 40 percent of patients attaining remission on anticonvulsant therapy. Remission is defined as 5 years without recurrence of seizure activity. Further complicating the fitness-for-duty issue is the fact that only 50 percent of patients who achieve remission do so without toxic side effects of the anticonvulsant drug.

As much as 10 percent of the population will experience at least one seizure in a lifetime, whereas less than 1 percent of the population qualifies for a diagnosis of epilepsy.

Many conditions producing seizures in the pediatric age group are known to remit prior to adulthood, and many adults sustain a reactive seizure that can be attributed to a reversible, underlying precipitant. These circumstances do not necessarily represent an ongoing risk of sudden, unpredictable incapacitation of a member. After a provoked seizure, with the precipitant identified and alleviated, the member can be cleared for duty if anticonvulsants are not prescribed and the conditions described in 9.13.6.1(2) through 9.13.6.1(5) are met.

A.9.13.7.1 The cause of cerebral bleed needs to be determined. If due to hypertensive bleed, then this is evidence for target organ disease. Hypertension with target organ disease does not permit safe performance of essential job tasks 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13, as the hypertension and stress associated with strenuous physical exertion can increase the likelihood for new bleeds and strokes leading to life-threatening sudden incapacitation due to central nervous system instability affecting control of respiration, cognitive abilities, communication, motor skills, sensory abilities, coordination, and equilibrium.

Arteriovenous malformation or cerebral aneurysm does not allow for the safe performance of essential job tasks 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13 since hypertension and stress associated with strenuous physical exertion can increase the likelihood for acute rupture and stroke leading to life-threatening sudden incapacitation. Members can safely return to duty after evaluation by a neurosurgeon if resection was successful, exam and imaging studies are normal (except for surgical site), and EEG shows no epileptic activity off all anticonvulsant medications.

A.9.13.8.1 Essential job tasks 1, 4, 6, 7, 8, 9, 10, 11, 12, and 13 might not be performed safely unless after evaluation by a specialist it is concluded that exam is normal and imaging studies are normal. If trauma produced seizures, then see recommendations for seizures in A.9.13.6.1.

A.9.14 Fire fighters perform individually and as a team. Fire fighters with active, ongoing or recurrent, psychiatric and/or psychological conditions can have difficulty following orders,

communicating information, and working in a coordinated manner with workers, victims, and involved civilians. The fire fighter with a personality disorder might not respond appropriately to command structure or adequately control his/her interpersonal behavior. Behavior that undermines command structure, group function, and/or group cohesion is not safe to the member or others performing essential job tasks. Fire fighters are exposed to gruesome tragedy during emergency operations, further exacerbating the stress of the job. Removing oneself from the scene, even temporarily, can significantly impact on the success of an emergency operation. Medications used to treat psychiatric or psychological conditions can produce or worsen somnolence, impair coordination, and predispose to heat stress.

A.9.15 Substance abuse interferes with cognitive functions, energy, command structure, communication, strength, sensation, gait, coordination, and equilibrium, and therefore compromises the member's ability to safely perform essential job tasks 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13. There is increased risk for auto accidents when driving departmental vehicles. Dehydration, arrhythmia, and disequilibrium can be life threatening in a toxic/traumatic/stress environment. Fire fighting requires members to perform independently and in coordination with others. Behavior that undermines command structure, group function, and/or group cohesion during emergency operations is not safe to the member or others at the scene.

Δ A.9.18.2 Medical Information Regarding Issues Related to Pregnancy in Fire Fighters. The following information is intended to help female fire fighters make informed decisions regarding their job activities if they are pregnant or considering pregnancy. The majority of pregnant fire fighters will be able to continue to work throughout pregnancy, with some accommodations. They should discuss with their treating physician any individual conditions that may require limitation of activities during pregnancy.

The following occupational hazards can have adverse effects at any time during pregnancy:

- (1) Products of combustion, especially carbon monoxide
- (2) Excessive heat
- (3) Other toxic chemicals, including prolonged exposure to vehicular exhaust
- (4) Trauma (even simple falls)

First trimester. In addition to the above, there are no other activities with an adverse effect. The risk to the fetus created by heat is highest during the first two months of pregnancy.

Second trimester. In addition to the above, the following activities may have adverse effects:

- (1) Alternating shift work, prolonged standing, and heavy lifting
- (2) Noise exposure

Third trimester. In addition to the above, there are no other activities with an adverse effect. Activities that involve or require aerobic fitness, speed, agility, and balance can be adversely affected by body changes during pregnancy.

Personal protective equipment. PPE is not designed to protect the fetus. The PPE fitted pre-pregnancy might not offer the same level of protection during pregnancy and might need to be refitted.

Post-delivery. Return-to-work decisions should be based on an individualized evaluation of the member's current status, the requirements of her work assignment, and the type of delivery and its complications.

Lactation. Exposure to toxic substances might result in the substances being present in breast milk.

Annex B Guide for Fire Department Administrators

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Legal Considerations in Applying the Standard. The consideration of an application or continued employment of a member based on medical or physical performance evaluations involves a determination that is not without legal implications. To this end, prior to making an adverse employment decision based on the current standard, the authority with jurisdiction might wish to consult with legal counsel.

B.1.1 Legal Protections for Individuals with Handicaps or Disabilities. The Rehabilitation Act of 1973, as amended, 29 U.S.C. § 791 et seq., and implementing regulations prohibit discrimination against those with handicaps or disabilities under any program receiving financial assistance from the federal government. The Americans with Disabilities Act (ADA) of 1990, 42 U.S.C. § 12101 et seq., also prohibits employment discrimination by certain private employers against individuals with disabilities. In addition, many states have enacted legislation prohibiting discrimination against those with handicaps or disabilities. Generally speaking, these laws prevent the exclusion, denial of benefits, refusal to hire or promote, or other discriminatory conduct against an individual based on a handicap or disability, where the individual involved can, with or without reasonable accommodation, perform the essential functions of the job without creating undue hardship on the employer or program involved.

Beginning in 1999, the United States Supreme Court has issued a series of decisions limiting the scope of the ADA. As a result, persons with certain kinds of impairments that are mitigated by corrective measures such as medication for high blood pressure or eyeglasses for myopia are not "disabled" under the ADA. See *Sutton v. United Airlines, Inc.*, 527 U.S. 471 (1999); *Murphy v. United Parcel Service, Inc.*, 118 S. Ct. 2133 (1999); and *Albertsons, Inc. v. Kirkingburg*, 527 U.S. 555 (1999). More recently the Supreme Court held that an impairment is not a disability covered by the ADA unless it severely restricts a person from doing activities that are of central importance to most people's daily lives. See *Toyota Motor Mfg., Kentucky, Inc. v. Williams*, 534 U.S. 184 (2002). These cases significantly limit the persons who can claim the protections of the federal ADA, but do not, by any means, eliminate the ADA as an important consideration in fire service-related employment decisions. Moreover, it should be borne in mind that separate disability protections exist under laws of many states, and some of these laws have been interpreted to afford greater protections than that afforded by the ADA. See, for example, *Dahill v. Boston Department of Police*, 434 Mass. 233 (2001), where the Supreme Judicial Court of Massachusetts ruled that a corrective device to alleviate a disability is not relevant in determining whether someone is disabled under the state's disability law.

The disability discrimination laws, therefore, continue to be an important part of the legal framework that governs employment-related decisions. Although this standard has been

developed with this in mind, these laws can, depending on the jurisdiction and the circumstances, affect the degree to which the authority having jurisdiction can implement the standard in an individual case. Users of this standard should be aware that, while courts, in assessing disability discrimination claims, are likely to give considerable weight to the provisions of a nationally recognized standard such as NFPA 1582 [see, for example, *Miller v. Sioux Gateway Fire Department*, 497 N.W.2d 838 (1993)], reliance on the standard alone might not be sufficient to withstand a challenge to an adverse employment decision.

B.1.2 Legal Protections for Individuals Who Are Members of Protected Classes (Race, Sex, Color, Religion, or National Origin). Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e, and implementing regulations by the Equal Employment Opportunity Commission (EEOC) prohibit discrimination in employment on the basis of race, sex, color, religion, or national origin (i.e., protected classes). Under Title VII, an “employer” is defined, generally, to mean a person with “15 or more employees for each working day in each of 20 or more calendar weeks in the current or preceding calendar year” (42 U.S.C. § 2000e). Several federal jurisdictions have held that unpaid volunteers are not considered to be “employees” under Title VII.

Additionally, many states, cities, and localities have adopted similar legislation. Generally, physical performance or other requirements that result in “adverse impact” on members of a protected class (e.g., on the basis of gender) are required to be validated through a study in accordance with EEOC guidelines, if such requirements are to be relied on in making employment decisions. Under EEOC guidelines, a study validating employment standards in one jurisdiction can be transportable to another jurisdiction (and therefore used in lieu of conducting a separate study). However, specific preconditions must be met in this regard, and the authority having jurisdiction should seek the advice of counsel before relying on a transported validation study.

B.1.2.1 Pregnancy and Reproduction. Federal regulations, as well as many court decisions, including the U.S. Supreme Court’s decision in *International Union, et al. v. Johnson Controls, Inc.* [499 U.S. 187, 111 S. Ct. 1196 (1991)], have interpreted the requirements of Title VII with respect to pregnancy and reproduction. The AHJ should seek the advice of counsel in resolving specific questions concerning these requirements as well as other requirements that can be imposed by state or local laws.

B.2 Determining Essential Job Tasks. The medical requirements in this edition of the standard were revised based on the essential job tasks contained in Chapter 5 and Chapter 9. It is recognized that some fire-fighting functions and tasks can vary from location to location due to differences in department size, functional and organizational differences, geography, level of urbanization, equipment utilized, and other factors. Therefore, it is the responsibility of each individual fire department to document, through job analysis, the essential job functions that are performed in the local jurisdiction.

There are a wide variety of job analytic techniques available to document the essential functions of the job of a member. However, at a minimum, any method utilized should be current, in writing, and meet the provisions of the Department of Labor regulations [29 CFR 1630.2(n)(3)]. Job descriptions should focus on critical and important work behaviors and specific tasks and functions. The frequency and/or duration of

task performance and the consequences of failure to safely perform the task should be specified. The working conditions and environmental hazards in which the work is performed should be described.

The job description should be made available to the fire department physician for use during the pre-placement medical examination for the individual determination of the medical suitability of applicants for membership.

B.3 Choosing a Fire Department Physician. Several factors should be considered in choosing a fire department physician. There are relatively few physicians with formal residency training and certification in occupational medicine. The fire department physician should be qualified to provide professional expertise in the areas of occupational safety and health as these areas relate to emergency services. For the purpose of conducting medical evaluations, the fire department physician should understand the physiological and psychological demands placed on members as well as the environmental conditions under which members have to perform.

Knowledge of occupational medicine and experience with occupational health programs are essential for physicians not formally trained in occupational medicine.

The physician must be committed to meeting the requirements of the program, including appropriate record keeping. The physician’s willingness to work with the department to continually improve the program is also important. Finally, the physician’s concern and interest in the program and in the individuals in the program are vital.

The following are some of the many options for obtaining physician services:

- (1) Physicians can be paid on a service basis or through a contractual arrangement.
- (2) For volunteer departments, local physicians might be willing to volunteer their services for the program, with other arrangements for payment of laboratory testing, x-rays, and so forth.
- (3) Some departments might utilize a local health care facility for medical care. However, in that case, the department should have one individual physician responsible for the program, record keeping, and so forth.
- (4) A military reserve or a National Guard unit can be used.

B.4 Coordinating the Medical Evaluation Program. An individual from within the department should be assigned the responsibility for managing the health and fitness program, including the coordination and scheduling of evaluations and examinations. This person should also act as liaison between the department and the physician to make sure that each has the information necessary for decisions about placement, scheduling appointments, and so forth.

B.5 Confidentiality. Confidentiality of all medical data is critical to the success of the program. Members need to feel assured that the information provided to the physician will not be inappropriately shared. No fire department supervisor or manager should have access to medical records without the express written consent of the member. There are occasions, however, when specific medical information is needed to make a decision about placement, return to work, and so forth, and a fire department manager should have more medical information for decision making. In that situation, written medical

consent should be obtained from the member to release the specific information necessary for that decision.

Budgetary constraints can affect the medical program. Therefore, it is important that components of the program be prioritized such that essential elements are not lost. With additional funding, other programs or testing can be added to enhance the program.

Annex C Protocols for Evaluation of Fitness of Members

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

Δ C.1 Annual Fitness Evaluation. The copyrighted material in C.1.1 is extracted from Chapter 4 of NFPA 1583, 2008 edition.

C.1.1 General.

C.1.1.1 All members shall participate in a periodic fitness assessment under supervision of the department health and fitness coordinator (HFC) and shall provide the HFC with data on which to base individual exercise prescription.

C.1.1.2 The fitness assessment shall be conducted at least annually.

C.1.2 Fitness Assessment.

C.1.2.1 All members shall be cleared for participation in the fitness assessment by the fire department physician.

C.1.2.2 If a member has an acute medical problem or a newly acquired chronic medical condition, the fitness assessment shall be postponed until that person has recovered from this condition and presents to the fire department for review.

C.1.3 Pre-Assessment Questionnaire. The HFC shall administer to all members a pre-assessment questionnaire that seeks to identify contraindications for participation in the fitness assessment and department exercise training program.

C.1.4 Fitness Assessment Components. The annual fitness assessments shall consist of the following components:

- (1) Aerobic capacity
- (2) Body composition
- (3) Muscular strength
- (4) Muscular endurance
- (5) Flexibility

C.1.4.1 Sample Assessment Protocols for the Health-Related Components of Fitness. The following examples of assessment protocols for health-related components of fitness vary in terms of ease of administration, safety, cost, and predictive value:

- (1) Aerobic capacity
 - (a) 1-mile walk
 - (b) 1.5-mile run/walk
 - (c) 12-minute run
 - (d) Step test (various)
 - (e) Stairclimbing machine
 - (f) Cycle ergometer (various)
 - (g) Treadmill (various)
- (2) Percentage of body fat
 - (a) Skinfold (various)
 - (b) Circumference (various)
 - (c) Bioimpedance (BIA)
 - (d) Hydrostatic weighing

- (c) Body mass index (optional)
 - (f) Waist-to-hip ratio (optional)
- (3) Muscular strength
 - (a) Handgrip dynamometer
 - (b) Static bicep curl with dynamometer
 - (c) Static leg press with dynamometer
 - (d) Bench press (1 rep maximum or percent of body weight)
 - (e) Leg press (1 rep maximum or percent of body weight)
- (4) Muscular endurance
 - (a) Push-ups
 - (b) Modified push-ups
 - (c) Pull-ups
 - (d) Bent knee sit-ups
 - (e) Crunches given time
 - (f) Crunches to cadence
- (5) Flexibility
 - (a) Sit and reach
 - (b) Modified sit and reach
 - (c) Trunk extension
 - (d) Shoulder elevation

C.2 Annual Fitness Evaluation. The copyrighted material in this section is reprinted with permission from the International Association of Fire Fighters (IAFF) *Fire Service Joint Labor-Management Wellness-Fitness Initiative*.

Δ C.2.1 Fitness Evaluation Protocols for Members. The following mandatory fitness protocols should be used to determine the member's baseline level of fitness and to evaluate progress from year to year. Fitness evaluations should be under the auspices of the fire department physician. The actual evaluations are permitted to be conducted by the fire department's fitness personnel. All data collected by the evaluator is to be held confidential and maintained in the member's confidential medical file. The evaluator can provide exercise programs to encourage the members to maintain or improve their level of fitness.

There are many protocols currently available to measure the sub-maximal VO_2 levels of apparently healthy individuals. These protocols differ in evaluation equipment (i.e., treadmill, stepmill, and stationary bike), rate of increasing work output, degree of increasing work output, and final result. To increase the consistency of VO_2 measurements, as well as the accuracy of the data collected between members within and between participating fire departments, one of the two following sub-maximal protocols is to be used to predict maximum aerobic capacity. The WFI Treadmill Protocol and WFI Stepmill Protocol were specifically developed and validated to evaluate the sub-maximal aerobic capacity of members.

After continued evaluation and research by the IAFF/IAFC Wellness-Fitness Initiative's technical experts, it was determined that significant errors were occurring when past protocols were applied to a population that has different characteristics from those for which the evaluation was developed. For this reason, the Bruce and Balke Treadmill Protocols were removed as evaluation protocols and as a means to collect data. Both were specifically tailored for less-fit populations to determine cardiovascular pathology and thus proved to be less accurate protocols for the general members population. The YMCA Stationary Bike Test Protocol was also removed since it consistently and grossly underestimated VO_2 for above average body

size (i.e., most members). The Canadian Step Test was also removed since it relies on a single-stage exercise that was found to underestimate measurement of member's VO_2 . The Gerkin protocol was removed because it was found to provide values that were somewhat variable and inconsistent with other proven measures of cardiovascular fitness.

A maximal cardiopulmonary evaluation with an electrocardiogram (ECG) should be permitted to be used to obtain VO_2 measurements. This medical evaluation should only be conducted in a medical facility with proper monitoring by a physician and available resuscitation equipment.

The muscular endurance evaluations were also modified. In order to improve the accuracy of the evaluation and the data collection, the sit-and-hold evaluation was eliminated. The sit-up and curl-up protocols were changed to the static plank evaluation in order to ensure the safety of the participant and to improve the specificity of the evaluation. The push-up evaluation was modified to now include the option of the alternate grip push-up evaluation, to ensure participant safety and uniformity in data collection. The alternate grip push-up was added for individuals with a history of hand, wrist or shoulder injuries.

The flexibility evaluation was modified to address the difference in limb length and/or differences in proportion between an individual's arm and legs.

The IAFF/IAFC Wellness-Fitness Initiative's technical experts have evaluated all equipment utilized in these fitness protocols. The technical experts found either accuracy, maintenance, or availability problems with some evaluation equipment. Manufacturer's information and product names are included in each protocol. Unless indicated, this equipment must not be substituted with other equipment. All equipment must be maintained and properly calibrated in accordance with the manufacturer's instructions.

Members must be fully recovered from the previous evaluation before proceeding to the next evaluation. The evaluation events can be sequenced to minimize the effects of previous evaluations on subsequent evaluation performance. If evaluations for body composition, aerobic capacity, muscular strength, muscle endurance, and flexibility are to be evaluated in one evaluation battery, the following sequence should be used after completing mandatory pre-evaluation procedures:

- (1) Body composition
- (2) Aerobic capacity
- (3) Muscular strength/power
- (4) Muscle endurance
- (5) Flexibility

The following is a mandatory pre-evaluation procedure. It should be conducted for all members prior to conducting the fitness evaluations:

- (1) Review and confirm individual's current medical status. It is required that all members are medically cleared through this standard's medical evaluation within 12 (± 3) months prior to any fitness evaluation.
- (2) Notify members in advance of the scheduled time and place of physical fitness evaluations. The individual should understand the protocol and what is expected before, during, and after the evaluation, including start and stop procedures. The individual will be required to wear comfortable clothes and either sneakers or athletic

shoes. All members must refrain from eating, drinking, smoking, and any physical activity prior to the evaluation to ensure accurate heart rate and blood pressure measurements.

- (3) Obtain a resting heart rate and blood pressure prior to aerobic capacity evaluation. If resting heart rate exceeds 110 beats per minute and/or resting blood pressure exceeds 160/100 mm Hg, ask the individual to relax in a quiet place for 5 minutes and re-test. If the heart rate and/or blood pressure remain at these levels, cancel the fitness evaluation and refer the individual to the fire department physician. If the retest indicates a reduction in heart rate and blood pressure, the evaluation can be given. The aerobic capacity protocols also require that age and weight in kilograms be obtained prior to the evaluation.
- (4) Review health status with the individual being evaluated. Contraindications for evaluations must be reviewed, addressing any changes in the individual's health status since their last medical evaluation that would warrant deferring the evaluation, including the following:
 - (a) Chest pain during or absence of physical activity
 - (b) Loss of consciousness
 - (c) Loss of balance due to dizziness (ataxia)
 - (d) Recent injury resulting in bone, joint, or muscle problem
 - (e) Current prescribed drug that inhibits physical activity
 - (f) Chronic infectious disease (e.g., hepatitis)
 - (g) Pregnancy
 - (h) Any recent disorders that can be exacerbated by exercise
 - (i) Any other reason why the individual believes that he or she should not be physically evaluated

Δ C.2.1.1 Aerobic Capacity. Treadmill. Submaximal treadmill evaluations shall use the WFI Treadmill Protocol. The treadmill should be a commercial treadmill capable of obtaining a 15-percent grade and 10 mph. A heart rate monitor or equivalent shall be used for heart rate measurements and a stopwatch used for timing.

Stepmill. Submaximal stepmill evaluations shall use the WFI Stepmill Protocol. The stepmill shall be a Stairmaster Stepmill SM-916 or 7000 PT. A heart rate monitor shall be used for heart rate measurements and a stopwatch used for timing.

Treadmill. Maximal treadmill evaluations shall use a continuous, multigrade medical cardiovascular protocol utilizing an electrocardiogram (ECG) for cardiac measurements. This evaluation must be under the direct supervision of a physician. The treadmill shall be a commercial treadmill capable of obtaining a 25-percent grade.

All aerobic capacity evaluation results must be recorded in milliliters (ml) of oxygen per kilogram (kg) of body weight per minute ($\text{VO}_{2\text{max}}$).

- (1) Choose the aerobic capacity protocol and worksheet.
- (2) Inform the fire fighter of all evaluation components.
- (3) Ensure that the individual is in proper clothing and footwear, is comfortable, and understands all facets of the evaluation.
- (4) Review all indicators for stopping the evaluation with the individual.

- (5) Place and secure heart rate monitor transmitter around individual's chest, in accordance with the manufacturer's instructions; evaluator shall hold or wear the heart rate monitor wrist receiver.
- (6) Measure the fire fighter's resting heart rate and resting blood pressure and record on the protocol worksheet.
- (7) Obtain and record weight and age for both protocols.

Determine the participants body mass index (BMI). Refer to Table C.2.1.1(a).

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[C.2.1.1a]

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)}^2}$$

US:

N

[C.2.1.1b]

$$\text{BMI} = 703 \times \frac{\text{Weight (lb)}}{\text{Height (in.)}^2}$$

- (8) Determine 85 percent of the fire fighter's estimated maximum heart rate, which will be the target exercise heart rate [see Table C.2.1.1(b)], using the following equation:

$$\text{Target exercise heart rate} = [208 - (0.7 \times \text{age})] \times 0.85$$

Example: The target exercise heart rate of a 40-year-old individual is:

$$\text{Target exercise heart rate} = [208 - (0.7 \times 40)] \times 0.85 = 153$$

If instead, maximum heart rate (MHR) had been previously measured on this individual, then 85% predicted MHR on future occasions would be more accurately calculated as:

$$\text{Target exercise heart rate} = .85 (\text{MHR} - [\text{age when MHR determined} - \text{current age}])$$

- (9) Record the target exercise heart rate on the protocol worksheet

Table C.2.1.1(a) Body Mass Index (BMI)

BMI	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Height	Body Weight (pounds)																														
58" (4'10")	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239
59" (4'11")	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247
60" (5')	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255
61" (5'1")	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264
62" (5'2")	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273
63" (5'3")	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	278	282
64" (5'4")	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291
65" (5'5")	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300
66" (5'6")	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309
67" (5'7")	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319
68" (5'8")	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328
69" (5'9")	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338
70" (5'10")	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348
71" (5'11")	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	336	343	351	358
72" (6')	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368
73" (6'1")	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378
74" (6'2")	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389
75" (6'3")	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399
76" (6'4")	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410
BMI	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Table C.2.1.1(b) Target Heart Rate (THR) for Respective Age

Age (yrs)	THR (BPM)	Age (yrs)	THR (BPM)	Age (yrs)	THR (BPM)	Age (yrs)	THR (BPM)
18	166	29	160	40	153	51	146
19	165	30	159	42	152	52	146
20	165	31	158	43	152	53	145
21	164	32	158	44	151	54	145
22	164	33	157	45	151	55	144
23	163	34	157	46	150	56	143
24	163	35	156	47	149	57	143
25	162	36	155	48	149	58	142
26	161	37	155	49	148	59	142
27	161	38	154	50	148	60	141
28	160	39	154		147	61	140

THR Formula: $[208 - (0.7 \times 40)] \times 85$

Note: THR is used as endpoint in submaximal aerobic capacity protocols.

C.2.1.2 Body Composition.

Conduct pre-evaluation procedures. Obtain the participant's age. Note the gender-specific skinfold sites. Men are measured at the triceps, subscapular and pectoral sites; women are measured at the triceps, abdominal and suprailiac sites. All measurements should be made on the right side of the body, with the subject standing upright. Use the tape measure to mark the site to be measured with a water-soluble marker. Place calipers directly on the skin surface, 1 cm away from the thumb and finger; perpendicular to the skinfold; and halfway between the crest and base of the fold. Maintain pinch while reading the caliper. Wait 1–2 seconds (not longer) before reading caliper. Rotate through all three sites or allow time for skin to regain normal texture and thickness. Take two measurements at each site. If the values are less than 1 mm of each other then calculate the average of the two measurements. If the difference between the two measurements is greater than or equal to 1 mm, then a third measurement must be taken. If the differences between the three skinfold measurements are equal,

then calculate the average of all three measurements [e.g., (1) 6 mm, (2) 9 mm, (3) 12 mm the average of all three measurements is 9 mm]. If the three measurements are not equal distance apart, then calculate the average of the two closest measurements [e.g., (1) 7 mm, (2) 4 mm, (3) 5 mm the average is calculated for measurement #2 and #3 only. The average of the two measurements is 4.5 mm]. Once the skinfolds are collected for all three sites, calculate the sum of the average skinfold measurement for each site. (Note: Sites are specific to gender.) To determine body fat percentage, cross-reference the sum of skin folds with the subject's age on the appropriate chart provided in this section [males, Table C.2.1.2(a); females, Table C.2.1.2(b)].

C.2.1.2.1 Male Skinfold Sites.

Triceps — located at the midpoint between the acromioclavicular (AC) joint and the olecranon process (center of the elbow) on the posterior aspect of the upper arm. [See Figure C.2.1.2.1(a) and Figure C.2.1.2.1(b).]

Table C.2.1.2(a) Percentage of Body Fat Estimate for Men Based on the Sum of Triceps, Subscapular, and Pectoral Skinfolds

Skinfolds Sum (mm)	Age up to Last Complete Year								
	Under 22	23–27	28–32	33–37	38–42	43–47	48–52	53–57	Over 57
8–10	1.5	2	2.5	3.1	3.6	4.1	4.6	5.1	5.6
11–13	3	3.5	4	4.5	5.1	5.6	6.1	6.6	7.1
14–16	4.5	5	5.5	6	6.5	7	7.6	8.1	8.6
17–19	5.9	6.4	6.9	7.4	8	8.5	9	9.5	10
20–22	7.3	7.8	8.3	8.8	9.4	9.9	10.4	10.9	11.4
23–25	8.6	9.2	9.7	10.2	10.7	11.2	11.8	12.3	12.8
26–28	10	10.5	11	11.5	12.1	12.6	13.1	13.6	14.2
29–31	11.2	11.8	12.3	12.8	13.4	13.9	14.4	14.9	15.5
32–34	12.5	13	13.5	14.1	14.6	15.1	15.7	16.2	16.7
35–37	13.7	14.2	14.8	15.3	15.8	16.4	16.9	17.4	18
38–40	14.9	15.4	15.9	16.5	17	17.6	18.1	18.6	19.2
41–43	16	16.6	17.1	17.6	18.2	18.7	19.3	19.8	20.3
44–46	17.1	17.7	18.2	18.7	19.3	19.8	20.4	20.9	21.5
47–49	18.2	18.7	19.3	19.8	20.4	20.9	21.4	22	22.5
50–52	19.2	19.7	20.3	20.8	21.4	21.9	22.5	23	23.6
53–55	20.2	20.7	21.3	21.8	22.4	22.9	23.5	24	24.6
56–58	21.1	21.7	22.2	22.8	23.3	23.9	24.4	25	25.5
59–61	22	22.6	23.1	23.7	24.2	24.8	25.3	25.9	26.5
62–64	22.9	23.4	24	24.5	25.1	25.7	26.2	26.8	27.3
64–67	23.7	24.3	24.8	25.4	25.9	26.5	27.1	27.6	28.2
68–70	24.5	25	25.6	26.2	26.7	27.3	27.8	28.4	29
71–73	25.2	25.8	26.3	26.9	27.5	28	28.6	29.1	29.7
74–76	25.9	26.5	27	27.6	28.2	28.7	29.3	29.9	30.4
77–79	26.6	27.1	27.7	28.2	28.8	29.4	29.9	30.5	31.1
80–82	27.2	27.7	28.3	28.9	29.4	30	30.6	31.1	31.7
83–85	27.7	28.3	28.8	29.4	30	30.5	31.1	31.7	32.3
86–88	28.2	28.8	29.4	29.9	30.5	31.1	31.6	32.2	32.8
89–91	28.7	29.3	29.8	30.4	31	31.5	32.1	32.7	33.3
92–94	29.1	29.7	30.3	30.8	31.4	32	32.6	33.1	33.4
95–97	29.5	30.1	30.6	31.2	31.8	32.4	32.9	33.5	34.1
98–100	29.8	30.4	31	31.6	32.1	32.7	33.3	33.9	34.4
101–103	30.1	30.7	31.3	31.8	32.4	33	33.6	34.1	34.7
104–106	30.4	30.9	31.5	32.1	32.7	33.2	33.8	34.4	35
107–109	30.6	31.1	31.7	32.3	32.9	33.4	34	34.6	35.2
110–112	30.7	31.3	31.9	32.4	33	33.6	34.2	34.7	35.3
113–115	30.8	31.4	32	32.5	33.1	33.7	34.3	34.9	35.4
116–118	30.9	31.5	32	32.6	33.2	33.8	34.3	34.9	35.5

Table C.2.1.2(b) Percentage of Body Fat Estimates for Women Based on the Sum of Triceps, Abdominal, and Suprailiac Skinfolds

Skinfolds Sum (mm)	Age up to Last Complete Year								
	18–22	23–27	28–32	33–37	38–42	43–47	48–52	53–57	Over 57
8–12	8.8	9	9.2	9.4	9.5	9.7	9.9	10.1	10.3
13–37	10.8	10.9	11	11.3	11.5	11.7	11.8	12	12.2
18–22	12.6	12.8	13	13.2	13.4	13.5	13.7	13.9	14.1
23–27	14.5	14.6	14.8	15	15.2	15.4	15.6	15.7	15.9
28–32	16.2	16.4	16.6	16.8	17	17.1	17.3	17.5	17.7
33–37	17.9	18.1	18.3	18.5	18.7	18.9	19	19.2	19.4
38–42	19.6	19.8	20	20.2	20.3	20.5	20.7	20.9	21.1
43–47	21.2	21.4	21.6	21.8	21.9	22.1	22.3	22.5	22.7
48–52	22.8	22.9	23.1	23.3	23.5	23.7	23.8	24	24.2
53–57	24.2	24.4	24.6	24.8	25	25.2	25.3	25.5	25.7
58–62	25.7	25.9	26	26.2	26.4	26.6	26.8	27	27.1
63–67	27.1	27.2	27.4	27.6	27.8	28	28.2	28.3	28.5
68–72	28.4	28.6	28.7	28.9	29.1	29.3	29.5	29.7	29.8
73–77	29.6	29.8	30	30.2	30.4	30.6	30.7	30.9	31.1
78–82	30.9	31	31.2	31.4	31.6	31.8	31.9	32.1	32.3
83–87	32	32.2	32.4	32.6	32.7	32.9	33.1	33.3	33.5
88–92	33.1	33.3	33.5	33.7	33.8	34	34.2	34.4	34.6
93–97	34.1	34.3	34.5	34.7	34.9	35.1	35.2	35.4	35.6
98–102	35.1	35.3	35.5	35.7	35.9	36	36.2	36.4	36.6
103–107	36.1	36.2	36.4	36.6	36.8	37	37.2	37.3	37.5
108–112	36.9	37.1	37.3	37.5	37.7	37.9	38	38.2	38.4
113–117	37.8	37.9	38.1	38.3	39.2	39.4	39.6	39.8	39.2
118–122	38.5	38.7	38.9	39.1	39.4	39.6	39.8	40	40
123–127	39.2	39.4	39.6	39.8	40	40.1	40.3	40.5	40.7
128–132	39.9	40.1	40.2	40.4	40.6	40.8	41	41.2	41.3
133–137	40.5	40.7	40.8	41	41.2	41.4	41.6	41.7	41.9
138–142	41	41.2	41.4	41.6	41.7	41.9	42.1	42.3	42.5
143–147	41.5	41.7	41.9	42	42.2	42.4	42.6	42.8	43
148–152	41.9	42.1	42.3	42.8	42.6	42.8	43	43.2	43.4
153–157	43.3	42.5	42.6	42.8	43	43.2	43.4	43.6	43.7
158–162	42.6	42.8	43	43.1	43.3	43.5	43.7	43.9	44.1
163–167	42.9	43	43.2	43.4	43.6	43.8	44	44.1	44.3
168–172	43.1	43.2	43.4	43.6	43.8	44	44.2	44.3	44.5
173–177	43.2	43.4	43.6	43.8	43.9	44.1	44.3	44.5	44.7
178–182	43.3	43.5	43.7	43.8	44	44.2	44.4	44.6	44.8

Subscapular — located on the same diagonal line as the inferior border of the scapula, 2 cm beyond the inferior angle. [See Figure C.2.1.2.1(c) and Figure C.2.1.2.1(d).]

Pectoral — Located on a diagonal line, midway between the axillary fold and the right nipple. [See Figure C.2.1.2.1(e) and Figure C.2.1.2.1(f).]

C.2.1.2.2 Female Skinfold Sites.

Triceps — located at the midpoint between the acromioclavicular (AC) joint and the olecranon process (center of the elbow) on the posterior aspect of the upper arm. [See Figure C.2.1.2.2(a) and Figure C.2.1.2.2(b).]

Abdominal — located at the right of the umbilicus, on a vertical fold, 2 cm from the right lateral border. [See Figure C.2.1.2.2(c) and Figure C.2.1.2.2(d).]

Suprailiac — located on a diagonal line, 1–2 cm anterior to the crest of the pelvis (ASIS). Grasp a diagonal skinfold just above and slightly forward of the crest of the ilium. [See Figure C.2.1.2.2(e) and Figure C.2.1.2.2(f).]

Δ C.2.1.3 Submaximal Graded Treadmill Evaluation (WFI Treadmill Protocol).

- (1) Conduct pre-evaluation procedures.
- (2) The individual being evaluated is instructed to straddle the treadmill belt until it begins to move. At approximately 1 mph, the individual is instructed to step onto the belt and the belt speed is increased to 3 mph at 0 percent grade. The individual warms up at 3 mph at 0 percent grade for 3 minutes. During the warm up, the individual is informed that the evaluation is submaximal and will terminate once their monitored heart rate exceeds the target exercise heart rate for 15 seconds. The individual is informed that the target exercise heart rate is 85 percent of their predicted maximal heart rate. The individual is advised that the evaluation is a series of 1-minute exercise stages, alternating between percent grade and speed (i.e., first minute percent grade is increased, second minute speed is increased, etc.). Inform the individual that if at any time during the evaluation they experience chest pain, light-headedness, ataxia, confusion, nausea, or clamminess, they should ask the evaluator to terminate the evaluation.

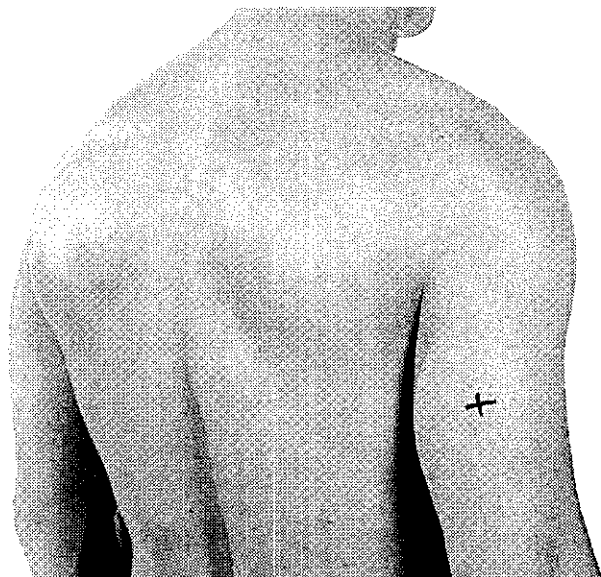


FIGURE C.2.1.2.1(a) [Site of Male Skinfold Measurement — Triceps.]

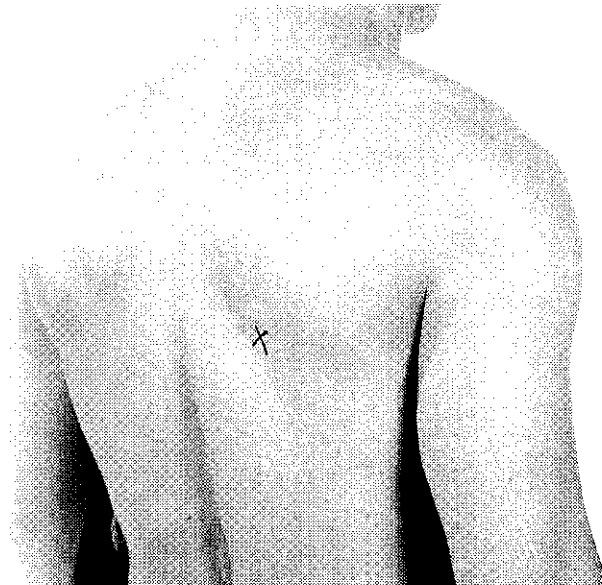


FIGURE C.2.1.2.1(c) [Site of Male Skinfold Measurement — Subscapular.]

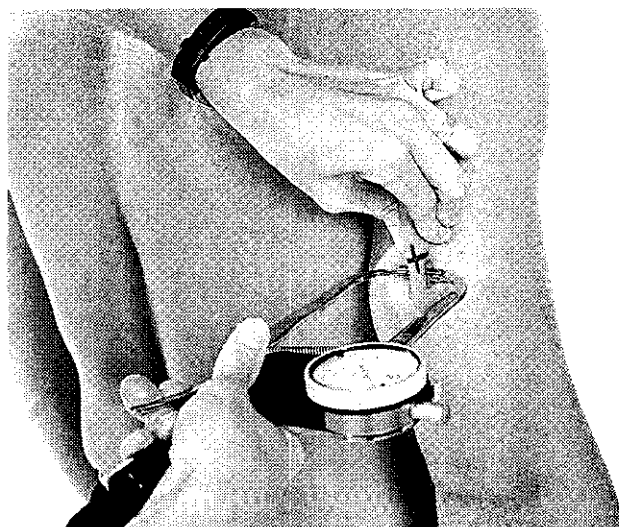


FIGURE C.2.1.2.1(b) [Triceps Measurement — Male.]

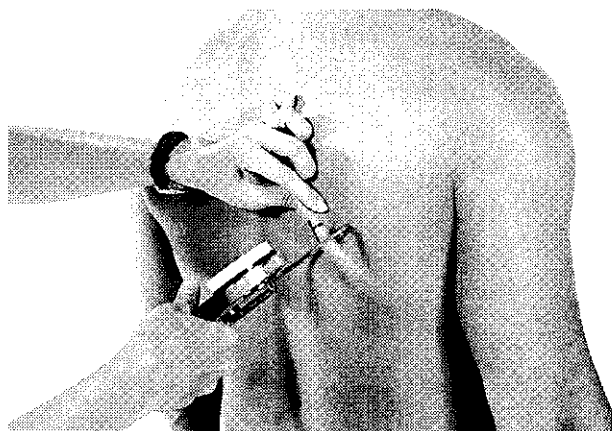


FIGURE C.2.1.2.1(d) [Subscapular Measurement — Male.]

Start the stopwatch when the treadmill reaches 3 mph at 0% grade. Continue with this speed and grade for 3 minutes (steady state). After completing the 3-minute steady state interval, inform the participant that the speed will increase to 4.5 mph. Advise the participant that the assessment is a series of 1-minute intervals, alternating between speed and percent grade. All subsequent speed increases occur at 0.5 mph. At 4:01 minutes, increase the grade from 0% to 2%. At this time, inform the participant that all subsequent grade increases occur at 2% intervals. The assessment will continue until the participant's heart rate exceeds the THR for 15 seconds, or the subject exhibits the medical criteria for early termination. Once the heart rate exceeds the Target Heart Rate (THR), note the time and continue the assessment for an additional

15 seconds. Do not make any changes to the assessment speed or grade during this time. If the participant's heart rate remains above the THR for the full 15 seconds, then stop the assessment and proceed to the cool-down phase. Record the total time, including the 3-minute warm-up, at which point the participant exceeds the THR. If the participant's heart rate exceeds the target, but then drops back to the THR or below within 15 seconds, then the assessment should continue. The assessment is not complete until the participant's heart rate exceeds the THR for 15 seconds. If this does not occur within 18 minutes, then terminate the assessment and record the time. Once the assessment is completed, the time is recorded. The participant should perform a cool-down for a minimum of 3 minutes at 3 mph, 0% grade. Continue to monitor the heart rate during the cool-down. Record the recovery heart rate at 1 minute of cool-down.

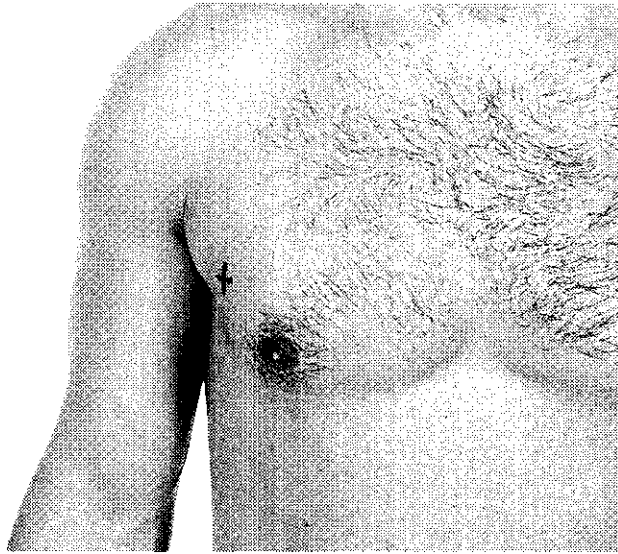


FIGURE C.2.1.2.1(e) [Site of Male Skinfold Measurement — Pectoral.]

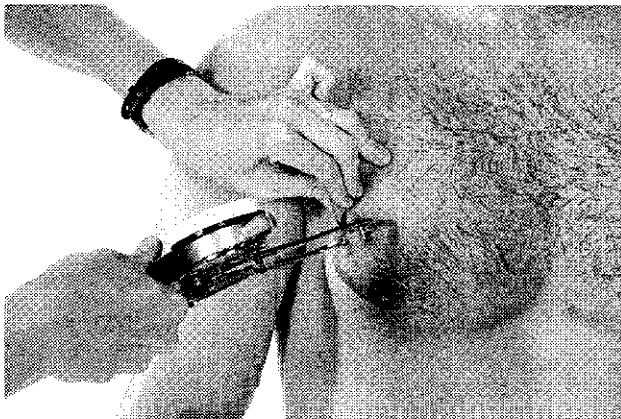


FIGURE C.2.1.2.1(f) [Pectoral Measurement — Male.]

Record the reason for terminating the assessment and the initial time the THIR was exceeded (if applicable). Record time in minutes and convert second(s) into decimal.

See Treadmill Formula and Table C.2.1.3 below. Use the test time (TT) the participant completed the assessment (i.e. exceeded the THIR) along with the treadmill conversion formula [$VO_2 \text{ max} = 56.981 + (1.242 \times TT) - (0.805 \times \text{BMI})$] to estimate $VO_2 \text{ max}$. Record the $VO_2 \text{ max}$.

Δ C.2.1.4 Submaximal Stepmill Evaluation (WFI Stepmill Protocol).

- (1) Conduct pre-evaluation procedures. Obtain and record individual's age in years and weight in kilograms.
- (2) The individual being evaluated is instructed to assume a starting position about two-thirds of the way up the stairs. The individual is instructed to temporarily grasp the handrails to reduce the possibility of losing balance when the stairs begin to move. The individual is also informed that holding or leaning on the handrails is not allowed

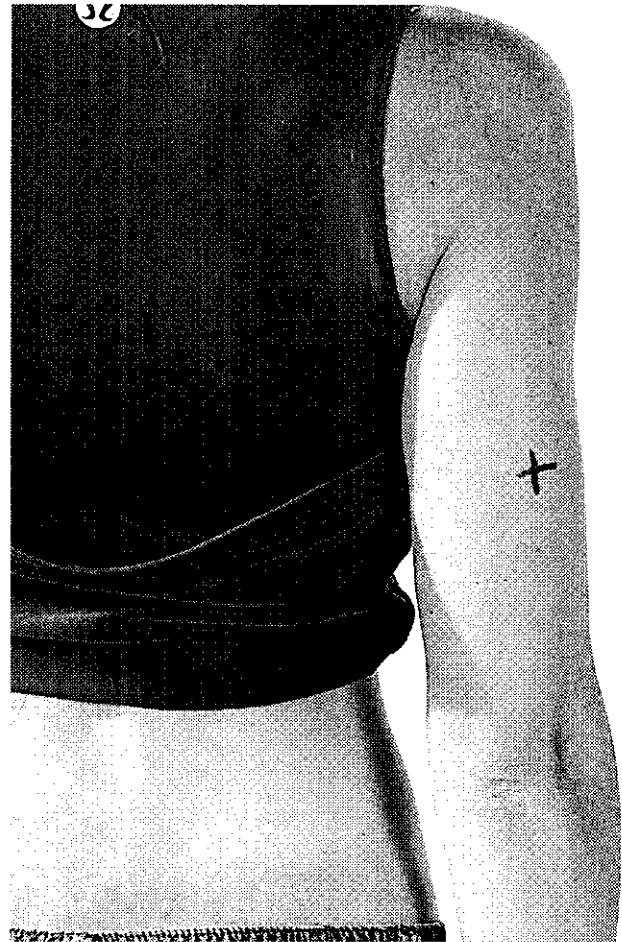


FIGURE C.2.1.2.2(a) [Site of Female Skinfold Measurement — Triceps.]



FIGURE C.2.1.2.2(b) [Triceps Measurement — Female.]

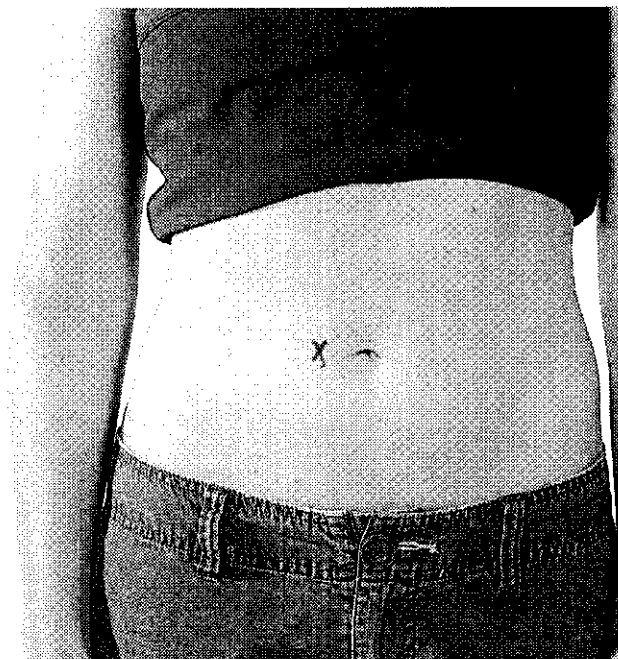


FIGURE C.2.1.2.2(c) [Site of Female Skinfold Measurement — Abdominals.]

once the evaluation begins since this will cause false overestimations of aerobic capacity.

- (3) The assessment starts at level 4 for 2 minutes, then level 5 for 1 minute (warm-up period). Start the stopwatch once the Stepmill begins. Inform the participant that the evaluation is a series of 1-minute intervals with increasing work loads on each subsequent minute. Once the assessment commences, do not allow the participant to hold or lean on the handrails; this will result in overestimation of aerobic capacity. At the completion of the 3 minute-warm-up, proceed to level 7 for 1 minute. *Note: This is marked by increasing the workload from level 5 to level 7. Once the heart rate exceeds the Target Heart Rate (THR), note the time and continue the assessment for an additional 15 seconds. Do not make any changes to the assessment intensity level during this time. If the participant's heart

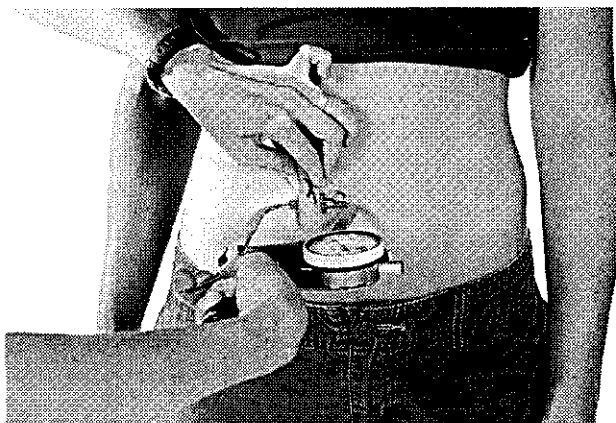


FIGURE C.2.1.2.2(d) [Abdominal Measurement — Female.]

rate remains above the THR for the full 15 seconds, then the participant has completed the assessment. Stop the assessment and record the time at which the participant exceeded the THR. The total Test Time (TT) begins from the time the participant starts on the Stepmill, to the point at which the participant exceeds their THR. It does not include the final 15 second monitoring period that the heart rate was above the THR. The assessment is complete once the participant's heart rate exceeds the target for 15 seconds. If the participant's heart rate exceeds the target, but then drops down to the THR or below within 15 seconds, then the assessment should continue. Once the assessment is completed, the participant will cool down for a minimum of 2 minutes at level 3. Continue to monitor the heart rate during the cool-down. Record the recovery heart rate at one minute of cool-down. The participant may grasp the handrails during the cool-down phase. Upon completion of the cool-down, instruct the participant to grasp the handrails. Stop the stepmill and assist the participant off the apparatus.

TERMINATE THE ASSESSMENT IF ANY OF THE FOLLOWING OCCURS:

- (1) The participant's heart rate exceeds THR for 15 seconds.
- (2) The THR has not been met after 16 minutes.
- (3) The participant asks to terminate the exercise.
- (4) The equipment malfunctions.

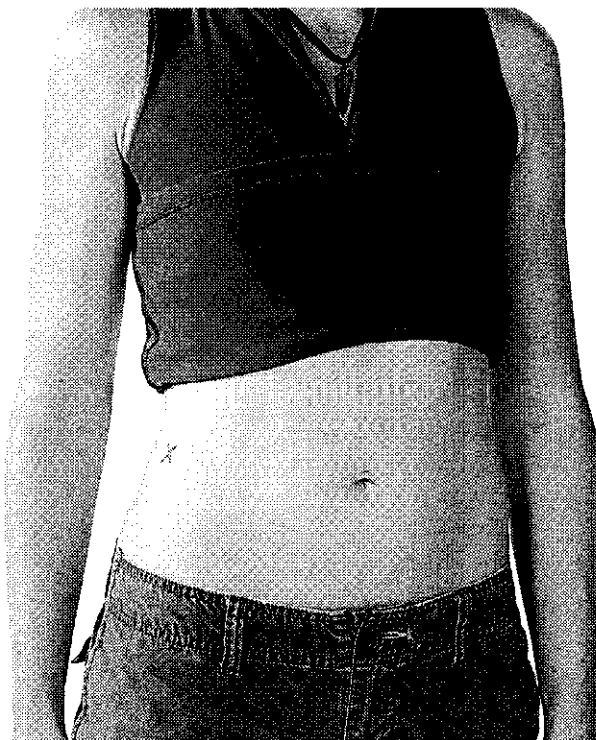


FIGURE C.2.1.2.2(e) [Site of Female Skinfold Measurement — Suprailiac.]



FIGURE C.2.1.2.2(f) [Suprailiac Measurement — Female.]

Medical conditions arise that prohibit completing the assessment. Record the reason for terminating the assessment and the initial time the heart rate had been exceeded (if applicable). Record time in minutes and convert second(s) into decimal (see Table C.2.1.4). Insert the test time (TT) at which the participant completed the assessment, along with the stepmill conversion formula to estimate VO_2 max. Record the VO_2 max.

Note: TT is the time in minutes that the participant's THR was exceeded and the test terminated Stepmill Submaximal VO_2 Prediction Formula.]

$$[\text{VO}_2\text{max} = 57.774 + (1.757 \times \text{TT}) - (0.904 \times \text{BMI})]$$

C.2.1.5 Muscular Strength/Power. Hand grip strength evaluations shall use the following protocol. The hand grip dynamometer shall be a Jamar Hydraulic Hand dynamometer. [See Figure C.2.1.5.]

(1) Conduct pre-evaluation procedures.

(2) The individual being evaluated is instructed to towel hands to ensure they are dry. The individual is instructed to place dynamometer in the hand to be evaluated; the evaluator adjusts, ensuring that the bottom of the handle clip is adjusted to fit snug in the first proximal interphalangeal joint. The red

Δ Table C.2.1.3 Treadmill Assessment

Time	Speed mph	% grade
0:00 – 1:00	3	0
1:01 – 2:00	3	0
2:01 – 3:00	3	0
3:01 – 4:00	4.5	0
4:01 – 5:00	4.5	2
5:01 – 6:00	5	2
6:01 – 7:00	5	4
7:01 – 8:00	5.5	4
8:01 – 9:00	5.5	6
9:01 – 10:00	6	6
10:01 – 11:00	6	8
11:01 – 12:00	6.5	8
12:01 – 13:00	6.5	10
13:01 – 14:00	7	10
14:01 – 15:00	7	12
15:01 – 16:00	7.5	12
16:01 – 17:00	7.5	14
17:01 – 18:00	8	14
Recovery Phase		
0:00 – 1:00	3	0
1:01 – 2:00	3	0
2:01 – 3:00	3	0

Δ Table C.2.1.4 Decimal Equivalents for Seconds

Time (seconds)	Decimal Equivalent	Time (seconds)	Decimal Equivalent	Time (seconds)	Decimal Equivalent
1	0.02	21	0.35	41	0.68
2	0.03	22	0.37	42	0.7
3	0.05	23	0.38	43	0.72
4	0.07	24	0.4	44	0.73
5	0.08	25	0.42	45	0.75
6	0.1	26	0.43	46	0.77
7	0.12	27	0.45	47	0.78
8	0.13	28	0.47	48	0.8
9	0.15	29	0.48	49	0.82
10	0.17	30	0.5	50	0.83
11	0.18	31	0.52	51	0.85
12	0.2	32	0.53	52	0.87
13	0.22	33	0.55	53	0.88
14	0.23	34	0.57	54	0.9
15	0.25	35	0.58	55	0.92
16	0.27	36	0.6	56	0.93
17	0.28	37	0.62	57	0.95
18	0.3	38	0.63	58	0.97
19	0.32	39	0.65	59	0.98
20	0.33	40	0.67	60	1

peak-hold needle is rotated counterclockwise to the zero position. The individual is advised that the evaluation is a series of six measurements — three for each hand. The individual is informed that the isometric contraction (squeezing) required during this evaluation must be eased into and then released slowly, without swinging arm, pumping arm, or jerking hand. Inform the individual that if at any time during the evaluation they experience chest pain, light-headedness, ataxia, confusion, nausea, or clamminess, they should terminate the evaluation.

(3) The individual is instructed to assume a slightly bent forward position, with elbow bent at a 90-degree angle, shoulder adducted and neutrally rotated, forearm and wrist in neutral position.

(4) The individual is instructed to squeeze with maximum strength 2 to 3 seconds while exhaling and then slowly release grip. The peak-hold needle will automatically record the highest force exerted.

(5) Measure both hands alternatively allowing three evaluations per hand. Reset the peak-hold needle to zero before obtaining new readings. List the scores for each hand to the nearest kilogram.

(6) Record the highest score.

C.2.1.6 Leg strength evaluations shall use the Wellness-Fitness Initiative Protocol for Leg Strength. The leg dynamometer shall be the Jackson Strength Evaluation System or a commercial dynamometer system that is digital, incorporates dead load cells, and includes an adjustable chain, handlebar, and test platform. The fire department must verify that the dynamometer is equivalent to the Jackson Strength Evaluation System. A V-grip handlebar (chinning triangle) is required. [See Figure C.2.1.6.]

(1) Conduct pre-evaluation procedures.

(2) The individual being evaluated is instructed to towel hands to ensure they are dry. The individual is advised that the evaluation is a series of three measurements. The individual is informed that the isometric arm contraction required during this evaluation must be eased into and then released slowly, without swinging arm, pumping arm, or jerking hands. Inform the individual that if at any time during the evaluation they experience back pain, chest pain, light-headedness, ataxia, confusion, nausea, or clamminess, they should terminate the evaluation.

(3) The individual is instructed to stand upon the dynamometer base plate, which has been placed on a level and secure surface, with feet spread shoulder width apart. The individual is instructed to hold the bar with a wide grip and bend their

elbows (keeping their elbows to their sides) 90 degrees. Individual must stand erect without arching back.

(4) The instructor verifies that the arm/elbow joint angle is 90 degrees and adjusts the chain so that it is taut in this position.

(5) The individual shall be instructed not to shrug shoulders, bend back, or perform any other motion other than to contract arms and attempt to move the handlebar in a vertical direction.

(6) Instruct the individual to flex arms for a total of 3 seconds.

(7) After 3 seconds, instruct the individual to slowly relax arms and to remain at standing rest for 30 seconds.

(8) Once the individual has completed the 30-second recovery period begin the second evaluation. Repeat evaluation for the third time using the same procedure.

(9) List all scores. Note: Digital readout will display the actual force, the highest peak force, and the average force achieved during the three evaluations.

(10) Record the highest of the three trials to the nearest kilogram.

C.2.1.7 Arm strength evaluations shall use the following protocol. The arm dynamometer shall be the Jackson Strength Evaluation System or a commercial dynamometer system that is digital, incorporates dead load cells, and includes an adjustable chain, handlebar, and test platform. The fire department must verify that the dynamometer is equivalent to the Jackson Strength Evaluation System. A straight-grip handlebar is required. (See Figure C.2.1.7.)

(1) Conduct pre-evaluation procedures.

(2) The individual being evaluated is instructed to towel hands to ensure they are dry. The individual is advised that the evaluation is a series of three measurements. The individual is informed that the isometric leg extension required during this evaluation must be eased into and then released slowly, without bending back, swinging arm, pumping or bending arm, or jerking hand. Inform the individual that if at anytime during the evaluation they experience back pain, chest pain, light-headedness, ataxia, confusion, nausea, or clamminess, they should terminate the evaluation.

(3) The individual is instructed to stand upon the dynamometer base plate, which has been placed on a level and secure surface, with feet spread shoulder width apart. The individual is instructed to stand erect. The chain is then adjusted so the upper (inside) edge of the bottom cross member of the V-grip handlebar is at the top of the individual's kneecap. The evaluator verifies this position, ensuring the chain is taut.

(4) The individual is then instructed to hold the bar, look straight with head in the neutral position, fully extend arms, and maintain a straight back. The evaluator shall verify this position and ensure that the individual's hips are directly over their feet, with trunk and knees slightly bent.

(5) Instruct the individual to lift using their legs for a total of 3 seconds.

(6) After 3 seconds, instruct the individual to slowly relax arms and legs and to remain at standing rest for 30 seconds.

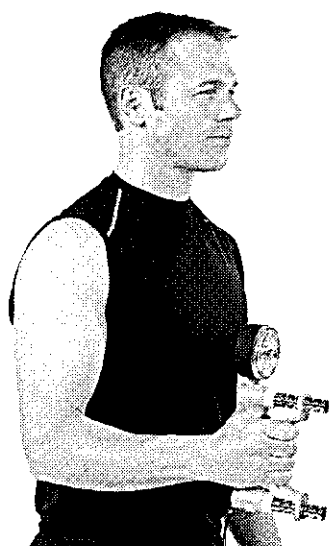


FIGURE C.2.1.5 [Hand Grip Dynamometer.]

(7) Once the individual has completed the 30-second recovery period begin the second evaluation. Repeat the evaluation for the third time using the same procedure.

(8) List all scores. Note: Digital readout will display the actual force, the highest peak force, and the average force achieved during the three evaluations.

(9) Record the highest of the three trials to the nearest kilogram.

C.2.1.8 WFI Vertical Jump — Optional Assessment. LEG POWER ASSESSMENT

Equipment:

- (1) Pressure Mat — “Just Jump” Probotics
- (2) Safety Tape — or any object that can be suspended above the mat to act as a target
- (3) Calculator

Assessment:

The purpose of this assessment is to estimate peak power produced in the lower body. Collect the participant's body

weight and record in kilograms ($\# \text{ lbs} \div 2.2 = \text{kg}$). Conduct pre-evaluation procedures. Place the jumping mat on a level surface. Connect the cord attached to the jumping mat to the handheld computer port. With the participant off the mat, turn the computer on. Choose “One Jump” on the computer menu. The display should read “Step on Mat.” Have the participant squat to a position where the knees are at a 90° angle and the hands by the sides (momentary pause at 90°) [see Figure C.2.1.8(a)]. Instruct the participant to jump straight up as high as he/she can, reaching toward the ceiling or a target object, without tucking the legs, and land with both feet on the mat [see Figure C.2.1.8(b)]. When the participant has completed the jump, the display will read the hang time and vertical jump in inches. The vertical jump mode resets automatically. Have the participant perform a series of 3 jumps and record the highest distance in inches.

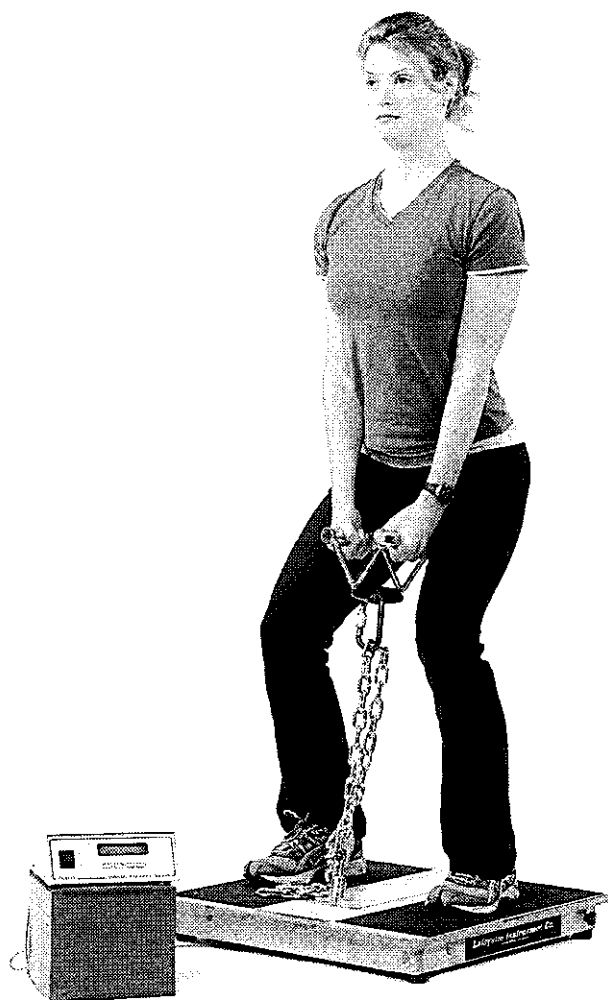


FIGURE C.2.1.6 [Leg Dynamometer.]

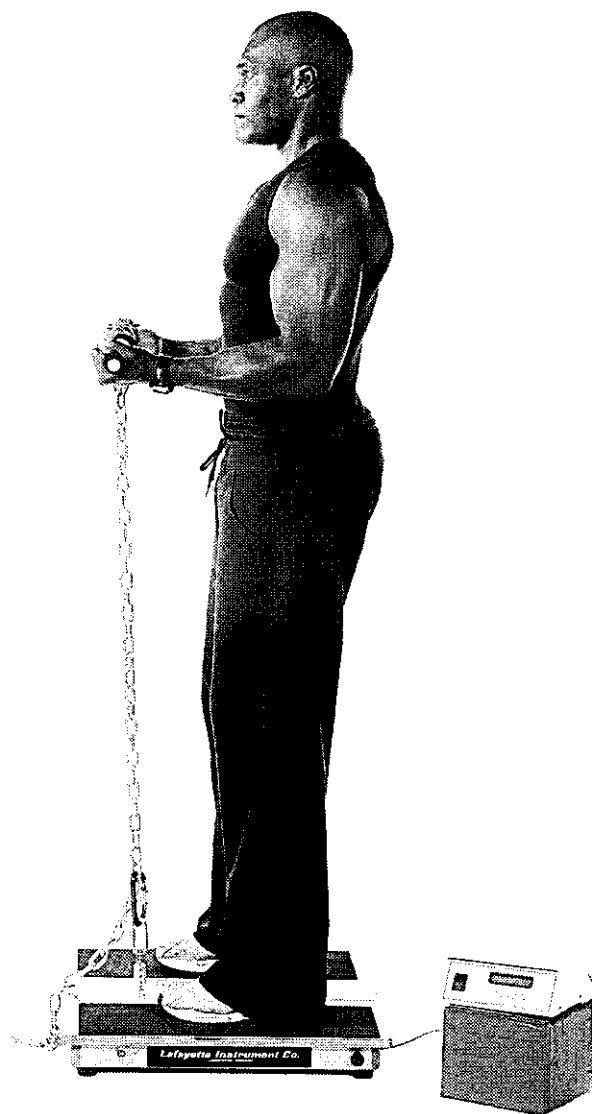


FIGURE C.2.1.7 [Arm Dynamometer.]

Convert the highest jump achieved in inches to centimeters (# inches \times 2.54 = cm). Use the power formula provided below with the jump height (cm) and body weight (kg) to estimate leg power.

Any deviations from the above techniques cannot be counted, and the participant must repeat the trial. The following are examples of situations that require a reevaluation: The participant fails to land with both feet on the mat. The participant tucks the legs instead of extending them while jumping. Note: Administrators can minimize the tendency of participants to tuck the legs by suspending a target object above the mat for the participant to attempt to touch.

Power formula:

Leg Power (watts) = $[(60.7 \times \text{jump height (cm)}) + (45.3 \times \text{body weight (kg)})] - 2055$

Use the following conversions:

Height in inches to centimeters (# inches \times 2.54 = cm)

Body weight in pounds to kilograms (# lbs \div 2.2 = kg)

C.2.1.9 Push-up muscle endurance evaluations shall use the Wellness-Fitness Initiative Protocol for Push-ups. Equipment used for this evaluation includes a 5 in. prop (i.e., cup, sponge), a metronome, and a stopwatch.

(1) Conduct pre-evaluation procedures.

(2) The individual is advised that the evaluation is a series of push-ups performed in a 2-minute time period. The individual is advised that the evaluation is initiated from the “up” position (hands are shoulder width apart, back is straight, and head is in neutral position). The individual is informed that they are not allowed to have their feet against a wall or other stationary item. Additionally, the individual is informed that the back must be straight at all times and they must push up to a straight arm position. The individual is instructed to continue performing push-ups in time with the cadence of the metronome, one beat up and one beat down. Inform the individual that if at any time during the evaluation they experience chest pain, lightheadedness, ataxia, confusion, nausea, or clamminess, they should terminate the evaluation.

(3) The evaluator places the 5-in. prop on the ground beneath the individual's chin and the individual must lower their body to the floor until the chin touches this object. [See Figure C.2.1.9(a) and Figure C.2.1.9(b).]

(4) The metronome should be set at a speed of 80, allowing for 40 push-ups per minute.

(5) The individual has a 2-minute time limit to complete a maximum of 80 push-ups

(6) The administrator shall stop the evaluation when the individual:

(a) Reaches 80 push-ups

(b) Performs three consecutive incorrect push-ups

(c) Does not maintain continuous motion with the metronome cadence

(7) Record the highest number of successfully completed push-ups.

C.2.1.10 Optional Assessment: WFI Alternate Grip Push-Up Test. Equipment:

Push-up handles

Metronome

Stopwatch

Prop – 5”, plus the height of the handles

Assessment:

The purpose of this assessment is to evaluate muscular endurance of the upper body. The alternate grip push-up (with stands) is an optional assessment for participants who experience muscular/skeletal discomfort in the performance of the standard WFI push-up. Conduct the pre-evaluation procedures. Advise the participant that the evaluation is a series of push-ups performed in a 2-minute time period to complete a maximum of 80 push-ups. The evaluation is initiated from the “up” position (hands are shoulder width apart, back is straight, and head is in neutral position). [See Figure C.2.1.10(a).] Advise the participant of the following: It is not permitted to prop feet against a



FIGURE C.2.1.8(a) [Preparation for Leg Power Assessment.]



FIGURE C.2.1.8(b) [Vertical Jump.]

wall or other stationary object. Back must be straight at all times (neutral position). Arms must be fully extended during the up-phase. Cadence with the metronome must be maintained, (one beat up and one beat down). Instruct the participant to grasp the push up stands, and assume the “up” position. (Caution: hex dumbbells may roll.)

Place the modified prop so that the chin of the participant will contact the prop during the lowering phase. (Prop height = 5” plus the height of stands). [See Figure C.2.1.10(b).] Set the metronome at a speed of 80 bpm, allowing for 40 push-ups per minute for 2 minutes. The assessor shall terminate the evaluation when the participant: Reaches 80 push-ups; Performs three consecutive incorrect push-ups; or Fails to maintain continuous motion with the metronome cadence. Once the assessment is complete, record the highest number of successfully completed push-ups.

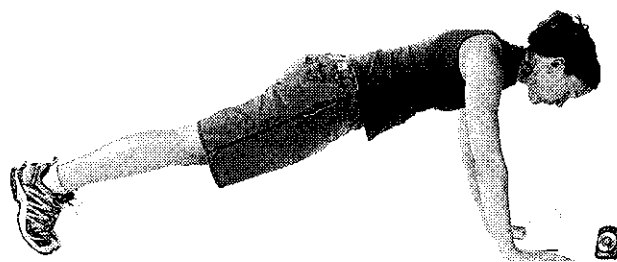


FIGURE C.2.1.9(a) [“Up” Position for Push-Up.]

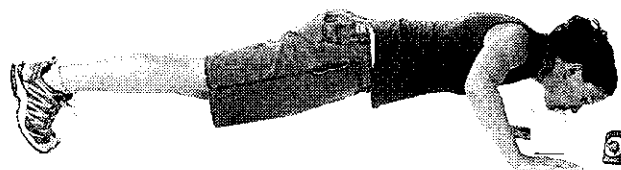


FIGURE C.2.1.9(b) [“Down” Position for Push-Up.]

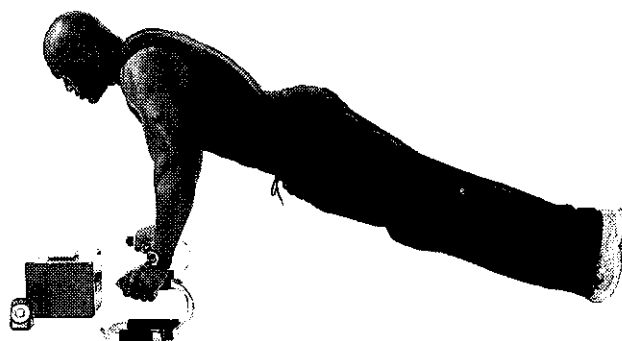


FIGURE C.2.1.10(a) [“Up” Position for Alternate Grip Push-Up.]

Δ C.2.1.11 WFI Prone Static Plank — Core Stabilization Assessment.

Equipment:
Stopwatch
Exercise Mat
Assessment:

The purpose of this assessment is to evaluate the muscular endurance of the core stabilizer muscles of the trunk. Conduct the pre-evaluation procedures. Instruct the participant to lay prone, keeping upper body elevated and supported by the elbows. Raise hips and legs off the floor, supporting the body on forearms and toes. Position elbows directly under the shoulders. Maintain straight body alignment from shoulder through hip, knee and ankle. The ankles should maintain a 90° angle, the scapulae should remain stabilized with elbows at 90°. The spine should remain in a neutral position throughout the assessment. Once the feet are in position, the participant then extends the knees, lifting off the floor. (See Figure C.2.1.11.) Start the stopwatch at this time. Instruct the participant to contract the abdominals so that the back will remain flat in the neutral position for the duration of the assessment. Any deviations from the above posture will warrant 2 verbal warnings. If a 3rd infraction occurs stop the watch and terminate the assessment. The assessor shall terminate the evaluation when the participant reaches 4 minutes or is unable to maintain proper form after the 2nd warning. Once the assessment termination criteria are met, stop the watch and record the time.

Δ C.2.1.12 Sit-and-reach flexibility evaluations shall use the Wellness-Fitness Initiative Sit and Reach Protocol. Equipment used for this evaluation shall be a Novel Acuflex I or equivalent trunk flexibility tester that compensates for variable arm and leg lengths.

(1) Conduct pre-evaluation procedures.

(2) The individual is advised that the evaluation is a series of three measurements that will evaluate the flexibility of the lower back, hamstring muscles, and shoulders. The individual



FIGURE C.2.1.10(b) [“Down” Position for Alternate Grip Push-Up.]



FIGURE C.2.1.11 [Core Stabilization Assessment.]

is informed that the flexion required during this evaluation must be smooth and slow, as the individual advances the slide on the box to the most distal position possible. Inform the individual that if at anytime during the evaluation they experience back pain, chest pain, light-headedness, ataxia, confusion, nausea, or clamminess, they should terminate the evaluation.

(3) The individual is instructed to sit on the floor ensuring the head, upper back, and lower back are in contact with the wall. The individual is instructed to place legs together, fully extended. The sit and reach box with the sliding measurement guide is placed with the box flat against the feet. [See Figure C.2.1.12(a).]

(4) While maintaining head and upper/lower back contact with the wall, the individual is instructed to extend arms fully in front of their body with the right hand overlaying the left hand, with middle finger of each hand directly over each other. The rule is set to 0.0 in. at the tips of the middle fingers. The individual is then instructed to exhale slowly while stretching slowly forward, bending at the waist, and pushing the measuring device with the middle fingers. During the stretch, legs are to remain together and fully extended and hands are to remain overlaid. [See Figure C.2.1.12(b).] The stretch is held momentarily and the distance obtained. If the individual bounces, flexes knee, or uses momentum to increase distance, the evaluation is not counted.

(5) Instruct the individual to relax for 30 seconds. Once the individual has completed the 30-second recovery period begin the second evaluation. Repeat evaluation for the third time using the same procedure.

(6) Record the furthest distance from the three trials (rounded to the nearest ¼ in.) as the final score.

C.2.1.13 Jackson Strength Evaluation System Lafayette Instrument Company Phone: 800-428-7545 or 765-423-1505 Website: www.licmef.com

JAMAR Hydraulic Hand Dynamometer Lafayette Instrument Company Phone: 800-428-7545 or 765-423-1505 Website: www.licmef.com

Novel Acuflex II Trunk Flexibility Tester Novel Products, Inc. Phone: 800-323-5143 E-mail: www.novelprod@aol.com

StairMaster StepMill StairMaster Phone: 888-678-2476 Website: www.stairmaster.com

Probotics “Just Jump” Mat Probotics, Inc. Phone: 256-489-9153 Website: www.probotics.org 19

- (1) LifeFitness 9100HR Treadmill: for information and local distributor contact, LifeFitness, 10601 West Belmont Avenue, Franklin Park, IL 60131, Phone (847) 288-3300, fax (847) 288-3791, Website www.lifefitness.com.
- (2) Jackson Strength Evaluation System with V-Grip Handlebar (chinning triangle): for information and local distributor contact, Lafayette Instrument, 3700 Sagamore Parkway North, P.O. Box 5729, Lafayette, IN 47903, Phone (765) 423-1505 or (800) 428-7545, fax (765) 423-4111, Website www.licmef.com (Note: The Jackson Strength Evaluation System includes a Jamar Hydraulic Hand Dynamometer).

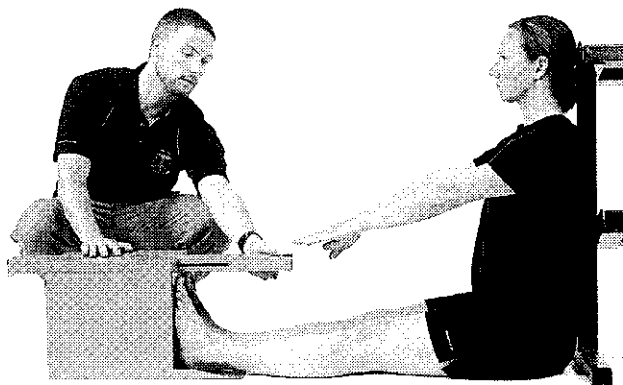


FIGURE C.2.1.12(a) [Sit and Reach Flexibility Evaluation — Initial Position.]



FIGURE C.2.1.12(b) [Sit-and-Rreach Flexibility Evaluation — Forward Position.]

- (3) Jamar Hydraulic Hand Dynamometer: for information and local distributor contact, Jamar, Sammons Preston, 4 Sammons Court, Bolingbrook, IL 60440, Phone (800) 323-5547 (Note: The Jackson Strength Evaluation System includes a Jamar Hydraulic Hand Dynamometer).
- (4) Novel Acuflex II Trunk Flexibility Tester: for information and local distributor contact, Novel Products Incorporated, Post Office Box 408, Rockton, IL 61072-0408, Phone (800) 323-5143, fax (815)624-4866, E-mail novelprod@aol.com.
- (5) Polar Heart Rate Monitor: for information and local distributor contact, Polar Electro Inc., 370 Crossways Park Drive, Woodbury, NY 11797, Phone (800) 227-1314; Canada (888) 918-5043, fax (516) 364-5454, Website www.polarus.com.
- (6) StairMaster StepMill SM-916 or 7000 PT: for information and local distributor contact, StairMaster Sports/Medical Products, L.P., 12421 Willows Road, NE, Suite 100, Kirkland, WA 98034, Phone (425) 823-1825, ext. 7605, fax (425) 821-3794, Website www.stairmaster.com.

Annex D Pregnancy Issues

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

D.1 Introduction.

D.1.1 Due to the legal issues associated with pregnancy and employment (see Section D.2), this annex is intended to serve as guidance for the fire department physician in advising the pregnant fire fighter of the risks associated with performing essential job functions and enabling her in decision-making. This has been summarized in an informational handout developed by the Task Group for the pregnant fire fighter (see A.9.18.2).

D.1.2 The majority of pregnant fire fighters will be able to continue to work throughout pregnancy, with some accommodations. A point will likely come during the pregnancy when the physical changes to the body of the pregnant fire fighter will impair her ability to perform some of the essential job tasks, and appropriate restrictions will need to be offered.

D.2 Legal Framework.

D.2.1 This document does not constitute legal advice. Before developing a pregnancy policy or before restricting or suspending a pregnant fire fighter against her will, fire physicians and the AHJ should seek competent legal advice.

D.2.2 The Pregnancy Discrimination Act of 1978 states that discrimination on the basis of pregnancy or childbirth constitutes unlawful sex discrimination under Title VII of the Civil Rights Act of 1964 [1]. Women who are pregnant or have related conditions must be treated in the same manner as other applicants or employees with similar abilities or limitations. An employer may not force a pregnant employee to take disability leave if she is able to work and cannot remove her from her duty assignment if she is able and willing to perform it. The Pregnancy Discrimination Act applies to most employers that have 15 or more employees.

D.2.3 The U.S. Supreme Court ruled in 1991 that an employer may not exclude pregnant women from hazardous jobs [2]. Therefore, assuming the pregnant fire fighter is willing and able to perform her essential job tasks, fire agencies should give options to pregnant fire fighters, but ultimately it is up to the individual fire fighters to decide, after consultation with their personal physicians, whether to accept a light duty assignment or other reasonable changes in their job assignments.

D.3 The pregnant fire fighter can be exposed to the following hazards associated with adverse outcomes to the pregnancy or damage to the fetus:

- (1) Physical hazards, including heat, trauma, radiation, and noise.
- (2) Chemical hazards, including exposure to carbon monoxide, other products of combustion (e.g., hydrogen cyanide, acrolein, formaldehyde, benzene, acetaldehyde, formic acid), heavy metals, and organic solvents.
- (3) Biological hazards. As first responders, fire fighters are at a higher risk of exposure to infectious agents. Pregnancy by itself does not increase that risk. However, with some agents (e.g., novel H1N1 influenza), the risk of complications is higher during pregnancy. Pregnant fire fighters should be aware of these risks and follow good hygiene principles.

D.4 Physical Hazards.

D.4.1 Trauma.

D.4.1.1 The uterus extends out of the protection of the pelvis after 13 weeks and is therefore more susceptible to direct trauma (to the uterus or the fetus) after that gestational point [3].

D.4.1.2 Fetal mortality due to nonuterine trauma is increased during the first 23 weeks, possibly due to higher susceptibility to maternal hypotension during the first and second trimesters [4,5].

D.4.1.3 With blunt trauma, the leading causes of fetal death are maternal shock, abruption, and uterine rupture [3]. Direct fetal injury from blunt trauma is rare [5].

D.4.1.4 Fetal mortality rates due to maternal trauma [3]:

- (1) Overall with major trauma: 40 percent to 65 percent [4,5,6]
- (2) Overall with minor trauma: 1 percent to 5 percent [3,5]
- (3) In case of maternal pelvic fracture: 25 percent to 35 percent [5,7]
- (4) Gunshot wound to abdomen: 30 percent to 50 percent [5]

D.4.1.5 Long-term outcomes after trauma, besides fetal loss, include higher risk of preterm labor and placental bleeding [5]. The risks of preterm labor and low birth weight were found to be nearly double in a series of patients discharged from a trauma center [8].

D.4.1.6 Pregnant fire fighters should be encouraged to wear seat belts. Proper seat belt positioning during pregnancy should be taught (lap belt under the abdomen and shoulder harness between the breasts); improper placement can result in uterine rupture [3,5]. Seat belt use significantly reduced fetal mortality (fivefold reduction) in a series of cases of pregnant patients injured in motor vehicle accidents [9].

D.4.1.7 Standard personal protective equipment is not designed to protect the fetus. The personal protective equipment fitted pre-pregnancy might not offer the same level of protection during pregnancy.

D.4.2 Noise. Noise exposure during pregnancy has been associated, in human studies, with several adverse outcomes, including miscarriage [10,11], intrauterine growth retardation [11,12,13], preterm delivery [11,14], hearing loss in babies and children [15,16], and hypertension in pregnancy [11]. In a review of 10 studies on pregnancy and noise, most studies did not achieve statistical significance in showing negative effect of noise [17]. The safe threshold of noise exposure during pregnancy is unknown [18]. (See D.11.1.)

D.4.3 Shift Work. Alternating shift work and night work have been associated with preterm birth [24,25], miscarriage [26] and lower birth weight [25,27]. Existing research is controversial. (See D.11.2.)

D.4.4 Heat. In animal studies, increase in maternal core temperature over 1.5°C has been shown to be teratogenic [30]. Core temperature has been shown to be up to 39°C in training [31,32]. Hyperthermia creates the highest risk during the first two months of pregnancy [33,34]. Sports Medicine Australia recommends a pregnant woman "to avoid exercise in hot conditions" [33]. Exercising in a warm environment should be

limited, and adequate hydration should be maintained with physical activity.

D.4.5 Physical Activity. Prolonged working hours, heavy lifting, prolonged standing, and heavy physical workload have been associated with preterm birth, lower birth weight, and pre-eclampsia [14,28]. (See D.11.3.)

D.4.6 Radiation. Fire fighters assigned to patient transport via aircraft or other high-altitude aviation may encounter radiation exposure of significance to a fetus [35,36]. (See D.11.4.)

D.5 Chemical Hazards.

D.5.1 Carbon Monoxide. Carbon monoxide exposure during pregnancy is associated with miscarriage, malformations, mental retardation, and low birth weight [32,38,39].

D.5.2 Products of Combustion. Other chemicals toxic to the fetus that are found in products of combustion include benzene, acrolein, formaldehyde, hydrogen cyanide, acetaldehyde, chloroform, and formic acid [32,38,39]. Both fire suppression and overhaul phases can expose firefighters to toxic chemicals [40].

D.5.3 Exposure to Lead and Other Metals. Lead exposure during pregnancy is associated with serious materno-fetal complications, including miscarriage, premature rupture of membranes, pre-eclampsia, hypertension, and neurobehavioral effects in infants and children [41,42,43]. Even at low levels, lead exposure has been associated with preterm delivery; congenital abnormalities [44]; and decreased birth weight, length, and head circumference [45]. Current research suggests that there is no safe lead exposure threshold to children, infants, and fetuses [43,46,47]. (See D.11.5.)

D.5.4 Exposure to Organic Solvents. Some organic solvents, like xylene, might be harmful to the fetus [18].

D.5.5 Other Chemicals. Clandestine drug laboratories and hazardous-material scenes should be avoided. Clandestine drug laboratories can expose fire fighters to a variety of toxic chemicals, some of which are potentially injurious to the fetus [49]. Extensive exposure to exhaust fumes might be dangerous because of exposure to carbon monoxide, benzene, and other organic solvents from motor vehicles. In the United States, gas used for regular road traffic does not contain benzene. In developing countries that use leaded gasoline, lead exposure can be significant problem for fire fighters exposed to exhaust fumes [52].

D.6 Medical Issues. The American College of Obstetricians and Gynecologists has published a list of medical contraindications to exercise during pregnancy [53] [Exercise during pregnancy and the postpartum period. ACOG Committee Opinion No. 267. <http://mail.ny.acog.org/website/SMIPodcast/Exercise.pdf>]. That list could be used to recommend work accommodation to pregnant fire fighters who are suffering from specific complications.

D.7 Risks by Trimesters. Table D.7 lists risks by trimester and during lactation.

D.8 Recommended Activity Modifications During Pregnancy.

D.8.1 The following activities are not recommended during the entire pregnancy:

- (1) Exposure to excessive heat

- (2) Hazmat assignment, exposure to products of combustion or toxic chemicals
- (3) Use of encapsulating protective gear
- (4) Exposure to ionizing radiation [18,35]
- (5) Exposure to prolonged vehicular exhaust or high-volume vehicular traffic (*see D.8.1.1*)
- (6) Aviation (including helicopter) unit assignment [18,35,36,37]

D.8.1.1 Recommendations by Trimester.

- (1) First trimester:
 - (a) Modified, nonhazardous duty only if requested by the fire fighter in consultation with her personal (treating) physician.
 - (b) The fire physician should ensure that the fire fighter and her treating physician are aware of risks created by the job assignment.
 - (c) All recommendations stated in D.8.1
- (2) Second trimester:
 - (a) An accommodation for maternity uniform may be needed.
 - (b) The following are not recommended:
 - i. Assignments with alternating shift work
 - ii. Heavy lifting and prolonged standing
 - (c) All recommendations stated in D.8.1
- (3) Third trimester:
 - (a) The fire fighter may have to be taken off hazardous duties if she is unable to perform the required job functions due to issues with balance, speed, or agility. She should be given a modified duty assignment.
 - (b) An accommodation for maternity uniform may be needed.
 - (c) The following are not recommended:
 - i. Assignments with alternating shift work
 - ii. Heavy lifting and prolonged standing
 - (d) All recommendations stated in D.8.1

D.9 Post-Delivery: Return to Work.

D.9.1 Because of different types of deliveries and associated complications, return-to-work decisions should be based upon an individualized evaluation of the fire fighter's current status and the requirements of her work assignment. (*See D.11.6.*)

D.9.2 Once the fire fighter requests to return to full duty with the consent of her treating health care provider, all restrictions for patrol duty and training should be lifted, unless other medical issues are present.

D.9.3 The physician should consider various issues such as the following [55]:

- (1) Delivery trauma and mode of delivery
- (2) C-section healing (*See D.11.7.*)
- (3) Physical deconditioning, fatigue, and lack of sleep
- (4) Musculoskeletal conditions (e.g., back pain, carpal tunnel syndrome, tendonitis)
- (5) Pregnancy-related issues
 - (a) Hypertension
 - (b) Eclampsia
 - (c) Gestational diabetes
 - (d) Post-partum depression
 - (e) Post-partum thyroiditis
 - (f) Deep venous thrombosis
 - (g) Anemia
 - (h) Other complications

D.10 Post-Delivery: Lactation.

D.10.1 Fire fighters who are breastfeeding should avoid unprotected exposure to toxic levels of heavy metals and other chemicals.

D.11 Notes.

D.11.1 Intrauterine measurements showed that the fetus was not significantly protected against loud noises [19]. One study in human volunteers found a maximal intrauterine noise attenuation of 10 dB at 4000 Hz [20]. In a study of ewes, the noise attenuation was 20 dB at 4000 Hz, but low-frequency sounds less than 250 Hz were 2 to 5 greater inside the uterus [21]. The sound of a siren can reach up to 110 dB inside the cab of an emergency vehicle [22,23]. The Navy and Marine Corps Public Health Center makes the following recommendations:

"1. The ACGIH [American Conference of Governmental Industrial Hygienists] 115 dBC TWA [time weighted average] and peak 155 dBC noise notations should be observed as exclusion criteria starting at 20 weeks gestation. Excluding pregnant women from discharging firearms after 20 weeks gestation would be consistent with those criteria.

Table D.7 Risks by Trimester and During Lactation

	First Trimester	Second Trimester	Third Trimester	Lactation
Trauma	The risk of direct fetal trauma is mitigated due to the location of uterus, which is a pelvic organ in the first trimester.	The risk of direct fetal trauma is increased due to the intra-abdominal position after 13 weeks.	The risk of direct fetal trauma is increased due to the intra-abdominal position after 13 weeks.	No additional risk.
Chemicals	Avoid exposure to heavy metals, hydrocarbons, carbon monoxide.	Avoid exposure to heavy metals, hydrocarbons, carbon monoxide.	Avoid exposure to heavy metals, hydrocarbons, carbon monoxide.	Avoid exposure to heavy metals, hydrocarbons, carbon monoxide.
Other risks	Heat, noise, radiation, shift work, infections.	Heat, noise, radiation, shift work, infections.	Heat, noise, radiation, shift work, infections.	No additional risk.

2. Pregnant workers should be vigilant in wearing hearing protectors whenever environmental noise exceeds 84 dBA, to minimize potentially unhealthy maternal cardiovascular and endocrine effects on the growing fetus.

3. Extended exposures (more than 12 minutes) above 104 dBA should be avoided after 20 weeks gestation, even with the use of maternal hearing protection.

4. Impact/impulse noise exposure sufficient to require personal hearing protection should be avoided” [18].

D.11.2 In a review of studies on pregnancy and shift work, 8 out of 12 studies showed a significant (but usually small) adverse effect of alternating shift work on pregnancy [17]. In a meta-analysis of 17 studies of shift work during pregnancy, the authors found a significant but small (relative risk 1.2) effect of shift work on preterm delivery; but no association between shift work and birth weight [28]. In a meta-analysis of 4 studies of pregnancy among nurses, shift work was significantly associated with a slightly increased risk of miscarriage [29].

D.11.3 In a meta-analysis of 53 studies of occupational exposures (prolonged working hours, shift work, lifting, standing and heavy physical workload) during pregnancy, the authors found a significant but small effect of long working hours (beyond 40 hours a week) on preterm birth; and a significant but small effect of prolonged standing (more than 3 hours day) on preterm birth. The influence of these occupational exposures on pre-eclampsia is less clear [28].

D.11.4 Aviation-related (including helicopters) potential hazards for the fetus include vibration, noise, jet fuel, and altitude [18,37].

D.11.5 Inorganic lead is absorbed by inhalation and ingestion. Blood absorption of inhaled lead is 30-40%, and blood absorption of ingested lead is 5-15%. Lead is then mostly stored in bones. The half-life of lead is 1 to 3 months in blood and soft tissues and 10 to 25 years in bones. Lead crosses the placenta and is transmitted from the mother to the fetus. Lead is excreted mainly through the kidneys and gastrointestinal tract. Lead is also excreted in breast milk [42,43,48].

D.11.6 Sports Medicine Australia recommends waiting for up to 6 weeks after delivery before performing intense physical exercises [54].

D.11.7 In a series of 100 patients with complications after a C-section, the most common complications were endomyometritis (63 patients), wound infection (32 patients), wound hematoma (22 patients) and postpartum hemorrhage (12 patients). Wound dehiscence was seen in 4 patients. All complications were seen within 10 days of the surgery [56]. Sports Medicine Australia recommends waiting for 6 weeks after C-section to resume exercising [54].

D.12 Pregnancy References.

- (1) Pregnancy Discrimination Act, 42 USC §2000e(k)
- (2) *Automobile Workers v. Johnson Controls*. 499 US 187 (1991).
- (3) Hill CC. Trauma in the obstetrical patient. *Women's Health (Lond Engl)* 2009;5(3):269-83. www.medscape.org/viewarticle/701797
- (4) Theodorou DA, Velmahos GC, Souter I, et al. Fetal death after trauma in pregnancy. *Am Surg* 2000;66:809-12.

- (5) Mattox KL, Goetzel L. Trauma in pregnancy. *Crit Care Med* 2005;33(10):S385-9.
- (6) Ali J, Yeo A, Gana T, McLellan BA. Predictors of fetal mortality in pregnant trauma patients. *J Trauma*. 1997;42(5):782-5.
- (7) Leggon RE, Wood GC, Indeck MC: Pelvic fractures in pregnancy: factors influencing maternal and fetal outcomes. *J Trauma* 2002;53(4):796-804.
- (8) Sperry JL, Casey BM, McIntire DD, et al. Long-term fetal outcomes in pregnant trauma patients. *Am J Surg*. 2006;192(6):715-21.
- (9) Luley T, Brown HL, Fitzpatrick FB, Hocker M. Trauma during pregnancy: restraint use and perinatal outcome after motor vehicle accidents. *Obstet Gynecol* 2008;111:1S.
- (10) Zhang J, Cai WW, Lee DJ. Occupational hazards and pregnancy outcomes. *Am J Ind Med* 1992;21(3):397-408.
- (11) Zhan C, Lu Y, Li C, Wu Z, Long Y, Zhou L, et al. A study of textile noise influence on maternal function and embryo-growth. *Hua Xi Yi Ke Da Xue Xue Bao*. 1991;22(4):394-8.
- (12) Hrubá D, Kukla L, Tyrlik M. Occupational risks for human reproduction: ELSPAC Study. European Longitudinal Study of Pregnancy and Childhood. *Cent Eur J Public Health* 1999;7(4):210-5.
- (13) Hartikainen AL, et al. Effect of occupational noise on the course and outcome of pregnancy. *Scand J Work Environ Health* 1994;20(6):444-50.
- (14) Luke B, Mamelle N, Keith L, et al. The association between occupational factors and preterm birth: a United States nurses' study. Research Committee of the Association of Women's Health, Obstetric, and Neonatal Nurses. *Am J Obstet Gynecol* 1995;173(3 Pt 1):849-62.
- (15) Pierson LL. Hazards of noise exposure on fetal hearing. *Semin Perinatol*. 1996;20(1):21-9.
- (16) Lalande NM, Héту R, Lambert J. Is occupational noise exposure during pregnancy a risk factor of damage to the auditory system of the fetus? *Am J Ind Med* 1986;10(4):427-35.
- (17) Nurminen T. Female noise exposure, shift work, and reproduction. *J Occup Environ Med* 1995;37(8):945-50.
- (18) Navy and Marine Corps Public Health Center. Reproductive and Developmental Hazards: A Guide for Occupational Health Professionals. Portsmouth, VA; April 2010. www.nehc.med.navy.mil/downloads/ocmed/Repro2010d2.pdf
- (19) Gerhardt KJ, Abrams RM, Huang X, Griffiths SK, Peters AJ. Intra-abdominal sound pressure levels during impulse noise exposure in sheep. *Mil Med* 2000;165(2):153-6.
- (20) Richards DS, Frentzen B, Gerhardt KJ, McCann ME, Abrams RM. Sound levels in the human uterus. *Obstet Gynecol*. 1992;80(2):186-90.
- (21) Gerhardt KJ, Abrams RM, Oliver CC. Sound environment of the fetal sheep. *Am J Obstet Gynecol* 1990;162(1):282-7.
- (22) Johnson DW, Hammond RJ, Sherman RE. Hearing in an ambulance paramedic population. *Ann Emerg Med* 1980;9(11):557-61.
- (23) Pepe PE, Jerger J, Miller RH, et al. Accelerated hearing loss in urban emergency medical services firefighters. *Ann Emerg Med* 1985;14(5):438-42.
- (24) Bodin L, Axelsson G, Ahlberg Jr G. The association of shift work and nitrous oxide exposure in pregnancy with birth weight and gestational age. *Epidemiology* 1999;10(4):429-36.

- (25) Xu X, Ding M, Li B, et al. Association of rotating shift-work with preterm births and low birth weight among never smoking women textile workers in China. *Occup Environ Med* 1994;51:470-4.
- (26) Axelsson G, Lutz C, Rylander R. Exposure to solvents and outcome of pregnancy in university laboratory employees. *Br J Ind Med* 1984;41:305-12.
- (27) Zhu JL, Hjollund NH, Olsen J. Shift work, duration of pregnancy, and birth weight: the National Birth Cohort in Denmark. *Am J Obstet Gynecol* 2004;191(1):285-91.
- (28) Bonzini M, Coggon D, Palmer KT. Risk of prematurity, low birthweight and pre-eclampsia in relation to working hours and physical activities: a systematic review. *Occup Environ Med* 2007;64(4): 228-43.
- (29) Quansah R, Jaakkola JJ. Occupational exposures and adverse pregnancy outcomes among nurses: a systematic review and meta-analysis. *J Women's Health* (Larchmt). 2010;19(10):1851-62.
- (30) Artal R, O'Toole M. Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *Br J Sports Med* 2003;37(1):6-12. <http://bjsm.bmj.com/content/37/1/6.full>
- (31) Agnew J, McDiarmid MA, Lees PS, et al. Reproductive hazards of fire fighting. I. Non-chemical hazards. *Am J Ind Med* 1991;19(4):433-45.
- (32) Evanoff BA, Rosenstock L. Reproductive hazards in the workplace: a case study of women firefighters. *Am J Ind Med* 1986;9(6):503-15.
- (33) Sport Medicine Australia. SMA statement: The benefits and risks of exercise during pregnancy. *J Sci Med Sport* 2002;5(1):11-9.
- (34) Hale RW, Milne L. The elite athlete and exercise in pregnancy. *Semin Perinatol* 1996;20:277-84.
- (35) Nicholas JS, Copeland K, Duke FE, Friedberg W. Galactic cosmic radiation exposure of pregnant aircrew members II. Federal Aviation Administration Report DOT/FAA/AM-00/33. Washington, DC; October 2000. www.faa.gov/library/reports/medical/oamtechreports/2000s/media/00_33.pdf
- (36) Federal Aviation Administration Advisory Circular No 120-61A. In-Flight Radiation Exposure. U.S. DOT, July 6, 2006. [www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/0e9f4e29ad41d6ce862571a7005a8288/\\$FILE/AC%20120-61A.pdf](http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/0e9f4e29ad41d6ce862571a7005a8288/$FILE/AC%20120-61A.pdf)
- (37) Van Dyke P. A literature review of air medical work hazards and pregnancy. *Air Med J* 2010;29(1):40-7.
- (38) McDiarmid MA, Agnew J. Reproductive hazards and firefighters. *Occup Med* 1995 Oct-Dec;10(4):829-41.
- (39) McDiarmid MA, Lees PS, Agnew J, et al. Reproductive hazards of fire fighting. II. Chemical hazards. *Am J Ind Med* 1991;19(4):447-72.
- (40) Bolstad-Johnson DM, Burgess JL, Crutchfield CD, et al. Characterization of firefighter exposures during fire overhaul. *AIHA J* 2000 Sep-Oct;61(5):636-41.
- (41) Winder C. Lead, reproduction and development. *Neurotoxicology* 1993;14(2-3):303-17.
- (42) Gardella C. Lead exposure in pregnancy: a review of the literature and argument for routine prenatal screening. *Obstet Gynecol Surv* 2001;56(4):231-8.
- (43) Agency for Toxic Substances and Disease Registry. Toxicological Profile for Lead. U.S. Department of Health and Human Services, Public Health Service. Atlanta, GA; 2007. www.atsdr.cdc.gov/toxprofiles/tp13.pdf
- (44) O'Halloran K, Spickett JT. The interaction of lead exposure and pregnancy. *Asia Pac J Public Health*. 1992;6(2): 35-9.
- (45) Osman K, Akesson A, Berglund M, et al. Toxic and essential elements in placentas of Swedish women. *Clin Biochem* 2000;33(2):131-8.
- (46) Lanphear BP, Hornung R, Khoury J, et al. Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. *Environ Health Perspect* 2005;113(7):894-9.
- (47) Centers for Disease Control and Prevention. Preventing Lead Poisoning in Young Children. Atlanta, GA; 2005. www.cdc.gov/nceh/lead/publications/PrevLeadPoisoning.pdf
- (48) Saryan LA, Zenz C. Lead and its compounds. In: Zenz C, Dickerson OB, Horvath EP, eds. *Occup Med* 3rd ed. St. Louis, Mo: Mosby; 1994:506-41.
- (49) Czarnecki F. Chemical hazards in law enforcement. *Clin Occup Environ Med* 2003;3(3):443-456.
- (50) Yorifuji T, Naruse H, Ohki S, et al. Residential proximity to major roads and preterm births. *Epidemiology* 2011;22(1):74-80.
- (51) Tomei F, Ghittori S, Imbriani M, et al. Environmental and biological monitoring of traffic wardens from the city of Rome. *Occup Med (Lond)*. 2001;51(3):198-203.
- (52) Kamal AA, Eldamaty SE, Faris R. Blood lead level of Cairo traffic policemen. *Sci Total Environ* 1991;105:165-70.
- (53) Exercise during pregnancy and the postpartum period. ACOG Committee. Opinion No. 267. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2002;99:171-3. <http://mail.ny.acog.org/website/SMIPodcast/Exercise.pdf>
- (54) Sports Medicine Australia. Exercise in Pregnancy. Women in Sport – Fact Sheet. Mitchell, Australia. <http://sma.org.au/wp-content/uploads/2009/10/WIS-ExPreg.pdf>
- (55) McGovern P, Dowd B, Gjerdingen D. Mothers' health and work-related factors at 11 weeks postpartum. *Ann Fam Med* 2007; 5(6): 519-27.
- (56) Hadar E, Melamed N, Tzadikévitch-Geffen K, et al. Timing and risk factors of maternal complications of cesarean section. *Arch Gynecol Obstet* 2011 Apr;283(4): 735-41. Epub 2010 Mar 31.

Annex E Sample Physician Evaluation Form for Fire Fighters with Diabetes

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

E.1 Figure E.1 is a form that will assist physicians in the evaluation of individuals with diabetes mellitus against their ability to safely perform the essential job functions of a fire fighter.

PHYSICIAN EVALUATION FORM FOR FIRE FIGHTERS WITH DIABETES MELLITUS

You are being asked to evaluate an individual for a position as a fire fighter (FF). It is essential that the FF undergo an individualized assessment of his or her diabetes to determine whether the individual's condition permits safe and effective job performance. This evaluation is based on the guidance established by the NFPA Technical Committee on Occupational Safety and Health in consultation with representatives of the American Diabetes Association. The relevant sections of these guidelines are listed below in bold, followed by the information needed to assess whether the individual meets these guidelines.

I. Introduction

The educated and motivated FF or FF applicant with well-managed diabetes mellitus can be capable of safe and effective job performance. An individualized assessment of the FF's or FF applicant's diabetes should be performed, including an assessment of the following:

- History of blood glucose control
- Current stability of blood glucose
- Risk for significant hypoglycemia or hyperglycemia
- Presence of diabetic complications
- Knowledge of diabetes and its management

Risk of hypoglycemia remains the major concern in regard to those with diabetes being or becoming a FF. This risk occurs primarily in those taking insulin, particularly those with type 1 diabetes, although it may also occur in those with type 2 diabetes who take insulin and/or sulfonylureas and other secretagogues.

Fire fighting entails a unique set of conditions that need to be considered in regard to those with diabetes and the risks of either hypo or hyperglycemia. These may include (depending upon the duties of the particular FF position):

- unpredictable periods of maximal physical exertion (e.g., climbing stairs with over 50 pounds of PPE and 20 to 40 pounds of equipment);
- use of encapsulating and insulated personal protective equipment (PPE) that can result in significant fluid loss and dehydration;
- exposure to extreme environmental temperatures;
- during emergency responses with limited access to food, water, and medications for prolonged periods of time;
- emergency response driving with the responsibility for others in the vehicle;
- critical, time-sensitive complex problem solving in hazardous environments;
- unpredictable meal schedules;
- control of one's emotions under stress;
- functioning as a team where sudden incapacitation can result in mission failure or risk of injury or death to civilians or other team members.

FIGURE E.1 Physician Evaluation Form.

II. Assessment

1. FF has been under the care of an endocrinologist or other physician knowledgeable about diabetes management. Outpatient and in-patient medical record(s) of the last three years or since date of diagnosis (whichever is shorter) should be reviewed by the treating physician and provided to the fire department physician.

My credentials as a physician knowledgeable about diabetes management are as follows (or attach CV):

This person has ☐ *type 1 diabetes* ☐ *type 2 diabetes*

Date of diagnosis: ____ / ____ / ____

Attach records for prior 3 years or since onset of diabetes whichever is shorter for

☐ *out-patient treatment* ☐ *in-patient treatment*

2. If type 1 diabetes, has been on a basal/bolus regimen or an insulin pump using analogue insulins for the six (6) months prior to evaluation^{1,2}

Current insulin regimen:

Insulin pump brand and model: _____

Pump settings:

Start Time					
Basal Rate					
Start Time					
Basal Rate					

Usual Bolus doses:

Breakfast _____

Lunch _____

Supper _____

Other _____

Correction factor:

Multiple dose insulin (specify regimen)

Basal: _____

Bolus: _____

Starting date on current regimen: ____ / ____ / ____

Δ FIGURE E.1 Continued

3. If type 2 diabetes on insulin, has been on a stable medication regimen for the three (3) months prior to evaluation.³ If on oral agents alone, should be on a stable medication regimen for one month prior to evaluation.⁴

Current medication regimen:

oral agents

insulin

Starting date on current regimen: ____ / ____ / ____

4. Has documentation of ongoing self-monitoring of blood glucose. This must be done with a glucose meter that stores every reading, records date and time of reading and from which data can be downloaded. Monitoring records must be available covering the time periods (1, 3, or 6 months), as described in Sections 2 and 3, following a schedule acceptable to the fire department physician.⁵

The individual has been asked to test glucose ____ times a day, and

- ☐ IS adhering to my recommended schedule for testing.
☐ is NOT adhering to my recommended schedule for testing.

Glucose logs

- ☐ are attached for review
☐ are not attached for review (please explain)

5. Has been educated in diabetes and its management and thoroughly informed of and understands the procedures that must be followed to monitor and manage his/her diabetes and what procedures should be followed if complications arise.⁶

The individual has completed the following diabetes education (include year of completion):

6. If an insulin pump user, documents

- proper understanding and education in the use of the insulin pump
- start date for the use of the pump
- history of insulin site infections
- history of pump cessation and pump malfunction
- backup plan for pump malfunction, including use of injectable insulin
- frequency of infusion set changes

The individual as completed the following education in the use of a continuous insulin infusion pump (indicate year of completion):

Δ FIGURE E.1 Continued

The individual routinely carries appropriate supplies to compensate for pump malfunction, including syringes and insulin vials or insulin pens.

☐ Yes ☐ No — please explain

The individual has had more than one pump site infection that caused him/her to miss work or usual daily activities in the preceding six months.

☐ Yes — please explain ☐ No

7. Has had hemoglobin A1C measured at least four times (intervals of two to three months) over the 12 months prior to evaluation if diagnosis has been present over a year.^{7,8}

Date	HbA1C
_____	_____
_____	_____
_____	_____
_____	_____

8. If the individual's A1C was found to be 8% or above on one or more occasions, has the validity of that level been confirmed by a second determination?

☐ Yes ☐ No (please explain)

9. If the second determination specified above was done, is there reason to suspect that the original A1C level(s) overestimates average blood glucose?

☐ Yes ☐ No

10. Incapacitating events — Has not had any within the past one (1) year and no more than two (2) episodes in the past three (3) years, or since diagnosis of diabetes (whichever is shorter) of

- severe hypoglycemia (loss of consciousness, seizures or coma, requiring the assistance of others or needing urgent treatment [glucose injection or IV glucose]) or
- a blood sugar < 60 mg/dl with unawareness⁹ demonstrated in current glucose logs.

Has this individual had an episode of hypoglycemia as described above?

☐ Yes ☐ No

If the individual has had such episode(s), please describe episodes and provide dates or episodes

11. Has had a complete eye exam by a qualified ophthalmologist or optometrist, including a dilated retinal exam, demonstrating no more than mild background diabetic retinopathy.¹⁰

Copy of ophthalmology or optometry report is attached

☐ Yes ☐ No (please explain)

Δ FIGURE E.1 Continued

12. Has normal vibratory testing with 128 Hz tuning fork, has normal testing with 10 gram Semmes-Weinstein monofilament¹¹ and normal orthostatic blood pressure and pulse testing.¹²

Vibration sensation: _____

Monofilament: _____

BP supine: _____

Pulse supine: _____

BP standing: _____

Pulse standing: _____

13. Has normal cardiac physical exam and normal cardiac stress testing to at least 12 METS. Annual cardiac stress testing¹³ should begin when any of the following criteria are met:

- age greater than 35 years
- Type 1 DM greater than 15 years duration
- Type 2 DM greater than 10 years duration
- signs of target organ damage (eyes, kidney, autonomic, cardiac)
- any other coronary artery disease risk factors

Copy of stress test report performed within the last 12 months is attached:

☐ Yes ☐ No (please explain)

14. Has normal renal function based on albumin/creatinine ratio $\leq 30:1$, and measured or calculated creatinine clearance > 60 ml/min.¹⁴

Serum Creatinine: _____

Calculated creatinine clearance (Specify method): _____

☐ Cockcroft Gault or

☐ MDRD

Urine microalbumin/creatinine ratio: _____

III. Treating Physician Statement

The above-named individual meets all of the criteria provided on this form:

☐ Yes — It is my opinion that the above-named individual is well-educated and well-motivated in diabetes self-management and has achieved a level of diabetes management to be capable of safe and effective job performance as a fire fighter.

I have reached this opinion after careful review of the above criteria.

☐ No — not recommended for position

☐ No, but IS recommended for position (letter of explanation attached)

Signature of Physician

Date

Printer or Typed Name of Physician

Phone Number

▲ FIGURE E.1 Continued

References

- ¹ Times cited for durations of stable treatment regimen or stability of management are in reference to the date of current evaluation for a fire fighter position.
- ² Date sought is when patient first began current insulin regimen (pump or injection) using current types of insulin (long acting, intermediate acting, short or rapid acting). A stable insulin regimen is defined as maintaining the same types of insulin (long acting, intermediate acting, short or rapid acting). Changes in insulin amount are part of the appropriate self-management of diabetes and do not disqualify an applicant or incumbent under this section.
- ³ Date sought is when patient first began current insulin or oral agent regimen defined as when patient began using current types of insulin or classes of oral medication. A stable insulin regimen is defined as maintaining the same types of insulin (long acting, intermediate acting, short or rapid acting). Changes in insulin amount are part of the appropriate self-management of diabetes and do not disqualify an applicant or incumbent under this section.
- ⁴ Changes in dose within the evaluation period will be allowed but addition of a new class of medications or insulin should result in a new period of observation:
 - one month for addition of a sulfonylurea or metformin
 - two months for addition of a thiazolidinedione to insulin or a sulfonylurea
 - three months for the addition of insulin.

- ⁵ Testing schedules are individual. What follows is a common pattern. Individual patterns may differ.

Therapeutic Regimen	Glucose Testing Schedule
Diet alone	Once or twice a week
Metformin, Thiazolidinediones, or Alpha Glucosidase inhibitors alone or in combination	Once or twice a week
Sulfonylureas, meglitinides, nateglinide — alone or in combination with the above group	Twice a day — AM and at supper; with any suspected hypoglycemic episodes
Insulin — one shot in combination with orals	Twice a day AM and at supper, with any suspected hypoglycemic episodes. 2–3 AM once a week
Insulin — two or more shots, Insulin pump	3 to 4 times a day — at meals and bedtime. 2–3 AM once a week; with any suspected hypoglycemic episodes

- ⁶ See http://care.diabetesjournals.org/cgi/content/full/28/suppl_1/s72
- ⁷ See http://care.diabetesjournals.org/cgi/content/full/27/suppl_1/s91
- ⁸ If Hemoglobin A1C > 8% this may signal a problem with diabetes management that warrants further assessment.
- ⁹ See http://care.diabetesjournals.org/cgi/content/full/28/suppl_1/s61
- ¹⁰ No more than one dot, blot, or flame-shaped hemorrhages or microaneurysm in all four fundus quadrants. http://www.jceh.co.uk/journal/46_04.asp
- ¹¹ See www.med.umich.edu/mdrte/textonly/educmats/MNSI_howto.doc
- ¹² Orthostatic hypotension is a physical finding defined by the American Autonomic Society and the American Academy of Neurology as a systolic blood pressure decrease of at least 20 mm Hg or a diastolic blood pressure decrease of at least 10 mm Hg within three minutes of standing. <http://www.aafb.org/afp/20031215/2393.html>
- ¹³ See Gibbons, et al. [2002]. ACC/AHA 2002 guideline update for exercise testing: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation* 106(14):1883–1892.
- ¹⁴ See http://care.diabetesjournals.org/cgi/content/full/27/suppl_1/s79. GFR calculator: www.nephron.com/mdrd/default.html.

▲ FIGURE E.1 Continued

Annex F Informational References

F.1 Referenced Publications. The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

F.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, 2013 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 edition.

NFPA 1003, *Standard for Airport Fire Fighter Professional Qualifications*, 2015 edition.

NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*, 2017 edition.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*, 2014 edition.

NFPA 1051, *Standard for Wildland Fire Fighter Professional Qualifications*, 2016 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2018 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System*, 2014 edition.

NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Department Members*, 2008 edition.

NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*, 2015 edition.

F.1.2 Other Publications.

F.1.2.1 ANSI Publication. American National Standards Institute, Inc., 25 West 43rd Street, 4th Floor, New York, NY 10036.

ANSI S3.6, *Specification for Audiometers*, 1996.

F.1.2.2 IAFF Publications. International Association of Fire Fighters, 4025 Fair Ridge Drive, Fairfax, VA 22033.

The Fire Service Joint Labor Management Wellness-Fitness Initiative, 3rd edition. Available at http://www.iafc.org/files/health-well_wfi3rdedition.pdf.pdf.

F.1.2.3 U.S. Government Publications. U.S. Government Publishing Office, Washington, DC 20402.

National Diabetes Information Clearinghouse, National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Health (NIH), Sickle Cell Trait and Other Hemoglobinopathies and Diabetes. Important Information for Physicians, <http://diabetes.niddk.nih.gov/dm/pubs/hemovari-A1C/>.

Title 21, Code of Federal Regulations, Part 801.420, "Hearing aid devices; professional and patient labeling," 1999.

Title 29, Code of Federal Regulations, Part 1630.2(n)(3), "Regulations to Implement the equal employment provisions of the Americans with Disabilities Act," 2003.

Title 29, Code of Federal Regulations, Part 1910.95, "Occupational noise exposure," 1996.

F.1.2.4 Additional Publications.

American Thoracic Society Guidelines Journal of Occupational and Environmental Medicine, 2000.

Fire Service Joint Labor-Management Wellness-Fitness Initiative, International Association of Fire Fighters, 1750 New York Avenue, NW, Washington, DC 20006; International Association of Fire Chiefs, 4025 Fair Ridge Drive, Suite 300, Fairfax, VA 22033, 1999.

Journal of the American College of Cardiology, October 1994.

F.2 Informational References. The following documents or portions thereof are listed here as informational resources only. They are not a part of the requirements of this document.

F.2.1 Testing Protocols.

American College of Sports Medicine. 1995. *Guidelines for Exercise Testing and Prescription*. Baltimore, MD: Williams & Wilkins.

American Industrial Hygiene Association. 1971. Ergonomic guide to assessment of metabolic and cardiac costs of physical work. *Am J Ind Hyg Assoc* 32:560-564.

Bilzon, J. F. J., E. G. Scarpello, D. V. Smith, N. A. Ravenhill, et al. 2001. "Characterization of the metabolic demands of simulated shipboard Royal Navy fire-fighting tasks." *Ergonomics* 44:766-780.

Gibbons, R. J., G. J. Balady, J. W. Beasley, et al. 1997. "ACC/AHA guidelines for exercise testing: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Exercise Testing)." *J Am Coll Cardiol* 30:260-311.

Glenhill N, Janitz V 1992. Characteristics of the physical demands of firefighting. *Can J Spt Scr* 17 (3): 2017-213.

Lemon, P. W., and R. T. Hermiston. 1977. "The human energy cost of fire fighting." *J Occup Med* 19:558-562.

Malley, K. S., A. M. Goldstein, T. K. Aldrich, K. J. Kelly, M. Weiden, N. Coplan, M. L. Karwa, and D. J. Prezant. 1999. "Effects of fire fighting uniform (modern, modified modern and traditional) design changes on exercise duration in New York City firefighters." *J Occup Med* 41:1104-1115.

Manning J. E., and T. R. Griggs. 1983. "Heart rate in fire fighters using light and heavy breathing equipment: simulated near maximal exertion in response to multiple work load conditions." *J Occup Med* 25:215-218.

O'Connell, E. R., P. C. Thomas, D. Lee, L. D. Cady, et al. 1986. "Energy costs of simulated stair climbing as a job-related task in fire fighting." *J Occup Med* 28:282-285.

Sothmann, M. S., K. Saupe, D. Jasenof, and J. Blaney. 1992. "Heart rate responses of firefighters to actual emergencies." *J Occup Med* 34:797-800.

U.S. Preventive Services Task Force. 1996. *Guide to Clinical Prevention Services*, 2nd edition. Baltimore, MD: Williams & Wilkins, 3-14.

F.2.2 Spinal Fusion and Its Impact on Adjacent Vertebral Level.

Eck, J. C., S. C. Humphreys, and S. D. Hodges. 1999. "Adjacent-segment degeneration after lumbar fusion: a review of clinical biomechanical and radiologic studies." *Am J Orthopedics* 1999; 28(6):336-340.

Lee, C. K. 1988. "Accelerated degeneration of the segment adjacent to a lumbar fusion." *Spine* 13(3):375-377.

▲ F.2.3 Cardiology.

Alfred, E. N., E. R. Bleeker, B. R. Chaitman, T. E. Dahms, S. O. Gottlieb, J. D. Hackney, M. Pagano, R. H. Selvester, W. M. Walden, and J. Warren. 1989. "Short-term effects of carbon monoxide exposure on the exercise performance of subjects with coronary artery disease." *N Engl J Med* 321(21):1426-1432.

American Diabetes Association. Standards of Medical Care in Diabetes – 2010. *Diabetes Care* 33: supplement 1, S11-S61, 2010.

Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, Jones DW, Materson BJ, Oparil S, Wright JT Jr, Roccella EJ; the National High Blood Pressure Education Program Coordinating Committee [2003]. The seventh report of the Joint National Committee [JNC-7] on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *JAMA* 289:2560-2571.

Gibbons RJ, Balady CJ, Bricker JT, Chaitman BR, Fletcher GF, Froelicher VF, Mark DB, McCallister BD, Mooss AN, O'Reilly MG, Winters WL Jr. [2002]. ACC/AHA 2002 guideline update for exercise testing: summary article: a report of the ACC/AHA Task Force on Practice Guidelines (Committee to Update the 1997 Exercise Testing guidelines). *J Am Coll Cardiol* 40:1531-1540.

Greenland, et al. 2007. ACCF/AHA 2007 Clinical Expert Consensus Document on Coronary Artery Calcium Scoring By Computed Tomography in Global Cardiovascular Risk Assessment and in Evaluation of Patients With Chest Pain: A Report of the American College of Cardiology Foundation Clinical Expert Consensus Task Force (ACCF/AHA Writing Committee to Update the 2000 Expert Consensus Document on Electron Beam Computed Tomography). *J Am Coll Cardiol* 49:378-402.

Jouven, X., M. Zureik, M. Desmos, D. Courbon, and P. Ducimetiere. 2000. "Longterm outcome in asymptomatic men with exercise-induced premature ventricular depolarizations." *N Engl J Med* 343(12):826-833.

Kales SN, Tsismenakis AJ, Zhang C, Soteriades ES [2009]. Blood pressure in fire fighters, police officers, and other emergency responders. *Am J Hypertens* 22:11-20.

"Premature ventricular depolarizations and exercise" (editorial comment on E.N. Alfred reference). 2000 *N Engl J Med* 343(12):879-880.

Schlant RC, Adolph RJ, DiMarco JP, Dreifus LS, Dunn MI, Fisch C, Garson A Jr, Haywood LJ, Levine HJ, Murray JA, Noble RJ, Ronan JA Jr [1992]. Guidelines for electrocardiography. A report of the American College of Cardiology/American Heart Association Task Force on Assessment of Diagnostic and Therapeutic Cardiovascular Procedures (Committee on Electrocardiography). *Circulation* 85(3):1221-1228.

Soteriades ES, Kales SN, Liarokapis D, Christiani DC [2003]. Prospective surveillance of hypertension in firefighters. *J Clin Hypertens* 5:315-320.

F.2.4 Asthma and Chronic Obstructive Pulmonary Diseases.

Bousquet, J., P. K. Jeffery, W. W. Busse, and M. Johnson, A. M. Vignola. 2000. "Asthma from bronchoconstriction to airways inflammation and remodeling." *Am J Respir Crit Care Med* 161(5):1720-1745.

Nadel, J. A., and W. W. Busse. 1998. "Asthma." *Am J Respir Crit Care Med* 157(4 Pt. 2):S130-138.

Postma, D. S., and H. A. Kerstjens. 1998. "Characteristics of airway hyperresponsiveness in asthma and chronic obstructive pulmonary diseases." *Am J Respir Crit Care Med* 158 (5 Pt. 2):S187-192.

Prezant, D. J., M. Weiden, G. I. Banauch, G. McGuinness, W. N. Rom, T. K. Aldrich, and K. J. Kelly. 2002. "Cough and bronchial responsiveness in firefighters at the World Trade Center site." *N Engl J Med* 347:806-815.

Senior R. M., and N. R. Anthonisen. 1998. "Chronic obstructive pulmonary diseases (COPD)." *Am J Respir Crit Care Med* 157(4 Pt. 2):S139-147.

Sherman, C. B., S. Barnhart, M. F. Miller, M. R. Segal, M. Aitken, R. Schoene, W. Daniell, and L. Rosentsock. 1989. "Fire-fighting acutely increases airway hyperreactivity." *Am Rev Resp Dis* 40(1):185-190.

F.2.5 Pulmonary Function Testing: Challenge Testing and Exercise Testing.

American College of Sports Medicine. 1995. *Guidelines for Exercise Testing and Prescription*. Baltimore, MD: Williams & Wilkins.

American Thoracic Society, Medical Society of the American Lung Association. 1993. "Guidelines for the evaluation of impairment/disability in patients with asthma." *Am Rev Resp Dis* 147(4):1056-1061.

Crapo R. O., R. Casaburi, A. L. Coates, Enright P. L., J. L. Hankinson, C. G. Irvin, N. R. MacIntyre, R. T. McKay, J. S. Wanger, S. D. Anderson, D. W. Cockcroft, J. E. Fish, and P. J. Sterk. 2000. "Guidelines for methacholine and exercise challenge testing — 1999." This official statement of the American Thoracic Society (ATS) was adopted by the ATS Board of Directors July 1999. *Am J Respir Crit Care Med* 161(1):309-329.

Hankinson, J. L., J. R. Odencrantz, and K. B. Fredan. 1999. "Spirometric reference values from a sample of the U.S. general population." *Am J Respir Crit Care Med* 1999; 159:179-187.

Miller, M. R., Hankinson J., Brusasco V., et al. ATS/ERS Task Force. "Standardization of spirometry." *Eur Respir J* 2005. 26:319-338.

Tierney MT, Lenar D, Stanforth PR, Craig JN, Fannar RP. 2010. Prediction of aerobic capacity in firefighters using submaximal treadmill and stairmill protocols. *J Strength Condition Res* 24 (3): 757-764.

Townsend, M. C., and the Occupational and Environmental Lung Disorder Committee. 2000. "American College of Occupational and Environmental Medicine Position Statement on Occupational Spirometry in the Occupational Setting." *J Occup Environ Med* 42:228-245.

F.2.6 Tuberculosis.

American Thoracic Society, Centers for Disease Control and Prevention (CDC), and Infectious Diseases Society of America. Treatment of tuberculosis, *Mortal Morbid Weekly Rep* 2003;52(No. RR-11):1-74.

Centers for Disease Control and Prevention (CDC). Guidelines for using the QuantiFERON-TB Gold test for detecting *Mycobacterium tuberculosis* infection, United States. *Mortal Morbid Weekly Rep*. 54:48-55, 2005.

ATS and CDC. "Diagnostic standards and classification of tuberculosis in adults and children." 2000. *Am J Respir Crit Care Med* 161(4):1376-1395. This official statement of the American Thoracic Society (ATS) and the Centers for Disease Control and Prevention (CDC) was adopted by the ATS Board of Directors July 1999. This statement was endorsed by the Council of the Infectious Diseases Society of America (IDSA), Sept. 1999.

ATS and CDC. "Targeted tuberculin testing and treatment of latent tuberculosis infection." 2000. *Am J Respir Crit Care Med* 161(4):S221-247. This official statement of the American

Thoracic Society (ATS) was adopted by the ATS Board of Directors July 1999. This is a joint statement of the ATS and the Centers for Disease Control and Prevention (CDC). This statement was endorsed by the Council of the Infectious Diseases Society of America (IDSA), Sept. 1999.

F.2.7 Cancer Screening.

Smith R. A., C. J. Mettlin, K. J. Davis, and H. Eyre. 2000. "American Cancer Society guidelines for the early detection of cancer." *CA J Clin* 50(1):34-49.

F.2.8 Other Publications.

U.S. Department of Defense, Department of the Army Regulation 40-501 Medical Services Standards of Medical Fitness. Headquarters Department of the Army, Washington, DC, 27 February 1998.

F.3 References for Extracts in Informational Sections.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety, Health, and Wellness Program*, 2018 edition.

NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Department Members*, 2015 edition.

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Sequence of Events for the Standards Development Process

Once the current edition is published, a Standard is opened for Public Input.

Step 1 – Input Stage

- Input accepted from the public or other committees for consideration to develop the First Draft
- Technical Committee holds First Draft Meeting to revise Standard (23 weeks); Technical Committee(s) with Correlating Committee (10 weeks)
- Technical Committee ballots on First Draft (12 weeks); Technical Committee(s) with Correlating Committee (11 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (5 weeks)
- First Draft Report posted on the document information page

Step 2 – Comment Stage

- Public Comments accepted on First Draft (10 weeks) following posting of First Draft Report
- If Standard does not receive Public Comments and the Technical Committee chooses not to hold a Second Draft meeting, the Standard becomes a Consent Standard and is sent directly to the Standards Council for issuance (see Step 4) or
- Technical Committee holds Second Draft Meeting (21 weeks); Technical Committee(s) with Correlating Committee (7 weeks)
- Technical Committee ballots on Second Draft (11 weeks); Technical Committee(s) with Correlating Committee (10 weeks)
- Correlating Committee Second Draft Meeting (9 weeks)
- Correlating Committee ballots on Second Draft (8 weeks)
- Second Draft Report posted on the document information page

Step 3 – NFPA Technical Meeting

- Notice of Intent to Make a Motion (NITMAM) accepted (5 weeks) following the posting of Second Draft Report
- NITMAMs are reviewed and valid motions are certified by the Motions Committee for presentation at the NFPA Technical Meeting
- NFPA membership meets each June at the NFPA Technical Meeting to act on Standards with “Certified Amending Motions” (certified NITMAMs)
- Committee(s) vote on any successful amendments to the Technical Committee Reports made by the NFPA membership at the NFPA Technical Meeting

Step 4 – Council Appeals and Issuance of Standard

- Notification of intent to file an appeal to the Standards Council on Technical Meeting action must be filed within 20 days of the NFPA Technical Meeting
- Standards Council decides, based on all evidence, whether to issue the standard or to take other action

Notes:

1. Time periods are approximate; refer to published schedules for actual dates.
2. Annual revision cycle documents with certified amending motions take approximately 101 weeks to complete.
3. Fall revision cycle documents receiving certified amending motions take approximately 141 weeks to complete.

Committee Membership Classifications^{1,2,3,4}

The following classifications apply to Committee members and represent their principal interest in the activity of the Committee.

1. M *Manufacturer*: A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.
2. U *User*: A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
3. IM *Installer/Maintainer*: A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.
4. L *Labor*: A labor representative or employee concerned with safety in the workplace.
5. RT *Applied Research/Testing Laboratory*: A representative of an independent testing laboratory or independent applied research organization that promulgates and/or enforces standards.
6. E *Enforcing Authority*: A representative of an agency or an organization that promulgates and/or enforces standards.
7. I *Insurance*: A representative of an insurance company, broker, agent, bureau, or inspection agency.
8. C *Consumer*: A person who is or represents the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in (2).
9. SE *Special Expert*: A person not representing (1) through (8) and who has special expertise in the scope of the standard or portion thereof.

NOTE 1: “Standard” connotes code, standard, recommended practice, or guide.

NOTE 2: A representative includes an employee.

NOTE 3: While these classifications will be used by the Standards Council to achieve a balance for Technical Committees, the Standards Council may determine that new classifications of member or unique interests need representation in order to foster the best possible Committee deliberations on any project. In this connection, the Standards Council may make such appointments as it deems appropriate in the public interest, such as the classification of “Utilities” in the National Electrical Code Committee.

NOTE 4: Representatives of subsidiaries of any group are generally considered to have the same classification as the parent organization.

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- a. Click on Sign In at the upper right side of the page.
- b. Under the Codes and Standards heading, click on the “List of NFPA Codes & Standards,” and then select your document from the list or use one of the search features.

OR

- a. Go directly to your specific document information page by typing the convenient shortcut link of www.nfpa.org/document# (Example: NFPA 921 would be www.nfpa.org/921). Sign in at the upper right side of the page.

To begin your Public Input, select the link “The next edition of this standard is now open for Public Input” located on the About tab, Current & Prior Editions tab, and the Next Edition tab. Alternatively, the Next Edition tab includes a link to Submit Public Input online.

At this point, the NFPA Standards Development Site will open showing details for the document you have selected. This “Document Home” page site includes an explanatory introduction, information on the current document phase and closing date, a left-hand navigation panel that includes useful links, a document Table of Contents, and icons at the top you can click for Help when using the site. The Help icons and navigation panel will be visible except when you are actually in the process of creating a Public Input.

Once the First Draft Report becomes available there is a Public Comment period during which anyone may submit a Public Comment on the First Draft. Any objections or further related changes to the content of the First Draft must be submitted at the Comment stage.

To submit a Public Comment you may access the online submission system utilizing the same steps as previously explained for the submission of Public Input.

For further information on submitting public input and public comments, go to: <http://www.nfpa.org/publicinput>.

Other Resources Available on the Document Information Pages

About tab: View general document and subject-related information.

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I. Applicable Regulations. The primary rules governing the processing of NFPA standards (codes, standards, recommended practices, and guides) are the *NFPA Regulations Governing the Development of NFPA Standards (Regs)*. Other applicable rules include *NFPA Bylaws*, *NFPA Technical Meeting Convention Rules*, *NFPA Guide for the Conduct of Participants in the NFPA Standards Development Process*, and the *NFPA Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council*. Most of these rules and regulations are contained in the *NFPA Standards Directory*. For copies of the *Directory*, contact Codes and Standards Administration at NFPA Headquarters; all these documents are also available on the NFPA website at “www.nfpa.org.”

The following is general information on the NFPA process. All participants, however, should refer to the actual rules and regulations for a full understanding of this process and for the criteria that govern participation.

II. Technical Committee Report. The Technical Committee Report is defined as “the Report of the responsible Committee(s), in accordance with the Regulations, in preparation of a new or revised NFPA Standard.” The Technical Committee Report is in two parts and consists of the First Draft Report and the Second Draft Report. (See *Regs* at Section 1.4.)

III. Step 1: First Draft Report. The First Draft Report is defined as “Part one of the Technical Committee Report, which documents the Input Stage.” The First Draft Report consists of the First Draft, Public Input, Committee Input, Committee and Correlating Committee Statements, Correlating Notes, and Ballot Statements. (See *Regs* at 4.2.5.2 and Section 4.3.) Any objection to an action in the First Draft Report must be raised through the filing of an appropriate Comment for consideration in the Second Draft Report or the objection will be considered resolved. [See *Regs* at 4.3.1(b).]

IV. Step 2: Second Draft Report. The Second Draft Report is defined as “Part two of the Technical Committee Report, which documents the Comment Stage.” The Second Draft Report consists of the Second Draft, Public Comments with corresponding Committee Actions and Committee Statements, Correlating Notes and their respective Committee Statements, Committee Comments, Correlating Revisions, and Ballot Statements. (See *Regs* at 4.2.5.2 and Section 4.4.) The First Draft Report and the Second Draft Report together constitute the Technical Committee Report. Any outstanding objection following the Second Draft Report must be raised through an appropriate Amending Motion at the NFPA Technical Meeting or the objection will be considered resolved. [See *Regs* at 4.4.1(b).]

V. Step 3a: Action at NFPA Technical Meeting. Following the publication of the Second Draft Report, there is a period during which those wishing to make proper Amending Motions on the Technical Committee Reports must signal their intention by submitting a Notice of Intent to Make a Motion (NITMAM). (See *Regs* at 4.5.2.) Standards that receive notice of proper Amending Motions (Certified Amending Motions) will be presented for action at the annual June NFPA Technical Meeting. At the meeting, the NFPA membership can consider and act on these Certified Amending Motions as well as Follow-up Amending Motions, that is, motions that become necessary as a result of a previous successful Amending Motion. (See 4.5.3.2 through 4.5.3.6 and Table 1, Columns 1-3 of *Regs* for a summary of the available Amending Motions and who may make them.) Any outstanding objection following action at an NFPA Technical Meeting (and any further Technical Committee consideration following successful Amending Motions, see *Regs* at 4.5.3.7 through 4.6.5.3) must be raised through an appeal to the Standards Council or it will be considered to be resolved.

VI. Step 3b: Documents Forwarded Directly to the Council. Where no NITMAM is received and certified in accordance with the Technical Meeting Convention Rules, the standard is forwarded directly to the Standards Council for action on issuance. Objections are deemed to be resolved for these documents. (See *Regs* at 4.5.2.5.)

VII. Step 4a: Council Appeals. Anyone can appeal to the Standards Council concerning procedural or substantive matters related to the development, content, or issuance of any document of the NFPA or on matters within the purview of the authority of the Council, as established by the Bylaws and as determined by the Board of Directors. Such appeals must be in written form and filed with the Secretary of the Standards Council (see *Regs* at Section 1.6). Time constraints for filing an appeal must be in accordance with 1.6.2 of the *Regs*. Objections are deemed to be resolved if not pursued at this level.

VIII. Step 4b: Document Issuance. The Standards Council is the issuer of all documents (see Article 8 of *Bylaws*). The Council acts on the issuance of a document presented for action at an NFPA Technical Meeting within 75 days from the date of the recommendation from the NFPA Technical Meeting, unless this period is extended by the Council (see *Regs* at 4.7.2). For documents forwarded directly to the Standards Council, the Council acts on the issuance of the document at its next scheduled meeting, or at such other meeting as the Council may determine (see *Regs* at 4.5.2.5 and 4.7.4).

IX. Petitions to the Board of Directors. The Standards Council has been delegated the responsibility for the administration of the codes and standards development process and the issuance of documents. However, where extraordinary circumstances requiring the intervention of the Board of Directors exist, the Board of Directors may take any action necessary to fulfill its obligations to preserve the integrity of the codes and standards development process and to protect the interests of the NFPA. The rules for petitioning the Board of Directors can be found in the *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council* and in Section 1.7 of the *Regs*.

X. For More Information. The program for the NFPA Technical Meeting (as well as the NFPA website as information becomes available) should be consulted for the date on which each report scheduled for consideration at the meeting will be presented. To view the First Draft Report and Second Draft Report as well as information on NFPA rules and for up-to-date information on schedules and deadlines for processing NFPA documents, check the NFPA website (www.nfpa.org/docinfo) or contact NFPA Codes & Standards Administration at (617) 984-7246.



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NFPA® 1583

Standard on Health-Related Fitness Programs for Fire Department Members

2015 Edition



NFPA®, 1 Batterymarch Park, Quincy, MA 02169-7471, USA
An International Codes and Standards Organization

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NFPA® 1583

Standard on

Health-Related Fitness Programs for Fire Department Members

2015 Edition

This edition of NFPA 1583, *Standard on Technical Committee on Health-Related Fitness Programs for Fire Department Members*, was prepared by the Technical Committee on Fire Service Occupational Safety and Health. It was issued by the Standards Council on November 11, 2014, with an effective date of December 1, 2014, and supersedes all previous editions.

This edition of NFPA 1583 was approved as an American National Standard on December 1, 2014.

Origin and Development of NFPA 1583

The initial edition of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, contained language requiring that the fire department develop a physical fitness program for its members. In the early 1990s, the technical committee responsible for NFPA 1500 began the development of a specific document to support that requirement. A recommended practice was prepared by the committee and processed through the standards system but never issued.

In June 1997, a new Technical Committee on Fire Service Occupational Medical and Health revived the project, but with a new focus. That focus was to provide a fire fighter with a comprehensive document focused on maintaining a healthy lifestyle, with a fitness component. The first edition was issued in 2000 as NFPA 1583, *Standard on Health-Related Fitness Programs for Fire Fighters*.

The multiple stress factors and rigors of their profession require fire fighters to be medically and physically fit in order to perform required tasks. The committee considers this standard to be a companion document to NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, and a tool to be used in conjunction with the Joint Labor Management Wellness-Fitness Initiative, developed by the International Association of Fire Fighters (IAFF) and the International Association of Fire Chiefs (IAFC).

The 2008 edition of the document was updated to reflect current practices in health-related fitness programs for fire department members and to editorially conform to the *Manual of Style for NFPA Technical Committee Documents*. The title was being changed to *Standard on Health-Related Fitness Programs for Fire Department Members*.

The revisions introduced the concept that, while a health and fitness program should require mandatory participation, it should be nonpunitive. The section on peer fitness trainers was expanded to include requirements for their qualifications and responsibilities. The relationship between the health and fitness coordinator (HFC) and the fire department physician was clarified.

A requirement was added that the health and fitness coordinator design an individualized exercise and fitness training program for a member returning to full duty from a debilitating injury, illness, or any other extended leave.

Annex materials were reorganized to focus on the fire department providing an adequate facility rather than a prescriptive list of equipment. Included were a suggestion that the HFC have a background in functional anatomy, exercise physiology, exercise testing and prescription, exercise supervision, and leadership rather than a long list of qualifications, and a self-assessment tool for use by members to monitor their individual fitness levels.

For the 2015 edition, the committee has updated several requirements to reflect changes in accepted practices in the health-related fitness programs currently being used. Some changes involve cardiovascular risk reduction, nutritional requirements, and inclusion of the fire department physician as part of the health and fitness consultation. The committee also added the reference to the IAFF/IAFC/ACE Peer Fitness Trainer certification in order to provide the end users of this document with a nationally established certification that can be used by fire departments to establish a minimum certification for fitness trainers.

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1583-3

This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on occupational safety and health in the working environment of the fire service. The Committee shall also have responsibility for documents related to medical requirements for fire fighters, and the professional qualifications for Fire Department Safety Officer.

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NFPA 1583

Standard on

Health-Related Fitness Programs for Fire Department Members

2015 Edition

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex D. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex D.

Chapter 1 Administration

1.1* Scope. This standard establishes the minimum requirements for the development, implementation, and management of a health-related fitness program (HRFP) for members of the fire department involved in emergency operations.

1.2 Purpose.

1.2.1 The purpose of this standard is to provide the minimum requirements for a health-related fitness program for fire department members that enhances the members' ability to perform occupational activities efficiently and safely and reduces the risk of injury, disease, and premature death.

1.2.2* This document is intended to help fire departments develop a health-related fitness program for fire department members that requires mandatory participation but is nonpunitive.

1.2.3 This document is not intended to establish physical performance criteria.

1.3 Application.

1.3.1 The requirements of this standard apply to organizations providing rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services, including public, military, private, and industrial fire departments.

1.3.2 This standard does not apply to industrial fire brigades that might also be known as emergency brigades, emergency

response teams, fire teams, plant emergency organizations, or mine emergency response teams.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.

NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, 2013 edition.

2.3 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 600, *Standard on Facility Fire Brigades*, 2015 edition.

NFPA 1451, *Standard for a Fire and Emergency Service Vehicle Operations Training Program*, 2013 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2014 edition.

NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, 2013 edition.

NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2010 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Shall. Indicates a mandatory requirement.

3.2.4 Should. Indicates a recommendation or that which is advised but not required.

3.3 General Definitions.

3.3.1 Debilitating Illness or Injury. A condition that temporarily or permanently prevents a member of the fire department from engaging in normal duties and activities as a result of illness or injury. [1500, 2013]

3.3.2 Emergency Operations. Activities of the fire department relating to rescue, fire suppression, emergency medical

care, and special operations, including response to the scene of the incident and all functions performed at the scene. [1500, 2013]

3.3.3 Facility Fire Brigade. An organized group of employees at a facility who are knowledgeable, trained, and skilled in at least basic fire-fighting operations, and whose full-time occupation might or might not be the provision of fire suppression and related activities for their employer. [600, 2015]

3.3.4 Fire Chief. The highest ranking officer in charge of a fire department. [1710, 2010]

3.3.5* Fire Department. An organization providing rescue, fire suppression, emergency medical care, special operations, and related services.

3.3.6 Fire Department Member. See 3.3.17, Member.

3.3.7 Fire Department Physician. The licensed doctor of medicine or osteopathy who has been designated by the fire department to provide professional expertise in the areas of occupational safety and health as they relate to emergency services. [1582, 2013]

3.3.8* Fire Suppression. The activities involved in controlling and extinguishing fires. [1500, 2013]

3.3.9* Hazard. A condition that presents the potential for harm or damage to people, property, or the environment.

3.3.10 Health and Fitness Coordinator. The person who, under the supervision of the fire department physician, has been designated by the department to coordinate and be responsible for the health and fitness programs of the department. [1500, 2013]

3.3.11* Health and Safety Officer. The member of the fire department assigned and authorized by the fire chief as the manager of the safety and health program. [1500, 2013]

3.3.12 Health Promotion. Preventive activities that identify real and potential health risks in the work environment and that inform, motivate, and otherwise help people to adopt and maintain healthy practices and lifestyles.

3.3.13* Health-Related Fitness Program (HRFP). A comprehensive program designed to promote the member's ability to perform occupational activities and to reduce or eliminate injuries and premature death.

3.3.14 Infectious Disease. An illness or disease resulting from invasion of a host by disease-producing organisms such as bacteria, viruses, fungi, or parasites. [1500, 2013]

3.3.15 Medical Evaluation. The analysis of information for the purpose of making a determination of medical certification. Medical evaluation includes a medical examination. [1582, 2013]

3.3.16 Medical Examination. An examination performed or directed by the fire department physician. [1582, 2013]

3.3.17* Member. A person involved in performing the duties and responsibilities of a fire department under the auspices of the organization. [1500, 2013]

3.3.18 Member Assistance Program (MAP). A generic term used to describe the various methods used in the fire department for the control of alcohol and other substance abuse, stress, and personal problems that adversely affect member performance. [1500, 2013]

3.3.19* Morbidity. The state of being diseased.

3.3.20 Occupational Injury. An injury sustained during the performance of the duties, responsibilities, and functions of a fire department member. [1500, 2013]

3.3.21 Procedure. An organizational directive issued by the authority having jurisdiction or by the department that establishes a specific policy that must be followed. [1561, 2014]

3.3.22 Punitive. Inflicting or aiming to inflict punishment or sanctions.

3.3.23 Qualified Person. A person who, by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with problems related to the subject matter, the work, or the project. [1451, 2013]

3.3.24 Risk. A measure of the probability and severity of adverse effects that result from exposure to a hazard. [1451, 2013]

3.3.25* Standard Operating Procedure. A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely for the performance of designated operations or actions.

Chapter 4 Organization

4.1 Program Overview.

4.1.1* The fire department shall establish and provide a health-related fitness program (HRFP) that enables members to develop and maintain a level of health and fitness to safely perform their assigned functions.

4.1.2 The fire chief shall have the ultimate responsibility for the fire departments health-related fitness program as required by NFPA 1500.

4.1.3 When this standard is adopted by a jurisdiction, the authority having jurisdiction shall set a date or dates for achieving compliance with the requirements of this standard and shall be permitted to establish a phase-in schedule for compliance with specific requirements of this standard.

4.1.4 Nothing in this standard shall restrict any jurisdiction from exceeding the requirements set forth herein.

4.1.5 The fire department shall incorporate the requirements of this standard in its risk management plan.

4.2 Program Components. The health-related fitness program shall include the following components:

- (1) Assignment of a qualified health and fitness coordinator
- (2) Periodic fitness assessment for all members
- (3) Exercise training program that is available to all members
- (4) Education and counseling regarding health promotion for all members
- (5) Process for collecting and maintaining health-related fitness program data

4.3 Roles and Responsibilities.

4.3.1 Each member of the fire department shall cooperate with, participate in, and comply with the provisions of the health-related fitness program.

4.3.2 The fire department shall require the structured participation of all members in the health-related fitness program.



4.4 Logistics.

4.4.1 The fire department shall be responsible for providing the opportunity and means for implementation of the health-related fitness program.

4.4.2* The fire department shall provide the opportunity and means for regular exercise training.

4.4.2.1* Fire departments with assigned work shifts shall allow members to participate during scheduled work times.

4.4.2.2 Fire departments without assigned work shifts shall provide members with the opportunity to participate at times that do not conflict with other commitments.

4.5 Program Referrals.

4.5.1 The fire department shall be responsible for providing educational resources and professional referrals as needed.

4.5.2 The fire department shall be financially responsible for fees associated with referrals only to the extent departmental policy, procedures, standard guidelines, or statutory obligations dictate.

Chapter 5 Health and Fitness Coordinator and Peer Fitness Trainers

5.1 Assignment.

5.1.1 The fire chief shall appoint a health and fitness coordinator (HFC).

5.1.2* The health and fitness coordinator shall be either a member of the fire department or a qualified outside agent.

5.1.3* The health and fitness coordinator shall have access to the fire department physician and other subject matter experts for consultation.

5.1.4 The health and fitness coordinator shall be the administrator of all components of the health-related fitness program.

5.1.5* The health and fitness coordinator shall act as a direct liaison between the fire department physician or other subject matter expert and the fire department.

5.1.6* The health and fitness coordinator shall act as a direct liaison to the fire department's health and safety officer.

5.2* Qualifications for Health and Fitness Coordinator.

5.2.1* The health and fitness coordinator shall have access to appropriate educational materials and formal certification from a professional organization, relevant educational experience, appropriate academic degrees, completion of course work relevant to the program components, or attendance at workshops related to health and fitness.

5.2.2 The health and fitness coordinator shall maintain the continuing education requirements dictated by the coordinator's certifying body or as described in the fire department's job description, whichever sets forth the higher standard.

5.3 Peer Fitness Trainers.

5.3.1 Peer fitness trainers shall work under the direction of the health and fitness coordinator to oversee safe participation in health-related fitness programs.

5.3.2 Peer fitness trainers shall implement and oversee fitness programs for academy recruits as directed by the department health and fitness coordinator.

5.3.3* Peer fitness trainers shall have the level of training and certification required by the fire department and shall maintain their recertification requirements as prescribed by the certifying organization.

Chapter 6 Fitness Assessment

6.1 General.

6.1.1 All members shall participate in a periodic fitness assessment under supervision of the fire department health and fitness coordinator.

6.1.1.1 Members shall discuss any physical limitations or concerns with the health and fitness coordinator in order to assist with the development of an individual exercise prescription.

6.1.1.2 Any medical condition or disease process that can limit a member's ability to safely participate in the annual fitness assessment should be addressed by the fire department physician or the member's treating physician, as appropriate.

6.1.1.3 The member's medical confidentiality shall be respected by the health and fitness coordinator.

6.1.2 The fitness assessment shall be conducted at least annually.

6.2 Fitness Assessment.

6.2.1 All members shall be cleared annually for participation in the fitness assessment by the fire department physician as directed by NFPA 1582.

6.2.2* If a member has an acute medical problem or a newly acquired chronic medical condition, the fitness assessment shall be postponed until that person has recovered from this condition and is cleared as required by 6.2.1.

6.3 Pre-Assessment Questionnaire. The health and fitness coordinator shall administer to all members a pre-assessment questionnaire that seeks to identify contraindications for participation in the fitness assessment and department exercise training program.

6.4* Fitness Assessment Components. The annual fitness assessments shall consist of the following components:

- (1) Aerobic capacity
- (2) Body composition
- (3) Muscular strength
- (4) Muscular endurance
- (5) Flexibility

Chapter 7 Exercise and Fitness Training Program

7.1* Program Components. The fire department's exercise and fitness training program, administered by the department health and fitness coordinator, shall consist of the following components:

- (1) Educational program that describes the components and benefits of exercise on performance and health



- (2) Individualized exercise prescription based on the results of the fitness assessment
- (3) Warm-up and cool-down exercise guidelines
- (4) Aerobic exercise program
- (5) Muscular resistance (strength, endurance) exercise program
- (6) Flexibility exercise program
- (7) Healthy back exercise program
- (8) Safety and injury prevention program

7.2 Program Participation.

7.2.1 The fire department physician shall clear all members for participation in the exercise and fitness training program as directed by NFPA 1582.

7.2.2 After a member returns to full duty from a debilitating injury, illness, or any other extended leave, the health and fitness coordinator shall design an individualized exercise and fitness training program under direction of the department physician or other attending health care professional, in order to facilitate restoration of the members fitness to an optimal level.

Chapter 8 Health Promotion Education

8.1* General Requirements. The fire department shall provide health promotion education as an integral part of the health-related fitness program.

8.1.1* The fire department shall provide for the education of members regarding health risk reduction, cardiovascular risk reduction, general health maintenance, fitness, and the prevention of occupational injuries, illnesses, accidents, or fatalities.

8.1.2* The fire department, under the direction of the fire department physician, shall provide education regarding all of the topics in 8.1.1.

8.1.3 Materials on the matters in 8.1.1 shall be made available to all members on an ongoing basis, with resource materials updated periodically to ensure current information.

8.1.4 The fire department shall provide education and guidance regarding access to the departments member assistance program (MAP) as required by NFPA 1500.

8.1.5 The fire department shall encourage all members to obtain ongoing health care from their primary care providers.

Chapter 9 Data Collection

9.1* General. The fire department shall ensure that a confidential fitness program file is established and maintained for each member.

9.2 Statistical Summary. Group statistical data shall be permitted to be used for administrative purposes as long as it is coded so as not to reveal any member's personal information.

9.3* Data Collected. The individual health-related fitness program file shall record the following:

- (1) Demographic information
- (2) Pre-assessment questionnaire
- (3) Fitness assessment
- (4) Program participation data

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.1 Although this standard is intended primarily for members involved in emergency operations, fire departments are encouraged to apply the components of the health-related fitness program to all employees.

A.1.2.2 The intent of this program is to promote health and fitness in a "mandatory, nonpunitive" manner. "Mandatory, nonpunitive" implies a program with universal participation; however, failure to achieve defined or individual fitness objectives should not be the basis for any employment sanctions, discipline, or other punitive actions.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase "authority having jurisdiction," or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.3.5 Fire Department. The term *fire department* includes any public, governmental, private, industrial, or military organization providing these services.

A.3.3.8 Fire Suppression. Fire suppression includes all activities performed at the scene of a fire incident or training exercise that expose fire department members to the dangers of heat, flame, smoke, and other products of combustion, explosion, or structural collapse. [1500, 2013]

A.3.3.9 Hazard. Hazards include the characteristics of facilities, equipment, systems, property, hardware, or other objects and the actions and inactions of people that create such hazards.

A.3.3.11 Health and Safety Officer. This individual can also be the incident safety officer or that role can be assigned to another individual as a separate function.



A.3.3.13 Health-Related Fitness Program (HRFP). The health-related fitness program includes fitness assessment, exercise training, and health promotion activities.

A.3.3.17 Member. A fire department member can be a full-time or part-time employee, can be a paid or unpaid volunteer, can occupy any position or rank within the fire department, and might or might not engage in emergency operations.

A.3.3.19 Morbidity. Morbidity refers to the number of sick persons or cases of disease in relationship to a specific population.

A.3.3.25 Standard Operating Procedure. The intent of standard operating procedures is to establish directives that must be followed. Standard operating guidelines allow flexibility in application.

A.4.1.1 The fire department needs to recognize that its members are its most valuable resource. The occupational safety and health program has provided direction on performing assigned functions in a safe manner. The health-related fitness program provides another process, one that allows members to enhance and maintain their optimum level of health and fitness throughout their tenure with the fire department. Education, one provision of a health-related fitness program, allows a means for improving health and fitness throughout the organization. The organization needs to provide the recognition and support to ensure the promotion and success of this process. Health and fitness needs to become a value within the organization, just as safety is a value.

Data suggest a correlation between the following:

- (1) A proactive approach to health and fitness and a decrease in debilitating occupational injuries
- (2) A reduction in workers compensation claims and a decrease in acute and chronic health problems of fire fighters

Combining the health-related fitness program with a proactive occupational safety and health program provides a fire department with the level of quality needed for its members.

The purpose of the health-related fitness program is consistent with the medical requirements and occupational safety and health standards, which is to improve the health fitness and overall well-being of fire-fighting personnel. Compliance with the standards of NFPA 1500 has demonstrated that, even in the fire service, benefits will ultimately be manifested in cost savings, decreased sick times, and reduced workers compensation and disability expenses.

A commitment of time and financial resources is necessary to fulfill requirements of this standard. The fire department should afford individual fire fighters the means, the facility, and the time, as part of their work-time function, to pursue the health-related goals. The initial investment of the fire service on behalf of its most valuable resource, the fire fighter, will pay significant dividends in the future.

A.4.4.2 The fire department should provide an adequate facility for overall fitness, including flexibility, aerobic fitness, and muscular strength, where exercise equipment is centrally located. Such a facility can be developed from the following:

- (1) Use of a gym in a commercial facility, high school, university, or other educational institution or private or governmental agency (e.g., military base)
- (2) In-house facility equipped through purchased or donated exercise equipment, which can include appropriate equipment obtained from the following resources:

- (a) Made in local apprenticeship programs (e.g., welders or pipefitters)
- (b) Made at and donated by correctional or educational institutions
- (c) Donated by gyms or rehabilitation facilities
- (d) Purchased on a shared cost agreement with the governing city, based on a reduced industrial insurance cost for a fitness program

The fire department should maintain equipment owned or leased by the fire department.

A.4.4.2.1 The fire department can allocate time on duty for physical fitness training. Scheduling of this time can vary due to emergency calls, training, and other activities.

A.5.1.2 The fire department can choose to acquire the services of an outside agent to serve as the health and fitness coordinator. This health and fitness coordinator should meet or exceed the training and educational background listed in A.5.2.1. The fire department should ensure that such an outside agent is familiar with the unique physical stresses present on the fireground.

Appropriate outside agents can be found at local colleges or universities in the exercise science, kinesiology, physical fitness, or fire technology departments. The private sector can also provide qualified personnel to serve as health and fitness coordinators. Such sources include hospital-based fitness programs, medical facilities, or private companies that provide fitness assessment and wellness programs.

A.5.1.3 Examples of subject matter experts for consultation are exercise physiologists, athletic trainers, and representatives of university health and wellness programs and executive wellness programs.

A.5.1.5 The data generated through the health-related fitness program can show a correlation between fire fighter fitness and occupational safety and health. Nonidentifying data should be shared to facilitate this correlation. The health and fitness coordinator should confer with the health and safety officer regarding health-related fitness policies and procedures, fitness safety, accident and injury prevention, health promotion, and injury rehabilitation.

A.5.1.6 Communication between the health and fitness coordinator and the department's health and safety officer will ensure that data collection and other requirements of the occupational safety and health program are maintained.

A.5.2 There are no broadly accepted educational standards for health and fitness personnel in the United States. While it would be an unrealistic and unattainable goal to require that all health and fitness coordinators have a baccalaureate or graduate degree in a related discipline, it is important to note the level of formal training such a degree connotes.

A.5.2.1 A number of professional organizations, including those listed in Table A.5.2.1, provide training and educational experiences as well as certification programs for interested persons. It is in the best interests of fire departments to avail themselves of these professional services as time and resources allow.

The health and fitness coordinator should have a background in functional anatomy, exercise physiology, exercise testing and prescription, exercise supervision, and leadership.

A.5.3.3 A minimal level of certification [IAFF/IAFC/ACE Peer Fitness Trainer (PFT)] can be obtained from American

Table A.5.2.1 Professional Organizations Providing Training

Organization	Training Program
American College of Sports Medicine	Personal Trainer, Health and Fitness Instructor, Exercise Specialist
American Council on Exercise (ACE)	Personal Trainer
International Association of Fire Fighters (IAFF)/International Association of Fire Chiefs (IAFC)/American Council on Exercise (ACE)	Peer Fitness Trainer (PFT)
National Strength and Conditioning Association (NSCA)	Certified Strength and Conditioning Specialist (CSCS) or Certified Personal Trainer (CPT)
National Academy of Sports Medicine (NASM)	Personal Trainer

Council on Exercise (ACE) as recommended by the IAFF/IAFC *Wellness-Fitness Initiative*.

A.6.2.2 This requirement is consistent with NFPA 1582 regarding postponement of medical evaluation for acute medical problems.

A.6.4 The IAFF in conjunction with the IAFC has developed a *Wellness-Fitness Initiative* for the fire service. The initiative gives a department a template for developing a comprehensive fitness program. (Annex C provides a self-assessment tool for determining fitness levels.) The following examples are from the IAFF/IAFC *Wellness-Fitness Initiative* as well as other fitness assessment protocols, which vary in terms of ease of administration, safety, cost, and predictive value:

- (1) Aerobic capacity, including the following:
 - (a) 1 mile (1.6 km) walk
 - (b) 1.5 mile (2.4 km) run/walk
 - (c) 12-minute run
 - (d) Step test (various)
 - (e) Stairclimbing machine
 - (f) Cycle ergometer (various)
 - (g) Treadmill (various)
- (2) Body composition as follows:
 - (a) Skinfold (various)
 - (b) Circumference (various)
 - (c) Bioimpedance (BIA)
 - (d) Hydrostatic weighing
 - (e) Body mass index (optional)
 - (f) Waist-to-hip ratio (optional)
- (3) Muscular strength as follows:
 - (a) Handgrip dynameter
 - (b) Static bicep curl with dynameter
 - (c) Static leg press with dynameter
 - (d) Bench press (1 rep maximum or percent of body weight)
 - (e) Leg press (1 rep maximum or percent of body weight)

- (4) Muscular endurance, including the following:
 - (a) Push-ups
 - (b) Modified push-ups
 - (c) Pull-ups
 - (d) Bent knee sit-ups
 - (e) Crunches/curl-ups given time or cadence
- (5) Flexibility, including the following:
 - (a) Sit and reach
 - (b) Lateral and rotation movement
 - (c) Trunk extension
 - (d) Shoulder elevation

A.7.1 Annex B provides further information about each component of the fire department's exercise and fitness training program to assist the health and fitness coordinator in setting up and administering such a program.

A.8.1 Health education is now the driving force of health promotion and disease prevention. In the fall of 1993, the Centers for Disease Control (CDC) formally added "and Prevention" to its name. At that time the CDC director announced that prevention's time had come in America. Coincident with this, third-party payers had begun to recognize the value of education about prevention and began to reimburse for preventive services and risk-reduction counseling. Organizations that establish health care guidelines in this country, such as the U.S. Preventive Services Task Force and American Academy of Family Physicians, unanimously agree that most clinical evaluation time for the average nonpregnant adult should be spent on counseling. It is in that spirit that this technical committee is promoting health education as a major part of the health-related fitness program.

A.8.1.1 It is understood that the degrees of resources vary greatly between fire departments. Despite such differences, adequate low-cost opportunities are universally available to satisfy this standard.

The fire department is encouraged to use an opportunistic team approach in the dissemination of informational materials, fostering, for example, collaboration between the fire department physician, the health and safety officer, and the health and fitness coordinator. Information obtained from the physician could be complemented by that supplied by guest speakers at fire department meetings. The balance of information could be available in the form of pamphlet materials kept in an accessible display case at the firehouse. Most materials are available free of charge through public medical organizations, public health agencies, or private advocacy groups, or can be found on the Internet and downloaded free of charge.

A.8.1.2 Educational materials can be in print or electronic form and administered in a formal or informal manner on the following topics:

- (1) Alcohol and substance abuse prevention
- (2) Pap smears, annual gynecological exams, colonoscopies, mammograms, and prostate-specific antigen (PSA) tests
- (3) Smoking cessation programs
- (4) Cancer risks, including skin cancer (the most common form of cancer), colon cancer, prostate cancer, breast cancer, and lung cancer
- (5) Diet and nutrition education, including cholesterol, weight management, diabetes, and effects of obesity
- (6) Infectious diseases, including recommendations for the prevention of influenza, hepatitis, tetanus, pneumonia,



- tuberculosis, varicella (chicken pox), measles, and rubella, as well as immunization recommendations for given age groups
- (7) Sexually transmitted diseases, including recommendations for prevention, diagnosis, and treatment of HIV, hepatitis, herpes, and chlamydia
- (8) Cardiovascular risk reduction
- (9) Sleep hygiene and fatigue management

A.9.1 The primary purpose for maintaining a health-related fitness program file for each participant is to document health-related fitness information for exercise prescription and periodic comparison to previous results. Comparison of new data to previous results will show an individual's progress in attaining a higher level of fitness. Consequently, from analysis and comparison of data, an individual's exercise prescription can be modified. In addition to measuring a participant's progress and providing information for modification of an individual's fitness program, analysis of the organization's set

of files, or database, will provide information about organizational progress in developing a health-related fitness program and the need for program modification. Along with providing valuable information about the success of the health-related fitness program, maintenance of the database and its subsequent analysis will provide statistics for program justification.

Electronic data processing is often employed to facilitate management of such a database. BSDI has been recognized by the IAFF/IAFC *Wellness-Fitness Initiative* as the publisher of appropriate software for documenting health-related fitness information.

A.9.3 It is recommended that the health-related fitness program file contain demographic information such as age, gender, ethnicity, years of service, and job assignment, as well as exercise frequency, intensity, duration, and mode information. To ensure consistency and continuity of the process, data should be collected on a standard form such as that shown in Figure A.9.3.

1583-12

HEALTH-RELATED FITNESS PROGRAMS FOR FIRE DEPARTMENT MEMBERS

PERSONAL AND DEMOGRAPHIC INFORMATION

Date of submission (mm/dd/yy): _____ Age: _____ Gender: ☐ Male ☐ Female

Fire department confidential identification code: _____

Fire-fighter confidential identification code number: _____

Ethnicity: ☐ African American ☐ Asian ☐ Hispanic ☐ Native American ☐ Filipino
☐ Caucasian ☐ Other

Job assignment: ☐ Structural fire fighting ☐ Administrative officer ☐ Field officer

No. of years in service: _____

Smoking/Tobacco usage (packs per day): ☐ <1 ☐ 1 ☐ 2 ☐ 3 or more ☐ None

Height (in whole inches): _____ Weight (in whole pounds): _____

FITNESS ASSESSMENT

Mode of Testing

Results

Aerobic Capacity

☐ 1.5 mile walk/run (field test)

☐ Other _____ Completed in _____ min _____ sec

☐ Step test

Test duration _____

Step height _____ VO₂ max _____

☐ Other _____

☐ Submaximal treadmill test

☐ Other _____ Heart rate _____ Blood pressure _____

☐ Submaximal cycle ergometer test

☐ Other _____ Heart rate _____ Blood pressure _____

Pre-exercise heart rate _____ Post-exercise heart rate _____

Pre-exercise blood pressure _____ Post-exercise blood pressure _____

Flexibility

☐ Trunk flexion (sit and reach test)

☐ Other _____ Most distal point reached _____

Muscular Strength

☐ Grip strength test

(one repetition maximum) Right hand _____ kg

☐ Other _____ Left hand _____ kg

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FIGURE A.9.3 Sample Health-Related Fitness Program Form Showing Demographic and Assessment Information.



2015 Edition

Mode of Testing	Results
Muscular Endurance	
<input type="checkbox"/> Push-up test [1 minute (max)]	Maximal number of push-ups performed consecutively without resting _____
<input type="checkbox"/> Other _____	
<input type="checkbox"/> Sit-up test [1 minute (max)]	Maximal number of sit-ups performed within 1 minute _____
<input type="checkbox"/> Other _____	
Body Composition Testing	
Skinfold assessment	Site #1 _____ Site #2 _____ Site #3 _____ Percent of body fat _____
Body mass index (BMI)	Member's weight divided by height ² = <input type="checkbox"/> 20–24.9 kg/m ² <input type="checkbox"/> 25–29.9 kg/m ² <input type="checkbox"/> 30–34.9 kg/m ² <input type="checkbox"/> over 35 kg/m ²
Waist-to-hip ratio	Waist circumference _____ Hip circumference _____ Waist-to-hip ratio _____
Hydrostatic weighing	Body density _____
Bioimpedance (BIA)	Body density _____
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FIGURE A.9.3 Continued

Annex B Sample Fitness Plan

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

B.1 Components and Benefits of Fitness. The health-related components of fitness focus on the importance of maintaining and increasing an individual's fitness levels, creating positive lifestyle changes, and enhancing job performance. The motor-related components of fitness improve an individual's athletic endeavors or area(s) of motor performance. Health-related and motor-related components of fitness include the following:

- (1) Health-related components
 - (a) Aerobic capacity
 - (b) Muscular strength
 - (c) Muscular endurance
 - (d) Flexibility
 - (e) Body composition
- (2) Motor-related components
 - (a) Coordination
 - (b) Agility
 - (c) Power
 - (d) Balance
 - (e) Speed

B.2 Individualized Exercise Prescription Based on the Fitness Assessment. The components of a basic exercise prescription should include the following:

- (1) *Mode:* type of exercise
- (2) *Intensity:* difficulty of exercise
- (3) *Duration:* length of exercise session
- (4) *Frequency:* number of sessions per day or week
- (5) *Progression:* gradual increases in workload to promote a training adaptation

The individualized exercise prescription should take into consideration the following concepts:

- (1) *Overload.* To create a training effect, the exercise performed must exceed the load the individual normally experiences. Excessive overload can lead to training injuries; therefore, it is best to underestimate workload and err on the side of safety.
- (2) *Progression.* As adaptations to the load take place, the load must be progressively increased in order to continue adaptations and improvements. Programs should progress gradually to avoid overtraining and injuries.
- (3) *Specificity.* Overload training leads to adaptations in the muscles and the physiological systems. The adaptations are specific to the manner in which the person trains. This principle of training will be very important for individuals who need to target a specific aspect of fitness.

(4) *Targeting the Improvement of Health and Fitness.* Programs designed to improve health will not necessarily improve fitness. However, any properly designed exercise training program designed to improve fitness will also have a positive impact on overall health. The *Surgeon General's Report on Physical Activity and Health* states that physical activity need not be strenuous to improve health, although greater health and fitness benefits can be achieved by increasing the amount of physical activity. Since a high level of physical fitness is essential for safely performing fire-fighting duties, a fitness program designed for public safety personnel should promote health and a higher level of physical fitness. The workout regimen should include exercises to improve aerobic capacity and muscular fitness components (i.e., strength, endurance, flexibility).

B.3 Warm-Up and Cool-Down Exercise.

B.3.1 Pre-Exercise (Warm-Up). Each workout session should include at least a 5- to 10-minute warm-up period. The purpose of the warm-up is to increase body temperature while improving the flow of blood and oxygen to the muscles. A warm-up prepares the body for the more strenuous exercise to follow, decreases risk of injury, and improves performance.

B.3.2 Post-Exercise (Cool-Down). A 10- to 15-minute cool-down period should follow each workout. This period includes a gradual tapering of exercise intensity followed by stretching. The purpose of the cool-down is to assist in the return of blood to the heart, thereby reducing cardiac stress. Tapering should be followed by stretching of the affected muscles to promote flexibility and reduce muscle soreness.

B.4 Aerobic Fitness.

B.4.1 Significance. Aerobic exercise has many benefits, including increased aerobic capacity, muscular endurance, improved bone density, and improved body composition. The *Surgeon General's Report on Physical Activity and Health* found that inactivity is hazardous to health. Aerobic exercise generally reduces coronary risk factors, muscle fatigue, injuries, and morbidity. Repeatedly, research has shown the need for fire fighters to have high levels of aerobic fitness in order to perform their job.

B.4.2 Definitions.

B.4.2.1 Aerobic Fitness. Enhancement of the body's ability to take in, transport, and utilize oxygen; improved stamina or ability to carry out muscular activity for a prolonged period of time. Aerobic fitness, also referred to as cardiovascular fitness and cardiorespiratory endurance, is generally measured by the maximal oxygen consumption test (VO_2 max).

B.4.2.2 American College of Sports Medicine (ACSM). A national organization of exercise physiologists and health practitioners who review the body of studies on exercise physiology and present exercise testing guidelines as well as exercise prescription recommendations and position statements.

B.4.2.3 Interval Training. A method of training in which periods of high-intensity effort (work interval) are alternated with periods of lower training intensity or rest (rest interval). These intervals are performed repeatedly for a given number of repetitions. For example, a 1-minute jog (work interval) followed by a 1-minute walk (rest interval), performed a total of 10 times (10 repetitions).

B.4.2.4 Karvonen's Formula. A formula used to predict the heart rates that represent approximately 60 to 85 percent of

VO_2 max. This rate is considered an appropriate range to promote aerobic fitness improvements.

B.4.2.5 Maximal Oxygen Consumption Level (VO_2 max). The maximal amount of oxygen that can be consumed and utilized per minute. It is measured in milliliters per kilogram of body weight per minute. Direct or gas exchange VO_2 measurement is considered the best indicator of aerobic fitness. Indirect VO_2 testing is a more common method of assessing aerobic fitness, which typically utilizes a formula to predict VO_2 from time and workload.

B.4.3 Aerobic Exercise Prescription.

B.4.3.1 Mode. Activities that utilize large muscle groups in a rhythmical continuous manner (e.g., walking, running, swimming, cycling, rowing, stair climbing, skating, dancing, cross-country skiing, rope skipping, racquetball) are all endurance-based activities. Training can also be carried out in an interval-style fashion. Employing a variety of training modes will reduce the chance of workout boredom and overuse injuries.

Selection of exercise mode should take into consideration the following:

- (1) Individual preferences
- (2) Availability of proper equipment or facilities
- (3) Risk of injury versus benefit of activity
- (4) Specificity to occupational demands

Since fire fighters need to support their own body weight and the additional load of protective clothing and breathing apparatus, the most job-specific activities will be those that are weight-bearing, such as walking or stair stepping, in contrast to non-weight-bearing activities such as cycling.

B.4.3.2 Intensity. How hard an individual exercises can be determined by monitoring exercise heart rate, perceived exertion, or caloric expenditure. The American College of Sports Medicine (ACSM) recommends exercising at a heart rate between 70 and 90 percent of maximal heart rate or 60 to 85 percent of VO_2 max, or heart rate reserve. Karvonen's formula (see B.4.4) can be used to calculate the heart rate range that represents approximately 60 to 85 percent of one's VO_2 max. An alternative to this approach calculates a straight percentage (70 percent to 90 percent) of maximal heart rate. If the maximal heart rate is unknown, it can be predicted by subtracting age from the constant 220.

A second calculation method uses the perception of exertion to determine proper intensity of exercise; exercise should be "somewhat hard" to "hard."

A third method for determining exercise intensity calculates the number of calories burned per minute for a given exercise or for a total exercise period. Generally speaking, activities that burn fewer than 10 calories per minute would represent a low-to-moderate intensity, and activities that burn more than 10 calories per minute would be considered high intensity.

B.4.4 Karvonen's Formula. To predict training heart rate, use the following formula [Source: ACSM's *Guidelines for Exercise Testing and Prescription* (Chapter 7)]:

$$HR_{\text{trn}} = HR_{\text{max}} - HR_{\text{rest}} \times \% \text{ intensity} + HR_{\text{rest}} \quad [\text{B.4.4}]$$

where:

HR_{trn} = Training heart rate
 HR_{max} = Maximum heart rate = $220 - \text{age}$
 HR_{rest} = Resting heart rate

When determining the proper intensity of exercise, the following must be considered:

- (1) Level of fitness
- (2) Medications that affect heart rate
- (3) Environmental conditions
- (4) Risk of cardiovascular or orthopedic injury
- (5) Individual objectives and preferences
- (6) Job specificity

Studies evaluating fire fighters' heart rate response to fire-ground activities find that heart rates range from 80 to 90 percent of maximal heart rate or 70 to 80 percent of VO_2 max. Therefore, a fire fighter should consider progressing to a program that includes some high-intensity efforts.

B.4.5 Duration. The duration of the workout can be determined by time, distance, or calories expended. Exercise duration is integrally related to exercise intensity, and together they determine the total number of calories burned in an exercise session. Total caloric expenditure can also be used to help determine exercise intensity and duration.

The ACSM recommends 20 to 60 minutes of continuous activity, excluding the warm-up and cool-down periods. Unfit individuals can benefit from multiple sessions of less than 10 minutes until they are able to withstand training of a longer duration.

B.4.6 Frequency. Exercise frequency is related to the intensity and duration of the exercise program as well as to individual time constraints and goals. Persons with very low fitness levels will benefit from multiple workouts per day, because they have to exercise at a low intensity and short duration due to lack of fitness. Two to three short workouts per day could be most appropriate. The ACSM recommends a minimum of three aerobic workouts per week to improve fitness and two sessions per week to maintain current fitness levels. Workouts should be performed on nonconsecutive days in order to allow adequate recovery between sessions. Weight training exercises can be performed on the days following the aerobic workout.

B.4.7 Weekly Caloric Expenditure. One goal of an exercise program can be a reduction in body fat. The total weekly caloric expenditure, which is determined by exercise intensity, duration, frequency, and mode, can also be used as a tool to determine the exercise prescription. The ACSM recommends a minimal caloric expenditure of 300 calories per exercise session performed three times a week or 200 calories per session performed four times a week. The *Surgeon General's Report on Physical Activity and Health* recommends an accumulated exercise expenditure of 1000 calories per week to improve health. A more optimal level to improve performance is an expenditure of 2000 calories a week.

B.4.8 Rate of Progression. According to the ACSM, the following considerations should be made when determining the proper rate of progression for an individual:

- (1) Medical, health, and coronary risk status
- (2) Functional capacity
- (3) Musculoskeletal conditions
- (4) Age
- (5) Individual goals and preferences
- (6) Specificity to occupational demands

Progressions can come in the form of increases in intensity, duration, and frequency, or a change in mode of exercise (e.g., running instead of cycling). Progressions should be gradual to avoid training injuries.

B.5 Muscle Fitness.

B.5.1 Significance. Components of muscle fitness include muscular strength, endurance, and flexibility. The demands of fire fighting require an above-average level of muscular strength and endurance. Increases in bone, muscle, and connective tissue strength and density decrease the risk of soft tissue injuries. Fire fighters have to be able to pull, drag, and carry heavy loads. Improved muscular fitness will improve job performance and decrease the likelihood of injuries.

B.5.2 Definitions.

B.5.2.1 Maximal Voluntary Contraction (MVC). Maximal amount of weight that can be lifted in a single voluntary muscular contraction.

B.5.2.2 Muscular Endurance. The ability of the muscle to perform repeated contraction for a prolonged period of time; the ability of the muscle to persist.

B.5.2.3 Muscular Strength. The maximal amount of force a muscle or group of muscles can exert in a single contraction; the ability to apply force.

B.5.2.4 National Strength and Conditioning Association (NSCA). A national association of exercise physiologist and health professionals who review the body of information generated on muscle fitness training and provide recommendations and position statements for exercise testing protocols and training programs.

B.5.2.5 Repetition Maximal (RM). The maximal number of repetitions that can be completed with a given weight. For example, if 150 lb (68 kg) is a 10 RM load on the bench press, a person could lift 150 lb (68 kg) at least 10 times but no more than 10 times, using proper lifting form.

B.5.2.6 Repetition (Rep). The lifting and then lowering of a weight.

B.5.2.7 Rest Interval. The period of rest that could include stretching or light activity between sets and different exercises. (See B.4.2.3, *Interval Training*.)

B.5.2.8 Set. A series of repetitions completed without rest.

B.5.3 Muscular Fitness Exercise Prescription.

B.5.3.1 Mode. Free weights, machine weights, circuit training, and calisthenics using body weight or tools and equipment from the fireground (e.g., hose, ladder, bundles), or anything that provides a resistance that the muscles have to overcome can be used to improve muscle fitness. The exercise modalities given here will be separated into the following four groups:

- (1) *Free Weights.* Use of free weights (e.g., dumbbells and barbells) requires a balance between the individual and the weight during lifting, which results in a greater use of muscles and the development of better coordination during forceful exertions. Balancing the individual and the weight improves strength transfer to real-life movements, whether for recreational, sport, or work activities. Free weights generally are less expensive to purchase and maintain. A spotter is necessary in several lifts, and the risk of injury can be more serious.
- (2) *Circuit Weight Training.* This regimen is a type of interval training in which strength, local muscle endurance, cardiorespiratory endurance, and reductions in body fat can be accomplished. Free weights, machine weights, and

calisthenics can be used in a circuit. Participants perform a series of exercises organized to work all the major muscle groups. The lifting or work period will be 15 to 30 seconds long, and rest intervals between exercises will vary from 15 seconds to 1 minute, depending on which element of fitness is to be emphasized.

- (3) **Machine Weights.** Machine weights provide improved convenience of lifting and safety, and they are easier to learn to use than free weights. Additionally, spotters are not necessary. Machine weights do not simulate the real-life lifting situation as well as free weights, but they do improve muscular fitness, which in turn should improve a fire fighter's ability to lift effectively and safely on the fireground. Machine weights are more expensive to purchase and maintain than free weights.
- (4) **Calisthenics.** Calisthenics use an individual's body weight to provide resistance to the muscles. Although no special equipment is required and calisthenics are generally quite safe to perform, resistance is limited by an individual's body weight. Therefore, calisthenics are not necessarily as effective for improvements in strength. Job-specific tasks such as pulling a hose or raising a ladder are very specific to job tasks. However, they are not as convenient or safe to use for all training purposes. The load or intensity is often difficult to control or manipulate.

B.5.3.2 Exercise Selection. A combination of all of the modes of training described in B.5.3.1 can be the most beneficial, especially for a fire fighter who needs to train specifically for job tasks but who also desires a safe and convenient exercise program. Regardless of what mode of training is used, a program should be balanced and complete. A minimum of one exercise should be included for each of the following movements:

- (1) Upper-body push
- (2) Upper-body pull
- (3) Lower-body thrust and extension using the hip and knee joint
- (4) Knee flexion (hamstrings)
- (5) Anterior trunk (abdominal)
- (6) Posterior trunk (lower back)

B.5.3.3 Intensity. Using the principle of repetition maximal (RM), the weight or resistance should be such that at least 5 repetitions can be completed, but no more than 20 repetitions can be performed, with a given weight (5–20 RM).

Exceptions would occur during warm-up sets and sets performed by novice lifters, as well as those returning from an injury or individuals with a low fitness level. These types of sets can be performed with lighter loads that would allow more repetitions as follows:

- (1) To emphasize the development of strength, a weight that allows 5 to 8 repetitions, or is a 5–8 RM load, should be used. Complete 3 to 6 sets of each exercise.
- (2) To emphasize the development of muscular endurance, a weight that allows a minimum of 10 repetitions, or a 10 RM load, should be used. Complete 3 to 6 sets of each exercise.
- (3) To emphasize proper warm-up, a light weight that allows 8 to 10 repetitions should be used. Complete 1 to 2 warm-up sets for each exercise.

B.5.3.4 Duration. The total volume of training (i.e., number of exercises, repetitions, and sets completed) should determine exercise duration, which can last from 20 to 90 minutes. The mode of training can also be a factor in determining

duration. Circuit training and the use of weight machines can provide a faster workout.

B.5.3.5 Rest Interval Between Workouts. A minimum of 48 hours between workouts of the same muscle should be allowed. Exceptions include the forearms, calf, and abdominal muscles, which can be exercised more frequently.

B.5.3.6 Rest Interval Between Sets and Exercises. More rest between sets and exercises is needed at the beginning of a program, after an injury, during a multijoint lift (e.g., squat), or when lifting heavier weights to emphasize strength. The following guidelines can be used to determine rest intervals between sets and exercises:

- (1) **Strength:** 2 to 3 minutes of rest between sets and exercises
- (2) **Endurance:** 30 seconds to 2 minutes of rest between sets
- (3) **Circuit program:** 15 to 30 seconds of rest between exercises

B.5.3.7 Training Frequency. The ACSM recommends that a minimum of 2 days per week be devoted to muscular fitness training. According to NSCA, improvements can be achieved at a frequency of 2 days per week, but 3 alternating days per week is superior to other training frequencies. Generally speaking, persons who are in good health, have a good training background, and desire muscular endurance and hypertrophy should engage in more frequent training. Persons of questionable health, limited training background, or engaging in heavy training using multijoint exercises designed to increase strength and high-intensity power should train less frequently. Two or more training sessions a week are required to maintain or make gains. The frequency of training depends on all of the following factors:

- (1) Initial level of conditioning
- (2) Individual goals
- (3) Health status of the athlete
- (4) Volume and load of exercises
- (5) Type of movement performed (multijoint vs. single-joint)

B.5.3.8 Rate of Progression. All exercise programs should start gradually in order to ease through the initial stages of the body's adaptation to the stress of exercise. Resistance training is no exception, as it follows the same stages described in the aerobic training section. (See B.4.8.) However, the method of increasing the workout will include one or more of the following factors:

- (1) Increased resistance (weight)
- (2) Increased repetitions
- (3) Increased sets
- (4) Decreased rest interval between sets
- (5) Increased frequency of training
- (6) Change in exercises or training mode

B.6 Flexibility.

B.6.1 Significance. Flexibility measures the range of motion in a joint, which depends on the extensibility of soft tissues (e.g., muscles, tendons, ligaments). Lack of flexibility can hinder physical performance or contribute to an increased risk of injury. Benefits of stretching include the following:

- (1) Relaxation from stress and tension
- (2) Improved circulation
- (3) Relief of lower back pain
- (4) Relief of muscle soreness
- (5) Improved coordination
- (6) Improved job performance
- (7) Reduced risk of injury



B.6.2 Definitions.

B.6.2.1 Static Stretch. A slow, gradual, constant stretch in which the end position is held for 10 seconds or longer. Static stretching is easy to learn, safe, and effective and is the recommended stretching mode for fire fighters.

B.6.2.2 Ballistic Stretch. A bouncing movement in which the end position is not held. Ballistic stretching involves a dynamic movement to create a rapid stretch of the muscles. It involves the same types of stretches utilized in static stretching, but it uses rapid or bouncing movements to elongate the muscle. Ballistic stretching can produce injuries to muscles or connective tissue, especially when a previous injury is involved.

B.6.2.3 Dynamic Stretch. Stretching utilizing movement, but including sports-specific movements or simulating a movement pattern used in an activity. Dynamic stretching can be beneficial to include in warm-up after muscles are warm and static stretching has been completed. Ballistic or dynamic stretching should not be substituted for the static mode.

B.6.2.4 Proprioceptive Neuromuscular Facilitation Stretch (PNF). Alternation of muscle contraction and relaxation of both the agonist (muscle being stretched) and antagonist (muscle in opposition to the stretch) muscles, resulting in further relaxation of the muscle being stretched. This interaction results in a decrease in resistance and an increase in the range of motion. This type of stretching generally requires a partner and more time to learn. The partner must be experienced in PNF techniques in order to prevent injuries. Some studies indicate that PNF is superior to static stretching in improving range of motion.

B.6.3 Flexibility Exercise Prescription.

B.6.3.1 Mode. The static stretching technique is safe and effective and is therefore the recommended method of improving flexibility. If personnel trained in the PNF method of training are available, stretching can be even more effective. To stretch the muscle statically and slowly, the muscle should be stretched to a point of tension, not pain, and held for at least 10 seconds. After the initial 10 seconds, the stretch should be lengthened a little further, and held another 10 seconds or longer. Each stretch should be repeated two to three times.

B.6.3.2 Intensity. Individuals should stretch to the point of tension, not pain. "No pain, no gain" definitely does not apply here. The stretch should be felt in the belly of the muscle and not at the joint.

B.6.3.3 Duration. Each stretch should be held at least 10 seconds, then progressed to 30 seconds or longer. Completing a stretching program for the whole body will take approximately 10 to 15 minutes.

B.6.3.4 Frequency. Stretching can and should be done daily. After the initial warm-up, stretching exercises will prepare the body for the more strenuous workout to follow. Stretching after a workout improves flexibility and decreases muscle soreness. A minimum of three stretching workouts a week will generally improve flexibility.

B.6.3.5 Progression. To progress in the flexibility program, increases should be made in the duration of the stretch to more than 10 seconds, in the number of repetitions (up to five repetitions), or in the frequency of stretching. Flexibility can be maintained by stretching at least three times a week, especially before and after workouts. Conducting weight training

activities using a full range of motion in each exercise will also help maintain flexibility.

B.6.3.6 Stretching Tips. The following tips can be helpful in making stretching safe and effective:

- (1) Always warm up muscles with an activity that elevates heart rate and muscle temperature before stretching.
- (2) Cold muscles should not be stretched.
- (3) The breath should not be held while stretching. Relaxing and slow breathing should be encouraged.
- (4) Proper technique and posture/body alignment should be used when stretching.
- (5) Stretching a muscle should be discontinued if a dull ache or burning sensation that could indicate a tissue tear is experienced.

B.7 Healthy Back Exercise Program.

B.7.1 Significance. Approximately 5 million Americans suffer from acute or chronic back pain, which accounts for over 90 million lost production days annually. A report by M. Karter in the *NFPA Journal* found that lower back sprains and strains were the most common type of injury. The physical demands placed on fire fighters put them at great risk especially if they are not adequately conditioned.

The following are common causes of lower back pain and injury:

- (1) Weak abdominal and/or lower back muscles
- (2) Inflexible lower back, hamstrings, and hip flexor
- (3) Improper posture and body mechanics

B.7.2 Mode. Strengthening and stretching exercises and exercises that improve aerobic fitness to lessen or prevent fatigue are general prescriptions in a healthy back exercise program. Specific exercises to strengthen the lower back, abdominal region, and the muscles in the trunk region are essential. The trunk region is often the weakest link in the body. It is responsible for transferring muscle forces from upper body to lower body, and vice versa, as well as for stabilizing and controlling movements of the spinal column. If lower back pain is consistent or severe, exercising should be discontinued, and the member should be examined by a physician.

B.7.3 Intensity. All exercises should be carried out at a low to moderate intensity. Proper form, not high intensity, should be emphasized. Each exercise should be completed in a slow, controlled manner. All stretching should follow the prescription for static stretching.

B.7.4 Duration. Exercise should continue for 10 to 20 minutes, depending on the number of exercises and stretches.

B.7.5 Frequency. Healthy back exercises should be carried out three to five times a week. As mentioned previously, these exercises can be inserted into any warm-up routine.

B.7.6 Progression. Stretches can be progressed by holding longer and gradually stretching further. Calisthenics and trunk strengthening exercises can be increased by completing more repetitions, or sets, or by adding light weights. The frequency of training can also be increased. Ten minutes of stretching and trunk strengthening exercises three times a week will maintain levels; 30 minutes a week to lessen the risk of a back injury is an excellent time investment. Cardiovascular and weight training exercises will also contribute to maintenance of a healthy back.

B.7.7 Improper Body Mechanics. Improper posture or lifting mechanics are often the result of weak and inflexible muscles. Strengthening the trunk region and improving flexibility will improve body mechanics.

Virtually all lifting tasks involve the legs; therefore, the legs should be strengthened. However, it is crucial for a fire fighter to employ proper lifting techniques even when the load is relatively light. Lifting free weights can help in learning how to lift properly, but specific lifting procedures should be followed for various fireground tasks. The feet should be approximately shoulder width apart, legs bent at the hips and knees, lower back flat or slightly bowed inward, chest and buttocks out, head erect. The power to lift should come from the legs and lower trunk, not the upper body.

B.7.8 Using Weight Belts. Recommendations for strength training involving the use of weight belts are as follows:

- (1) For exercises not stressing the back, a belt should not be worn.
- (2) For exercises directly stressing the back, a belt should not be worn during lighter sets but always worn for near maximal and maximal sets.
- (3) It should never be assumed that a weight belt will afford protection against improper lifting technique.

B.8 Safety and Injury Prevention. The following are general guidelines for prevention of injuries while exercising:

- (1) Warm-up and stretching exercises should be performed before a workout. The exercise intensity and stretch should be gradually tapered after a workout.
- (2) Members should not overestimate their abilities when beginning an exercise program. Starting out slow and easy and gradually increasing the exercise intensity, duration, or frequency is paramount. Members need to remember that they do not get out of shape overnight and that they cannot get into shape overnight. They need to be patient.
- (3) Chronic muscle soreness and fatigue are signs of overtraining. They indicate the need to reduce the workout stimulus, to increase the recovery period between workouts, or both. The body's messages should be heeded.
- (4) Properly fitting exercise equipment and clothing should always be worn.
- (5) Performing the same workout routine should be avoided. Variety not only reduces boredom but also avoids overuse-type injuries. Periodically changing the modes of exercise, the intensity, and the duration of workouts is required. Changing the exercise stimulus also issues a new challenge to the body, resulting in continued improvements.

Annex C Self-Assessment Tool

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

C.1 General. A self-assessment gives the member valuable feedback on their individual fitness level, ability to recover from exertion, and overall physical capacity as it pertains to the job. It is an evaluation that the member can safely perform in private to provide individualized feedback on personal level of fitness, level of improvement, and physical capacity for exercise. The exercises, weights, repetitions, and aerobic equipment chosen for use in a self-assessment should be similar to the actual job.

A self-assessment can be performed at the workout location with minimal equipment. An assessment should be customized for the member to measure accurately his or her individual ability to perform actual, essential job tasks specific to the routine duties of the department. The information collected from the assessment is valuable to uniformed personnel because it can be compared to previous and future assessments. If an individual's heart rate at 1 minute exceeds 90 percent of the estimated maximum, that individual could lack the reserve necessary to perform safely on the fireground. Similarly, if an individual is unable to complete the repetitions of a particular exercise, that individual could be unable to sufficiently complete the essential task that the exercise simulates. This information should be used to motivate the member to improve any deficiencies noted during the evaluation.

A personalized exercise prescription is a major component of the wellness program. The personalized exercise prescription should be a progressive plan that accounts for an individual's current level of fitness as determined from the self-assessment, job duties, time restrictions, physical capabilities, nutritional status, and self-improvement.

C.2 Example of Circuit Self-Assessment Test. One type of self-assessment is a circuit test. A member who is going to perform a circuit self-assessment test should be medically cleared to participate in the assessment. The member should warm up properly prior to beginning the assessment, then follow the protocol below.

Prior to performing the self-assessment, assemble the following equipment:

- (1) Heart rate monitor
- (2) Dumbbells [pairs of 15 lb, 20 lb, 30 lb, and 35 lb (7 kg, 9 kg, 14 kg, and 16 kg)]
- (3) Treadmill (capable of 5 mph and 15 percent grade)
- (4) Lat pulldown machine [set at 80 lb (36 kg)]
- (5) Flat bench

Place the equipment conveniently close to the treadmill as you will be returning to this piece of equipment throughout the assessment.

Wet the heart receiver and put it on your chest. Tighten it to a comfortable setting. Turn on the watch and be sure it is receiving your heart rate.

Now you are ready to begin the assessment. Remember that you will be recording both your time and your heart rate. Therefore you should move at as brisk a pace as you feel comfortable between events.

Get your self-assessment worksheet (see Figure C.2) and mark the date. Keep this sheet with you as you proceed so you can record your heart rate immediately after each event. Once the test has begun, move from one station to the next with no more than 30 seconds between events. Movements with weights should be through the full range of motion, and both the concentric and eccentric contractions.

The steps of the self-assessment are as follows:

- (1) Straddle the treadmill and start the belt. Be sure to set the exercise time for 20 minutes so it can run continually during your evaluation. Set the speed for 3.5 mph while you increase the incline to 15 percent. As soon as the belt reaches 2 mph you can step on the treadmill. Once the incline reaches 15 percent, increase the speed to 5.0 mph. As soon as the speed hits 5.0 mph begin timing your assessment.



SELF-ASSESSMENT WORKSHEET				
Name: _____				
	Date			
	Start Time			
	Finish Time			
Exercise	Heart Rate			
Treadmill at 15 percent and 5 mph for 1 min.				
DB curls with 15 lb, 24 reps (standing — both arms)				
Treadmill at 15 percent and 3.5 mph for 1 min.				
DB rows with 30 lb, 24 reps (each arm)				
Treadmill at 15 percent and 3.5 mph for 1 min.				
DB military press with 20 lb, 24 reps (standing — alternating arms)				
Treadmill at 15 percent and 3.5 mph for 1 min.				
DB carry with 35 lb, 10 reps (pickup/carry 6 ft)				
Treadmill at 15 percent and 3.5 mph for 1 min.				
Lat pulldown at 80 lb, 24 reps (close grip/palms towards face)				
1 minute of recovery (sitting quietly)				
2 minutes of recovery (sitting quietly)				
3 minutes of recovery (sitting quietly)				
4 minutes of recovery (sitting quietly)				
5 minutes of recovery (sitting quietly)				

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FIGURE C.2 Self-Assessment Worksheet.

- (2) Run on the treadmill at 5.0 mph on a 15 percent grade for 1 minute. At the end of 1 minute, reduce the speed to 3.5 mph and step off the treadmill. Record your heart rate and move to the 15 lb dumbbells.
- (3) Pick up the 15 lb dumbbells and perform 24 biceps curls with both arms simultaneously. Do not swing your arms or upper body. Be sure to move through the full range of motion. After the 24th repetition, record your heart rate and move back to the treadmill.
- (4) Walk on the treadmill for 1 minute at 3.5 mph on a 15 percent grade. After 1 minute, record your heart rate and move on to the dumbbell (DB) row.
- (5) Place your left knee and left arm on the flat bench and pick up the 30 lb dumbbell with your right hand. Keeping your chest parallel to the ground, pull the dumbbell upward and into your lower chest. Perform 24 repetitions with your right arm. Then place your right knee and right arm on the bench and perform 24 repetitions with your left arm. Record your heart rate and move on to the treadmill.
- (6) Walk on the treadmill for 1 minute at 3.5 mph on a 15 percent grade. After 1 minute, record your heart rate and move on to the DB military press.
- (7) Pick up the 20 lb dumbbells and in a standing position perform 24 repetitions (with each arm) of alternating military press. Record your heart rate and move on to the treadmill.
- (8) Walk on the treadmill for 1 minute at 3.5 mph on a 15 percent grade. After 1 minute, record your heart rate and move on to the DB carry.
- (9) Bend down using your legs and pick up both 35 lb dumbbells (one in each hand). Carry the dumbbells to a mark 6 ft away and set them down on the ground. Turn, pick up the dumbbells, and return to where you started. Complete 10 repetitions, with each time you set down the dumbbells counting as one repetition. Record your heart rate and return to the treadmill.
- (10) Walk on the treadmill for 1 minute at 3.5 mph on a 15 percent grade. After 1 minute, record your heart rate and move on to the lat pulldown.
- (11) Sit down with knees secured and grasp the straight lat pulldown bar with your hands close together and your palms facing you. Pull down in front of your body until the bar reaches your chin. Perform 24 repetitions, being sure to go all the way up. Record your total time and heart rate.
- (12) Sit in a quiet location and record your heart rate every minute for 5 minutes.

C.3 Interpreting Your Results. Interpret your results as follows:

- (1) Determine 85 percent of your estimated maximum heart rate, which will be the target exercise heart rate, using the following simple Karvonen Method equation:
 $\text{Target exercise heart rate} = 0.85 (220 - \text{age})$
Example: The target exercise heart rate of a 40-year-old individual would be 153. [$\text{Target exercise heart rate} = 0.85 (220 - 40) = 153$]

- (2) Observe your heart rate throughout the test to see if it ever goes over your 85 percent value. If your heart rate is near maximal, it could indicate that you need to work on your cardiovascular conditioning. This indicates that you could have very little reserve if some greater demand occurs on the fireground.
- (3) For each event, evaluate whether you completed the required number of repetitions. If you could not complete the required number of repetitions, you need to work on your muscular strength and/or endurance in these muscle groups.
- (4) Observe your total time and compare it to your last total time. If your total time for this test is less than your last test and your heart rate response is the same or less, your fitness level has improved.
- (5) Observe your 5-minute recovery. A heart rate that recovers quickly is indicative of aerobic fitness. If your 5-minute heart rate is less than your last test, your fitness level has improved.

Annex D Informational References

D.1 Referenced Publications. The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

D.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.

NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, 2013 edition.

Karter, M., and P. LeBlanc, 1997 Fire Fighter Injury Report, *NFPA Journal*, November/December 1998.

D.1.2 Other Publications.

D.1.2.1 American College of Sports Medicine Publications. American College of Sports Medicine, P.O. Box 1440, Indianapolis, IN 46206-1440.

ACSM's Guidelines for Exercise Testing and Prescription, Lippincott Williams Wilkins, 7th edition, 2005.

D.1.2.2 IAFF/IAFC Publications. International Association of Fire Fighters, 1750 New York Avenue, NW, Washington, DC 20006; International Association of Fire Chiefs, 4025 Fair Ridge Drive, Fairfax, VA 22033-2868.

The Fire Service Joint Labor Management Wellness-Fitness Initiative, Second edition, 1999.

D.1.2.3 U.S. Government Publications. U.S. Government Printing Office, Washington, DC 20402.

Surgeon General's Report on Physical Activity and Health, 1996.

D.2 Informational References. (Reserved)

D.3 References for Extracts in Informational Sections.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.



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Sequence of Events for the Standards Development Process

As soon as the current edition is published, a Standard is open for Public Input

Step 1: Input Stage

- Input accepted from the public or other committees for consideration to develop the First Draft
- Committee holds First Draft Meeting to revise Standard (23 weeks)
Committee(s) with Correlating Committee (10 weeks)
- Committee ballots on First Draft (12 weeks)
Committee(s) with Correlating Committee (11 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (5 weeks)
- First Draft Report posted

Step 2: Comment Stage

- Public Comments accepted on First Draft (10 weeks)
- If Standard does not receive Public Comments and the Committee does not wish to further revise the Standard, the Standard becomes a Consent Standard and is sent directly to the Standards Council for issuance
- Committee holds Second Draft Meeting (21 weeks)
Committee(s) with Correlating Committee (7 weeks)
- Committee ballots on Second Draft (11 weeks)
Committee(s) with Correlating Committee (10 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (8 weeks)
- Second Draft Report posted

Step 3: Association Technical Meeting

- Notice of Intent to Make a Motion (NITMAM) accepted (5 weeks)
- NITMAMs are reviewed and valid motions are certified for presentation at the Association Technical Meeting
- Consent Standard bypasses Association Technical Meeting and proceeds directly to the Standards Council for issuance
- NFPA membership meets each June at the Association Technical Meeting and acts on Standards with "Certified Amending Motions" (certified NITMAMs)
- Committee(s) and Panel(s) vote on any successful amendments to the Technical Committee Reports made by the NFPA membership at the Association Technical Meeting

Step 4: Council Appeals and Issuance of Standard

- Notification of intent to file an appeal to the Standards Council on Association action must be filed within 20 days of the Association Technical Meeting
- Standards Council decides, based on all evidence, whether or not to issue the Standards or to take other action

Committee Membership Classifications^{1,2,3,4}

The following classifications apply to Committee members and represent their principal interest in the activity of the Committee.

1. **M** *Manufacturer:* A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.
2. **U** *User:* A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
3. **IM** *Installer/Maintainer:* A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.
4. **L** *Labor:* A labor representative or employee concerned with safety in the workplace.
5. **RT** *Applied Research/Testing Laboratory:* A representative of an independent testing laboratory or independent applied research organization that promulgates and/or enforces standards.
6. **E** *Enforcing Authority:* A representative of an agency or an organization that promulgates and/or enforces standards.
7. **I** *Insurance:* A representative of an insurance company, broker, agent, bureau, or inspection agency.
8. **C** *Consumer:* A person who is or represents the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in (2).
9. **SE** *Special Expert:* A person not representing (1) through (8) and who has special expertise in the scope of the standard or portion thereof.

NOTE 1: "Standard" connotes code, standard, recommended practice, or guide.

NOTE 2: A representative includes an employee.

NOTE 3: While these classifications will be used by the Standards Council to achieve a balance for Technical Committees, the Standards Council may determine that new classifications of member or unique interests need representation in order to foster the best possible Committee deliberations on any project. In this connection, the Standards Council may make such appointments as it deems appropriate in the public interest, such as the classification of "Utilities" in the National Electrical Code Committee.

NOTE 4: Representatives of subsidiaries of any group are generally considered to have the same classification as the parent organization.

Submitting Public Input / Public Comment through the Electronic Submission System (e-Submission):

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- b. Under the Codes and Standards heading, Click on the Document Information pages (List of Codes & Standards), and then select your document from the list or use one of the search features in the upper right gray box.

OR

- a. Go directly to your specific document page by typing the convenient short link of www.nfpa.org/document#, (Example: NFPA 921 would be www.nfpa.org/921) Click in the gray Sign In box on the upper left side of the page. Once signed in, you will see a red “Welcome” message in the top right corner.

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At this point, the NFPA Standards Development Site will open showing details for the document you have selected. This “Document Home” page site includes an explanatory introduction, information on the current document phase and closing date, a left-hand navigation panel that includes useful links, a document Table of Contents, and icons at the top you can click for Help when using the site. The Help icons and navigation panel will be visible except when you are actually in the process of creating a Public Input.

Once the First Draft Report becomes available there is a Public comment period during which anyone may submit a Public Comment on the First Draft. Any objections or further related changes to the content of the First Draft must be submitted at the Comment stage.

To submit a Public Comment you may access the e-Submission System utilizing the same steps as previous explained for the submission of Public Input.

For further information on submitting public input and public comments, go to: <http://www.nfpa.org/publicinput>

Other Resources available on the Doc Info Pages

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Technical committee tab: View current committee member rosters or apply to a committee

Technical questions tab: For members and Public Sector Officials/AHJs to submit questions about codes and standards to NFPA staff. Our Technical Questions Service provides a convenient way to receive timely and consistent technical assistance when you need to know more about NFPA codes and standards relevant to your work. Responses are provided by NFPA staff on an informal basis.

Products/training tab: List of NFPA’s publications and training available for purchase.

Community tab: Information and discussions about a Standard

Information on the NFPA Standards Development Process

I. Applicable Regulations. The primary rules governing the processing of NFPA standards (codes, standards, recommended practices, and guides) are the NFPA *Regulations Governing the Development of NFPA Standards (Regs)*. Other applicable rules include NFPA *Bylaws*, NFPA *Technical Meeting Convention Rules*, NFPA *Guide for the Conduct of Participants in the NFPA Standards Development Process*, and the NFPA *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council*. Most of these rules and regulations are contained in the *NFPA Standards Directory*. For copies of the *Directory*, contact Codes and Standards Administration at NFPA Headquarters; all these documents are also available on the NFPA website at “www.nfpa.org.”

The following is general information on the NFPA process. All participants, however, should refer to the actual rules and regulations for a full understanding of this process and for the criteria that govern participation.

II. Technical Committee Report. The Technical Committee Report is defined as “the Report of the responsible Committee(s), in accordance with the Regulations, in preparation of a new or revised NFPA Standard.” The Technical Committee Report is in two parts and consists of the First Draft Report and the Second Draft Report. (See *Regs* at 1.4)

III. Step 1: First Draft Report. The First Draft Report is defined as “Part one of the Technical Committee Report, which documents the Input Stage.” The First Draft Report consists of the First Draft, Public Input, Committee Input, Committee and Correlating Committee Statements, Correlating Input, Correlating Notes, and Ballot Statements. (See *Regs* at 4.2.5.2 and Section 4.3) Any objection to an action in the First Draft Report must be raised through the filing of an appropriate Comment for consideration in the Second Draft Report or the objection will be considered resolved. [See *Regs* at 4.3.1(b)]

IV. Step 2: Second Draft Report. The Second Draft Report is defined as “Part two of the Technical Committee Report, which documents the Comment Stage.” The Second Draft Report consists of the Second Draft, Public Comments with corresponding Committee Actions and Committee Statements, Correlating Notes and their respective Committee Statements, Committee Comments, Correlating Revisions, and Ballot Statements. (See *Regs* at Section 4.2.5.2 and 4.4) The First Draft Report and the Second Draft Report together constitute the Technical Committee Report. Any outstanding objection following the Second Draft Report must be raised through an appropriate Amending Motion at the Association Technical Meeting or the objection will be considered resolved. [See *Regs* at 4.4.1(b)]

V. Step 3a: Action at Association Technical Meeting. Following the publication of the Second Draft Report, there is a period during which those wishing to make proper Amending Motions on the Technical Committee Reports must signal their intention by submitting a Notice of Intent to Make a Motion. (See *Regs* at 4.5.2) Standards that receive notice of proper Amending Motions (Certified Amending Motions) will be presented for action at the annual June Association Technical Meeting. At the meeting, the NFPA membership can consider and act on these Certified Amending Motions as well as Follow-up Amending Motions, that is, motions that become necessary as a result of a previous successful Amending Motion. (See 4.5.3.2 through 4.5.3.6 and Table 1, Columns 1-3 of *Regs* for a summary of the available Amending Motions and who may make them.) Any outstanding objection following action at an Association Technical Meeting (and any further Technical Committee consideration following successful Amending Motions, see *Regs* at 4.5.3.7 through 4.6.5.3) must be raised through an appeal to the Standards Council or it will be considered to be resolved.

VI. Step 3b: Documents Forwarded Directly to the Council. Where no Notice of Intent to Make a Motion (NITMAM) is received and certified in accordance with the Technical Meeting Convention Rules, the standard is forwarded directly to the Standards Council for action on issuance. Objections are deemed to be resolved for these documents. (See *Regs* at 4.5.2.5)

VII. Step 4a: Council Appeals. Anyone can appeal to the Standards Council concerning procedural or substantive matters related to the development, content, or issuance of any document of the Association or on matters within the purview of the authority of the Council, as established by the *Bylaws* and as determined by the Board of Directors. Such appeals must be in written form and filed with the Secretary of the Standards Council (See *Regs* at 1.6). Time constraints for filing an appeal must be in accordance with 1.6.2 of the *Regs*. Objections are deemed to be resolved if not pursued at this level.

VIII. Step 4b: Document Issuance. The Standards Council is the issuer of all documents (see Article 8 of *Bylaws*). The Council acts on the issuance of a document presented for action at an Association Technical Meeting within 75 days from the date of the recommendation from the Association Technical Meeting, unless this period is extended by the Council (See *Regs* at 4.7.2). For documents forwarded directly to the Standards Council, the Council acts on the issuance of the document at its next scheduled meeting, or at such other meeting as the Council may determine (See *Regs* at 4.5.2.5 and 4.7.4).

IX. Petitions to the Board of Directors. The Standards Council has been delegated the responsibility for the administration of the codes and standards development process and the issuance of documents. However, where extraordinary circumstances requiring the intervention of the Board of Directors exist, the Board of Directors may take any action necessary to fulfill its obligations to preserve the integrity of the codes and standards development process and to protect the interests of the Association. The rules for petitioning the Board of Directors can be found in the *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council* and in 1.7 of the *Regs*.

X. For More Information. The program for the Association Technical Meeting (as well as the NFPA website as information becomes available) should be consulted for the date on which each report scheduled for consideration at the meeting will be presented. For copies of the First Draft Report and Second Draft Report as well as more information on NFPA rules and for up-to-date information on schedules and deadlines for processing NFPA documents, check the NFPA website (www.nfpa.org/aboutthecodes) or contact NFPA Codes & Standards Administration at (617) 984-7246.



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NFPA News — From new standards for dry cleaning plants to warning equipment for household carbon monoxide, this monthly online update keeps you abreast of additions of changes that could impact how you do your work.

NFPA Standards Directory — The NFPA Standards Directory is your complete guide to NFPA's code-making process. Simply access your online NFPA member profile for document revision guidelines, the revision cycle schedule, and forms for submitting Proposals and Comments. Your online NFPA member profile and access to the NFPA Standards Directory is automatically generated once you join NFPA.

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Wellness and Fitness Program

1023.1 PURPOSE AND SCOPE

The purpose of this policy is to establish the guidelines for the Wellness and Fitness Program that will assist members in developing greater stamina and strength, decreasing the risk of injury, disability or death from disease or injury, improving performance, increasing energy and recovering more quickly from strenuous and exhaustive work.

1023.1.1 POLICY

It is the policy of the City of Merced Fire Department that the wellness and fitness of its members is an organizational priority.

The program shall be based on the IAFF/IAFC Fire Service Joint Labor Management Wellness/Fitness Initiative, and the current editions of NFPA 1582 - *Standard on Comprehensive Occupational Medical Program for Fire Departments* and NFPA 1583 - *Standard on Health-Related Fitness Programs for Fire Department Members*.

1023.2 PROGRAM COMPONENTS

1023.2.1 MEDICAL EXAMINATIONS

All firefighting members should have an annual medical examination. Medical examinations specifics should be established by a qualified health care professional but may include:

- Medical history
- Blood draw/analysis
- Vital signs
- Cardiovascular
- Pulmonary
- Gastrointestinal
- Genitourinary, hernia exam
- Lymph nodes exam
- Neurological exam
- Musculoskeletal
- Urinalysis
- Vision test
- Hearing
- Chest X-ray (initial baseline with repeat every five years or as required)
- Cancer screening

Wellness and Fitness Program

1023.2.2 FITNESS EVALUATIONS

All firefighting members should have an annual fitness evaluation consisting of an assessment questionnaire (developed by a qualified health care professional) and testing to evaluate the following:

1023.2.3 IMMUNIZATION AND DISEASE SCREENING

All firefighting members should have an annual immunization and disease screening to ensure all recommended vaccinations against work-related exposures are current and that members are free from work-related disease. Specific vaccinations and diseases should be identified by a qualified medical professional but may include:

- Tuberculosis
- Hepatitis C
- Hepatitis B
- Tetanus/diphtheria vaccine (booster every 10 years)
- Measles, mumps, rubella (MMR)
- Polio
- Influenza
- H1N1
- HIV (optional)

1023.2.4 PHYSICAL FITNESS AND CONDITIONING

A physical fitness and conditioning program should correspond to the physical movement patterns and aerobic capacity required in the performance of firefighter duties. The program should also provide, for example, fitness equipment in fire stations within the available space. The fitness and conditioning program should be developed in coordination with a trained and certified fitness and conditioning trainer and should comply with the Physical Fitness Policy.

1023.2.5 PEER FITNESS TRAINERS

Volunteers should be solicited to serve as peer fitness trainers (PFTs). Selected PFTs shall receive specialized fitness and conditioning training and education sufficient to pass certification requirements. PFTs will assist in the promotion of the Wellness and Fitness Program and be capable of assisting firefighters on a one-to-one basis to increase levels of fitness.

PROFESSIONAL SERVICES AGREEMENT

THIS Agreement is made on August _____ 2019, by and between the CITY OF MERCED ("City"), and Gaetke Medical Corporation, a California Professional Corporation and its management services company, 1582, LLC, a Nevada Limited Liability Company registered in the State of California, hereinafter collectively referred to as "Contractor".

WITNESSETH:

WHEREAS, the City has a Fire Health, Wellness and Fitness Program, which includes a medical assessment of fire suppression personnel, and the City desires to retain services of a physician licensed to practice medicine in the State of California to perform the medical assessment;

WHEREAS, the Contractor has presented a proposal for such services to the City, and is duly licensed, qualified and experienced to perform those services;

NOW, THEREFORE, the parties hereto mutually agree as follows:

1. SCOPE OF SERVICES:

A. Contractor shall do all work, produce all reports, and carry out all activities necessary to completion of the services described in the Scope of Work, attached hereto and incorporated herein by this reference as **Exhibit "A."** This Contract and its exhibits shall be known as the "Contract Documents." Terms set forth in any Contract Document shall be deemed to be incorporated in all Contract Documents as if set forth in full therein. In the event of conflict between terms contained in these Contract Documents, the more specific term shall control. If any portion of the Contract Documents shall be in conflict with any other portion, provisions contained in the Contract shall govern over conflicting provisions contained in the exhibits to the Contract.

B. Contractor enters into this Contract as an independent contractor and not as an employee of the City. The Contractor shall have no power or authority by this Contract to bind the City in any respect. Nothing in this Contract shall be construed to be inconsistent with this relationship or status. All employees, agents, contractors or subcontractors hired or retained by the Contractor are employees, agents, contractors or subcontractors of the Contractor and not of the City. The City shall not be obligated in any way to pay any wage claims or other claims made against Contractor by any such employees, agents, contractors or subcontractors, or any other person resulting from performance of this Contract.

C. The Contractor agrees it has satisfied itself by its own investigation and research regarding the conditions affecting the work to be done and labor and materials needed, and that its decision to execute this Contract is based on such independent investigation and research.

2. TERM OF CONTRACT

A. The services of Contractor are to commence upon execution of this Contract by both parties and shall be undertaken and completed in accordance with the terms of this agreement. The term of this agreement is three years, unless extended by mutual written agreement of the parties hereto.

B. The City may, by written instrument signed by the Parties, extend the duration of this Contract for one year in the manner provided in Section 5, provided that the extension does not require the payment of compensation in excess of the maximum compensation set forth in Section 3, Compensation.

3. COMPENSATION:

A. The Contractor shall be paid monthly for the actual fees, costs and expenses but in no event shall total compensation exceed sixty-thousand dollars (\$60,000), without City's prior written approval. Contractor's fees shall be as set forth in **Exhibit B**.

B. Said amount shall be paid upon submittal of a monthly billing showing the provision of the services that month. Contractor shall furnish City with invoices for all expenses as well as for all materials authorized by this Contract. The invoices shall be submitted with the monthly billings. If Contractor's performance is not in conformity with the scope of work as set forth in Exhibit "A," payments may be delayed or denied, unless the Contractor's failure to perform is a documented result of the City's failure to conform with the provisions of the scope of work attached as Exhibit "A," or if the time for performance is extended pursuant to Section 5.

C. If the work is halted at the request of the City, compensation shall be based upon the proportion that the work performed bears to the total work required by this Contract, subject to Section 4.

4. TERMINATION:

A. This Contract may be terminated by either party, provided that the other party is given not less than 30 calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate.

B. The City may temporarily suspend this Contract, at no additional cost to City, provided that the Contractor is given written notice (delivered by certified mail, return receipt requested) of temporary suspension. If City gives such notice of temporary suspension, Contractor shall immediately suspend its activities under this Contract.

C. Notwithstanding any provisions of this Contract, Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of this Contract by Contractor, and the City may withhold any payments due to Contractor until such time as the exact amount of damages, if any, due the City from Contractor is determined.

D. In the event of termination, the Contractor shall be compensated as provided for in this Contract, except as provided in Section 4C. Upon termination, the City shall be entitled to all work performed to that date in accordance with Section 7 hereof.

5. AMENDMENTS, CHANGES OR MODIFICATIONS:

Amendments, changes or modifications in the terms of this Contract may be made at any time by mutual written agreement between the parties hereto and shall be signed by the persons authorized to bind the parties hereto.

6. EXTENSIONS OF TIME:

Contractor may, for good cause, request extensions of time to perform the services required hereunder. Such extensions shall be authorized in advance by the City in writing and shall be incorporated in written amendments to this Contract or the attached Work Program in the manner provided in Section 5.

7. COMPLIANCE WITH ALL LAWS:

A. Contractor shall comply with all applicable laws, ordinances, and codes of federal, State of California and local governments.

B. Contractor warrants to the City that it is licensed by all applicable governmental bodies to perform this Contract and will remain so licensed throughout the progress of the Work, and that it has, and will have, throughout the progress of the Work, the necessary experience, skill and financial resources to enable it to perform this Contract.

8. WARRANTIES AND RESPONSIBILITIES – CONTRACTOR:

A. Contractor agrees and represents that it is qualified to properly provide the services set forth in **Exhibit "A"** in a manner which is consistent with the generally accepted standards of Contractor's profession.

B. Contractor agrees and represents that the work performed under this Contract shall be in accordance with applicable federal, State of California and local law.

C. Contractor shall designate a project manager who at all times shall represent the Contractor before the City on all matters relating to this Contract. The project manager shall continue in such capacity unless and until he or she is removed at the request of the City, is no longer employed by Contractor, or is replaced with the written approval of the City, which approval shall not be unreasonably withheld.

D. Contractor shall provide corrective services without charge to the City for services which fail to meet the above professional and legal standards, and which are reported to Contractor in writing within sixty (60) days of discovery. Should Contractor fail or refuse to perform promptly its obligations, the City may render or undertake performance thereof and the Contractor shall be liable for any expenses thereby incurred.

9. SUBCONTRACTING:

None of the services covered by this Contract, with the exception of laboratory services to be provided by LabCorp and X-Ray overread services by SimonMed Imaging, shall be subcontracted without the prior written consent of the City, which will not be unreasonably withheld. Contractor shall be as fully responsible to the City for the negligent acts and omissions of its contractors and subcontractors, and of persons either directly or indirectly employed by them, as it is for the negligent acts and omissions of persons directly employed by Contractor.

10. ASSIGNABILITY:

Contractor shall not assign or transfer any interest in this Contract whether by assignment or novation, without the prior written consent of the City which will not be unreasonably withheld. However, claims for money due or to become due Contractor from the City under this Contract may be assigned to a financial institution, or to a trustee in bankruptcy, without such approval. Notice of any assignment or transfer whether voluntary or involuntary shall be furnished promptly to the City.

11. INTEREST IN CONTRACT:

Contractor covenants that neither it, nor any of its employees, agents, contractors, or subcontractors has any interest, nor shall they acquire any interest, direct or indirect, in the subject of the Contract, nor any other interest which would conflict in any manner or degree with the performance of its services hereunder. Contractor shall make all disclosures required by the City's conflict of interest code in accordance with the category designated by the City, unless the City Manager, or his or her designee, determines in writing that Contractor's duties are more limited in scope than is warranted by the category designated by the City code and that a narrower disclosure category should apply. Contractor also agrees to make disclosure in compliance with the City conflict of interest code if, at any time after the execution of this Contract, City determines and notifies Contractor in writing that Contractor's duties under this Contract warrant greater disclosure by Contractor than was originally contemplated. Contractor shall make disclosures in the time, place and manner set forth in the conflict of interest code and as directed by the City.

12. MATERIALS CONFIDENTIAL:

The materials prepared or assembled by Contractor pursuant to performance of this Contract are confidential and/or are protected by State of California and federal medical privacy laws. The NFPA 1582 Medical Standard Evaluation Form, Contractor completes for each Merced Fire Suppression employee will be submitted to the City of Merced in a secure manner. The record shall be maintained in a confidential manner, shall not include private medical information, and shall not otherwise be disclosed to any person or entity, except pursuant to subpoena, court order, or the written consent of the employee.

Should an employee not meet the standards outlined under NFPA 1582, the contractor will complete the work status form for that employee and submit this document to the City of Merced in a secure manner.

Contractor agrees that any materials, reports or records created pursuant to this contract containing medical information shall be maintained in a confidential manner, and shall not be made available to any individual (other than the employee examined) or organization without the prior written approval of the employee, or pursuant to subpoena or court order.

13. LIABILITY OF CONTRACTOR – NEGLIGENCE:

Contractor shall be responsible for performing the work under this Contract in a manner which is consistent with the generally-accepted standards of the Contractor's profession and shall be liable for its own negligence and the negligent acts of its employees, agents, contractors and subcontractors. The City shall have no right of control over the manner in which the work is to be done but only as to its outcome and shall not be charged with the responsibility of preventing risk to Contractor or its employees, agents, contractors or subcontractors.

14. INDEMNITY AND LITIGATION COSTS:

Contractor shall indemnify, defend, and hold harmless the City, its officers, officials, agents, volunteers, and employees against all claims, damages, demands, liability, costs, losses and expenses, including without limitation court costs and reasonable attorneys' fees, arising from Contractor's negligent acts or negligent failure to act, errors, omissions or willful misconduct incident to the performance of this Contract except such loss or damage caused by the active negligence, sole negligence, or willful misconduct of the City. The provisions of this paragraph shall survive termination or suspension of this Contract.

15. CONTRACTOR TO PROVIDE INSURANCE:

Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, or employees.

A. MINIMUM SCOPE AND LIMIT OF INSURANCE

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than **\$2,000,000** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.

2. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering, Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **\$1,000,000** per accident for bodily injury and property damage.

3. **Workers' Compensation** insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less the **\$1,000,000** per accident for bodily injury or disease. ***(Not required if Contractor provides written verification it has no employees)***

If the Contractor maintains broader coverage and/or higher limits than the minimums shown above, the City requires and shall be entitled to the broader coverage and/or the higher limits maintained by the contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

4. CONTRACTOR will maintain professional liability insurance for Errors and Omissions coverage in the amount of not less than one million dollars (\$1,000,000).

B. Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status. The City, its officers, officials, employees, agents, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance (at least as broad as ISO Form CG 20 10 11 85 or both CG 20 10, CG 20 26, CG 20 33, or CG 20 38; and CG 20 37 forms if later revisions used).

1. **Primary Coverage.** For any claims related to this contract, the Contractor's insurance coverage shall be primary with coverage at least as broad as ISO CG 20 01 04 13 as respects the City, its officers, officials, employees, agents, or volunteers shall be excess of the Contractor's insurance and shall not contribute to it.

2. **Notice of Cancellation.** Each insurance policy required above shall state that coverage shall not be canceled, except with notice to the City.

3. **Waiver of Subrogation.** Contractor hereby grants to City a waiver of any right to subrogation which any insurer of said Contractor may acquire against the City by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer.

4. **Self-Insured Retentions.** Self-insured retentions must be declared to and approved by the City. The City may require the Contractor to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or City.

5. **Acceptability of Insurers.** Insurance is to be placed with insurers authorized to conduct business in the state with a current AM. Best's rating of no less than A:VII, unless otherwise acceptable to the City.

6. **Claims Made Policies.** If any of the required policies provide coverage on a claim made basis:

- i. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
- ii. Insurance must be maintained, and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
- iii. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Contractor must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

7. **Verification of Coverage.** Contractor shall furnish the City with original Certificate of Insurance including all required amendatory endorsements (or copies of the applicable policy language effecting coverage required by this clause) and a copy of the Declarations and Endorsement Page of the CGL policy listing all policy endorsements to the City before work begins. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

8. Subcontractors. Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that City is an additional insured on insurance required from subcontractors.

9. Special Risks or Circumstances. City reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

16. MISCELLANEOUS PROVISIONS:

A. Contractor shall keep itself fully informed of, shall observe and comply with, and shall cause any and all persons, firms or corporations employed by it or under its control to observe and comply with, applicable federal, state, county and municipal laws, ordinances, regulations, orders and decrees which in any manner affect those engaged or employed on the work described by this Contract or the materials used or which in any way affect the conduct of the work.

B. Contractor shall not engage in unlawful employment discrimination. Such unlawful employment discrimination includes, but is not limited to, employment discrimination based upon a person's race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, gender, citizenship, or sexual orientation.

C. Contractor shall maintain and make available for inspection by the City and its auditors accurate records of all of its costs, disbursements and receipts with respect to any work under this Contract. Such inspections may be made during regular office hours at any time until six (6) months after the final payments under this Contract are made to the Contractor.

D. This Contract constitutes the entire agreement between the parties relative to the services specified herein and no modification hereof shall be effective unless and until such modification is evidenced by a writing signed by both parties to this Contract. There are no understandings, agreements, conditions, representations, warranties or promises, with respect to this Contract, except those contained in or referred to in the writing.

E. All notices that are required to be given by one party to the other under this Contract shall be in writing and shall be deemed to have been given if delivered personally or enclosed in a properly addressed envelope and deposited in a United States Post Office for delivery by registered or certified mail addressed to the parties at the following addresses:

City: Steve Carrigan, City Manager
99 E. 16th Street.
Merced, CA 95340

Contractor: Mark J. Gaetke, MD President
Gaetke Medical Corporation
950 Cass Street
Monterey, CA 93940

Paul Granstrom, President
1582, LLC
950 Cass Street
Monterey, CA 93940

F. This Contract shall be interpreted and governed by the laws of the State of California.

G. Any action arising out of this Contract shall be brought and maintained in Merced County California, regardless of where else venue may lie.

H. In any action brought by either party to enforce the terms of this Contract, each party shall be bear responsibility for its attorney's fees and all costs regardless of whether one party is determined to be the prevailing party.

I. All parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement in the names, titles, and capacities herein stated and on behalf of any entities, persons, or firms represented or purported to be represented by such entity(ies), person(s), or firm(s) and that all formal requirements necessary or required by any state and/or federal law in order to enter into this Agreement have been fully complied with. Furthermore, by entering into this Agreement, Contractor hereby warrants that it shall not have breached the terms or conditions of any other contract or Agreement to which Contractor is obligated, which breach would have a material effect hereon.

CONTRACTOR

By: _____
Mark J. Gaetke, MD
President
Gaetke Medical Corporation
950 Cass Street
Suite B
Monterey, CA 93940

By: _____
Paul Granstrom
President
1582, LLC
950 Cass Street
Suite B
Monterey, CA 93940

CITY

By: _____
Steve Carrigan, City Manager
City of Merced

APPROVED AS TO FORM:

City Attorney Date

ACCOUNT DATA:

Verified by Finance Officer

EXHIBIT A

Scope of Work

Contractor shall conduct NFPA 1582 Compliant Medical Examinations of City of Merced Fire Suppression Personnel. Contractor will deploy a Mobile Medical Unit to conduct all testing onsite at the Merced Fire Department in two (2) visits within a twelve month period, on dates mutually agreed upon between Contractor and the City.

The on-site examination shall be as follows:

Part 1 Exam (Initial Testing)

Time allotment is 30 minutes

- Review Merced employee's completed forms, provided by Gaetke Medical Corporation
- Lab testing (conducted by LabCorp), fasting blood work (CBC, CMP, Lipid Profile, Hepatitis Profile Screening, Prostate Specific Antigen Screening, Hemoglobin A1C, C-Reactive Protein), microscopic urinalysis (not testing for drugs or nicotine)
- Biometric testing (height, weight, blood pressure, BMI or Calipers)
- Urine laboratory test
- Spirometry/Pulmonary function testing
- Audiometric hearing exam
- Snellen Vision screening
- Ultrasound Screening (Thyroid, Carotid Artery, Aorta Artery)
- Additional testing as requested by the department

Part 2 Exam (Resting EKG or Stress EKG and Physician Exam)

- Resting EKG
- Stress Treadmill EKG Testing (maximal stress) WFI Protocol
- Physician examination and review of results
- OSHA Respirator Questionnaire and Clearance Letter

Additional Optional Testing Components:

Heavy Metal Urine (\$125.00 X 18)	\$2,250.00
DOT Paperwork (\$30.00 X 30)	\$ 900.00

Reporting of Results:

Results of the examination will be provided directly to the Merced Fire Suppression Employee. In addition, Contractor will complete a City of Merced 1582 Medical Standard Evaluation Form for each Merced Fire Suppression Employee examined. The Form provided to the City will not include confidential or private medical information. Additionally, if an employee does not meet the standards outlined under NFPA 1582, we'll complete a work status form to the employee and City of Merced.

At the Part 2 examination with the physician, the physician will provide a copy of any results that have concerns the physician recommends the employee discuss with his or her primary care provider. Contractor will not provide any prescriptions or treatment plans for the employee to correct any areas of concern.

EXHIBIT B

Payment for Services

Fees for the services to be provided pursuant to this Contract are as follows:

Merced Fire Panel	Cost per employee
1582* Compliant Medical Exam with Mobile Fee	\$ 813.02

**See attached proposal*

Fire members receive the Ultrasound screening (Thyroid, Carotid and Aortic) cost is \$125.00 per member.

In the event a return to duty examination is required, and if it requires an extensive review of previous medical records, surgical history, or discussion with the employee's provider, Contractor, with prior written approval from the City, may charge an additional assessment fee of \$150.00 per hour. In no event shall total compensation under this contract exceed sixty-thousand dollars (\$60,000), without the City's prior written approval.

City of Merced - 1582 Medical Examination Components		Includes:
Physician Medical Exam (Board Certified Licensed Physician in California)	\$	154.27
Audiometric Hearing Exam	\$	24.25
Spirometry	\$	36.86
Snellen Vision Screening	\$	-
Biometric Testing (Height, Weight, Blood Pressure, BMI or Calipers)	\$	-
Venipuncture	\$	-
Lab Testing (testing conducted by LabCorp) screening for:	\$	44.84
Complete Blood Count (CBC)		<i>included</i>
Comprehensive Metabolic Screening (CMP)		<i>included</i>
Lipid Profile (LDL, HDL, Cholesterol, Triglycerides)		<i>included</i>
Microscopic Urinalysis (not testing for Drugs or Nicotine)		<i>included</i>
Advanced Lab Testing (testing conducted by LabCorp) screening for:		
Hepatitis Profile Screening (Infection A,B,C and Immunity to A & B)	\$	72.75
Hemoglobin A1C	\$	33.95
C-Reactive Protein	\$	45.00
Prostate Specific Antigen Screening (Males Only)	\$	25.00
Resting EKG	\$	38.80
OSHA Respirator Questionnaire and Clearance Letter	\$	9.70
Stress Treadmill EKG Testing (Maximal Stress Test) Bruce Protocol 12.8 METs	\$	77.60
Ultrasound Screening (Carotid, Aorta, Thyroid)	\$	125.00
Total NFPA 1582 Compliant Medical Exam	\$	688.02
On-Site Mobile Medical Fee	\$	125.00
Total NFPA 1582 Compliant Medical Exam - conducted On-Site	\$	813.02

Additional Paperwork	Cost:
OSHA Respirator Questionnaire and Clearance Letter	\$ 9.70
DOT CDL Paperwork (if completed with Physical Examination)	\$ 30.00

Additional Specialized Lab testing	Cost:
24 hour Urine Heavy Metal Profile (Arsenic, Cadmium, Mercury and Lead)	\$ 125.00
QuantiFERON Gold (QFT TB Test)	\$ 75.00
Hemoglobin A1C	\$ 33.95
Hepatitis Profile Screening (Infection to A, B and C, Immunity to A and B)	\$ 77.60
Hepatitis A Screening	\$ 33.95
Hepatitis B Surface Antigen Screening	\$ 20.37
Hepatitis B Surface Antibody Screening	\$ 19.40
Hepatitis B Core Antibody Screening	\$ 19.40
Prostate Specific Antigen ("PSA") Lab Test	\$ 25.00
Fecal Occult Blood	\$ 42.00
Non-DOT Urine Drug Screen	\$ 32.98
DOT Urine Drug Screen	\$ 37.98
Testosterone Screening	\$ 59.00

Additional Advanced Testing		Cost:
Ultrasound Screening (Carotid, Thyroid, Aortic)		\$ 125.00
Advanced Vision Screening (Titmus, Depth, Color)		\$ 40.00
Vo2 Max Testing		\$ 350.00
Pulmonary Report of each Vo2 Max provided by Saint Mary's Pulmonary Group		\$ 50.00

Immunizations		Cost:
Hepatitis B Vaccinations and Titers (per Injection)		\$ 58.20
Tetanus/diphtheria Vaccine (TDaP)		\$ 42.00
Measles, Mumps, Rubella Vaccine (MMR)		Market
Polio Vaccine		Market
Hepatitis A Vaccine (per Injection)		\$ 72.75
Varicella Vaccine		Market
Influenza Vaccine		Market

Services <u>not</u> currently offered		Cost:
Mammography		Not Appl.
Screening Colonoscopy Services		Not Appl.
Physical Fitness Testing as outlined under NFPA 1582 (pending set up)		Not Appl.

NFPA 1582 Panels - 2018 Edition* (interpreted by 1582 - Mark Gaetke, MD & Troy Ross, MD)



Laboratory Blood / Urine Testing:

Complete Blood Count w/ Differential

Comprehensive Metabolic Panel

Fasting Lipid Panel

Urinalysis (with Micro if indicated)

Hepatitis B Surface Antibody Blood Screening

Hepatitis C Antibody Blood Screening

Prostate Specific Antigen Blood Screening

PPD TB Skin Test

Audiogram

Spirometry

Vision Test (Snellen)

Blood Pressure Monitoring

2 View Chest X-ray (with Radiology Overread)

Resting EKG

Medical History Review

Health Promotion Counseling

Sleep Disturbance Apnea Questionnaire

Cardiac Risk Stratification

Mental Health Screening

OSHA Respirator Questionnaire and Clearance Letter

Physician Exam - (Chapter 7 Baseline / Annual)

1582 MEDICAL EVALUATION PANEL PRICES

	Panel A	Panel B	Panel C	Panel D	Panel E	Panel F	Panel G	Panel H	Panel I
Candidate		Annual Male Age 50 +	Annual Female Age 50 +	Male Age Under 40 At least every 3rd yr	Female Age Under 40 At least every 3rd yr	Male Age 40-49	Female Age 40-49	Male Age Under 40 Years 2 and 3	Female Age Under 40 Years 2 and 3
\$	44.84	\$ 44.84	\$ 44.84	\$ 44.84	\$ 44.84	\$ 44.84	\$ 44.84		
Hepatitis B Surface Antibody Blood Screening	\$ 19.40								
Hepatitis C Antibody Blood Screening	\$ 27.16								
Prostate Specific Antigen Blood Screening		\$ 24.25							
PPD TB Skin Test	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00	\$ 5.00
Audiogram	\$ 24.25	\$ 24.25	\$ 24.25	\$ 24.25	\$ 24.25	\$ 24.25	\$ 24.25	\$ 24.25	\$ 24.25
Spirometry	\$ 36.86	\$ 36.86	\$ 36.86	\$ 36.86	\$ 36.86	\$ 36.86	\$ 36.86	\$ 36.86	\$ 36.86
Vision Test (Snellen)	Included	Included	Included	Included	Included	Included	Included	Included	Included
Blood Pressure Monitoring	Included	Included	Included	Included	Included	Included	Included	Included	Included
2 View Chest X-ray (with Radiology Overread)	\$ 38.80								
Resting EKG	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80		
Medical History Review	\$ 30.00	Included	Included	Included	Included	Included	Included	Included	Included
Health Promotion Counseling	Included	Included	Included	Included	Included	Included	Included	Included	Included
Sleep Disturbance Apnea Questionnaire	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00
Cardiac Risk Stratification	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00
Mental Health Screening	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00
OSHA Respirator Questionnaire and Clearance Letter	\$ 9.70	\$ 9.70	\$ 9.70	\$ 9.70	\$ 9.70	\$ 9.70	\$ 9.70	\$ 9.70	\$ 9.70
Physician Exam - (Chapter 7 Baseline / Annual)	\$ 154.27	\$ 154.27	\$ 154.27	\$ 154.27	\$ 154.27	\$ 154.27	\$ 154.27	\$ 154.27	\$ 154.27
1582 MEDICAL EVALUATION PANEL PRICES	\$ 469.08	\$ 377.97	\$ 353.72	\$ 353.72	\$ 353.72	\$ 353.72	\$ 353.72	\$ 270.08	\$ 270.08

Chapter 8 - Annual Occupational Fitness Evaluation of Members

8.2.1 (Page 21) - A mandatory fitness evaluation that is not punitive or competitive shall be conducted annually as part of an individualized program

Chapter 8 - Fitness Evaluation

	Panel A	Panel B	Panel C	Panel D	Panel E	Panel F	Panel G	Panel H	Panel I
Chapter 8 - Muscular Strength, Endurance & Flexibility	\$ 90.00	\$ 90.00	\$ 90.00	\$ 90.00	\$ 90.00	\$ 90.00	\$ 90.00	\$ 90.00	\$ 90.00
Stress EKG, WFI Protocol	\$ 72.75	\$ 72.75	\$ 72.75	\$ 72.75	\$ 72.75	\$ 72.75	\$ 72.75	\$ 72.75	\$ 72.75
(Chapter 8.2.2.1 - An evaluation of aerobic capacity shall be performed after appropriate medical evaluation)									
1582 FITNESS EVALUATION PANEL PRICES	\$ 162.75	\$ 162.75	\$ 162.75	\$ 162.75	\$ 162.75	\$ 162.75	\$ 162.75	\$ 162.75	\$ 162.75

TOTAL COST OF 1582 MEDICAL AND FITNESS PANELS

	Panel A	Panel B	Panel C	Panel D	Panel E	Panel F	Panel G	Panel H	Panel I
TOTAL COST OF 1582 MEDICAL AND FITNESS PANELS	\$ 631.83	\$ 540.72	\$ 516.47	\$ 516.47	\$ 516.47	\$ 516.47	\$ 516.47	\$ 432.83	\$ 432.83

******ON-SITE MOBILE MEDICAL UNIT FEE IS AN ADDITIONAL \$125.00 PER MEMBER******

*Disclaimer: This is the interpretation of the 2018 edition of NFPA 1582, prepared by the team at 1582, Medical Director - Mark Gaetke, MD and Troy Ross, MD
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<div> <div>1582</div> <div>OPTIONAL ITEMS</div> </div>		Panel A	Panel B	Panel C	Panel D	Panel E	Panel F	Panel G	Panel H	Panel I
		Candidate	Annual Male Age 50 +	Annual Female Age 50 +	Male Age Under 40 At least every 3rd yr	Female Age Under 40 At least every 3rd yr	Male Age 40-49	Female Age 40-49	Male Age Under 40 Years 2 and 3	Female Age Under 40 Years 2 and 3
HIV Screening		\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65	\$ 43.65
Hemoglobin A1C (recommended for Diabetic/ Pre-Diabetic)		\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00	\$ 35.00
Heavy Metals Urine (Mercury, Lead, Arsenic, Cadmium)		\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00
2 View Chest X-ray with Radiology Overread		\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80	\$ 38.80
Prostate Specific Antigen (010322) - Age 50 or Age 40 if Afr.Am.		\$ 24.25	\$ 24.25							
Fecal Occult Blood - (offered at age 40 to 49 only)		\$ 98.35					\$ 24.25			
Quantiferon TB test - Upgrade		\$ 75.15	\$ 75.15	\$ 75.15	\$ 75.15	\$ 75.15	\$ 75.15	\$ 75.15	\$ 75.15	\$ 75.15
Respirator Fit Test (Quantitative)		\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Ultrasound Screening (Carotid, Thyroid, Aorta)		\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00	\$ 125.00
CDL Paperwork		\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00

<div> <div>1582</div> <div>INFECTIOUS DISEASE MANAGEMENT</div> </div>		Panel A	Panel B	Panel C	Panel D	Panel E	Panel F	Panel G	Panel H	Panel I
		Candidate	Annual Male Age 50 +	Annual Female Age 50 +	Male Age Under 40 At least every 3rd yr	Female Age Under 40 At least every 3rd yr	Male Age 40-49	Female Age 40-49	Male Age Under 40 Years 2 and 3	Female Age Under 40 Years 2 and 3
MMR antibody		Price Pending								
Polio antibody		Price Pending								
Varicella antibody		Price Pending								
Tdap Vaccination		\$ 41.25								
Polio Vaccination		\$ 125.50								
Hepatitis A Vaccination		\$ 72.75								
Hepatitis B Vaccination		\$ 58.20								
Twinrix Vaccination (Hepatitis A/B Combo per Dose)		\$ 100.88								
Varicella Vaccination		\$ 116.60								
Influenza Vaccination		\$ 25.00								

<div> <div>1582</div> <div>SUGGESTED REFERRALS BY NPPA 1582</div> </div>		Panel A	Panel B	Panel C	Panel D	Panel E	Panel F	Panel G	Panel H	Panel I
		Candidate	Annual Male Age 50 +	Annual Female Age 50 +	Male Age Under 40 At least every 3rd yr	Female Age Under 40 At least every 3rd yr	Male Age 40-49	Female Age 40-49	Male Age Under 40 Years 2 and 3	Female Age Under 40 Years 2 and 3
Mammography (every 2 yrs at 40, annually at age 50)		Recommended		Recommended						
Colonoscopy (age 50, unless indicated earlier)		Recommended	Recommended	Recommended						
Gyn exam with Pap Smear (every 3 yrs or every 5 yrs w/ HPV testing)		Recommended		Recommended		Recommended		Recommended		Recommended
Urology evaluation (if positive for hematuria)		Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended

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Fire Department Clients

Nevada Fire Departments

Sparks Fire Department (2007)
Reno Fire Department (2008)
Ely Fire Department (2009)
Carson City Fire Department (2010)
Las Vegas Fire & Rescue (2011)
North Las Vegas Fire Department (2011)
Central Lyon County Fire Protection District (2011)
North Lyon County Fire Protection District (2011)
Mason Valley Fire Protection District (2011)
North Lake Tahoe Fire Protection District (2011)
Sierra Fire Protection District (2011)
Truckee Meadows Fire Protection District (2011)
White Pine County Fire Protection District (2011)
Storey County Fire Protection District (2011)
Esmeralda County Fire Protection District (2012)
Mineral County Fire Protection District (2012)
Tahoe Douglas Fire Protection District (2013)
Boulder City Fire Department (2014 WellTrac)
Elko County Fire Protection District (2014)
Lincoln County Fire Protection District (2014)
Lander County Fire Protection District (2014)
Nye County Fire Protection District (2014)
Henderson Fire Department (2014 WellTrac)
Elko Fire Department (2016)
Fallon Fire Department (2016)
Reno-Tahoe Airport Fire Department (2016)

Volunteer Fire Department Clients of Nevada

Denio VFD (2010)
Ely VFD (2010)
Orovada VFD (2010)
Paradise Hills VFD (2010)
Paradise Valley VFD (2010)
Golconda VFD (2011)
Valmy VFD (2011)
Goldfield VFD (2012)
Silver Peak VFD (2012)
Smith Valley VFD (2013)

Fire Department Clients

Arizona Fire Departments

Golden Valley Fire Protection District (2015)
Kingman Fire Department (2015)
Northern Arizona Fire Protection District (2016)
Fort Mojave Mesa Fire Protection District (2016)
Mohave Valley Fire Department (2016)
Bullhead City Fire Department (2017)
Tubac Fire Department (2019)
Yuma Fire Department – Rural Metro Fire (pending 2019)
Maricopa Fire Department – Rural Metro Fire (pending 2019)
Casa Grande Fire Department – (pending 2019)

California Fire Departments

Nevada County Consolidated Fire Protection District (2015)
Grass Valley Fire Department (2015)
South Lake Tahoe Fire Department (2017)
Lake Valley Fire Protection District (2018)
Lincoln Fire Department (2018)
Rocklin Fire Department (2018)
Auburn Fire Department (2019)
Merced Fire Department (pending 2019)
Clovis Fire Department (pending 2019)
Piedmont Fire Department (pending 2019)
Los Banos Fire Department (pending 2019)
Benicia Fire Department (pending 2019)
North Lake Tahoe Fire Department, Tahoe City (pending 2019)

Colorado Fire Departments

Upper Pine River Fire Protection District (2011)
Los Pinos Fire Protection District (2011)
Fort Lewis Mesa Fire Protection District (2013)
Pagosa Springs Fire Department (2017)

Military Clients

Nevada Air National Guard (2009)
Office of the Military (2009)
Nevada ARMY Guard (2013)
Fallon Naval Air Station – Top Gun (ARC Workplace Services - 2015)
Nellis Air Force Base (ARC Workplace Services - 2016)

Law Enforcement Clients

State of Nevada

Client since 2009 through RFP Awarded Contract – Master Service Agreement # 1737

2nd Term through RFP Awarded Contract – Master Service Agreement # 3148

Department of Corrections* - *All prisons served (2,500 Sworn Officers)*

Department of Public Safety* – *All DPS Agencies including:*

Nevada Highway Patrol*

Parole and Probation*

Nevada Division of Investigations*

State Fire Marshall

Dignitary Protection

Training

Office of Professional Responsibility

Capitol Police

Division of Forestry*

Department of Wildlife*

Department of Agriculture

Department of Environmental Protection

Department of Motor Vehicles

Department of State Parks*

Lakes Crossing

Legislative Counsel Bureau

Office of the Military

Nevada OSHA

Secretary of State Office

Truckee Meadows Community College

University of Nevada Reno – Police

Municipal Clients of Nevada

Sparks Police Department (2007)

Reno Police Department (2008)

Reno Marshals (2008)

Lovelock Police Department* (2009)

Washoe County School District Police (2010)

Boulder City Police Department* (2010 –WellTrac)

Las Vegas Department of Public Safety (2011)

North Las Vegas Police Department (2011)

Fallon Police Department* (2012)

Elko Police Department* (2014)

Henderson Police Department (2014 WellTrac)

Yerington Police Department (2016)

County Clients of Nevada

Carson City Sheriff's Office* (2010)
White Pine Sheriff's Office* (2010)
Lincoln County Sheriff's Office* (2010)
Churchill County Sheriff's Office* (2011)
Storey County Sheriff's Office* (2011)
Esmeralda County Sheriff's Office* (2011)
Mineral County Sheriff's Office* (2012)
Elko County Sheriff's Office* (2013)
Lander County Sheriff's Office* (2014)
Lyon County Sheriff's Office* (2014)
Nye County Sheriff's Office* (2014)
Washoe County Sheriff's Office (2015)
Pershing County Sheriff's Office* (2016)
Humboldt County Sheriff's Office* (2016)
Douglas County Sheriff's Office* (2017)
Eureka County Sheriff's Office (2017)



ADMINISTRATIVE REPORT

Agenda Item I.7.

Meeting Date: 10/7/2019

Report Prepared by: Marvin Dillsaver, Communications System Supervisor

SUBJECT: Acceptance and Appropriation of Settlement Funding in the Amount of \$3,092.84 from the LexisNexis Coplogic Solutions to Assist with Communication Needs of the Police Department

REPORT IN BRIEF

Considers accepting and appropriating settlement funding in the amount of \$3,092.84 from LexisNexis Coplogic Solutions to assist with communication needs of the Police Department.

RECOMMENDATION

City Council - Adopt a motion accepting settlement funds from the LexisNexis Coplogic Solutions and increasing revenue in account 001-1006-360.01-01 in the amount of \$3,093 and appropriating the same to account 001-1006-522.12-00.

ALTERNATIVES

1. Approve, as recommended by Staff; or,
2. Approve, subject to conditions other than recommended by Staff (identify specific findings and/or conditions amended to be addressed in the motion); or,
3. Deny; or,
4. Continue to a future meeting (date and time to be specified in the motion).

AUTHORITY

Charter of the City of Merced, Section 200.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget

DISCUSSION

In July of 2019, the City of Merced received notification that the city would be receiving a payment from LexisNexis Coplogic Solutions, Inc for a reimbursement of fees related to the processing of our accident reports. On August 28, 2019 the City of Merced received a check in the amount of \$3,092.84 for the excess fees collected.

The Merced Police Department will use the \$3,092.84 to fill needs to enhance internal department communications.

The Merced Police Department has until November 26, 2019 to deposit the funds.

IMPACT ON CITY RESOURCES

Staff is requesting that Council accept the reimbursement funds of \$3,092.84; increase the revenue account 001-1006-360.01-01 and appropriate the same to 001-1006-522.12-00.



ADMINISTRATIVE REPORT

Agenda Item I.8.

Meeting Date: 10/7/2019

Report Prepared by: Phaedra A. Norton, City Attorney

SUBJECT: Authorization to Modify the Personnel/Budget Allocation in the City Attorney's Department to Reflect a City Attorney, a Deputy City Attorney, a Deputy/Senior Deputy City Attorney, an Office Administrator/Paralegal and a Legal Administrative Assistant

REPORT IN BRIEF

Modification to the Personnel/Budget Allocation in the City Attorney's Department.

RECOMMENDATION

City Council - Adopt a motion adopting **Resolution 2019-64**, A Resolution of the City Council of the City of Merced, California, Amending the Personnel/Budget Allocation in the City Attorney Department to Reflect a City Attorney, a Deputy City Attorney, a Deputy/Senior Deputy City Attorney, a Legal Administrative Assistant and a Paralegal Office Administrator to be filled by the incumbent Paralegal effective June 21, 2019.

ALTERNATIVES

1. Approve as recommended; or
2. Deny; or
3. Refer to staff for further study; or
4. Take no action.

AUTHORITY

Article VII, Section 710, of the Merced City Charter.

DISCUSSION

The mission of the City Attorney's Department is to utilize in-house legal staff to provide expert and cost effective legal representation to the City. The City Attorney has had an opportunity, over the past year, to evaluate the structure and legal needs of the City and its various departments.

The City Attorney has determined that modifications to the current structure and allocation of budgeted positions in the City Attorney Department is warranted. The current structure and budget allocation consists of a City Attorney, a Chief Deputy City Attorney, a Deputy City Attorney, a Paralegal, and a Legal Administrative Assistant.

The Chief Deputy City Attorney position was vacated by the incumbent this fiscal year thus presenting an opportunity to make the recommended changes to the City Attorney's Office allocated

budgeted positions. The City Attorney is recommending that the Chief Deputy City Attorney be unallocated and an allocation of one Deputy/Senior Deputy City Attorney be approved. In addition, the City Attorney transitioned some of the supervision, administrative, and budget functions of the Chief Deputy position to the Office Administrator/Paralegal position and is therefore recommending that there be an allocation of one Office Administrator/Paralegal to be filled by the incumbent Paralegal who has been performing these functions.

The changes recommended do not change the total allocated/budgeted positions in the City Attorney's Office. It is anticipated that the City Attorney's Office will need to evolve with the City and the organization. The City Attorney will recommend additional modifications as they become necessary to serve the City's needs.

IMPACT ON CITY RESOURCES

No appropriation of funds is needed. Based upon the modifications proposed, there will recognized salary savings.

ATTACHMENTS

1. Resolution 2019-64

RESOLUTION NO. 2019-_____

**A RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF MERCED, CALIFORNIA, AMENDING
THE PERSONNEL/BUDGET ALLOCATION IN THE
CITY ATTORNEY DEPARTMENT TO REFLECT A
CITY ATTORNEY, A DEPUTY CITY ATTORNEY,
A DEPUTY/SENIOR DEPUTY CITY ATTORNEY, A
LEGAL ADMINISTRATIVE ASSISTANT AND A
PARALEGAL OFFICE ADMINISTRATOR**

THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY
RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The Classification Plan of the City of Merced is hereby amended by amending the personnel allocation in the City Attorney Department by deleting one Chief Deputy City Attorney position, adding one Deputy/Senior Deputy City Attorney position at page range 808/876 respectively, and adding one Paralegal Office Administrator position at pay range 703 effective June 21, 2019.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the ____ day of _____ 2019, by the following vote:

AYES: Council Members:

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

APPROVED:

Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

Prudence A. Hahn 10-1-19
City Attorney Date



ADMINISTRATIVE REPORT

Agenda Item I.9.

Meeting Date: 10/7/2019

Report Prepared by: Stephanie Dietz, Assistant City Manager

SUBJECT: Approval of the First Amendment to the Agreement with the Lew Edwards Group in the Additional Amount of \$53,000 and the Total not to Exceed Contracted Amount of \$82,000 to Develop a Public Education Strategy Related to the Possible Extension of Measure C

REPORT IN BRIEF

Considers the approval of the First Amendment to the Agreement with the Lew Edwards Group for an additional amount of \$53,000 and the Total Contracted Amount not to exceed \$82,000 to develop a public education strategy related to the possible extension of Measure C.

RECOMMENDATION

City Council - Adopt a motion:

- A. Approving the First Amendment to the Agreement with the Lew Edwards Group for an amount not to exceed \$82,000 related to the extension of Measure C; and,
- B. Approving a Supplemental Appropriation in the amount of \$53,000 of the unappropriated fund balance in Fund 061-Measure C to provide funding for the amended agreement;
- D. Provide staff direction on areas within the Public Education Strategy Related to the Possible Extension of Measure C; and,
- C. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

ALTERNATIVES

- 1. Approve as recommended by staff; or
- 2. Approve, subject to notifications as conditioned by Council; or
- 3. Deny the request completely; or
- 4. Refer back to staff for reconsideration of specific items as requested by Council; or
- 5. Defer action until a specified time

AUTHORITY

City of Merced Charter, Section 200

CITY COUNCIL PRIORITIES

FY 2019/20 City Council Priorities, Staffing - Measure C

DISCUSSION

On April 1, 2006, a voter approved general-purpose half-cent sales tax went into effect. Locally known as Measure C, sales tax funding has been historically used to support enhanced public safety services and local street projects. Measure C was approved for a period of 20 years, set to sunset in 2026. With the approval of the half-cent sales tax, a Citizens Oversight Committee was also created to create community accountability and ensure that additional funding was allocated in accordance with voter approval.

During the economic downturn, Measure C was used to stabilize public safety services by directly funding positions within the Police and Fire departments. As the economy began to stabilize, the City Council directed staff to develop a plan to transition positions from Measure C to more sustainable funding sources. A total of four positions have been transferred off Measure C support to date. Even with this initial progress, staffing levels are still heavily subverted by Measure C, with a total of 20.49 FTE remaining in the Police Department and 12.30 FTE remaining in the Fire department.

Measure C funding has become a critical funding source to continuing enhanced levels of public safety services to the residents of Merced. On July 1, 2019, the City Council recognized the importance of Measure C and directed staff to begin evaluating the development of an education strategy to test the viability of extending Measure C on a potential November 2020 ballot. In addition to seeking a strategy to extend Measure C in its current form, the Council also expressed an interest in exploring other options, including but not limited to, removal of the sunset date, potentially adding a quarter-cent to support Parks Maintenance, and evaluating general sales tax v. special sales tax thresholds for voter approval.

Staff are recommending that the City Council approve the First Amendment with the Lew Edwards Group in order to develop an effective strategy for a Measure C extension and fully vetting any and all options for November 2020. With the approval of this amendment, staff will begin a robust educational campaign and coordinate with community efforts to fully vet potential options for a November 2020 ballot. Regular updates on the progress of these efforts will be provided to the Council. Opinion survey testing is tentatively scheduled for early spring of 2020. Staff will return to the Council with a First Amendment to the agreement with Fairbank, Maslin, Maullin, Metz & Associates, Inc. to facilitate the completion of a Public Opinion Survey within the next 60 days. A project timeline will also be presented during this action to the Council for consideration and participation opportunities.

IMPACT ON CITY RESOURCES

The original \$29,000 agreement was funded by the General Fund, Measure C, and the Police Station project. The amendment to the agreement in the amount of \$53,000 will be funded by Measure C since it will solely focus on strategy and education for an extension. A supplemental appropriation of \$53,000 of the unappropriated, unreserved fund balance is required and available in Fund 061-Measure C.

ATTACHMENTS

1. Lew Edwards Group First Amendment
2. Lew Edwards Group - Original Agreement

FIRST AMENDMENT TO AGREEMENT FOR FOR PROFESSIONAL SERVICES

THIS FIRST AMENDMENT TO AGREEMENT is made and entered into this ____ day of _____, 2019, by and between the City of Merced, a California Charter Municipal Corporation ("City"), and Lew Edwards Group, a California Corporation, ("Consultant").

WHEREAS, City and Consultant have previously entered into An Agreement for Professional Services ("Contract") dated April 15, 2019; and,

WHEREAS, City and Consultant desire to amend said Agreement to extend the term of the Agreement to include Measure C Renewal project.

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants hereinafter recited, agree as follows:

1. Section 21, "EXTENDED TERM," is hereby added to the Agreement to read as follows:

"21. EXTENDED TERM. The Extended Term of the Agreement shall be from September 15, 2019 to October 31, 2020."

2. Section 22, "ADDITIONAL SCOPE OF SERVICES," is hereby added to the Agreement to read as follows:

"22. ADDITIONAL SCOPE OF SERVICES. Consultant shall perform the additional work outlined in the Additional Scope of Services, attached hereto as Exhibit "1".

3. Section 23, "ADDITIONAL COMPENSATION," is hereby added to the Agreement to read as follows:

"23. ADDITIONAL COMPENSATION. City shall pay to Consultant the not to exceed additional sum of Eighty-Two Thousand Dollars (\$82,000.00) payable as set forth in accordance with the schedule set forth on Exhibit "2, attached hereto."

4. Except as herein amended, the Agreement dated April 15, 2019, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this First Amendment to Agreement to be executed on the date first above written.

CITY OF MERCED
A California Charter Municipal
Corporation

BY: _____
City Manager

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

APPROVED AS TO FORM:

BY: Shueh C. Ntm 9.20-19
City Attorney Date

ACCOUNT DATA:

BY: _____
Verified by Finance Officer

CONSULTANT
LEW EDWARDS GROUP
A California Corporation

BY: _____
(Signature)

(Typed Name)

Its: _____
(Title)

BY: _____
(Signature)

(Typed Name)

Its: _____
(Title)

Taxpayer I.D. No. _____

ADDRESS: _____

TELEPHONE: _____

FAX: _____

E-MAIL: _____

ADDITIONAL SCOPE OF SERVICES

Over the life of the project, LEG will provide services that include:

- a. Project-facilitate a Measure C renewal project timeline
- b. Add strategic value to opinion research efforts
- c. Independently evaluate opinion research and provide Strategic Recommendations, including an assessment of risks/opportunities, project timetable, and election viability/timing
- d. Recommend methods to engage constituents, expand community awareness of policy, fiscal/service needs and solicit additional community input on potential funding or policy priorities
- e. Develop word text copy for informational materials
- f. Recommend local media and/or Internet and social media approaches
- g. Advise City on public responses to constituent inquiries
- h. Confer with City staff on ballot measure preparation and add value to related staff reports

EXHIBIT 1

ADDITIONAL COMPENSATION

Consultant's Agreement for Professional Services shall not exceed Eighty-Two Thousand Dollars (\$82,000) payable as follows:

- On September 30, 2019, Four Thousand Dollars (\$4,000.00); and
- Thirteen payments of Six Thousand Dollars (\$6,000.00) per payment due and payable on the last business day of each month commencing October 30, 2019 and ending October 30, 2020.

EXHIBIT 2

**AGREEMENT BETWEEN THE CITY OF MERCED AND THE LEW
EDWARDS GROUP TO PROVIDE LEAD PROJECT, EVALUATION,
COMMUNICATIONS AND BALLOT MEASURE PREPARATION
SERVICES**

THIS AGREEMENT is made effective this 15th day of April 2019, by and between the City of Merced, a California Charter Municipal Corporation, (hereinafter referred to as “City”) and the Lew Edwards Group (hereinafter referred to as “LEG”).

WHEREAS, the LEG is an experienced professional firm providing lead project, evaluation, communications and ballot measure preparation services to California cities; and

WHEREAS, the City desires to obtain preparatory, strategic and communications services related to potential ballot financing options to support needed Charter Amendment issues, the construction and enhancement of public facilities, and long-term fiscal sustainability within the City of Merced; and

WHEREAS, the LEG has the ability to support the City’s efforts on, and provide coordination with other professionals assigned to this project.

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants hereinafter recited, hereby agree as follows:

1. SCOPE OF SERVICES. Over the life of the project, LEG will provide services that include:

Step One

- a. Project-facilitate a coordinated strategy and timeline
- b. Add strategic value to opinion research efforts
- c. Independently evaluate opinion research and provide Strategic Recommendations, including an assessment of risks/opportunities, project timetable, and election viability/timing

Step Two

- d. Recommend methods to engage constituents, expand community awareness of policy, fiscal/service needs and solicit additional community input on potential funding or policy priorities
- e. Develop word text copy for informational materials
- f. Recommend local media and/or Internet and social media approaches
- g. Advise City on public responses to constituent inquiries

- h. Confer with City staff on ballot measure preparation and add value to related staff reports

2. **TIME OF PERFORMANCE.** The term of this Agreement shall commence upon mutual execution of Agreement and will be completed by October 31, 2020.

3. **COMPENSATION.** The City agrees to pay to LEG a monthly fee of Six Thousand Dollars (\$6,000) per month as detailed in Exhibit A, attached hereto and incorporated herein by this reference.

4. **RECORDS.** It is understood and agreed that all Final Work Product plans, studies, specifications, data magnetically or otherwise recorded on computer or computer diskettes, record, files, reports, etc., in possession of the LEG relating to the matters covered by the Agreement shall be the property of the City, and LEG hereby agrees to deliver the same to the City upon termination of the Agreement. Consultant's notes and working drafts are specifically excluded from this provision. It is understood and agreed that the documents and other materials, including but not limited to those set forth hereinabove, prepared pursuant to this Agreement are prepared specifically for the City and are not necessarily suitable for any future or other use.

5. **CONSULTANT'S BOOKS AND RECORDS.** LEG shall maintain and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services or expenditures and disbursements charged to the City for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to LEG. Any records or documents required to be maintained shall be made available for inspection, audit and/or copying at any time during regular business hours, upon oral or written request of the City.

6. **INDEPENDENT CONTRACTOR.** It is expressly understood that LEG is an independent contractor and that its employees shall not be employees of or have any contractual relations with the City. LEG shall be responsible for the payment of all taxes, workers' compensation insurance and unemployment insurance. Should LEG desire any insurance protection, LEG is to acquire same at its expense.

In the event LEG or any employee, agent, or subcontractor of LEG providing services under this Agreement is determined by a court of competent jurisdiction or

the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an Employee of the City, LEG shall indemnify, protect, defend and hold harmless the City for the payment of any employee and/or employer contribution for PERS benefits on behalf of LEG or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

7. INDEMNITY. LEG shall indemnify, protect, defend (with legal counsel selected by the City), save and hold City, its officers, employees, and agents, harmless from any and all claims or causes of action for death or injury to persons, or damage to property resulting from intentional or negligent acts, errors, or omissions of Consultant or Consultant's officers, employees, volunteers, and agents during performance of this Agreement, or from any violation of any federal, state or municipal law or ordinance, to the extent caused in whole or in part, by the willful misconduct, negligent acts, or omissions of LEG's work, except for loss caused by the sole negligence or willful misconduct of the City or its officers, employees, volunteers or agents. It is understood that the duty of LEG to indemnify and hold harmless includes the duty to defend as set forth in Section 2778 of the California Civil Code. Acceptance by City of insurance certificates and endorsements required under this Agreement does not relieve LEG from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall survive the termination of the Agreement and shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, LEG acknowledges and agrees to the provisions of this section and that it is a material element of consideration.

8. INSURANCE. During the term of this Agreement, LEG shall maintain in full force and at its own cost and expense, the following insurance coverage:

- a. Workers' Compensation Insurance. Full workers' compensation insurance shall be provided with a limit of at least One Hundred Thousand Dollars (\$100,000) for any one person and as required by law, including Employer's Liability limits of \$1,000,000.00 per accident. The policy shall be endorsed to waive the insurer's subrogation rights against the City.
- b. Professional Liability Insurance. LEG shall carry professional liability insurance appropriate to LEG's profession in the minimum amount of One Million Dollars (\$1,000,000).

- c. Qualifications of Insurer. The insurance shall be provided by an acceptable insurance provider, as determined by City, which satisfies all of the following minimum requirements:
 - a. An insurance carrier admitted to do business in California and maintain an agent for service of process within this State; and
 - b. An insurance carrier with a current A.M. Best rating of A: VII or better (except for workers' compensation provided through the California State Compensation Fund).
- d. Certificate of Insurance. LEG shall compete and file with the City prior to engaging in any operation or activity set forth in this Agreement, certificates of insurance evidencing coverage as set forth above and which shall provide that no cancellation or expiration by the insurance company will be made during the term of this Agreement, without thirty (30) days written notice to City prior to the effective date of such cancellation – including cancellation for nonpayment of premium.
- e. Notwithstanding any language in the Agreement to the contrary, LEG shall be entitled to be paid pursuant to the terms of this Agreement until LEG has obtained the insurance required by this Section 10 and provided documentation of said insurance to the City. In addition to any other remedies City may have, City reserves the right to withhold payment if LEG's insurance policies are not current.

9. ASSIGNABILITY OF AGREEMENT. It is understood and agreed that this Agreement contemplates personal performance by LEG and is based upon a determination of its unique personal competence and experience and upon its specialized personal knowledge. Assignments of any or all rights, duties or obligations of LEG under this Agreement will be permitted only with the express written consent of the City.

10. TERMINATION FOR CONVENIENCE OF CITY. Either party may terminate this Agreement any time by mailing a notice in writing to the other that the Agreement is terminated. Said Agreement shall then be deemed terminated, and no further work shall be performed by LEG. If the Agreement is so terminated, the Consultant shall be paid for that percentage of the phase of work actually completed, based on a pro rata portion of the compensation for said phase satisfactory completed at the time the notice of termination is received.

11. CONFORMANCE TO APPLICABLE LAWS. LEG shall comply with its standard of care regarding all applicable Federal, State, and municipal laws, rules and ordinances. No discrimination shall be made by LEG in the employment of persons to work under this contract because of race, color national origin, ancestry, disability, sex or religion of such person.

LEG hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act (8 U.S.C.A. 1101 et seq.), as amended; and in connection therewith, shall not employ unauthorized aliens as defined therein. Should LEG so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should any agency or instrumentality of the federal or state government, including the courts, impose sanctions against the City for such use of unauthorized aliens, LEG hereby agrees to, and shall, reimburse City for the cost of all such sanctions imposed, together with any and all costs, including attorneys' fees, incurred by the City in connection therewith.

12. WAIVER. In the event that either the City or LEG shall at any time or times waive any breach of this Agreement by the other, such waiver shall not constitute a waiver of any other or succeeding breach of this Agreement, whether of the same or any other covenant, condition or obligation. Waiver shall not be deemed effective until and unless signed by the waiving party.

13. ON CONSISTENT OR CONFLICTING TERMS IN AGREEMENT AND EXHIBITS. In the event of any contradiction or inconsistency between any attached document(s) or exhibit(s) incorporated by reference herein and the provisions of the Agreement itself, the terms of the Agreement shall control.

Any exhibit that is attached and incorporated by reference shall be limited to the purposes for which it is attached, as specified in this Agreement. Any contractual terms or conditions contained in such exhibit imposing additional obligations on the City are not binding upon the City unless specifically agreed to in writing, and initialed by the authorized City representative, as to each additional contractual term or condition.

14. AMBIGUITIES. This Agreement has been negotiated at arms' length between persons knowledgeable in the matters dealt with herein. Accordingly, and rule of law, including, but not limited to, Section 1654 of the Civil Code of California, or any other statutes, legal decisions, or common-law principles of similar effect, that would require interpretation of any ambiguities in this Agreement against

the party that drafted this Agreement is of no application and is hereby expressly waived.

15. VENUE. This Agreement and all matters relating to it shall be governed by the laws of the State of California and any action brought relating to this Agreement shall be held exclusively in a state court in the County of Merced.

16. AMENDMENT. This Agreement shall not be amended, modified, or otherwise changed unless in writing and signed by both parties.

17. INTEGRATION. This Agreement constitutes the entire understanding and agreement of the parties and supersedes all previous and/or contemporaneous understanding or agreement between the parties with respect to all or any part of the subject matter hereof.

18. AUTHORITY TO EXECUTE. The person or persons executing this Agreement on behalf of the parties hereto warrants and represents that he/she/they has/have the authority to execute this Agreement on behalf of their entity and has/have the authority to bind their party to the performance of its obligation hereunder.

19. COUNTERPARTS. This Agreement may be executed in one or more counterparts with each counterpart being deemed an original. No counterpart shall be deemed to be an original or presumed delivery unless and until the counterparts executed by the other parties hereto are in the physical possession of the party or parties seeking enforcement thereof.

20. All notices, requests, demands or other communications under the Agreement shall be in writing. Notice shall be sufficiently given for all purposes as follows:

- a. First Class Mail. When mailed first class to the last address of the recipient known to the Party giving notice, notice is effective three mail delivery days after deposit in a United States Postal Service office of mailbox.
- b. Certified Mail. When mailed certified mail, return receipt requested, notice is effective upon receipt if delivery is confirmed by a return receipt.

- c. **Overnight Delivery.** When delivered by an overnight delivery service, charges prepaid or charged to the sender's account, notice is effective on delivery, if delivery is confirmed by the delivery service.

Any correctly addressed notice that is refused, unclaimed or undeliverable because of an act or omission of the party to be notified shall be deemed effective as of the first date that the notice was refused, unclaimed or deemed undeliverable by the postal authorities, messengers or overnight delivery service.

Mailing and contact information for notice to the Parties of this Agreement at the time of endorsement of this Agreement is as follows:

City of Merced
678 W. 18th Street
Merced, CA 95340
(209) 385-6834

Attn: Steve Carrigan, City Manager

The Lew Edwards Group
5454 Broadway
Oakland, CA 94618
(510) 594-0224

Attn: Lloyd Edwards, Secretary-Treasurer

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the date first above written.

CITY OF MERCED
A California Charter Municipal
Corporation

BY:  AC 427
City Manager

ATTEST:

STEVE CARRIGAN, CITY CLERK

BY: [Signature]

Assistant/Deputy City Clerk

APPROVED AS TO FORM:

BY: [Signature]

City Attorney

Date



300928
ACCOUNT DATA:

PO# 134328

BY: [Signature]

Verified by Finance Officer V-17888

Funds available. mfg 5/15/19
061-1026-522-17-00 R 5/15/19
\$14,500.00
449-1001-627-65-00 116040
\$14,500.00

THE LEW EDWARDS GROUP

By: [Signature]

Lloyd A. Edwards, Secretary-Treasurer

Date: April 19, 2019

Exhibit A:
Compensation for Step One Services

Consultant's contract for professional services for Step One services shall not exceed Twenty-nine Thousand Dollars (\$29,000) payable as follows:

- On April 30, 2019, Three Thousand Dollars (\$3,000.00);
- Four payments of Six Thousand Dollars (\$6,000.00) per payment due and payable on the last business day of each month commencing May 31st, 2019 and ending August 30th, 2019; and
- The final payment of Two Thousand Dollars (\$2,000.00) due and payable on September 15, 2019.

The parties may choose to extend this Agreement beyond September 15th for Step Two services. If so, such additional work shall be authorized by the City and additional fees shall apply.

Exhibit 1 – Table of Contracts

6/3/2019 City Council Meeting

(Page 1 of 2)

Department/Division	Vendor	Purpose/Location	Amount
0409 – Insurance	CSAC Excess Insurance Authority (CSAC-EIA)	Amended Memorandum of Understanding (MOU) for the City Advantage Plans (CAP) Delta Dental Program – Originally adopted by the Authority on October 26, 2009.	(No funds.)
1201 – Recreation and Parks	Coaching Corps, Inc.	Training Memorandum of Understanding (MOU) to Conduct an On-Site Mentoring Training Session on June 4, 2019, at 755 West 15th Street, Merced, CA 95340.	(No funds.)
1201 – Recreation and Parks	Fresno County Superintendent of Schools (FCOE)	Program Services Agreement (Safe & Healthy Kids) for the Leadership Academy "Scout Island Outdoor Education" Youth Council Field Trip on June 18, 2019.	\$ 1,025.00
1119 – PW - Facilities	Scott A. Middleton (DBA: Middleton Handyman Services)	Replace and install 6' x 80" double-door package, with panic hardware, coordinated closer, and 12" windows, at the Stephen Leonard Recreation Center. Statement of Services (PO #134395).	\$ 2,562.46
0803 – Engineering	Kleinfelder, Inc.	Drill two (2) borings to determine existing pavement sections, collect samples, and provide data report for full depth reclamation, along "V" Street, between 16th and 18th Streets ("V" St. Improvements - Project No. 117038). Statement of Services (PO #134391).	\$ 3,270.00
0803 – Engineering	Kleinfelder, Inc.	Drill three (3) borings to determine existing pavement sections, collect samples, and provide data report for full depth reclamation, along "G" St., between Childs Ave. and 13th St. ("G" St. Improvements - Project No. 117039). Statement of Services (PO #134392).	\$ 3,468.00
0803 – Engineering	Kleinfelder, Inc.	Drill three (3) borings to determine existing pavement sections, collect samples, and provide data report for full depth reclamation, along Alpine Dr., between "G" St. and Wainwright Ave. (Alpine Dr. Improvements - Project No. 119006). Statement of Services (PO #134393).	\$ 3,468.00

Copies of all of the contracts listed above are available in the City Clerk's Office.

Exhibit 1 – Table of Contracts (Continued)6/3/2019 City Council Meeting

(Page 2 of 2)

0803 – Engineering	Kleinfelder, Inc.	Drill three (3) borings to determine existing pavement sections, collect samples, and provide data report for full depth reclamation, along Canal Street, between 19 th & 24 Streets. (Project Nos. 117039 and 119006). Statement of Services (PO #134493).	\$ 3,985.00
0803 – Engineering	Kleinfelder, Inc.	Debris recycle - Perform compaction testing for sub-base and base of all new sidewalks, concrete areas, driveways, curb and gutter, cross gutters, paving, and other misc. fill (Proj. No. 116017). Statement of Services (PO #134390).	\$ 4,619.55
2002 – Economic Development	Jose M. and Albert Gonzalez DBA: AJG Garden Service, LLC	One-time cleanup at 3033 North "G" Street. Statement of Services (PO #134252).	\$10,000.00
2002 – Economic Development	Jose M. and Albert Gonzalez DBA: AJG Garden Service, LLC	Biweekly landscaping services for 3033 North "G" Street, (12-month term). Statement of Services (PO #134251).	\$15,000.00
0403 – Information Technology	Accela, Inc.	Master Software-as-a-Service (SaaS) Agreement for the "Merced Connect" Smartphone Application for Citizen Engagement and Other Public Outreach Services.	\$18,153.88
0803 – Engineering	California Surveying & Drafting Supply, Inc.	PageWide Maintenance Service and Purchase Agreement for a Hewlett Packard (HP) PageWide XL4100 MFP Plotter/Printer/Scanner/Copier (2-roll upgrade; 36" color).	\$21,004.92
0701 – Finance	Bartel Associates, LLC	Agreement for Professional Services to Provide an Actuarial Valuation of Post-Employment Benefits (OPEB).	\$21,500.00
1119 – PW - Facilities	T & S Intermodal Maintenance, Inc. (DBA: T & S West)	Restroom repairs at the Transportation Center (includes replacement of partitions, counter tops, sinks, and fixtures; epoxy coating over tile; paper towel dispenser and repairs). Statement of Services (PO #134447).	\$27,800.00
0201 – City Manager	The Lew Edwards Group	Agreement for Professional Services to Provide Lead Project, Evaluation, Communications, and Ballot Measure Preparation Services (Charter amendments, etc.).	\$29,000.00
1120 – PW - Parks	MV Construction, Inc.	Bridge repairs at 16th Street and Highway 99 on-ramp - removal and installation of wood railings and posts; painting of wood members and anchor bolts. (Project No. 119061). Statement of Services (PO #134508).	\$58,800.00

Copies of all of the contracts listed above are available in the City Clerk's Office.



ADMINISTRATIVE REPORT

Agenda Item I.10.

Meeting Date: 10/7/2019

Report Prepared by: Wally Broughton, Public Works Manager - Operations

SUBJECT: Approval of First Amendment to Elevator Maintenance Agreement with ThyssenKrupp Elevator Corporation in the Amount of \$1,015 Monthly for the Term Ending June 30, 2020 for Maintenance of Seven Elevators Located at the Civic Center, Ralph Shannon Parade, Merced Center Parking Garage, and Police Station

REPORT IN BRIEF

Considers approving a First Amendment with ThyssenKrupp Elevator Corporation in the amount of \$1,015 monthly and extending the agreement term through June 30, 2020, for maintenance of seven elevators located at the Civic Center, Ralph Shannon Parade, Merced Center Parking Garage, and Police Station.

RECOMMENDATION

City Council - Adopt a motion approving the first amendment to elevator maintenance agreement with ThyssenKrupp Elevator Corporation in the amount of \$1,015 monthly, and authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

ALTERNATIVES

1. Approve, as recommended by staff;
2. Approve, subject to conditions outlined by Council;
3. Refer to staff for reconsideration of specific items;
4. Continue to a future meeting;
5. Deny.

AUTHORITY

Municipal Code Section 3.04, Article III - Purchase over Twenty-Five Thousand Dollars.

CITY COUNCIL PRIORITIES

As provided for in the FY19-20 Adopted Budget.

DISCUSSION

In June 2011, the City of Merced entered into an agreement with ThyssenKrupp Elevator Corporation ("ThyssenKrupp") to perform monthly maintenance on seven elevators located at the Merced Civic Center (2), Ralph Shannon Parade (2), Merced Center Parking Garage (2), and the Police Central Station (1).

The initial contract was for a two-year period, ending on June 30, 2013. ThyssenKrupp has continued providing service at the same cost of \$85 per month per elevator through June 30, 2019 via two separate extension letters (attachment 2). ThyssenKrupp has sent a third extension letter, but after 8 years of service, the price has increased to \$145 per month per elevator, with the term ending June 30, 2020.

Staff is requesting approval to extend the contract term through June 30, 2020 and to increase the monthly service cost to \$1,015 for the seven elevators. The amendment has been prepared and approved as to form by the City Attorney's Office (attachment 3).

IMPACT ON CITY RESOURCES

The proposed cost of monthly service is \$145 per hydraulic elevator, for a total of \$1,015 monthly. The elevator maintenance service has been budgeted for in Facilities account line 671-1119-532.25-00.

ATTACHMENTS

1. Original Agreement
2. Letters of Extension
3. First Amendment

Elevator Maintenance Service contract

THE CITY OF MERCED IS INVITING PROPOSALS FOR ELEVATOR FULL MAINTANENCE SERVICE CONTRACT FOR SEVEN HYDRAULIC ELEVATORS

The City of Merced hereby requests proposals to service all City owned elevators listed herewith.

Make	Model	Freight	Passenger	Site	Address	State ID	Notes
		Hydraulic	Hydraulic				
A & B Elevator	Relay Logic		1	Police Department	611 22 nd Street	069525	
US Elevator	Relay Logic		1	Merced Civic Center	678 18 th Street	085780	
US Elevator	Relay Logic		1	Merced Civic Center	678 18 th Street	085781	
Westinghouse	Relay Logic		1	Parcade	638 18 th Street	105181	
Westinghouse	Relay Logic		1	Parcade	638 18 th Street	105182	
	Microprocessor		1	Merced Center Parking	1801 M Street W	149297	
Schindler	Microprocessor		1	Merced Center Parking	1801 M Street W	149298	

The following items represent the basic scope of service to be rendered:

CLEAN (remove dirt, lint, excess oil and grease):

- Power units
- Control Equipment (relay panels, selectors, operating switches, etc.)
- Pit Equipment (remove normal accumulation of rubbish)
- Guide Rails and Brackets (brush to remove lint and dust)
- Car Frames (guide shoes, safety parts, etc.)
- Top of Cars and Bottom of Platforms
- Car Door and Gate Openers
- Hoist way Door Equipment

LUBRICATE:

Oil and grease as required, according to manufacturers lubrication schedules. Provide proper lubrication to all items of elevator equipment at intervals recommended by the manufacturer and/or as a result of visual examinations.

- Power Unit (refill tank when necessary-flush and filter)
- Control Equipment (selectors, operation switches and devices, etc.)
- Guide Rails (refill lubricators as often as required)

EXAMINE:

Provide a thorough visual examination of all exposed parts accessible without dismantling components. Examinations are to be performed on a regular scheduled basis at intervals to be established based on use and need. Examinations to be performed by a State of California Certified Competent Conveyance Mechanic.

ADJUST:

Provide all necessary adjustments during regular scheduled examination visits.

Elevator Maintenance Service contract

REPAIRS:

During regular working hours provide necessary major and minor repairs, including labor and parts as required, to the following items:

- Control Equipment (relay panels, selectors, operating switches, etc.)
- Car Door and Gate Operators
- Hoist way Door Equipment
- Interlocks
- Leveling Switches (car and hoist way switches and cams)
- Guide Shoes (car roller guides, shoes, gibs, etc.)
- Pit Equipment
- Hydraulic Valves, Pumps, Pump Motors (Power Unit)
- "V" Belt on Power Unit
- Door Motors
- Guide Bearings, Packing and Packing Gland (Hydraulic Seals)

CALLBACK SERVICE

Provide minor emergency callback service during regular time hours at no additional charge to the customer.

Overtime shall consist of weekdays 5pm to 8am, and Saturdays. (Hours as recognized by the International Union of Elevator Constructors.)

Double-time shall consist of Sundays and Holidays. (Hours as recognized by the International Union of Elevator Constructors.)

Billing for overtime call backs shall be at the following rates:

Overtime	\$ 196.00	per hour
Double-time	\$ 247.00	per hour

Overtime and double-time shall have two hour minimum for call out.

ITEMS NOT COVERED

Cosmetic, construction, or ancillary components of the elevator system, including the finishing, repairing, or replacement of the cab enclosure, ceiling frames, panels and/or fixtures, hoist way door panels, door frames, sills, car flooring, floor covering, lighting fixtures, ceiling light bulbs and tubes, main line power switches, breaker(s), feeders to controller, hydraulic elevator jack casing, buried piping, alignment of guide rails, smoke and fire sensors, communication devices, security systems, batteries for emergency lighting and lowering, air conditioners, heaters, ventilation fans and all other items as set forth and excluded in this agreement.

Maintenance Frequency

No less than twelve (12) maintenance visits per year. Fire recall testing and State of California-required record-keeping shall be completed by elevator service provider.

Elevator Maintenance Service contract

Response Time

In the event of trapped passenger(s), elevator service provider shall provide a technician on-site in forty-five (45) minutes or less from the time of notification. In the event the elevator requires repair, but is unoccupied, then response time shall be within four (4) hours or less.

On-line Record-Keeping

Elevator service provider shall provide Purchaser with on-line service records, inspection reports and preliminary orders.

Testing

Elevator service provider shall provide **all** required testing on **all** hydraulic elevators, as required by the State of California, at no additional charge. The testing shall be covered during business hours. The elevators shall individually be out of service during the testing.

Any additional billing as a result of vandalism, misuse/damage by others, work not covered under the terms of this order shall be approved in writing PRIOR to commencement of the work.

Mandatory site visit

An onsite inspection by the proposed service provider representative is Mandatory prior to placing a bid. Onsite inspections may be scheduled with Facilities Supervisor Mark Norman at 209-385-6852 at least two weeks prior to bid opening.

Qualifications

Only Licensed C-11 contractors in good standing are eligible to bid on this proposal. Contractor must maintain C-11 certification in good standing as required by the State of California for the term of this agreement or will be considered in default and nullify this agreement.

Insurance

During the entire duration of the contract the contractor shall maintain in full force and effect at its own cost and expense, the following insurance coverage:

- a. Workers' Compensation Insurance; full workers' compensation insurance shall be provided with a limit of at least One Hundred Thousand Dollars (\$100,000) for any one person and as required by law.
- b. General Liability and Automobile Insurance. Service provider shall obtain and keep in full force and effect a commercial, general liability and automobile policy or policies of at least Five Hundred Thousand Dollars (\$500,000) combined limit for bodily injury and property damage; provided that the City, its officers, employees, volunteers, and agents are to be named additional insured under the policies, and that the policies shall stipulate that this insurance will operate as primary insurance for work performed by Service provider and its contractors or sub-contractors, and that

Elevator Maintenance Service contract

- no other insurance effected by City or other named insured will be called on to cover a loss covered thereunder.
- c. Certificate of Insurance and Endorsements. Service provider shall complete and file with the City, prior to engaging in any operation or activity set forth in this Agreement, certificates of insurance and additional insured endorsements evidencing coverage as set forth above and which shall provide that no cancellation or expiration by the insurance company will be made during the term of this Agreement, without thirty (30) days written notice to City prior to the effective date of such cancellation – including cancellation for non-payment of premium.
 - d. Failure to maintain insurance as noted above will be considered a breach of contract and said contract shall become null and void. The Service provider will be held responsible for all costs incurred by the City of Merced as a result of said breach of contract.

Term

This contract shall be for a term of one year, two years or five years at the discretion of the City of Merced.

Proposed quote for one year of service: \$7140.00 (\$85.00 per unit, per month)

Proposed quote for two years of service: \$14,280.00 (\$85.00 per unit, per month)

Proposed quote for five years of service \$35,700.00 (\$85.00 per unit, per month)

Payment

Payment shall be made on a quarterly basis and shall be paid prior to the service period. Service period shall commence on the first of the Fiscal year (July 1st) and the service period shall be three calendar months.

Elevator Maintenance Service contract

PROPOSALS MUST BE SUBMITTED TO
THE CITY OF MERCED PURCHASING DEPARTMENT
2525 "O" STREET MERCED CA 95340
BY June 10th 2011

Name of Company submitting quote for service: ThyssenKrupp Elevator Corporation

Address: 4335 N Golden State Blvd, Ste. 102, Fresno, CA 93722

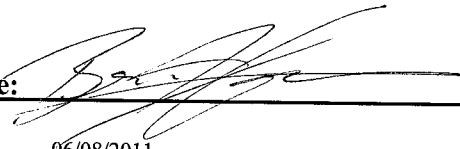
Authorized representative: Brian Hodges

Title or position: Senior Account Representative

Contact phone number: (559) 271-1238

E-mail address: brian.hodges@thyssenkrupp.com

Signature of authorized representative:



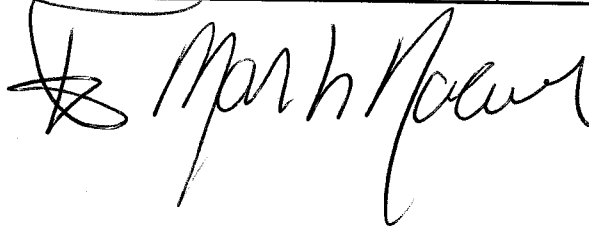
Date: 06/08/2011

Acceptance by the City of Merced

Signature: Pamela Whala **Title:** Purchasing Supervisor

Date: 6-15-11

Term accepted one year two years or five years **(circle one accepted)**

 6-15-11

ThyssenKrupp Elevator Americas

TEAM Fresno

06/12/2013

John Spangler
City of Merced
678 W 18th St
Merced, CA 95340

Re: Elevator Maintenance – Extension

Mr. Spangler

ThyssenKrupp will agree to extend the agreement from July 1, 2013 – June 30, 2014. There will be no increase in price for this additional year. The existing costs are as follows:

Merced Civic Center -	\$170.00 Per Month
Merced Parcade-	\$170.00 Per month
Merced Center Parking-	\$170.00 Per Month
Merced Police Department-	\$85.00 Per Month

If you have any questions please feel free to contact us any time.

Sincerely,
Hodges,
Brian E.
Brian Hodges
Sr. Account Manager
ThyssenKrupp Elevator

Digitally signed by
Hodges, Brian E.
DN: cn=Hodges, Brian E.
Date: 2013.06.12
10:41:59 -0700

ThyssenKrupp Elevator Corporation
4335 N Golden State Blvd, Ste. 102
Fresno, CA 93722
Telephone: (559) 271-1238
Fax: (866) 653-5298
E-mail: brian.hodges@thyssenkrupp.com
Internet: www.thyssenkruppelevator.com



June 10, 2014

John Spangler
City of Merced
678 W. 18-Street
Merced, CA 96340

RE: Elevator Maintenance Pricing 07/01/2014 – 06/30/2019

Dear John,

Please be advised that ThyssenKrupp Elevator will agree to extend the current maintenance agreement through 2019.

The price will remain firm at \$595.00 per month (\$85.00 per month / per hydraulic elevator) for the referenced period. Please let me know if you have any questions.

Sincerely,

Thomas J. Krimmel
Sr. Sales Representative

ThyssenKrupp Elevator
Acceptance

A handwritten signature in dark ink, appearing to read 'T. Krimmel', written over a horizontal line.

City of Merced
Acceptance

A handwritten signature in dark ink, appearing to read 'David W. Smith', written over a horizontal line.

ThyssenKrupp Elevator Corporation
940 Riverside Pkwy, Ste 20
West Sacramento, CA 95605
Telephone: (916) 376-8700, (800) 664-5438
Fax: (866) 572-2888 Cell: 916-825-5113
E-mail: thomas.krimmel@thyssenkrupp.com
Internet: www.thyssenkruppelevator.com

ThyssenKrupp Elevator Americas

July 1, 2019

John Spangler
City of Merced
678 W. 18th Street
Merced, CA 96340

RE: Elevator Maintenance Pricing 07/01/2019 – 06/30/2020

Dear John,

Please be advised that ThyssenKrupp Elevator will agree to extend the current maintenance agreement through 2020.

The price will remain firm at \$1,015.00 per month (\$145.00 per month / per hydraulic elevator) for the referenced period. Please let me know if you have any questions.

Sincerely,

Thomas J. Krimmel
Sr. Sales Representative

ThyssenKrupp Elevator
Acceptance

City of Merced
Acceptance



FIRST AMENDMENT TO AGREEMENT FOR ELEVATOR MAINTENANCE SERVICES

THIS FIRST AMENDMENT TO AGREEMENT is made and entered into this ____ day of _____, 2019, by and between the City of Merced, a California Charter Municipal Corporation (“City”), and ThyssenKrupp Elevator Corporation, a Delaware Corporation, whose address of record is 940 Riverside Parkway, Suite 20, West Sacramento, California 95605 (“Contractor”).

WHEREAS, City is in need of elevator maintenance services; and,

WHEREAS, City and Contractor have previously entered into an Agreement for Professional Services (“Agreement”) dated July 15, 2011; and,

WHEREAS, City and Contractor desire to amend said Agreement to provide for additional services.

NOW, THEREFORE, the parties hereto, in consideration of the mutual covenants hereinafter recited, agree as follows:

1. Section titled “ADDITIONAL TERM,” is hereby added to the Agreement to read as follows:

“ADDITIONAL TERM. An additional term of eighty-four (84) months is hereby added to the Agreement. The additional term shall be from July 1, 2013 to June 30, 2020.”

2. Section titled, “COMPENSATION DURING ADDITIONAL TERM,” is hereby added to the Agreement to read as follows:

“COMPENSATION DURING ADDITIONAL TERM. City shall pay to Contractor the not to exceed additional sum of One Thousand Fifteen Dollars (\$1,015.00) (\$145.00 per hydraulic elevator per month) per month for a total not to exceed sum of Twelve Thousand One Hundred Eighty Dollars (\$12,180.00) per year.

3. Except as herein amended, the Agreement dated July 15, 2011, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this First Amendment to Agreement to be executed on the date first above written.

CITY OF MERCED
A California Charter Municipal
Corporation

BY: _____
City Manager

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

APPROVED AS TO FORM:

BY: Phedra A. Nink 9-9-19
City Attorney Date

ACCOUNT DATA:

BY: _____
Verified by Finance Officer

CONTRACTOR
THYSSENKRUPP ELEVATOR
CORPORATION,
A Delaware Corporation

BY: 
(Signature)

Rachel Toner
(Typed Name)

Its: Branch Manager
(Title)

BY: _____
(Signature)

(Typed Name)

Its: _____
(Title)

Taxpayer I.D. No. _____

ADDRESS: 940 Riverside Pkwy. Ste. 20
West Sacramento, CA 95605

TELEPHONE: (916) 376-8700

FAX: (866) 572-2888

E-MAIL:

Thomas.krimmel@thyssenkrupp.com



ADMINISTRATIVE REPORT

Agenda Item I.11.

Meeting Date: 10/7/2019

Report Prepared by: Lamnguene Kindavong, Recreation Coordinator, Parks and Recreation

SUBJECT: Acceptance and Appropriation of Grant Funding in the Amount of \$1,000 for FY 2020 Merced County First Five Community Engagement Event Sponsorship Program for Tiny Tots 4th Annual Halloween Pumpkin Party

REPORT IN BRIEF

Considers accepting and appropriating grant funding in the amount of \$1,000 from Merced County First Five for the 4th Annual Tiny Tots Halloween Pumpkin Party.

RECOMMENDATION

City Council - Adopt a motion:

- A. Accepting grant funds from Merced County First Five and increasing revenue in account 024-1226-360-02-01 - Creative Skills-Contributions and Donations in the amount of \$1,000; and,
- B. Appropriating the same to account 024-1226-542-29-00 - Creative Skills-Supplies and Services; and,
- C. Authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

ALTERNATIVES

1. Approve, as recommended by Staff; or,
2. Approve, subject to conditions other than recommended by Staff (identify specific findings and/or conditions amended to be addressed in the motion); or,
3. Deny; or,
4. Continue to a future meeting (date and time to be specified in the motion).

AUTHORITY

Charter of the City of Merced, Section 200.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget

DISCUSSION

The Children's Bill of Rights' Community Engagement Sponsorships Program provides financial support to organizations implementing community engagement events and activities that: Promote

the Children's Bill of Rights, and connect families with children 0-5 years with available services that make the rights more of a reality for Merced County children. Funding under this program falls within First 5's mission of "providing for the optimal physical, emotional and intellectual growth of the young children of Merced County", and aims to increase community level awareness and acknowledgement of the need to prioritize care benefiting our youngest kids (0-5).

Under this funding program, First 5 Merced County will support activities across a broad geography throughout Merced County, and partner together with a diverse group of organizations, groups, businesses, and other entities to engage community members and begin discussions around the Bill of Rights and children's needs, and connect families with needed services.

The Parks and Recreation Department applied for a community sponsorship program earlier in August and was awarded \$1,000 for costs associated with the upcoming event. This event offers an opportunity for children and families in the community to experience the wonders of Halloween in a safe environment, decorating pumpkins along with a contest, Halloween crafts (handmade & edible), a spooky room and complimentary drinks and popcorn for attendees. Attendees are encouraged to dress up. This event will be held at city hall in the foyer and Sam Pipes room on October 16, 2019 from 5:15pm-7:15pm.

For the past three years as the event continues to grow, a working relationship with community businesses has been developed as their monetary support has been supplemental to these events. Now with the partnership of First 5 and the focus on youth 0-5 years, we are able to allow 0-5 youth access to these events free of cost sponsored by First 5.

In addition to the approved funding, we are also able to increase the experience for youth with additional special crafts, decorations, free complimentary snack and juices and additional staffing. Every child who attends each activity receives free door buster items such as goodie bags.

IMPACT ON CITY RESOURCES

Once it is accepted and appropriated, this \$1,000 will be available within the FY2019-20 budget to help with costs for this particular event.

ATTACHMENTS

1. First Five Agreement Letter
2. Tiny Tots Halloween Flyer



Date: 09/03/19

Lamnugene Kindavong, Recreation Coordinator
City of Merced Parks & Community Services
632 W. 18th Street
Merced, CA 95340

260 E. 15th Street
Merced, CA 95341
(209) 385-7337
(209) 724-4006 Fax
www.first5mercedcounty.org

COMMISSIONERS

Supervisor Lee Lor
Commission Chair
Board of Supervisors, District 2

Yvonnia Brown, Director
Commission Vice-Chair
Behavioral Health and Recovery
Services

Scott Pettygrove, Director
Human Services Agency

Dr. Gordon Arakawa
County Health Officer

Aaron Lequia
District 1 Representative

Iantha Thompson
District 2 Representative

Shirley Brown, R.N.
District 3 Representative

Eva de Long
District 4 Representative

Paula Smith
District 5 Representative

Equal Opportunity Employer

Subject: Agreement Letter – First 5 Merced County Community
Engagement Event Sponsorship Program

Dear Lamnugene Kindavong;

Congratulations! City of Merced Parks & Community Services has been selected for funding in the amount of \$1000.00 in order to support the 4th Annual Halloween Tiny Tots Pumpkin Decorating Party on October 16th, 2019 at City Hall in the Sam Pipes Room.

By accepting First 5 Merced County funds, the recipient organization agrees to the following:

1. The Children's Bill of Rights will be distributed during the event in a variety of creative ways, which may include activities designed around the Bill, and planned in coordination with First 5. First 5 will also assist in obtaining the necessary printed materials to distribute.
2. First 5 can provide 2 large mounted posters and one banner of the Bill for display during the event.
3. Selected Recipients will plan and implement this event in coordination with First 5 Merced County staff available to provide technical assistance and support to promote the events success.
4. Provided funds will be used as stated in the Letter of Request submitted to, and negotiated with First 5 Merced County, and in compliance with the approved Funding Guidelines and Criteria for this program.
5. Minimum general commercial liability insurance will be provided for the event, as follows: \$500,000 combined single limits per occurrence and \$1,000,000 annual aggregate covering bodily injury, personal injury and property damage.
6. The event shall not include any religious teaching, instruction, indoctrination, proselytizing, exposure or discussion. All services/activities provided shall be secular.
7. First 5 Merced County funds shall be used only to supplement existing levels of service and not solely to fund existing levels of service. No First 5 Merced County funds shall be used to supplant existing funds from any source for any purpose.

8. Any marketing efforts and/or materials for the sponsored event shall identify First 5 Merced County as a sponsoring or co-sponsoring entity and include the official First 5 Merced County logo and identify the event as supportive of the Children's Bill of Rights for Merced County.
9. If the sponsored event does not occur for any reason, First 5 Merced County will receive repayment of First 5 funding from the recipient organization.
10. Following the completion of the sponsored event, funding recipients will complete a survey of the event, documenting the estimated attendance, its benefits for those attending and related information.
11. First 5 Merced County reserves the right to terminate this agreement and its payment provisions, should the funding recipient and/or the sponsored event fail to comply with the terms of this agreement.
12. The funding recipient agrees to indemnify, defend and hold harmless First 5 Merced County, its Commission, staff, and agents, and assigns from and against any and all claims, demands, liability, judgments, awards, interest, attorney's fees, costs, experts' fees and expenses of whatsoever kind or nature, at any time arising out of or in any way connected with the performance of this Agreement, whether in tort, contract or otherwise.
13. The funding recipient warrants and covenants that no official or employee of the County of Merced, First 5 Merced County, nor any business entity in which an official of the County or First 5 has an interest, has been employed or retained to solicit or aid in the procuring of the agreement, nor that any such person will be employed or otherwise benefit from the performance of this agreement without immediate divulgence of such fact to First 5 Merced County.
14. The funding recipient shall not discriminate or in any way limit access to the sponsored event supported under this agreement on the basis of race, creed, religion, color, national origin, sex, disability or medical condition.

Payment of funds shall be provided to the recipient organization upon return of this agreement, once signed by an authorized official, agreeing to comply with the terms, as presented, and completing the attached invoice template.

Signature by authorized official: 

Date: 9/9/19

Full Name and Title


Agency/Organization Name

If you have any questions, please contact me directly at (209) 385-7337.

Sincerely,

Scott Waite
Executive Director
First 5 Merced County

APPROVED AS TO FORM:





PARKS & RECREATION

4TH ANNUAL TINY TOTS HALLOWEEN PUMPKIN PARTY

Costumes & Parents are Welcome
Ages 2-8yrs
Space is Limited

OCTOBER 16, 2019 | 5:15 PM – 7:15 PM

LOCATION: 678 W. 18TH ST.

CITY HALL, SAM PIPES ROOM

Children will enjoy Halloween this year with fun activities, edible crafts, pumpkin decorating contest, and lots more

PRE-REGISTER AT 632 W. 18TH ST

209-385-6235





ADMINISTRATIVE REPORT

Agenda Item I.12.

Meeting Date: 10/7/2019

Report Prepared by: Jennifer Arellano, Recreation Supervisor, Parks and Recreation

SUBJECT: Authorization to Accept Volunteer Labor and 21 Donated Trees Valued at Approximately \$2,300 from Clean Earth a Harsco Company at the Applegate Park and Zoo on October 19, 2019 for Clean Earth Day Tree Planting Event

REPORT IN BRIEF

Considers approving acceptance of labor and materials valued at approximately \$2,300 for new trees at Applegate Park and Zoo from Clean Earth a Harsco Company for their Clean Earth Day tree planting event on October 19, 2019.

RECOMMENDATION

City Council - Adopt a motion accepting a donation from Clean Earth a Harsco Company for volunteer labor and 21 trees valued at approximately \$2,300 at Applegate Park and Zoo on October 19, 2019 for Clean Earth Day tree planting event.

ALTERNATIVES

1. Approve, as recommended by staff; or,
2. Approve, subject to other than recommended by staff (identify specific findings and/or conditions amended to be addressed in the motion); or,
3. Deny; or,
4. Refer to staff for consideration of specific items (specific items to be addressed in the motion); or,
5. Continue to future meeting (date and time to be specified in motion).

AUTHORITY

Charter of the City of Merced, Section 200.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

Clean Earth a Harsco Company is one of the largest specialty waste companies in the United States providing remediation, disposal, recycling, and beneficial reuse solutions for all types of specialty waste. The company is holding Clean Earth Days during the month of October to realize their vision to create a better future for people, partners, and the planet. Clean Earth employees from across the country will team up to hold waste collection events, help local non-profit organizations with their daily tasks and special projects, and clean up location trails and streams.

The nearest local branch of the company is located in Modesto, and has been a very strong supporter of the Applegate Park Zoo through the Zoological Society with multiple regular donations of materials and money for improvement projects. This year, for Clean Earth day they would like to donate to the City by planting 21 new trees throughout Applegate Park and inside the Zoo on October 19. Public Works Parks workers will help dig the tree holes prior to arrival of the volunteers and will work with them closely that day to ensure the trees are planted correctly.

IMPACT ON CITY RESOURCES

There is no direct impact on City Resources. New trees throughout Applegate Park and at the Zoo will be an enhancement for the public, and save City resources.



ADMINISTRATIVE REPORT

Agenda Item I.13.

Meeting Date: 10/7/2019

Report Prepared by: Michelle Reid, Recreation Supervisor, Parks and Recreation

SUBJECT: Approval of Recreation and Parks Commission's Recommendation to Accept a Donation of a Tile Mosaic Artwork Installation at the Applegate Park Merced Open Air Theater (MOAT) by Monica Modest

REPORT IN BRIEF

Considers approving the Recreation and Parks Commission's recommendation to accept a donation of a tile mosaic artwork installation at the Applegate Park Merced Open Air Theater (MOAT) from Monica Modest.

RECOMMENDATION

City Council - Adopt a motion approving the Recreation and Park Commission's recommendation to accept a donation of a tile mosaic artwork installation from Monica Modest, to be placed at the Applegate Park Merced Open Air Theater (MOAT); and, authorizing the City Manager or the Assistant City Manager to execute the necessary documents.

ALTERNATIVES

1. Approve, as recommended by the Recreation and Parks Commission; or,
2. Approve, subject to other than recommended by the Recreation and Parks Commission (identify specific findings and/or conditions amended to be addressed in the motion); or,
3. Deny; or,
4. Refer to the Recreation and Parks Commission for reconsideration of specific items (specific items to be addressed in the motion); or,
5. Continue to a future meeting (date and time to be specified in the motion).

AUTHORITY

Charter of the City of Merced, Section 200.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

Artist Monica Modest has submitted a proposal to create a community art project and have it placed on the side of the Merced Open Air Theater (MOAT) in Applegate Park. The mosaic will consist of glazed, star-shaped clay tiles. The entire project will cover an 8 x 8 foot space on the side of the MOAT, towards the rear of the structure.

The tiles were completed in 2017 and actively involved in the community. The inspiration for this project is an effort to memorialize individuals who have passed away living on the streets. Ms. Modest has created and placed other pieces of art on City property, including Rahilly Park and Bob Hart Square. There will be no expense to the City. Ms. Modest will be responsible for all expenses involved in the creation and installation of the art work.

The item went before the Recreation and Parks Commission on August 26, 2019, where they voted unanimously to recommend approval of the project to City Council.

IMPACT ON CITY RESOURCES

No appropriation of funds is needed.

ATTACHMENTS

1. Starry Night Project Proposal

STARRY NIGHT: HOMELESS REMEMBRANCE PROJECT

(Proposal from Monika Modest)

The imagery of this project as well as the mosaic itself were inspired by Vincent van Gogh's Starry Night painting and came about as a result of an inquiry from Phil Schmauss, Merced Rescue Mission, and Joseph Homer (Golden Valley Health Center).

Every year in December a Homeless Remembrance memorial event takes place in Merced. At Applegate Park advocates for the homeless population as well as many of the homeless people of Merced gather to remember their fellow homeless brothers and sisters who have passed. They learn about services available to them and blankets, socks, hats and gloves are given away.

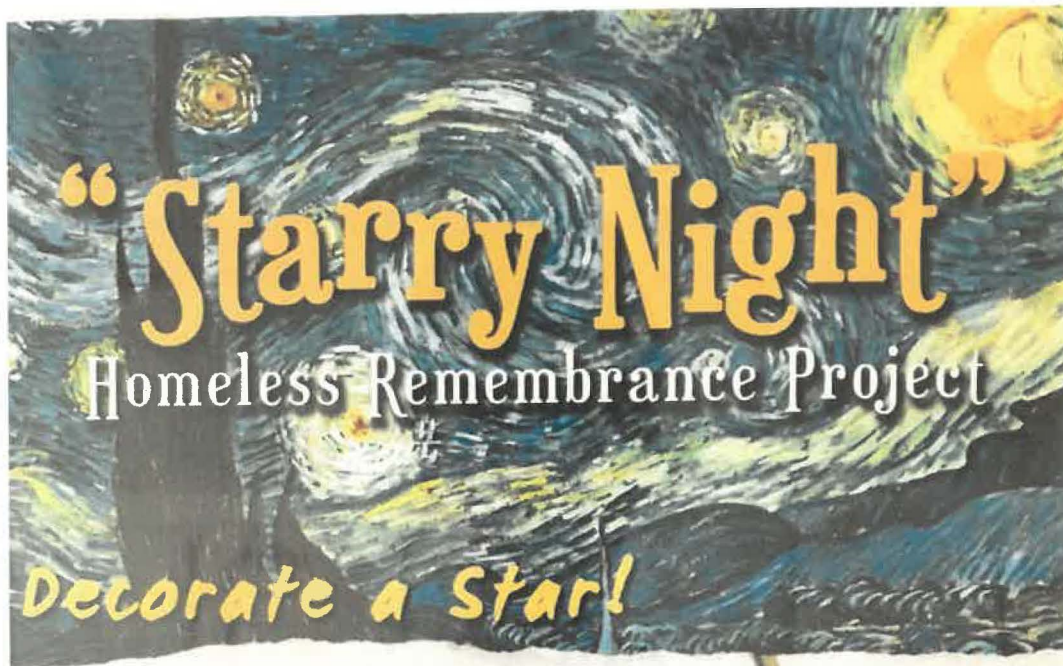
Van Gogh and his famous Starry Night painting seem to be fitting: the artist's mental health battles, his personal "demons" he struggled with, the poverty and rejection he experienced for most of his life very appropriately mirror what many of the homeless are confronted with.

The first workshops to glaze a ceramic star were held at the homeless shelter followed by numerous workshops open to the public. The \$5 donation was used to purchase the blankets, etc. Yosemite High School students, together with Bill Gossett, their art teacher, were a big part of this project, helping me glaze all the swirly brush marks Van Gogh is famous for.

Picture 1: Flyer for star glazing workshops

Picture 2: 4'x4' section of mosaic (final size: 8'x8')

Picture 3: close up



Last year, over forty homeless residents perished due to the elements...

This year, we will memorialize them forever with a permanent art installation in Merced!

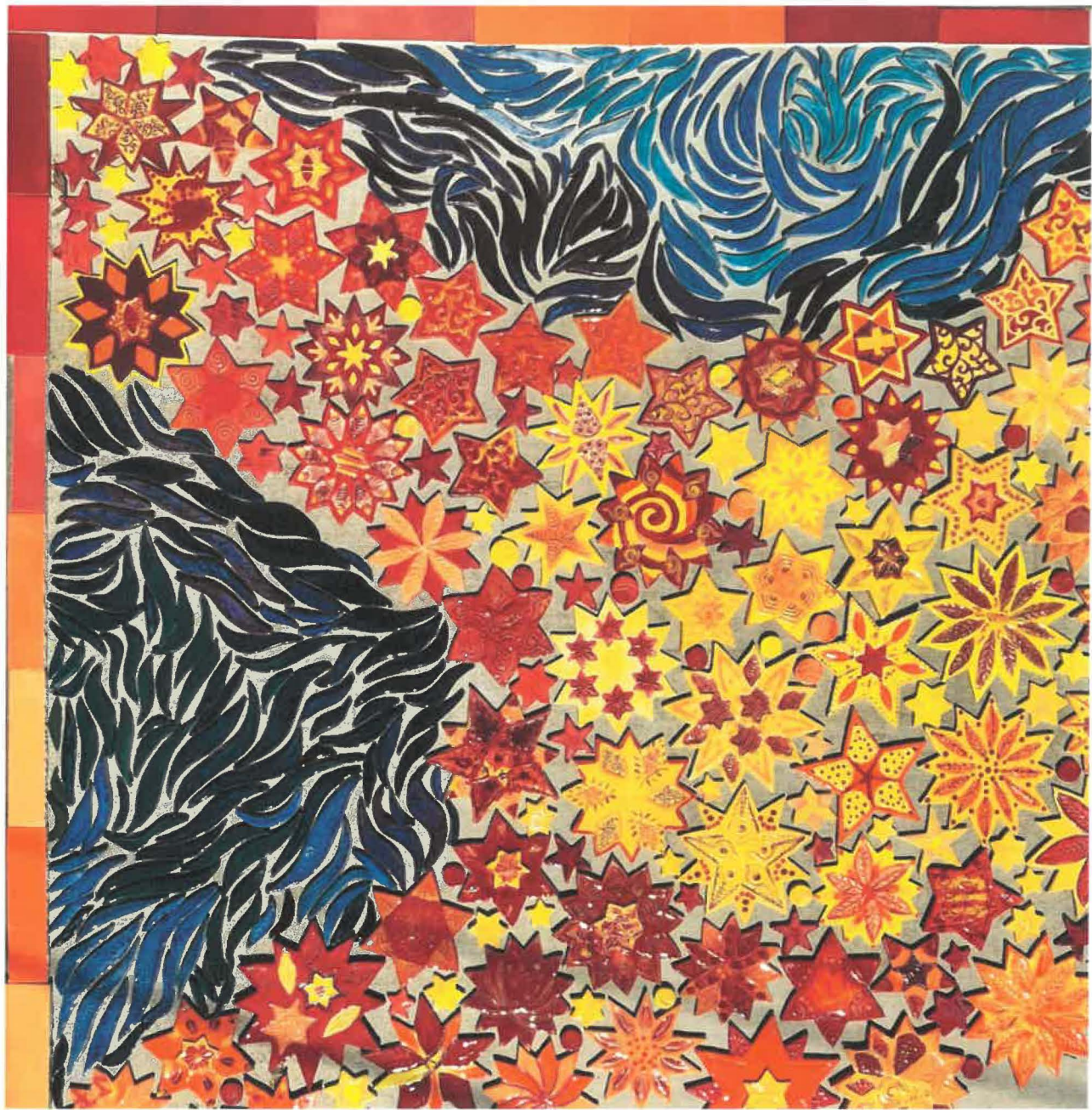
A Donation of \$5 is encouraged - Sponsors are sought and proceeds will be used to buy sleeping bags for the homeless.

Join us and glaze a ceramic star.
Monika Modest, a local artist, will help you shine!

PUBLIC WORKSHOP
Thursday, November 30th 2017
5pm - 8pm

Merced Multicultural Arts Center
645 W Main St, Merced CA

Sponsors Contact 814.777.0100





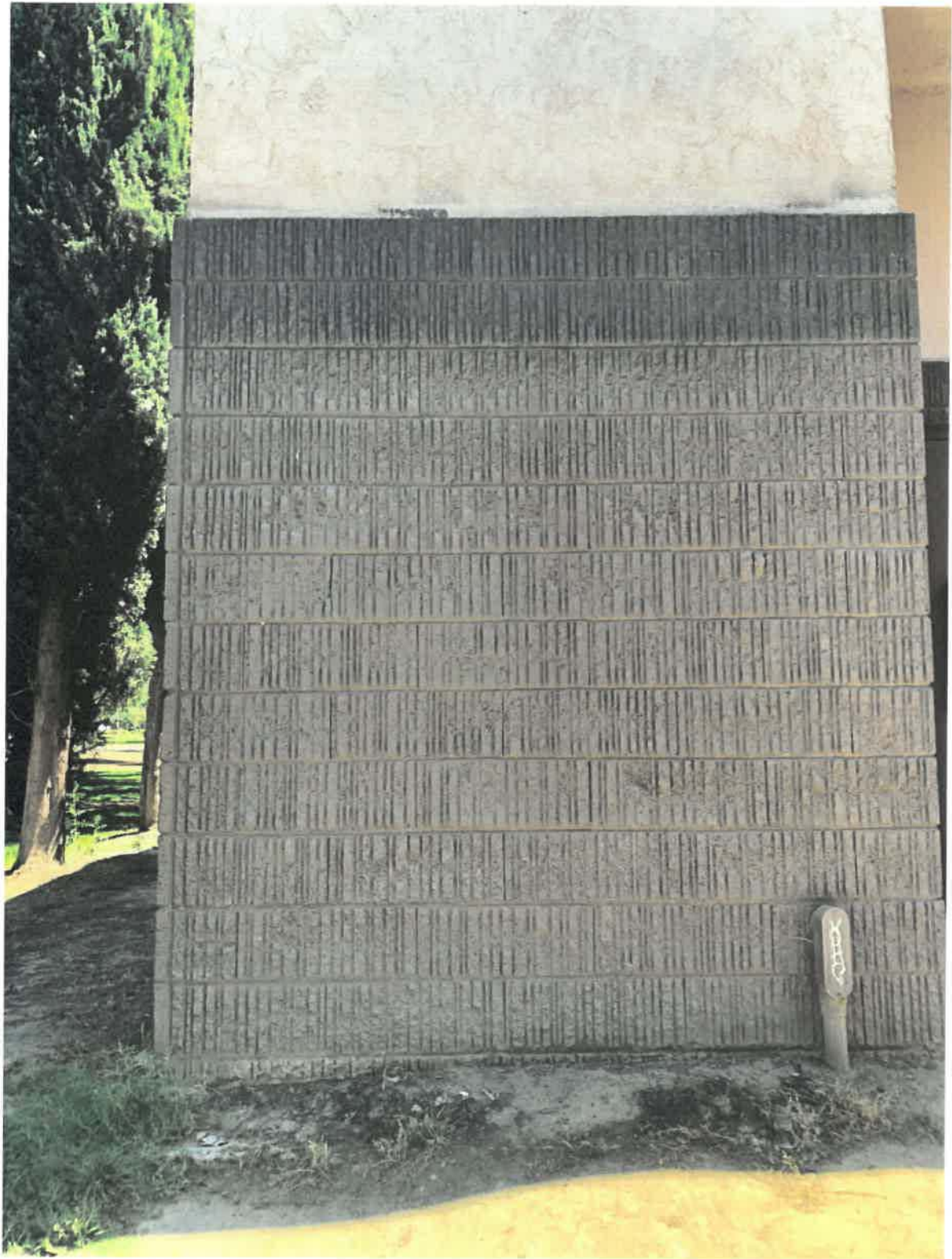
Starry Night by Vincent Van Gogh



Below are pictures taken of possible installation sites on the Merced Open Air Theater (MOAT) in Applegate Park.









ADMINISTRATIVE REPORT

Agenda Item I.14.

Meeting Date: 10/7/2019

Report Prepared by: Michelle Reid, Recreation Supervisor, Parks and Recreation

SUBJECT: Approval of Recreation and Parks Commission's Recommendation to Grant a Request by the Deaf and Hard of Hearing Service Center for the Co-Sponsored Rental Rate for the Merced Senior Community Center on December 14, 2019 for its Annual Holiday Celebration

REPORT IN BRIEF

Considers approving the Recreation and Parks Commission's recommendation to approve a request for the co-sponsored rate for the rental of the Merced Senior Community Center by the Deaf and Hard of Hearing Service Center to hold its annual Holiday Celebration on December 14, 2019.

RECOMMENDATION

City Council - Adopt a motion approving the Recreation and Park Commission's recommendation to rent the Merced Senior Community Center to the Deaf and Hard of Hearing Service Center (DHHSC) on December 14, 2019, at the co-sponsored rental rate.

ALTERNATIVES

1. Approve, as recommended by the Recreation and Parks Commission; or,
2. Approve, subject to other than recommended by the Recreation and Parks Commission (identify specific findings and/or conditions amended to be addressed in the motion); or,
3. Deny; or,
4. Refer to the Recreation and Parks Commission for reconsideration of specific items (specific items to be addressed in the motion); or,
5. Continue to a future meeting (date and time to be specified in the motion).

AUTHORITY

Charter of the City of Merced, Section 200.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

The Parks and Recreation Department received a request from the Deaf and Hard of Hearing Service Center (DHHSC) to use the Merced Senior Community Center at the co-sponsored rate. The event is held for the deaf and hard of hearing and their families to celebrate the holiday season. The Holiday Celebration is Saturday, December 14, 2019, from 10:00 AM to 4:00 PM. The DHHSC will receive one hour before and one hour after the scheduled time at no charge for set up and clean up.

Six total hours have been requested for co-sponsorship. The request was made at the Recreation and Parks Commission meeting on April 22, 2019. The Commission unanimously approved co-sponsorship of the event.

The Merced Senior Community Center is available during the requested time and there will be no interference with regularly scheduled senior programs. There is an established co-sponsorship rate for use of the Senior Center, which requires City Council approval. By charging the co-sponsored rate, the City will recoup all expenses for hosting the event at our facility. The DHHSC will be required to provide liability insurance regardless of which fees are approved.

The regular and co-sponsored rates for this type of event are as follows:

Regular Rate:

\$300 refundable deposit
\$750 hourly rate (\$125 per hour)
\$100 set up fee
\$366 cleaning fee

Total = \$1,516

Co-Sponsored Rate:

\$50 refundable deposit
\$240 staff charge (\$40 per hour)
\$0 (set-up fee waived)
\$45 maintenance fee

Total = \$335

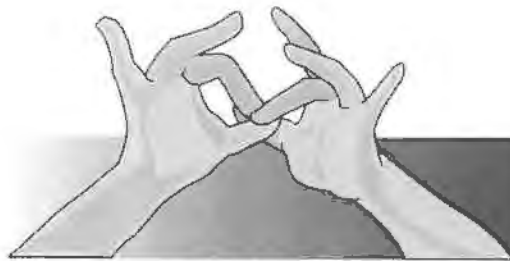
Staff and the Recreation and Parks Commission have reviewed the application and see the event as a worthy cause and recommend approving the request.

IMPACT ON CITY RESOURCES

No appropriation of funds is needed

ATTACHMENTS

1. Letter of Request
2. Co-sponsorship Application



Connect. Inspire. Succeed.

DHHSC

DEAF & HARD OF HEARING SERVICE CENTER

March 5, 2019

Merced Senior Community Center
678 West 18th Street
Merced, CA 95340

To Council Members,

The Deaf and Hard of Hearing Service Center (DHHSC) of Merced will be hosting the annual Holiday Celebration in December. This provides a wonderful time for approximately 80- 100 Deaf and Hard of Hearing people and their families and relatives to come together and celebrate the Holiday Season. Would the Merced Senior Community Center be willing to co-sponsor this event for the local Deaf Community? We are looking to host this celebration on December 14 from 10am to 4pm (9am to 5pm).

DHHSC is a tax-exempt 501(c)3 organization. Our tax identification number is 77-0003788. Thank you in advance for your co-sponsor for this holiday event.

To express our appreciation of your co-sponsor, your business logo and information will be informed to the people who will attend to the holiday event. Please contact me if you would like additional information about the event and/or our agency in general, my work phone number is (209) 230-9910 or work email at Angelicamb@dhhsc.org.

Deaf and Hard of Hearing Service Center, Inc. is a private community benefit organization that provides services to the Deaf and Hard of Hearing Community in Central California. We provide seven core services, including communication assistance, peer counseling, information and referral, employment development and placement, independent living skills instruction, advocacy, and community education. Our agency's mission is "To advocate, seek equality, and promote self-determination through empowerment for those who seek our assistance; and to enhance the awareness and understanding of Deaf Culture and the unique communications needs of Deaf and Hard of Hearing individuals."

Thank you very much!

Sincerely,

Angelica Medina- Boersma
Client Service Specialist
DHHSC
855 W. 18th St, Suite A
Merced, CA 95340
Angelicamb@dhhsc.org
(209) 230-9910
www.dhhsc.org

Fresno Headquarters:

5340 N. Fresno Street
Fresno, CA 93710
(559) 225-3323 V/VP
(559) 225-0116 FAX • info@dhhsc.org

Central Coast Outreach Office:

36 Quail Run Circle, Suite 100-T
Salinas, CA 93907
(831) 753-6540 V/TTY
(831) 753-6542 FAX • ccinfo@dhhsc.org

South Valley Outreach Office:

113 N. Church Street, Suite 222
Visalia, CA 93291
(559) 302-9820 V/VP
(559) 334-0138 FAX • svoinfo@dhhsc.org

Merced Outreach Office:

855 W. 18th Street, Suite A
Merced, CA 95340
(209) 230-9910 V/VP
(209) 726-7717 FAX • minfo@dhhsc.org

City of Merced Parks and Community Services

632 W 18th Street
Merced, CA 95340
(209) 385-6855 fax (209) 726-5327

***On Call (209) 564-9103**

For Rental Problems

APPLICATION AND AGREEMENT FOR USE OF FACILITIES

Applicant's Name:		Address:		City: MERCED		Zip Code: 95340	
Name of Organization: Deaf & Hard of Hearing Service Center			Day Phone (Area Code):			Evening Phone (Area Code):	
Room to be reserved - Please Circle:							
Sam Pipes Conference Room				Merced Community Senior Center			
Nature of Event: Luncheon		Event Date: 12/14/19		Time: 10 AM TO 4 PM		Estimated Attendance Adults Minors Total 200	
Public Event? Yes No		Equipment Requirements:					
Event used to raise money? Yes No		<input type="checkbox"/> Chairs - Theatre Style <input type="checkbox"/> Chairs and Tables – Classroom Style <input type="checkbox"/> Chairs and Tables – Banquet Style with Dance Floor <input type="checkbox"/> Stage <input type="checkbox"/> Kitchen Facilities <input type="checkbox"/> Portable Coffee Maker(s) <input type="checkbox"/> P.A. System <input type="checkbox"/> U.S. Flag <input type="checkbox"/> California Flag					
Admission Charged? Yes No		<div style="border: 1px solid black; padding: 5px; text-align: center;">CO-SPONSORSHIP RENTAL FEES</div>					
Other: <u>Event time is 10 AM to 4 PM. Renter to receive one hour (set up) before and one hour after (cleanup) at no cost.</u>							
<u>Total use time is 6 hours.</u>							
ADDITIONAL DATES: _____							

APPLICANT'S AGREEMENT

I have read this agreement and accept the facility for which this application is made in an "AS IS" condition. In consideration of the minimal fees paid for use of the facility, the applicant is to indemnify, defend and hold harmless the City of Merced, its officers, officials, employees, agents, and volunteers ("City and City Personnel") from all actions, liabilities, claims, damages to persons or property, losses, costs, penalties, obligations, errors, or omissions that may be asserted or claimed by any person, firm, or entity arising out of or in connection with the activities conducted by the applicant, whether or not there is concurrent passive or negligence on the part of City or City Personnel.

NOTICE TO APPLICANT:

All rentals must be cancelled no later than 2 weeks before the event date, except the **Senior Center, which must be cancelled at least 30 days before the event.** A "Refund Appeal" must be filled out when requesting a refund and may be subject to a 25% assessment fee for administrative costs. Failure to do so will result in forfeiture of deposit and all rental fees.

Signed _____

Date _____

-OFFICE USE ONLY-

FEES

Contracted Hours \$ 6 @ \$ 40 = \$ 240.00

Deposit (refundable) \$ 50.00

Set-up Fee \$ _____

Kitchen Fee \$ _____

Cleaning Fee \$ 45.00

TOTAL \$ 335.00 380

Department Authorized Signature:

_____ Date: _____

☐ Approved ☐ Denied

☐ Set up Diagram (at least 2 weeks prior to event if applicable)

☐ **Certificate of Insurance in compliance with City of Merced.**

☐ **Contracted Security/Dance Permit**

☐ **ABC License (if liquor is to be sold)**

☐ Added to Computer By: _____

Please make check payable to City of Merced.

Returned checks will result in cancellation of event and/or additional charges.



ADMINISTRATIVE REPORT

Agenda Item I.15.

Meeting Date: 10/7/2019

Report Prepared by: Julie Nelson, Associate Planner, Development Services Department

SUBJECT: Second Reading and Final Adoption of Ordinance Amending Section 9.08.020 Regarding Cardrooms and Amending CUP #1216, Merced Poker Room, and CUP #1219, Poker Flats Casino (AKA Golden Valley Casino) to Reflect the Number of Card Tables Allowed Pursuant to State Regulations

REPORT IN BRIEF

Second reading and final adoption of an Ordinance amending the number of card tables allowed within the City of Merced from sixteen (16) to twelve (12) in compliance with state regulations.

RECOMMENDATION

City Council - Adopt a motion adopting **Ordinance 2503**, an Ordinance of the City Council of the City of Merced, California, amending Section 9.08.020 "Cardrooms," of the Merced Municipal Code.

ALTERNATIVES

1. Adopt Ordinance 2503; or,
2. Deny; or,
3. Continue to a future City Council meeting (date and time to be specified in the City Council motion).

AUTHORITY

City of Merced Charter, Section 200.

CITY COUNCIL PRIORITIES

Not Applicable.

DISCUSSION

On April 18, 2016, the City Council introduced an ordinance amending Section 9.08.020 dealing with cardrooms (Ordinance No. 2457 - Attachment 1). This amendment increased the number of tables allowed within the City from 8 tables to 16 tables (no single cardroom was allowed more than 8 tables). On April 26, 2016, the revised ordinance was submitted to the Department of Justice (DOJ) for review as required by state regulations. The ordinance became effective June 2, 2016.

The City received a letter from the DOJ dated April 26, 2017 (Attachment 2), which outlined the changes that were made to the City's regulations by Ordinance No. 2457 and identified issues that conflicted with the California Business and Professions Code.

The letter stated that the City could not increase the number of tables allowed within the City to sixteen (16) as was allowed under Ordinance No. 2457. Instead, according to the Business and Professions Code, the City could only increase the number of tables to twelve (12). The letter also noted that the ordinance failed to meet state regulations regarding the hours of operation for a cardroom, and recommended changes regarding wagering limits. Please refer to the letter at Attachment 2 for details regarding the DOJ's concerns with Ordinance No. 2457.

On February 22, 2017, the Planning Commission approved Conditional Use Permit (CUP) #1216 for the Merced Poker Room at 1459 Martin Luther King, Jr. Way and CUP #1218 for Poker Flats Casino (now known as Golden Valley Casino) at 1714 Martin Luther King, Jr. Way. These CUP's allowed each business to operate 8 card tables for a total of 16 tables as allowed under Ordinance No. 2457. The Merced Poker Room subsequently filed an appeal of the Conditions of Approval limiting the number of card tables within their establishment to 8 tables. They wanted to be able to have more than 8 tables within the establishment, but to only have 8 tables in operation at any given time. The City Council denied this request (see City Council Resolution 2017-18 at Attachment 3).

As previously noted, the City was notified by the DOJ of issues with Ordinance No. 2457 in April 2017. At that time, the City notified both card rooms that the state had determined the number of tables allowed within the City was only twelve (12) tables. Therefore, each establishment would be allowed a maximum of six (6) tables.

The City Attorney's office drafted the necessary changes to the ordinance [a red-lined version of the ordinance has been provided in order to see the changes that were made (Attachment 4)] and submitted it to the Department of Justice for review. On May 13, 2019, the City received a letter from the DOJ acknowledging that the proposed ordinance amendments are now in compliance with the California Business and Professions Code regulations for cardrooms (refer to the letter at Attachment 5).

The Merced Poker Room and Golden Valley Casino were notified of the proposed ordinance amendment. They are aware that this amendment limits the number of tables for each establishment to six (6).

ATTACHMENTS

1. Draft Ordinance

ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
AMENDING SECTION 9.08.020, "CARDROOMS,"
OF THE MERCED MUNICIPAL CODE**

WHEREAS, two cardrooms are authorized to operate within the City; and

WHEREAS, under existing City regulations, no cardroom may operate with more than four card tables and no more than eight card tables may be located within the City; and

WHEREAS, under specific provisions of the Business and Professions Code, the City Council may authorize an increase in the number of card tables without a vote of the voters of the City of Merced; and

WHEREAS, Business and Professions Code 19961.06, subd. (b) allows an increase of two additional card tables per cardroom; and

WHEREAS, pursuant to the authority of this code section, the City Council wishes to increase the number of card tables allowed to operate within the City of Merced from eight card tables to 12 card tables; and

WHEREAS, on or after the effective date of this Ordinance, the City Council wishes for a cardroom operator to be able to apply for up to two additional card tables, provided, however, that under no circumstances shall the total number of authorized card tables allowed to operate within the City exceed 12 card tables; and,

WHEREAS, the City Council wishes to remove existing limits and bets and wagers at cardrooms within the City.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES ORDAIN AS FOLLOWS:

SECTION 1. AMENDMENT TO CODE. Section 9.08.020, "Cardrooms," of the Merced Municipal Code is hereby amended to read as follows:

“9.08.020 - Cardrooms.

A. Cardrooms in the City of Merced may only be located in areas zoned as follows:

1. Central Commercial (C-C);
2. Commercial Thoroughfare (C-T);
3. General Commercial (C-G).

B. It is unlawful and a misdemeanor, subject to punishment in accordance with Chapter 1.12 of this code, for any person, either as principal, agent, employee, or otherwise, to play, conduct, or deal any game of cards in any cardroom, or in any other public place or place resorted to generally by the public, between the hours of two a.m. and six a.m. of any day, except that any duly licensed cardroom operating in a Commercial Thoroughfare (C-T) zone or Central Commercial (C-C) zone is permitted to operate 24 hours per day.

C. Any person operating a cardroom shall be responsible and liable for patron security and safety in and around the gaming establishment. Security guards shall be provided in such number and at such times as directed by the Chief of Police, or as may otherwise be required by conditional use permit.

D. As of April 18, 2016, there are two cardrooms authorized to operate within the City of Merced, each of which may operate four (4) card tables. There shall be no increase in the existing number of cardrooms without the approval of a majority of the voters of the City.

E. The City of Merced hereby increases the number of authorized card tables to be operated within the City from eight (8) card tables to twelve (12) card tables. There shall be no increase in the number of card tables to be operated beyond twelve (12) card tables without the approval of a majority of the voters of the City.

F. In order for a cardroom to increase the number of card tables to be operated from the four (4) card tables that existed as of April 18, 2016, the operator must first obtain a conditional use permit to operate additional card tables. A cardroom operator may apply for up to two (2) additional card tables subject to the overall limit of twelve (12) card tables to be operated within the City; provided, however, that under no circumstances shall a cardroom have more than six (6) card tables in operation at any one time. All card tables not in operation shall be completely covered and shall display a sign on the table, with not less than six (6") inch lettering, stating that 'This table is not in operation.' The cover and sign shall be approved in advance by the City.

G. As of the date of the final adoption of this Ordinance No. ____, Conditional Use Permit #1216 approved by Resolution #3077 on February 22, 2017 related to the 'Merced Poker Room,' and Conditional Use Permit #1219, approved by Resolution #3079 on February 22, 2017, related to the 'Poker Flats Casino AKA Golden Valley Casino,' are hereby amended to allow a maximum of six (6) card tables to be operated per cardroom in accordance with this Ordinance and State law. All other conditions of Conditional Use Permit #1216, Resolution #3077 and Conditional Use Permit #1219, Resolution #3079 remain in full force and effect, except that if there are any conflict between said Conditional Use Permits and this Ordinance, the provisions of this Ordinance control.

H. If a cardroom operator obtains a conditional use permit to operate additional card tables, the new card tables must be added within one (1) year from the date of approval of the conditional use permit. Otherwise, the right to add the additional card tables shall automatically expire and the number of card tables allowed in that cardroom shall revert back to the number of card tables that existed prior to the approval of the conditional use permit.

I. There shall be a no-limits wager amount in a cardroom located within the City. The rules of each game and wagering limits shall be clearly posted at the gaming tables where the games are offered to provide the patrons adequate notice of such rules and limits.”

SECTION 2. EFFECTIVE DATE. This Ordinance shall be in full force and effect thirty (30) days after its adoption.

SECTION 3. SEVERABILITY. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance, and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 4. PUBLICATION. The City Clerk is directed to cause a summary of this Ordinance to be published in the official newspaper at least once within fifteen (15) days after its adoption showing the vote thereon.

The foregoing Ordinance was introduced at a regular meeting of the City Council of the City of Merced on the ____ day of _____, 2019, and was passed and adopted at a regular meeting of said City Council held on the ____ day of _____, 2019, by the following called vote:

AYES: **Council Members:**

NOES: **Council Members:**

ABSTAIN: **Council Members:**

ABSENT: **Council Members:**

APPROVED:

Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant City Clerk

(SEAL)

APPROVED AS TO FORM:

 8/28/19
City Attorney **Date**



ADMINISTRATIVE REPORT

Agenda Item J.1.

Meeting Date: 10/7/2019

Report Prepared by: Jacob Struble, Lieutenant, Police Department

SUBJECT: Public Hearing and Adoption of Resolution Granting a Certificate of Public Convenience and Necessity for McHenry Protective Services

REPORT IN BRIEF

Considers approving a Resolution granting and issuing a certificate of public convenience and necessity to McHenry Protective Services.

RECOMMENDATION

City Council - Adopt a motion approving **Resolution 2019-49**, a Resolution of the City Council of the City of Merced, California, granting a certificate of public convenience and necessity to McHenry Protective and Investigative Services.

ALTERNATIVES

1. Approve as recommended by staff; or,
2. Deny the recommendation; or,
3. Modify the staff recommendation.

AUTHORITY

Section 5.40.020 of the Merced Municipal Code requires that before any person can engage in the business of operating a private patrol service or to engage in employment as a patrolman of such private patrol service a certificate of public convenience and necessity must be issued by the City Council.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

The City has received a business license application from McHenry Protective Investigative Services (DBA McHenry Protective Services), a private security firm requesting to do business within the City of Merced. McHenry Protective Services is a licensed security contractor based out of Fresno California that provides security services in the Fresno California area.

In speaking with the owner, Jeromy Scott McHenry, he advised he has clients that are requesting his services in the City of Merced. This is the reason McHenry Protective and Investigative Services is seeking a City of Merced business license.

An online check with the Department of Consumer Affairs was completed and found no complaints against McHenry Protective Services.

A questionnaire was sent to McHenry Protective Services to obtain the required information per 5.40.030 of the City of Merced Municipal Code. Refer to the attached questionnaire for specific details.

McHenry Protective Services currently holds a Private Patrol Operator License # 17405 issued by the Bureau of Security and Investigative Services. The current license expires February 28, 2021.

A notice of Public hearing was published in the Merced County Times regarding the Application for Certificate of Public Convenience and Necessity.

IMPACT ON CITY RESOURCES

None.

ATTACHMENTS

1. Business License Application
2. Merced Police Department Private Patrol Application
3. Bureau of Security and Investigative Services licensing details for 17405
4. Resolution 2019-49
5. PH Notice



BUSINESS LICENSE APPLICATION

Finance Department

Phone: (209) 385-6843

Fax: (209) 388-7217

E-Mail: blinquiry@cityofmerced.org

City of Merced
678 W. 18th St.
Merced, CA 95340

Application Date: JAN 22, 2019

Please Check All That Apply: ☒ New Application ☐ Change of Owner

☐ Change of Address - Previous Address: _____

☐ Change of Business Name; previous business name: _____

☐ Add/Delete Partner ☐ Temporary Business From _____ to _____

☐ New Business Operating Within an Existing Business

(provide name of existing business) _____

Business Name (Include DBA, if applicable)

MCHENRY PROTECTIVE AND INVESTIGATIVE SERVICES

DBA MCHENRY PROTECTIVE SERVICES

****State licensed care facilities, must use the same name as listed on the state license.**

Business Address and Telephone Information:

Address (Home-based businesses must use the home address as the business address):

Suite/Apt #:

5180 N. FRESNO ST.

101

City:

State:

Zip Code:

Telephone:

FRESNO

CA

93710

(559) 478 7747

Mailing Address: Same as Business Address? ☒

Address:

Suite/Apt. No.:

City:

State:

Zip Code:

E-Mail Address:

Business Activity (Provide a detailed description of all proposed business activities):

PRIVATE SECURITY - GUARDS & PATROL SERVICE

PRIVATE INVESTIGATIONS

Licensed Contractor?

☒ Y

☐ N

PRO 17405
License #:

SECURITY AGENCY
Classification:

2/29/2021
Expiration:

Contractor's License Verified By (official use):

Check Cashing Business?

☒ Y

☐ N

Permit #:

N/A

Business Start Date

In Merced: FEB 01, 2019

Number of

Employees/Professionals: 3

Number of Units:

0

Tax Identification Numbers:

Federal Tax ID #/SSN:

State Tax ID #/SSN:

State Sales Tax #:

☐ Corporation ☐ Partnership

☒ Sole Owner ☐ Non-profit

Non-profit #:

Owner's Information				
(If more than 2 owners please attach a separate sheet of paper)				
1) First Name: <u>JEROMY</u>		Middle Initial: <u>S</u>	Last Name: <u>MCHENRY</u>	
Home Address (No P.O. Boxes): [REDACTED]		Apt. #:	City: <u>FRESNO</u>	State: <u>CA</u>
Home Telephone: [REDACTED]		Date of Birth: [REDACTED]	Driver's License #: (The Finance Dept. will make a copy of your license)	
2) First Name:		Middle Initial:	Last Name:	
Home Address (No P.O. Boxes)		Apt. #:	City:	State:
Home Telephone: ()		Date of Birth:	Driver's License #: (The Finance Dept. will make a copy of your license)	
Corporate Information (If Applicable)				
Person/Agent for Service of Process (First and Last Name):			Telephone: ()	
Home Address (No P.O. Boxes):		Apt. #:	City:	State: Zip Code:
Emergency Contact Information (Provide two names):				
Emergency Contact: <u>24 HR SERVICE / DISPATCH</u>			Telephone Number: <u>(844) 811-1122</u>	
Emergency Contact: <u>JEROMY MCHENRY</u>			Telephone Number: [REDACTED]	
Select a billing method: CPI Base Rate <input type="checkbox"/> Gross Receipts <input checked="" type="checkbox"/>				
I understand that this selection shall remain in effect for a minimum of four (4) consecutive quarters. Falsification of this statement is a misdemeanor. (<u>jm</u>) Initial				

FOR FINANCE USE ONLY	
Date Billed: <u>01/24/19</u>	Classification:
Additional Fee \$	Gross receipts <input checked="" type="checkbox"/> CPI Base Rate <input type="checkbox"/>
License Fee \$	License Number Issued:
Total Due	Initial: <u>jm</u>

NOTE: Application continues on the following pages

Police Department Review Assessment		
Will your business involve any of the following? (answer all questions/circle yes or no)		
Firearms or Gunpowder (if gunpowder is used a fire permit may be required)	Y	<input checked="" type="radio"/> N
Storage of Explosives	Y	<input checked="" type="radio"/> N
Tattoo Establishments	Y	<input checked="" type="radio"/> N
Curb Painting	Y	<input checked="" type="radio"/> N
Taxicabs and Drivers (requires City Council approval)	Y	<input checked="" type="radio"/> N
Limousine Service	Y	<input checked="" type="radio"/> N
Card Room If yes, how many tables? _____	Y	<input checked="" type="radio"/> N
Pool/Billiard Rooms and Family Billiard Parlors If yes, how many tables? _____	Y	<input checked="" type="radio"/> N
Bingo or other games open to the general public	Y	<input checked="" type="radio"/> N
Carnivals or Circuses	Y	<input checked="" type="radio"/> N
Fortune Teller	Y	<input checked="" type="radio"/> N
Child Care Centers If yes, how many children? _____	Y	<input checked="" type="radio"/> N
Dependent Adult Care Centers	Y	<input checked="" type="radio"/> N
Massage. State Certified? include number _____ and expiration date _____	Y	<input checked="" type="radio"/> N
Door to door soliciting of goods or services	Y	<input checked="" type="radio"/> N
Pawn Shop/Secondhand Dealer/Junk Dealer (requires City Council approval)	Y	<input checked="" type="radio"/> N
Street or Sidewalk Vendor	Y	<input checked="" type="radio"/> N
Liquidation Sale	Y	<input checked="" type="radio"/> N
Itinerant Vendors	Y	<input checked="" type="radio"/> N
Motion Picture Filming	Y	<input checked="" type="radio"/> N
Dancing Permits	Y	<input checked="" type="radio"/> N
Nightclub	Y	<input checked="" type="radio"/> N
Alcohol Sales On-Sale <input type="checkbox"/> Off-Sale <input type="checkbox"/>	Y	<input checked="" type="radio"/> N
Adult Entertainment Business	Y	<input checked="" type="radio"/> N
Renting or Selling Adult-Type Videos and Books	Y	<input checked="" type="radio"/> N
Escort Service and/or Figure Modeling	Y	<input checked="" type="radio"/> N
Mobile Auto Repair	Y	<input checked="" type="radio"/> N
Tow Company and Drivers	Y	<input checked="" type="radio"/> N
Fire Extinguisher Refill Business	Y	<input checked="" type="radio"/> N
Alarm Companies	Y	<input checked="" type="radio"/> N
Lock and Key Businesses, including mobile services	Y	<input checked="" type="radio"/> N
Private Patrol, Security Services and Guards (requires City Council approval)	<input checked="" type="radio"/> Y	N
If you answered "yes" to any of the questions, your license may be subject to Police Department review.		

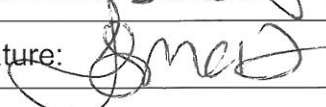
Read the following information before signing below

The payment of a license tax required by the provisions of the Merced Municipal Code and its acceptance by the City, and the issuance of such license to any person shall not entitle the holder thereof to carry on any business unless he has complied with all the requirements of the Merced Municipal Code, California Fire Code, California Building Code, and all other applicable laws, nor to carry on any business in any building or on any premises designated on such license in the event that such building or premises are situated in a zone or locality in which the conduct of such business is in violation of any law.

This business license does not grant authorization to occupy any space, building, premises or property that requires modifications or additional approvals or permits. Any modifications or change of occupancy category to the building or space may require building permits. All new uses occupying space through lease, rent or ownership, whether a lot, tenant space, or portion of a property, must comply with local zoning laws. It is the responsibility of the business license applicant to obtain all necessary permits and approvals from the building department, fire department and planning department prior to occupying the space. For the reasons stated above, it is highly advisable that applicants for a business license contact the Building Department and Planning Department as early in the process of obtaining a business license as is possible. By ensuring permits and approvals are obtained in advance of occupancy, unforeseen construction and permit fees may be avoided.

Additionally, the Merced County Environmental Health Department has requirements for certain business operations such as any Food Facilities, Hazardous Materials/Waste (including medical), Care Facilities, Labor Services (handyman/contractors/janitorial/yard service, and many others). Please contact them at (209) 381-1100, or visit their offices at 260 E. 15th Street.

By signature below, I certify that I will operate my business in accordance with all applicable Federal, State, and City laws and regulations, including the requirements of the California Fire and Building Codes. I also certify that I am aware that it is my responsibility to obtain any necessary permits and/or approvals prior to occupying a business location, and that violations must be corrected.

Applicant's Printed Name: JEREMY MCHENRY	
Applicant's Signature: 	Date: 1-2-19
Applicant's Title: owner	

Is there a need for Supplemental Application Forms? Check all that apply.

<i>Business-Related Activity and Supplemental Application Form</i>	<i>Responsible Department</i>
<input type="checkbox"/> Massage? <i>Massage Application</i>	Finance Dept.
<input type="checkbox"/> Street and Sidewalk Vendor? <i>Solicitors Permit</i>	Finance Dept.
<input type="checkbox"/> Curb Painting? <i>Curb-Painting Application</i>	Finance Dept.
<input type="checkbox"/> Motion Picture Filming? <i>Motion Picture Filming Application</i>	Finance Dept.
<input type="checkbox"/> Adult Entertainment? <i>Adult Entertainment Business Applications</i>	Police Dept.
<input type="checkbox"/> Weapon Sales? <i>Sale of Weapons Application</i>	Police Dept.
<input type="checkbox"/> Taxicab Service? <i>Taxicab Service Application</i>	Police Dept.
<input type="checkbox"/> Pool and Billiard Rooms? <i>Pool and Billiard Room Application</i>	Police Dept.
<input checked="" type="checkbox"/> Private Patrol Service? <i>Private Patrol Application</i>	Police Dept.
<input type="checkbox"/> Second Hand Dealer/Pawn Shop? <i>Goods Resale Application</i>	Police Dept.
<input type="checkbox"/> Work from Home in City? <i>Home Occupation Certificate</i>	Planning Dept.
<input type="checkbox"/> Circus or Carnival? <i>Temporary Outdoor Use Application</i>	Planning Dept.

For Office Use Only: Endorsements from other Departments and Agencies

<p>Endorsement Required? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>City of Merced Police Department. 611 W. 22nd Street. (209) 385-6912</p> <p>By: <u>LT. STROBE</u> Date: <u>1-31-19</u></p>
<p>Endorsement Required? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>City of Merced Planning Department. 678 W 18th Street. (209) 385-6858</p> <p>Zoning: <u>Outside City Limits</u> Home Occupation Certificate No. _____ (if applicable).</p> <p>By: <u>[Signature]</u> Date: <u>1/29/19</u> Is a Land Use Entitlement Required Y / N</p>
<p>Endorsement Required? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Merced County Environmental Health Department. 260 E 15th Street (209) 381-1100</p> <p>By: _____ Date: _____</p>
<p>Endorsement Required? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Merced County Public Health Department (massage only) 260 E. 15th Street. (209) 381-1023</p> <p>By: _____ Date: _____</p>

*** Under federal law and state law, compliance with disability access laws is a serious and significant responsibility that applies to all California building owners and tenants with buildings open to the public. You may obtain information about your legal obligations and how to comply with disability access laws at the following agencies: The Division of the State Architect at www.dgs.ca.gov/dsa/Home.aspx; The Department of Rehabilitation at www.rehab.cahwnet.gov; The California Commission of Disability Access at www.cdda.ca.gov.



Merced Police Department

Private Patrol Application

1. Please list previous five years business or occupation for each person signing the application. Provide the name and address of each employer, the date of the commencement and termination of employment and the nature of the services performed. Attach additional pages if needed.

DERON MCHENRY HAS OWNED AND OPERATED MCHENRY PROTECTIVE & INVESTIGATIVE SERVICE SINCE 2006 PRIOR TO THAT MCHENRY WAS A FIRE CHIEF & SECURITY MANAGER FOR THE DEPT OF THE NAVY.

2. List the territory of the city in which you desire to operate your proposed private patrol service:

WE HAVE A CONTRACT IN PLACE TO PROVIDE SECURITY FOR ALL HERITAGE MANAGEMENT GROUP PROPERTIES IN MERCED & WILL EXPAND FROM THERE

3. List the hours which you propose to patrol such territory or render guard or watchman services.

WILL PROVIDE 24 HR SERVICES W/ MAJORITY OF ACTIVITY DURING

4. Address of principal place of business of the applicant, or the proposed principal place of business and all existing or proposed branch offices.

CURRENTLY NO OFFICE IN MERCED BUT WILL MOST LIKELY OPEN OFFICE @ A HERITAGE LOCATION IE: GRAYSTONE BUSINESS PARK - 360 E. YOSEMITE. BUT NOT AT THIS TIME.

5. Do you hold a license issued by the state under the provisions of the Private Investigator and Adjuster Act? ☒ Yes / ☐ No Date issued: 4/2006 Expiration Date: 11/30/2020

PZ #25023

6. Has any person signing the application ever been arrested on a charge of the commission of a felony, or a charge involving moral turpitude, at any time, or arrested for any reason within five years past, giving full details:

NO

7. Are you a corporation? Yes / ☒ No

If yes attach a certified copy of the resolution or minutes authorizing the application.

[Signature]
Applicant Signature

7/3/2019
Date

BUREAU OF SECURITY AND INVESTIGATIVE SERVICES LICENSING DETAILS FOR: 17405

NAME: MCHENRY PROTECTIVE SERVICES
LICENSE TYPE: PRIVATE PATROL OPERATOR
PRIMARY STATUS: CURRENT
ADDRESS NOT DISCLOSED

ISSUANCE DATE
FEBRUARY 13, 2013
EXPIRATION DATE
FEBRUARY 28, 2021
CURRENT DATE / TIME
JULY 24, 2019
9:56:05 AM

LICENSE RELATIONSHIPS

OWNER

LICENSE/REGISTRATION ROLE: BUSINESS
LICENSE
RELATED PARTY ROLE: PRINCIPAL
NAME: MCHENRY, JEROMY SCOTT
[VIEW MORE DETAILS](#)

ADDRESS NOT DISCLOSED

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE
PATROL OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: MCHENRY PROTECTIVE SERVICES
LICENSE/REGISTRATION TYPE: PRIVATE
PATROL OPERATOR BRANCH
LICENSE NUMBER: 6231 **PRIMARY STATUS:**
EXPIRED

ADDRESS :
32 E ALISAL ST
204
SALINAS CA 93901-3404
MONTEREY COUNTY
MAP

PPO TO QUALIFIED MANAGER

LICENSE/REGISTRATION ROLE: PRIVATE
PATROL OPERATOR
RELATED PARTY ROLE: QUALIFIED MANAGER
NAME: MCHENRY, JEROMY SCOTT
[VIEW MORE DETAILS](#)

ADDRESS :
FRESNO CA 93705-2303
FRESNO COUNTY

QUALIFYING FIREARM PERMIT

LICENSE/REGISTRATION ROLE: BUSINESS OR
PROFESSIONAL LICENSE
RELATED PARTY ROLE: EXPOSED FIREARM
PERMIT
NAME: MCHENRY, JEROMY SCOTT
LICENSE/REGISTRATION TYPE: EXPOSED
FIREARM PERMIT
LICENSE NUMBER: 341119 **PRIMARY STATUS:**
CURRENT

ADDRESS :
FRESNO CA 93705-2303
FRESNO COUNTY

RESOLUTION NO. 2019-_____

**A RESOLUTION OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
GRANTING A CERTIFICATE OF PUBLIC
CONVENIENCE AND NECESSITY TO MCHENRY
PROTECTIVE AND INVESTIGATIVE SERVICES**

WHEREAS, pursuant to Chapter 5.40 of the Merced Municipal Code, McHenry Protective and Investigative Services, has applied to the City of Merced for a Certificate of Public Convenience and Necessity to operate a private patrol and security service within the City; and

WHEREAS, the written report required by Section 5.40.040 of the Merced Municipal Code has been received and reviewed by the City Council and a public hearing held.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The City Council declares that the public convenience and necessity require the proposed private patrol and security service.

SECTION 2. A Certificate of Public Convenience and Necessity is hereby granted to McHenry Protective and Investigative Services.

///

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///

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///

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the _____ day of _____ 2019, by the following vote:

AYES: Council Members:

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

APPROVED:


Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:



City Attorney Date 7/30/19

PUBLIC HEARING NOTICE

The Merced City Council will hold a public hearing on Monday, October 7, 2019, at 6:00 p.m. or as soon thereafter as can be heard, in the Civic Center City Council Chamber, 678 West 18th Street, Merced, CA, regarding the application filed by Jeromy McHenry to operate McHenry Protective Services, a private patrol/security service, within the Merced city limits. The business office will be located at 5180 N. Fresno Street, Ste. 101, Fresno CA, 93710.

All persons in favor of or opposed to this matter are invited to attend this hearing or forward written comments to the Merced City Clerk's Office, 678 West 18th Street, Merced, CA 95340 by 5:00 p.m. on Monday, October 7, 2019.

Publish: September 26, 2019

By: John Tresidder, Assistant City Clerk



ADMINISTRATIVE REPORT

Agenda Item J.2.

Meeting Date: 10/7/2019

Report Prepared by: Jacob Struble, Lieutenant, Police Department

SUBJECT: Public Hearing and Adoption of Resolution Granting a Certificate of Public Convenience and Necessity for Stonewall Private Security Services

REPORT IN BRIEF

Considers approving a Resolution to grant and issue a certificate of public convenience and necessity to Stonewall Private Security Services.

RECOMMENDATION

City Council - Adopt a motion approving **Resolution 2019-50**, a Resolution of the City Council of the City of Merced, California, granting a certificate of public convenience and necessity to Stonewall Private Security Services.

ALTERNATIVES

1. Approve as recommended by staff; or,
2. Deny the recommendation; or,
3. Modify the staff recommendation.

AUTHORITY

Section 5.40.020 of the Merced Municipal Code requires that before any person can engage in the business of operating a private patrol service or to engage in employment as a patrolman of such private patrol service a certificate of public convenience and necessity must be issued by the City Council.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

The City has received a business license application from Stonewall Private Security Services, a private security firm requesting to do business within the City of Merced. Stonewall Private Security Services currently provides services in Modesto, Los Banos and Atwater. Stonewall Private Security Services has obtained their Bureau of Security and Investigative Services Private Patrol Operator license from the State of California. The license was issued January 14, 2019 and expires January 31, 2021.

In speaking with the owner, Juan Amador-Sanchez, he advised he would like to provide security

services in the City of Merced. This is the reason Stonewall Private Security Services is seeking a City of Merced business license.

An online check with the Department of Consumer Affairs was completed and found no complaints against Stonewall Private Security Services.

A questionnaire was sent to Stonewall Private Security Services to obtain the required information per 5.40.030 of the City of Merced Municipal Code. Refer to the attached questionnaire for specific details.

Stonewall Private Security Services currently holds a Private Patrol Operator License # 120501 issued by the Bureau of Security and Investigative Services. The current license expires January 31, 2021.

A Notice of Public Hearing was published in the Merced County Times regarding the Application for Certificate of Public Convenience and Necessity.

IMPACT ON CITY RESOURCES

"No appropriation of funds is needed."

ATTACHMENTS

1. Business License Application
2. Merced Police Department Private Patrol Application
3. Bureau of Security and Investigative Services licensing details for 120501
4. Resolution 2019-50
5. PH Notice



BUSINESS LICENSE APPLICATION

Finance Department

Phone: (209) 385-6843

Fax: (209) 388-7217

E-Mail: blinquiry@cityofmerced.org

City of Merced
678 W. 18th St.
Merced, CA 95340

Application Date: 2-7-2019

Please Check All That Apply: ☒ New Application ☐ Change of Owner

☐ Change of Address - Previous Address: _____

☐ Change of Business Name; previous business name: _____

☐ Add/Delete Partner ☐ Temporary Business From _____ to _____

☐ New Business Operating Within an Existing Business

(provide name of existing business) _____

Business Name (Include DBA, if applicable)

Stonewall Private Security Services

****State licensed care facilities, must use the same name as listed on the state license.**

Business Address and Telephone Information:

Address (Home-based businesses must use the home address as the business address): Suite/Apt #:

City: Merced State: CA Zip Code: 95341 Telephone: [REDACTED]

Mailing Address: Same as Business Address? ☐

Address: [REDACTED] Suite/Apt. No.: _____

City: Merced State: CA Zip Code: 95341 E-Mail Address: [REDACTED]

Business Activity (Provide a detailed description of all proposed business activities):

Provide Private Security Services for
Private and Public events.

Licensed Contractor?	Y	N	License #:	Classification:	Expiration:
----------------------	---	---	------------	-----------------	-------------

Contractor's License Verified By (official use): _____

Check Cashing Business?	Y	N	Permit #:
-------------------------	---	---	-----------

Business Start Date In Merced: <u>2-7-19</u>	Number of Employees/Professionals:	Number of Units:
---	---------------------------------------	------------------

Tax Identification Numbers:

Federal Tax ID #/SSN: <u>[REDACTED]</u>	State Tax ID #/SSN:	State Sales Tax #:
---	---------------------	--------------------

<input type="checkbox"/> Corporation	<input type="checkbox"/> Partnership
<input checked="" type="checkbox"/> Sole Owner	<input type="checkbox"/> Non-profit

Non-profit #: _____

Owner's Information				
(If more than 2 owners please attach a separate sheet of paper)				
1) First Name: <i>Juan</i>	Middle Initial: <i>M</i>	Last Name: <i>Ameador-Sanchez</i>	Suffix (Jr./Sr./III):	
Home Address (No P.O. Boxes): [REDACTED]	Apt. #:	City: <i>Merced</i>	State: <i>CA</i>	Zip Code: <i>95341</i>
Home Telephone: [REDACTED]	Date of Birth: [REDACTED]	Driver's License #: [REDACTED] (The Finance Dept. will make a copy of your license)		
2) First Name:	Middle Initial:	Last Name:	Suffix (Jr./Sr./III):	
Home Address (No P.O. Boxes)	Apt. #:	City:	State:	Zip Code:
Home Telephone: ()	Date of Birth:	Driver's License #: (The Finance Dept. will make a copy of your license)		
Corporate Information (If Applicable)				
Person/Agent for Service of Process (First and Last Name):			Telephone: ()	
Home Address (No P.O. Boxes):	Apt. #:	City:	State: :	Zip Code:
Emergency Contact Information (Provide two names):				
Emergency Contact: <i>Maritza Ameador</i>			Telephone Number: (209) [REDACTED]	
Emergency Contact: <i>Joe Ameador</i>			Telephone: (209) [REDACTED]	
<u>Select a billing method:</u> CPI Base Rate <input type="checkbox"/> Gross Receipts <input type="checkbox"/>				
I understand that this selection shall remain in effect for a minimum of four (4) consecutive quarters. Falsification of this statement is a misdemeanor. () Initial				

FOR FINANCE USE ONLY	
Date Billed:	Classification:
Additional Fee \$	Gross receipts <input type="checkbox"/> CPI Base Rate <input type="checkbox"/>
License Fee \$	License Number Issued:
Total Due	Initial:

NOTE: Application continues on the following pages

Police Department Review Assessment		
Will your business involve any of the following? (answer all questions/circle yes or no)		
Firearms or Gunpowder (if gunpowder is used a fire permit may be required)	Y	<input checked="" type="radio"/> N
Storage of Explosives	Y	<input checked="" type="radio"/> N
Tattoo Establishments	Y	<input checked="" type="radio"/> N
Curb Painting	Y	<input checked="" type="radio"/> N
Taxicabs and Drivers (requires City Council approval)	Y	<input checked="" type="radio"/> N
Limousine Service	Y	<input checked="" type="radio"/> N
Card Room If yes, how many tables? _____	Y	<input checked="" type="radio"/> N
Pool/Billiard Rooms and Family Billiard Parlors If yes, how many tables? _____	Y	<input checked="" type="radio"/> N
Bingo or other games open to the general public	Y	<input checked="" type="radio"/> N
Carnivals or Circuses	Y	<input checked="" type="radio"/> N
Fortune Teller	Y	<input checked="" type="radio"/> N
Child Care Centers If yes, how many children? _____	Y	<input checked="" type="radio"/> N
Dependent Adult Care Centers	Y	<input checked="" type="radio"/> N
Massage. State Certified? include number _____ and expiration date _____	Y	<input checked="" type="radio"/> N
Door to door soliciting of goods or services	Y	<input checked="" type="radio"/> N
Pawn Shop/Secondhand Dealer/Junk Dealer (requires City Council approval)	Y	<input checked="" type="radio"/> N
Street or Sidewalk Vendor	Y	<input checked="" type="radio"/> N
Liquidation Sale	Y	<input checked="" type="radio"/> N
Itinerant Vendors	Y	<input checked="" type="radio"/> N
Motion Picture Filming	Y	<input checked="" type="radio"/> N
Dancing Permits	Y	<input checked="" type="radio"/> N
Nightclub	Y	<input checked="" type="radio"/> N
Alcohol Sales On-Sale <input type="checkbox"/> Off-Sale <input type="checkbox"/>	Y	<input checked="" type="radio"/> N
Adult Entertainment Business	Y	<input checked="" type="radio"/> N
Renting or Selling Adult-Type Videos and Books	Y	<input checked="" type="radio"/> N
Escort Service and/or Figure Modeling	Y	<input checked="" type="radio"/> N
Mobile Auto Repair	Y	<input checked="" type="radio"/> N
Tow Company and Drivers	Y	<input checked="" type="radio"/> N
Fire Extinguisher Refill Business	Y	<input checked="" type="radio"/> N
Alarm Companies	Y	<input checked="" type="radio"/> N
Lock and Key Businesses, including mobile services	Y	<input checked="" type="radio"/> N
Private Patrol, Security Services and Guards (requires City Council approval)	<input checked="" type="radio"/> Y	N
If you answered "yes" to any of the questions, your license may be subject to Police Department review.		

Read the following information before signing below

The payment of a license tax required by the provisions of the Merced Municipal Code and its acceptance by the City, and the issuance of such license to any person shall not entitle the holder thereof to carry on any business unless he has complied with all the requirements of the Merced Municipal Code, California Fire Code, California Building Code, and all other applicable laws, nor to carry on any business in any building or on any premises designated on such license in the event that such building or premises are situated in a zone or locality in which the conduct of such business is in violation of any law.

This business license does not grant authorization to occupy any space, building, premises or property that requires modifications or additional approvals or permits. Any modifications or change of occupancy category to the building or space may require building permits. All new uses occupying space through lease, rent or ownership, whether a lot, tenant space, or portion of a property, must comply with local zoning laws. It is the responsibility of the business license applicant to obtain all necessary permits and approvals from the building department, fire department and planning department prior to occupying the space. For the reasons stated above, it is highly advisable that applicants for a business license contact the Building Department and Planning Department as early in the process of obtaining a business license as is possible. By ensuring permits and approvals are obtained in advance of occupancy, unforeseen construction and permit fees may be avoided.

Additionally, the Merced County Environmental Health Department has requirements for certain business operations such as any Food Facilities, Hazardous Materials/Waste (including medical), Care Facilities, Labor Services (handyman/contractors/janitorial/yard service, and many others). Please contact them at (209) 381-1100, or visit their offices at 260 E. 15th Street.

By signature below, I certify that I will operate my business in accordance with all applicable Federal, State, and City laws and regulations, including the requirements of the California Fire and Building Codes. I also certify that I am aware that it is my responsibility to obtain any necessary permits and/or approvals prior to occupying a business location, and that violations must be corrected.

Applicant's Printed Name: <i>Juan Amador</i>	
Applicant's Signature: <i>[Signature]</i>	Date: <i>2-7-19</i>
Applicant's Title: <i>Owner / CEO</i>	

Is there a need for Supplemental Application Forms? Check all that apply.

<i>Business-Related Activity and Supplemental Application Form</i>		<i>Responsible Department</i>
<input type="checkbox"/> Massage?	<i>Massage Application</i>	Finance Dept.
<input type="checkbox"/> Street and Sidewalk Vendor?	<i>Solicitors Permit</i>	Finance Dept.
<input type="checkbox"/> Curb Painting?	<i>Curb-Painting Application</i>	Finance Dept.
<input type="checkbox"/> Motion Picture Filming?	<i>Motion Picture Filming Application</i>	Finance Dept.
<input type="checkbox"/> Adult Entertainment?	<i>Adult Entertainment Business Applications</i>	Police Dept.
<input type="checkbox"/> Weapon Sales?	<i>Sale of Weapons Application</i>	Police Dept.
<input type="checkbox"/> Taxicab Service?	<i>Taxicab Service Application</i>	Police Dept.
<input type="checkbox"/> Pool and Billiard Rooms?	<i>Pool and Billiard Room Application</i>	Police Dept.
<input checked="" type="checkbox"/> Private Patrol Service?	<i>Private Patrol Application</i>	Police Dept.
<input type="checkbox"/> Second Hand Dealer/Pawn Shop?	<i>Goods Resale Application</i>	Police Dept.
<input checked="" type="checkbox"/> Work from Home in City?	<i>Home Occupation Certificate</i>	Planning Dept.
<input type="checkbox"/> Circus or Carnival?	<i>Temporary Outdoor Use Application</i>	Planning Dept.

For Office Use Only: Endorsements from other Departments and Agencies

Endorsement Required? ☒ YES ☐ NO

City of Merced Police Department. 611 W. 22nd Street. (209) 385-6912

By: _____ Date: _____

Endorsement Required? ☒ YES ☐ NO

City of Merced Planning Department. 678 W 18th Street. (209) 385-6858

Zoning: R-1-V. Home Occupation Certificate No. 19-002 (if applicable).

By: SCA Date: 2-7-19. Is a Land Use Entitlement Required Y / N

Endorsement Required? ☐ YES ☒ NO

Merced County Environmental Health Department. 260 E 15th Street (209) 381-1100

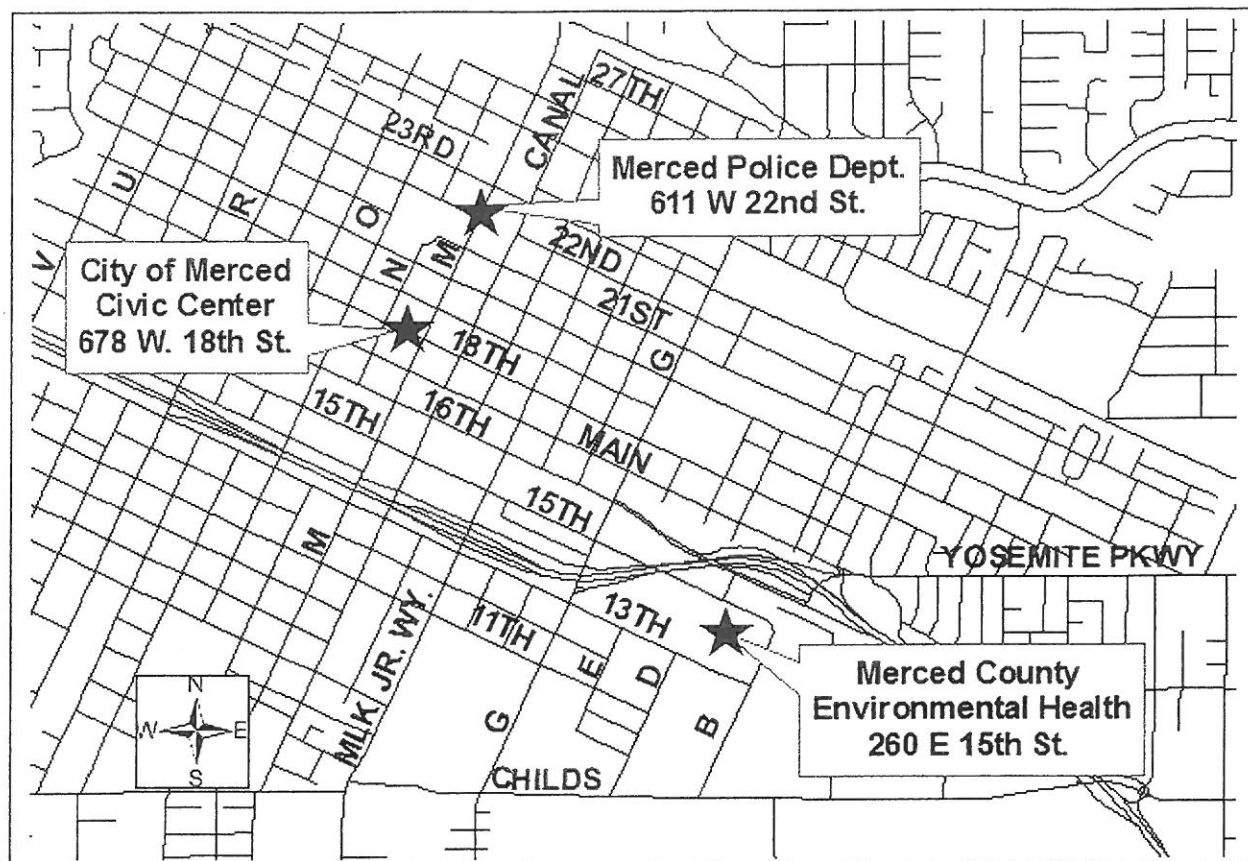
By: _____ Date: _____

Endorsement Required? ☐ YES ☒ NO

Merced County Public Health Department (massage only) 260 E. 15th Street. (209) 381-1023

By: _____ Date: _____

*** Under federal law and state law, compliance with disability access laws is a serious and significant responsibility that applies to all California building owners and tenants with buildings open to the public. You may obtain information about your legal obligations and how to comply with disability access laws at the following agencies: The Division of the State Architect at www.dgs.ca.gov/dsa/Home.aspx; The Department of Rehabilitation at www.rehab.cahwnet.gov; The California Commission of Disability Access at www.cdda.ca.gov.



~~~ WATER QUALITY CONTROL DIVISION ~~~

1776 Grogan Avenue • Merced, CA 95341  
Office: (209) 385-6204

**PLEASE COMPLETE EACH SECTION BELOW:**

Name of Business: Stonewall Private Security Services Name of Owner: Juan Amador-Sanchez  
Address of Business: 370 Serano St. City/State/Zip: Merced Ca. 95341 Phone: 209-261-4890  
Type of Business: Security Services SIC Code: \_\_\_\_\_ ([www.osha.gov](http://www.osha.gov))

**IF YOU ARE A NEW FOOD SERVICE ESTABLISHMENT, YOU MUST CONTACT THE WATER QUALITY CONTROL DIVISION AT (209) 385-6204 FOR A GENERAL WASTE DISCHARGE PERMIT BEFORE OPENING DAY OF BUSINESS. (Merced Municipal Code 15.30.010)**

**Complete and answer each question below. If the question does not apply, write Not Applicable. Thank you.**

1. Will your business apply pesticides, herbicides or fertilizers? If yes, list the name of the products used and how often applied: Not applicable
2. Is your business a wreckage or storage yard containing vehicles or motorized equipment? YES ☐ NO ☒
3. Will your facility be involved with any product manufacturing? YES ☐ NO ☒  
List Product(s) below: \_\_\_\_\_
4. Will your facility store materials outside? YES ☐ NO ☒
5. List chemicals and materials that will be stored outside: Not applicable
6. How will you cover outside chemical/material storage to prevent contribution of pollution from storm water runoff? Not applicable
7. Does your business provide car washing, detailing or cleaning of any kind? Please explain: Not applicable

|                    |                  |
|--------------------|------------------|
| Internal Use Only: |                  |
| Review Date:       | Inspection Date: |
| Follow Up:         | RWQCB Notified:  |
| Notes:             |                  |
|                    |                  |
|                    |                  |

## DISABILITY ACCESS REQUIREMENTS AND RESOURCES

### NOTICE TO APPLICANTS FOR BUSINESS LICENSES AND COMMERCIAL BUILDING PERMITS:

Under federal and state law, compliance with disability access laws is a serious and significant responsibility that applies to all California building owners and tenants with buildings open to the public. You may obtain information about your legal obligations and how to comply with disability access laws at the following agencies:

DEPARTMENT OF  
GENERALSERVICES,  
Division of the State  
Architect, CASp Program

[www.dgs.ca.gov/dsa](http://www.dgs.ca.gov/dsa)

[www.dgs.ca.gov/casp](http://www.dgs.ca.gov/casp)

DEPARTMENT OF  
REHABILITATION  
Disability Access Services

[www.dor.ca.gov](http://www.dor.ca.gov)

[www.rehab.cahwnet.gov/](http://www.rehab.cahwnet.gov/)

[disabilityaccessinfo](http://disabilityaccessinfo)

DEPARTMENT OF  
GENERALSERVICES,  
California Commission on  
Disability Access

[www.cdda.ca.gov](http://www.cdda.ca.gov)

[www.cdda.ca.gov/resources-menu/](http://www.cdda.ca.gov/resources-menu/)

### CERTIFIED ACCESS SPECIALIST INSPECTION SERVICES

Compliance with state and federal construction-related accessibility standards ensures that public places are accessible and available to individuals with disabilities. Whether your business is moving into a newly constructed facility or you are planning an alteration to your current facility, by engaging the services of a Certified Access Specialist (CASp) early in this process you will benefit from the advantages of compliance and under the Construction-Related Accessibility Standards Compliance Act (CRASCA, Civil Code 55.51-55.545), also benefit from legal protections.

Although your new facility may have already been permitted and approved by the building department, it is important to obtain CASp inspection services after your move-in because unintended access barriers and violations can be created, for example, placing your furniture and equipment in areas required to be maintained clear of obstructions. For planned alterations, a CASp can provide plan review of your improvement plans and an access compliance evaluation of the public accommodation areas of your facility that may not be part of the alteration.

A CASp is a professional who has been certified by the State of California to have specialized knowledge regarding the applicability of accessibility standards. CASp inspection reports prepared according to CRASCA entitle business and facility owners to specific legal benefits, in the event that a construction-related accessibility claim is filed against them.

To find a CASp, visit [www.apps2.dgs.ca.gov/DSA/casp/casp\\_certified\\_list.aspx](http://www.apps2.dgs.ca.gov/DSA/casp/casp_certified_list.aspx).

(Issued 12-28-18)

## DISABILITY ACCESS REQUIREMENTS AND RESOURCES

### GOVERNMENT TAX CREDITS, TAX DEDUCTIONS AND FINANCING

State and federal programs to assist businesses with access compliance and access expenditures are available:

#### **Disabled Access Credit for Eligible Small Businesses**

FEDERAL TAX CREDIT—Internal Revenue Code Section 44 provides a federal tax credit for small businesses that incur expenditures for the purpose of providing access to persons with disabilities. For more information, refer to Internal Revenue Service (IRS) Form 8826: Disabled Access Credit at [www.irs.gov](http://www.irs.gov).

STATE TAX CREDIT—Revenue and Taxation Code Sections 17053.42 and 23642 provide a state tax credit similar to the federal Disabled Access Credit, with exceptions. For more information, refer to Franchise Tax Board (FTB) Form 3548: Disabled Access Credit for Eligible Small Businesses at [www.ftb.ca.gov](http://www.ftb.ca.gov).

#### **Architectural and Transportation Barrier Removal Deduction**

FEDERAL TAX DEDUCTION—Internal Revenue Code Section 190 allows businesses of all sizes to claim an annual deduction for qualified expenses incurred to remove physical, structural and transportation barriers for persons with disabilities. For more information, refer to IRS Publication 535: Business Expenses at [www.irs.gov](http://www.irs.gov).

#### **California Capital Access Financing Program**

STATE FINANCE OPTION—The California Capital Access Program (CalCAP) Americans with Disabilities Act (CalCAP/ADA) financing program assists small businesses with financing the costs to alter or retrofit existing small business facilities to comply with the requirements of the federal ADA. Learn more at [www.treasurer.ca.gov/cpcfa/calcap/](http://www.treasurer.ca.gov/cpcfa/calcap/).

### FEDERAL AND STATE LEGAL REQUIREMENTS ON ACCESSIBILITY FOR INDIVIDUALS WITH DISABILITIES

AMERICANS WITH DISABILITIES ACT OF 1990 (ADA)—The ADA is a federal civil rights law that prohibits discrimination against individuals with disabilities, and requires all public accommodations and commercial facilities to be accessible to individuals with disabilities. Learn more at [www.ada.gov](http://www.ada.gov).

CALIFORNIA BUILDING CODE (CBC)—The CBC contains the construction-related accessibility provisions that are the standards for compliant construction. A facility's compliance is based on the version of the CBC in place at the time of construction or alteration. Learn more at [www.bsc.ca.gov](http://www.bsc.ca.gov).

(Issued 12-28-18)



CITY OF MERCED  
Planning Department

MINOR HOME OCCUPATION CERTIFICATE

(See Current Fee Schedule for Fee)

I, Juan Amador-Sanchez have read and understand Section 20.48.040, Home  
(please print name)

Occupations Standards, of the Merced City Zoning Ordinance, as reproduced on the reverse side of this form.

I propose to establish a home occupation in my home at the following address:

370 Serano Street, Merced, California.

Said home occupation will consist of the following activities (please give a detailed description of all activities taking place at the home):

Create work schedules.

Number of Employees: 1

Are there any employees who do **NOT** reside in the home?  
(If yes, you will need to apply for a Major Home Occupation.)

☐ Yes ☒ No

Will clients/customers visit the home?

☐ Yes ☒ No

Number of clients/customers visiting home weekly? Not applicable  
(More than 2 per week means you'll need to apply for a Major Home Occupation Certificate.)

Hours of client/customer visits? Not applicable (Limited to 8:00 a.m. to 8:00 p.m.)

I hereby state that my home occupation will conform to all provisions set forth in said Section 20.48.040 of the Merced City Zoning Ordinance and with the information stated above.

Date: 2-7-19

[Signature]  
(Signature of Applicant)

*This section for Planning Department Use Only*

CERTIFICATE NO: 19-022

ZONING DISTRICT: R-1-4

RECEIVED BY PLANNING DEPARTMENT: Feb. 7, 2019

BY: [Signature]

## EXCERPT FROM MERCED CITY ZONING ORDINANCE

### 20.48.040 Home Occupation Standards.

All home occupations shall comply with the following standards:

1. **Size.** Home occupations shall not occupy more than 25 percent of the floor area of the dwelling unit or 400 square feet, whichever is less.
2. **Sales and Displays.** Products shall not be sold directly to customers within a home occupation. Home occupations may not establish window display of products to attract customers.
3. **Advertising.** No newspaper, radio, or television service shall be used to advertise the location of business; however, contact information, including phone numbers and e-mail address (but not the location address), shall be allowed on such advertisements.
4. **Signs.** One single-non-illuminated, wall-mounted outdoor sign of not more than 1 square foot in area is permitted.
5. **Vehicle Traffic.** A home occupation shall not generate vehicle traffic greater than normally associated with a residential use. No more than 2 vehicles associated with the business shall be parked in the immediate neighborhood.
6. **Deliveries.** Deliveries and pick-ups for home occupations shall not interfere with vehicle circulation, and shall occur only between 8:00 a.m. and 8:00 p.m., Monday through Saturday.
7. **Mechanical Equipment.** No mechanical equipment shall be permitted that is not normally associated with a residential use.
8. **Performance Standards.** Home occupations shall not generate dust, odors, noise, vibration, or electrical interference or fluctuation that is perceptible beyond the property line.
9. **Hazardous Materials and Auto Repair Prohibited.** The storage of flammable, combustible, or explosive materials is prohibited as is auto repair in either minor or major home occupations.

### 20.48.050 Suspension of Permit

The Director of Development Services may suspend the approval of a home occupation if any of the following applies:

- A. The home occupation has become:
  1. Detrimental to public health, safety, welfare, or character of a neighborhood.
  2. In violation of any city, county and/or state code, ordinance, rule or regulation.
  3. A hazard or nuisance to pedestrian, vehicular circulation or parking, or the community in general.
  4. A different form than which the permit was issued.
- B. The home occupation does not commence within one year of approval; or,
- C. The home occupation ceases for a period greater than one year.



Merced Police Department

Private Patrol Application

1. Please list previous five years business or occupation for each person signing the application. Provide the name and address of each employer, the date of the commencement and termination of employment and the nature of the services performed. Attach additional pages if needed.

Dignity Health, MMCM "Security Officer" 8/5/2013 - currently employed.  
333 Mercy Ave, Merced, CA 95340  
U.S. Department of Justice BOP "Correctional Officer" 10/28/2018 - currently employed.  
1 Federal Way, Atwater, CA 95341  
National Security Industries "Security Officer" 3/15/2016 - 3/16/2018  
940 Park Ave. San Jose CA 95126

2. List the territory of the city in which you desire to operate your proposed private patrol service:

Merced, California

3. List the hours which you propose to patrol such territory or render guard or watchman services.

24 hours a day and seven days a week

4. Address of principal place of business of the applicant, or the proposed principal place of business and all existing or proposed branch offices.

370 Serano Street  
Merced CA 95341


5. Do you hold a license issued by the state under the provisions of the Private Investigator and Adjuster Act? Yes / ☒ No Date issued: N/A Expiration Date: N/A

6. Has any person signing the application ever been arrested on a charge of the commission of a felony, or a charge involving moral turpitude, at any time, or arrested for any reason within five years past, giving full details:

No

7. Are you a corporation? Yes / ☒ No

If yes attach a certified copy of the resolution or minutes authorizing the application.

  
Applicant Signature

7/2/2019  
Date

**BUREAU OF SECURITY AND  
INVESTIGATIVE SERVICES  
LICENSING DETAILS FOR: 120501**

**NAME:** STONEWALL PRIVATE SECURITY SERVICES  
**LICENSE TYPE:** PRIVATE PATROL OPERATOR  
**PRIMARY STATUS:** CURRENT  
**ADDRESS OF RECORD**  
370 SERANO ST  
MERCED CA 95341-6974  
MERCED COUNTY

**ISSUANCE DATE**  
JANUARY 14, 2019  
**EXPIRATION DATE**  
JANUARY 31, 2021  
**CURRENT DATE / TIME**  
JULY 24, 2019  
9:55:25 AM

**LICENSE RELATIONSHIPS****OWNER**

**LICENSE/REGISTRATION ROLE:** BUSINESS  
LICENSE

**ADDRESS NOT DISCLOSED**

**RELATED PARTY ROLE:** PRINCIPAL

**NAME:** AMADOR, JUAN MANUEL

[VIEW MORE DETAILS](#)

**PPO TO QUALIFIED MANAGER**

**LICENSE/REGISTRATION ROLE:** PRIVATE  
PATROL OPERATOR

**ADDRESS :**  
MERCED CA 95341-6974  
MERCED COUNTY

**RELATED PARTY ROLE:** QUALIFIED MANAGER

**NAME:** AMADOR, JUAN MANUEL

[VIEW MORE DETAILS](#)

**RESOLUTION NO. 2019-\_\_\_\_\_**

**A RESOLUTION OF THE CITY COUNCIL OF  
THE CITY OF MERCED, CALIFORNIA,  
GRANTING A CERTIFICATE OF PUBLIC  
CONVENIENCE AND NECESSITY TO  
STONEWALL PRIVATE SECURITY SERVICES**

WHEREAS, pursuant to Chapter 5.40 of the Merced Municipal Code, Stonewall Private Security Services, has applied to the City of Merced for a Certificate of Public Convenience and Necessity to operate a private patrol and security service within the City; and

WHEREAS, the written report required by Section 5.40.040 of the Merced Municipal Code has been received and reviewed by the City Council and a public hearing held.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The City Council declares that the public convenience and necessity require the proposed private patrol and security service.

SECTION 2. A Certificate of Public Convenience and Necessity is hereby granted to Stonewall Private Security Services.

///

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///

///

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the \_\_\_\_\_ day of \_\_\_\_\_ 2019, by the following vote:

AYES: Council Members:

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

APPROVED:


\_\_\_\_\_  
Mayor

ATTEST:  
STEVE CARRIGAN, CITY CLERK

BY: \_\_\_\_\_  
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

  
\_\_\_\_\_  
City Attorney      7/30/19  
Date

## **PUBLIC HEARING NOTICE**

The Merced City Council will hold a public hearing on Monday, October 7, 2019, at 6:00 p.m. or as soon thereafter as can be heard, in the Civic Center City Council Chamber, 678 West 18<sup>th</sup> Street, Merced, CA, regarding the application filed by Juan Amador-Sanchez to operate Stonewall Private Security Services, a private patrol/security service, within the Merced city limits. The business office will be located at 370 Serano Street, Merced, Ca 95341.

All persons in favor of or opposed to this matter are invited to attend this hearing or forward written comments to the Merced City Clerk's Office, 678 West 18<sup>th</sup> Street, Merced, CA 95340 by 5:00 p.m. on Monday, October 7, 2019.

Publish: September 26, 2019

By: John Tresidder, Assistant City Clerk



## ADMINISTRATIVE REPORT

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**Agenda Item J.3.**

Meeting Date: 10/7/2019

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*Report Prepared by: Jacob Struble, Lieutenant, Police Department*

**SUBJECT:** Public Hearing and Adoption of Resolution Granting a Certificate of Public Convenience and Necessity for First Alarm Security & Patrol, Inc.

### REPORT IN BRIEF

Considers approving a resolution to grant and issue a certificate of public convenience and necessity to First Alarm Security & Patrol, Inc.

### RECOMMENDATION

**City Council** - Adopt a motion approving **Resolution 2019-59**, a Resolution of the City Council of the City of Merced, California, granting a certificate of public convenience and necessity to First Alarm Security & Patrol, Inc.

### ALTERNATIVES

1. Approve as recommended by staff; or,
2. Deny the recommendation; or,
3. Modify the staff recommendation.

### AUTHORITY

Section 5.40.020 of the Merced Municipal Code requires that before any person can engage in the business of operating a private patrol service or to engage in employment as a patrolman of such private patrol service a certificate of public convenience and necessity must be issued by the City Council.

### CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

### DISCUSSION

The City has received a business license application from First Alarm Security & Patrol, Inc., a private security firm requesting to do business within the City of Merced. First Alarm Security & Patrol, Inc. currently provides services in San Jose, California. First Alarm Security & Patrol, Inc. has obtained their Bureau of Security and Investigative Services Private Patrol Operator license from the State of California. The license was originally issued August 7, 1992 and expires August 31, 2020.

In speaking with the owner's representative, BreAnne Iverson, she advised they would like to provide



security services in the City of Merced. This is the reason First Alarm Security & Patrol, Inc. is seeking a City of Merced business license.

An online check with the Department of Consumer Affairs was completed and found no complaints against First Alarm Security & Patrol, Inc.

A questionnaire was sent to First Alarm Security & Patrol, Inc. to obtain the required information per 5.40.030 of the City of Merced Municipal Code. Refer to the attached questionnaire for specific details.

First Alarm Security & Patrol, Inc. currently holds a Private Patrol Operator License # 11167 issued by the Bureau of Security and Investigative Services. The current license expires August 31, 2020.

A Notice of Public Hearing was published in the Merced County Times regarding the Application for Certificate of Public Convenience and Necessity.

### **IMPACT ON CITY RESOURCES**

"No appropriation of funds is needed."

### **ATTACHMENTS**

1. Business License Application
2. Merced Police Department Private Patrol Application
3. Bureau of Security and Investigative Services licensing details for 11167
4. Resolution 2019-59
5. PH Notice



# BUSINESS LICENSE APPLICATION

Finance Department  
TEL # (209) 385-6843  
FAX # (209) 388-7217

Email: [blinquiry@cityofmerced.org](mailto:blinquiry@cityofmerced.org)

City of Merced  
678 W. 18<sup>th</sup> St.  
Merced, CA 95340

Application Date: 8/2/19

Please Check All That Apply: ☒ New Application ☐ Change of Owner

☐ Change of Address - Previous Address: \_\_\_\_\_

☐ Change of Business Name; previous business name: \_\_\_\_\_

☐ Add/Delete Partner ☐ Temporary Business From \_\_\_\_\_ to \_\_\_\_\_

☐ New Business Operating Within an Existing Business

(provide name of existing business) \_\_\_\_\_

## Business Name (Include DBA, if applicable)

First Alarm Security & Patrol, Inc. dba First Security Services  
\*\*State licensed care facilities, must use the same name as listed on the state license.

## Business Address and Telephone Information:

Address (Home-based businesses must use the home address as the business address):

Suite/Apt #:

1731 Technology Dr.

800

City:

San Jose

State:

CA

Zip Code:

95110

Telephone:

(408) 550-2437

Mailing Address:

Same as Business Address? ☒

Address:

Suite/Apt. No.:

City:

State:

Zip Code:

E-Mail Address:

## Business Activity (Provide a detailed description of all proposed business activities):

uniformed security officers & marked vehicle patrol

Licensed Contractor?

Y

N

License #:

Classification:

Expiration:

Contractor's License Verified By (official use):

Check Cashing Business?

Y

N

Permit #:

Business Start Date In Merced:

7/15/19

Number of Employees/Professionals:

2 (in Merced)

Number of Units:

## Tax Identification Numbers:

State:

State Sales Tax #:

☒ Corporation ☐ Partnership ☐ Sole Owner

☐ Non-profit

Non-profit #:

| Owner's Information                                             |                             |                              |                                          |                           |
|-----------------------------------------------------------------|-----------------------------|------------------------------|------------------------------------------|---------------------------|
| (If more than 2 owners please attach a separate sheet of paper) |                             |                              |                                          |                           |
| 1) First Name:<br><i>Cal</i>                                    | Middle Initial:<br><i>L</i> | Last Name:<br><i>Horton</i>  | Suffix (Jr./Sr./III):                    |                           |
| Home Address (No P.O. Boxes):<br>[REDACTED]                     |                             | Apt. #:                      | City:<br><i>Scotts Valley CA</i>         | State:<br><i>CA</i>       |
| Home Telephone:<br>[REDACTED]                                   |                             | Date of Birth:<br>[REDACTED] | Driver's License #:<br><i>[REDACTED]</i> | Zip Code:<br><i>95066</i> |
| (The Finance Dept. will make a copy of your license)            |                             |                              |                                          |                           |

|                              |                 |                                                                             |                       |           |
|------------------------------|-----------------|-----------------------------------------------------------------------------|-----------------------|-----------|
| 2) First Name:               | Middle Initial: | Last Name:                                                                  | Suffix (Jr./Sr./III): |           |
| Home Address (No P.O. Boxes) | Apt. #:         | City:                                                                       | State:                | Zip Code: |
| Home Telephone:<br>( )       | Date of Birth:  | Driver's License #:<br>(The Finance Dept. will make a copy of your license) |                       |           |

| Corporate Information (If Applicable)                      |         |       |                   |           |
|------------------------------------------------------------|---------|-------|-------------------|-----------|
| Person/Agent for Service of Process (First and Last Name): |         |       | Telephone:<br>( ) |           |
| Home Address (No P.O. Boxes):                              | Apt. #: | City: | State:            | Zip Code: |

| Emergency Contact Information (Provide two names):                                                                                                                           |                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Emergency Contact:<br><i>24 H Dispatch</i>                                                                                                                                   | Telephone Number:<br><i>(800) 400-1110</i> |
| Emergency Contact:                                                                                                                                                           | Telephone Number:<br>( )                   |
| Select a billing method: CPI Base Rate <input type="checkbox"/> Gross Receipts <input checked="" type="checkbox"/>                                                           |                                            |
| I understand that this selection shall remain in effect for a minimum of four (4) consecutive quarters. Falsification of this statement is a misdemeanor. <i>(P)</i> Initial |                                            |

| FOR FINANCE USE ONLY |                                                                                |
|----------------------|--------------------------------------------------------------------------------|
| Date Billed:         | Classification:                                                                |
| Additional Fee \$    | Gross receipts <input type="checkbox"/> CPI Base Rate <input type="checkbox"/> |
| License Fee \$       | License Number Issued:                                                         |
| Total Due            | Initial:                                                                       |

**NOTE: Application continues on the following pages**



## Police Department Review Assessment

**Will your business involve any of the following? (answer all questions/circle yes or no)**

|                                                                                  |   |   |
|----------------------------------------------------------------------------------|---|---|
| Firearms or Gunpowder (if gunpowder is used a fire permit may be required)       | Y | N |
| Storage of Explosives                                                            | Y | N |
| Tattoo Establishments                                                            | Y | N |
| Curb Painting                                                                    | Y | N |
| Taxicabs and Drivers (requires City Council approval)                            | Y | N |
| Limousine Service                                                                | Y | N |
| Card Room If yes, how many tables? _____                                         | Y | N |
| Pool/Billiard Rooms and Family Billiard Parlors If yes, how many tables? _____   | Y | N |
| Bingo or other games open to the general public                                  | Y | N |
| Carnivals or Circuses                                                            | Y | N |
| Fortune Teller                                                                   | Y | N |
| Child Care Centers If yes, how many children? _____                              | Y | N |
| Dependent Adult Care Centers                                                     | Y | N |
| Massage. State Certified? include number _____ and expiration date _____         | Y | N |
| Door to door soliciting of goods or services                                     | Y | N |
| Pawn Shop/Secondhand Dealer/Junk Dealer (requires City Council approval)         | Y | N |
| Street or Sidewalk Vendor                                                        | Y | N |
| Liquidation Sale                                                                 | Y | N |
| Itinerant Vendors                                                                | Y | N |
| Motion Picture Filming                                                           | Y | N |
| Dancing Permits                                                                  | Y | N |
| Nightclub                                                                        | Y | N |
| Alcohol Sales On-Sale <input type="checkbox"/> Off-Sale <input type="checkbox"/> | Y | N |
| Adult Entertainment Business                                                     | Y | N |
| Renting or Selling Adult-Type Videos and Books                                   | Y | N |
| Escort Service and/or Figure Modeling                                            | Y | N |
| Mobile Auto Repair                                                               | Y | N |
| Tow Company and Drivers                                                          | Y | N |
| Fire Extinguisher Refill Business                                                | Y | N |
| Alarm Companies                                                                  | Y | N |
| Lock and Key Businesses, including mobile services                               | Y | N |
| Private Patrol, Security Services and Guards (requires City Council approval)    | Y | N |

**If you answered "yes" to any of the questions, your license may be subject to Police Department review.**

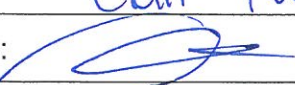
## Read the following information before signing below

The payment of a license tax required by the provisions of the Merced Municipal Code and its acceptance by the City, and the issuance of such license to any person shall not entitle the holder thereof to carry on any business unless he has complied with all the requirements of the Merced Municipal Code, California Fire Code, California Building Code, and all other applicable laws, nor to carry on any business in any building or on any premises designated on such license in the event that such building or premises are situated in a zone or locality in which the conduct of such business is in violation of any law.

This business license does not grant authorization to occupy any space, building, premises or property that requires modifications or additional approvals or permits. Any modifications or change of occupancy category to the building or space may require building permits. All new uses occupying space through lease, rent or ownership, whether a lot, tenant space, or portion of a property, must comply with local zoning laws. It is the responsibility of the business license applicant to obtain all necessary permits and approvals from the building department, fire department and planning department prior to occupying the space. For the reasons stated above, it is highly advisable that applicants for a business license contact the Building Department and Planning Department as early in the process of obtaining a business license as is possible. By ensuring permits and approvals are obtained in advance of occupancy, unforeseen construction and permit fees may be avoided.

Additionally, the Merced County Environmental Health Department has requirements for certain business operations such as any Food Facilities, Hazardous Materials/Waste (including medical), Care Facilities, Labor Services (handyman/contractors/janitorial/yard service, and many others). Please contact them at (209) 381-1100, or visit their offices at 260 E. 15<sup>th</sup> Street.

By signature below, I certify that I will operate my business in accordance with all applicable Federal, State, and City laws and regulations, including the requirements of the California Fire and Building Codes. I also certify that I am aware that it is my responsibility to obtain any necessary permits and/or approvals prior to occupying a business location, and that violations must be corrected.

|                                                                                                            |              |
|------------------------------------------------------------------------------------------------------------|--------------|
| Applicant's Printed Name: Gail Tuttle                                                                      |              |
| Applicant's Signature:  | Date: 8/2/19 |
| Applicant's Title: CFO                                                                                     |              |



**Is there a need for Supplemental Application Forms? Check all that apply.**

| <i>Business-Related Activity and Supplemental Application Form</i>                             | <i>Responsible Department</i> |
|------------------------------------------------------------------------------------------------|-------------------------------|
| <input type="checkbox"/> Massage? <i>Massage Application</i>                                   | Finance Dept.                 |
| <input type="checkbox"/> Street and Sidewalk Vendor? <i>Solicitors Permit</i>                  | Finance Dept.                 |
| <input type="checkbox"/> Curb Painting? <i>Curb-Painting Application</i>                       | Finance Dept.                 |
| <input type="checkbox"/> Motion Picture Filming? <i>Motion Picture Filming Application</i>     | Finance Dept.                 |
| <input type="checkbox"/> Adult Entertainment? <i>Adult Entertainment Business Applications</i> | Police Dept.                  |
| <input type="checkbox"/> Weapon Sales? <i>Sale of Weapons Application</i>                      | Police Dept.                  |
| <input type="checkbox"/> Taxicab Service? <i>Taxicab Service Application</i>                   | Police Dept.                  |
| <input type="checkbox"/> Pool and Billiard Rooms? <i>Pool and Billiard Room Application</i>    | Police Dept.                  |
| <input checked="" type="checkbox"/> Private Patrol Service? <i>Private Patrol Application</i>  | Police Dept.                  |
| <input type="checkbox"/> Second Hand Dealer/Pawn Shop? <i>Goods Resale Application</i>         | Police Dept.                  |
| <input type="checkbox"/> Work from Home in City? <i>Home Occupation Certificate</i>            | Planning Dept.                |
| <input type="checkbox"/> Circus or Carnival? <i>Temporary Outdoor Use Application</i>          | Planning Dept.                |

**Endorsements from other Departments and Agencies**

Endorsement Required? ☒ YES ☐ NO

City of Merced Police Department. 611 W. 22<sup>nd</sup> Street. (209) 385-6912

By: \_\_\_\_\_ Date: \_\_\_\_\_

Endorsement Required? ☒ YES ☒ NO

City of Merced Planning Department. 678 W 18<sup>th</sup> Street. (209) 385-6858

Zoning: out of city limits Home Occupation Certificate No. N/A (if applicable).

By: [Signature] Date: 8/13/19 Is a Land Use Entitlement Required Y / N

Endorsement Required? ☐ YES ☒ NO

Merced County Environmental Health Department. 260 E 15<sup>th</sup> Street (209) 381-1100

By: \_\_\_\_\_ Date: \_\_\_\_\_

Endorsement Required? ☐ YES ☒ NO

Merced County Public Health Department (massage only) 260 E. 15<sup>th</sup> Street. (209) 381-1023

By: \_\_\_\_\_ Date: \_\_\_\_\_

\*\*\* Under federal law and state law, compliance with disability access laws is a serious and significant responsibility that applies to all California building owners and tenants with buildings open to the public. You may obtain information about your legal obligations and how to comply with disability access laws at the following agencies: The Division of the State Architect at [www.dgs.ca.gov/dsa/Home.aspx](http://www.dgs.ca.gov/dsa/Home.aspx); The Department of Rehabilitation at [www.rehab.cahwnet.gov](http://www.rehab.cahwnet.gov); The California Commission of Disability Access at [www.cdda.ca.gov](http://www.cdda.ca.gov).

~~~WATER QUALITY CONTROL DIVISION~~~

1776 Grogan Avenue • Merced, CA 95341

Office: (209) 385-6204

PLEASE COMPLETE EACH SECTION BELOW:

Name of Business: First Alarm Security & Patrol, Inc. Name of Owner: Cal Horton
 Address of Business: 1731 Technology Dr #800 City/State/Zip: San Jose CA 95110 Ph #: 408-364-1110
 Type of Business: uniformed security / patrol SIC Code: 561012 (www.osha.gov)

IF YOU ARE A NEW FOOD SERVICE ESTABLISHMENT, YOU MUST CONTACT THE WATER QUALITY CONTROL DIVISION AT (209) 385-6204 FOR A GENERAL WASTE DISCHARGE PERMIT BEFORE OPENING DAY OF BUSINESS. (Merced Municipal Code 15.30.010)

Complete and answer each question below. If the question does not apply, write Not Applicable. Thank you.

1. Will your business apply pesticides, herbicides or fertilizers? If yes, list the name of the products used and how often applied: No
2. Is your business a wreckage or storage yard containing vehicles or motorized equipment? YES ☐ NO ☒
3. Will your facility be involved with any product manufacturing? YES ☐ NO ☒
 List Product(s) below: _____
4. Will your facility store materials outside? YES ☐ NO ☒
5. List chemicals and materials that will be stored outside: Not applicable.
6. How will you cover outside chemical/material storage to prevent contribution of pollution from storm water runoff? Not applicable.
7. Does your business provide car washing, detailing or cleaning of any kind? Please explain: No.

| | |
|--------------------|------------------|
| Internal Use Only: | |
| Review Date: | Inspection Date: |
| Follow Up: | RWQCB Notified: |
| Notes: | |
| | |
| | |



Merced Police Department
Private Patrol Application

1. Please list previous five years business or occupation for each person signing the application. Provide the name and address of each employer, the date of the commencement and termination of employment and the nature of the services performed. Attach additional pages if needed.

President - First Alarm Security & Patrol, Inc.

2. List the territory of the city in which you desire to operate your proposed private patrol service:

1136 West Main St.

3. List the hours which you propose to patrol such territory or render guard or watchman services.

21:00 - 05:00 7 days/week (dedicated onsite officer)

4. Address of principal place of business of the applicant, or the proposed principal place of business and all existing or proposed branch offices.

1731 Technology Dr. #800, San Jose, CA 95110

branches - Aptos, Salinas, ST, Walnut Creek, Burlingame, Santa Rosa, Stockton, Sacramento, & Rockville, MD

5. Do you hold a license issued by the state under the provisions of the Private Investigator and Adjuster Act? Yes / ☒ No Date issued: _____ Expiration Date: _____

6. Has any person signing the application ever been arrested on a charge of the commission of a felony, or a charge involving moral turpitude, at any time, or arrested for any reason within five years past, giving full details:

No.

7. Are you a corporation? ☒ Yes / ☐ No

If yes attach a certified copy of the resolution or minutes authorizing the application.


Applicant Signature

8/19/19
Date

BUREAU OF SECURITY AND INVESTIGATIVE SERVICES

LICENSING DETAILS FOR: 11167

NAME: FIRST ALARM SECURITY & PATROL

LICENSE TYPE: PRIVATE PATROL OPERATOR

PRIMARY STATUS: CURRENT

PREVIOUS NAMES: FIRST ALARM SECURITY & PATROL 1/17/14 ♦ FIRST ALARM ♦
FIRST ALARM SEC & PATROL INC

ADDRESS OF RECORD

1731 TECHNOLOGY DRIVE STE 800
SAN JOSE CA 95110
SANTA CLARA COUNTY

ISSUANCE DATE

AUGUST 7, 1992

EXPIRATION DATE

AUGUST 31, 2020

CURRENT DATE / TIME

AUGUST 23, 2019
7:44:22 AM

LICENSE RELATIONSHIPS

OFFICER

LICENSE/REGISTRATION ROLE: BUSINESS LICENSE

RELATED PARTY ROLE: PRINCIPAL

NAME: SAAL, JARL E

[VIEW MORE DETAILS](#)

ADDRESS NOT DISCLOSED

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR

RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH

NAME: FIRST ALARM SECURITY & PATROL

LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH

LICENSE NUMBER: 6130 **PRIMARY STATUS:**
CURRENT

ADDRESS :
1473 N. DAVIS RD.
SALINAS CA 93907
MONTEREY COUNTY
[MAP](#)

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR

RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH

NAME: FIRST ALARM SECURITY & PATROL

LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH

LICENSE NUMBER: 4226 **PRIMARY STATUS:**
CANCELLED

ADDRESS :
8352 CHURCH ST #12
GILROY CA 95020
SANTA CLARA COUNTY
[MAP](#)

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR

RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH

NAME: FIRST ALARM SECURITY & PATROL

LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH

LICENSE NUMBER: 6523 **PRIMARY STATUS:**
CURRENT

ADDRESS :
72088 NORTHSORE ST STE B
THOUSAND PALMS CA 92276-2312
RIVERSIDE COUNTY
[MAP](#)

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR

RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH

NAME: FIRST ALARM SECURITY & PATROL

LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH

LICENSE NUMBER: 5120 **PRIMARY STATUS:**
CANCELLED

ADDRESS :
2365 PARAGON DR #E
SAN JOSE CA 95131
SANTA CLARA COUNTY
[MAP](#)

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6198 **PRIMARY STATUS:**
CURRENT

ADDRESS :
1111 ESTATES DRIVE
APTOS CA 95003
SANTA CRUZ COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6278 **PRIMARY STATUS:**
CURRENT

ADDRESS :
550 HOWE AVE STE 230
SACRAMENTO CA 95825-8339
SACRAMENTO COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 5115 **PRIMARY STATUS:**
CANCELLED

ADDRESS :
184 MONROE ST #1
SALINAS CA 93906
MONTEREY COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6286 **PRIMARY STATUS:**
CURRENT

ADDRESS :
1801 OAKLAND BLVD. STE 315
WALNUT CREEK CA 94596
CONTRA COSTA COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 5308 **PRIMARY STATUS:**
CURRENT

ADDRESS :
111 ANZA BLVD STE 300
BURLINGAME CA 94010-1917
SAN MATEO COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6241 **PRIMARY STATUS:**
CANCELLED

ADDRESS :
330 TRES PINOS RD STE F1
HOLLISTER CA 95023-5579
SAN BENITO COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH

ADDRESS :
5250 CLAREMONT AVENUE
STOCKTON CA 95207
SAN JOAQUIN COUNTY
MAP

NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6245 **PRIMARY STATUS:**
CURRENT

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6449 **PRIMARY STATUS:**
CURRENT

ADDRESS NOT DISCLOSED

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 6509 **PRIMARY STATUS:**
CURRENT

ADDRESS :
2601 OCEAN PARK BLVD STE 208
SANTA MONICA CA 90405-5229
LOS ANGELES COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 5307 **PRIMARY STATUS:**
CANCELLED

ADDRESS :
2190 MERIDIAN PARK BL #K
CONCORD CA 95003
CONTRA COSTA COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 5430 **PRIMARY STATUS:**
CANCELLED

ADDRESS :
1555 RIVER PARK DR
SACRAMENTO CA 95815
SACRAMENTO COUNTY
MAP

PPO TO PPB

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: PRIVATE PATROL
OPERATOR BRANCH
NAME: FIRST ALARM SECURITY & PATROL
LICENSE/REGISTRATION TYPE: PRIVATE PATROL
OPERATOR BRANCH
LICENSE NUMBER: 5431 **PRIMARY STATUS:**
CURRENT

ADDRESS :
1240 BRIGGS AVENUE
SANTA ROSA CA 95401
SONOMA COUNTY
MAP

PPO TO QUALIFIED MANAGER

LICENSE/REGISTRATION ROLE: PRIVATE PATROL
OPERATOR
RELATED PARTY ROLE: QUALIFIED MANAGER
NAME: HORTON, CALVIN L
[VIEW MORE DETAILS](#)

ADDRESS NOT DISCLOSED

PRESIDENT

LICENSE/REGISTRATION ROLE: BUSINESS LICENSE
RELATED PARTY ROLE: PRINCIPAL

ADDRESS NOT DISCLOSED

NAME: HORTON, CALVIN L
[VIEW MORE DETAILS](#)

RESOLUTION NO. 2019-_____

**A RESOLUTION OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
GRANTING A CERTIFICATE OF PUBLIC
CONVENIENCE AND NECESSITY TO FIRST
ALARM SECURITY & PATROL, INC.**

WHEREAS, pursuant to Chapter 5.40 of the Merced Municipal Code, First Alarm Security & Patrol, Inc., has applied to the City of Merced for a Certificate of Public Convenience and Necessity to operate a private patrol and security service within the City; and

WHEREAS, the written report required by Section 5.40.040 of the Merced Municipal Code has been received and reviewed by the City Council and a public hearing held.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The City Council declares that the public convenience and necessity require the proposed private patrol and security service.

SECTION 2. A Certificate of Public Convenience and Necessity is hereby granted to First Alarm Security & Patrol, Inc.

///

///

///

///

///

///

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the _____ day of _____ 2019, by the following vote:

AYES: Council Members:

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

APPROVED:

Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

Phuocha A. Mota 2/28/19
City Attorney Date

PUBLIC HEARING NOTICE

The Merced City Council will hold a public hearing on Monday, October 7, 2019, at 6:00 p.m. or as soon thereafter as can be heard, in the Civic Center City Council Chamber, 678 West 18th Street, Merced, CA, regarding the application filed by Cal Horton to operate First Alarm Security & Patrol, Inc., a private patrol/security service, within the Merced city limits. The business office will be located at 1731 Technology Drive, Suite 800, San Jose, CA 95110.

All persons in favor of or opposed to this matter are invited to attend this hearing or forward written comments to the Merced City Clerk's Office, 678 West 18th Street, Merced, CA 95340 by 5:00 p.m. on Monday, October 7, 2019.

Publish: September 26, 2019

By: John Tresidder, Assistant City Clerk



ADMINISTRATIVE REPORT

Agenda Item J.4.

Meeting Date: 10/7/2019

Report Prepared by: Julie Nelson, Associate Planner, Development Services Department

SUBJECT: Public Hearing for Approving a Mitigated Negative Declaration for Environmental Review #19-18 and Potential Introduction of an Ordinance, Approving Zone Change #426 and Adoption of a Resolution Approving General Plan Amendment #19-02 Changing the Zoning and General Plan Designations for Approximately 0.52 Acres of Land Generally Located on the East Side of McKee Road Approximately 360 Feet South of Yosemite Avenue and the Appeal of the Planning Commission's Denial of Conditional Use Permit #1231 to Allow a Mixed-Use Project to be Constructed at the Southeast Corner of Yosemite Avenue and McKee Road

REPORT IN BRIEF

Considers approving a Mitigated Negative Declaration for Environmental Review #19-18, and introducing an Ordinance, General Plan Amendment #19-03, Zone Change #426, and an appeal of the Planning Commission's denial of Conditional Use Permit #1231 for a mixed-use project.

RECOMMENDATION

General Plan Amendment #19-02 and Zone Change #426

City Council - Adopt a motion:

A. Adopting **Resolution 2019-63**, a Resolution of the City Council of the City of Merced, California, approving a Mitigated Negative Declaration for General Plan Amendment #19-02 and Zone Change #426, approving General Plan Amendment #19-02 to change the General Plan Designation from Low Density Residential (LD) to Neighborhood Commercial (CN) for approximately 0.52 acres of land generally located on the east side of McKee Road approximately 360 feet south of Yosemite Avenue, and approving a Legislative Action Agreement for the same; and,

B. Introducing **Ordinance 2504**, an Ordinance of the City Council of the City of Merced, California, amending the Official Zoning Map by rezoning approximately 0.52 acres of land generally located on the east side of McKee Road, approximately 360 feet south of Yosemite Avenue from R-1-6 to Neighborhood Commercial (C-N); and,

C. Authorizing the City Manager or the Assistant City Manager to execute the Legislative Action Agreement.

Conditional Use Permit #1231

A. Open the public hearing and hear all testimony regarding the appeal; and,

- B. Close the public hearing; and,
- C. Provide direction to staff regarding Findings to grant or deny the appeal.

ALTERNATIVES

General Plan Amendment #19-02 and Zone Change #426

- 1. Approve the request as recommended by the Planning Commission and staff; or
- 2. Approve subject to modifications as conditioned by the City Council; or,
- 3. Deny the request; or,
- 4. Refer back to staff for reconsideration of specific items (specific items to be addressed in the motion); or,
- 5. Continue to a future meeting (date and time to be specified in the motion).

Conditional Use Permit #1231

- 1. Give direction regarding Findings for approval or denial;
- 2. Continue the public hearing to a future meeting (date and time to be specified in the motion).

AUTHORITY

Title 19 of the Merced Municipal Code outlines environmental review procedures and California Government Code Section 65358 (a) grants the authority to amend all or part of an adopted General Plan. The legislative body may amend the zoning pursuant to California Government Code Section 65583.

City of Merced Zoning Ordinance Section 20.74 - Appeals addresses the procedure for appealing a decision made by the Planning Commission.

DISCUSSION

The following discussion is divided into two parts. The first part of the discussion will focus on the requested General Plan Amendment and Zone Change, and the second part will focus on the appeal of the Conditional Use Permit #1231. The City Council's action on the General Plan Amendment and Zone Change will be separate from the action on the Conditional Use Permit.

General Plan Amendment and Zone Change

The requested General Plan Amendment and Zone Change is for an approximately 0.52-acre portion of a parcel generally located at the southeast corner of Yosemite Avenue and McKee Road (Attachment 1). The General Plan Amendment would change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN), and the Zone Change would change the Zoning from R-1-6 to Neighborhood Commercial (C-N) (Attachment 2). The owner of the property, Merced Holdings, LP (Joe Englanoff, Managing Member), recently acquired the additional 0.52 acres (approximately 22,670 s.f) of land from the adjacent property owner to the south and is requesting the General Plan and Zoning designations be changed to be consistent with the remainder of the property.

In 2014, the owner applied for a General Plan Amendment and Zone Change to change the original 4.32 acre parcel and the 1.1 acre parcel at the southeast corner of Yosemite & McKee from Low Density Residential (LD) and R-1-6 to Neighborhood Commercial (CN). At that time, the owner proposed the construction of a 62,000-square-foot retail commercial center that would have included a small grocery store, a fast-food restaurant (with a drive-through), and other retail uses appropriate to the Neighborhood Commercial (C-N) zone (Attachment 3). The City Council approved the General Plan Amendment and Zone Change to Neighborhood Commercial in 2015.

When the General Plan Amendment and Zone Change were approved in 2015, the City Council had two options for the Shopping Center design on the project site. One option included providing direct access to Whitewater Way from Yosemite Avenue, and the other option did not provide access other than an entrance-only service road to serve commercial uses proposed on the site. The City Council voted to prohibit direct access from Yosemite Avenue to Whitewater Way and instead, approved the option with an entrance-only service road.

The approval of the General Plan Amendment and Zone Change would make the land use designations consistent for the entire site. This would need to be done for any future development on the property. Currently, the owner is proposing a mixed use development that would include 428 efficiency dwelling units (EDU's), 18,000 square feet of community/amenity area for the residential tenants, and 18,000 square feet of commercial space (refer to the Site Plan at Attachment 4).

Planning Commission Action on General Plan Amendment and Zone Change

The Planning Commission considered General Plan Amendment #19-02 and Zone Change #426 and held a public hearing on the matter on August 21, 2019, (additional information regarding the meeting is provided later in this report). In order to make the land use designations consistent for the entire site, the Commission voted 5-0 (5 ayes, 0 noes, 1 absent, 1 vacancy) to recommend the City Council approve General Plan Amendment #19-02 and Zone Change #426 subject to the Conditions and Mitigation Measures at Exhibits A and B of Planning Commission Resolution #4025 (Attachment 16). An excerpt from the Planning Commission Minutes of August 21, 2019 are provided at Attachment 17 and Planning Commission Staff Report #19-22 is provided at Attachment 18.

Appeal of Conditional Use Permit #1231

In addition to the General Plan Amendment and Zone Change, the applicant is appealing the Planning Commission's denial of Conditional Use Permit (CUP) #1231. Staff is asking the City Council provide direction on whether they wish to grant the appeal or deny the appeal. Additionally, the Council should provide Findings to support the action they wish to take regarding the appeal. Staff would then return at a future City Council meeting with the Findings for the Council to take official action on the appeal. In order for the Council to fully consider the appeal, proposed conditions of approval have been included at Attachment 5. Should the Council wish to grant the appeal and approve CUP #1231, these conditions of approval are recommended to be included in the approval.

Project Description

Conditional Use Permit #1231 would allow the construction of a mixed-use development on the

project site. The development would include 428 Efficiency Dwelling Units, 18,000 square feet of common/community space for the residential tenants, and 18,000 square feet of commercial space for a variety of commercial uses (refer to the Site Plan at Attachment 4). Buildings 1 and 3 as shown on the site plan would each contain 102 units, while Buildings 2 and 4 would each contain 112 units. Buildings 2 and 4 would have a mixture of retail commercial uses and community/common area for the residential tenants on the ground floor. The building elevations are provided at Attachment 6 as well as renderings at Attachment 7.

Efficiency Dwelling Units (EDU's), or micro-apartments as they are sometimes referred to, are commonplace in many cities and are synonymous with what is more commonly referred to as a studio apartment. This type of unit typically consists of one room with a separate bathroom. The kitchen area, living, and sleeping areas are combined into one space and typically range in size from 200 to 350 square feet. This type of unit is generally more affordable than other types of housing and provides an alternative to sharing a larger apartment or single-family home with other tenants.

The units proposed with this development would be approximately 330 square feet. The floor plans are provided at Attachment 8. Although this would be the first development within the City exclusively devoted to efficiency units, many existing apartment complexes have studio apartments which are only slightly larger than the proposed EDU's. A recent internet search of apartments in Merced with studios revealed that several complexes have studio units that are between 400 and 450 square feet. There were at least five others complexes that have units that are 300 to 350 square feet. Additionally, the Hampshire Retirement Center at 3420 R Street offers studio units that are between 325 and 500 square feet. Once the renovation is complete on the Tioga Apartments, there will be a few studio apartments on each floor that are approximately 300 square feet in size.

The developer would limit the number of occupants in each unit to one individual. This was a concern for the Planning Commission as they felt it may violate Fair Housing Laws. Subsequent to the Planning Commission meeting, the applicant provided the analysis found at Attachment 9 which explains that this development could legally restrict the number of occupants to one person per unit. This analysis was reviewed by the City Attorney's office and found to consistent with federal and state laws. Additional details regarding the building and unit design is provided later in this report. Condition #31 of the proposed conditions of approval also restricts the occupancy to one tenant per unit.

Density

As previously described, the majority of the site has a General Plan designation of Neighborhood Commercial (CN) and is also zoned Neighborhood Commercial (C-N). With the approval of the proposed General Plan Amendment and Zone Change, the entire 5.94 acres would be designated for Neighborhood Commercial uses. Although the Neighborhood Commercial designation implies land uses on the site with commercial uses, multi-family uses are also allowed within a C-N zone, subject to approval of a Conditional Use Permit. While the Zoning Ordinance lists multi-family uses as a conditional use within the C-N zone, the Zoning Ordinance does not specify what density is allowed. Typically, density would be determined by the General Plan designation. The General Plan identifies multi-family land use designations as Low-Medium Density (LMD), High-Medium Density (HMD), and High Density (HD). Table 3.2 of the General Plan also sets forth the Population expected within each

land use classification. The table below provided the different density classifications, units per acre, and population per acre.

| Density Classification | Units/Acre | Population/Acre |
|---------------------------------------|------------|-----------------|
| Low-Medium Density Residential (LMD) | 6 to 12 | 18.4 - 36.2 |
| High-Medium Density Residential (HMD) | 12 to 24 | 36.5 - 72.5 |
| High Density Residential (HD) | 24 to 36 | 72.8 -108.7 |

When calculating the density for the proposed project using the conventional method of units per acre, the density proposed for this project exceeds what is allowed by the General Plan. However, because the proposal is for Efficiency Dwelling Units with a single occupant, the actual number of people on the site could be less than the number of people allowed with a traditional multi-family apartment complex and within the population per acre set forth in Table 3.2 of the General Plan. As shown in the table below, a multi-family apartment complex developed at the maximum density allowed under the General Plan (High Density - 36 units/acre), could have 428 people in the complex if each unit were a 2 bedroom unit (assuming one person per bedroom). If the units were all 3 bedroom units, that number would increase to 642 people (assuming one person per bedroom). If more than one person shared the bedrooms, the number would increase accordingly. It should be noted that California Fair Housing Law typically allows two people per bedroom which could mean that the previous numbers could more than double if these were typical two or three bedroom units.

| DENSITY & PEOPLE PER ACRE | | | | | | |
|---------------------------|---------|----------------|-----------------|-----------|--------------|-------------|
| Acres | Density | Max Units/Acre | Allowed DU/Acre | Bdrm/Unit | Total People | People/Acre |
| 5.94 | HD | 36 | 214 | 2 | 428 | 72 |
| 5.94 | HD | 36 | 214 | 3 | 642 | 108 |
| Proposed Project | | | | | | |
| 5.94 | | | | 1 | 428 | 72 |

Since the Planning Commission meeting, staff has reviewed a small sample of existing apartment complexes as well as two of the most recently approved apartment projects that haven't been built yet to compare the density and people per acre. This analysis made the following assumptions:

- Each complex had a 50/50 mixture of 1 and 2 bedroom units;
- Each bedroom had 2 people

The analysis of the existing apartment complexes revealed that three of the existing complexes had a density between 52 and 58 people/acre, one had 62 people per acre, and one had 75 people per acre.

Analyzing the recently approved projects [Merced Stations at Yosemite and Lake, and the Regency Apartments, east of G Street at Merrill Place (north of Cardella)] revealed a much higher density as these projects both included units with more bedrooms. The Merced Station project was approved to have 225 units with a mixture of 2, 3, and 4 bedroom units. Assuming two persons per bedroom, this

would yield 84 people per acre. If the number of people per bedroom was reduced to one person, the density would be 52 people per acre.

The Regency Apartment project was approved for 216 units with a mixture of 1, 2, and 4 bedroom units for a total of 678 bedrooms. Again, assuming two people per bedroom, this would yield 138 people per acre. If the number of people per bedroom was reduced to 1 person, the density for this project would be 72 people per acre.

Based on the foregoing analysis, the density could be considered equal to that of the High Density Residential (HD) General Plan Designation.

General Plan Compliance and Policies Related to the Conditional Use Permit

Although the standard method for calculating density would indicate the project exceeds the densities set forth in the General Plan, as described above, the number of people per acre would be equal to that of a typical High Density Residential (HD) development. The *Merced Vision 2030 General Plan* including the City's Housing Element. This element sets forth policies and guidelines to encourage more housing within the City. The following policies from the Housing Element support affordable housing, mixed-use development, and higher densities.

Policy H-1.1 *Support Increased in Residential Zoning Districts*

Although the proposed project would not be located within a residential zone, it does provide an opportunity for a higher density project to provide needed housing within the City.

Policy H 1.1.c *Encourage Mixed Use Development*

The proposed project would provide a mixture of retail commercial uses to serve the neighborhood and multi-family efficiency dwelling units.

Policy H1.1.e *Encourage Alternate Housing Types*

The proposed project would include efficiency dwelling units that would essentially house a single occupant within an approximately 350-square-foot unit. Each unit would provide kitchen facilities, a bathroom, and living and sleeping areas. This type of unit is unusual for the City of Merced. This policy encourages housing designs with a smaller footprint as a form of alternate housing.

Policy H1.8b *Prioritize City efforts to encourage residential development by focusing on in-fill development and densification within the existing City Limits.*

The proposed project is on an in-fill site and as explained above, when considering the number of people per acre, proposes a density that is equal to the City's highest density classification.

The following are Land Use Policies and Implementing Actions of the General Plan that could be met with the proposed project.

Policy L-1.1 *Promote Balanced Development Which Provides Jobs, Services, and Housing.*

- Implementing Action 1.1.a: Promote mixed use development combining compatible employment, service and residential elements.*
- Implementing Action 1.1.c: Determine the types of housing opportunities needed for the type of employment opportunities being created in the City.*

Traffic/Circulation

The project site is located at the southeast corner of Yosemite Avenue and McKee Road. Yosemite Avenue, east of Parsons is designated as a “Special Street Section” in the *Merced Vision 2030 General Plan*. As such, the ultimate right-of-way for this road is 94 feet. McKee Road is a Collector Road with an ultimate right of way of 74 feet. The project would have access from Yosemite Avenue (right-in/right-out only) and McKee Road (full access). Both the intersections of Yosemite Avenue and McKee Road and Yosemite Avenue and Via Moraga (approximately 0.3 miles east of McKee Road) are signalized. No access is proposed to Whitewater Way from the project site, unless the Fire Department requires an emergency access per Condition #21 of the Conditional Use Permit Conditions at Attachment 5. It should also be noted that the intersection of Yosemite Avenue and Lake Road would be signalized with the development of the Merced Stations project located on the south side of Yosemite at Lake Road.

Traffic Impact Analysis

Transportation and traffic impacts were previously analyzed for this site with General Plan Amendment #14-06 and Zone Change #421. A traffic analysis was prepared as part of Initial Study #14-32 at the time the previous General Plan Amendment and Zone Change were considered and approved (Appendix D of Initial Study #19-15 at Attachment 10). The traffic analysis at that time analyzed impacts associated with a 62,000-square-foot shopping center. When comparing the previous project to the current project, it was determined that the level of impacts were similar based on traffic generation rates for the dwelling units being based on the number of occupants rather than the number of units (similar to the analysis for Land Use and Density). Using a rate of 3.31 average daily trips (ADT's) per resident, there would be 1,417 ADT's for the residential portion of the project. The exact type of tenants that would occupy the commercial portion of the project is unknown. Therefore, the same calculation method was used for this project as used in the previous analysis (Specialty Retail). Based on this calculation, the retail portion of the project would add an additional 798 ADT's, bringing the total estimated ADT's for the mixed-use project to 2,214 ADT's. The previous traffic analysis estimated a total of 2,647 ADT's for the previously proposed 62,000-square-foot shopping center. The previous analysis allowed for a 35% reduction of trips based on “pass-by” traffic (traffic that would already be on the roadway, not making a specific trip to the subject location). This reduction resulted in a net of 1,721 ADT's.

The previous traffic analysis analyzed the following road segments and intersections.

Roadways:

- Yosemite Avenue between Parsons Avenue and McKee Road
- McKee Road between Yosemite Avenue and Silverado Avenue

Intersections:

- Yosemite Avenue and Parsons Avenue
- Yosemite Avenue and McKee Road
- Yosemite Avenue and Hatch Road
- McKee Road and Olive Avenue

The quality of traffic operating conditions is rated by Level of Service (LOS) Categories A through F, ("A" being the best). LOS A indicates free-flow traffic conditions with little or no delay. LOS F represents over-saturated conditions where traffic flows exceed capacity resulting in long queues and delays. The City of Merced has adopted LOS D as the standard for streets to operate at an acceptable level.

Yosemite Avenue and Parsons/Gardner

The previous analysis found that all the intersections studied would operate at an acceptable level of service (LOS), except the intersection of Yosemite Avenue and Parsons Avenue/Gardner Road. According to the traffic study done for the previous shopping center project on this site, this intersection would operate at an LOS F under the existing, plus project scenario.

The following Mitigation Measure is recommended in Initial Study #19-18 for this project to ensure this intersection operates at an acceptable level of service (see the Mitigation Monitoring Program at Exhibit B of Planning Commission Resolution #4025 at Attachment 15).

Mitigation Measure

TRA-01 The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)

-or-

The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.

Olive Avenue and McKee Road

The intersection of Olive Avenue and McKee Road would also decrease from LOS C to LOS F under the Cumulative 2035 scenario analyzed by the previous traffic study. Mitigation Measure TRA-02 (refer to the Mitigation Measures at Exhibit B of Planning Commission Resolution #4025 - Attachment 15) is recommended for this intersection which would bring the level of service back to an LOS C (the existing LOS).

Alternate Transportation

The project would incentivize the use of alternate transportation by offering a discount on rent for residents who don't have a vehicle. Additionally, they will provide specific areas for Uber and Lyft pick-ups, and they are exploring the possibility of offering rentals of bicycles, scooters, and zip cars.

The site is also located near transit stops for The Bus and Cat Tracks.

Although the estimated average daily trips for the proposed mixed-use project is slightly higher than the net result for the previously proposed shopping center, no reductions have been applied to the ADT's for the mixed-use project for pass-by traffic or transit and bicycle facilities. When consideration is given to the alternate transportation available and encouraged on the project site, it is likely that the ADT's generated by the current project would be approximately equal to the previously proposed project.

Based on concerns express by the Planning Commission (see below), the applicant is preparing an updated traffic study for this project. However, it was not completed in time to be included in this report. Details of the updated traffic study will be provided at the City Council meeting.

Parking

The Zoning Ordinance requires 1.75 spaces of parking for each multi-family unit up to 30 units, plus an additional 1.5 spaces for each unit over 30. There is also an increase in the number of spaces required based on the number of bedrooms and bathrooms in a unit. Based on this calculation, the residential portion of this project would require 650 parking spaces.

Parking for the commercial portion of the project would be based on the actual uses. Since the uses are unknown at this point, but expected to be a mixture of retail, service, and restaurant uses, a factor of one space for every 250 square feet of floor area was used to calculate the required parking for the commercial portion of the project. The Zoning Ordinance allows a 15% reduction in floor area for non-usable commercial space such as restrooms, storage areas, etc. Using this formula, the parking requirements for the commercial portion of the project would be 61 spaces.

The applicant is proposing a total of 412 parking spaces as shown in the table below:

| Parking Type | Spaces | Parking Type | Spaces |
|--------------------|--------|--------------------|--------|
| Motorcycle/Scooter | 36 | Accessible Parking | 12 |
| Standard Parking | 290 | Compact Parking | 74 |

The applicant provided an analysis of the City's parking requirements based on the actual number of people occupying a unit (Attachment 12). This analysis considered the number of spaces required based on a 3 bedroom unit with 2 people per bedroom and a 3 bedroom unit with 1 person per bedroom. Based on this analysis, an apartment project that has 214 3-bedroom units with two people per bedroom would be required to provide 435 parking spaces under the City's Zoning Ordinance, which equates to 0.33 spaces per bed/resident. Under the scenario with 1 person per bedroom, 435 spaces would be required or 0.68 spaces per person.

The applicant's analysis shows that they are providing 0.81 spaces per unit which exceeds the 0.68 which would be required for a typical development with 3 bedroom units. Using the factor of 0.81 spaces/unit, the parking required for the residential use would be 348 spaces. The site provides 412 spaces which would be slightly more than what is estimated for the retail uses plus the residential

uses. In addition to the parking spaces provided, the development would have a dedicated area for Uber and Lyft pickups to help encourage the use of alternative transportation. The proximity to bus stops would also help encourage the use of public transportation rather than having a personal vehicle.

In addition to the vehicle parking provided, indoor bicycle storage facilities would be provided to encourage the use of bicycles. The site has easy access to the bicycle trail system which could encourage the use of bicycles rather than cars.

The Zoning Ordinance (MMC Section 20.38.050) also allows for reductions in parking requirements for mixed used projects, projects near transit, and other reductions which could be applied to this project.

If insufficient parking is required on-site, however, tenant parking could spill out into the adjacent neighborhood. The Moraga neighborhood has very narrow streets and limited on-street parking so this could be an issue.

Public Improvements/City Services

There are existing water and sewer lines that could serve the project site. However, there is limited capacity within the existing sewer lines in Yosemite Avenue to serve this site. Due to constrictions in the Yosemite Avenue line, the proposed project would need to provide an alternative to discharging the wastewater generated from the site into the Yosemite Avenue line during peak flow times. The developer has been working with the City's Public Works Director on a solution for this issue. One solution may be to provide underground storage for the project's wastewater discharge and release the wastewater during off-peak hours. Condition #32 of the recommended conditions for the Conditional Use Permit requires the developer to work with the City Engineer and Public Works Director to find a satisfactory solution for this issue.

Building Design

The proposed building designs would be similar to the style of the buildings at UC Merced. The three story buildings would have clean lines and use a variety of building materials to provide interest. The balconies on the upper floors are staggered to add additional interest. The elevations are provided at Attachments 7 and 8. The table below provides a breakdown of each building by unit number and building height.

| BUILDING DETAILS | | | | | |
|-------------------------|----------------|--------------|-------------------------------------|--------------------------|--------------------------------|
| Building No. | Stories | Units | Use | Total Square Feet | Height (to top parapet) |
| 1 | 3 | 102 | Residential | 34,560 | 33' 4 1/4" |
| 2 | 3 | 112 | Residential/Residential Common Area | 59,520 | 31' 10 1/4" |
| 3 | 3 | 102 | Residential | 34,560 | 33' 4 1/4" |

| | | | | | |
|-------|---|-----|--------------------------------|---------|-----------|
| 4 | 3 | 112 | Residential/Res
Common Area | 59,520 | 31' 10 ¼" |
| TOTAL | | 428 | | 188,160 | |

Each residential unit would be approximately 330 square feet and contain a kitchen, bathroom, and living/sleeping area. The units are designed for a single occupant. Some of the units include a balcony and some don't have balconies, which would slightly increase the indoor living area. The balconies have been staggered to help provide depth and interest to the building elevations. All the units would have access through the interior of the building, which would increase security for the tenants.

Buildings 2 and 4 have a mixture of commercial space and common space for the residential tenants on the first floor of each building. The common areas would include amenities such as a gym, a kitchen/community area for gatherings and events, a meditation room, a study area, a media room, indoor bike storage area, laundry facilities, and a management office, mailroom, and office center for tenants. Building 2 also provides a roof-top deck area to provide additional outdoor open space for the tenants (Attachment 11). This area would provide an additional outdoor area for tenants to lounge and socialize.

Site Design

The site is designed to keep the buildings near the center of the site away from the residential uses. The front building (Building 2) is set back approximately 75 feet from Yosemite Avenue. Building 1 is approximately 50 feet from McKee Road, Building 3 is approximately 125 feet from the southern property line, and Building 4 is approximately 55 feet from the eastern property line near Whitewater Way.

Parking is provided around the perimeter of the site and between the buildings. Bicycle parking is provided inside Building 4.

A promenade area is provided between Buildings 2 and 4 (refer to Page 2 of Attachment 5 as well as the renderings at Attachment 7) which will include landscaping, tables, and chairs/benches to provide an open space area for the tenants and customers of the commercial uses. The developers envision this area would be used by customers of the food establishments and other retail uses as well as the residential tenants.

A minimum six-foot tall block wall would separate the project from the residential uses to the south of the site (Condition #34). This height may be increased to 8 feet if the City Council desires.

Distance to Adjacent Residential Uses

All the buildings on the site would be 3-stories and between 31 and 33 feet tall. The diagram at Attachment 13 shows the distance from each building to the closest adjacent structure. For reference, Attachment 14 shows comparable distances from City Hall. The site would be provided with dense landscaping to help buffer the surrounding uses from noise and lights and to help provide privacy between the uses. Additional information regarding landscaping is provided in Planning Commission Staff Report #19-22 at Attachment 18.

Neighborhood Impact/Interface

As previously described, the project site is surrounded by residential uses as well as Yosemite Church and Providence School to the north across Yosemite Avenue. The developer held two neighborhood meetings on August 13, 2019, at Yosemite Church. The first meeting was held at 3:00 p.m., but no one from the neighborhood attended. At this meeting, there were people who work at the church in attendance, but no neighborhood residents. The second meeting was held at 6:00 p.m. There were 6 people in attendance at this meeting. The applicant sent notices to property owners within 300 feet of the site.

Some of the concerns raised were about the number of people on the site and the traffic impacts. There were also concerns voiced from one of the neighbors across Yosemite Avenue about the building heights and the ability of the residential tenants being able to see into their back yards. There were also questions about where the customers for the retail uses would park. The neighbors also noted that they don't want uses like nightclubs or bars to be allowed in the commercial areas. The applicant was agreeable to not allowing nightclubs and bars, but wanted to be able to have restaurants that serve alcohol with meals.

Neighborhood Commercial zones allow multi-family uses with approval of a Conditional Use Permit. The City's interface regulations apply when a commercial use is adjacent to or across the street from a residential use. The purpose of the Interface Regulations is to protect existing residential neighborhoods and to ensure that new development is designed in a manner to minimize negative impacts on nearby uses to the greatest extent possible.

The height of the buildings would be taller than most of the other buildings in the area. However, Yosemite Church's main building is close to the same height as the proposed buildings. There are several two-story homes in the area, and most are less than 30 feet in height, but a few have steeper roofs and higher peaks making them approximately 28 feet tall.

As discussed in the traffic section of this report, the traffic generated by the proposed mixed-use project would be comparable to that of the previously proposed shopping center. Mitigation measures are included to help minimize the effects of the additional traffic in the area.

Public hearing notices were sent to all property owners within 300 feet of the site prior to the Planning Commission meeting and again 10 days prior to the City Council meeting.

Planning Commission Action on Conditional Use Permit #1231

On August 21, 2019, the Planning Commission held a duly noticed public hearing to consider General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231. There were six people who spoke in opposition to the project raising concerns primarily related to traffic and the number of people on the site. Some speakers noted that they believed the site was to be developed as a shopping center and were not supportive of the proposed change to allow multi-family dwellings. The letter at Attachment 15 was submitted by Bright Development in opposition to the project.

The applicant, Joe Englanoff, and his representative, Raj Joshi spoke in favor of the project. They explained that they would provide incentives such as reductions in rent to tenants who don't have vehicles. They further explained that while the project would be ideal for students, they are not limiting the tenants to students only. Mr. Englanoff also noted that they chose this particular site within the City rather than a location closer to the UC Merced Campus in order to have access to City sewer and water services.

After hearing all the testimony, the Planning Commission voted to deny Conditional Use Permit #1231 by the following vote: 4-1 (4 ayes, 1 no, 1 absent, 1 vacancy) due to concerns regarding traffic, the capacity in the sewer line, and concerns with being able to legally limit the number of tenants in each unit (refer the Planning Commission Resolution #4026 at Attachment 17). An excerpt of the Planning Commission Minutes is provided at Attachment 18.

City Council Action

The City Council will need to take action on the General Plan Amendment and Zone Change separately from the appeal of Conditional Use Permit #1231. The Planning Commission and staff recommend approval of General Plan Amendment #19-02 and Zone Change #426 subject to the Findings, Conditions, and Mitigation Measures provided in the Draft City Council Resolution at Attachment 20 and Draft Ordinance at Attachment 21. Therefore, it would be appropriate for the City Council to Introduce the Ordinance at Attachment 21 approving Zone Change #426 and approve General Plan Amendment #19-02 by the adoption of the Resolution at Attachment 20. Additionally, the City Council should authorize the City Manager or Assistant City Manager to execute the Legislative Action Agreement at Attachment 22.

Action on the Appeal of Conditional Use Permit #1231 should include direction to staff, along with Findings to either approve or deny the appeal. Staff will prepare a Resolution based on that direction and Findings and return at a future Council meeting for Council to take final action on the appeal. Should the City Council vote to grant the appeal, thus approving Conditional Use Permit #1231, staff recommends City Council direction include the Conditions at Attachment 5 and the Mitigation Measures described in Appendix A of Initial Study #19-15 (Attachment 10).

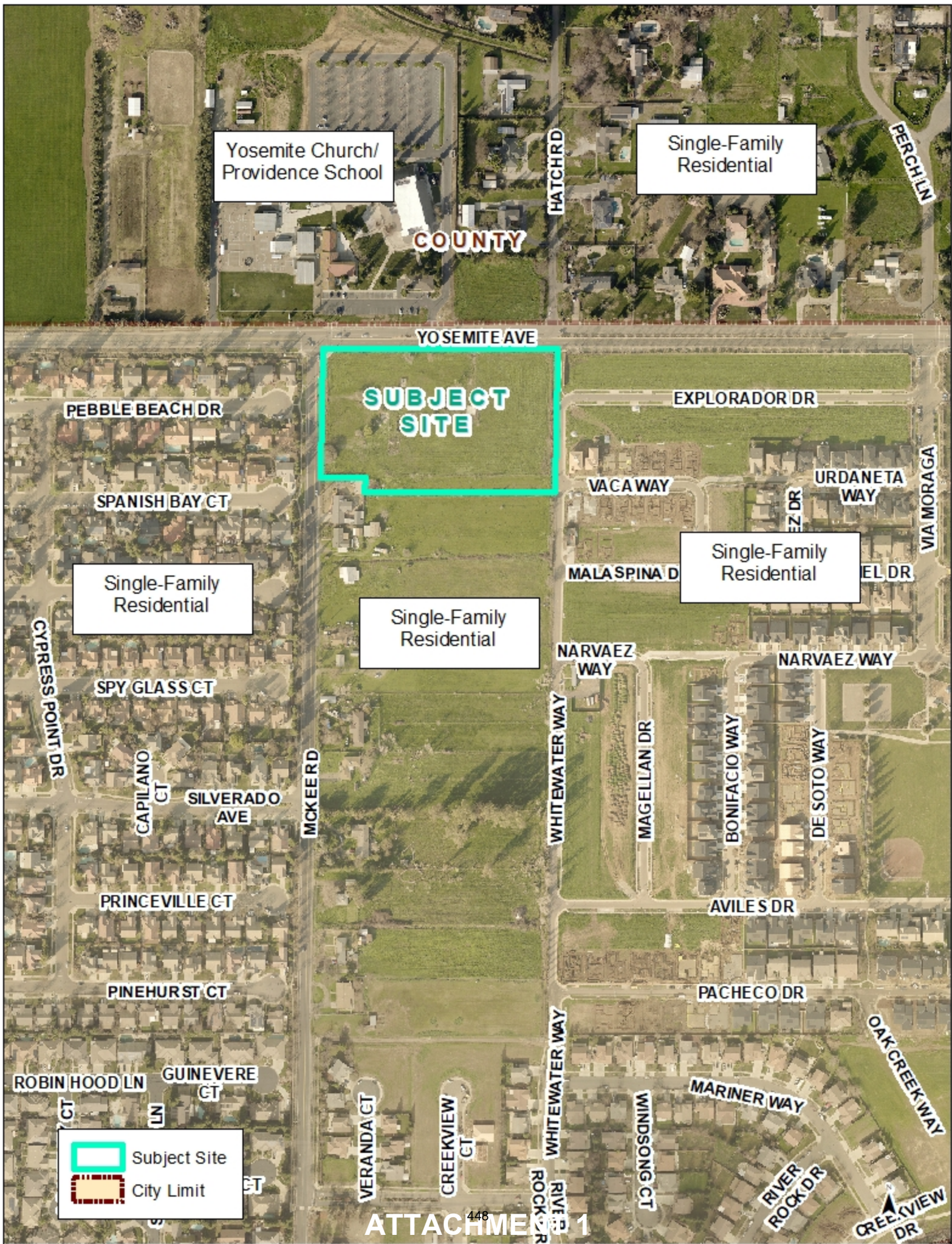
IMPACT ON CITY RESOURCES

The project would be required to annex into the City's Community Facilities District for Services and pay all required Public Facility Financing Program Impact Fees. Payment of these fees and ongoing payment of the CFD taxes would mitigate any expected impacts on City resources.

ATTACHMENTS

1. Location Map
2. Proposed Land Use Changes
3. Original Site Plan
4. Proposed Site Plan
5. Proposed Conditions of Approval for Conditional Use Permit #1231
6. Elevations

7. Renderings
8. Floor Plans
9. Single Tenant Analysis
10. Initial Study #19-15
11. Rooftop Deck
12. Applicant's Parking Analysis
13. Distance from Surrounding Uses
14. Distance References
15. Letter from Bright Development
16. Planning Commission Resolution #4025
17. Planning Commission Resolution #4026
18. Planning Commission Minutes Excerpt of 8/21/2019
19. Planning Commission Staff Report #19-22
20. Draft City Council Resolution for General Plan Amendment
21. Draft Ordinance for Zone Change
22. Legislative Action Agreement
23. Presentation



Yosemite Church/
Providence School

Single-Family
Residential

COUNTY

SUBJECT
SITE

YOSEMITE AVE

PEBBLE BEACH DR

EXPLORADOR DR

SPANISH BAY CT

VACA WAY

URDANETA
WAY

Single-Family
Residential

Single-Family
Residential

Single-Family
Residential

MALA SPINA D

EL DR

CYPRESS POINT DR

SPY GLASS CT

NARVAEZ
WAY

NARVAEZ WAY

CAPILANO
CT

SILVERADO
AVE

WHITEWATER WAY

MAGELLAN DR

BONIFACIO WAY

DE SOTO WAY

PRINCEVILLE CT

AVILES DR

PINEHURST CT

PACHECO DR

ROBIN HOOD LN

GUINEVERE
CT

VERANDA CT

CREEKVIEW
CT

WHITEWATER WAY

WINDSONG CT

MARINER WAY

RIVER
ROCK DR

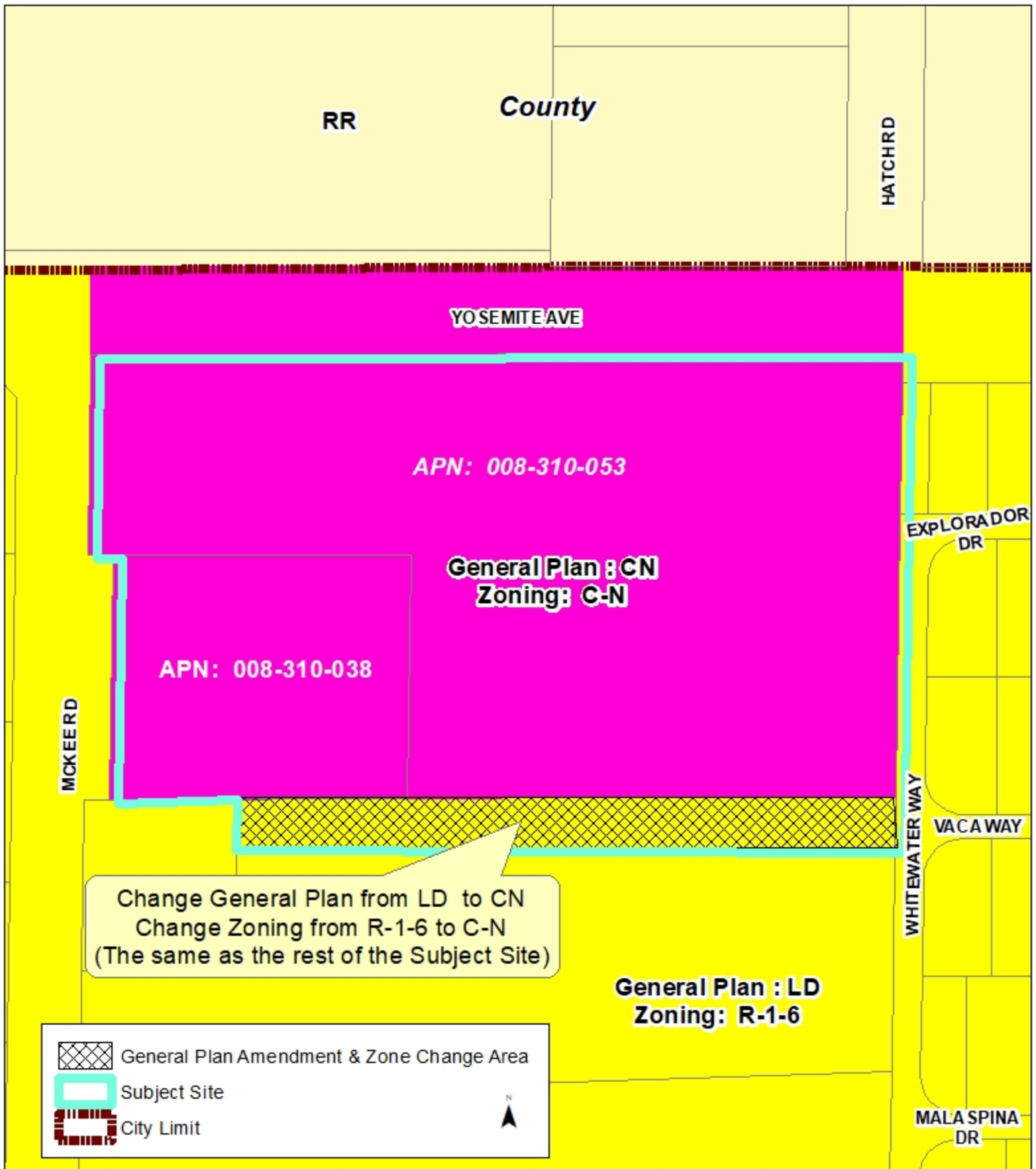
OAK CREEKWAY

CREEKVIEW
DR

Subject Site
City Limit

ATTACHMENT 1

448



Disclaimer: This document was prepared for general inquiries only. The City of Merced is not liable for errors or omissions that might occur. Official information concerning specific parcels should be obtained from recorded or adopted City documents.

**PROPOSED GENERAL
PLAN AMENDMENT
& ZONE CHANGE
ATTACHMENT 2**



Golden Valley Engineering & Surveying
 405 West 10th Street
 Merced, CA 95351
 Phone (209) 722-3254
 Fax (209) 722-3254
 Website www.goldenvalleyeng.com

GOLDEN VALLEY
 ENGINEERING & SURVEYING
 405 West 10th Street
 Merced, CA 95351
 Phone (209) 722-3254
 Fax (209) 722-3254
 Website www.goldenvalleyeng.com

| | |
|-------------|--------------------|
| APN | 060-570-056 |
| Owner | Merced Holding, LP |
| Prepared By | John As Shown |
| Checked By | John As Shown |
| Drawn By | John As Shown |
| Scale | As Shown |
| Date | 06/11/2014 |

CALIFORNIA
 PRELIMINARY SITE PLAN FOR
 THE SHOPS AT UNIVERSITY VILLAGE
 SW CORNER OF YOSEMITE & MCKEE ROAD
 MERCED

PROJECT DATA:
 SITE ACREAGE: 5.42 Acres Gross
 5.06 Acres Net (after R.O.W. Dedication)
 PROVIDED PARKING: 216 Spaces (including 11 H.C.)
 MAXIMUM BLDG. AREA: 216 x 300 = 64,800 S.F.
 TOTAL BLDG. AREA: 62,000 S.F.

PROJECT DATA:
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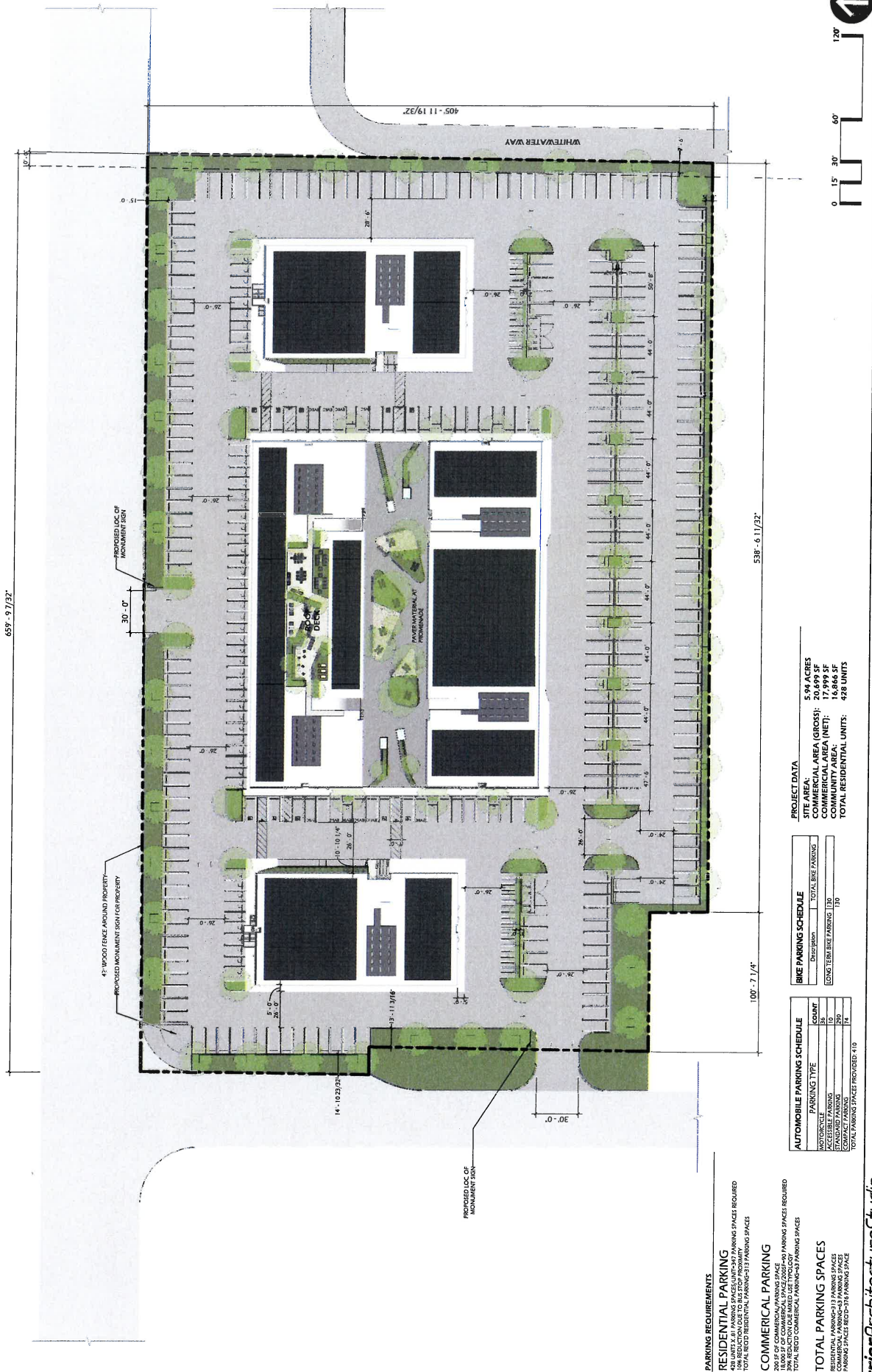
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 MAXIMUM BLDG. AREA: 216 x 300 = 64,800 S.F.
 TOTAL BLDG. AREA: 62,000 S.F.

SITE PLAN







SITE PLAN
7/1/00
A. J. P. S. L. A. D.

PROJECT DATA

| | |
|--------------------------|------------|
| SITE AREA: | 5.94 ACRES |
| COMMERCIAL AREA (GROSS): | 20,699 SF |
| COMMERCIAL AREA (NET): | 17,999 SF |
| TOTAL RESIDENTIAL UNITS: | 420 UNITS |

BIKE PARKING SCHEDULE

| Description | Quantity | Total Bike Parking |
|------------------------|----------|--------------------|
| Long Term Bike Parking | 130 | 130 |

AUTOMOBILE PARKING SCHEDULE

| Parking Type | Count |
|--------------------------------------|------------|
| Motorist | 19 |
| Accessible | 19 |
| Standard | 290 |
| TOTAL PARKING SPACES PROVIDED | 410 |

PARKING REQUIREMENTS

RESIDENTIAL PARKING
420 UNITS X .81 PARKING SPACES/UNIT=340.2 PARKING SPACES REQUIRED
TOTAL REQUIRED RESIDENTIAL PARKING=340.2 PARKING SPACES

COMMERCIAL PARKING
17,999 SF OF COMMERCIAL SPACE X .0015 PARKING SPACES/100 SF=26.9985 PARKING SPACES REQUIRED
TOTAL REQUIRED COMMERCIAL PARKING=26.9985 PARKING SPACES

TOTAL PARKING SPACES
340.2 + 26.9985 = 367.1985 PARKING SPACES REQUIRED
367.1985 PARKING SPACES REQUIRED - 410 PARKING SPACES PROVIDED = 42.8015 PARKING SPACES PROVIDED

MER
MERCED HOLDINGS LP
CONDITIONAL USE PERMIT
AUGUST 8 2019

ferrierArchitectureStudio

PROPOSED CONDITIONS
CONDITIONAL USE PERMIT #1231

If the City Council wishes to approve Conditional Use Permit #1231, staff recommends the approval include Environmental Review #19-18 (Mitigated Negative Declaration), and the following conditions:

- *1) The proposed shall be constructed/designed in substantial compliance with the Site Plan, Floor Plan, Elevations, and Renderings (Attachments C, D, E, F, and G of Planning Commission Staff Report #19-22), except as modified by the conditions.
- *2) The proposed project shall comply with all standard Municipal Code and Subdivision Map Act requirements as applied by the City Engineering Department.
- *3) The Project shall comply with the applicable conditions set forth in Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 previously approved for this site.
- *4) All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.
- *5) The approval of this Conditional Use Permit is contingent on City Council approval of General Plan Amendment #19-02 and Zone Change #426. The effective date of the Conditional Use Permit approval will be the effective date of the City Council approval of the General Plan Amendment and Zone Change. If the General Plan Amendment and Zone change are not approved, the Planning Commission's approval of the Conditional Use Permit will be null and void.
- *6) The developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against any governmental entity in which developer/applicant's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the developer/applicant of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the developer/applicant shall not thereafter be responsible to indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.
- *7) The developer/applicant shall construct and operate the project in strict compliance with the approvals granted herein, City standards, laws, and ordinances, and in compliance with all State and Federal laws, regulations, and standards. In the event of a conflict between City laws and standards and a State or Federal law, regulation, or standard, the stricter or higher standard shall control.
- *8) Community Facilities District (CFD) formation is required for annual operating costs for police and fire services as well as storm drainage, public landscaping, street trees, street

PROPOSED CONDITIONS
CONDITIONAL USE PERMIT #1231

lights, parks and open space. CFD procedures shall be initiated before final map approval or issuance of a building permit, whichever comes first. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received.

- *9) The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-18 (Exhibit B of Planning Commission Resolution #K) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-18, Attachment K of Staff Report #19-22).
- *10) All signs shall comply with the North Merced Sign Ordinance and Section 20.62.040 (B)(2) of the City's Zoning Ordinance for signs in a Neighborhood Commercial (C-N) zone.
- *11) The applicant shall construct all missing improvements along the property frontage on Yosemite Avenue and McKee Road including, but not limited to, sidewalk, curb, gutter, street lights, and street trees.
- *12) All necessary right-of-way along the property frontage, including Yosemite Avenue, McKee Road, and Whitewater Way, needed for public improvements shall be dedicated prior to the issuance of the first building permit.
- *13) Appropriate turning radii shall be provided within the parking areas to allow for Fire Department and refuse truck access.
- *14) Parking lot trees shall be installed per City Parking Lot Landscape Standards and Section 20.38.070 (F). At a minimum, parking lot trees shall be provided at a ratio of one tree for every six parking spaces. Trees shall be a minimum of 15-gallons, and be of a type that provides a 30-foot minimum canopy at maturity (trees shall be selected from the City's approved tree list).
- *15) All projects on this site shall comply with Post Construction Standards in accordance with the requirement for the City's Phase II MS-4 Permit (Municipal Separate Storm Sewer System).
- *16) Prior to issuance of the first grading/building permit for any project on the site, the applicant shall demonstrate compliance with San Joaquin Valley Air Pollution Control District Rule 9510 to the Planning Department. Changes to the site plan resulting from compliance with Rule 9510 are subject to review by City Staff or the Planning Commission, as determined by the Director of Development Services.
- *17) Bicycle parking for all projects on the site shall meet the minimum requirements of the California Green Building Code and Merced Municipal Code Section 20.38.080.
- *18) All landscaping on the site shall be in compliance with the City's Water Efficient Landscaping and Irrigation Ordinance (Merced Municipal Code Section 17.60) and all state-mandated conservation and drought restrictions as well as the City's Zoning Ordinance Section 20.36 – Landscaping.

PROPOSED CONDITIONS
CONDITIONAL USE PERMIT #1231

- *19) Irrigation for all onsite landscaping shall be provided by a low-volume system in accordance with the State's Emergency Regulation for Statewide Urban Water Conservation or any other state or city-mandated water regulations dealing with the current drought conditions.
- *20) All landscaping in the public right-of-way shall comply with the most recently adopted water regulations by the State and City addressing water conservation measures. If turf is proposed to be installed in medians or parkstrips, high quality artificial turf (approved by the City Engineer and Development Services Director) shall be installed.
- *21) If it is determined by the Fire Department that emergency vehicle access to Whitewater Way is needed to adequately serve the site or the surrounding area, the developer shall work with the City to provide such access, including an emergency gate with appropriate knox boxes, etc. as required by the Fire Department.
- *22) For buildings over 30 feet tall, a minimum 26-foot-wide drive aisle shall be provided for emergency vehicle access. The developer shall work with the Fire Department to determine the areas that need the 26-foot-wide drive aisle.
- *23) A fire control room may be required for the buildings on the site. The applicant shall work with the Fire Department to determine the location of the fire control room. Additional fire control rooms may be required at the discretion of the Fire Chief.
- *24) Each building shall be provided with a Fire Department Connection.
- *25) Buildings that do not provide an elevator (other than a freight elevator) shall be provided with an additional exit. The developer shall work with the Chief Building Official to determine the number of exits required for each building.
- *26) Each unit shall be provided with cooking facilities, other than a hot plate or microwave, as well as bathroom facilities per the California Building Code definition of an "Efficiency Dwelling Unit."
- *27) A minimum turning radius of 33 feet inside, curb-to-curb and 49 feet wall-to-wall for fire apparatus access must be provided throughout the project site or as required by the Fire Department.
- *28) All storm water shall be retained onsite and metered out to the City's storm water system in accordance with City Standards, subject to a storm drain plan approved by the City Engineer.
- *29) The developer shall use proper dust control procedures during site development in accordance with San Joaquin Valley Air Pollution Control District rules.
- *30) All parking lot and other exterior lighting shall be oriented in such a way so that it does not spill over onto adjacent properties.
- 31) Each unit shall be only be rented to a single occupant. At no time shall more than one person reside in each unit.
- 32) The owner/developer shall work with the City Engineer and Public Works Director to determine the best method for wastewater discharge from the site. This may be accomplished by providing an on-site storage system to capture wastewater and store it for discharge to the City's wastewater system during off-peak hours. The City Engineer and/or

PROPOSED CONDITIONS
CONDITIONAL USE PERMIT #1231

Public Works Director shall have final approval of the method used.

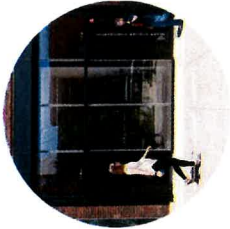
- 33) Containers for refuse and recycled goods shall be stored in enclosures that are designed with colors compatible with the buildings and shall be constructed to meet City Standards. At the Building Permit stage, the developer shall work with the City Refuse Department to determine the best location for these enclosures to ensure proper access is provided for City Refuse Trucks as well as the number of containers needed to adequately serve the site. Use of a trash compactor should be considered to reduce the number of pick-ups per week.
- 34) A minimum 6-foot high concrete block wall shall be installed along the southern property line. The height of the wall could be increased, not to exceed 8-feet tall, if required by the Planning Commission. A minimum five-foot wide landscaping area shall be provided to allow for the planting of vines or other appropriate landscape material.
- 35) Drive-thru uses, bars, nightclubs, and large convenience markets similar to a 7-Eleven type store are not allowed. Small convenience markets intended to serve the tenants or the immediate neighborhood could be allowed. Restaurants serving alcohol could be allowed with Conditional Use Permit approval.
- 36) All construction activity shall be conducted between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday.
- 37) All walking paths, bicycle and vehicle parking areas, and recreational areas shall be provided with sufficient lighting to ensure a safe environment.
- 38) All mechanical equipment shall be screened from public view.

(*) Denotes non-discretionary conditions.





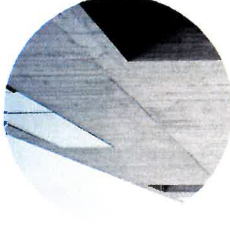
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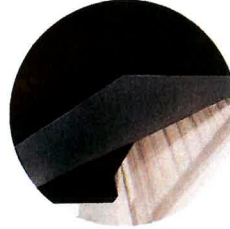
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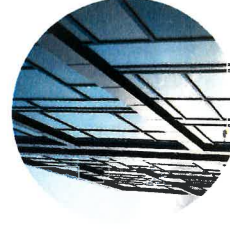
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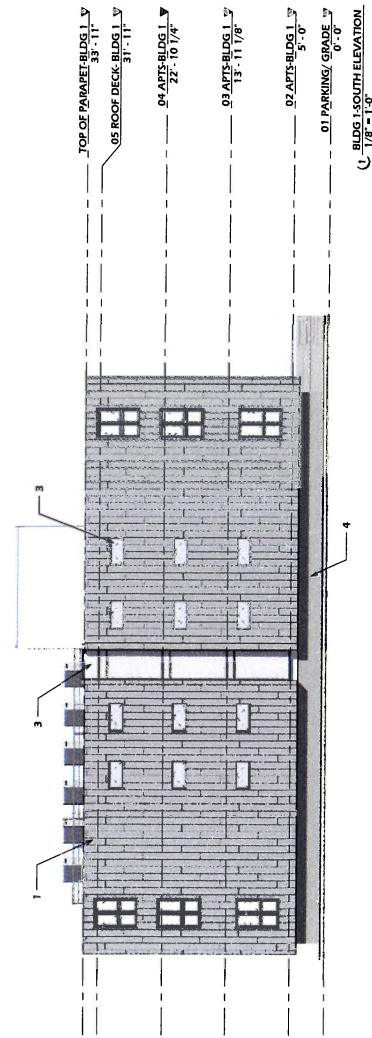
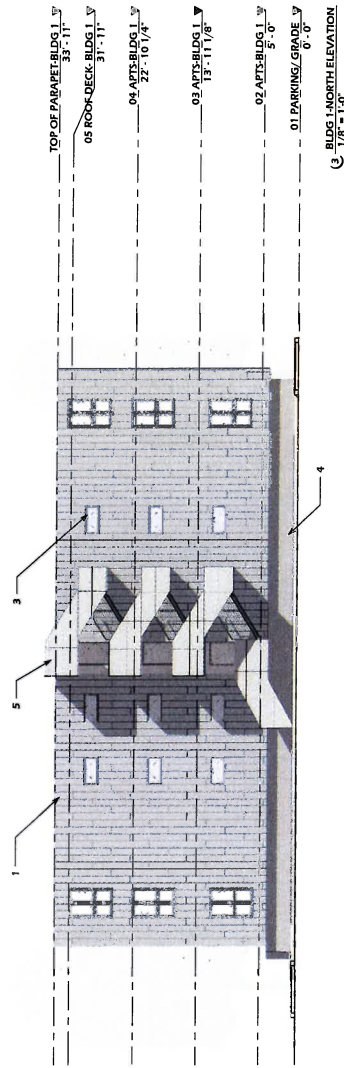
4 BOARD FORM CONCRETE



5 METAL PANEL RAILING

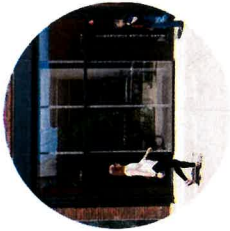


6 BRAKE METAL STOREFRONT





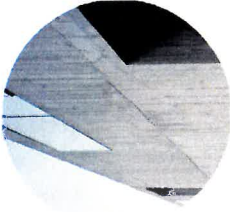
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2 COMMERCIAL STOREFRONT



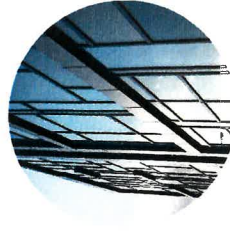
3 RESIDENTIAL WINDOWS



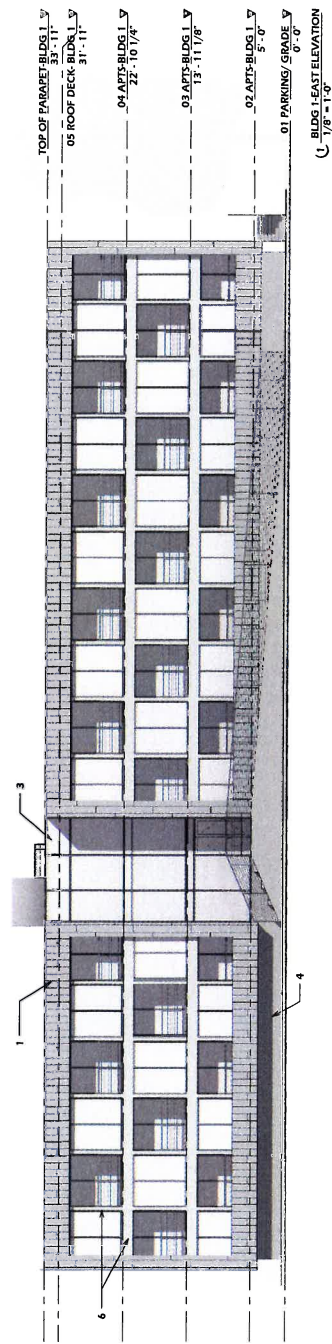
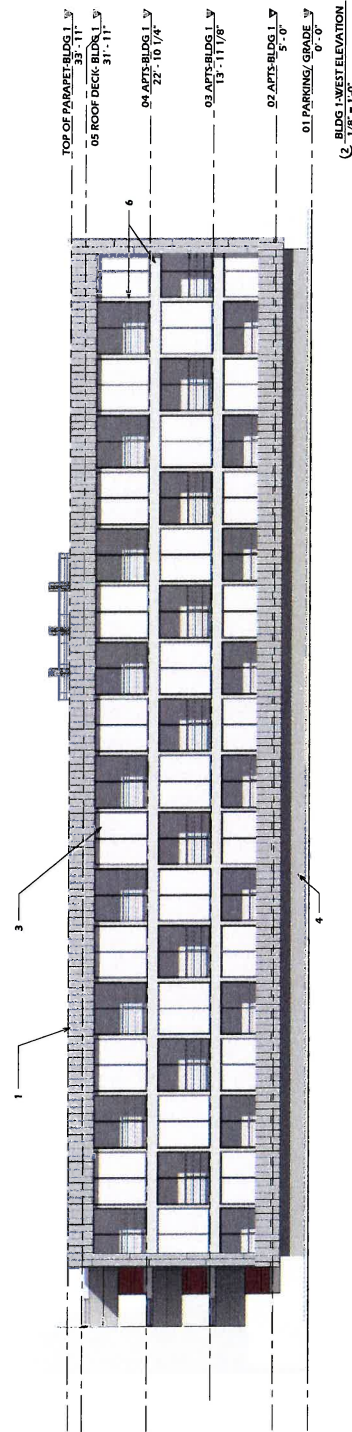
4 BOARD FORM CONCRETE



5 METAL PANEL RAILING

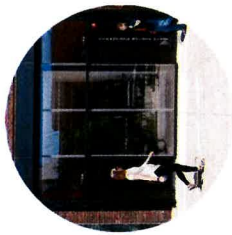


6 BRASS METAL STOREFRONT





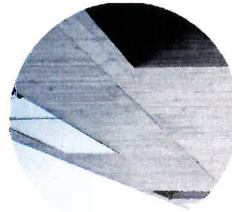
1 EQUITONE CEMENT PANEL OR EOV



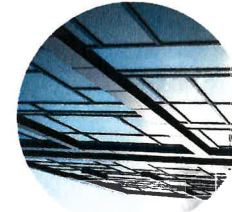
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3 RESIDENTIAL WINDOWS



4 BOARD FORM CONCRETE



6 BRAKE METAL STOREFRONT



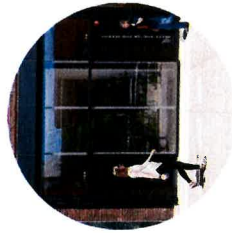
BLDG 2 NORTH ELEVATION
1/8" = 1'-0"



BLDG 2 SOUTH ELEVATION
1/8" = 1'-0"



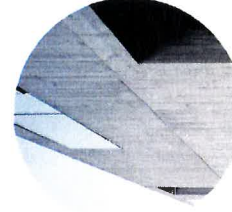
1 EQUITONE CEMENT PANEL OR EOY



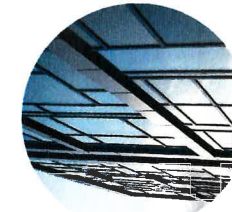
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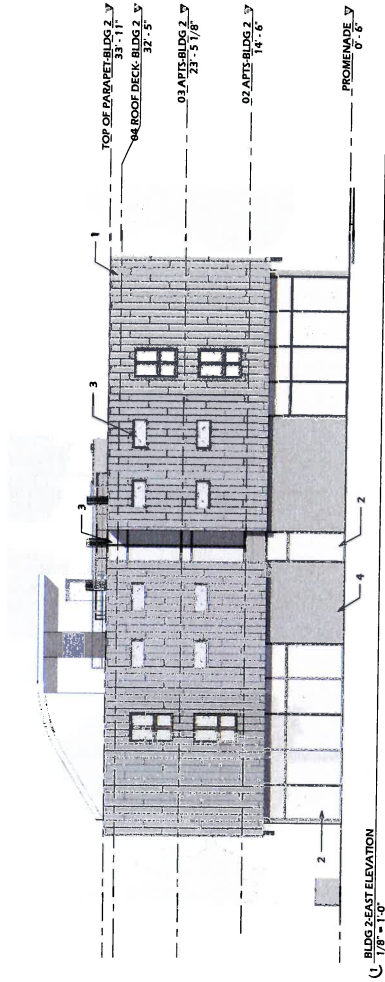
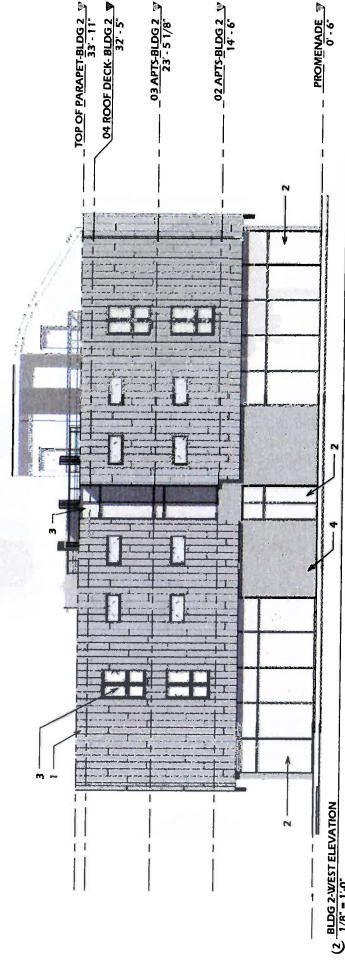
3 RESIDENTIAL WINDOWS



4 BOARD FORM CONCRETE

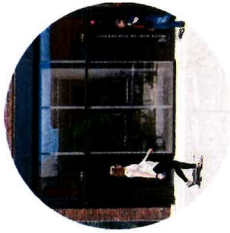


6 BRAKE METAL STOREFRONT





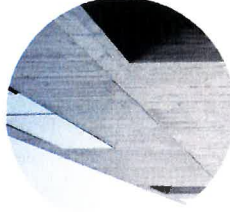
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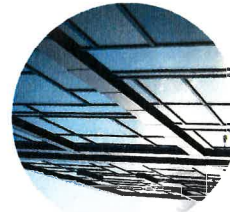
2 COMMERCIAL STOREFRONT



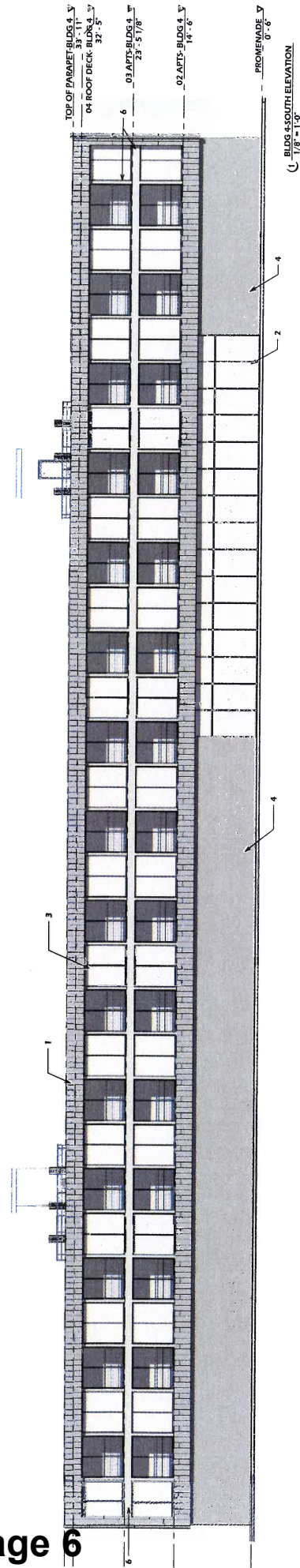
3 RESIDENTIAL WINDOWS



4 BOARD FORM CONCRETE

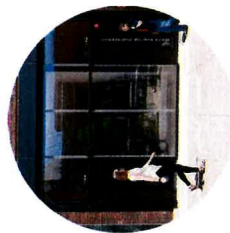


6 BRAKE METAL STOREFRONT





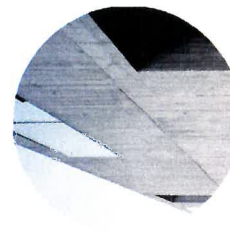
1 EQUITONE CEMENT PANEL OR EQV



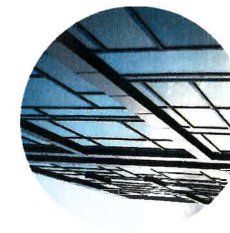
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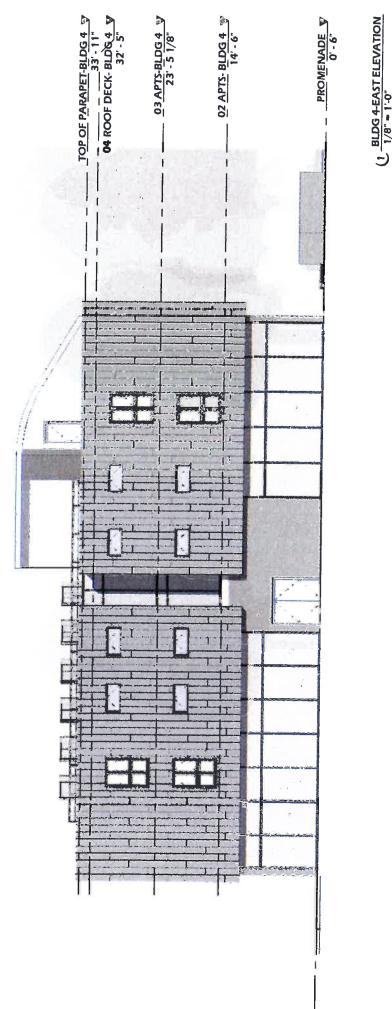
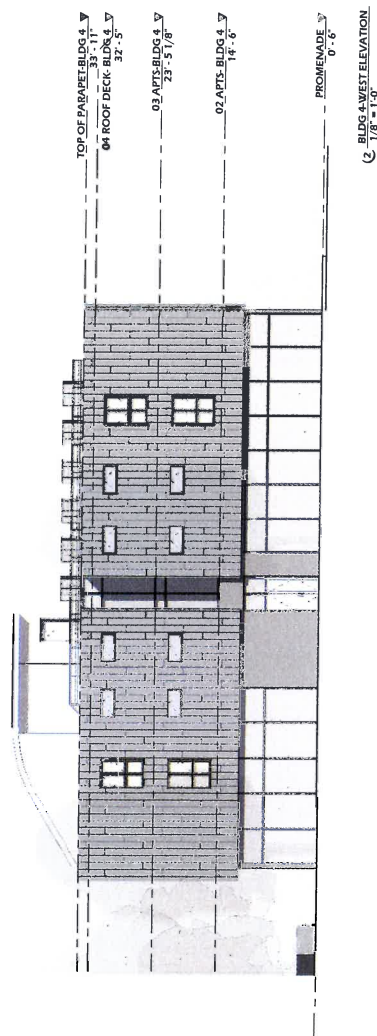
3 RESIDENTIAL WINDOWS



4 BOARD FORM CONCRETE



6 BRAKE METAL STOREFRONT

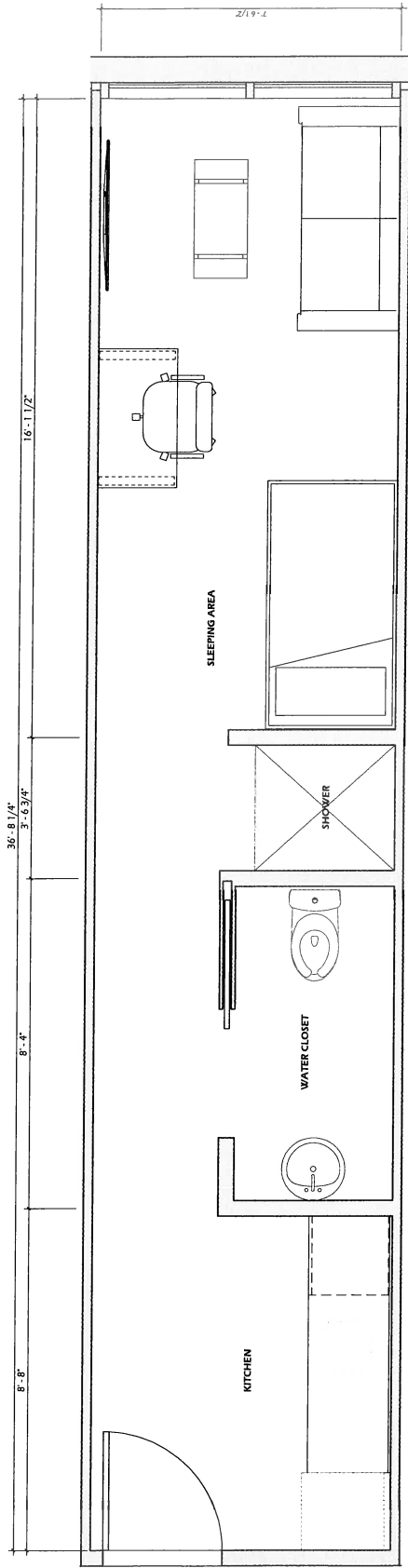




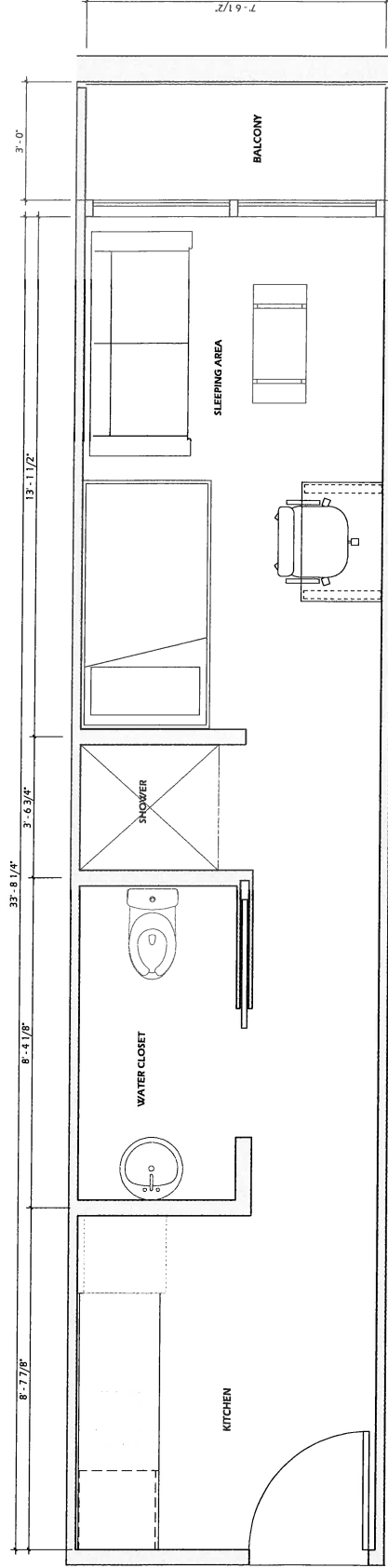








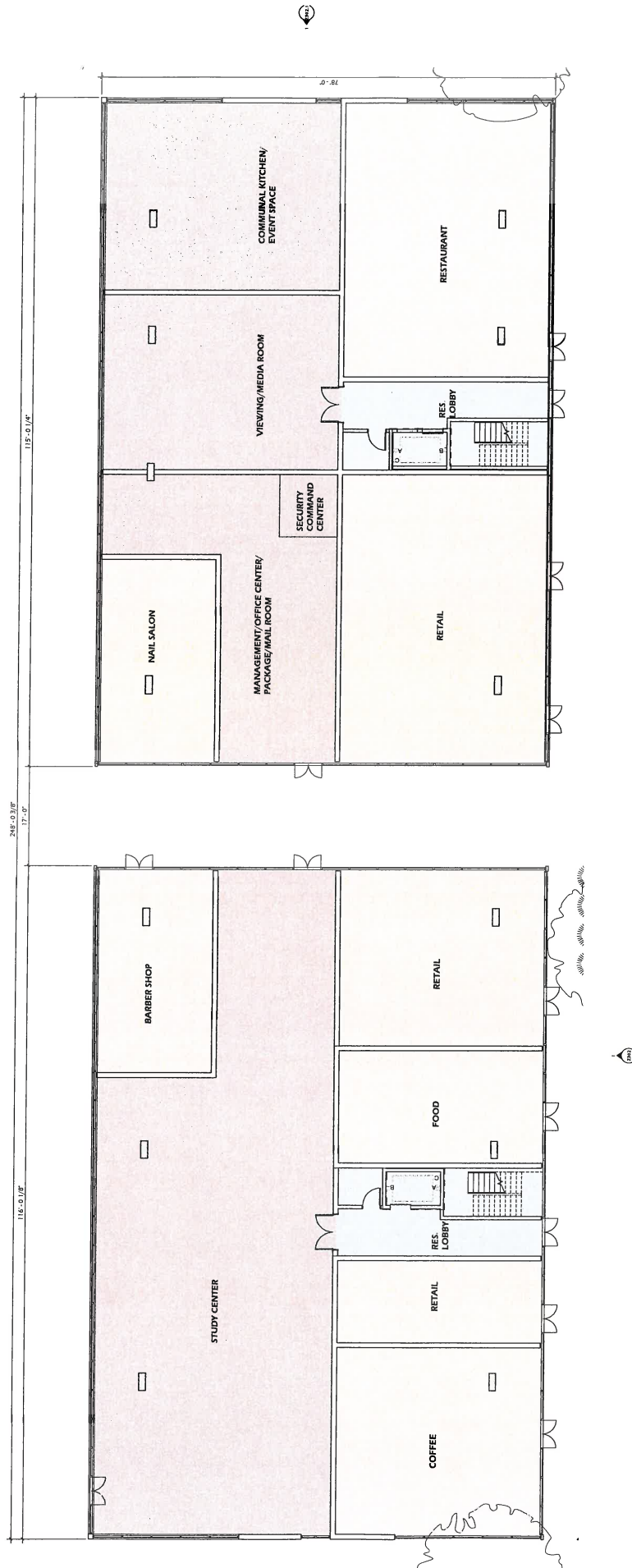
TYPICAL UNIT WITHOUT BALCONY



TYPICAL UNIT WITH BALCONY

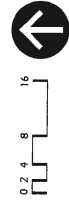
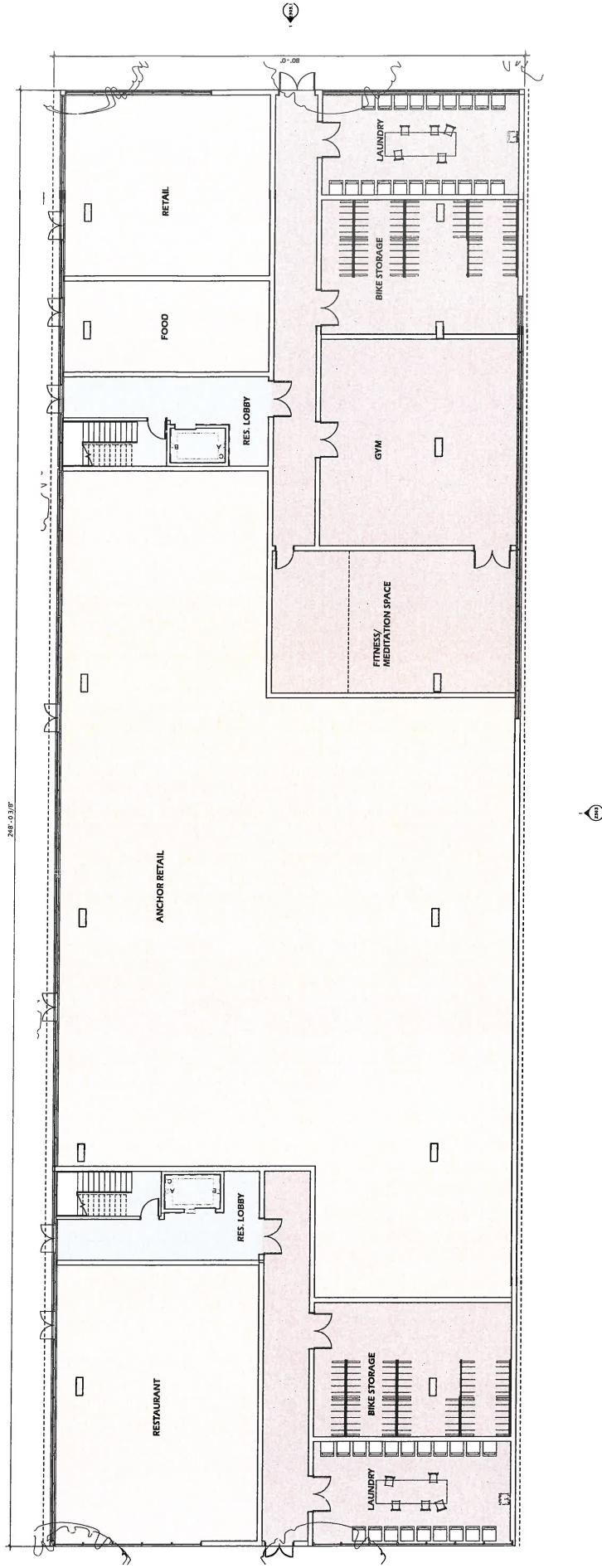
LEGEND

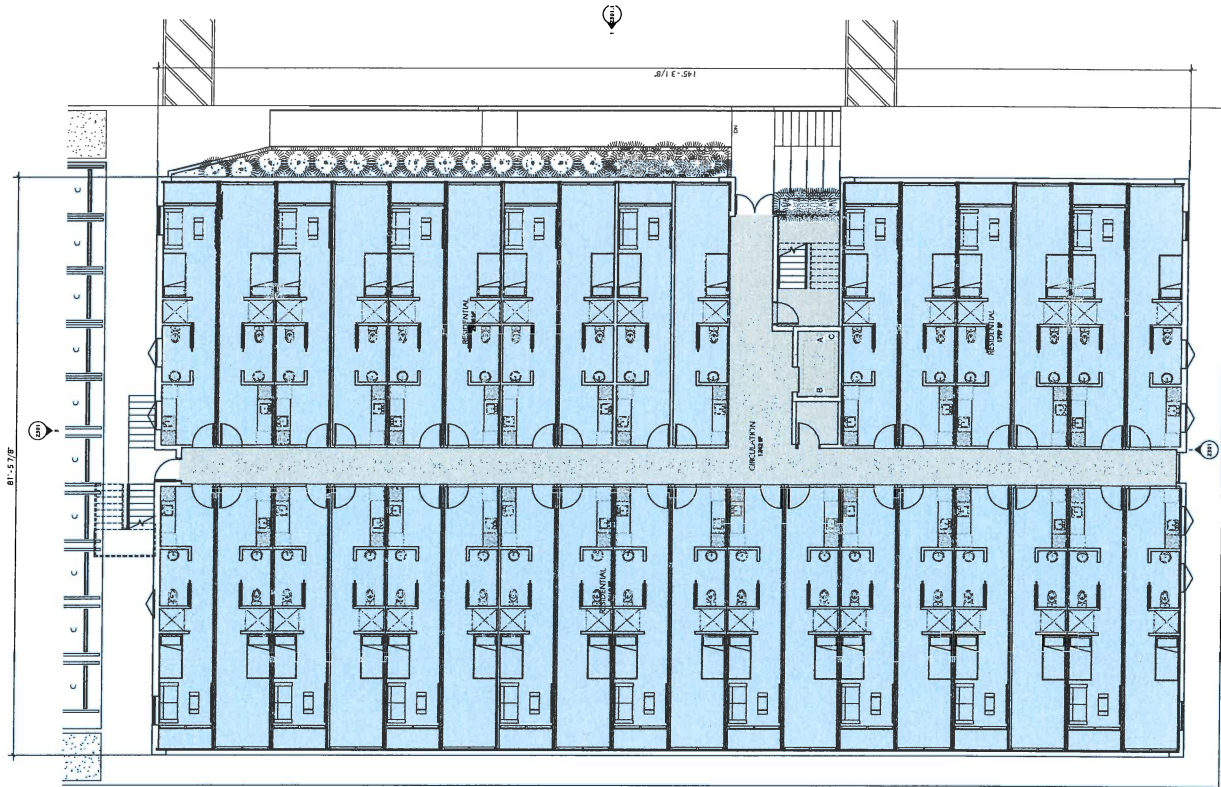
- COMMUNITY SPACE
- RESIDENTIAL
- RETAIL



LEGEND

- COMMUNITY SPACE
- RESIDENTIAL
- RETAIL





Room Legend
 CIRCULATION
 RESIDENTIAL



0 2 4 8 16
 FEET

01 APTS - BLDG 1 & 3
 Z101.1
 1" = 1'-0"

AUGUST 8, 2019

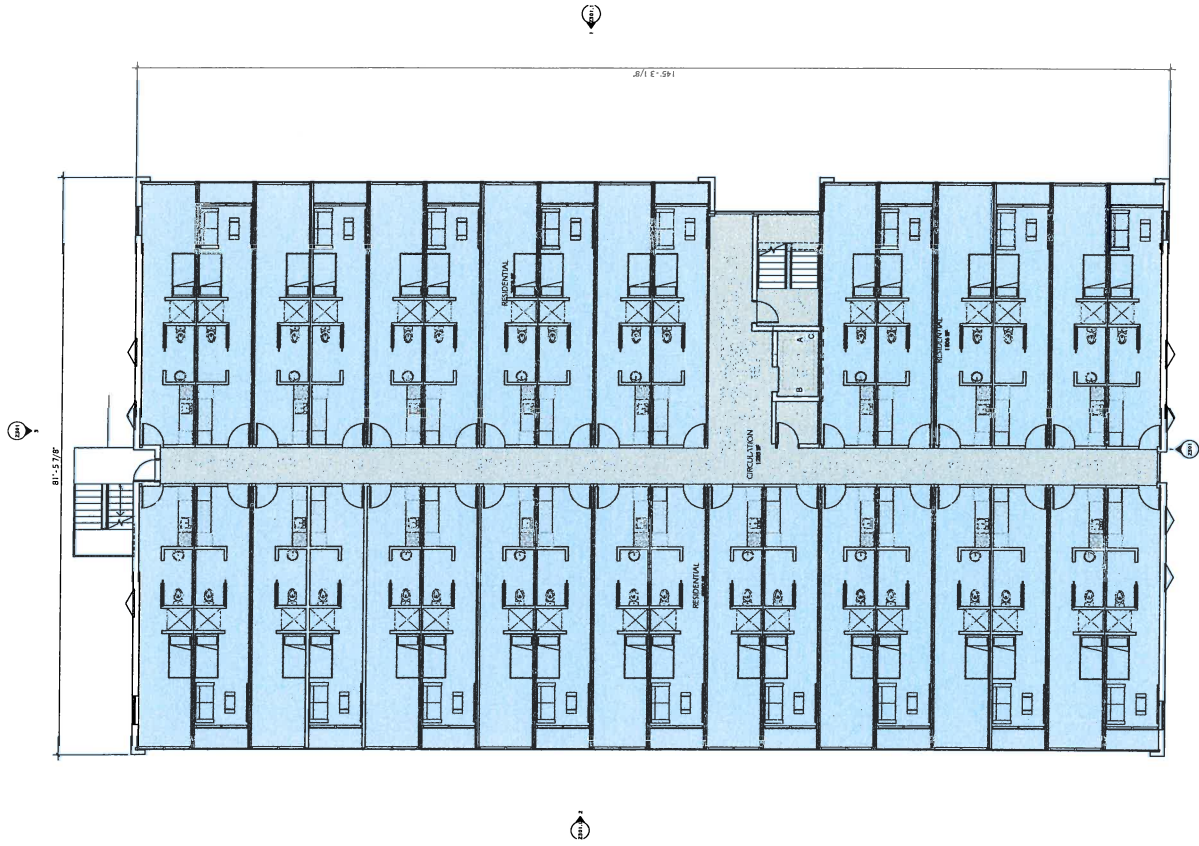
CONDITIONAL USE
 PERMIT

MERCED HOLDINGS, LP

MER

ferrierArchitectureStudio

Room Legend
 ■ CIRCULATION
 ■ RESIDENTIAL



02 APTS - BLDG 1 & 3
 2/10/2
 18'-10"

AUGUST 8, 2019

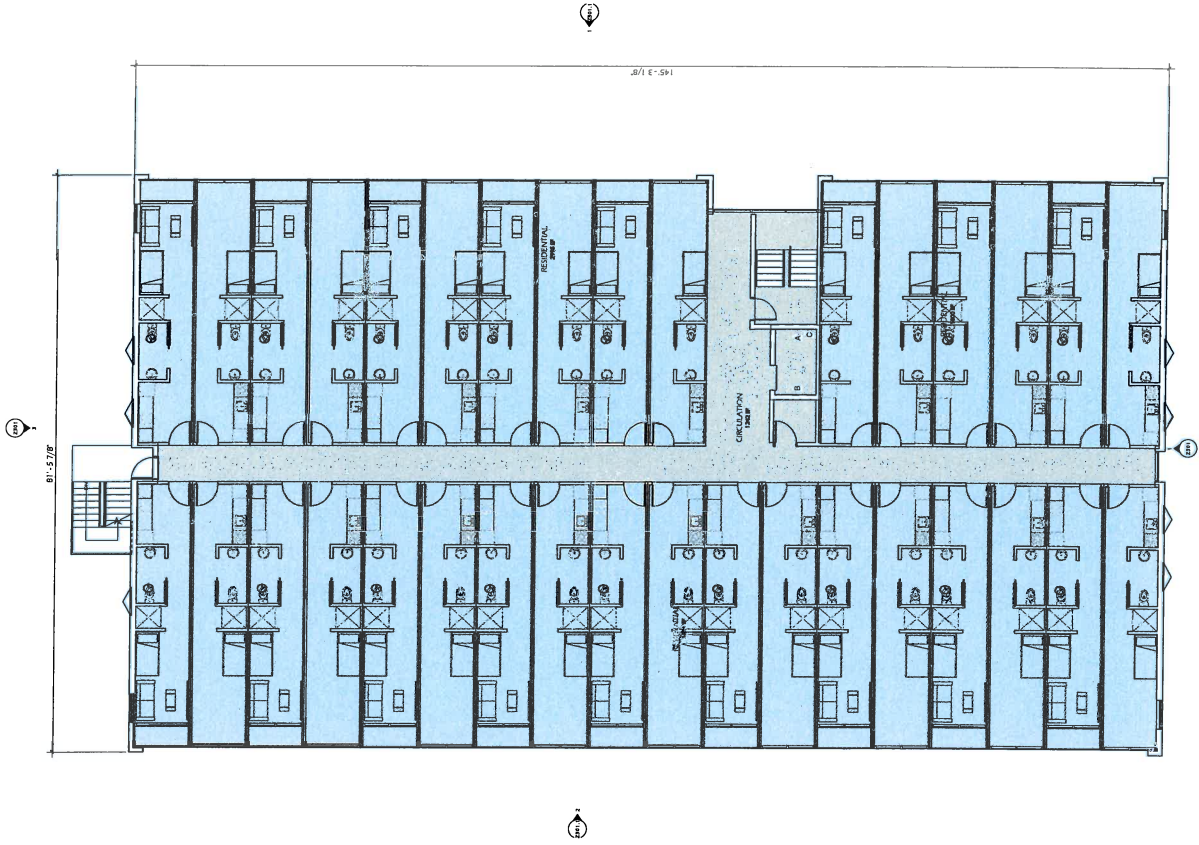
CONDITIONAL USE
 PERMIT

MERGED HOLDINGS LP

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Room Legend
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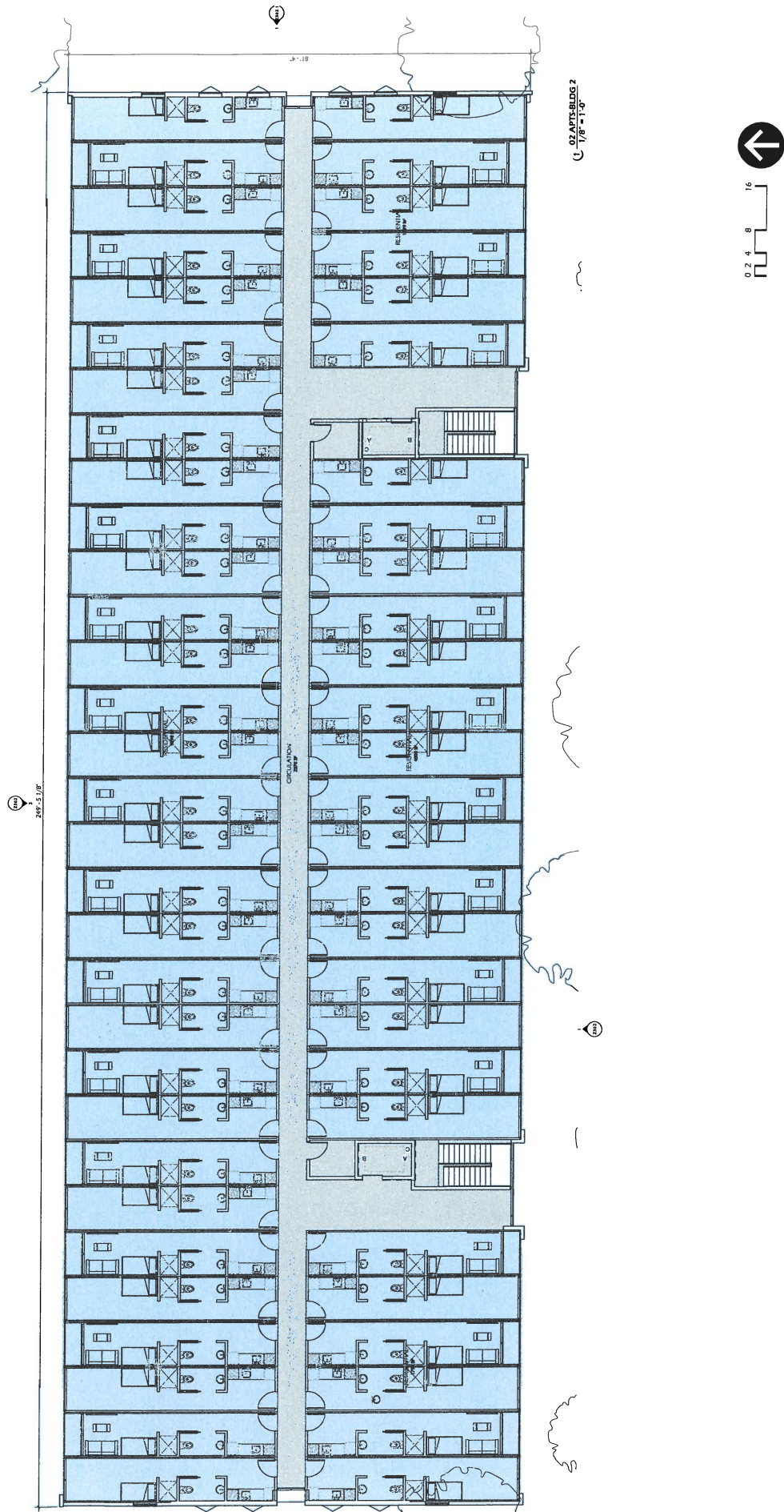
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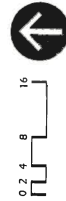
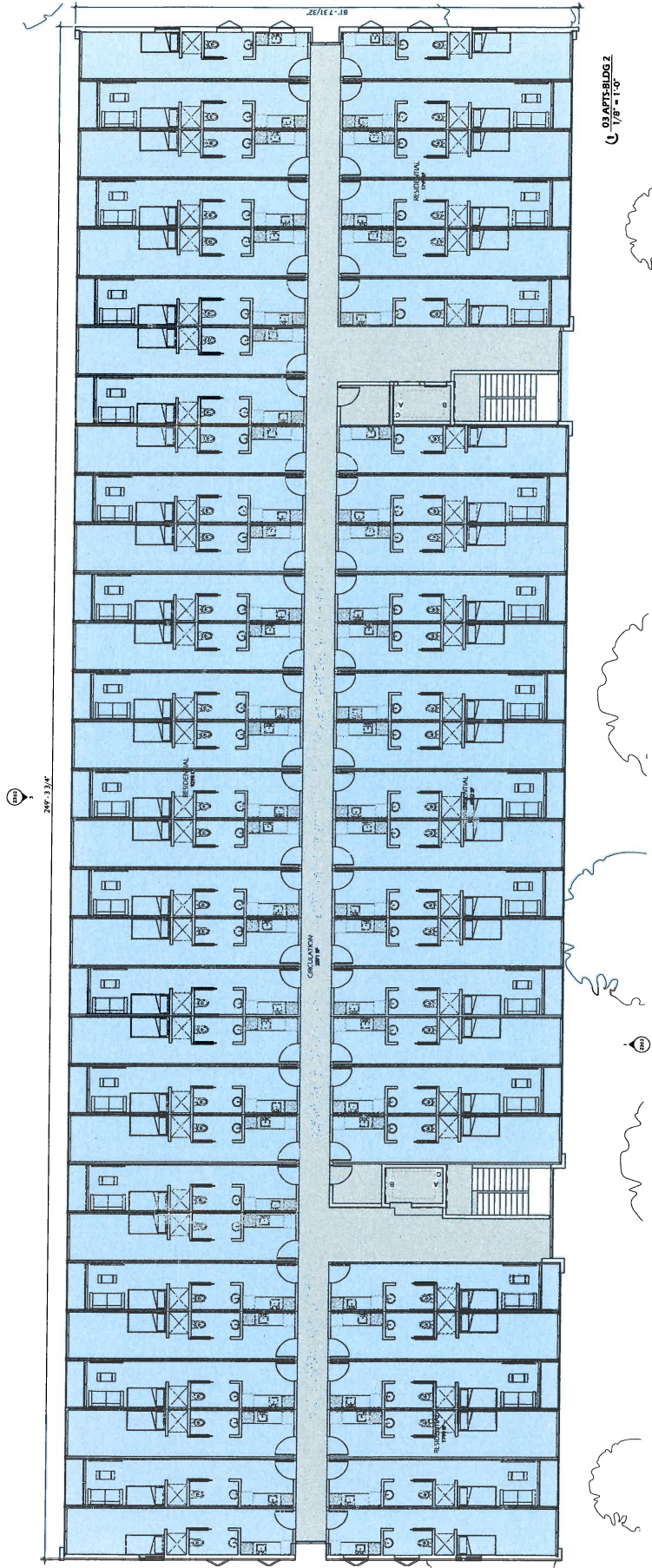
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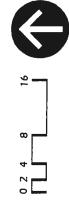
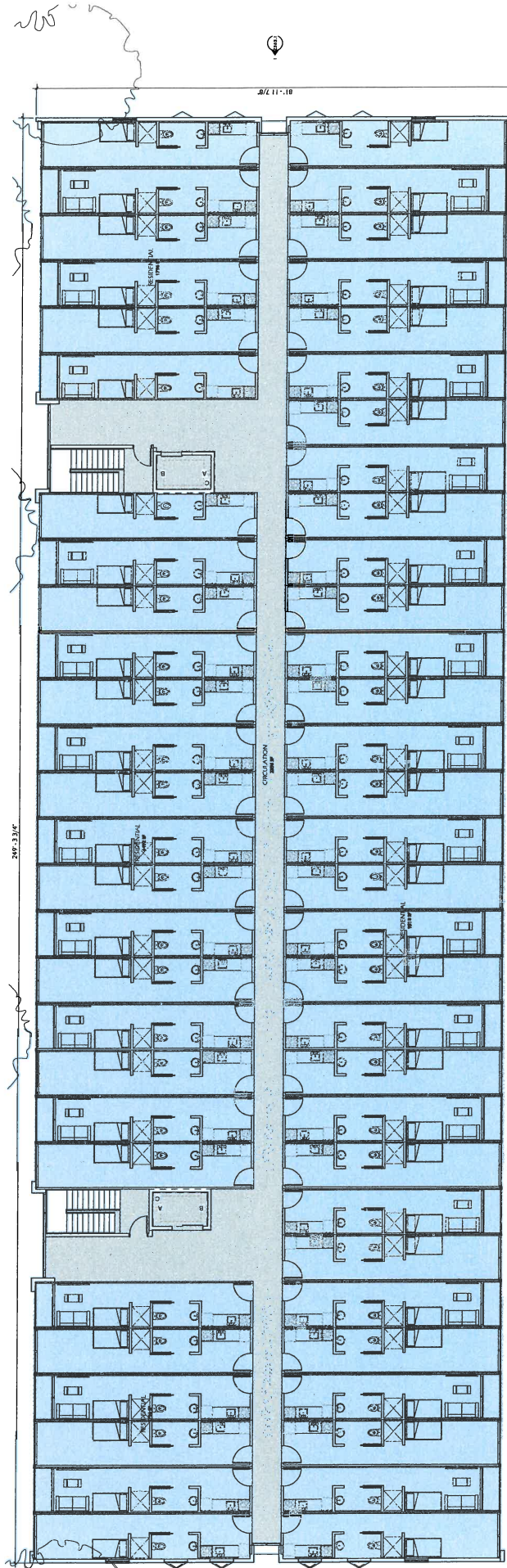
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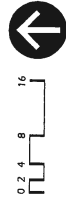
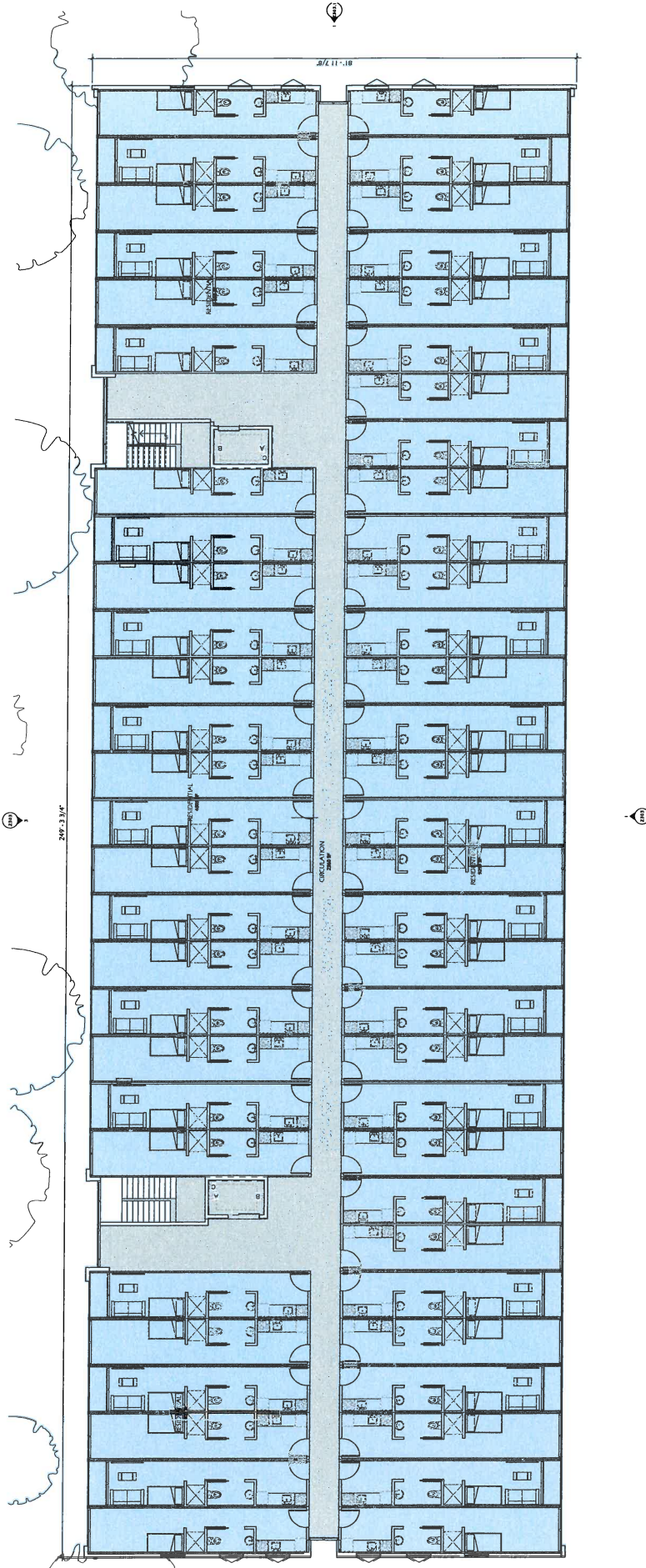
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September 9, 2019

LEGAL LETTER OF OPINION

To Whom It May Concern:

Question Presented:

Does a private owner's maximum occupancy limit of one person per unit violate Federal and California law's prohibition of discrimination against "familial status"? (See 42 USCA 3604, subd. (a).; see also Cal. Gov. Code §12955.)

Opinion:

I, Justin Wilmers, Esq., am an attorney duly licensed to practice law in the State of California. After reviewing the relevant law, subject to the qualifications and analysis below, I am of the opinion that a private owner's maximum occupancy limit of one person per unit does not per se violate the anti-discrimination provisions under the applicable Federal and California law.

Analysis:

I. The Federal Fair Housing Act and California FEHA

The Federal Fair Housing Act states that it shall be unlawful to refuse to sell or rent after the making of a bonafide offer, or to refuse to negotiate the sale or rental of, or otherwise make unavailable or deny, a dwelling to any person because of...familial status..." (42 USCA §3604, subd. (a).) Similarly, California FEHA forbids such discrimination based on familial status. (Cal. Gov. Code §12900 et. seq.)

The Fair Housing Act/FEHA mandates that courts examine the totality of the circumstances to determine whether the facially neutral occupancy restriction results in discrimination against a protected class. Specifically, if the plaintiff proves a prima facie case of discrimination, the defendant has the burden to articulate some legitimate nondiscriminatory reason for its action. As a matter of guidance, HUD has set forth a general rule that an occupancy policy of two persons per bedroom is presumptively reasonable. However, as exemplified below, the courts have never applied this rule as a basis of liability. Rather, each case is determined by the totality of the circumstances.

More restrictive, California's Department of Fair of Employment and Housing (DFEH) suggests "two plus one" formula, meaning two people per bedroom plus one additional occupant in the living space.

While the FHA authorizes federal, state or local governmental restrictions regarding the maximum number of occupants permitted to occupy rental units, the FHA does not expressly address the legitimacy of private owner occupancy restrictions that are more restrictive than state and local law. However, according HUD regulations, when a complaint alleges familial status housing discrimination, nongovernmental occupancy restrictions will be carefully examined to determine whether they operate *unreasonably* to limit or exclude families with children. (24 CFR, Ch.1, Subch. A, Appendix 1 at 693 (1991).)

In interpreting the laws above, the Eighth Circuit Court of Appeals in *U.S. v. Badgett* held that HUD's general rule of thumb "does not mean that a single occupancy requirement is always invalid, but it does render such a requirement suspect..." (*Badgett*, (1992) 976 F.2d 1176, at 1179.) However, in *Badgett*, the appellees only justification for a single person occupancy standard was limited availability of parking. The Court found this insufficient to justify the policy and was merely a pretext for other impermissible justifications. Most significantly, the dwellings at issue were one bedroom units with 636 square feet of living space.

In contrast to *Badgett*, the Ninth Circuit Court of Appeals has affirmed that owners and managers may develop and implement *reasonable* occupancy requirements based on factors such as the number and size of sleeping areas or bedrooms and the overall size of the dwelling unit. (See *Pfaff v. U.S. Dept. of Housing and Urban Development* (1996) 88 F.3d 739.) In its ruling, the *Pfaff* court departed from the suggested rule that a landlord must produce a "compelling business necessity" to impose numerical occupancy standards. (*Id.* at 748.)

Thus, the applicable federal law allows private housing providers to develop and implement occupancy standards reasonably related to the factors noted above, provided the standard has a demonstrable relationship to a legitimate business purpose.

II. City of Merced Local Law

The City of Merced has no governmentally implemented occupancy limits. Below is a brief overview of municipal codes that may be relevant for analysis.

The City of Merced Municipal Code adopted the Uniform Housing Code, 1997 Edition as the housing code of the city. (Merced Municipal Code §17.08.010.) The Uniform Housing Act defines "Efficiency Dwelling Units" as a dwelling unit containing only one habitable room and meeting the requirements of Section 503.2, exception. The 503.2 exception states,

"The unit shall have a living room of not less than 220 square feet of superficial floor area. An additional 100 square-feet of superficial floor area shall be provided for each occupant of such unit in excess of two."

Presumably, based on the language above, the **maximum** allowable numerical occupancy for an efficiency unit of 220 square feet is two occupants.

Additionally, City of Merced Municipal Code §20.44.120 allows for Single Room Occupancy (SRO) use, which states each unit shall accommodate “a maximum of two (2) persons.”

Provided the requirements for SRO are met, a privately implemented occupancy limit of 1 person per unit would seem reasonable and non-violative of the discrimination laws discussed above.

Qualifications:

- Privately implemented occupancy limit must be uniformly applied, not selectively.
- Privately implemented occupancy limit must have a demonstrable relationship to a legitimate business purpose. Such factors include, but are not limited to,
 - Size of bedrooms and unit;
 - Age of occupants;
 - Configuration of unit;
 - Capacity of septic, sewer, or other building systems;
 - Compliance with state and local law.
- If municipal occupancy limits that are stricter than federal/state law do in fact exist, the privately implemented occupancy limits must comply with such. However, upon my research this does not seem to be the case.

Sincerely,

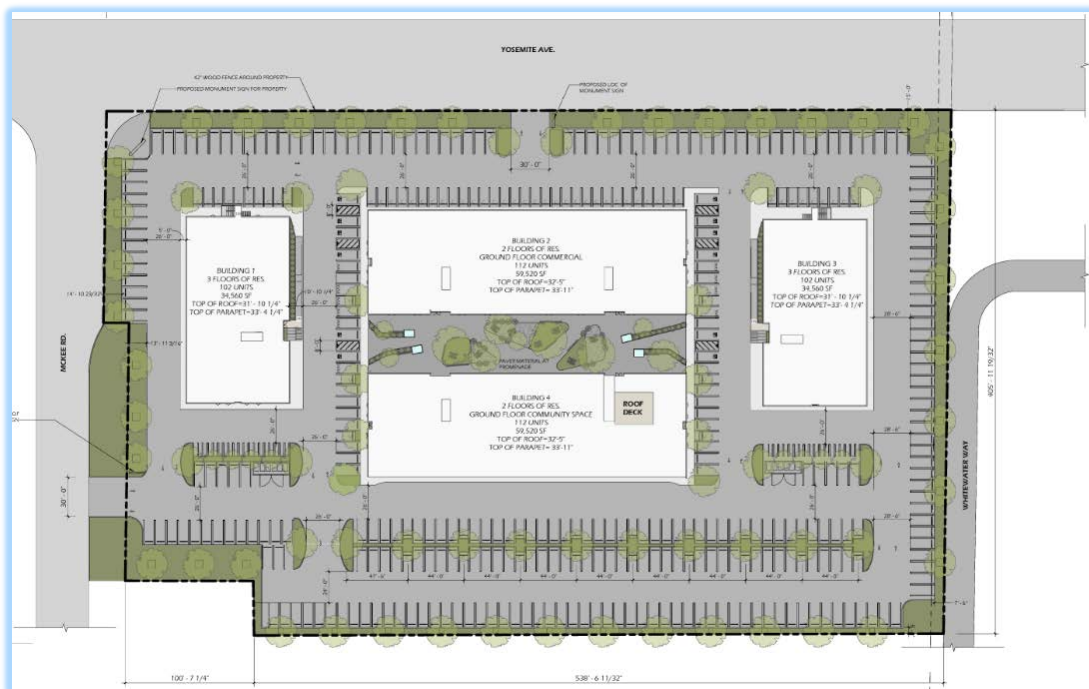
A handwritten signature in black ink, appearing to read 'Justin Wilmers', with a stylized flourish at the end.

Justin Wilmers, Esq.
Attorney at Law

INITIAL STUDY #19-18

General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231

SOUTHEAST CORNER OF
YOSEMITE AVENUE & MCKEE ROAD
Assessor's Parcel Numbers: 008-310-038; -053



Proposed Mixed-Use Project

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Attachments

- A) Public Hearing Notice and Map
- B) Mitigation Monitoring Program

Appendices

- A. Mitigation Monitoring Program for Initial Study #14-21
- B. Air Quality Analysis
- C. Greenhouse Gas Analysis
- D. Traffic Analysis

CITY OF MERCED
PLANNING & PERMITTING DIVISION

TYPE OF PROPOSAL: General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231

INITIAL STUDY: #19-18

DATE RECEIVED: June 25, 2019 (date application determined to be complete)

LOCATION: Southwest corner of East Yosemite Avenue and McKee Road
(3486 and 3492 McKee Road)

ASSESSOR'S PARCEL NUMBERS: 008-310-053 AND 008-310-038

Please forward any written comments by August 21, 2019 to:

Julie Nelson, Associate Planner
City of Merced Planning & Permitting Division
678 West 18th Street
Merced, CA 95340

Applicant Contact Information:

Merced Holdings, LP
9701 W Pico Blvd., Ste 201A
Los Angeles, CA 90035-4743

General Plan and Zoning Designations

Current General Plan Designation: Neighborhood Commercial (CN) and Low Density Residential (LD) – refer to the General Plan and Zoning Map at Figure 3.

Current Zoning Designation: Neighborhood Commercial (C-N) and R-1-6 – refer to the General Plan and Zoning Map at Figure 3.

Project Site

The proposed project is located at the southeast corner of Yosemite Avenue and McKee Road (Figures 1 and 2). The site is comprised of two parcels (APN's: 008-310-053 and -038) totaling approximately 5.94 acres (Figure 2). The surrounding land uses are shown on the map at Figure 2 and listed in the table below.

| Surrounding Land | Existing Use of Land | Zoning Designation | City General Plan Land Use Designation |
|-------------------------|--|---------------------------|---|
| North | Single-Family Residential/Church/School (across Yosemite Avenue) | County | Rural Residential (RR) |
| South | Single-Family Residential | R-1-6 | Low Density Residential (LD) |
| East | Single-Family Residential | P-D #52 | Low Density Residential (LD) |
| West | Single-Family Residential (across McKee Road) | R-1-6 | Low Density Residential (LD) |

Figure 1
Proximity Map

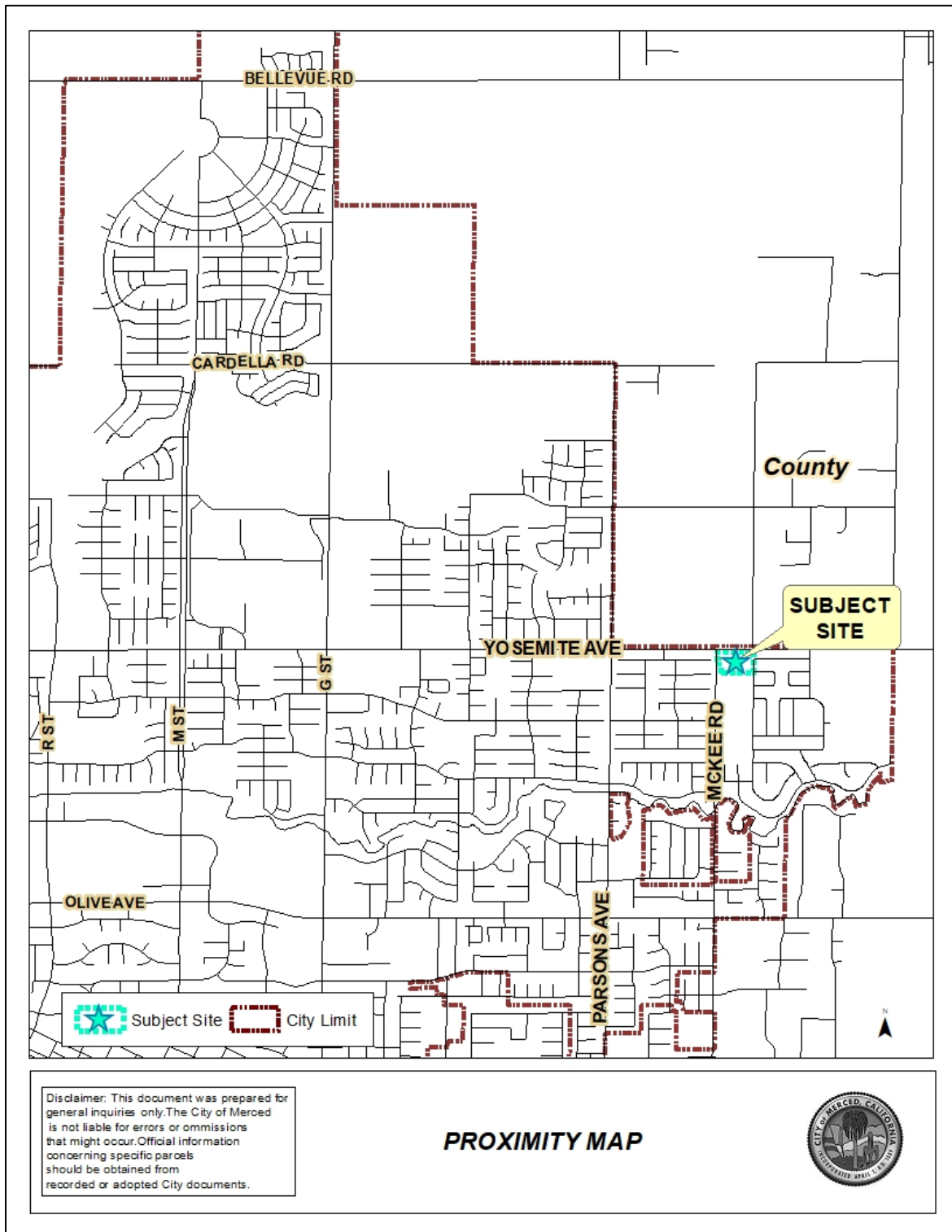


Figure 2
Subject Site & Surrounding Uses



Project Description

The proposed project includes a General Plan Amendment and Zone Change for 22,670 square feet of lot area along the southern property line of the Subject Site (refer to the map at Figure 3). As shown on the General Plan and Zoning Map at Figure 3 on page 6, the majority of the site has a General Plan designation of Neighborhood Commercial (CN) and a Zoning designation of Neighborhood Commercial (C-N). However, the developer recently acquired approximately 22,670 square feet of land from the adjacent parcel to the south. This area currently has a General Plan designation of Low Density Residential (LD) and a Zoning designation of R-1-6 (refer to Figure 3). The proposed General Plan Amendment would change this area from Low Density Residential (LD) to Neighborhood Commercial (CN) and the Zoning designation from R-1-6 to Neighborhood Commercial (C-N).

In addition to the proposed land use changes, the applicant is requesting approval for a Conditional Use Permit allow the construction of 428 efficiency dwelling units, approximately 18,000 square feet of retail space, and associated parking at the southeast corner of Yosemite Avenue and McKee Road (refer to the Site Plan at Figure 4). Each residential unit would be approximately 330 square feet in size and would be limited to a single occupant. The units would include kitchen facilities, a bathroom, and a living and bedroom area. The proposed floor plan for the efficiency dwelling units, the retail area, and the community is provided at Figure 5.

There would be a total of four buildings constructed on the site. All of the buildings would be three-stories tall. Buildings 1 and 3 as shown on the site plan at Figure 4 would each contain 102 units, while Buildings 2 and 4 would each contain 112 units. Buildings 2 and 4 would have a mixture of retail commercial uses and community/common area for the residential tenants on the ground floor. The table below provides a breakdown of the units, stories, building heights, and sizes. The building elevations are provided Figures 6-A, 6-B, 6-C, and 6-D.

BUILDING DETAILS

| Building No. | Stories | Units | Use | Total Square Feet | Height (to top of parapet) |
|---------------------|----------------|--------------|------------------------------------|--------------------------|-----------------------------------|
| 1 | 3 | 102 | Residential | 34,560 | 33' 4 1/4" |
| 2 | 3 | 112 | Residential/Retail/
Common Area | 59,520 | 31' 10 1/4" |
| 3 | 3 | 102 | Residential | 34,560 | 33' 4 1/4" |
| 4 | 3 | 112 | Residential/Retail/
Common Area | 59,520 | 31' 10 1/4" |
| TOTAL | | 428 | | 188,160 | |

The Zoning Ordinance describes uses that are allowed within a specific zone “by right” and those allowed with a discretionary review such as Site Plan Review or a Conditional Use Permit. Multi-family dwellings are allowed within a C-N zone with approval of a Conditional Use Permit. Therefore, the applicant has requested approval of a CUP for this project. Additionally, Section 20.32 of the Zoning Ordinance sets out the requirements for interface regulations to help integrate potentially incompatible zones. This section requires Site Plan Review be obtained prior to construction on a parcel with a Neighborhood Commercial (C-N) zone when it is adjacent to or across the street from an R-1-6 zone or property zoned Planned Development (P-D) containing uses that are similar to those permitted in an R-1-6 zone. In this case, the property to the west

across McKee Road and the property to the south are zoned R-1-6. The property to the east is zoned Planned Development (P-D) #52 which allows single-family dwellings similar to the R-1-6 zone. The property to the north of the site is not within the City Limits, but is within the City's Sphere of Influence and Specific Urban Development Plan Boundary and have a Rural Residential (RR) General Plan designation. The uses in this area include a church and a small school as well as single-family dwellings located on 1 to 2-acre lots. Instead of requiring two separate processes for the project to review the use as a Conditional Use and interface with a Site Plan Review, the Conditional Use Permit process will address the interface regulations.

Figure 3 - Proposed Land Use Changes

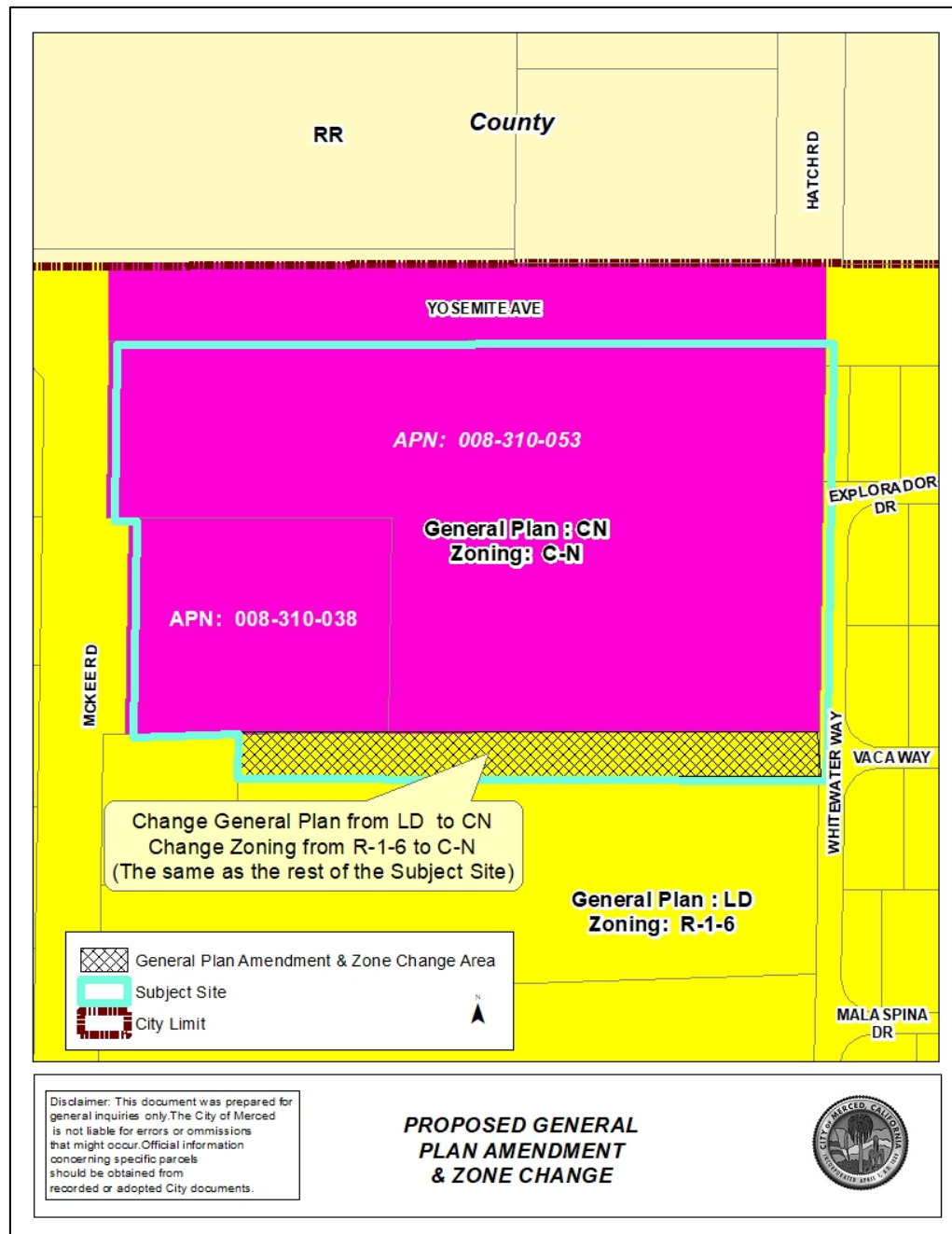


Figure 4 -Site Plan



Figure 5 - Floor Plan



Figure 6-A - Elevations

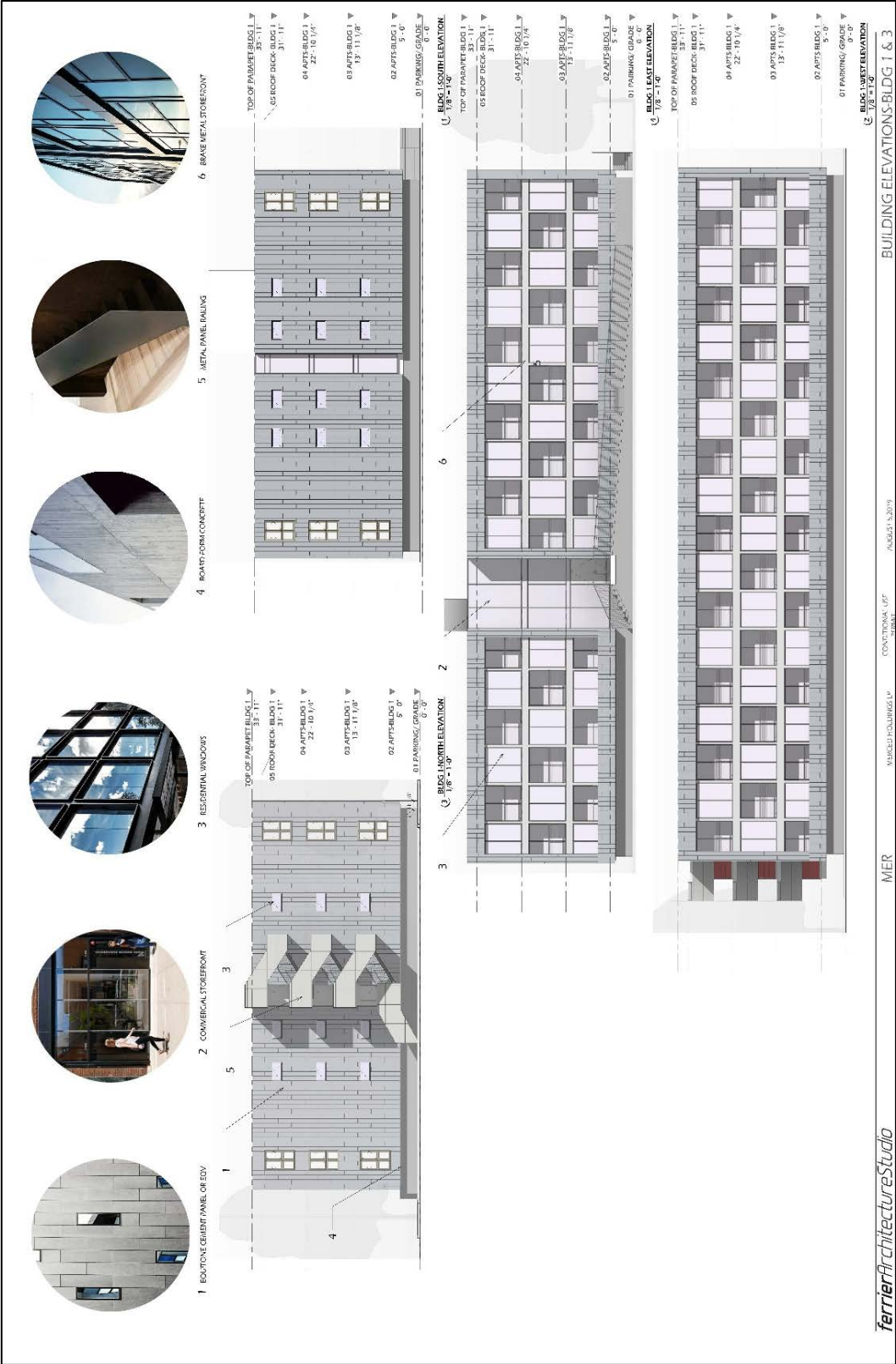


Figure 6-B - Elevations

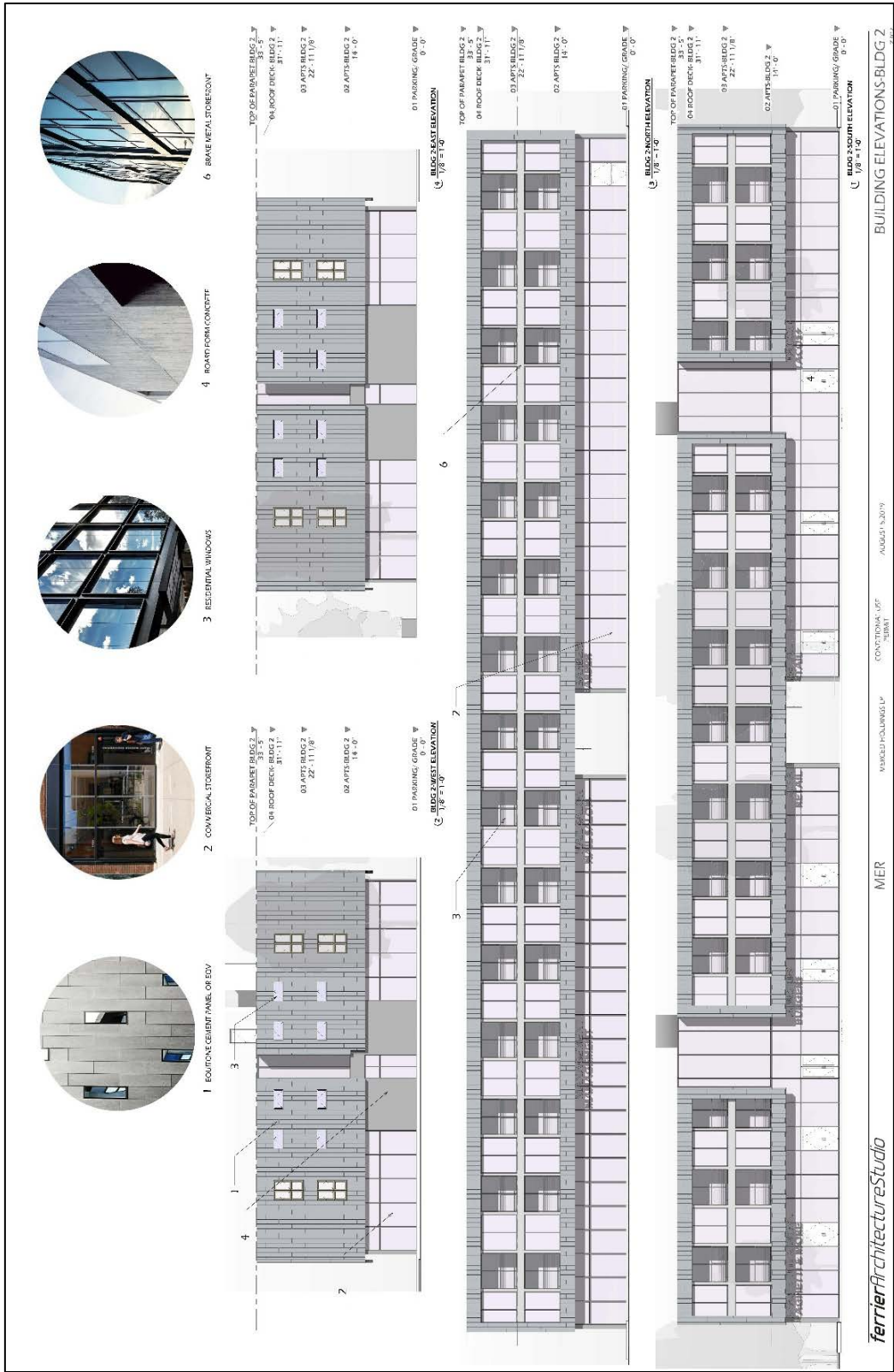


Figure 6-C - Elevations

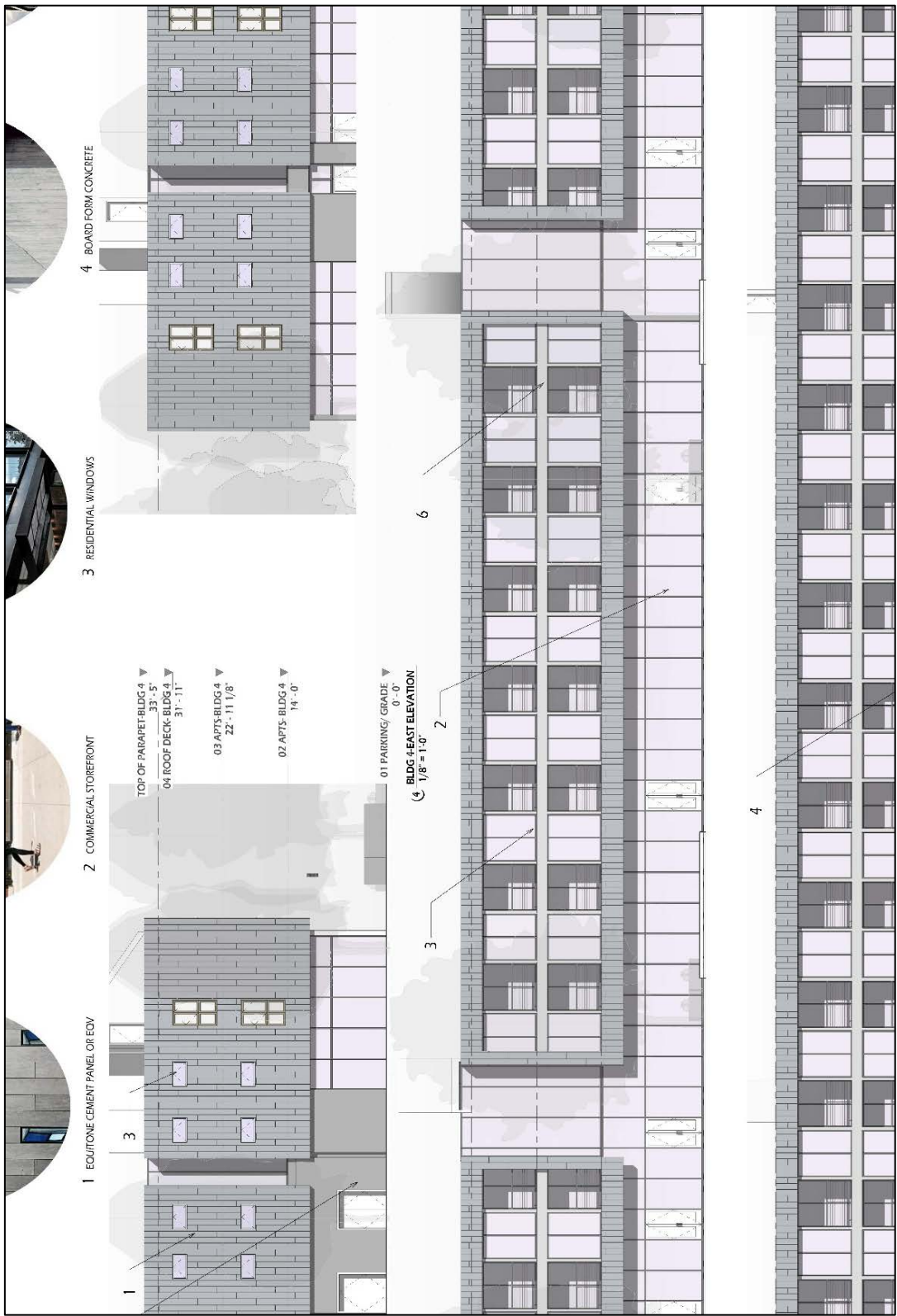
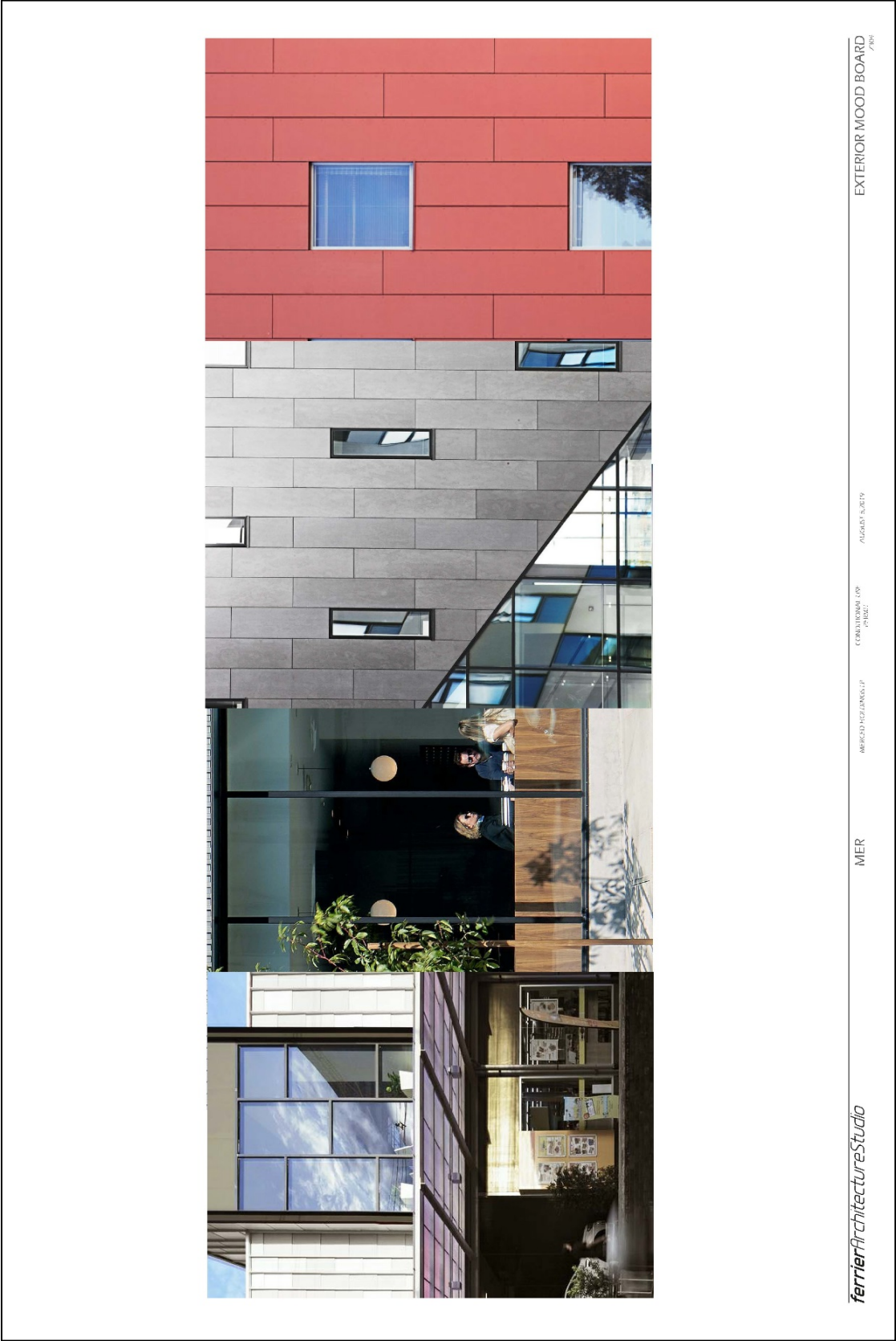


Figure 6-D - Elevations



Background

This site was included in Expanded Initial Study (EIS) #02-27 for the “Hunt Family Annexation,” which resulted in a Mitigated Negative Declaration. In 2014, an application was submitted for a General Plan Amendment and Zone Change to change the land use from Low Density Residential to Neighborhood Commercial for a majority of the site (all but the newly acquired 22,679 square feet). The requested General Plan Amendment and Zone Change changing the zoning from R-1-6 to Neighborhood Commercial (C-N) were approved August 3, 2015.

With this change, an additional environmental review (Initial Study #14-32) was prepared and also resulted in a Mitigated Negative Declaration (MND). The Mitigation Monitoring Program for Initial Study #14-32, which also includes relevant mitigation measures from EIS #02-27, is provided at Appendix A. All applicable mitigation measures from the previous environmental reviews shall be enforced with the project currently being proposed.

Within a Neighborhood Commercial (C-N) zone, multi-family uses are permitted with Conditional Use Permit approval. In order for the developer to use the entire site for multi-family development, the General Plan Amendment and Zone Change for the newly acquired area is needed. If the General Plan Amendment and Zone Change are approved, the Conditional Use Permit could be approved to allow the construction of the proposed development.

A. INITIAL FINDINGS

- A. The proposal is a project as defined by CEQA Guidelines Section 15378.
- B. The project is not a ministerial or emergency project as defined under CEQA Guidelines (Sections 15369 and 15369).
- C. The project is therefore discretionary and subject to CEQA (Section 15357).
- D. The project is not Categorically Exempt.
- E. The project is not Statutorily Exempt.
- F. Therefore, an Environmental Checklist has been required and filed.

B. CHECKLIST FINDINGS

- A. An on-site inspection was made by this reviewer on July 11, 2019.
- B. The checklist was prepared on July 26, 2019.
- C. The *Merced Vision 2030 General Plan* and its associated EIR (SCH# 2008071069) were certified in January 2012. The document comprehensively examined the potential environmental impacts that may occur as a result of build-out of the 28,576-acre Merced SUDP/SOI. For those significant environmental impacts (Loss of Agricultural Soils and Air Quality) for which no mitigation measures were available, the City adopted a Statement of Overriding Considerations (City Council Resolution #2011-63). This document herein incorporates by reference the *Merced Vision 2030 General Plan*, the *General Plan Program EIR* (SCH# 2008071069), and Resolution #2011-63.

As a subsequent development project within the SUDP/SOI, many potential environmental effects of the Project have been previously considered at the program level and addressed within the General Plan and associated EIR. (Copies of the General Plan and its EIR are available for review at the City of Merced Planning and Permitting Division, 678 West 18th Street, Merced, CA 95340.) As a second tier environmental document, Initial Study #19-18 plans to incorporate goals, policies, and implementing actions of the *Merced Vision 2030 General Plan*, along with mitigation measures from the General Plan EIR, as mitigation for potential impacts of the Project.

Project-level environmental impacts and mitigation measures (if applicable) have been identified through site-specific review by City staff. This study also utilizes existing technical information contained in prior documents and incorporates this information into this study. This site was included in Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 and Initial Study #14-32 for General Plan Amendment #14-06 and Zone Change #421. The previously approved Mitigation Monitoring Program for both Initial Studies is found at Appendix A.

Project-level environmental impacts have been identified through site-specific review by City staff. This study also utilizes existing technical information contained in prior documents and incorporates this information into this study.

C. ENVIRONMENTAL IMPACTS:

Will the proposed project result in significant impacts in any of the listed categories? Significant impacts are those which are substantial, or potentially substantial, changes that may adversely affect the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant. (Section 15372, State CEQA Guidelines. Appendix G of the Guidelines contains examples of possible significant effects.)

A narrative description of all "potentially significant," "negative declaration: potentially significant unless mitigation incorporated," and "less than significant impact" answers are provided within this Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact,” as indicated by the checklist on the following pages.

| | | | | | |
|---|----------------------------|---|--------------------------------|---|------------------------------------|
| X | Aesthetics | | Agriculture/Forestry Resources | X | Air Quality |
| X | Biological Resources | X | Cultural Resources | X | Energy |
| X | Geology/Soils | X | Greenhouse Gas Emissions | X | Hazards and Hazardous Materials |
| X | Hydrology/Water Quality | X | Land Use/Planning | | Mineral Resources |
| X | Noise | X | Population/Housing | X | Public Services |
| X | Recreation | X | Transportation | | Tribal Cultural Resources |
| X | Utilities/Services Systems | X | Wildfire | X | Mandatory Findings of Significance |

DETERMINATION

On the basis of this initial evaluation:

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

Prepared by:

Julie Nelson, Associate Planner

Date

Approved
by:

Kim Espinosa, Planning Manager
Environmental Coordinator, City of Merced

Date

Distributed for Public Review: August 1, 2019

1. Aesthetics

SETTING AND DESCRIPTION

The project site is comprised of two parcels totaling 5.94 acres located at the southeast corner of East Yosemite Avenue and McKee Road. The site is currently vacant, although, two single-family dwellings were recently demolished and removed from the site. The site is surrounded by urban development consisting of primarily single-family homes. There is also a church and small school located to the north of the site.

The site is not located within a designated scenic corridor and there are no scenic vistas visible from the site. The topography of the site is level and there are no outstanding features noted.

The proposed project would include the construction of four 3-story buildings ranging in height from 31' 10 1/4" to 33' 4 1/4" to the top of the building parapet. The buildings would be located towards the interior of the site with parking surrounding the buildings (refer to the building elevations at Figures 6-A through 6-D on pages 8 through 11).

The buildings would have a modern design with a mixture of exterior finishes including vertical and/or horizontal wood siding, stucco, and typical commercial store fronts with metal finishes. Balconies would be provided on the upper floor levels for the residential tenants. Each building would have interior stairways as well as exterior stairways for emergency access.

The site would be enhanced with landscaping along the perimeter and between the buildings as well as parking lot trees (refer to the Site Plan at Figure 4 on Page 6 for the conceptual landscape plan for the site).

Parking lot lighting and exterior building lighting would be added to the site.

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|---|--------------------------------------|--|------------------------------------|-----------|
| 1. <u>Aesthetics.</u> Will the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | | | | ✓ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | | ✓ |
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | | | ✓ | |

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|---|--------------------------------------|--|------------------------------------|-----------|
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Have a substantial adverse effect on a scenic vista?*

The site is not designated as a scenic vista and is not located near any designated scenic vistas. Therefore, the project would not have any adverse impacts on a scenic vista and there would be **no impact**.

- b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

There are no officially designated State Scenic Highways or Routes in the project vicinity. Therefore, the project would have **no impact** on scenic resources, such as rock outcroppings, trees, or historic buildings within a scenic highway.

- c) *If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The project site is located within an urbanized area with development surrounding the site. The current zoning for the majority of the site is Neighborhood Commercial (C-N). The proposed Zone Change would change the recently acquired 22,670 square feet of lot area from R-1-6 to Neighborhood Commercial (C-N). The proposed buildings would not exceed the maximum height allowed in an R-1-6 zone (35 feet) or that allowed within a C-N zone when directly across from or adjacent to a residential zone (also 35 feet). The City's zoning ordinance does not regulate scenic quality other than building height and general aesthetics. Because the site is currently vacant and has recently been in a blighted condition, the development of the site would improve the aesthetic value of the site. Therefore, any changes to the visual character of the site would be a **less than significant impact**.

- d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

The General Plan Amendment and Zone Change would not create any additional source of light or glare that would affect views in the area. The construction of the mixed-use development on the site would add artificial lighting to the area. The parking areas and buildings would add artificial lighting to the site and area. However, given the fact that the site is surrounded by urban development and is currently zoned for commercial development, the impacts would be less than significant. The proposed project may result in low level, off-site light and glare from streetlights, security lights, parking lot lighting and reflective material. Off-site effects depend upon the type of lighting fixtures installed and

building materials used to construct the buildings. All lighting would be required to meet the California Energy Code and would be required to be shielded so it doesn't spillover onto adjacent properties as required by the Energy Code. The addition of lighting would be a **less than significant impact**.

2) **Agriculture Resources**

SETTING AND DESCRIPTION

Merced County is among the largest agriculture producing Counties in California (ranked fifth), with a gross income of more than \$3.4 billion in 2017. The County's leading agriculture commodities include milk, chickens, almonds, cattle and calves, tomatoes, and sweet potatoes.

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| 2. <u>Agriculture and Forestry Resources.</u>
Will the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and monitoring Program of the California Resources Agency, to non - agriculture? | | | | ✓ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | ✓ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land [as defined in Public Resources Code Section 12220(g)], timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production [as defined by Government Code Section 51104(g)]? | | | | ✓ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | | | | ✓ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | | | | ✓ |

Impact Analysis

Would the project:

- a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and monitoring Program of the California Resources Agency, to non -agriculture?*

The project site is located within the City Limits of Merced and was annexed in 2003. The California Department of Conservation prepares Important Farmland Maps through its Farmlands Mapping and Monitoring Program (FMMP). The system of classifying areas is based on soil type and use. According to the 2018 Merced County Important Farmlands Map, the site is classified as “Urban and Built-Up Land, and “Vacant or Disturbed Land” (Figure 7). Therefore, the proposed General Plan Amendment, Zone Change, and Conditional Use Permit would not have any effect on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The proposed project would not affect protected farmland and there would be **no impact**.

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

There are no Williamson Act contract lands in this area. Therefore, there is **no impact**.

- c) *Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

There is no forest land or timberland on the site. The project would not conflict with any zoning or plan for forest land or timberland. Therefore, **there is no impact**.

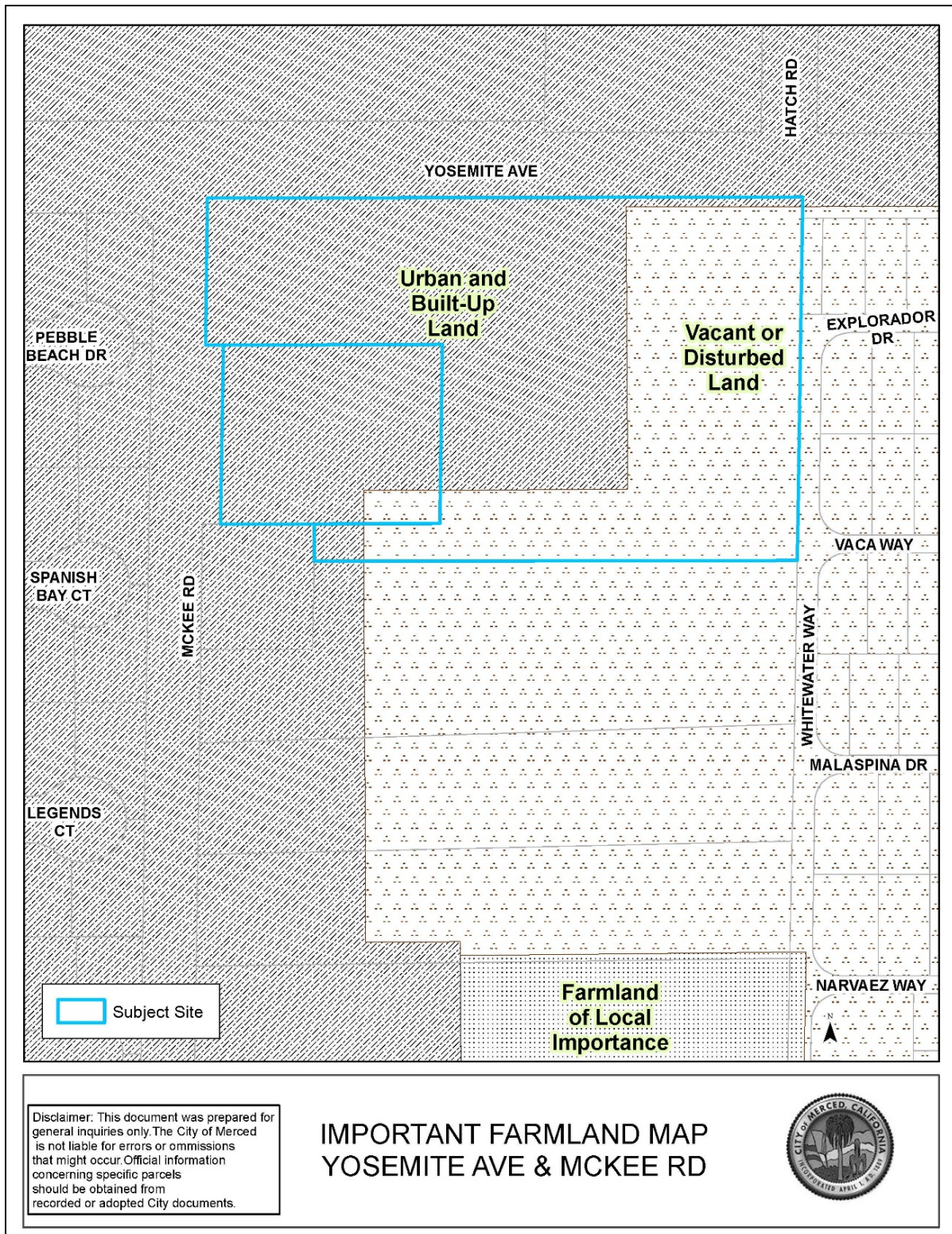
- d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

See item 3 above. **No impact**.

- e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

The nearest land being used for farming is approximately one-half mile to the east, outside the City Limits. The proposed development would not cause the use of this land to change. Therefore, there is **no impact**.

Figure 7 - Important Farmland Map



3. Air Quality

SETTING AND DESCRIPTION

The San Joaquin Valley Air Pollution Control District (SJVAPCD) will review the project to assess the impact to air quality and to establish acceptable mitigation measures. Hence, the City recognizes that additional mitigation measures may be applied to subsequent phases of the development of this area. While the action of the SJVAPCD is independent of City reviews and actions, their process allows the City to review proposed mitigation measures that could affect project design and operation. Any proposed changes are subject to approval by the City.

The project is located in the San Joaquin Valley Air Basin (SJVAB), which occupies the southern half of the Central Valley and is approximately 250 miles in length and, on average, 35 miles in width. The Coast Range, which has an average elevation of 3,000 feet, serves as the western border of the SJVAB. The San Emigdio Mountains, part of the Coast Range, and the Tehachapi Mountains, part of the Sierra Nevada, are both located to the south of the SJVAB. The Sierra Nevada extends in a northwesterly direction and forms the eastern boundary of the SJVAB. The SJVAB is basically flat with a downward gradient to the northwest.

The climate of the SJVAB is strongly influenced by the presence of these mountain ranges. The mountain ranges to the west and south induce winter storms from the Pacific to release precipitation on the western slopes, producing a partial rain shadow over the valley. A rain shadow is defined as the region on the leeward side of the mountain where precipitation is noticeably less because moisture in the air is removed in the form of clouds and precipitation on the windward side. In addition, the mountain ranges block the free circulation of air to the east, resulting in the entrapment of stable air in the valley for extended periods during the cooler months.

Winter in the SJVAB is characterized as mild and fairly humid, and the summer is hot, dry, and cloudless. During the summer, a Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind.

For additional information, please refer to the Air Quality Analysis prepared by Rincon Consultants found at Appendix B.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
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| 3. <u>Air Quality.</u> Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | ✓ |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | | | ✓ | |
| c) Expose sensitive receptors to substantial pollutant concentrations? | | | ✓ | |

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| d) Create objectionable odors affecting a substantial number of people? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Conflict with or obstruct implementation of the applicable air quality plan?*

Per the Air Quality Analysis found at Appendix B, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, there would be **no impact**.

- b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

Per the Air Quality Analysis found at Appendix B, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant. Therefore, this impact is considered **less than significant**.

- c) *Expose sensitive receptors to substantial pollutant concentrations?*

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, based on Table 2 of the Air Quality Analysis at Appendix B indicates construction emissions would not exceed the SJVAPCD construction threshold levels. Additionally, Table 3 of the Analysis indicates that operational emissions would not exceed the SJVAPCD threshold levels. Therefore, this impact is considered **less than significant**.

- d) *Create objectionable odors affecting a substantial number of people?*

During construction, the various diesel powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered less than significant. In addition, the proposed residential and commercial uses are not expected to produce any offensive odors that would result in frequent odor complaints. The proposed project would not create objectionable odors affecting a substantial number of people during project construction or operation, and this impact is considered **less than significant**.

4. Biological Resources

SETTING AND DESCRIPTION

The plan area is located in the Central California Valley eco-region. This eco-region is characterized by flat, intensively farmed plains with long, hot dry summers and cool, wet winters (14-20 inches of precipitation per year). The Central California Valley eco-region includes the Sacramento Valley to the north and the San Joaquin Valley to the south and it ranges between the

Sierra Nevada Foothills to the east to the Coastal Range foothills to the west. Nearly half of the eco-region is actively farmed, and about three fourths of that farmed land is irrigated.

According to the State of California, Department of Fish and Game Natural Diversity Data Base (NDDB), the site does not include any plant and/or animal species listed as threatened or endangered by the State of California or the Federal Government. Furthermore, the biological resources evaluation, prepared as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (EIR), does not identify the project area as containing any seasonal or non-seasonal wetland or vernal pool areas. Given the adjacent, built-up, urban land uses and major roadways, no form of unique, rare or endangered species of plant and/or animal life could be sustained on the subject site.

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| 4. <u>Biological Resources.</u> Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | ✓ | |
| b) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | ✓ | |
| c) Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance? | | | | ✓ |
| d) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | | ✓ |
| e) Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance? | | | | ✓ |
| f) <i>Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i> | | | | ✓ |

Impact Analysis

Would the project:

- a) *Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

The proposed project would not have any direct effects on animal life by changing the diversity of species, number of species, reduce any rare or endangered species, introduce any new species, or deteriorate existing fish or wildlife habitat. Although the *Merced Vision 2030 General Plan* identifies several species of plant and animal life that exist within the City's urban boundaries, the subject site, which is surrounded by developed urban uses, does not contain any rare or endangered species of plant or animal life.

A biological resources inventory was prepared as part of the environmental review for the annexation of this area. At that time, there was no evidence of the presence of any candidate, sensitive, or special status species or their habitats in the area. However, mitigation measures were adopted for project sites that abut Black Rascal Creek. Because this site does not abut the creek, these mitigation measures are not applicable to this project. This impact would be **less than significant**.

| <i>Goal Area OS-1: Open Space for the Preservation of Natural Resources</i> | |
|--|---|
| Policies: | |
| OS-1.1 | Identify and mitigate impacts to wildlife habitats which support rare, endangered, or threatened species. |

- b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

The proposed project would not have any direct effects on riparian habitat or other sensitive natural community. The City General Plan identifies Bear, Black Rascal, Cottonwood, Miles, Fahrens, and Owens Creeks within the City's growth area. The subject site is not located adjacent to any of these areas or any water way. Therefore, the project would have a **less than significant impact** on riparian habitat.

- c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The project site would not have any direct effect on wetlands as no wetlands have been identified in this area. All of the area surrounding the subject site has been modified from its original state and is developed with urban uses. There is **no impact**.

- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

The project would not have any adverse effects on any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridor, or impede the use of native wildlife nursery sites. There is **no impact**.

- e) *Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?*

The proposed project would not conflict with local policies and/or ordinances protecting biological resources. There are few trees or other vegetation present on the site. The City's

General Plan does not identify this site as being a biological resource. According to Expanded Initial Study #02-27, the biological study done for the annexation of this site revealed no evidence of the presence of any candidate, sensitive, or special status species or their habitats on the site. Therefore, there is **no impact**.

- f) *Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The proposed project would not have any effects on a habitat conservation plan. There are no adopted habitat conservation plans, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan for the City of Merced or Merced County. There is **no impact**.

5. Cultural Resources

SETTING AND DESCRIPTION

The City of Merced area lies within the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur.

Merced County was first explored by Gabriel Moraga in 1806, when he named the Merced River, “El Rio de Nuestra Senra de la Merced.” Moraga’s explorations were designed to locate appropriate sites for an inland chain of missions. Moraga explored the region again in 1808 and 1810.

Archaeology

Archaeological sites are defined as locations containing significant levels of resources that identify human activity. Very little archaeological survey work has been conducted within the City or its surrounding areas. Creeks, drainage, and sloughs exist in the northern expansion area of the City, and Bear Creek and Cottonwood Creek pass through the developed area. Archaeological sites in the Central Valley are commonly located adjacent to waterways and represent potential for significant archaeological resources.

Paleontological sites are those that show evidence of pre-human existence. Quite frequently, they are small outcroppings visible on the earth’s surface. While the surface outcroppings are important indications of paleontologic resources, it is the geologic formations that are the most important. There are no known sectors within the project area known to contain sites of paleontologic significance.

Historic Resources

In 1985, in response to community concerns over the loss of some of the City’s historic resources, and the perceived threats to many remaining resources, a survey of historic buildings was undertaken in the City. The survey focused on pre-1941 districts, buildings, structures, and objects of historical, architectural, and cultural significance. The survey area included a roughly four square-mile area of the central portion of the City.

The National Register of Historic Places, the California Historical Landmarks List, and the California Inventory of Historic Resources identify several sites within the City of Merced. These

sites are listed on the Merced Historical Site Survey and maintained by the Merced Historical Society. There are no listed historical sites on the Project site.

According to the environmental review conducted for the annexation of this area, there are no listed historical sites and no known sectors within the project area known to contain sites of paleontological or archeological significance. However, mitigation measures were adopted to ensure proper steps are taken in the event evidence of archeological artifacts area discovered during construction.

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| 5. <u>Cultural Resources.</u> Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | | ✓ | | |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | | ✓ | | |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | | ✓ | | |

Impact Analysis

Would the project:

- a) *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

The project would not alter or destroy any historic archaeological site, building, structure, or object, nor would it alter or affect unique ethnic cultural values or restrict religious or sacred uses.

A cultural resources records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus as part of the City's General Plan update. No historic resources were found at or near the project site. The impact of this project would be less than significant. However, as part of the Expanded Initial Study (EIS) prepared for this site as part of the annexation process in 2003, mitigation measures were applied to ensure no cultural resources would be disturbed. This project would be required to comply with those mitigation measures. Compliance with this mitigation measure would reduce this impact to **less than significant with mitigation**.

Mitigation Measures:

- CUL-1) If unknown pre-contact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations.

Cultural resources materials may include pre-contact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations shall be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.

The applicant shall inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:

“The subsurface of the construction site is sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells.”

The City shall verify that the language has been included in the grading plans prior to issuance of a grading permit or other permitted project action that includes ground-disturbing activities on the project site.

- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

The project would not alter or destroy any prehistoric archaeological site, building, structure, or object, nor would it alter or affect unique ethnic cultural values or restrict religious or sacred uses.

A cultural resources records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus as part of the City's General Plan update. No archeological resources were found at or near the project site. However, the project is required to comply with all mitigation measures applied to EIS #02-27. Therefore, this impact would be **less than significant with mitigation**.

Mitigation Measure:

CUL-2) Implementation of Mitigation Measure CUL-1.

- c) *Disturb any human remains, including those interred outside of formal cemeteries?*

Disturbance of human remains interred outside of formal cemeteries would result in a significant impact. If human remains are identified during project construction, Section

7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code shall apply, appropriate. Therefore, implementation of Mitigation Measure CUL-3 reduce potential impacts to human remains to **less than significant with mitigation**.

Mitigation Measure:

- CUL-3) If human remains are identified during construction and cannot be preserved in place, the applicant shall fund: 1) the removal and documentation of the human remains from the project corridor by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, 2) the scientific analysis of the remains by a qualified archaeologist, should such analysis be permitted by the Native American Most Likely Descendant, and 3) the reburial of the remains, as appropriate. All excavation, analysis, and reburial of Native American human remains shall be done in consultation with the Native American Most Likely Descendant, as identified by the California Native American Heritage Commission.

6. Energy

SETTING AND DESCRIPTION

Appendix F (Energy Conservation) of the CEQA Guidelines provides that potentially significant energy implications of a project must be considered in an EIR, with particular emphasis on avoiding or reducing the inefficient, wasteful and unnecessary consumption of energy. As such, this discussion considers the proposed Project's consumption of energy resources, particularly electricity, natural gas, and transportation fuels, during both the project's construction and operational phases.

The proposed mixed use project would be built to meet the California Energy Code requirements and may include the installation of solar panels. Additionally, the project would provide bicycle parking and promote the use of public transit to help reduce energy consumed for transportation. The site is located within ¼-mile of a transit stop. The project would incorporate recycling procedures for the disposal of recyclable materials in accordance with the City's recycling ordinance and AB 341.

According to data from the U.S. Energy Information Administration, apartment buildings with 5 or more units typically use less energy than other home types. Households in apartment buildings with 5 or more units use approximately 50% less energy as other types of homes. The lower energy consumption can be attributed, in part to smaller living spaces and units being bordered by other units or common areas which reduces exposure to outside temperatures and the number of windows in the unit.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| 6. <u>Energy.</u> Would the project: | | | | |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | | ✓ | | |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | | ✓ | | |

Impact Analysis

- a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

The project is not expected to result in potentially significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. The project would be constructed on an in-fill lot that has access to existing electrical and telecommunications services. No new transportation, electrical, or telecommunications facilities are required to support the project leading to unnecessary consumption of energy resources. Compliance with the California Green Building Standards Code, AB 341- Solid Waste Diversion, and the San Joaquin Valley Air Pollution Control District standards during construction and operation of the project will further ensure the efficient consumption of energy resources. Implementation of these regulations would reduce impacts to **less than significant with mitigation.**

Mitigation Measure:

- ENE-1) The applicant shall comply with all applicable California Energy Code, AB 341, and San Joaquin Valley Air Pollution Control District rules and regulations regulating energy efficiency and waste.
- b) *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

With the implementation of the regulations described in item “a” above, the proposed project would not conflict with a state or local plan for renewable energy or energy efficiency. This impact is **less than significant with mitigation.**

- ENE-2) Implementation of Mitigation Measure ENE-1.

7. Geology and Soils

SETTING AND DESCRIPTION

The City of Merced is located approximately 150 miles southeast of San Francisco along the west side of the southern portion of the Great Valley Geomorphic Province, more commonly referred to as the San Joaquin Valley. The valley is a broad lowlands bounded by the Sierra Nevada to the east and Coastal Ranges to the west. The San Joaquin Valley has been filled with a thick sequence

of sedimentary deposits of Jurassic to recent age. A review of the geologic map indicates that the area around Merced is primarily underlain by the Pleistocene Modesto and Riverbank Formations with Holocene alluvial deposits in the drainages. Miocene-Pliocene Mehrten and Pliocene Laguna Formation materials are present in outcrops on the east side of the SUDP/SOI. Modesto and Riverbank Formation deposits are characterized by sand and silt alluvium derived from weathering of rocks deposited east of the SUDP/SOI. The Laguna Formation is made up of consolidated gravel sand and silt alluvium and the Mehrten Formation is generally a well consolidated andesitic mudflow breccia conglomerate.

Faults and Seismicity

A fault, or a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side, is an indication of past seismic activity. It is assumed that those that have been active recently are the most likely to be active in the future, although even inactive faults may not be “dead.” “Potentially Active” faults are those that have been active during the past two million years or during the Quaternary Period. “Active” faults are those that have been active within the past 11,000 years. Earthquakes originate as movement or slippage occurring along an active fault. These movements generate shock waves that result in ground shaking.

Based on review of geologic maps and reports for the area, there are no known active or potentially active faults, or Alquist-Priolo Earthquake Fault Zones (formerly referred to as a Special Studies Zone) in the SUDP/SOI. In order to determine the distance of known active faults within 50 miles of the Site, the computer program EZ-FRISK was used in the General Plan Update.

Soils

According to the USDA Natural Resources Conservation Service website, the soil on the site includes Yokohl clay loam, 0 to 3 percent slopes (YbA). Soil properties can influence the development of building sites, including site selection, structural design, construction, performance after construction, and maintenance. Soil properties that affect the load-supporting capacity of an area include depth to groundwater, ponding, flooding, subsidence, shrink-swell potential, and compressibility.

The City of Merced regulates the effects of soils and geological constraints primarily through the enforcement of the California Building Code (CBC), which requires the implementation of engineering solutions for constraints to development posed by slopes, soils, and geology.

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| 7. <u>Geology and Soils.</u> Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? | | | ✓ | |
| ii) Strong seismic ground shaking? | | | ✓ | |
| iii) Seismic-related ground failure, including liquefaction? | | | ✓ | |
| iv) Landslides? | | | ✓ | |
| b) Result in substantial soil erosion or loss of topsoil? | | ✓ | | |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | | | ✓ | |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | ✓ | |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | | | ✓ | |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - i) *Strong seismic ground shaking?*
 - ii) *Strong seismic ground shaking?*
 - iii) *Seismic-related ground failure, including liquefaction?*
 - iv) *Landslides?*

The project site is not located within a mapped fault hazard zone, and there is no record or evidence of faulting on the project site (City of Merced General Plan Figure 11.1). Because no faults underlie the project site, no people or structures would be exposed to substantial adverse effects related to earthquake rupture, and no impact would result from the project.

Expanded Initial Study #02-27 stated that the project site **may** expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Ground shaking of moderate severity may be expected to be experienced on the project site during a large seismic event. All building permits are reviewed to ensure compliance with the California Building Code (CBC). In addition, the City enforces the provisions of the Alquist Priolo Special Study Zones Act that limits development in areas identified as having special seismic hazards. All structures shall be designed and built in accordance with the standards of the California Building Code. Pursuant to CEQA §15162, the project will not create any impacts that warrant additional environmental documentation over and above the impacts addressed in the City's General Plan EIR.

The project **may** expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. However, according to the City's *Merced Vision 2030 General Plan EIR*, the probability of soil liquefaction occurring within the City of Merced is considered to be a low to moderate hazard; however, detailed geotechnical engineering investigation required in compliance with the California Building Code (CBC) would be required for the project.

APPLICABLE GENERAL PLAN GOALS AND POLICIES:

The City's *Merced Vision 2030 General Plan* contains policies that address seismic safety.

| | |
|--|--|
| <i>Goal Area S-2: Seismic Safety:</i> | |
| Goal | |
| Reasonable Safety for City Residents from the Hazards of Earthquake and Other Geologic Activity | |
| Policies | |
| S-2.1 | Restrict urban development in all areas with potential ground failure characteristics. |

The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Landslides generally occur on slopes of 15 percent or greater. The project site's topography is generally of slopes between 0 and 3 percent, which are considered insufficient to produce hazards other than minor sliding during seismic activity.

These impacts are considered **less than significant**.

b) *Result in substantial soil erosion or loss of topsoil?*

Construction of the proposed project could result in temporary soil erosion and the loss of top soil due to construction activities, including clearing, grading, site preparation activities, and installation of the proposed drainage and on-site sewer and water systems. Construction activities disturbing one or more acres are required by the State Water Resources Board (SWRCB) to obtain a General Construction Activity Stormwater Permit, which would require the proposed project to implement a Storm Water Pollution Prevention Plan (SWPPP). Project compliance with SWRCB and the City of Merced regulations to avoid erosion siltation effects would reduce this impact to **less than significant with mitigation**.

Mitigation Measures:

GEO-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit.

GEO-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02.

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

The City of Merced is located in the Valley area of Merced County and is therefore less likely to experience landslides than other areas in the County. The probability of soil liquefaction actually taking place anywhere in the City of Merced is considered to be a low hazard. Soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. According to the *Merced Vision 2030 General Plan* EIR, no significant free face failures were observed within the SUDP/SOI and the potential for lurch cracking and lateral spreading is, therefore, very low within the SUDP/SOI area. This impact is **less than significant**.

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

Expansive soils are those possessing clay particles that react to moisture changes by shrinking (when they dry) or swelling (when they become wet). Expansive soils can also consist of silty to sandy clay. The extent of shrinking and swelling is influenced by the environment, extent of wet or dry cycles, and by the amount of clay in the soil. This

physical change in the soils can react unfavorably with building foundations, concrete walkways, swimming pools, roadways, and masonry walls.

Implementation of General Plan Policies, adherence to the Alquist-Priolo Act, and enforcement of the California Building Code (CBC) Standards would reduce this impact to **less than significant**.

- e) *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

The EIR prepared for the City's *Merced Vision 2030 General Plan* states the following:

"According to the Geologic, Geohazards and Environmental Health Hazards Evaluation Report (Geocon Consultants, Inc.), the soils in the SUDP/SOI are not generally considered to be expansive, have a generally low to moderate erosion potential, and are generally considered suitable for wastewater disposal using conventional septic systems."

However, no new septic systems are allowed in the City and any future construction on the site will be required to connect to the City's sewer system. Based on this evaluation, this impact is **less than significant**.

- f) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

The proposed project would be located on a previously developed in-fill site. The site has been used for agriculture as well as residential purposes and has been previously altered from its native state. Therefore, this impact would be **less than significant**.

8. **Greenhouse Gas Emissions**

SETTING AND DESCRIPTION

The issue of project-generated Greenhouse Gas (GHG) Emissions is a reflection of the larger concern of Global Climate Change. While GHG emissions can be evaluated on a project level, overall, the issue reflects a more regional or global concern. CEQA requires all projects to discuss a project's GHG contributions. However, from the standpoint of CEQA, GHG impacts on global climate change are inherently cumulative. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, it can safely be assumed that existing conditions do not measurably contribute to a noticeable incremental change in the global climate.

The project applicant provided a Greenhouse Gas study for the previously proposed project on this site which was prepared by Rincon Consultants, Inc. (Appendix C). The study analyzed the emissions associated with a 62,000-square-foot neighborhood commercial center. Although the project has changed, the greenhouse gas impacts would remain similar. Therefore, the previous analysis remains valid for this project.

The City of Merced has not developed or adopted a CEQA threshold for determining the significance of GHG emissions at the project-level. The San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds were recommended for use in the study. Based on the SJVAPCD, the proposed project would have a less than significant impact if it achieves at least a 29 percent reduction in GHG emissions compared to business as usual (BAU). This reduction is consistent with the AB 32 Scoping Plan (2008).

To determine whether the construction of the future shopping center (now a mixed use project) would result in a 29 percent reduction in BAU GHG emissions, two emissions scenarios were calculated and compared:

BAU Scenario – is reflective of a realistic project scenario that would occur absent project design features and state regulations enacted as a result of AB 32, and is consistent with SJVAPCD’s and the Air Resources Board’s (ARB) definition of “business as usual.”

Project Scenario – is also reflective of a realistic project scenario that includes voluntary project design features and further state regulations enacted as a result of AB 32. The project design features and state regulations accounted for in the Project Scenario include use of energy efficient (LED) lighting, recycled water, efficient irrigation systems, recycling, as well as Renewable Portfolio Standard, Low Carbon Fuel Standard, and Pavley Standards.

THRESHOLDS OF SIGNIFICANCE

The proposed project would result in a significant impact on the environment if it would:

- Generate GHG emissions either directly or indirectly, that may have a significant impact on the environment;
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| 8. <u>Greenhouse Gas Emissions.</u>
Would the project: | | | | |
| a) Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment? | | | ✓ | |
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment?*

The following is an excerpt from the Greenhouse Gas Study provide by Rincon Consultants, Inc. – Appendix C. Although the original project considered by this analysis was for a 62,000-square-foot retail commercial shopping center, the revised mixed-use project would generate comparable vehicle trips and the project construction would be

similar. Therefore, the impacts are considered to be similar and a new analysis was not required.

Construction of the proposed project would generate GHG emissions through on-site use of heavy duty construction equipment and off-site vehicle trips made by construction workers and haul/delivery trucks that would travel to and from the project site. Construction of the proposed project would be completed in approximately eight months. To evaluate GHG emissions from project construction, construction emissions are amortized over the life of the project (approximately 20 years as a conservative estimate) and added to the operational emissions. As shown in Table 1, both the BAU Scenario and Project Scenario would generate approximately 221 MT CO₂E total or 11 MT CO₂E per year when amortized over a 20-year period.

Operation of the proposed project would result in GHG emissions from the following primary sources: energy (electricity and natural gas used on-site), mobile (on-road mobile vehicle traffic generated by the project), solid waste disposal by the land use, water usage by the land use, and area sources (landscaping equipment). As shown in Table 1, operation of the project would generate 3,387 MT CO₂E per year under the BAU Scenario and 2,103 MT CO₂E per year under the Project Scenario. The difference in GHG emission between the BAU Scenario and Project Scenario can be attributed to the voluntary project features (i.e., low-flow fixtures, provision of neighborhood commercial uses, pedestrian access, and bicycle parking), the Renewable Portfolio Standard, Title 24 Energy Efficiency Building Standards, Low Carbon Fuel Standard, and Pavley I Standard.

As shown in Table 1, under the BAU Scenario, the proposed project would generate approximately 3,398 MT CO₂E per year from both construction and operation, while the proposed project under the Project Scenario would generate approximately 2,114 MT CO₂E per year from both construction and operation.

Table 1: Project-related GHG Emissions for BAU Scenario and Project Scenario

| Source | GHG Emissions (MT CO ₂ E per Year) | |
|--|---|------------------|
| | BAU Scenario | Project Scenario |
| Construction Emissions | | |
| Mobile (20-year amortization) | 11 | 11 |
| Construction Emissions Subtotal | 11 | 11 |
| Operational Emissions | | |
| Area | <0.2 | <0.2 |
| Energy | 232 | 120 |
| Mobile | 3,109 | 1,946 |
| Solid Waste | 30 | 30 |
| Water | 16 | 8.4 |
| Operational Emissions Subtotal | 3,387 | 2,103 |
| Total GHG Emissions | 3,398 | 2,114 |

As shown in Table 2, the Project Scenario would reduce BAU emission by 1,284 MT CO₂E per year. Therefore, the proposed project demonstrates an approximately 38 percent reduction below the BAU Scenario and would be considered **less than significant**.

Table 2: Summary of Project Reduction from BAU Scenario

| | GHG Emissions (MT CO₂E per Year) |
|---|--|
| BAU Scenario Total | 3,398 |
| Project Scenario Total | 2,114 |
| Difference Between BAU and Project | 1,284 |
| Percent Reduction from BAU Scenario | 38% |
| Project Meets or Exceeds Threshold
(less-than-significant) | Yes (Less-than-Significant) |

Based on the SJVAPCD's recommended threshold, GHG emissions from the proposed project would be less than significant if the Project Scenario emissions are at least 29 percent below BAU Scenario emissions. As shown in Table 2, the Project Scenario would reduce BAU Scenario emissions by 1,284 MT CO₂E per year, or approximately 38 percent, which is greater than the 29 percent threshold. Therefore, GHG emissions from the proposed project would be **less than significant**.

- b) *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The following is an excerpt from the Greenhouse Gas Study provide by Rincon Consultants, Inc. – Appendix C.

Assembly Bill (AB) 32 identifies a statewide target to reduce GHG emissions to 1990 levels by 2020, which is equivalent to “cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 15 percent from today's levels” (Scoping Plan, 2008). The City's Climate Action Plan (2012) also establishes a target to reduce GHG emissions 15 percent below 2008 levels, consistent with AB 32 and its Scoping Plan. Construction and operation of the proposed project would achieve a 32.4 percent reduction in GHG emissions compared to BAU, which exceeds the reduction targets identified in the Scoping Plan and City's Climate Action Plan.

In addition, the proposed project would support many of the goals identified in the City's Climate Action Plan. The project would help reduce vehicle miles traveled by providing neighborhood commercial services and providing bicycle parking and pedestrian access. As such, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and impacts would be **less than significant**.

9. Hazards and Hazardous Materials

SETTING AND DESCRIPTION

Hazardous Materials

A substance may be considered hazardous due to a number of criteria, including toxicity, ignitability, corrosivity, or reactivity. The term “hazardous material” is defined in law as any material that, because of quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Wildland and Urban Fire Hazards

Both urban and wildland fire hazard potential exists in the City of Merced and surrounding areas, creating the potential for injury, loss of life, and property damage. Urban fires primarily involve the uncontrolled burning of residential, commercial, or industrial structures due to human activities. Wildland fires affect grassland, brush or woodlands, and any structures on or near these fires. Such fires can result from either human made or natural causes.

Urban fires comprise the majority of fires in the City of Merced while the potential for wildland fires could increase as large blocks of undeveloped land are annexed into the City. Most of the fires are caused by human activities involving motor vehicles, equipment, arson, and burning of debris.

Airport Safety

The City of Merced is impacted by the presence of two airports-Merced Regional Airport, which is in the southwest corner of the City, and Castle Airport (the former Castle Air Force Base), located approximately eight miles northwest of the subject site.

The continued operation of the Merced Regional Airport involves various hazards to both flight (physical obstructions in the airspace or land use characteristics which affect flight safety) and safety on the ground (damage due to an aircraft accident). Growth is restricted around the Regional Airport in the southwest corner of the City due to the noise and safety hazards associated with the flight path.

Castle Airport also impacts the City. Portions of the northwest part of the City's SUDP/SOI and the incorporated City are within Castle's safety zones. The primary impact is due to noise (Zones C and D), though small areas have density restrictions (Zone B2). The military discontinued operations at Castle in 1995. One important criterion for determining the various zones is the noise factor. Military aircraft are designed solely for performance, whereas civilian aircraft have extensive design features to control noise.

Potential hazards to flight include physical obstructions and other land use characteristics that can affect flight safety, which include: visual hazards such as distracting lights, glare, and sources of smoke; electronic interference with aircraft instruments or radio communications; and uses which may attract flocks of birds. In order to safeguard an airport's long-term usability, preventing encroachment of objects into the surrounding airspace is imperative.

Railroad

Hazardous materials are regularly shipped on the BNSF and SP/UP Railroad lines that pass through the City. While unlikely, an incident involving the derailment of a train could result in the spillage of cargo from the train in transporting. The spillage of hazardous materials could have devastating results. The City has little to no control over the types of materials shipped via the rail lines. There is also a safety concern for pedestrians along the tracks and vehicles utilizing at-grade crossings. The design and operation of at-grade crossings allows the City some control over rail-related hazards. Ensuring proper gate operation at the crossings is the most effective strategy to avoid collision and possible derailments.

Public Protection and Disaster Planning

Hospitals, ambulance companies, and fire districts provide medical emergency services. Considerable thought and planning have gone into efforts to improve responses to day-to-day emergencies and planning for a general disaster response capability.

The City's Emergency Plan and the County Hazardous Waste Management Plan both deal with detailed emergency response procedures under various conditions for hazardous materials spills. The City also works with the State Department of Health Services to establish cleanup plans and to monitor the cleanup of known hazardous waste sites within the City.

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Impact | No Impact |
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| 9. <u>Hazards and Hazardous Materials.</u>
Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | | ✓ | |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | | ✓ | |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | ✓ | |
| d) Be located on a site which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | | | ✓ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | | ✓ |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | ✓ |

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|--|--------------------------------------|--|------------------------------------|-----------|
| g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | | |

Impact Analysis

Would the project:

- a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Construction activities of the proposed project would involve the use, storage, transport, and disposal of oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials. No hazardous materials are anticipated to be used at the site after construction. The project would be required to adhere to all applicable federal and state health and safety standards. Construction activity must also be in compliance with the California Occupational Safety and Health Administration regulations (Occupational Safety and Health Act of 1970). This impact would be **less than significant** with compliance with these requirements.

- b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Construction on the project site would be reviewed for the use of hazardous materials at the building permit stage. Implementation of Fire Department and Building Code regulations for hazardous materials, as well as implementation of federal and state requirements, would reduce any risk caused by a future use on the site from hazardous materials to a **less than significant** level.

APPLICABLE GENERAL PLAN GOALS AND POLICIES:

The City of Merced *Vision 2030 General Plan* contains policies that address hazardous materials.

| | |
|--|--|
| <i>Goal Area S-7: Hazardous Materials</i> | |
| Goal | |
| Hazardous Materials Safety for City Residents | |
| Policies | |
| S-2.1 | Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials. |
| Implementing Actions: | |
| 7.1.a | Support Merced County in carrying out and enforcing the Merced County Hazardous Waste Management Plan. |

| | |
|--------------|---|
| 7.1.b | Continue to update and enforce local ordinances regulating the permitted use and storage of hazardous gases, liquids, and solids. |
| 7.1.d | Provide continuing training for hazardous materials enforcement and response personnel. |

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

There is one school located within a ¼-mile radius of the site. Providence Christian School is located to the north across Yosemite Avenue approximately 200 feet from the subject site. Hazardous materials are not expected to be at the project site after construction. However, compliance with Fire Department regulations, as well as state and federal regulations through annual inspections and permitting requirements makes this impact **less than significant**.

- d) *Be located on a site which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

According to the California Department of Toxic Substances Control EnviroStor database search, the project site is not listed as a hazardous waste site, and no significant hazard to the public or the environment would result with project implementation. Therefore, there is **no impact**.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

The project site is located approximately 7 miles from the Merced Regional Airport and approximately 9 miles from the Castle Airport. The project site is not located in an area for which an Airport Land Use Plan has been prepared, and no public or private airfields are within two miles of the project area. Therefore, no at-risk population working at the site would be exposed to hazards due to aircraft over-flight. Therefore, implementation of the proposed project would not expose persons to airport-related hazards, and **no impact** would occur.

- f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The proposed project will not adversely affect any adopted emergency response plan or emergency evacuation plan. No additional impacts will result from the development of the project area over and above those already evaluated by the EIR prepared for the *Merced Vision 2030 General Plan*. The project would not modify any roadways or cause any other changes that would impair the implementation of an adopted emergency response plan. Therefore, there is **no impact**.

APPLICABLE GENERAL PLAN GOALS AND POLICIES:

The *Merced Vision 2030 General Plan* contains policies that address disaster preparedness.

| | |
|---|---|
| <i>Goal Area S-1: Disaster Preparedness</i> | |
| Goal | |
| General Disaster Preparedness | |
| Policies | |
| S-1.1 | Develop and maintain emergency preparedness procedures for the City. |
| Implementing Actions: | |
| 1.1.a | Keep up-to-date through annual review the City's existing Emergency Plan and coordinate with the countywide Emergency Plan. |
| 1.1.b | Prepare route capacity studies and determine evacuation procedures and routes for different types of disasters, including means for notifying residents of a need to evacuate because of a severe hazard as soon as possible. |
| 7.1.d | Provide continuing training for hazardous materials enforcement and response personnel. |

- g) *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

The project site is located within an urban area and is not located within a very high fire hazard severity zone. According to the EIR prepared for the *Merced Vision 2030 General Plan*, the risk for wildland fire in the City of Merced is minimal. According to the Cal Fire website, the Merced County Fire Hazard Severity Zone Map shows the project site is designated as a "Local Area of Responsibility" with a Hazard Classification of "Urban Unzoned."

The City of Merced Fire Department is the responsible agency for responding to fires at the subject site. The project site is located within Fire District #5, and is served by Station #55 located at 3520 Parsons Avenue (approximately 0.5 miles from the project site). The proposed project would not expose people or structures to significant loss, injury or death involving wildland fires and there would be **no impact**.

10. Hydrology and Water Quality

SETTING AND DESCRIPTION

Water Supplies and Facilities

The City's water supply system consists of four elevated storage tanks with a combined storage capacity of approximately 1.4 million gallons, 23 wells and 14 pumping stations equipped with variable speed pumps that attempt to maintain 45 to 50 psi (pounds per square inch) nominal water pressure. The City is required to meet State Health pressure requirements, which call for a minimum of 20 psi at every service connection under the annual peak hour condition and maintenance of the annual average day demand plus fire flow, whichever is stricter.

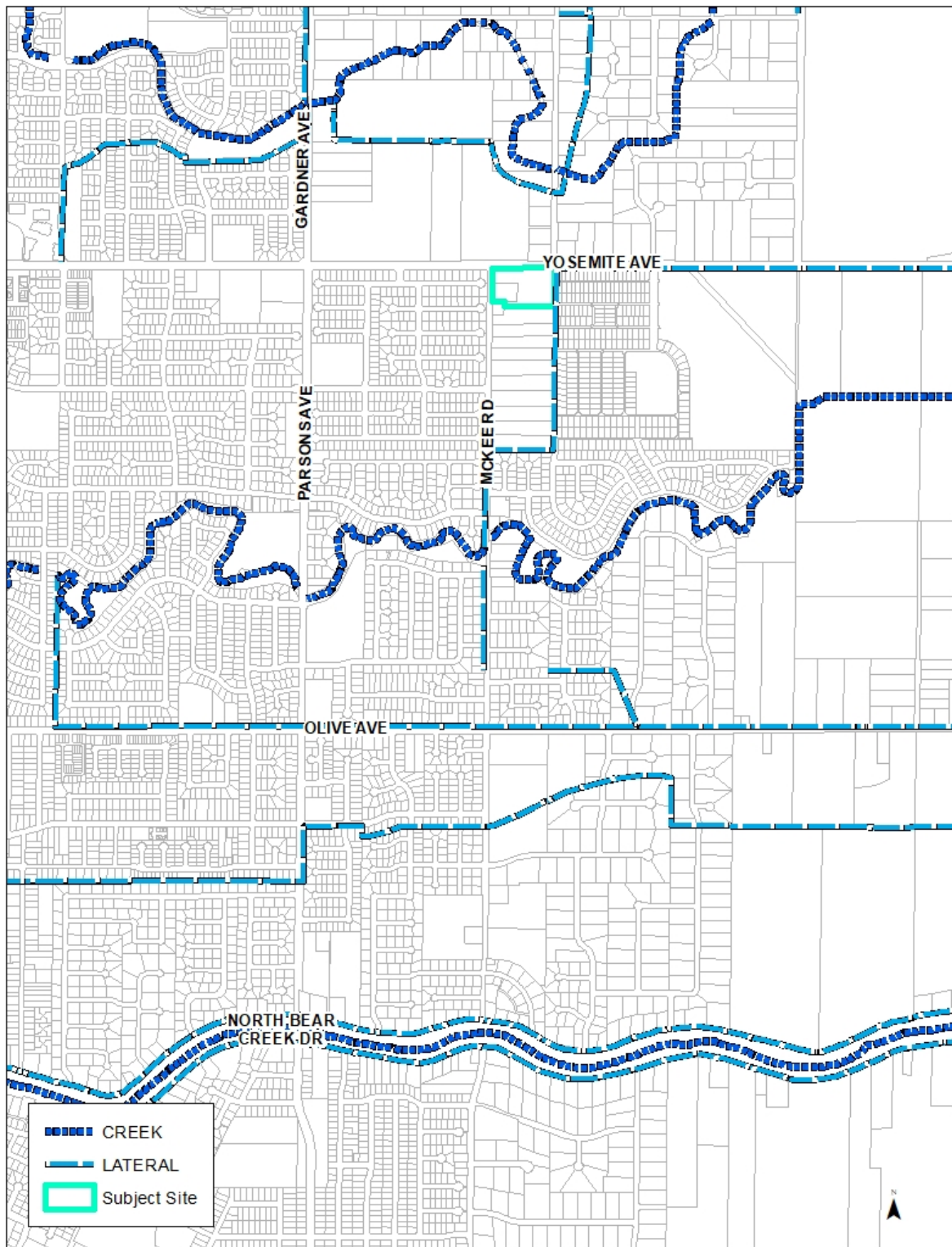
Storm Drainage/Flooding

In accordance with the adopted City of Merced Standard Designs of Common Engineering Structures, percolation/detention basins are designed to temporarily collect run-off so that it can be metered at acceptable rates into canals and streams which have limited capacity.

Proximity to Existing Waterways

The project site is located at the southeast corner of Yosemite Avenue and McKee Road. There are underground Merced Irrigation District (MID) facilities adjacent to the site that feed into Black Rascal Creek. Black Rascal Creek is located approximately ½ mile to the south of the site and Cottonwood Creek is located approximately ½ mile north of the site. Refer to the map at Figure 8 on Page 42.

Figure 8 - Waterways



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| 10. <u>Hydrology and Water Quality.</u>
Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | | ✓ | | |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | | | ✓ | |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | | | | |
| i. result in a substantial erosion or siltation on- or off-site; | | ✓ | | |
| ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | | ✓ | | |
| iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | | ✓ | | |
| iv. impede or redirect flood flows? | | ✓ | | |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | | | ✓ | |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Violate any water quality standards or waste discharge requirements?*

The project site is currently vacant, but previously had two houses on it (they were demolished in 2017). Construction of the proposed mixed-use project and associated parking would result in the majority of the site being covered with impervious surfaces.

The State Water Resources Control Board and nine Regional Water Quality Control Boards regulate the water quality of surface water and groundwater bodies throughout California. The proposed project is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB).

Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed with an increased potential to expose soils to wind and water erosion, which could result in temporary minimal increases in sediment load into the MID nearby water bodies, including the Black Rascal Creek, located approximately 0.5 miles to the south, and Cottonwood Creek, located approximately 0.5 mile to the north. Any potential short-term water quality effects from project related construction activities can be minimized and reduced to a level of **less than significant with mitigation** by implementing the following mitigation measure.

Mitigation Measure:

HYDRO-1) To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities.

HYDRO-2 If any storm drainage from the site is to drain into MID facilities, the developer shall first enter into a “Storm Drainage Agreement” with MID and pay all applicable fees.

The nearest water bodies to the proposed project include the Black Rascal Creek, located approximately 0.5 mile to the south, and Cottonwood Creek, located approximately 0.5 mile to the north. Operation of the proposed project could result in surface water pollution associated with chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and waste that may be spilled or leaked and have the potential to be transported via runoff during periods of heavy precipitation into these water bodies. Implementation of Mitigation Measure HYDRO-2, described below, would ensure that stormwater runoff from the proposed project would be appropriately managed to prevent pollutants from

being discharged into these water bodies, reducing any potential impacts to **less than significant with mitigation.**

Mitigation Measure:

HYDRO-3) To reduce the potential for degradation of surface water quality during project operation, a SWPPP shall be prepared for the proposed project. The SWPPP shall describe specific programs to minimize stormwater pollution resulting from the proposed project. Specifically, the SWPPP shall identify and describe source control measures, treatment controls, and BMP maintenance requirements to ensure that the project complies with post-construction stormwater management requirements of the RWQCB.

- b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The City receives all of its water supply from groundwater. Based on the City's Urban Water Management Plan (UWMP), water consumption in 2015 was estimated to be 15.9 million gallons of water per day (mgd) or approximately 17,855 acre-feet per year. The UWMP also estimates the projected acre-feet of water use for years 2020, 2025, 2030, and 2035, which are projected to increase each year. By 2035, the City's projected water use is expected to be 31,960 acre-feet of potable and raw water and 5,869 acre-feet of recycled water.

The proposed project would generate a need for approximately 53,500 gallons per day for the residential uses and approximately 2,160 gallons per day for the retail/commercial uses. Based on the 2015 water well production of 15.9 mgd, the proposed project would use approximately 0.34% of the total daily water demand for the City.

Although development of the site would restrict onsite recharge where new impervious surface areas are created, all alterations to groundwater flow would be captured and routed to the stormwater percolation ponds or pervious surfaces with no substantial net loss in recharge potential anticipated. This reduces this impact to a **less than significant** level.

- c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
- i. *result in a substantial erosion or siltation on- or off-site;*
 - ii. *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
 - iii. *create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
 - iv. *impede or redirect flood flows?*

Implementation of the project would result in grading and landform alterations on the site that would expose native soils that could be subject to the effects associated with wind and

water erosion unless adequate measures are taken to limit the transport of soils in surface water from the site to downstream locations. As discussed above, the project applicant would be required to implement a SWPPP that would identify specific measures to address erosion and siltation resulting from grading and construction as well as the potential long-term water quality impacts.

Construction of the project would include connecting on-site drainage facilities to the City's storm drain system. The City has approximately 112 miles of underground storm drain lines, underground storage pipes, and 141 acres of detention ponds. An 18-inch storm drain line exists in Yosemite Avenue that the on-site storm drainage system would connect to. The project site would consist of approximately 200,000 square feet of impervious surfaces. All storm water run-off would be required to be captured on-site and metered into the City's storm drainage per City Standards. Additionally, at the time of construction, the developer would be required to provide calculations to demonstrate that the proposed on-site retention and the City's storm water system would be able to accommodate the additional run-off from the site.

According to FEMA, the project site as well as the area surrounding the site are located within a Zone X which is considered to be outside the flood plain. As previously mentioned any run-off from the site would be required to be captured on-site and metered into the City's storm drain system. Therefore runoff from the site would not increase the rate or amount of surface water flooding or impede or redirect flood flows.

Implementation of Mitigation Measure HYDRO-1 and Mitigation Measure HYDRO-4 below would reduce any impacts from site drainage to **less than significant with mitigation**.

Mitigation Measure:

HYDRO-4 Prior to issuance of a building permit or as required by the City Engineer, the developer shall demonstrate to the City that storm drainage facilities are adequate to meet the Project demands and that improvements are consistent with the City Standards and the City's Storm Drain Master Plan.

- d) *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

As shown on the map located at Figure 9 on the following page, the project site is located within Flood Zone "X." The Federal Emergency Management Agency (FEMA), defines Zone X as an area of minimal flood hazard. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

The site is not in a tsunami or seiche zone and would not present a risk for release of pollutants due to inundation. This impact is **less than significant**.

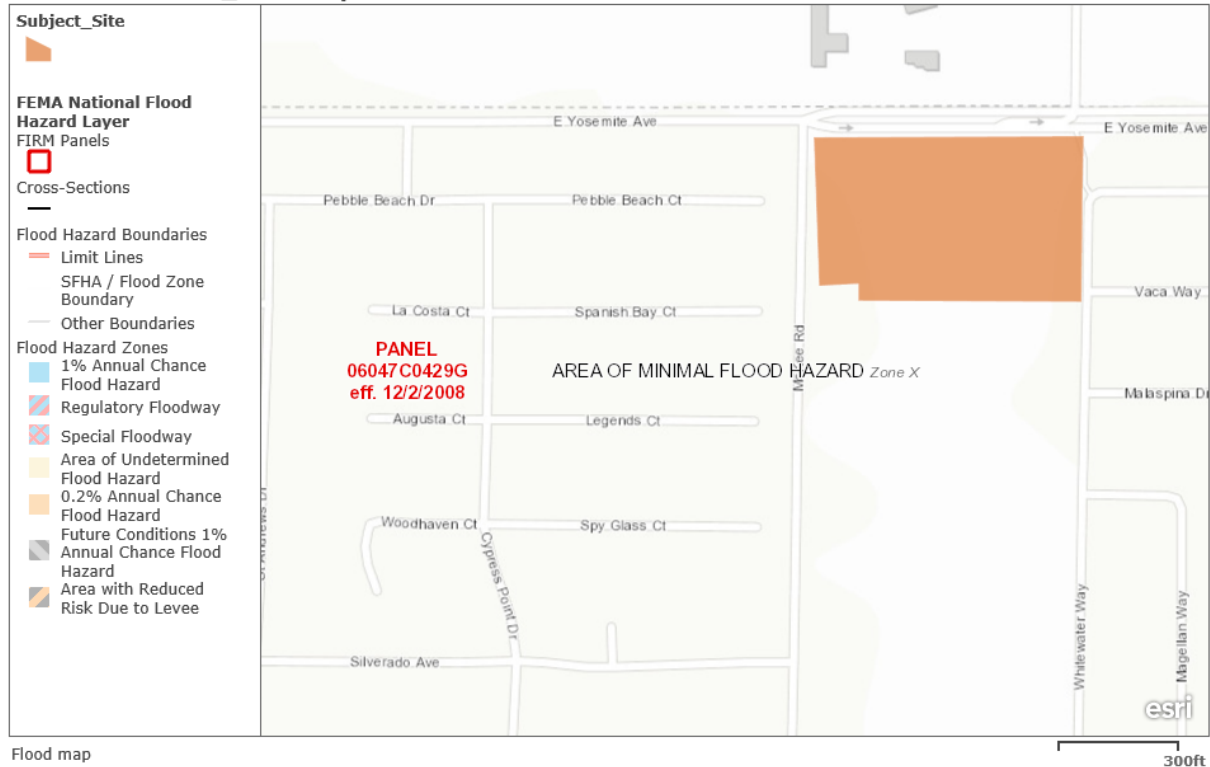
- e) *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

The proposed project would not obstruct or conflict with the implementation of a water quality control plan or sustainable groundwater management plan. The project would be

required to comply with all City of Merced standards and Master Plan requirements for groundwater and water quality control. This impact is **less than significant**.

Figure 9 - FEMA Flood Map

Yosemite & McKee_Flood Map



Merced County Association of Gov, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA

11. Land Use and Planning

SETTING AND DESCRIPTION

The project site is located within the City Limits of Merced and within its Specific Urban Development Plan and Sphere of Influence (SUDP/SOI). The majority of the site is currently zoned Neighborhood Commercial (C-N). However, the small area (approximately 22,670 square feet) along the south property line recently acquired by the developer is zoned R-1-6. As with the zoning, the General Plan designation for the majority of the site is Neighborhood Commercial, with the exception of the area along the southern property line which is designated as Low Density Residential. The current and proposed General Plan and Zoning Designations are shown on the map at Figure 3 on Page 5.

Surrounding Uses

Refer to Figure 2 on Page 3 and the table below for the surrounding land uses.

| Surrounding Land | Existing Use of Land | Zoning Designation | City General Plan Land Use Designation |
|-------------------------|--|---------------------------|---|
| North | Single-Family Residential/Church/School (across Yosemite Avenue) | County | Rural Residential (RR) |
| South | Single-Family Residential | R-1-6 | Low Density Residential (LD) |
| East | Single-Family Residential | P-D #52 | Low Density Residential (LD) |
| West | Single-Family Residential (across McKee Road) | R-1-6 | Low Density Residential (LD) |

Current Use/Background

The project site is currently vacant, but was previously occupied by two single-family dwellings (these were demolished in 2017). The site is currently zoned Neighborhood Commercial (C-N), with a small portion of the site being zoned R-1-6. The subject site consists of two individual lots [Assessor's Parcel Numbers (APN's): 008-310-053 and -038 totaling 5.94 acres]. Recently, 22,670 square feet of lot area was acquired from the neighboring property to the south and made part of APN 008-310-053 (refer to the Proposed Land Use Map at Figure 3 on page 5). This area is currently designated on the *Merced Vision 2030 General Plan* Land Use Map as Low Density Residential and has a zoning designation of R-1-6. The proposed General Plan Amendment and Zone Change would amend the General Plan designation to Neighborhood Commercial (CN) and the zoning designation to Neighborhood Commercial (C-N).

In 2014, the owner applied for a General Plan Amendment and Zone Change to change the entire site from Low Density Residential (LD) and R-1-6 to Neighborhood Commercial (CN). At that time, the owner proposed the construction of a 62,000 square-foot retail commercial center that would have included a small grocery store, a fast-food restaurant (with a drive-through), and other retail uses appropriate to the Neighborhood Commercial (C-N) zone. The City Council approved the General Plan Amendment and Zone Change to Neighborhood Commercial in 2015.

Project Characteristics

The current project consists of a General Plan Amendment and Zone Change for 22,670 square feet of lot area along the southern property line of APN: 008-310-053 and a Conditional Use Permit for the entire 5.94 acres to allow the construction of a mixed-use project consisting of 428 efficiency dwelling units and 18,000 square feet of commercial retail space along with associated parking for the proposed uses. The development would consist of four three-story buildings located near the middle of the site with parking around the perimeter of the site (refer to the Site Plan at Figure 4 on Page 6).

The table below provides the size, height, and use of each building.

| Building No. | Stories | Units | Use | Total Square Feet | Height (to top of parapet) |
|---------------------|----------------|--------------|-----------------------------|--------------------------|-----------------------------------|
| 1 | 3 | 102 | Residential | 34,560 | 33' 4 ¼" |
| 2 | 3 | 112 | Residential/Retail | 59,520 | 31' 10 ¼" |
| 3 | 3 | 102 | Residential | 34,560 | 33' 4 ¼" |
| 4 | 3 | 112 | Residential/
Common Area | 59,520 | 31' 10 ¼" |
| TOTAL | | 428 | | 188,160 | |

Building 2 would include 18,000 square feet of retail/commercial space on the first floor and Building 4 would have 18,000 square feet of community/common area for the tenants to use. Additionally, a roof-top deck is proposed on top of Building 4 as an additional amenity for the tenants. This area would provide additional common/open space with seating and possible tables for the tenants to use. There would also be a promenade area between Buildings 2 and 4 providing an open space area with tables and seating for the tenants and possibly patrons of the retail uses.

Although the Neighborhood Commercial zone is primarily used for commercial development intended to serve a neighborhood, multi-family uses are allowed with a Conditional Use Permit. The proposed mix-use development would provide a small amount of retail/commercial (approximately 18,000 square feet) in addition to the multi-family residential units. The retail uses would most likely be uses that would serve the entire area, not just the tenants of the apartment complex.

The Zoning Ordinance does not specify a density for multi-family housing allowed within a C-N zone. The General Plan has a range of multi-family densities: Low-Medium Density (LMD) – 6 to 12 units/acre; High-medium Density (HMD) – 12 to 24 units/acre; and High Density (HD) 24 to 36 units/acre. The Zoning designations that correlate to the multi-family General Plan designations would be R-2; R-3-1.5; R-3, AND R-4. The proposed density for this project, based on the number of units is 72 units/acre. This unit density is double the maximum density allowed in an area with a High Density Residential (HD) General Plan designation. However, if one looks at the actual number of people rather than the number of units, the number of people may be lower because the proposal is for efficiency dwelling units that would have a single occupant. The proposed Conditional Use Permit would include a condition to limit the units to only one person per unit. As shown in the table below, based on a High Density General Plan designation allowing 36 units per acre, a maximum of 214 units could be constructed. However, if the units were 2 or 3 bedroom units (considering one person per bedroom), the number of people on the site would actually be equal to or higher than what the number of people would be under the current proposal. If more than one person resided in each bedroom, the number would be even greater.

| DENSITY & PEOPLE PER ACRE | | | | | | |
|---------------------------|---------|----------------|-----------------|-----------|--------------|-------------|
| Acres | Density | Max Units/Acre | Allowed DU/Acre | Bdrm/Unit | Total People | People/Acre |
| 5.94 | HD | 36 | 214 | 2 | 428 | 72 |
| 5.94 | HD | 36 | 214 | 3 | 642 | 108 |
| Proposed Project | | | | | | |
| 5.94 | | | | 1 | 428 | 72 |

With the table above in mind, it should also be considered that typically the maximum number of units is not constructed on a site. In order to allow for parking and open space, most developments use approximately 75% of the developable area. If this were the case, the number of units would be reduced to 161, which would make the number of people on the site slightly less than shown in the table above. However, with 3 bedroom units (still considering only one person per bedroom), the density would be 81 persons/acre still well above the density proposed with the project. In many units that have more than a single bedroom, it is not uncommon for more than one person to share a bedroom. If this were the case, the number of people on the site would be even higher. Refer to the table below for more details.

| DENSITY & PEOPLE/ACRE WITH 75% SITE DEVELOPMENT | | | | | | |
|---|---------|----------------|-----------------|-----------|--------------------------------------|-------------------------------------|
| Acres | Density | Max Units/Acre | Allowed DU/Acre | Bdrm/Unit | Total Units
(75 % of Max Density) | People/Acre
(75% of Max Density) |
| 5.94 | HD | 36 | 214 | 2 | 161 | 54 |
| 5.94 | HD | 36 | 214 | 3 | 161 | 81 |
| Proposed Project | | | | | | |
| 5.94 | | | | 1 | 428 | 72 |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| 11. <u>Land Use and Planning.</u>
Would the project: | | | | |
| a) Physically divide an established community? | | | | ✓ |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Physically divide an established community?*

The project site was annexed in 2002 and is surrounded by urban uses. The proposed project would develop an existing vacant lot and would become a part of the adjacent, surrounding community. The project would not physically divide the community, therefore, there is **no impact**.

- b) *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

The Housing Element of the *Merced Vision 2030 General Plan* includes policies supporting affordable housing, mixed-use development, and higher densities.

Policy H-1.1 Support Increased in Residential Zoning Districts

Although the proposed project would not be located within a residential zone, it does provide an opportunity for a higher density project to provide needed housing within the City.

Policy H 1.1.c Encourage Mixed Use Development

The proposed project would provide a mixture of retail commercial uses to serve the neighborhood and multi-family efficiency dwelling units.

Policy 1.1.e Encourage Alternate Housing Types

The proposed project would include efficiency dwelling units that would essentially house a single occupant within an approximately 350-square-foot unit. Each unit would provide kitchen facilities, a bathroom, and living and sleeping areas. This type of unit is unusual for the City of Merced. This policy encourages housing designs with a smaller footprint as a form of alternate housing.

Policy 1.8b Prioritize City efforts to encourage residential development by focusing on in-fill development and densification within the existing City Limits.

The proposed project is an in-fill project on a vacant lot that was previously developed with two single-family homes. The proposed density would be above the City's maximum density standard for units/acre. However, in considering the actual number of people per acre, the number of people would be less than what could feasibly be allowed if the site were developed with 2 or 3 bedroom units. The average household size for Merced is approximately 3 persons per household. If the site was 75% of the site was developed with housing for a total of 161 units, based on the average household size, there could be as many as 483 residents on the site with an average of 81 people/acre. The current proposal would have 72 people/acre.

Based on the forgoing analysis, the project would comply with the General Plan based on a comparison of units per acre vs. people per acre. Therefore, this impact would be **less than significant**.

12. Mineral Resources

SETTING AND DESCRIPTION

The City of Merced does not contain any mineral resources that require managed production, according to the State Mining and Geology Board. Based on observed site conditions and review of geological maps for the area, economic deposits of precious or base metals are not expected to underlie the Merced SUDP/SOI. According to the California Geological Survey, Aggregate Availability in California - Map Sheet 52, Updated 2006, minor aggregate production occurs west and north of the City of Merced, but economic deposits of aggregate minerals are not mined within the immediate vicinity of the SUDP/SOI. Commercial deposits of oil and gas are not known to occur within the SUDP/SOI or vicinity.

According to the Merced County General Plan Background Report (June 21, 2007), very few traditional hard rock mines exist in the County. The County's mineral resources are almost all sand and gravel mining operations. Approximately 38 square miles of Merced County, in 10 aggregate resource areas (ARA), have been classified by the California Division of Mines and Geology for aggregate. The 10 identified resource areas contain an estimated 1.18 billion tons of concrete resources with approximately 574 million tons in western Merced County and approximately 605 million tons in eastern Merced County. Based on available production data and population projections, the Division of Mines and Geology estimated that 144 million tons of aggregate would be needed to satisfy the projected demand for construction aggregate in the County through the year 2049. The available supply of aggregate in Merced County substantially exceeds the current and projected demand.

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| 12. <u>Mineral Resources.</u> Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | ✓ |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | | | | ✓ |

Impact Analysis

Would the project:

- a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

Based on observed site conditions and review of geological maps for the area, economic deposits of precious or base metals are not known to occur in the Merced SUDP/SOI. Therefore implementation of the proposed project would have **no impact** on the availability of mineral resources or impact current or future mining operations.

- b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

No Mineral Resource Zones or mineral resource recovery sites exist within the City of Merced or in the area designated for future expansion of the City (the SUDP/SOI). Therefore implementation of the proposed project would have **no impact** on the availability of mineral resources or impact current or future mining operations.

13. Noise

SETTING AND DESCRIPTION

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern. According to the *Merced Vision 2030 General Plan*, outdoor noise exposure not exceeding 60 db is considered to be a “normally acceptable” noise level for residential uses.

Potential noise impacts of the proposed project can be categorized as those resulting from construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project.

The existing noise in the area is predominantly traffic related. However, there is a school and church on the north side of Yosemite Avenue that have occasional outdoor activities. Additionally, there has been construction going on in the Moraga Subdivision for the last year or more which has contributed to noise in the area. Otherwise, the site is surrounded by residential uses.

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| 13. <u>Noise.</u> Would the project result in: | | | | |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | ✓ | | |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | | | ✓ | |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | ✓ | |

Impact Analysis

Would the project result in:

- a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Construction Noise

Construction of the project would temporarily increase noise levels in the area during the construction period. The duration of construction is expected to be 120-180 days. Therefore, the noise from construction may be steady for several weeks and then cease all together. Construction activities, including site clearing, building construction, and paving would be considered an intermittent noise impact throughout the construction period. These activities could result in various effects on sensitive receptors, depending on the presence of intervening barriers or other insulating materials. Although construction activities would likely occur only during daytime hours, construction noise could still be considered disruptive to local residents. The City of Merced does not have a noise ordinance, but past practice has been to allow construction activities during daylight hours (between 7:00 a.m. and 7:00 p.m.). Implementation of the mitigation measures below would reduce potential impacts from construction noise to **less than significant with mitigation**.

Operational Noise

Noise from the mixed-use development would be primarily traffic related. Additionally, there would be added noise from outdoor activities such as loading and unloading of

materials and products for the retail uses and possible outdoor activities of the tenants, as well as more frequent refuse collection to serve the site. Parking for the site is located around the perimeter of the property. There would be a concrete block wall along the southern boundary of the project. To the west of the project across McKee Road (a 60 to 80-foot right-of-way) are existing single-family residences. There is a 6-foot-tall fence along the eastern property line of these residences separating them from McKee Road. This fence is a combination of stucco, wrought-iron, and wood. To the east of the site are additional single-family homes, separated by Whitewater Way (approximately 25-foot right-of-way) and an emergency vehicle access easement (25-feet wide) just off Yosemite Avenue (refer to map at Figure 8). A concrete block wall has been constructed adjacent to the emergency vehicle access easement, but does not extend to the other residential lots along the east side of Whitewater Way. As proposed, the project would provide a 15-foot landscape buffer along Yosemite Avenue, Whitewater Way and McKee Road. The landscape buffer along the southern property line would be reduced to 5 feet, but there would be a block wall providing separation as well.

The project does not include outdoor recreation areas other than the promenade between Buildings 2 and 4. The common area on the ground floor of Building 4 would provide recreation area for the tenants. Additionally, a roof deck is proposed on the top of Building 4 which would provide additional common area with tables and chairs for tenants. Noise from the outdoor promenade area and the roof deck could be of concern, however, given the distance from the adjacent uses, it is not expected to have a significant impact. The promenade area would be approximately 240 feet from the nearest home across McKee Road and approximately the same distance from the homes on Whitewater Way. The homes to the north and south of the site would be buffered from noise by the location of Buildings 2 and 4. The roof deck would be approximately 450 feet from the homes on McKee Road and approximately 250 feet from the homes on Whitewater Way.

Acceptable outdoor noise levels in residential areas is not exceeding 60 dB. According to Table 10.2 of the *Merced Vision General Plan*, the current noise level generated by traffic along Yosemite Avenue within 100 feet of the roadway is 61.2 dB. Using this as a reference, it is unlikely that noise from the apartments or outdoor recreation areas would exceed 60 dB. However, the increase in traffic may increase the noise level generated from Yosemite Avenue. According to Table 10.2 at time of the General Plan buildout, it is expected that in order to achieve a rating of 60dB, a sensitive use would have to be 297 feet from the roadway. While it is not expected that this project would increase traffic to the level expected by the General Plan buildout, there will be an increase over the existing traffic in the area, but it is not expected to significantly increase the noise impacts. As explained in the Traffic and Transportation section below, the traffic generated by this project would very similar to the traffic generated by the previously proposed shopping center. Therefore, operational noise is expected to be **less than significant**.

Mitigation Measure:

- NOI-1) To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:

- The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment.
- The construction contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction disturbance area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited).
- The construction contractor shall locate, to the maximum extent practical, on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall limit all noise producing construction activities, including deliveries and warming up of equipment, to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No such work shall be permitted on Sundays or federal holidays without prior approval from the City.

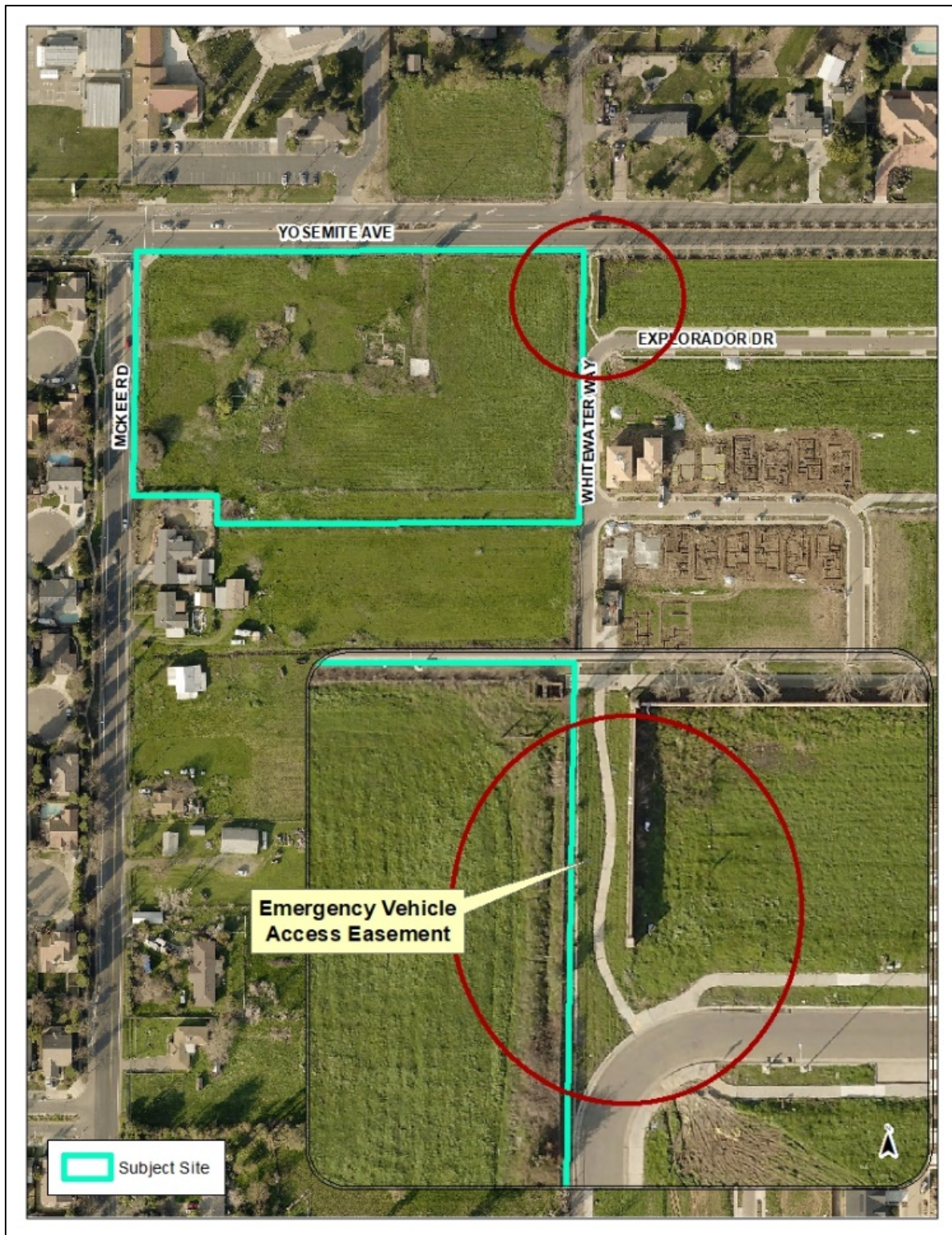
b) *Generation of excessive groundborne vibration or groundborne noise levels?*

No permanent noise sources would be located within the project site that would expose persons to excessive groundborne vibration or noise levels. Construction activities associated with implementation of the proposed project are not expected to result in excessive groundborne vibration or groundborne noise levels. Therefore, implementation of the proposed project would not permanently expose persons within or around the project sites to excessive groundborne vibration or noise and the project impacts would be ***less than significant***

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The nearest airports to the project site include Merced Regional Airport, located approximately 6.9 miles southwest of the project site, and Castle Airport, located approximately 9.3 miles northwest of the project site. No portion of the project site lies within the 55 dBA CNEL noise contours of these airports. Given the project site's distance from the nearest airports, project implementation would not expose people residing or working in the project area to excessive noise levels and impacts would be ***less than significant***.

Figure 8 - Emergency Vehicle Access



14. Population and Housing

SETTING AND DESCRIPTION

The implementation of the proposed project would result in the construction of a mixed use project that would consist of 428 efficiency dwelling units, 18,000 square feet of common space, and 18,000 square feet of retail/commercial space. The project site is surrounded by urban uses.

Expected Population and Employment Growth

According to the State Department of Finance, the City of Merced's population for 2019 is estimated to be 87,110. Population projections estimate that the Merced SUDP area will have a population of 159,900 by the Year 2030. The 2019 population projections prepared by the State also indicate a vacancy rate of 6.31% and an average household size of 3.24 persons per household.

According to the *Merced Vision 2030 General Plan*, the City of Merced is expected to experience significant employment growth by the Year 2030.

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| 14. <u>Population and Housing.</u>
Would the project: | | | | |
| a) Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | ✓ | |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | ✓ |

Impact Analysis

Would the project:

- a) *Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The proposed mixed-use project includes the construction of 428 efficiency dwelling units. Each units would house an individual person which would add 428 people to the site on a continual basis. As previously explained, the unit density is higher than would be allowed by the City's General Plan. However, when one looks at the actual number of people on the site, the density is the same or less than what it would be if the project contained more conventional apartment units of 2, 3, or even 4 bedroom units. There are no new roads or other infrastructure being proposed with the project. Therefore, this impact would be **less than significant**.

- b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

Implementation of the proposed project would not displace any existing housing. There were previously two single-family dwellings on the site, but these homes were in a blighted condition and were demolished in 2017. There is **no impact**.

15. Public Services

SETTING AND DESCRIPTION

Fire Protection

The City of Merced Fire Department provides fire protection, rescue, and emergency medical services from five fire stations throughout the urban area. The City's Central Fire Station is located in the downtown area at 16th and G Streets. The City also has four other stations throughout the City. Station #55, located at 3520 Parsons Avenue, would serve the project site.

Police Protection

The City of Merced Police Department provides police protection for the entire City. The Police Department employs a mixture of sworn officers, non-sworn officer positions (clerical, etc.), and unpaid volunteers (VIP's). The service standard used for planning future police facilities is approximately 1.37 sworn officers per 1,000 population, per the Public Facilities Financing Plan.

Schools

The public school system in Merced is served by three districts: 1) Merced City School District (elementary and middle schools); 2) Merced Union High School District (MUHSD); and, 3) Weaver Union School District (serving a small area in the southeastern part of the City with elementary schools). The districts include various elementary schools, middle (junior high) schools, and high schools. The Project site falls within the Merced City School District and Merced Union High School District (MUHSD).

As the City grows, new schools will need to be built to serve our growing population. According to the Development Fee Justification Study for the MUHSD, Merced City Schools students are generated by new multi-family development at the following rate:

Student Generation Rates

| Commercial/Industrial Category | Elementary (K-8)
(Students per 1,000 sq.ft.) | High School (9-12)
(Students per 1,000 sq.ft.) |
|---------------------------------------|---|---|
| Retail | 0.13 | 0.038 |
| Restaurants | 0.00 | 0.157 |
| Offices | 0.28 | 0.048 |
| Services | 0.06 | 0.022 |
| Wholesale/Warehouse | 0.19 | 0.016 |
| Industrial | 0.30 | 0.147 |
| Multi-Family | 0.559 (per unit) | 0.109 (per unit) |

Based on the table above, the proposed mixed-use project would be expected to generate 289 total new students [242 Elementary School (K-8) students, and 47 High School students].

Parks

Richard Bernasconi Park located within the Moraga subdivision to the east of the site would be the closest park to the project site. Rahilly Park is located approximately 1 mile southwest of the site and Davenport Park is located approximately 1 mile northwest of the site.

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| 15. <u>Public Services.</u> Would the project: | | | | |
| a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: | | | | |
| i. Fire Protection? | | | ✓ | |
| ii. Police Protection? | | | ✓ | |
| iii. Schools? | | | ✓ | |
| iv. Parks? | | | ✓ | |
| v. Other Public Facilities? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:*

- i. *Fire Protection* - The City of Merced Fire Department would provide fire protection services to the site. The project site is located within Fire District #5 and would be served by Fire Station #55, located at 3520 Parsons Avenue. The response from this station would meet the desired response time of 4 to 6 minutes, citywide. The proposed change in land use designation would not affect the City's ability to provide fire protection. The project would be required to be constructed with a fire sprinkler system and to meet all requirements of the California Fire Code and the Merced Municipal Code.

At the time a building permit is issued, the developer would be required to pay the fees required by the Public Facility Financing Plan (PFFP). A portion of

this fee goes to cover the City's costs for fire protection such as fire stations, etc. In addition, the developer would be required to annex into the City's Community Facilities District for Services (CFD #2003-2). This would result in an assessment paid with property taxes in which a portion of the tax would go to pay for fire protection services.

Compliance with all Fire, Building, and Municipal Code requirements as well as payment of the Impact Fees required by the Public Facilities Financing Program, and annexation into the City's CFD for services would reduce any potential impacts to a **less than significant level**.

- ii. *Police Protection* - Development of the project would require additional police services in the area. The proposed mixed-use project is located on a site that is currently vacant. Any change to the status of the site would require additional services. However, the impacts from the proposed project would not substantially increase the impacts beyond what was anticipated with the previous General Plan Amendment and Zone Change that changed the land use for this site to Neighborhood Commercial. Payment of the required Public Facilities Impact Fees and annexation into the City's Community Facilities District (CFD) for services would reduce any potential impacts to a **less than significant level**.
- iii. *Schools* - Based on the table provided in the "Settings and Description" section above, the proposed mixed-use project would generate 242 Elementary School (K-8) students and 47 High School students. Because this project would be efficiency dwelling units for an individual tenant, it is unlikely that this number of students would be generated from the project. However, the project would be required to pay all fees required by the Leroy F. Greene School Facilities Act of 1988. The payment of this statutory fee under California Government Code §65995 is deemed "full and complete mitigation" of school impacts.
- iv. *Parks* - The development of the mixed use project would not trigger the need to construct a new park in the area. Payment of the fees required under the Public Facilities Financing Program (PFFP) as described above and payment of Quimby Act fees would be required at time of building permit issuance to help fund future parks and maintenance of existing parks as well as the payment of fees in lieu of land dedication for future parks would be required at the building permit stage. The proposed amenities onsite and the payment of fees would reduce this potential impact to **less than significant**.
- v. *Other Public Facilities* - The development of the project could impact the maintenance of public facilities and could generate impacts to other governmental services. Payment of the fees required under the Public Facilities Financing Program (PFFP) as described above would mitigate these impacts to a **less than significant level**.

16. Recreation

SETTING AND DESCRIPTION

The City of Merced has a well-developed network of parks and recreation facilities. Richard Bernasconi Park (a Neighborhood Park) is located within the Moraga Subdivision at the corner of Jardin Way and Aviles Drive. This park is approximately 0.2 miles from the site. Bob Carpenter Park (a Neighborhood Park) is located at the corner of Parsons Avenue and Silverado Drive, approximately 1/2 mile from the site. Rahilly Park (a Regional Park) is also located on Parsons Avenue approximately 1 mile from the project site. The Rascal Creek Bike path is also accessible from McKee Road approximately 1/2 mile south of the site.

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| 16. <u>Recreation.</u> Would the project: | | | | |
| a) Increase the use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | ✓ | |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Increase the use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The construction of the proposed project would provide 428 units which, in turn, would introduce 428 residents to this area. As described above, there are 3 parks within a short distance of the site, the site would also have easy access to the City's bicycle trail system with an access point to trail system approximately 1/2 mile to the east of the site. The project would provide an approximately 18,000-square-foot community/recreation area for the tenants, as well as a promenade and rooftop deck with tables and seating. Additionally, the developer would be required to pay the fees described under the Parks section above which would help fund future recreation needs. This impact would be **less than significant**.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

As described above, the project would provide a community/recreation area, a promenade area, and rooftop deck for residents to use for recreation. Also as previously described, the project would be required to pay all impact fees required at the time of building permit issuance which would reduce any impacts to a **less than significant** level.

17. **Transportation/Traffic**

SETTING AND DESCRIPTION

The project site is located at the southeast corner of Yosemite Avenue and McKee Road. Yosemite Avenue, east of Parsons is designated as a “Special Street Section” in the *Merced Vision 2030 General Plan*. As such, the ultimate right-of-way for this road is 94 feet. McKee Road is a Collector Road with an ultimate right of way of 74 feet. The project would have access from Yosemite Avenue (right-in/right-out only) and McKee Road. Both the intersections of Yosemite Avenue and McKee and Yosemite and Via Moraga are signalized.

Yosemite Avenue Access

The primary access on Yosemite Avenue would be a driveway that is located approximately 320 feet east of the intersection of Yosemite Avenue and McKee Road (refer to the Site Plan at Figure 3 on Page 6). This driveway would provide right in/right out access only. The existing median in Yosemite Avenue would remain unchanged along the project site frontage.

McKee Road Access

The primary access on McKee Road would be through a driveway located approximately 195 feet south of the intersection of Yosemite Avenue and McKee Road. This driveway would allow both left and right turning movements.

Project Characteristics

The proposed project includes 428 Efficiency Dwelling Units. Each unit would house one individual, which would be restricted by lease and management (and CUP conditions). The project would incentivize the use of alternate transportation by offering a discount on rent for residents who don’t have a vehicle. Additionally, they will provide specific areas for Uber and Lyft pick-ups, and they are exploring the possibility of offering rentals of bicycles, scooters, and zip cars. The site is also located near transit stops for The Bus and Cat Tracks.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
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| 17. <u>Transportation/Traffic.</u>
Would the project: | | | | |
| a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | | ✓ | | |

| | | | | |
|--|--------------------------------|--|------------------------------|-----------|
| b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)? | | ✓ | | |
| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | ✓ |
| d) Result in inadequate emergency access? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Transportation and traffic impacts were previously analyzed for this site with General Plan Amendment #14-06 and Zone #421. A traffic analysis was prepared as part of Initial Study #14-32 at the time the previous General Plan Amendment and Zone Change were considered and approved (Appendix D). The traffic analysis at that time analyzed impacts associated with a 62,000-square-foot shopping center. When comparing the previous project to the current project, it was determined that the level of impacts were similar based on traffic generation rates for the dwelling units being based on the number of occupants rather than the number of units (similar to the analysis for Land Use and Density). Using a rate of 3.31 average daily trips (ADT's) per resident, there would be 1,417 ADT's for the residential portion of the project. The exact type of tenants that would occupy the commercial portion of the project is unknown. Therefore, the same calculation method was used for this project as used in the previous analysis (Specialty Retail). Based on this calculation, the retail portion of the project would add an additional 798 ADT's, bring the total estimated ADT's for the mixed-use project to 2,214 ADT's. The previous traffic analysis estimated a total of 2,647 ADT's for the previously proposed 62,000-square-foot shopping center. The previously analysis allowed for a 35% reduction of trips based on "pass-by" traffic (traffic that would already be on the roadway, not making a specific trip to the subject location). This reduction resulted in a net of 1,721 ADT's.

The previous traffic analysis analyzed the following road segments and intersections.

Roadways:

- Yosemite Avenue between Parsons Avenue and McKee Road
- McKee Road between Yosemite Avenue and Silverado Avenue

Intersections:

- Yosemite Avenue and Parsons Avenue
- Yosemite Avenue and McKee Road

- Yosemite Avenue and Hatch Road
- McKee Road and Olive Avenue

The previous analysis found that all the intersections studied would operate at an acceptable level of service (LOS), except the intersection of Yosemite Avenue and Parsons Avenue/Gardner Road. This intersection would operate at an LOS F under the existing, plus project scenario. The intersection currently operates at an LOS E. The City's General Plan identifies a level of service (LOS) D as acceptable. Mitigation is recommended to ensure this intersection operates at an acceptable level of service.

The intersection of Olive Avenue and McKee Road would also decrease from LOS C to LOS F under the Cumulative 2035 scenario analyzed by the previous traffic study. Mitigation is also recommended for this intersection which would bring the level of service back to an LOS C.

It should be noted that a traffic signal is planned for this intersection in the future. The cost of the signal would be the responsibility of the City of Merced. The traffic analysis determined that this intersection meets the Manual on Uniform Traffic Control Devices (MUTCD) warrants for traffic signals. However, the traffic analysis recommends that prior to installation of a traffic signal, the remaining MUTCD warrants be conducted to determine if the need exists for a traffic signal at this time. Because the cost of the traffic signal would be borne by the City, it was determined that the recommended mitigation was more feasible at this time.

In addition to the mitigation for the intersection at Parsons and Yosemite Avenues, all previously approved mitigation measures approved at the time of annexation would still apply.

Although the estimated average daily trips for the proposed mixed-use project is slightly higher than the net result for the previously proposed shopping center, no reductions have been applied to the ADT's for the mixed-use project for pass-by traffic or transit and bicycle facilities. When consideration is given to the alternate transportation available and encouraged on the project site, it is likely that the ADT's generated by the current project would be equal to the previously proposed project.

The current project would not add any new roadway facilities and proposes to encourage bicycle, pedestrian, and transit use by providing bicycle parking facilities on-site (both long-term and short-term facilities would be provided in compliance with the CA Green Code), providing a pedestrian-friendly site design with easy access to sidewalks and bicycle paths, and the site would be located near transit stops. The implementation of these design elements along with the previously approved mitigation measures would reduce potential impacts to **less than significant with mitigation**.

Mitigation Measures

TRA-01

The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The

City Engineer recommends the length of the lane be increased to 200 feet.)

-or-

The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.

TRA-02

The following modifications to the intersection of Olive Avenue and McKee Road shall be made:

Southbound Approach:

- Remove the adjacent on-street parking for 100 feet on the southbound approach.
- Re-stripe the approach as shared left/thru lane and share right/thru lane.
- Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop.

Northbound Approach

- Remove the adjacent on-street parking for 100 feet on the north bound approach.
- Re-stripe the approach as shared left/thru lane and shared right/thru lane.
- Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area.

b) *Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?*

Vehicle Miles Traveled. Senate Bill (SB) 743 (Steinberg 2013) was approved by Governor Brown on September 27, 2013, and created a path to revise the definition of transportation impacts according to CEQA. As the guidelines are proposed today, CEQA transportation impacts are determined using LOS of intersections and roadways, which is a measure of congestion. The intent of SB 743 is to align CEQA transportation study methodology with and promote the statewide goals and policies for reducing vehicle miles traveled (VMT) and GHGs. Three objectives of SB 743 related to development are to reduce GHGs, diversify land uses, and focus on creating a multimodal environment. It is hoped that this will spur infill development.

VMT is defined as the product of a number of trips and those trips' lengths. CEQA Guidelines § 15064.3 (b) (1) provides the following criteria for analyzing transportation impacts for land use projects: Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The California Office of Planning and research recommends assuming a project causes a less than significant impact if it is located within ½-mile of a transit stop along an existing high quality transit corridor. The project site is located within ½-mile of transit stops that are served by The Cat Tracks transit service for UC Merced. However, an additional stop may be needed for the regional

transit system buses (The Bus). Implementation of the following mitigation measure would reduce potential impacts to **less than significant with mitigation**.

Mitigation Measure:

TRA-03 The developer shall work with the Transit Joint Powers Authority of Merced County (The Bus) to locate a bus stop within ½-mile of the project site.

- c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Implementation of the proposed project would create new roads or alter any existing roads in such a way to substantially increase hazards due to a geometric design feature. The proposed project would alter the intersections of McKee Road and Olive Avenue and Yosemite Avenue and Parsons Avenue as required by Mitigation Measures TRA-01 and TRA-02. Otherwise, there would be no modifications to roadways. Construction of the proposed project would create **no impact**.

- d) *Result in inadequate emergency access?*

The proposed project includes two driveways to provide access to the site. The project includes a right-in/right-out driveway on Yosemite Avenue and a full access driveway on McKee Road. Providing two points of access into the site satisfies the Fire Departments requirements for emergency access. Any impacts would be **less than significant**.

18. Tribal Cultural Resources

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| 18. <u>Tribal Cultural Resources</u>
Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | |
| i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | | | | ✓ |

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| ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | | | | ✓ |

Impact Analysis

Would the project:

- a) *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
 - i. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*
 - ii. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

As stated in the Cultural Resources Section of this Initial Study, improvements associated with the project include site excavation, grading, paving, and construction of buildings. The areas of the project subject to demolition and construction facilities are likely to have been subject to ground disturbance in the past. No tribal resources are known to have occurred or have been identified at the project site or in the vicinity of the project site. However, as noted in the Cultural Resources Section, implementation of Mitigation Measures CUL-1 and CUL-3 would protect previously unrecorded or unknown cultural resources, including Native American artifacts and human remains, should these be encountered during project construction.

In addition, Assembly Bill (AB) 52 provides for consultation between lead agencies and Native American tribal organizations during the CEQA process. Since AB 52 was enacted in July 2015, the City has not been contacted by any California Native American tribes requesting that they be notified when projects are proposed in Merced. As a result, the City is not required to notify any tribes of this project, and no tribes have requested consultation pursuant to Public Resources Code

section 21080.3.1. Therefore, it is assumed that no Tribal Cultural Resources would be adversely affected by the project. As a result, *no impact* would occur.

19. Utilities and Service Systems

SETTING AND DESCRIPTION

Water

The City's water system is composed of 23 groundwater production wells located throughout the City, approximately 350 miles of main lines, and 4 water tower tanks for storage. Well pump operators ensure reliability and adequate system pressure at all times to satisfy customer demand. Diesel powered generators help maintain uninterrupted operations during power outage. The City of Merced water system delivers more than 24 million gallons of drinking water per day to approximately 20,733 residential, commercial, and industrial customer locations. The City is required to meet State Health pressure requirements, which call for a minimum of 20 psi at every service connection under the annual peak hour condition and maintenance of the annual average day demand plus fire flow, whichever is stricter. The City of Merced Water Division is operated by the Public Works Department.

The City of Merced's wells have an average depth of 414 feet and range in depth from 161 feet to 800 feet. The depth of these wells would suggest that the City of Merced is primarily drawing water from a deep aquifer associated with the Mehrten geologic formation. Increasing urban demand and associated population growth, along with an increased shift by agricultural users from surface water to groundwater and prolonged drought, have resulted in declining groundwater levels due to overdraft. This condition was recognized by the City of Merced and the Merced Irrigation District (MID) in 1993, at which time the two entities began a two-year planning process to assure a safe and reliable water supply for Eastern Merced County through the year 2030. Integrated Regional Water Planning continues today through various efforts.

Wastewater

Wastewater (sanitary sewer) collection and treatment in the Merced urban area is provided by the City of Merced. The wastewater collection system handles wastewater generated by residential, commercial, and industrial uses in the City.

The City Wastewater Treatment Plant (WWTP), located in the southwest part of the City about two miles south of the airport, has been periodically expanded and upgraded to meet the needs of the City's growing population and new industry. The City's wastewater treatment facility has a capacity of 11.5 million gallons per day (mgd), with an average flow of 8.5 mgd. The City has recently completed an expansion project to increase capacity to 12 mgd and upgrade to tertiary treatment with the addition of filtration and ultraviolet disinfection. Future improvements would add another 8 mgd in capacity (in increments of 4 mgd), for a total of 20 mgd. This design capacity can support a population of approximately 174,000. The collection system will also need to be expanded as development occurs.

Treated effluent is disposed of in several ways depending on the time of year. Most of the treated effluent (75% average) is discharged to Hartley Slough throughout the year. The remaining treated effluent is delivered to a land application area and the on-site City-owned wetland area south of the treatment plant.

Storm Drainage

The Draft *City of Merced Storm Drainage Master Plan* addresses the collection and disposal of surface water runoff in the City's SUDP. The study addresses both the collection and disposal of storm water. Systems of storm drain pipes and catch basins are laid out, sized, and costed in the plan to serve present and projected urban land uses.

It is the responsibility of the developer to ensure that utilities, including storm water and drainage facilities, are installed in compliance with City regulations and other applicable regulations. Necessary arrangements with the utility companies or other agencies will be made for such installation, according to the specifications of the governing agency and the City (Ord. 1342 § 2 (part), 1980: prior code § 25.21(f)). The City requires the construction of storm water percolation/detention basins with new development. Percolation basins are designed to collect storm water and filter it before it is absorbed into the soil and reaches groundwater tables. Detention basins are designed to temporarily collect runoff so it can be metered at acceptable rates into canals and streams which have limited capacity. The disposal system is mainly composed of MID facilities, including water distribution canals and laterals, drains, and natural channels that traverse the area.

The City of Merced has been involved in developing a Storm Water Management Plan (SWMP) to fulfill requirements of storm water discharges from Small Municipal Separate Storm Sewer System (MS4) operators in accordance with Section 402(p) of the Federal Clean Water Act (CWA). The SWMP was developed to also comply with General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ.

Solid Waste

The City of Merced is served by the Highway 99 Landfill and the Highway 99 Compost Facility, located at 6040 North Highway 99, one and one-half miles north of Old Lake Road. The County of Merced is the contracting agency for landfill operations and maintenance, while the facilities are owned by the Regional Waste Authority. The City of Merced provides services for all refuse pick-up within the City limits and franchise hauling companies collect in the unincorporated areas. In addition to these two landfill sites, there is one private disposal facility, the Flintkote County Disposal Site, at SR 99 and the Merced River. This site is restricted to concrete and earth material.

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| 19. <u>Utilities and Service Systems.</u>
Would the project: | | | | |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | | | ✓ | |

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| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | | | ✓ | |
| c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | ✓ | | |
| d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | | | ✓ | |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

The proposed project would be served by the City's existing water, wastewater treatment, and storm water drainage systems. Due to constricted capacity in the Yosemite Avenue line, the project would be required to provide an alternative to allow wastewater to be pumped into the City's wastewater system during off-peak hours. One solution would be to provide on-site storage for wastewater to be pumped into the City's wastewater system and on to the treatment facility during off-peak hours. This would not, however, cause the construction of any new City facilities. Electrical power, natural gas, and telecommunications facilities are all located near the site. It is not anticipated that any new facilities would be required. This impact would be **less than significant**.

- b) *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

The City's water supply system consists of four elevated storage tanks with a combined storage capacity of approximately 1.4 million gallons, 23 wells and 14 pumping stations. The project is expected to use approximately 53,125 gallons of water per day. There is a

16-inch water line in Yosemite Avenue and another 16-inch line in McKee Road to serve the project site. The City's water supply would be sufficient to serve the proposed project. This impact would be **less than significant**.

- c) *Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

The City's wastewater collection system handles wastewater generated by residential, commercial, and industrial uses in the City. The City Wastewater Treatment Plant (WWTP), located in the southwest part of the City about 2 miles south of the airport, has been periodically expanded and upgraded to meet the needs of the City's growing population and new industry.

The WWTP recently finished two major upgrades (Phase IV and Phase V) to improve the quality of the treated water, referred to as plant effluent, and to improve the quality of biosolids and methods of treatment. The Merced Wastewater Treatment Plant is now one of the most advanced facilities in the state. It is capable of treating up to 12 million gallons of influent a day. The proposed project is estimated to generate approximately 47,408 gallons of wastewater per day (based on 111 gallons/resident). The additional wastewater generated by the project would be approximately 0.39% of the overall capacity of the WWTP.

Although there is sufficient capacity at the WWTP, the existing line in Yosemite Avenue does not have enough capacity during peak hours to accommodate the additional wastewater and transmit it to the WWTP for processing. In order to mitigate this issue, the project would be required to implement the mitigation measure below. Implementation of this mitigation measure would reduce this impact to **less than significant with mitigation**.

Mitigation Measure:

UTI-01) The project shall provide for on-site storage of wastewater in an underground storage tank, then release the wastewater into the City's system during off-peak hours or an alternative approved by the City Engineer. Details to be worked out with the City Engineer prior to construction.

- d) *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Solid wastes within the County of Merced are disposed of at two landfill sites owned and operated by the Merced County Regional Waste Management Authority. The west side of the County is served by the Billy Wright Road landfill, and the east side (including the City of Merced) by the Highway 59 landfill, 1.5 miles north of Old Lake Road. The County of Merced is the contracting agency for landfill operation and maintenance. It is estimated that the remaining capacity of the Highway 59 site will last until the year 2030. The City of Merced provides services for all refuse pick-up within the City limits, including green waste and recycling. Street sweeping services are also offered.

The proposed project would be required to provide recycling containers as well as general garbage containers. Additionally, in order to reduce the number of containers on site for

general waste, the developer may install trash compactors. CalRecycle estimates that the average multi-family unit generates approximately 4 pounds of waste per day (combined trash and recyclables). This equates to 1,712 pounds/day for the overall project. It is expected that approximately ½ of the total waste generated could be recycled. The City's Refuse Department would be able to serve the project and sufficient capacity is available at the landfill to serve the project. This impact would be **less than significant**.

- e) *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

The California Integrated Waste Management Act of 1989 (AB 939) changed the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25 percent by 1995 and 50 percent by 2000. The proposed project would be required to comply with all federal, State, and local regulations related to solid waste. Furthermore, the proposed project would be required to comply with all standards related to solid waste diversion, reduction, and recycling during project construction and operation of the project. Therefore, the proposed project is anticipated to result in **less-than-significant** impacts related to potential conflicts with federal, State, and local statutes and regulations related to solid waste.

20. Wildfire

SETTING AND DESCRIPTION

Both urban and wildland fire hazard potential exists in the City of Merced and surrounding areas, creating the potential for injury, loss of life, and property damage. Urban fires primarily involve the uncontrolled burning of residential, commercial, or industrial structures due to human activities. Wildland fires affect grassland, brush or woodlands, and any structures on or near these fires. Such fires can result from either human made or natural causes.

Urban fires comprise the majority of fires in the City of Merced. The site is surrounded by urban uses. The single-family lots to the south are large lots over 1 acre in size. These lots contain areas of grass and other vegetation that could be susceptible to fires. However, the City of Merced Fire Department has procedures in place to address the issue of wildland fires, so no additional mitigation would be necessary.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
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| 20. <u>Wildfire.</u> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | | | | |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | | | ✓ | |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------|--|------------------------------|-----------|
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | | | ✓ | |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | | | ✓ | |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | | | | ✓ |

Impact Analysis

Would the project:

- a) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

The project does not include the construction of new roadways or major changes to existing roads. The project would also be required to comply with all applicable requirements of the California Fire Code. As such, the project would not impact an adopted emergency response plan or emergency evacuation plan. This impact would be **less than significant**.

- b) *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

According to the California Department of Forestry and Fire Protection, the project site is not located in any fire hazard zone. The areas surrounding the project site are mostly developed, urban land.

There is a low potential for wildland fires within these parameters. Additionally, the California Building Code and the California Fire Codes work together to regulate building construction and related items such as the care of vacant lots and the storage of flammable liquids.

To provide effective fire prevention activities for low hazard occupancies, the Fire Department conducts seasonal hazard removal programs (primarily weed abatement). The City of Merced employs a weed abatement program, which requires property owners to eliminate flammable vegetation and rubbish from their properties. Each property within the City is surveyed each spring and notices are sent to the property owners whose

properties have been identified to pose a fire risk. Since inception of this program in 1992, grass or brush related fires within the City have been greatly reduced. The City also picks up abandoned vehicles, and a “Spring Clean-up” conducted annually allows people to have bulky refuse picked up at transfer stations without charge. A permanent site is being planned near Highway 59 and Yosemite Avenue. Further, staging areas, building areas, and/or areas slated for development using spark-producing equipment are cleared of dried vegetation or other materials that could serve as fuel for combustion; impacts are considered **less than significant**.

- c) *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The project would be required to repair/replace any missing or damaged infra-structure along their property frontage. However, the on-going maintenance of roadways would fall to the City. All other infra-structure or utilities exist in the area. No additional infra-structure or on-going maintenance would be required that would cause an impact to the environment. This impact is **less than significant**.

- d) *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project site and surrounding area is relatively flat with no risk of downslope or downstream flooding or landslides. Therefore, there is **no impact**.

21. Mandatory Findings of Significance

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-----------|
| 21. <u>Mandatory Findings of Significance.</u>
Would the project: | | | | |
| a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | ✓ | |

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| b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?) | | | ✓ | |
| c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | ✓ | |

Impact Analysis

Would the project:

- a) *Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

As previously discussed in this document, the project does not have the potential to adversely affect biological resources or cultural resources because such resources are lacking on the project site, and any potential impacts would be avoided with implementation of the mitigation measures and other applicable codes identified in this report. Also, the project would not significantly change the existing urban setting of the project area. Thus, this impact would be **less than significant**.

- b) *Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?)*

The Program Environmental Impact Report conducted for the *Merced Vision 2030 General Plan, and the General Plan Program EIR* (SCH# 2008071069) has recognized that future development and build-out of the SUDP/SOI will result in cumulative and unavoidable impacts in the areas of Air Quality and Loss of Agricultural Soils. In conjunction with this conclusion, the City has adopted a Statement of Overriding Considerations for these impacts (Resolution #2011-63) which is herein incorporated by reference.

The certified General Plan EIR addressed and analyzed cumulative impacts resulting from changing agricultural use to urban uses. No new or unaddressed cumulative impacts will result from the Project that have not previously been considered by the certified General Plan EIR or by the Statement of Overriding Considerations, or mitigated by this Expanded

Initial Study. This Initial Study does not disclose any new and/or feasible mitigation measures which would lessen the unavoidable and significant cumulative impacts.

The analysis of impacts associated with the development of the proposed change will contribute to the cumulative impacts identified in the General Plan EIR. The nature and extent of these impacts, however, falls within the parameters of impacts previously analyzed in the General Plan EIR. No individual or cumulative impacts will be created by the Project that have not previously been considered at the program level by the General Plan EIR or mitigated by this Initial Study. This impact is **less than significant**.

- c) *Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Development anticipated by the *Merced Vision 2030 General Plan* will have significant adverse effects on human beings. These include the incremental degradation of air quality in the San Joaquin Basin, the loss of prime agricultural soils, the incremental increase in traffic, and the increased demand on natural resources, public services, and facilities. However, consistent with the provisions of CEQA previously identified, the analysis of the Project is limited to those impacts which are peculiar to the Project site or which were not previously identified as significant effects in the prior EIR. The previously-certified General Plan EIR and the Statement of Overriding Considerations addressed those cumulative impacts; hence, there is no requirement to address them again as part of this Project.

This previous EIR has concluded that these significant adverse impacts are accounted for in the mitigation measures incorporated into the General Plan EIR. In addition, a Statement of Overriding Considerations has been adopted by City Council Resolution #2011-63 that indicates that the significant impacts associated with development of the Project are offset by the benefits that will be realized in providing necessary jobs for residents of the City. The analysis and mitigation of impacts has been detailed in the Environmental Impact Report prepared for the *Merced Vision 2030 General Plan*, which are incorporated into this document by reference.

While this issue was addressed and resolved with the General Plan EIR in an abundance of caution, in order to fulfill CEQA's mandate to fully disclose potential environmental consequences of projects, this analysis is considered herein. However, as a full disclosure document, this issue is repeated in abbreviated form for purposes of disclosure, even though it was resolved as a part of the General Plan.

Potential impacts associated with the Project's development have been described in this Initial Study. All impacts were determined to either be **less than significant** or **less than significant with mitigation measures**.

Attachments:

- A) Public Hearing Notice and Notice Area Map
- B) Mitigation Monitoring Program

Appendices:

- A) Mitigation Monitoring Program for Initial Study #14-32
- B) Air Quality Analysis
- C) Greenhouse Gas Analysis for General Plan Amendment #14-06
- D) Traffic Analysis for General Plan Amendment #14-06

NOTICE OF PUBLIC HEARING
FOR GENERAL PLAN AMENDMENT #19-02, ZONE CHANGE #426, CONDITIONAL USE PERMIT
#1231, AND NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

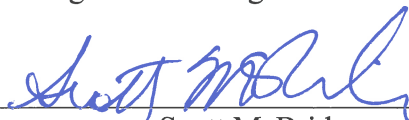
A public hearing will be held by the Merced City Planning Commission on Wednesday, August 21, 2019, at 7:00 p.m., or as soon thereafter as may be heard in the City Council Chambers located at 678 W. 18th Street, Merced, CA, concerning General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231. This application was initiated by Merced Holdings, LP, property owner. The General Plan Amendment and Zone Change application is a request to change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN) and change the Zoning designation from R-1-6 to Neighborhood Commercial (C-N) for approximately 22,670 square feet of land located approximately 360 feet south of Yosemite Avenue, on the east side of McKee Road. The Conditional Use Permit application is a request to allow the construction of 428 Efficiency Dwelling Units and 18,000 square feet of retail on 5.94 acres of land with a General Plan designation of Neighborhood Commercial (CN) and Zoning designation of Neighborhood Commercial (C-N) generally located at the southeast corner of Yosemite Avenue and McKee Road. The property is more particularly described as: "Adjusted Parcel 1" as shown on Certificate of Compliance #2018-23 for Boundary Adjustment #18-06, recorded as Document Number 2019-009885 in Merced County Records; also known as Assessor's Parcel Number (APN): 008-310-053; and Parcel 1 as shown on that certain map entitled "Parcel Map for Nuketa L. Pretzer-Jensen," recorded in Book 58, Page 44 of Merced County Records; also known as Assessor's Parcel Number (APN): 008-310-038.

An environmental review checklist has been filed for this project, and a draft mitigated negative declaration has been prepared under the California Environmental Quality Act. A copy of this staff evaluation ("Initial Study") is available for public inspection at the City of Merced Planning Department during regular business hours, at 678 West 18th Street, Merced, CA. A copy of this document can also be purchased at the Planning Department for the price of reproduction.

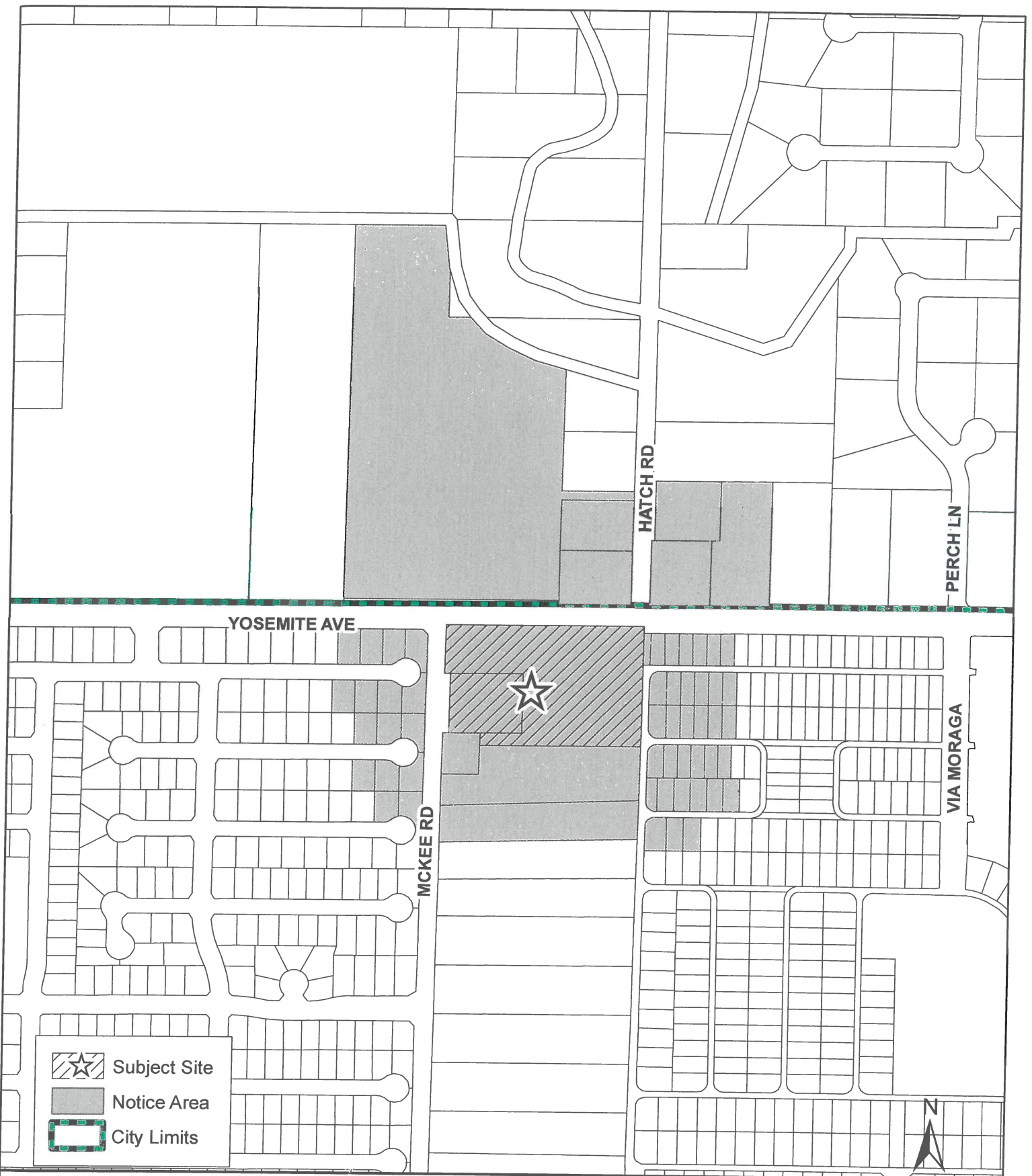
All persons in favor of, opposed to, or in any manner interested in this request for a General Plan Amendment, Zone Change, and Conditional Use Permit, are invited to attend this public hearing or forward written comments to the Director of Development Services, City of Merced, 678 W. 18th Street, Merced, CA 95340. The public review period for the environmental determination begins on August 1, 2019, and ends on August 21, 2019. Please feel free to call the Planning Department at (209) 385-6858 for additional information. If you challenge the decision of the Planning Commission in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Merced at, or prior to, the public hearing.

After the Planning Commission makes its decision on this matter, the General Plan Amendment, Specific Plan Revision, and Site Utilization Plan Revision will also be considered at a public hearing before the City Council. A separate notice of that public hearing will also be given.

July 30, 2019



Scott McBride,
Director of Development Services



Disclaimer: This document was prepared for general inquiries only. The City of Merced is not liable for errors or omissions that might occur. Official information concerning specific parcels should be obtained from recorded or adopted City documents.

General Plan Amendment #19-02, Zone Change #426, & Conditional Use Permit #1231



ENVIRONMENTAL REVIEW #19-18

Mitigation Monitoring Program

MITIGATION MONITORING CONTENTS

This mitigation monitoring program includes a brief discussion of the legal basis and purpose of the mitigation monitoring program, a key to understanding the monitoring matrix, a discussion of noncompliance complaints, and the mitigation monitoring matrix itself.

LEGAL BASIS AND PURPOSE OF THE MITIGATION MONITORING PROGRAM

Public Resource Code (PRC) 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report or mitigated negative declaration. This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The City of Merced has adopted its own “Mitigation Monitoring and Reporting Program” (MMC 19.28). The City’s program was developed in accordance with the advisory publication, *Tracking CEQA Mitigation Measures*, from the Governor’s Office of Planning and Research.

As required by MMC 19.28.050, the following findings are made:

- 1) The requirements of the adopted mitigation monitoring program for the General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231 shall run with the real property. Successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program.
- 2) Prior to any lease, sale, transfer, or conveyance of any portion of the subject real property, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made.

MITIGATION MONITORING PROCEDURES

In most cases, mitigation measures can be monitored through the City’s construction plan approval/plan check process. When the approved project plans and specifications, with mitigation measures, are submitted to the City Development Services Department, a copy of the monitoring checklist will be attached to the submittal. The Mitigation Monitoring Checklist will be filled out upon project approval with mitigation measures required. As project plans and specifications are checked, compliance with each mitigation measure can be reviewed.

In instances where mitigation requires on-going monitoring, the Mitigation Monitoring Checklist will be used until monitoring is no longer necessary. The Development Services Department will be required to file periodic reports on how the implementation of various mitigation measures is progressing or is being maintained. Department staff may be required to conduct periodic inspections to assure compliance. In some instances, outside agencies and/or consultants may be required to conduct necessary periodic inspections as part of the mitigation monitoring program. Fees may be imposed per MMC 19.28.070 for the cost of implementing the monitoring program.

GENERAL PLAN MITIGATION MEASURES

As a second tier environmental document, Initial Study #19-18 incorporates some mitigation measures adopted as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (SCH# 2008071069), as mitigation for potential impacts of the Project.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the project. The complaint shall be directed to the Director of Development Services in written form providing specific information on the asserted violation. The Director of Development Services shall cause an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the Director of Development Services shall cause appropriate actions to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue. Merced Municipal Code (MMC) Sections 19.28.080 and 19.28.090 outline the criminal penalties and civil and administrative remedies which may be incurred in the event of noncompliance. MMC 19.28.100 spells out the appeals procedures.

MONITORING MATRIX

The following pages provide a series of tables identifying the mitigation measures proposed specifically for General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231. The columns within the tables are defined as follows:

| | |
|--|---|
| Mitigation Measure: | Describes the Mitigation Measure (referenced by number). |
| Timing: | Identifies at what point in time or phase of the project that the mitigation measure will be completed. |
| Agency/Department Consultation: | This column references any public agency or City department with which coordination is required to satisfy the identified mitigation measure. |
| Verification: | These columns will be initialed and dated by the individual designated to verify adherence to the project specific mitigation. |

General Plan Amendment #19-02/Zone Change #426/Conditional Use Permit #1231
Mitigation Monitoring Checklist

Project Name: _____ **File Number:** _____
Approval Date: _____ **Project Location** _____
Brief Project Description _____

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring Requirements (MMC 19.28) with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

| 5) Cultural Resources | | | | |
|------------------------------|---|----------------------|------------------------------------|---|
| <i>Impact</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| <i>a</i> | <p>CUL-1) If unknown pre-contact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations.</p> <p>Cultural resources materials may include pre-contact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations shall be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.</p> <p>The applicant shall inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:</p> <p><i>(continued on next page)</i></p> | | | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|---|----------------------|------------------------------------|---|
| <i>a</i> | <p>“The subsurface of the construction site is sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells.”</p> <p>The City shall verify that the language has been included in the grading plans prior to issuance of a grading permit or other permitted project action that includes ground-disturbing activities on the project site.</p> | Building Permits | Planning Department | |
| <i>b</i> | CUL-2) Implementation of Mitigation Measure CUL-1. | Building Permits | Planning Department | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|---|----------------------|------------------------------------|---|
| <i>c</i> | CUL-3) If human remains are identified during construction and cannot be preserved in place, the applicant shall fund: 1) the removal and documentation of the human remains from the project corridor by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, 2) the scientific analysis of the remains by a qualified archaeologist, should such analysis be permitted by the Native American Most Likely Descendant, and 3) the reburial of the remains, as appropriate. All excavation, analysis, and reburial of Native American human remains shall be done in consultation with the Native American Most Likely Descendant, as identified by the California Native American Heritage Commission. | Building Permits | Planning Department | |
| 6) Energy | | | | |
| <i>a</i> | ENE-1) The applicant shall comply with all applicable California Energy Code, AB 341, and San Joaquin Valley Air Pollution Control District rules and regulations regulating energy efficiency and waste. | Building Permits | Building Department | |
| <i>b</i> | ENE-2) Implementation of Mitigation Measure ENE-1. | Building Permits | Building Department | |

| 7) Geology and Soils | | | | |
|---------------------------------------|--|--------------------------------------|-----------------------------|--|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| b | GEO-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit. | Building/
Encroachment
Permits | Engineering
Department | |
| | GEO-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02. | Building/
Encroachment
Permits | Engineering
Department | |
| 8) Hydrology and Water Quality | | | | |
| a | HYDRO-1) To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities. | Building/
Encroachment
Permits | Engineering
Department | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|--|--------------------------------------|------------------------------------|---|
| <i>a</i> | HYDRO-2 If any storm drainage from the site is to drain into MID facilities, the developer shall first enter into a “Storm Drainage Agreement” with MID and pay all applicable fees. | Building/
Encroachment
Permits | Engineering
Department | |
| <i>a</i> | HYDRO-3) To reduce the potential for degradation of surface water quality during project operation, a SWPPP shall be prepared for the proposed project. The SWPPP shall describe specific programs to minimize stormwater pollution resulting from the proposed project. Specifically, the SWPPP shall identify and describe source control measures, treatment controls, and BMP maintenance requirements to ensure that the project complies with post-construction stormwater management requirements of the RWQCB. | Building/
Encroachment
Permits | Engineering
Department | |
| <i>c</i> | HYDRO-4 Prior to issuance of a building permit or as required by the City Engineer, the developer shall demonstrate to the City that storm drainage facilities are adequate to meet the Project demands and that improvements are consistent with the City Standards and the City’s Storm Drain Master Plan. | Building/
Encroachment
Permits | Engineering
Department | |

| 13) Noise | | | | |
|-------------------|---|-----------------|-----------------------------|--|
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| <i>a</i> | <p>NOI-1) To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:</p> <ul style="list-style-type: none"> • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction disturbance area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited). • The construction contractor shall locate, to the maximum extent practical, on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. <p><i>(continued on next page)</i></p> | Building Permit | Building Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|---------------------------------------|---|-----------------|---------------------------------|--|
| | <ul style="list-style-type: none"> The construction contractor shall limit all noise producing construction activities, including deliveries and warming up of equipment, to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No such work shall be permitted on Sundays or federal holidays without prior approval from the City. | Building Permit | Planning Department | |
| 17) Transportation and Traffic | | | | |
| a | <p>TRA-01 The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)</p> <p>-or-</p> <p>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.</p> | Building Permit | Planning/Engineering Department | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|--|----------------------|--|---|
| | <p>TRA-02 The following modifications to the intersection of Olive Avenue and McKee Road shall be made:</p> <p><u>Southbound Approach:</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the southbound approach. • Re-stripe the approach as shared left/thru lane and share right/thru lane. • Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop. <p><u>Northbound Approach</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the north bound approach. • Re-stripe the approach as shared left/thru lane and shared right/thru lane. • Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area. | Building Permit | Planning/
Engineering
Department | |
| <i>b</i> | <p>TRA-03 The developer shall work with the Transit Joint Powers Authority of Merced County (The Bus) to locate a bus stop within ½-mile of the project site.</p> | Building Permit | Planning/
Engineering
Department | |

| 19) Utilities and Service Systems | | | | |
|--|---|-----------------|------------------------|--|
| c | UTI-01) The project shall provide for on-site storage of wastewater in an underground storage tank, then release the wastewater into the City's system during off-peak hours or an alternative approved by the City Engineer. Details to be worked out with the City Engineer prior to construction. | Building Permit | Engineering Department | |

Certificate of Completion:

By signing below, the environmental coordinator confirms that the required mitigation measures have been implemented as evidenced by the Schedule of Tasks and Sign-Off Checklist, and that all direct and indirect costs have been paid. This act constitutes the issuance of a *Certificate of Completion*.

Environmental Coordinator

Date

APPENDICES

APPENDIX A
MITIGATION MONITORING PROGRAM
INITIAL STUDY #14-32

| |
|--|
| <p style="text-align: center;">ENVIRONMENTAL REVIEW #14-32
Mitigation Monitoring Program</p> |
|--|

MITIGATION MONITORING CONTENTS

This mitigation monitoring program includes a brief discussion of the legal basis and purpose of the mitigation monitoring program, a key to understanding the monitoring matrix, a discussion of noncompliance complaints, and the mitigation monitoring matrix itself.

LEGAL BASIS AND PURPOSE OF THE MITIGATION MONITORING PROGRAM

Public Resource Code (PRC) 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report or mitigated negative declaration. This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The City of Merced has adopted its own “Mitigation Monitoring and Reporting Program” (MMC 19.28). The City’s program was developed in accordance with the advisory publication, *Tracking CEQA Mitigation Measures*, from the Governor’s Office of Planning and Research.

As required by MMC 19.28.050, the following findings are made:

- 1) The requirements of the adopted mitigation monitoring program for the General Plan Amendment #14-06 and Zone Change #421, shall run with the real property. Successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program.
- 2) Prior to any lease, sale, transfer, or conveyance of any portion of the subject real property, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made.

MITIGATION MONITORING PROCEDURES

In most cases, mitigation measures can be monitored through the City’s construction plan approval/plan check process. When the approved project plans and specifications, with mitigation measures, are submitted to the City Development Services Department, a copy of the monitoring checklist will be attached to the submittal. The Mitigation Monitoring Checklist will be filled out upon project approval with mitigation measures required. As project plans and specifications are checked, compliance with each mitigation measure can be reviewed.

In instances where mitigation requires on-going monitoring, the Mitigation Monitoring Checklist will be used until monitoring is no longer necessary. The Development Services Department will be required to file periodic reports on how the implementation of various mitigation measures is progressing or is being maintained. Department staff may be required to conduct periodic inspections to assure compliance. In some instances, outside agencies and/or consultants may be required to conduct necessary periodic inspections as part of the mitigation monitoring program. Fees may be imposed per MMC 19.28.070 for the cost of implementing the monitoring program.

GENERAL PLAN MITIGATION MEASURES

As a second tier environmental document, Initial Study #14-32 incorporates some mitigation measures adopted as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (SCH# 2008071069), as mitigation for potential impacts of the Project.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the project. The complaint shall be directed to the Director of Development Services in written form providing specific information on the asserted violation. The Director of Development Services shall cause an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the Director of Development Services shall cause appropriate actions to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue. Merced Municipal Code (MMC) Sections 19.28.080 and 19.28.090 outline the criminal penalties and civil and administrative remedies which may be incurred in the event of noncompliance. MMC 19.28.100 spells out the appeals procedures.

MONITORING MATRIX

The following pages provide a series of tables identifying the mitigation measures proposed specifically for General Plan Amendment #14-06 and Zone Change #421. The columns within the tables are defined as follows:

| | |
|--|---|
| Mitigation Measure: | Describes the Mitigation Measure (referenced by number). |
| Timing: | Identifies at what point in time or phase of the project that the mitigation measure will be completed. |
| Agency/Department Consultation: | This column references any public agency or City department with which coordination is required to satisfy the identified mitigation measure. |
| Verification: | These columns will be initialed and dated by the individual designated to verify adherence to the project specific mitigation. |

General Plan Amendment #14-06/Zone Change #421 Mitigation Monitoring Checklist

Project Name: _____ **File Number:** _____
Approval Date: _____ **Project Location** _____
Brief Project Description _____

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring Requirements (MMC 19.28) with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

| C) Air Quality | | | | |
|--------------------------|---|--|---|---|
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| C-1 | C-1) The project applicant shall submit an Indirect Source Review (ISR) to the San Joaquin Air Pollution Control Board in compliance with District Rule 9510 and shall comply with all other applicable District Rules. The San Joaquin Valley Air Pollution Control District recommends this application be submitted as early as possible or prior to the final discretionary approval. | Prior to Conditional Use Permit (CUP) approval | Planning Department | |
| C-1 | C-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit Issuance / CUP approval | Inspection Services / Planning Department | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|------------------------------|--|---|---|---|
| C-2 | C-3) Compliance with Mitigation Measures C-1 and C-2 above would reduce this impact to a less than significant level. | Building Permit Issuance / CUP approval | Inspection Services / Planning Department | |
| C-3 | C-4) Compliance with Mitigation Measures C-1 and C-2 above would reduce this impact to a less than significant level. | Building Permit Issuance / CUP approval | Inspection Services / Planning Department | |
| C-5 | C-5) Compliance with Mitigation Measures C-1 and C-2 above would reduce this impact to a less than significant level. | Building Permit Issuance / CUP approval | Inspection Services / Planning Department | |
| E) Cultural Resources | | | | |
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| E-1 | E-1) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-zoning #02-02 (Attachment A). | Building Permit | Planning Department | |
| E-2 | E-2) Compliance with Mitigation Measure E-1 would make this impact less than significant. | Building Permit | Planning Department | |
| E-3 | E-3) Compliance with Mitigation Measure E-1 would make this impact less than significant. | Building Permit | Planning Department | |
| E-4 | E-4) Compliance with Mitigation Measure E-1 would make this impact less than significant. | Building Permit | Planning Department | |

| F) Geology and Soils | | | | |
|---------------------------------------|--|----------------------|---|---|
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| F-2 | F-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit. | Building Permit | Inspection Services / Engineering Department | |
| F-2 | F-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Engineering Department/ Planning | |
| H) Hydrology and Water Quality | | | | |
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| H-2 | H-1) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services | |
| H-2 | H-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Planning Department / Engineering | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|--|----------------------|---|---|
| H-3 | H-3) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Planning Department / Engineering | |
| H-4 | H-4) The project developer shall provide calculations to the City Engineer verifying the capacity of the existing storm drain line as well as the capacity of the basin into which the water would ultimately drain. | Building Permit | Engineering | |
| H-4 | H-5) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Planning Department / Engineering | |
| H-5 | H-6) The project developer shall provide calculations to the City Engineer verifying the capacity of the existing storm drain line as well as the capacity of the basin into which the water would ultimately drain. | Building Permit | Engineering | |
| H-5 | H-7) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Planning Department / Engineering | |

| K) Noise | | | | |
|----------------------------------|--|----------------------|---|---|
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| K-1 | K-1) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Planning Department / Engineering | |
| K-2 | K-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #00-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | Building Permit | Inspection Services / Planning Department / Engineering | |
| O. Transportation/Traffic | | | | |
| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
| O-1 | <p>O-1) The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)</p> <p>-or-</p> <p>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.</p> | Building Permit | Planning Department / Engineering | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|---|----------------------|------------------------------------|---|
| O-1 | <p>O-2) The following modifications to the intersection of Olive Avenue and McKee Road shall be made:</p> <p><u>Southbound Approach:</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the southbound approach. • Re-strip the approach as shared left/thru lane and share right/thru lane. • Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop. <p><u>Northbound Approach</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the north bound approach. • Re-strip the approach as shared left/thru lane and shared right/thru lane. • Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area. | Building Permit | Planning Department / Engineering | |

| <i>Impact No.</i> | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> | <i>City Verification (date and initials)</i> |
|--------------------------|--|----------------------|------------------------------------|---|
| O-1 | O-3) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02 (Attachment A). | | | |
| O-2 | O-4) The implementation of Mitigation Measures O-1 through O-3 above would reduce this impact to a less than significant level. | | | |

Certificate of Completion:

By signing below, the environmental coordinator confirms that the required mitigation measures have been implemented as evidenced by the Schedule of Tasks and Sign-Off Checklist, and that all direct and indirect costs have been paid. This act constitutes the issuance of a *Certificate of Completion*.

Environmental Coordinator

Date

Attachments:

Mitigation Monitoring Program for Initial Study #02-27 for GPA #02-02/Annexation/Pre-Zoning #02-02

**EXPANDED INITIAL STUDY #02-27
for
HUNT FAMILY ANNEXATION TO THE
CITY OF MERCED**

Appendix A
Mitigation Monitoring Program

MITIGATION MONITORING CONTENTS

This mitigation monitoring program includes a brief discussion of the legal basis and purpose of the mitigation monitoring program, a key to understanding the monitoring matrix, a discussion of noncompliance complaints, and the mitigation monitoring matrix itself.

LEGAL BASIS AND PURPOSE OF THE MITIGATION MONITORING PROGRAM

Public Resource Code (PRC) 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report or mitigated negative declaration. This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The City of Merced has adopted its own "Mitigation Monitoring and Reporting Program" (MMC 19.28). The City's program was developed in accordance with the advisory publication, *Tracking CEQA Mitigation Measures*, from the Governor's Office of Planning and Research.

As required by MMC 19.28.050, the following findings are made:

- 1) The requirements of the adopted mitigation monitoring program for the Hunt Family shall run with the real property that is the subject of a General Plan Amendment/Annexation to the City of Merced. Successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program.
- 2) Prior to any lease, sale, transfer, or conveyance of any portion of the subject real property, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made.

MITIGATION MONITORING PROCEDURES

In most cases, mitigation measures can be monitored through the City's construction plan approval/plan check process. When the approved project plans and specifications, with mitigation measures, are submitted to the City Development Services Department, a copy of the monitoring checklist will be attached to the submittal. The Hunt Family Annexation Mitigation Monitoring Checklist will be filled out upon project approval with mitigation measures required. As project plans and specifications are checked, compliance with each mitigation measure can be reviewed.

EXHIBIT A
Planning Commissioner Resolution #2707

In instances where mitigation requires on-going monitoring, the Mitigation Monitoring Checklist will be used until monitoring is no longer necessary. The Development Services Department will be required to file periodic reports on how the implementation of various mitigation measures is progressing or is being maintained. Department staff may be required to conduct periodic inspections to assure compliance. In some instances, outside agencies and/or consultants may be required to conduct necessary periodic inspections as part of the mitigation monitoring program. Fees may be imposed per MMC 19.28.070 for the cost of implementing the monitoring program.

GENERAL PLAN MITIGATION MEASURES

As a second tier environmental document, the *Expanded Initial Study for Hunt Family Annexation to the City of Merced* incorporates some mitigation measures adopted as part of the *Merced Vision 2015 General Plan Program Environmental Impact Report* (SCH# 95082050), as mitigation for potential impacts of the Project. Therefore, following the Hunt Family Annexation Mitigation Monitoring Checklist (starting on page A-11) is a list of these relevant General Plan mitigation measures along with the General Plan Mitigation Monitoring Checklists (Forms A and B) to be used to verify that the General Plan mitigation measures have been met.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the project. The complaint shall be directed to the Director of Development Services in written form providing specific information on the asserted violation. The Director of Development Services shall cause an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the Director of Development Services shall cause appropriate actions to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue. Merced Municipal Code (MMC) Sections 19.28.080 and 19.28.090 outline the criminal penalties and civil and administrative remedies which may be incurred in the event of noncompliance. MMC 19.28.100 spells out the appeals procedures.

MONITORING MATRIX

The following pages provide a series of tables identifying the mitigation measures proposed specifically for the Hunt Family Annexation. The columns within the tables are defined as follows:

| | |
|--|---|
| Mitigation Measure: | Summarizes the Mitigation Measure (referenced by number) identified in <i>Expanded Initial Study #02-27</i> . |
| Timing: | Identifies at what point in time or phase of the project that the mitigation measure will be completed. |
| Agency/Department Consultation: | This column references any public agency or City department with which coordination is required to satisfy the identified mitigation. |
| Verification: | These columns will be initialed and dated by the individual designated to verify adherence to the project specific mitigation. |

Hunt Family Annexation Mitigation Monitoring Checklist

Project Name: _____ File Number: _____
Approval Date: _____ Project Location: _____
Brief Project Description: _____

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring Requirements (MMC 19.28) with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|--|---|--|---------------------------------------|
| <p style="text-align: center;">2. AGRICULTURAL RESOURCES</p> | | | |
| <p>2-1 A provision shall be recorded by the applicants/developer or successors, at time of sale of any residentially-zoned property within the project that lies within 1,000 feet of the external boundary of any non-project property which currently has an active agricultural operation (including 4-H projects), or has had an agricultural operation on it during the calendar year preceding the year within which the sale takes place. This provision shall notify the buyer(s) and any subsequent owner(s) of the possible inconvenience or discomfort of farming operations, arising from the use of agricultural chemicals, including pesticides, and fertilizers, as well as from the pursuit of agricultural operations including plowing, spraying, and harvesting which occasionally generate dust, smoke, noise and odor, and the priority to which Merced County places on agricultural operations.</p> | <p style="text-align: center;">Building Permits</p> | <p style="text-align: center;">City Planning & Inspection Services</p> | |

| <i>Mitigation Measure</i> | <i>Timing</i> | <i>Agency or Department Consultation</i> | <i>City Verification (date and initials)</i> |
|--|-------------------------|---|---|
| 3. AIR QUALITY | | | |
| 3-1. All active portions of construction sites, earthen access roads, and material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice a day with complete coverage, preferably in the late morning and after work is done for the day. Where feasible, reclaimed water shall be used. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-2. All clearing, grading, earth moving, or excavation activities shall cease during periods of winds greater than 20 miles per hour averaged over one hour. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-3. All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-4. The area disturbed by clearing, earth moving, or excavation activities shall be minimized at all times. This can be accomplished by mowing instead of disking for weed control and seeding and watering inactive portions of the construction site until grass is evident, if construction time frames warrant. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-5. Construction site vehicle speeds shall be limited to 15 miles per hour. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-6. If used, petroleum-based dust palliatives shall meet the road oil requirements of the District's rule regarding Cutback Asphalt Paving Materials. | <i>Building Permits</i> | <i>SJVUAPCD</i> | |
| 3-7. Streets adjacent to the Project site shall be swept as needed to remove silt and/or mud that may have accumulated from construction activities. The streets are required to be wet prior to or in conjunction with rotary sweeping. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-8. All internal combustion engine-driven equipment shall be properly maintained and well tuned according to the manufacturer's specifications. | <i>Building Permits</i> | <i>City Inspection Services</i> | |

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|--|----------------------------------|--|--|
| 3-9. When reasonably available and economically feasible, diesel powered or electric equipment shall be utilized in lieu of gasoline powered engines. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-10. Construction activities shall minimize obstruction of through traffic lanes adjacent to the site and a flag person shall be retained to maintain safety adjacent to existing roadways. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-11. Prior to issuance of building permits, the project will be required to comply with District Regulation VIII. Specifically, the rules that apply to this project are: Rule 8010 (Administrative Requirements) and Rule 8020 (Construction, Demolition, Excavation, and Extraction Activities). Additional rules that may apply to this project depending on construction practices employed are: Rule 8030 (Handling and Storage of Bulk Materials), Rule 8060 (Paved and Unpaved Roads), and Rule 8070 (Parking, Shipping, Receiving, Transfer, Fueling, and Service Areas). | <i>Building Permits</i> | <i>SJVUAPCD</i> | |
| 3-12. If public transit is available in the area, a public transit stop shall be located within safe walking distance from the Project site or included as part of the Project. (Details to be worked out with Merced County Transit staff at the tentative map stage.) | <i>Tentative Subdivision Map</i> | <i>City Planning and Merced County Transit Service</i> | |
| 3-13. Provide low nitrogen oxide (NOx) emitting and/or high efficiency water heaters. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-14. Planting of deciduous trees on the south and westerly facing sides of buildings. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-15. If fireplaces are proposed, only natural gas fireplaces, EPA-certified wood burning fireplaces/stoves, or pellet fueled heater should be installed. Conventional open-hearth fireplaces should not be permitted. | <i>Building Permits</i> | <i>City Inspection Services</i> | |

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|--|----------------------------------|--|--|
| 3-16. Sidewalks and bikepaths should be installed throughout as much of the project as possible and should be connected to any nearby open space areas, parks, schools, commercial areas, etc. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |
| 3-17. Natural gas lines and electrical outlets should be installed in patio areas to encourage the use of gas barbecues and electric yard tools. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-18. Energy efficient design including automated control system for heating/air conditioning and energy efficiency beyond Title 24 requirements, lighting controls and energy-efficient lighting in buildings, increased insulation beyond Title 24 requirements, and light colored roof materials to reflect heat. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-19. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-20. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operation are occurring. (the use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting t limit the visible dust emissions.) | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 3-21. Limit the hours of operation of heavy duty equipment to between 7 a.m. and 7 p.m. and/or the amount of equipment in use. (See also mitigation measure 11-2). | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 4) BIOLOGICAL RESOURCES | | | |
| 4-1. The developers shall dedicate to the City a minimum 50-foot-wide corridor from the centerline (or 25 feet from the crown, whichever is greater) of Black Rascal Creek in order to maintain these open space areas as natural riparian preserves and recreation areas per <i>Merced Vision 2015 General Plan</i> policy. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |

| <i>Mitigation Measure</i> | <i>Timing</i> | <i>Agency or Department Consultation</i> | <i>City Verification (date and initials)</i> |
|---|----------------------------------|--|--|
| 4-2. If any trees along Black Rascal Creek or on the Project site that have been determined to be potential nesting sites for raptors are proposed for removal, a pre-construction survey for nesting raptors shall be conducted prior to tree removal and alternatives to removal shall be explored. If removal is approved by the City, between February 1 and September 15, appropriate measures to avoid disturbing any nesting raptors shall be implemented at that time or the trees shall be felled between September 15 and January 31. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |
| 5) CULTURAL RESOURCES | | | |
| 5-1. If evidence of archaeological artifacts is discovered during construction, all operations within an area at and adjacent to the discovered site shall halt until a qualified archaeologist determines the extent of significance of the site. | <i>Building Permits</i> | <i>City Planning</i> | |
| 5-2. On-site preservation of a resource is the preferred alternative. Preserving a cultural deposit maintains the artifacts in context and may prevent inadvertent discovery of, or damage to, human burials. Preservation may be accomplished through a number of means such as capping or covering the site with a layer of soil, fencing the site area, and/or incorporation of the resource in a park area. | <i>Building Permits</i> | <i>City Planning</i> | |
| 6. GEOLOGY AND SOILS | | | |
| 6-1. Prior to approval of a tentative subdivision map, the City shall review plans for drainage and stormwater run-off control systems and their component facilities to ensure that these systems are non-erosive in design. | <i>Building Permits</i> | <i>City Inspection Services</i> | |

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|--|----------------------------------|--|--|
| 6-2. Upon completion of phased construction, subsequent phases shall re-vegetate all exposed soil surfaces within 30 days, or as otherwise approved by the City, to minimize potential topsoil erosion. Reasonable alternatives to re-vegetation may be employed, especially during peak high temperature periods or to avoid negative impacts to nearby agricultural activities, subject to the approval of the City. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 6-3. Projects under review shall be required to submit temporary erosion control plans for construction activities. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 6-4. Prior to the issuance of building permits, the applicant shall retain a qualified geologist or qualified soil specialist to conduct soil samples throughout the Project area to identify expansive soils, and those areas shall be identified on a map for the City. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 6-5. Building plans shall be reviewed by a registered engineer or other professional specializing in geo-technical assessments to ensure that the soils can support the load.. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 8) HYDROLOGY AND WATER QUALITY | | | |
| 8-1. Prior to approval of a tentative subdivision map, the applicant shall demonstrate to the City that storm drainage facilities are adequate to meet Project demands and that improvements are consistent with the Merced County Critical Area Flooding and Drainage Plan and/or the City's Storm Drainage Master Plan. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |
| 8-2. Prior to approval of building permits, the applicants shall demonstrate to the City that temporary erosion control measures will be followed during construction. | <i>Building Permits</i> | <i>City Planning</i> | |

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|--|---------------------------|--|--|
| 11) NOISE | | | |
| 11-1. Residential development on the Project site shall meet acceptable noise level standards as follows: <ul style="list-style-type: none"> • A maximum of 45 dB for interior noise level for residential projects. • A maximum of 60 dB for exterior noise level, especially when outdoor activities are important components of a project. • A maximum of 65 dB when all the best available noise-reduction techniques have been exhausted without achieving 60 dB, and the strict application of such a maximum becomes a hindrance to development needed or typical for an area. | Building Permits | City Inspection Services | |
| 11-2. Grading and construction activity shall be limited to daylight hours (between 7 a.m. and 7 p.m.) in areas where noise sensitive receptors (i.e. adjacent single-family development) are located. | Building Permits | City Inspection Services | |
| 11-3. In noise sensitive areas, construction equipment, compressors, and generators shall be fitted with heavy duty mufflers specifically designed to reduce noise impacts. | Building Permits | City Inspection Services | |
| 13) PUBLIC SERVICES | | | |
| 13-1 Prior to the issuance of building permits, the applicant shall be responsible for the payment of school facility impact fees as adopted by the Merced City School District and Merced Union High School District. | Building Permits | City Inspection Services | |
| 14) RECREATION | | | |
| 14-1. The Project developers shall work with the City to locate a neighborhood park site within the Project boundaries. (Details to be addressed at the tentative subdivision map stage.) | Tentative Subdivision Map | City Planning | |

| <i>Mitigation Measure</i> | <i>Timing</i> | <i>Agency or Department Consultation</i> | <i>City Verification
(date and initials)</i> |
|---|----------------------------------|---|---|
| 14-2. The Project developers shall work with the City (and County as applicable) on the design and construction of bike paths along Black Rascal Creek and possibly along the PG&E utility corridor, and to connect the City bike path to the County bike path along Lake Road. (Details and possible reimbursement to be addressed at the tentative subdivision map stage.) | <i>Tentative Subdivision Map</i> | <i>City Planning and County Planning</i> | |
| 15) TRANSPORTATION AND TRAFFIC | | | |
| 15-1 The Project shall pay all fees as required under the City's Public Facilities Impact Fees (Chapter 17.62 of the Merced Municipal Code) prior to building permit issuance. | <i>Building Permits</i> | <i>City Inspection Services</i> | |
| 15-2 <i>Traffic Signal at Yosemite and McKee or Hatch:</i> Owner shall provide financial security acceptable to the City equivalent to a "fair share" (but not to exceed 25 percent) of the cost of a traffic signal at the intersection of either McKee Road and Yosemite Avenue or Hatch Road and Yosemite Avenue, whichever intersection the City ultimately decides to signalize. Scope of improvements includes a traffic signal and related intersection improvements to City standards and to the satisfaction of the City Engineer. The "fair share," final cost, and form of security shall be determined by the City Engineer at the time of the first tentative subdivision map or other discretionary action. The determination of the City Engineer will be subject to appeal to the City Council. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|--|----------------------------------|--|--|
| <p>15-3 <i>Yosemite Avenue:</i> The developer shall construct and dedicate any remaining improvements on half of the 94-foot right-of-way for Yosemite Avenue along the Project boundaries. The developer shall construct full frontage improvements (curb, gutter, sidewalks, street trees, street lights, etc.) on Yosemite and at least one travel lane in each direction. The timing of construction of the improvements is to be determined at the subdivision map stage. Construction is subject to reimbursement per Merced Municipal Code (MMC) section 17.58 and/or the Administrative Policy of the Public Facilities Impact Fees (City Council Resolution #98-73), whichever is applicable.</p> | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |
| <p>15-4 <i>McKee Road:</i> The developer shall construct and dedicate any remaining improvements on half of the 74-foot right-of-way for McKee Road along the Project boundaries. The developer shall construct full frontage improvements (curb, gutter, sidewalks, street trees, street lights, etc.) on McKee and at least one travel lane in each direction. The timing of construction of the improvements is to be determined at the subdivision map stage. Only off-site construction is subject to reimbursement per Merced Municipal Code (MMC) section 17.58, but no reimbursement is available from the Public Facilities Impact Fees for collectors, such as McKee.</p> | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |
| <p>15-5 <i>Local and Collector Streets:</i> The developer shall be responsible for construction and dedication of all interior collector and local streets within the Project boundaries. Construction shall meet all the requirements of the most recent edition of the City of Merced's <i>Standard Designs for Common Engineering Structures</i>. No reimbursement is available for these roadways.</p> | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |

| Mitigation Measure | Timing | Agency or Department Consultation | City Verification (date and initials) |
|---|----------------------------------|--|--|
| 15-6 <i>Lake Road:</i> The property owners shall work with the City and the County to address whether a future extension of Lake Road is necessary from Yosemite Avenue south to Olive Avenue as shown in the County's Circulation Element. This issue shall be addressed prior to approval of the first final subdivision map with frontage on the possible Lake Road right-of-way. If the issue is not resolved prior to map approval, right-of-way for the future extension of Lake Road shall be preserved on the map, with the understanding that it might be given back to the property owners in the future if it is not needed. | <i>Tentative Subdivision Map</i> | <i>City Planning and County Planning</i> | |
| 16) UTILITIES | | | |
| 16-1 Prior to approval of a tentative subdivision map, the City shall review the Project application to ensure that wastewater facilities are adequate to meet Project service demands and are consistent with wastewater master plans. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |

Copies of This Form Distributed To:

City Council _____ City Manager _____ Dev Serv Dir. _____ Public Works Dir. _____ City Engineer _____ Fire Chief _____
Police Chief _____ Leisure Serv. Dir. _____ County of Merced (Dept. _____) Other (List _____)
Responsible Agency: (List _____)

I hereby certify that I have inspected the project site and that the above information is true to the best of my knowledge.

Name: (Print) _____ Representing: (Agency/Firm) _____

Signature: _____ Date: _____

APPLICABLE MITIGATION MEASURES OF THE GENERAL PLAN EIR—HUNT FAMILY ANNEXATION

| <i>Mitigation Measure</i> | <i>Timing</i> | <i>Agency or Department Consultation</i> | <i>City Verification (date and initials)</i> |
|---|----------------------------------|---|--|
| <i>Plant/Animal Life</i> | | | |
| 3-a) When site-specific development proposals are submitted to the City for review and action, surveys should be conducted for special-status species prior to the disturbance of potentially suitable habitat. All surveys will be conducted in accordance with applicable state and federal guidelines. | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | Completed 10/2/02 with Biological Resources Inventory by Moore Biological Consultants (Appendix D) |
| <i>Traffic/Circulation</i> | | | |
| 7-a) Appropriate traffic studies shall be prepared for all development projects which can be expected to reduce a road segment or intersection levels of service below "D." | <i>Tentative Subdivision Map</i> | <i>City Planning</i> | |
| 7-b) The City shall require all development proposals to contribute, based on their proportionate share of impact, to circulation system improvements necessary to maintain at least a level of service "D" on all road segments and intersections impacted by the development project. | <i>Certificate of Occupancy</i> | <i>City Planning</i> | |
| <i>Public Facilities/Services</i> | | | |
| 8-d) Development projects will be required to pay public facilities impact fees as established by the City in accordance with the requirements of State law. | <i>Certificate of Occupancy</i> | <i>City Planning</i> | |

**Merced Vision 2015 General Plan
Environmental Mitigation Checklist Form A**

Project Name: _____

File Number: _____

Approval Date: _____

EIR _____ **Conditional Neg. Dec.** _____

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring requirements with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6)

| Mitigation Measure | Type | Monitoring Dept. | Shown on Plans | Verified Implementation | Remarks |
|--------------------|------|------------------|----------------|-------------------------|---------|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| 13. | | | | | |
| 14. | | | | | |

(Add additional Measures as Necessary)

Explanation of Headings:

- Type: Project, ongoing, cumulative.
Monitoring Dept. Department or Agency responsible for monitoring a particular mitigation measure.
Shown on Plans: When mitigation measure is shown on plans, this column will be initialed and dated.
Verified Implementation: When a mitigation measure has been implemented, this column will be initialed and dated.
8-3. Remarks: Area for describing status of ongoing mitigation measure, or for other information.

APPENDIX B

AIR QUALITY ANALYSIS



Rincon Consultants, Inc.

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July 10, 2019
Project No: 19-08088

Raj Joshi
Merced Holdings LP
Via email: raj@builderific.com

Subject: Air Quality Technical Analysis for the Shoppes at University Village Mixed-Use Project at Yosemite Avenue and McKee Road in the City of Merced, California

Dear Mr. Joshi:

Rincon Consultants, Inc. (Rincon) is pleased to provide this memorandum summarizing the findings of an air quality technical analysis for the Shoppes at University Village Mixed-Use Project (proposed project) located at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced, California. Rincon assessed the project's air quality impacts in accordance with the methodologies outlined in the San Joaquin Valley Air Pollution Control District (SJVAPCD) *CEQA Air Quality Handbook* and supplemental guidance. The methodologies and results are summarized below.

Project Description

The project site is located on approximately 5.94 acres at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced. The project would include construction of three residential buildings and one mixed-use building. Building 1 would include 102 residential units; Building 2 would include 56 residential units, 18,000 square feet (sf) of commercial space, and 18,000 sf of retail and common space;¹ Building 3 would include 102 residential units; and Building 4 would include 168 residential units. Based on applicant provided information, the residential units would primarily be used as student housing. The project would also include 376 vehicular parking spaces, nine of which would be American with Disabilities Act compliant and 12 of which would be established as electric vehicle charging stations.

Impact Analysis

Methodology

The project's construction and operational criteria pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod uses project-specific information, including the project's land uses, square footages, location, and construction information to estimate a project's operational and construction emissions.

¹ Based on applicant provided information, it is assumed that the community space would include a fast food restaurant without drive-through (4,500 sf), a health club (9,000 sf) for use by residents only, and an office space (4,500 sf).

This report assumes that construction would begin in January 2020 and occur over approximately 14 months based on CalEEMod defaults. Modeling utilized CalEEMod defaults for construction equipment and, because the site is relatively flat, it was assumed that no import or export would be required. Trip generation rates provided by the San Mateo Planning Department were used in the analysis. Trip generation rates provided and input into CalEEMod include 3.31 trips per day for residential uses and 44.32 trips per day for the commercial and retail uses. The fleet mix for the residential units, which would be used by students, was altered from CalEEMod defaults to be more consistent with a fleet mix that represents student housing.² Specifically, the percentage of the fleet mix assigned to motorhomes and school buses was reduced to zero and that percentage of trips was added to the light duty automotive (LDA) category. Additionally, the heavy-heavy-duty (HHD) vehicle class was reduced from approximately 15 percent of the fleet mix to five percent of the fleet mix and the approximately 10 percent removed from HHD was added to the medium-heavy-duty (MHD) vehicle class to represent future conditions on the project site. Finally, it was assumed that the units would not include hearths. CalEEMod results and assumptions are included as an attachment.

Significance Thresholds

The SJVAPCD recommends the use of quantitative thresholds to determine the significance of temporary construction-related pollutant emissions and project operational emissions. SJVAPCD's project-specific and cumulative significance thresholds are the same and where projects exceed the project-specific significance thresholds they are considered cumulatively considerable.³ The SJVAPCD has recommended regional thresholds for emissions of reactive organic gases (ROG), nitrous oxide (NO_x), carbon monoxide (CO), sulfur oxide (SO_x), particulate matter with a diameter between 2.5 and 10 micrometers (PM₁₀), and particulate matter with a diameter of 2.5 micrometers or less (PM_{2.5}). SJVAPCD's construction and operational significance thresholds are shown in Table .

Table 1 Air Quality Thresholds of Significance – Criteria Pollutants

| Emission Source | Maximum Annual Emissions (tons per year) | | | | | |
|------------------------|--|-----------------|-----|-----------------|------------------|-------------------|
| | ROG | NO _x | CO | SO _x | PM ₁₀ | PM _{2.5} |
| Construction Emissions | 10 | 10 | 100 | 27 | 15 | 15 |
| Operational Emissions | 10 | 10 | 100 | 27 | 15 | 15 |

Source: SJVAPCD. 2015. San Joaquin Valley APCD Air Quality Significance Thresholds – Criteria Pollutants.
<http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf>

Results

Construction Emissions

Table 2 summarizes the estimated maximum daily emissions of pollutants associated with construction of the project. As shown in Table 2, ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions would not exceed

² The default fleet mix used for the retail component remained unchanged.

³ SJVAPCD. 2015. *San Joaquin Valley APCD Guidance for Assessing and Mitigating Air Quality Impacts*.
http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

SJVAPCD regional thresholds. Therefore, project construction would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Table 2 Construction Emissions

| Emission Source | Maximum Annual Emissions (tons per year) | | | | | |
|--|--|-----------------|------------|-----------------|------------------|-------------------|
| | ROG | NO _x | CO | SO _x | PM ₁₀ | PM _{2.5} |
| 2020 Construction Emissions | 0.5 | 3.9 | 3.9 | <0.1 | 0.7 | 0.3 |
| 2021 Construction Emissions | 4.3 | 0.1 | 0.2 | <0.1 | <0.1 | <0.1 |
| Maximum Construction Emissions | 4.3 | 3.9 | 3.9 | <0.1 | 0.7 | 0.3 |
| <i>SJVAPCD Construction Thresholds</i> | <i>10</i> | <i>10</i> | <i>100</i> | <i>27</i> | <i>15</i> | <i>15</i> |
| Threshold Exceeded? | No | No | No | No | No | No |

Notes: All emissions modeling was done using CalEEMod. See Attachment for modeling worksheets.

Operational Emissions

Table 3 summarizes project-related operational emissions by emission source. The majority of project-related operational emissions would be associated with vehicle trips to and from the project site. As shown in Table 3, project operational emissions would not exceed SJVAPCD regional thresholds for criteria pollutants. Therefore, the project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. Because criteria pollutant emissions and regional thresholds are cumulative in nature, the project would not result in a cumulatively considerable net increase of a criteria pollutant.

Table 3 Operational Emissions

| Emission Source | Maximum Annual Emissions (tons per year) | | | | | |
|---------------------------------------|--|-----------------|-------------|-----------------|------------------|-------------------|
| | ROG | NO _x | CO | SO _x | PM ₁₀ | PM _{2.5} |
| Area | 2.3 | <0.1 | 3.2 | <0.1 | <0.1 | <0.1 |
| Energy | <0.1 | 0.3 | 0.2 | <0.1 | <0.1 | <0.1 |
| Mobile | 0.8 | 7.7 | 7.7 | <0.1 | 2.1 | 0.6 |
| Total Project Emissions | 3.2 | 8.0 | 11.0 | <0.1 | 2.1 | 0.6 |
| <i>SJVAPCD Operational Thresholds</i> | <i>10</i> | <i>10</i> | <i>100</i> | <i>27</i> | <i>15</i> | <i>15</i> |
| Threshold Exceeded? | No | No | No | No | No | No |

Notes: All emissions modeling was done using CalEEMod. See Attachment for modeling worksheets.

Conclusions

Based on the analysis, the project's operational and construction emissions would not exceed the SJVAPCD recommended regional or local significance thresholds.

Thank you for the opportunity to work with you on this project. Please contact us if you have any questions or concerns regarding the information presented herein.

Sincerely,
Rincon Consultants, Inc.



Kari Zajac, MESM
Project Manager



Matt Maddox, AICP, MESM
Principal

Attachments

CalEEMod Results and Assumptions

Attachment

California Emissions Estimator Model Results and Assumptions

Shoppes at University Village Project - 19-08088 - Merced County, Annual

Shoppes at University Village Project - 19-08088

Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------------------------------|--------|---------------|-------------|--------------------|------------|
| General Office Building | 4.50 | 1000sqft | 0.00 | 4,500.00 | 0 |
| Parking Lot | 376.00 | Space | 3.38 | 150,400.00 | 0 |
| Fast Food Restaurant w/o Drive Thru | 4.50 | 1000sqft | 0.00 | 4,500.00 | 0 |
| Health Club | 9.00 | 1000sqft | 0.00 | 9,000.00 | 0 |
| Apartments Mid Rise | 428.00 | Dwelling Unit | 2.56 | 428,000.00 | 428 |
| Strip Mall | 18.00 | 1000sqft | 0.00 | 18,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------|-------|------------------|-----|---------------------------|------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 49 |
| Climate Zone | 3 | | | Operational Year | 2022 |

Utility Company Pacific Gas & Electric Company

| | | | | | |
|--------------------------|--------|--------------------------|-------|--------------------------|-------|
| CO2 Intensity (lb/MW/hr) | 641.35 | CH4 Intensity (lb/MW/hr) | 0.029 | N2O Intensity (lb/MW/hr) | 0.006 |
|--------------------------|--------|--------------------------|-------|--------------------------|-------|

1.3 User Entered Comments & Non-Default Data

Shoppes at University Village Project - 19-08088 - Merced County, Annual

Project Characteristics -

Land Use - Source: applicant provided site plans

Construction Phase -

Vehicle Trips - Source: City of Merced Planning Department

Fleet Mix - Assumed a fleet mix that is more consistent with student housing-- reduced motorhome and school bus to 0 and added values to LDA; reduced HDD to 5% and added remaining ~10.4% to MHD

Area Mitigation -

Shoppes at University Village Project - 19-08088 - Merced County, Annual

| Table Name | Column Name | Default Value | New Value |
|-----------------|--------------------|---------------|-----------|
| tblFleetMix | HHD | 0.15 | 0.05 |
| tblFleetMix | LDA | 0.50 | 0.50 |
| tblFleetMix | MH | 6.2800e-004 | 0.00 |
| tblFleetMix | MHD | 0.02 | 0.12 |
| tblFleetMix | SBUS | 1.5540e-003 | 0.00 |
| tblLandUse | LotAcreage | 0.10 | 0.00 |
| tblLandUse | LotAcreage | 0.10 | 0.00 |
| tblLandUse | LotAcreage | 0.21 | 0.00 |
| tblLandUse | LotAcreage | 11.26 | 2.56 |
| tblLandUse | LotAcreage | 0.41 | 0.00 |
| tblLandUse | Population | 1,224.00 | 428.00 |
| tblVehicleTrips | ST_TR | 6.39 | 3.31 |
| tblVehicleTrips | ST_TR | 696.00 | 0.00 |
| tblVehicleTrips | ST_TR | 2.46 | 0.00 |
| tblVehicleTrips | ST_TR | 20.87 | 0.00 |
| tblVehicleTrips | SU_TR | 5.86 | 3.31 |
| tblVehicleTrips | SU_TR | 500.00 | 0.00 |
| tblVehicleTrips | SU_TR | 1.05 | 0.00 |
| tblVehicleTrips | SU_TR | 26.73 | 0.00 |
| tblVehicleTrips | WD_TR | 6.65 | 3.31 |
| tblVehicleTrips | WD_TR | 716.00 | 0.00 |
| tblVehicleTrips | WD_TR | 11.03 | 0.00 |
| tblVehicleTrips | WD_TR | 32.93 | 0.00 |
| tblWoodstoves | NumberCatalytic | 2.56 | 0.00 |
| tblWoodstoves | NumberNoncatalytic | 2.56 | 0.00 |

Shoppes at University Village Project - 19-08088 - Merced County, Annual

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

| Year | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| tons/yr | | | | | | | | | | | | | | | | |
| 2020 | 0.5294 | 3.9020 | 3.9337 | 9.6800e-003 | 0.5679 | 0.1615 | 0.7294 | 0.1942 | 0.1514 | 0.3456 | 0.0000 | 871.2893 | 871.2893 | 0.1137 | 0.0000 | 874.1310 |
| 2021 | 4.3201 | 0.1341 | 0.1775 | 3.1000e-004 | 7.2200e-003 | 7.1000e-003 | 0.0143 | 1.9200e-003 | 6.6000e-003 | 8.5200e-003 | 0.0000 | 26.9500 | 26.9500 | 6.2000e-003 | 0.0000 | 27.1050 |
| Maximum | 4.3201 | 3.9020 | 3.9337 | 9.6800e-003 | 0.5679 | 0.1615 | 0.7294 | 0.1942 | 0.1514 | 0.3456 | 0.0000 | 871.2893 | 871.2893 | 0.1137 | 0.0000 | 874.1310 |

Mitigated Construction

| Year | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|----------|
| tons/yr | | | | | | | | | | | | | | | | |
| 2020 | 0.5294 | 3.9020 | 3.9337 | 9.6800e-003 | 0.5679 | 0.1615 | 0.7294 | 0.1942 | 0.1514 | 0.3456 | 0.0000 | 871.2889 | 871.2889 | 0.1137 | 0.0000 | 874.1307 |
| 2021 | 4.3201 | 0.1341 | 0.1775 | 3.1000e-004 | 7.2200e-003 | 7.1000e-003 | 0.0143 | 1.9200e-003 | 6.6000e-003 | 8.5200e-003 | 0.0000 | 26.9500 | 26.9500 | 6.2000e-003 | 0.0000 | 27.1050 |
| Maximum | 4.3201 | 3.9020 | 3.9337 | 9.6800e-003 | 0.5679 | 0.1615 | 0.7294 | 0.1942 | 0.1514 | 0.3456 | 0.0000 | 871.2889 | 871.2889 | 0.1137 | 0.0000 | 874.1307 |

Shoppes at University Village Project - 19-08088 - Merced County, Annual

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | | | | | | | | Maximum Mitigated ROG + NOX (tons/quarter) | | | | | |
|---------|------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1 | 1-1-2020 | 3-31-2020 | 1.1189 | | | | | | | | 1.1189 | | | | | |
| 2 | 4-1-2020 | 6-30-2020 | 1.1011 | | | | | | | | 1.1011 | | | | | |
| 3 | 7-1-2020 | 9-30-2020 | 1.1132 | | | | | | | | 1.1132 | | | | | |
| 4 | 10-1-2020 | 12-31-2020 | 1.1067 | | | | | | | | 1.1067 | | | | | |
| 5 | 1-1-2021 | 3-31-2021 | 4.4589 | | | | | | | | 4.4589 | | | | | |
| | | Highest | 4.4589 | | | | | | | | 4.4589 | | | | | |

2.2 Overall Operational

Unmitigated Operational

4

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|--------|--------|---------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|-------------|-------------|------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Area | 2.3669 | 0.1968 | 3.2533 | 1.1900e-003 | | 0.0305 | 0.0305 | | 0.0305 | 0.0305 | 0.0000 | 190.6113 | 190.6113 | 8.5800e-003 | 3.4000e-003 | 191.8388 |
| Energy | 0.0356 | 0.3081 | 0.1593 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 1,042.8785 | 1,042.8785 | 0.0380 | 0.0129 | 1,047.6776 |
| Mobile | 0.7728 | 7.6977 | 7.6656 | 0.0339 | 2.0274 | 0.0341 | 2.0614 | 0.5509 | 0.0322 | 0.5831 | 0.0000 | 3,147.9533 | 3,147.9533 | 0.2333 | 0.0000 | 3,153.7848 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 65.5884 | 0.0000 | 65.5884 | 3.8762 | 0.0000 | 162.4925 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 10.1259 | 69.8938 | 80.0196 | 1.0432 | 0.0252 | 113.6121 |
| Total | 3.1753 | 8.2026 | 11.0782 | 0.0370 | 2.0274 | 0.0892 | 2.1166 | 0.5509 | 0.0873 | 0.6382 | 75.7143 | 4,451.3368 | 4,527.0511 | 5.1992 | 0.0415 | 4,669.4057 |

Shoppes at University Village Project - 19-08088 - Merced County, Annual

2.2 Overall Operational**Mitigated Operational**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| tons/yr | | | | | | | | | | | | | | | | |
| MT/yr | | | | | | | | | | | | | | | | |
| Area | 2.3482 | 0.0367 | 3.1852 | 1.7000e-004 | | 0.0176 | 0.0176 | | 0.0176 | 0.0176 | 0.0000 | 5.1985 | 5.1985 | 5.0300e-003 | 0.0000 | 5.3242 |
| Energy | 0.0356 | 0.3081 | 0.1593 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 1,042.8785 | 1,042.8785 | 0.0380 | 0.0129 | 1,047.6776 |
| Mobile | 0.7728 | 7.6977 | 7.6656 | 0.0339 | 2.0274 | 0.0341 | 2.0614 | 0.5509 | 0.0322 | 0.5831 | 0.0000 | 3,147.9533 | 3,147.9533 | 0.2333 | 0.0000 | 3,153.7848 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 65.5884 | 0.0000 | 65.5884 | 3.8762 | 0.0000 | 162.4825 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 10.1259 | 69.8938 | 80.0196 | 1.0432 | 0.0252 | 113.6121 |
| Total | 3.1566 | 8.0425 | 11.0101 | 0.0360 | 2.0274 | 0.0762 | 2.1036 | 0.5509 | 0.0744 | 0.6253 | 75.7143 | 4,265.9240 | 4,341.6383 | 5.1956 | 0.0381 | 4,482.8911 |

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.59 | 1.95 | 0.61 | 2.75 | 0.00 | 14.52 | 0.61 | 0.00 | 14.83 | 2.03 | 0.00 | 4.17 | 4.10 | 0.07 | 8.19 | 3.99 |

3.0 Construction Detail**Construction Phase**

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| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1 | Site Preparation | Site Preparation | 1/1/2020 | 1/14/2020 | 5 | 10 | |
| 2 | Grading | Grading | 1/15/2020 | 2/11/2020 | 5 | 20 | |
| 3 | Building Construction | Building Construction | 2/12/2020 | 12/29/2020 | 5 | 230 | |
| 4 | Paving | Paving | 12/30/2020 | 1/26/2021 | 5 | 20 | |
| 5 | Architectural Coating | Architectural Coating | 1/27/2021 | 2/23/2021 | 5 | 20 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 3.38

Residential Indoor: 866,700; Residential Outdoor: 288,900; Non-Residential Indoor: 54,000; Non-Residential Outdoor: 18,000; Striped Parking Area: 9,024 (Architectural Coating – sqft)

OffRoad Equipment

Shoppes at University Village Project - 19-08088 - Merced County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 384.00 | 76.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 77.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

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3.2 Site Preparation - 2020**Unmitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0903 | 0.0000 | 0.0903 | 0.0497 | 0.0000 | 0.0497 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | | 0.0110 | 0.0110 | 0.0101 | 0.0101 | 0.0101 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |
| Total | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | 0.0903 | 0.0110 | 0.1013 | 0.0497 | 0.0101 | 0.0598 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |

Unmitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.1000e-004 | 2.9000e-004 | 3.0000e-003 | 1.0000e-005 | 7.2000e-004 | 1.0000e-005 | 7.2000e-004 | 1.9000e-004 | 1.0000e-005 | 2.0000e-004 | 0.0000 | 0.6530 | 0.6530 | 2.0000e-005 | 0.0000 | 0.6536 |
| Total | 4.1000e-004 | 2.9000e-004 | 3.0000e-003 | 1.0000e-005 | 7.2000e-004 | 1.0000e-005 | 7.2000e-004 | 1.9000e-004 | 1.0000e-005 | 2.0000e-004 | 0.0000 | 0.6530 | 0.6530 | 2.0000e-005 | 0.0000 | 0.6536 |

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3.2 Site Preparation - 2020**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0903 | 0.0000 | 0.0903 | 0.0497 | 0.0000 | 0.0497 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | | 0.0110 | 0.0110 | 0.0101 | 0.0101 | 0.0101 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |
| Total | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | 0.0903 | 0.0110 | 0.1013 | 0.0497 | 0.0101 | 0.0598 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |

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Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.1000e-004 | 2.9000e-004 | 3.0000e-003 | 1.0000e-005 | 7.2000e-004 | 1.0000e-005 | 7.2000e-004 | 1.9000e-004 | 1.0000e-005 | 2.0000e-004 | 0.0000 | 0.6530 | 0.6530 | 2.0000e-005 | 0.0000 | 0.6536 |
| Total | 4.1000e-004 | 2.9000e-004 | 3.0000e-003 | 1.0000e-005 | 7.2000e-004 | 1.0000e-005 | 7.2000e-004 | 1.9000e-004 | 1.0000e-005 | 2.0000e-004 | 0.0000 | 0.6530 | 0.6530 | 2.0000e-005 | 0.0000 | 0.6536 |

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3.3 Grading - 2020**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | | | | | | |
| Fugitive Dust | | | | | 0.0655 | 0.0000 | 0.0655 | 0.0337 | 0.0000 | 0.0337 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0243 | 0.2639 | 0.1605 | 3.0000e-004 | | 0.0127 | 0.0127 | 0.0117 | 0.0117 | 0.0117 | 0.0000 | 26.0588 | 26.0588 | 8.4300e-003 | 0.0000 | 26.2694 |
| Total | 0.0243 | 0.2639 | 0.1605 | 3.0000e-004 | 0.0655 | 0.0127 | 0.0783 | 0.0337 | 0.0117 | 0.0454 | 0.0000 | 26.0588 | 26.0588 | 8.4300e-003 | 0.0000 | 26.2694 |

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Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.8000e-004 | 4.8000e-004 | 5.0000e-003 | 1.0000e-005 | 1.2000e-003 | 1.0000e-005 | 1.2100e-003 | 3.2000e-004 | 1.0000e-005 | 3.3000e-004 | 0.0000 | 1.0884 | 1.0884 | 4.0000e-005 | 0.0000 | 1.0893 |
| Total | 6.8000e-004 | 4.8000e-004 | 5.0000e-003 | 1.0000e-005 | 1.2000e-003 | 1.0000e-005 | 1.2100e-003 | 3.2000e-004 | 1.0000e-005 | 3.3000e-004 | 0.0000 | 1.0884 | 1.0884 | 4.0000e-005 | 0.0000 | 1.0893 |

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3.3 Grading - 2020**Mitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Fugitive Dust | | | | | 0.0655 | 0.0000 | 0.0655 | 0.0337 | 0.0000 | 0.0337 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0243 | 0.2639 | 0.1605 | 3.0000e-004 | | 0.0127 | 0.0127 | 0.0117 | 0.0117 | 0.0117 | 0.0000 | 26.0587 | 26.0587 | 8.4300e-003 | 0.0000 | 26.2694 |
| Total | 0.0243 | 0.2639 | 0.1605 | 3.0000e-004 | 0.0655 | 0.0127 | 0.0783 | 0.0337 | 0.0117 | 0.0454 | 0.0000 | 26.0587 | 26.0587 | 8.4300e-003 | 0.0000 | 26.2694 |

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Mitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.8000e-004 | 4.8000e-004 | 5.0000e-003 | 1.0000e-005 | 1.2000e-003 | 1.0000e-005 | 1.2100e-003 | 3.2000e-004 | 1.0000e-005 | 3.3000e-004 | 0.0000 | 1.0884 | 1.0884 | 4.0000e-005 | 0.0000 | 1.0893 |
| Total | 6.8000e-004 | 4.8000e-004 | 5.0000e-003 | 1.0000e-005 | 1.2000e-003 | 1.0000e-005 | 1.2100e-003 | 3.2000e-004 | 1.0000e-005 | 3.3000e-004 | 0.0000 | 1.0884 | 1.0884 | 4.0000e-005 | 0.0000 | 1.0893 |

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3.4 Building Construction - 2020**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2438 | 2.2064 | 1.9376 | 3.1000e-003 | | 0.1285 | 0.1285 | | 0.1208 | 0.1208 | 0.0000 | 266.3515 | 266.3515 | 0.0650 | 0.0000 | 267.9760 |
| Total | 0.2438 | 2.2064 | 1.9376 | 3.1000e-003 | | 0.1285 | 0.1285 | | 0.1208 | 0.1208 | 0.0000 | 266.3515 | 266.3515 | 0.0650 | 0.0000 | 267.9760 |

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Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0370 | 1.0624 | 0.2323 | 2.5100e-003 | 0.0579 | 5.7800e-003 | 0.0636 | 0.0167 | 5.5300e-003 | 0.0223 | 0.0000 | 237.8853 | 237.8853 | 0.0236 | 0.0000 | 238.4748 |
| Worker | 0.2010 | 0.1424 | 1.4726 | 3.5500e-003 | 0.3522 | 2.7500e-003 | 0.3549 | 0.0936 | 2.5400e-003 | 0.0962 | 0.0000 | 320.4253 | 320.4253 | 0.0106 | 0.0000 | 320.6895 |
| Total | 0.2380 | 1.2048 | 1.7049 | 6.0600e-003 | 0.4100 | 8.5300e-003 | 0.4186 | 0.1103 | 8.0700e-003 | 0.1184 | 0.0000 | 558.3106 | 558.3106 | 0.0341 | 0.0000 | 559.1643 |

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3.4 Building Construction - 2020**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2438 | 2.2064 | 1.9376 | 3.1000e-003 | | 0.1285 | 0.1285 | | 0.1208 | 0.1208 | 0.0000 | 266.3512 | 266.3512 | 0.0650 | 0.0000 | 267.9757 |
| Total | 0.2438 | 2.2064 | 1.9376 | 3.1000e-003 | | 0.1285 | 0.1285 | | 0.1208 | 0.1208 | 0.0000 | 266.3512 | 266.3512 | 0.0650 | 0.0000 | 267.9757 |

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Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0370 | 1.0624 | 0.2323 | 2.5100e-003 | 0.0579 | 5.7800e-003 | 0.0636 | 0.0167 | 5.5300e-003 | 0.0223 | 0.0000 | 237.8853 | 237.8853 | 0.0236 | 0.0000 | 238.4748 |
| Worker | 0.2010 | 0.1424 | 1.4726 | 3.5500e-003 | 0.3522 | 2.7500e-003 | 0.3549 | 0.0936 | 2.5400e-003 | 0.0962 | 0.0000 | 320.4253 | 320.4253 | 0.0106 | 0.0000 | 320.6895 |
| Total | 0.2380 | 1.2048 | 1.7049 | 6.0600e-003 | 0.4100 | 8.5300e-003 | 0.4186 | 0.1103 | 8.0700e-003 | 0.1184 | 0.0000 | 558.3106 | 558.3106 | 0.0341 | 0.0000 | 559.1643 |

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3.5 Paving - 2020**Unmitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Off-Road | 1.3600e-003 | 0.0141 | 0.0147 | 2.0000e-005 | | 7.5000e-004 | 7.5000e-004 | | 6.9000e-004 | 6.9000e-004 | 0.0000 | 2.0028 | 2.0028 | 6.5000e-004 | 0.0000 | 2.0190 |
| Paving | 4.4000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 1.8000e-003 | 0.0141 | 0.0147 | 2.0000e-005 | | 7.5000e-004 | 7.5000e-004 | | 6.9000e-004 | 6.9000e-004 | 0.0000 | 2.0028 | 2.0028 | 6.5000e-004 | 0.0000 | 2.0190 |

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Unmitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 7.0000e-005 | 5.0000e-005 | 5.0000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.1088 | 0.1088 | 0.0000 | 0.0000 | 0.1089 |
| Total | 7.0000e-005 | 5.0000e-005 | 5.0000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.1088 | 0.1088 | 0.0000 | 0.0000 | 0.1089 |

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3.5 Paving - 2020**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 1.3600e-003 | 0.0141 | 0.0147 | 2.0000e-005 | | 7.5000e-004 | 7.5000e-004 | | 6.9000e-004 | 6.9000e-004 | 0.0000 | 2.0028 | 2.0028 | 6.5000e-004 | 0.0000 | 2.0190 |
| Paving | 4.4000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 1.8000e-003 | 0.0141 | 0.0147 | 2.0000e-005 | | 7.5000e-004 | 7.5000e-004 | | 6.9000e-004 | 6.9000e-004 | 0.0000 | 2.0028 | 2.0028 | 6.5000e-004 | 0.0000 | 2.0190 |

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Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 7.0000e-005 | 5.0000e-005 | 5.0000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.1088 | 0.1088 | 0.0000 | 0.0000 | 0.1089 |
| Total | 7.0000e-005 | 5.0000e-005 | 5.0000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.1088 | 0.1088 | 0.0000 | 0.0000 | 0.1089 |

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3.5 Paving - 2021**Unmitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Off-Road | 0.0113 | 0.1163 | 0.1319 | 2.1000e-004 | | 6.1000e-003 | 6.1000e-003 | | 5.6100e-003 | 5.6100e-003 | 0.0000 | 18.0211 | 18.0211 | 5.8300e-003 | 0.0000 | 18.1668 |
| Paving | 3.9900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0153 | 0.1163 | 0.1319 | 2.1000e-004 | | 6.1000e-003 | 6.1000e-003 | | 5.6100e-003 | 5.6100e-003 | 0.0000 | 18.0211 | 18.0211 | 5.8300e-003 | 0.0000 | 18.1668 |

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Unmitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 5.7000e-004 | 3.9000e-004 | 4.1000e-003 | 1.0000e-005 | 1.0800e-003 | 1.0000e-005 | 1.0800e-003 | 2.9000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.9511 | 0.9511 | 3.0000e-005 | 0.0000 | 0.9518 |
| Total | 5.7000e-004 | 3.9000e-004 | 4.1000e-003 | 1.0000e-005 | 1.0800e-003 | 1.0000e-005 | 1.0800e-003 | 2.9000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.9511 | 0.9511 | 3.0000e-005 | 0.0000 | 0.9518 |

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3.5 Paving - 2021**Mitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Off-Road | 0.0113 | 0.1163 | 0.1319 | 2.1000e-004 | | 6.1000e-003 | 6.1000e-003 | | 5.6100e-003 | 5.6100e-003 | 0.0000 | 18.0211 | 18.0211 | 5.8300e-003 | 0.0000 | 18.1668 |
| Paving | 3.9900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0153 | 0.1163 | 0.1319 | 2.1000e-004 | | 6.1000e-003 | 6.1000e-003 | | 5.6100e-003 | 5.6100e-003 | 0.0000 | 18.0211 | 18.0211 | 5.8300e-003 | 0.0000 | 18.1668 |

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Mitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 5.7000e-004 | 3.9000e-004 | 4.1000e-003 | 1.0000e-005 | 1.0800e-003 | 1.0000e-005 | 1.0800e-003 | 2.9000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.9511 | 0.9511 | 3.0000e-005 | 0.0000 | 0.9518 |
| Total | 5.7000e-004 | 3.9000e-004 | 4.1000e-003 | 1.0000e-005 | 1.0800e-003 | 1.0000e-005 | 1.0800e-003 | 2.9000e-004 | 1.0000e-005 | 2.9000e-004 | 0.0000 | 0.9511 | 0.9511 | 3.0000e-005 | 0.0000 | 0.9518 |

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3.6 Architectural Coating - 2021**Unmitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Archit. Coating | 4.2988 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.1900e-003 | 0.0153 | 0.0182 | 3.0000e-005 | | 9.4000e-004 | 9.4000e-004 | | 9.4000e-004 | 9.4000e-004 | 0.0000 | 2.5533 | 2.5533 | 1.8000e-004 | 0.0000 | 2.5576 |
| Total | 4.3010 | 0.0153 | 0.0182 | 3.0000e-005 | | 9.4000e-004 | 9.4000e-004 | | 9.4000e-004 | 9.4000e-004 | 0.0000 | 2.5533 | 2.5533 | 1.8000e-004 | 0.0000 | 2.5576 |

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Unmitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.2200e-003 | 2.2100e-003 | 0.0234 | 6.0000e-005 | 6.1400e-003 | 5.0000e-005 | 6.1900e-003 | 1.6300e-003 | 4.0000e-005 | 1.6800e-003 | 0.0000 | 5.4246 | 5.4246 | 1.7000e-004 | 0.0000 | 5.4287 |
| Total | 3.2200e-003 | 2.2100e-003 | 0.0234 | 6.0000e-005 | 6.1400e-003 | 5.0000e-005 | 6.1900e-003 | 1.6300e-003 | 4.0000e-005 | 1.6800e-003 | 0.0000 | 5.4246 | 5.4246 | 1.7000e-004 | 0.0000 | 5.4287 |

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3.6 Architectural Coating - 2021**Mitigated Construction On-Site**

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Archit. Coating | 4.2988 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.1900e-003 | 0.0153 | 0.0182 | 3.0000e-005 | | 9.4000e-004 | 9.4000e-004 | | 9.4000e-004 | 9.4000e-004 | 0.0000 | 2.5533 | 2.5533 | 1.8000e-004 | 0.0000 | 2.5576 |
| Total | 4.3010 | 0.0153 | 0.0182 | 3.0000e-005 | | 9.4000e-004 | 9.4000e-004 | | 9.4000e-004 | 9.4000e-004 | 0.0000 | 2.5533 | 2.5533 | 1.8000e-004 | 0.0000 | 2.5576 |

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Mitigated Construction Off-Site

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| tons/yr | | | | | | | | | | | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.2200e-003 | 2.2100e-003 | 0.0234 | 6.0000e-005 | 6.1400e-003 | 5.0000e-005 | 6.1900e-003 | 1.6300e-003 | 4.0000e-005 | 1.6800e-003 | 0.0000 | 5.4246 | 5.4246 | 1.7000e-004 | 0.0000 | 5.4287 |
| Total | 3.2200e-003 | 2.2100e-003 | 0.0234 | 6.0000e-005 | 6.1400e-003 | 5.0000e-005 | 6.1900e-003 | 1.6300e-003 | 4.0000e-005 | 1.6800e-003 | 0.0000 | 5.4246 | 5.4246 | 1.7000e-004 | 0.0000 | 5.4287 |

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

| Category | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------------------|------------------------|--------|--------|------------------------|
| | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.7728 | 7.6977 | 7.6656 | 0.0339 | 2.0274 | 0.0341 | 2.0614 | 0.5509 | 0.0322 | 0.5831 | 0.0000 | 3,147,953 ₃ | 3,147,953 ₃ | 0.2333 | 0.0000 | 3,153,784 ₈ |
| Unmitigated | 0.7728 | 7.6977 | 7.6656 | 0.0339 | 2.0274 | 0.0341 | 2.0614 | 0.5509 | 0.0322 | 0.5831 | 0.0000 | 3,147,953 ₃ | 3,147,953 ₃ | 0.2333 | 0.0000 | 3,153,784 ₈ |

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4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated Annual VMT | Mitigated Annual VMT |
|-------------------------------------|-------------------------|----------|----------|------------------------|----------------------|
| | Weekday | Saturday | Sunday | | |
| Apartment Mid Rise | 1,416.68 | 1,416.68 | 1416.68 | 4,126,377 | 4,126,377 |
| Fast Food Restaurant w/o Drive Thru | 0.00 | 0.00 | 0.00 | | |
| General Office Building | 0.00 | 0.00 | 0.00 | | |
| Health Club | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Strip Mall | 797.76 | 756.72 | 367.74 | 1,124,941 | 1,124,941 |
| Total | 2,214.44 | 2,173.40 | 1,784.42 | 5,251,318 | 5,251,318 |

4.3 Trip Type Information

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| Land Use | Miles | | | | | Trip % | | | Trip Purpose % | | | |
|--------------------------------|------------|------------|-------------|------------|------------|-------------|------------|------------|----------------|---------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| Apartments Mid Rise | 10.80 | 7.30 | 7.50 | 46.90 | 17.40 | 35.70 | | | | 86 | 11 | 3 |
| Fast Food Restaurant w/o Drive | 9.50 | 7.30 | 7.30 | 1.50 | 79.50 | 19.00 | | | | 51 | 37 | 12 |
| General Office Building | 9.50 | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | | | | 77 | 19 | 4 |
| Health Club | 9.50 | 7.30 | 7.30 | 16.90 | 64.10 | 19.00 | | | | 52 | 39 | 9 |
| Parking Lot | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | | | | 0 | 0 | 0 |
| Strip Mall | 9.50 | 7.30 | 7.30 | 16.60 | 64.40 | 19.00 | | | | 45 | 40 | 15 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise | 0.500680 | 0.030090 | 0.155509 | 0.109662 | 0.018147 | 0.004601 | 0.120527 | 0.050000 | 0.002397 | 0.002156 | 0.006230 | 0.000000 | 0.000000 |
| Fast Food Restaurant w/o Drive Thru | 0.498498 | 0.030090 | 0.155509 | 0.109662 | 0.018147 | 0.004601 | 0.015536 | 0.154991 | 0.002397 | 0.002156 | 0.006230 | 0.001554 | 0.000628 |
| General Office Building | 0.498498 | 0.030090 | 0.155509 | 0.109662 | 0.018147 | 0.004601 | 0.015536 | 0.154991 | 0.002397 | 0.002156 | 0.006230 | 0.001554 | 0.000628 |
| Health Club | 0.498498 | 0.030090 | 0.155509 | 0.109662 | 0.018147 | 0.004601 | 0.015536 | 0.154991 | 0.002397 | 0.002156 | 0.006230 | 0.001554 | 0.000628 |
| Parking Lot | 0.498498 | 0.030090 | 0.155509 | 0.109662 | 0.018147 | 0.004601 | 0.015536 | 0.154991 | 0.002397 | 0.002156 | 0.006230 | 0.001554 | 0.000628 |
| Strip Mall | 0.498498 | 0.030090 | 0.155509 | 0.109662 | 0.018147 | 0.004601 | 0.015536 | 0.154991 | 0.002397 | 0.002156 | 0.006230 | 0.001554 | 0.000628 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 690.7751 | 690.7751 | 0.0312 | 6.4600e-003 | 693.4818 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 690.7751 | 690.7751 | 0.0312 | 6.4600e-003 | 693.4818 |
| Natural Gas Mitigated | 0.0356 | 0.3081 | 0.1593 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.1034 | 352.1034 | 6.7500e-003 | 6.4600e-003 | 354.1958 |
| Natural Gas Unmitigated | 0.0356 | 0.3081 | 0.1593 | 1.9400e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.1034 | 352.1034 | 6.7500e-003 | 6.4600e-003 | 354.1958 |

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

| Land Use | NaturalGas Use
kBTU/yr | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|---------------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| tons/yr | | | | | | | | | | | | MT/yr | | | | | |
| Apartments Mid Rise | 5.21212e+006 | 0.0281 | 0.2402 | 0.1022 | 1.5300e-003 | | 0.0194 | 0.0194 | | 0.0194 | 0.0194 | 0.0000 | 278.1388 | 278.1388 | 5.3300e-003 | 5.1000e-003 | 279.7916 |
| Fast Food Restaurant w/o Drive Thru | 946890 | 5.1100e-003 | 0.0464 | 0.0390 | 2.8000e-004 | | 3.5300e-003 | 3.5300e-003 | | 3.5300e-003 | 3.5300e-003 | 0.0000 | 50.5297 | 50.5297 | 9.7000e-004 | 9.3000e-004 | 50.8299 |
| General Office Building | 58725 | 3.2000e-004 | 2.8800e-003 | 2.4200e-003 | 2.0000e-005 | | 2.2000e-004 | 2.2000e-004 | | 2.2000e-004 | 2.2000e-004 | 0.0000 | 3.1338 | 3.1338 | 6.0000e-005 | 6.0000e-005 | 3.1524 |
| Health Club | 187830 | 1.0100e-003 | 9.2100e-003 | 7.7300e-003 | 6.0000e-005 | | 7.0000e-004 | 7.0000e-004 | | 7.0000e-004 | 7.0000e-004 | 0.0000 | 10.0233 | 10.0233 | 1.9000e-004 | 1.8000e-004 | 10.0829 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 192600 | 1.0400e-003 | 9.4400e-003 | 7.9300e-003 | 6.0000e-005 | | 7.2000e-004 | 7.2000e-004 | | 7.2000e-004 | 7.2000e-004 | 0.0000 | 10.2779 | 10.2779 | 2.0000e-004 | 1.9000e-004 | 10.3390 |
| Total | | 0.0356 | 0.3081 | 0.1593 | 1.9500e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.1034 | 352.1034 | 6.7500e-003 | 6.4600e-003 | 354.1958 |

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5.2 Energy by Land Use - NaturalGas**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e | |
|-------------------------------------|----------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|--|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | | |
| Apartments Mid Rise | 5.21212e+006 | 0.0281 | 0.2402 | 0.1022 | 1.5300e-003 | | 0.0194 | 0.0194 | | 0.0194 | 0.0194 | 0.0000 | 278.1388 | 278.1388 | 5.3300e-003 | 5.1000e-003 | 279.7916 | |
| Fast Food Restaurant w/o Drive Thru | 946890 | 5.1100e-003 | 0.0464 | 0.0390 | 2.8000e-004 | | 3.5300e-003 | 3.5300e-003 | | 3.5300e-003 | 3.5300e-003 | 0.0000 | 50.5297 | 50.5297 | 9.7000e-004 | 9.3000e-004 | 50.8299 | |
| General Office Building | 58725 | 3.2000e-004 | 2.8800e-003 | 2.4200e-003 | 2.0000e-005 | | 2.2000e-004 | 2.2000e-004 | | 2.2000e-004 | 2.2000e-004 | 0.0000 | 3.1338 | 3.1338 | 6.0000e-005 | 6.0000e-005 | 3.1524 | |
| Health Club | 187830 | 1.0100e-003 | 9.2100e-003 | 7.7300e-003 | 6.0000e-005 | | 7.0000e-004 | 7.0000e-004 | | 7.0000e-004 | 7.0000e-004 | 0.0000 | 10.0233 | 10.0233 | 1.9000e-004 | 1.8000e-004 | 10.0829 | |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| Strip Mall | 192600 | 1.0400e-003 | 9.4400e-003 | 7.9300e-003 | 6.0000e-005 | | 7.2000e-004 | 7.2000e-004 | | 7.2000e-004 | 7.2000e-004 | 0.0000 | 10.2779 | 10.2779 | 2.0000e-004 | 1.9000e-004 | 10.3390 | |
| Total | | 0.0356 | 0.3081 | 0.1593 | 1.9500e-003 | | 0.0246 | 0.0246 | | 0.0246 | 0.0246 | 0.0000 | 352.1034 | 352.1034 | 6.7500e-003 | 6.4600e-003 | 354.1958 | |

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5.3 Energy by Land Use - Electricity**Unmitigated**

| Land Use | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| | kWh/yr | MT/yr | | | |
| Apartment Mid Rise | 1,924,400 | 559.8286 | 0.0253 | 5.2400e-003 | 562.0222 |
| Fast Food Restaurant w/o Drive Thru | 130,365 | 37.9247 | 1.7100e-003 | 3.5000e-004 | 38.0733 |
| General Office Building | 41,040 | 11.9390 | 5.4000e-004 | 1.1000e-004 | 11.9858 |
| Health Club | 79,380 | 23.0926 | 1.0400e-003 | 2.2000e-004 | 23.1830 |
| Parking Lot | 52,640 | 15.3136 | 6.9000e-004 | 1.4000e-004 | 15.3736 |
| Strip Mall | 146,700 | 42.6767 | 1.9300e-003 | 4.0000e-004 | 42.8439 |
| Total | | 690.7751 | 0.0312 | 6.4600e-003 | 693.4818 |

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5.3 Energy by Land Use - Electricity**Mitigated**

| Land Use | Electricity Use
kWh/yr | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|---------------------------|-----------------|---------------|--------------------|-----------------|
| MT/yr | | | | | |
| Apartments Mid Rise | 1.9244e+006 | 559.8286 | 0.0253 | 5.2400e-003 | 562.0222 |
| Fast Food Restaurant w/o Drive Thru | 130365 | 37.9247 | 1.7100e-003 | 3.5000e-004 | 38.0733 |
| General Office Building | 41040 | 11.9390 | 5.4000e-004 | 1.1000e-004 | 11.9858 |
| Health Club | 79380 | 23.0926 | 1.0400e-003 | 2.2000e-004 | 23.1830 |
| Parking Lot | 52640 | 15.3136 | 6.9000e-004 | 1.4000e-004 | 15.3736 |
| Strip Mall | 146700 | 42.6767 | 1.9300e-003 | 4.0000e-004 | 42.8439 |
| Total | | 690.7751 | 0.0312 | 6.4600e-003 | 693.4818 |

6.0 Area Detail**6.1 Mitigation Measures Area**

No Hearths Installed

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6.2 Area by SubCategory**Mitigated**

| SubCategory | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.4299 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.8219 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Hearth | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0964 | 0.0367 | 3.1852 | 1.7000e-004 | | 0.0176 | 0.0176 | | 0.0176 | 0.0176 | 0.0000 | 5.1985 | 5.1985 | 5.0300e-003 | 0.0000 | 5.3242 |
| Total | 2.3482 | 0.0367 | 3.1852 | 1.7000e-004 | | 0.0176 | 0.0176 | | 0.0176 | 0.0176 | 0.0000 | 5.1985 | 5.1985 | 5.0300e-003 | 0.0000 | 5.3242 |

7.0 Water Detail**7.1 Mitigation Measures Water**

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| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|--------|----------|
| Category | MT/yr | | | |
| Mitigated | 80.0196 | 1.0432 | 0.0252 | 113.6121 |
| Unmitigated | 80.0196 | 1.0432 | 0.0252 | 113.6121 |

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7.2 Water by Land Use**Unmitigated**

| Land Use | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|---------------------|----------------|---------------|---------------|-----------------|
| | Mgal | MT/yr | | | |
| Apartments Mid Rise | 27.8859 / 17.5803 | 70.6428 | 0.9115 | 0.0220 | 99.9953 |
| Fast Food Restaurant w/o Drive Thru | 1.3659 / 0.0871852 | 2.6722 | 0.0446 | 1.0700e-003 | 4.1069 |
| General Office Building | 0.799802 / 0.490201 | 2.0118 | 0.0261 | 6.3000e-004 | 2.8537 |
| Health Club | 0.532288 / 0.326241 | 1.3389 | 0.0174 | 4.2000e-004 | 1.8992 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 1.33331 / 0.817187 | 3.3538 | 0.0436 | 1.0500e-003 | 4.7572 |
| Total | | 80.0196 | 1.0432 | 0.0252 | 113.6121 |

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7.2 Water by Land Use**Mitigated**

| Land Use | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|---------------------|----------------|---------------|---------------|-----------------|
| | Mgal | MT/yr | | | |
| Apartment Mid Rise | 27.8859 / 17.5803 | 70.6428 | 0.9115 | 0.0220 | 99.9953 |
| Fast Food Restaurant w/o Drive Thru | 1.3659 / 0.0871852 | 2.6722 | 0.0446 | 1.0700e-003 | 4.1069 |
| General Office Building | 0.799802 / 0.490201 | 2.0118 | 0.0261 | 6.3000e-004 | 2.8537 |
| Health Club | 0.532288 / 0.326241 | 1.3389 | 0.0174 | 4.2000e-004 | 1.8992 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 1.33331 / 0.817187 | 3.3538 | 0.0436 | 1.0500e-003 | 4.7572 |
| Total | | 80.0196 | 1.0432 | 0.0252 | 113.6121 |

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Shoppes at University Village Project - 19-08088 - Merced County, Annual

Category/Year

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|--------|----------|
| | MT/yr | | | |
| Mitigated | 65.5884 | 3.8762 | 0.0000 | 162.4925 |
| Unmitigated | 65.5884 | 3.8762 | 0.0000 | 162.4925 |

Shoppes at University Village Project - 19-08088 - Merced County, Annual

8.2 Waste by Land Use**Unmitigated**

| Land Use | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------------------|----------------|----------------|---------------|---------------|-----------------|
| | tons | MT/yr | | | |
| Apartments Mid Rise | 196.88 | 39.9649 | 2.3619 | 0.0000 | 99.0113 |
| Fast Food Restaurant w/o Drive Thru | 51.84 | 10.5231 | 0.6219 | 0.0000 | 26.0704 |
| General Office Building | 4.19 | 0.8505 | 0.0503 | 0.0000 | 2.1072 |
| Health Club | 51.3 | 10.4134 | 0.6154 | 0.0000 | 25.7989 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 18.9 | 3.8365 | 0.2267 | 0.0000 | 9.5048 |
| Total | | 65.5884 | 3.8762 | 0.0000 | 162.4925 |

Shoppes at University Village Project - 19-08088 - Merced County, Annual

8.2 Waste by Land Use**Mitigated**

| | Waste
Disposed | Total CO ₂ | CH ₄ | N ₂ O | CO ₂ e |
|-------------------------------------|-------------------|-----------------------|-----------------|------------------|-------------------|
| Land Use | tons | MT/yr | | | |
| Apartment Mid Rise | 196.88 | 39.9649 | 2.3619 | 0.0000 | 99.0113 |
| Fast Food Restaurant w/o Drive Thru | 51.84 | 10.5231 | 0.6219 | 0.0000 | 26.0704 |
| General Office Building | 4.19 | 0.8505 | 0.0503 | 0.0000 | 2.1072 |
| Health Club | 51.3 | 10.4134 | 0.6154 | 0.0000 | 25.7989 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Strip Mall | 18.9 | 3.8365 | 0.2267 | 0.0000 | 9.5048 |
| Total | | 65.5884 | 3.8762 | 0.0000 | 162.4925 |

9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

Boilers

Shoppes at University Village Project - 19-08088 - Merced County, Annual

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

11.0 Vegetation

APPENDIX C

GREENHOUSE GAS ANALYSIS

Note: This analysis was previously prepared for General Plan Amendment #14-06 and Zone Change #421. The project remains similar in size and impacts, therefore, no additional analysis was required.

Greenhouse Gas Study for The Shoppes at University Village Project

Draft Report

Prepared by:



Greenhouse Gas Study for The Shoppes at University Village

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This report is a greenhouse gas (GHG) emissions study for the proposed Shoppes at University Village project located at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced. The study was prepared by Rincon Consultants, Inc. under contract to Merced Holdings LP. The purpose of this study is to analyze the proposed project's GHG emissions and the associated environmental impacts.

PROJECT LOCATION AND DESCRIPTION

The project site is located on two parcels totaling approximately 5.42 acres at the southeast corner of Yosemite Avenue and McKee Road (APNs 008-310-038 and 008-310-050) in the City of Merced. The project site is currently zoned Low Density Residential (R-1-6) and has a General Plan Designation of Low Density Residential. The project site is currently developed with two single-story residential units and one accessory building with areas of 1,416 square feet, 1,771 square feet, and 600 square feet, respectively (3,787 square feet total).

The proposed project involves a General Plan amendment and re-zone to accommodate a neighborhood commercial land use. The project would include demolition of the existing on-site structures and construction of three new neighborhood commercial buildings. The areas of the new buildings would be approximately 42,000 square feet, 13,000 square feet, and 7,000 square feet, totaling 62,000 square feet of building area. The project also would include approximately 64,800 square feet of on-site parking (approximately 216 parking spaces). In addition, the project would include bicycle parking, pedestrian site access, and the installation of low-flow fixtures and systems.

Construction of the proposed project would involve demolition, site preparation, minor grading, building construction, and architectural coating. Construction would take approximately eight months.

SETTING

Environmental Setting

Greenhouse Gases and Climate Change. Climate change refers to any change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to the accumulation of GHGs in the atmosphere.

Greenhouse gases, or GHGs, trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs, such as carbon dioxide (CO₂), occur naturally and are emitted to the atmosphere through both natural processes and human activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities. According to the United Nations Intergovernmental Panel on Climate Change (IPCC), there is high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming (by approximately 1.4°F) since the mid-20th century (IPCC, 2013).

The principal GHGs that enter the atmosphere as a result of human activities include:

- **Carbon dioxide (CO₂)** is primarily generated by fossil fuel (e.g., oil, natural gas, and coal) combustion from stationary and mobile sources. Carbon dioxide is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** emissions result from the decomposition of organic waste in landfills and livestock enteric fermentation. CH₄ is also emitted during the production and transport of coal, natural gas, and oil.
- **Nitrous oxide (N₂O)** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- **Fluorinated gases** (i.e., hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) are emitted from a variety of industrial processes, such as aluminum and semiconductor manufacturing. Hydrofluorocarbons are used as refrigerants, aerosol propellants, solvents, and fire retardants and are released into the atmosphere through leaks, servicing, and disposal of equipment in which they are used. These gases are typically emitted in smaller quantities but are generally very strong GHGs.

Each of the GHGs listed above differs in its ability to absorb heat in the atmosphere, or in its Global Warming Potential (GWP) over a 100 year period. GHGs are compared in terms of their respective intensity factor per molecule given an atmospheric lifetime of 100 years. The IPCC defines the intensity factor of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of “carbon dioxide equivalent” (CO₂E), which compares the gas in question to that of the same mass of CO₂ (CO₂ has an intensity factor of one by definition).

State and Local GHG Emissions Levels. In 2012, California produced 459 million metric tons (MMT) CO₂E (California Air Resources Board [ARB], 2014). The transportation sector was the largest source of emissions, accounting for approximately 37 percent of the total emissions. The industrial sector accounted for approximately 22 percent of the total emissions. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 507 MMT CO₂E (ARB, August 2013). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

According to the City of Merced *2011 Inventory of Community and Government Operations GHG Emissions* (2014), the community as a whole emitted 505,579 metric tons (MT) CO₂E in 2011 resulting from transportation, commercial/industrial and residential energy use, solid waste generation, and other processes/fugitive emissions. The largest source of emissions was the transportation sector, which contributed to 42 percent of total emissions. Activities in the commercial/industrial and residential sectors resulted in the second and third greatest emissions (32 percent and 21 percent respectively).

Potential Effects of Climate Change. According to the California Environmental Protection Agency’s (CalEPA) *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, loss of ecosystems and species, and more drought years. While there is growing scientific consensus about the possible effects of climate change at a global and potentially statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. However,



the *City of Merced Climate Action Plan* lists higher temperatures, flooding, and drought as the major potential climate hazards that may be exacerbated by climate change.

Regulatory Setting

State of California. In recent years, the State of California has enacted several laws to address the potential effects of increasing atmospheric concentrations of GHG emissions. In 2006, the State signed into law the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32, codified at Section 1, Division 25.5, Section 38500 et seq. of the California Health & Safety Code). This law sets a target to reduce statewide GHG emissions to 1990 levels (426.6 MMT CO₂E) by 2020 and represents California's fair share contribution toward stabilizing global warming. AB 32 also required the ARB to design and implement a plan identifying strategies and regulations to meet the statewide target. The resulting *Climate Change Scoping Plan* (2008 Scoping Plan), adopted in 2008, estimated that GHG emissions in the state need to be reduced by approximately 29 percent below 2020 "business-as-usual" (BAU) forecasted emissions (596 MMT CO₂E), or 15 percent below the GHG emissions levels at the time the 2008 Scoping Plan was prepared.¹ Key elements of the plan include:

- Adopting and implementing measures pursuant to existing state laws and policies, including California's goods movement measures, Clean Car Standards (Pavley Standard) and the Low Carbon Fuel Standard;
- Expanding energy efficiency and green building practices;
- Achieving a statewide renewables energy mix of 33 percent (Renewable Portfolio Standard);
- Reducing methane emissions from landfills;
- Developing a California cap-and-trade program;
- Targets for transportation-related GHG emissions;
- Increasing solid waste diversion; and
- Strengthening water efficiency programs.

In 2011, the ARB updated the 2020 forecast to account for new estimates for future fuel and energy demand as well as other factors. The updated forecast projects statewide BAU emissions to be 506.8 MMT CO₂E in 2020. Considering the updated BAU forecast of 506.8 MMT CO₂E, the ARB now estimates a 16 percent reduction below the estimated statewide BAU levels would now be necessary to return to 1990 emission levels (i.e., 426.6 MMT CO₂E) by 2020, instead of the 29 percent BAU reduction previously reported under the 2008 Scoping Plan (ARB, August 2013).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving

¹ The ARB's "business-as-usual," or BAU, forecast provides an estimate of the future GHG emissions expected to occur if none of the foreseeable measures included in the 2008 Scoping Plan are implemented. The base years used to forecast BAU emissions for the 2008 Scoping Plan was the average of statewide emissions in 2002, 2003, and 2004. BAU forecasted emissions were estimated to reach 596 MMT CO₂E in 2020.



lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

SJVAPCD. The SJVAPCD is the regional air quality management agency in the Central Valley and the agency with air permitting authority in the region. On December 17, 2009, the SJVAPCD adopted guidance for assessing and reducing the impacts of project-specific GHG emissions on global climate change: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*. It also adopted the policy: *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects under CEQA When Serving as the Lead Agency*. The SJVAPCD found that the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD further found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions consistent with the AB 32 target, whether through project design elements or mitigation. The guidance and policy allow a project to rely on the implementation of Best Performance Standards (BPS) as a method for streamlining the CEQA process of determining significance of GHG emissions. Projects not implementing BPS would be required to demonstrate that “project specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG” (SJVAPCD Guidance, 2009). The guidance does not limit a lead agency’s authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change (SJVAPCD, 2009).

City of Merced. On June 6, 2012 the Merced City Council voted to include a GHG reduction target of 1990 levels by 2020, or 15 percent below 2008 levels by 2020, consistent with AB 32 in the City’s *Climate Action Plan*.² In August 2012, the City of Merced approved its *Climate Action Plan* which provides guidance to meet the target and identifies over 150 potential ways to reduce GHG emissions and the community’s influence on climate change. The City is in the process of developing a more detailed programmatic climate action plan that will qualify as a plan for the reduction of GHG emissions under CEQA Section 15183.5.

IMPACT ANALYSIS

Significance Thresholds and Methodology

Significance Thresholds. According to the CEQA Guidelines, impacts related to GHG emissions from a proposed project would be significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;³ and/or*
- *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.⁴*

² The ARB Scoping Plan (2008) states that reducing GHG emissions to 1990 levels by 2020 is approximately the same as reducing “current” (2005-2008) emissions levels by 15 percent by 2020.

³ Consistent with question considered for Merced General Plan EIR Impact #3.17-1.

⁴ Consistent with question considered for Merced General Plan EIR Impact #3.17-2.

The vast majority of individual projects do not generate sufficient GHG emissions to, in isolation, create a direct impact on climate change. Rather it is the increased accumulation of GHGs from more than one project and many sources in the atmosphere that may result in global climate change, which can cause the adverse environmental effects previously discussed. Accordingly, the threshold of significance for GHG emissions determines whether a project's contribution to global climate change is "cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

The City of Merced has not developed or adopted a CEQA threshold for determining the significance GHG emissions at the project-level, and therefore has recommended the use of the SJVAPCD threshold (see discussion under Regulatory Setting above). Based on the SJVAPCD threshold, the proposed project would have a less than cumulatively significant impact if it achieves at least a 29 percent reduction in GHG emissions compared to BAU, consistent with the AB 32 Scoping Plan (2008).

Similar to the SJVAPCD threshold, the City's Climate Action Plan (2012) establishes a target to reduce GHG emissions to 1990 levels by 2020, consistent with the AB 32 target and 2008 Scoping Plan (see discussion under Regulatory Setting above). As such, if emissions from the proposed project fall below the SJVAPCD's 29 percent threshold, which according to the 2008 Scoping Plan is roughly equivalent to 1990 levels by 2020, the proposed project would be consistent with target identified in the City's Climate Action Plan, and result in a less than significant impact with regards to conflict with an applicable plan adopted for the purpose of reducing GHG emissions if it results in a 29 percent reduction in GHG emissions.

Methodology. GHG emissions associated with project construction and operations were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. The model was developed in collaboration with and supported by the air districts of California, including the SJVAPCD. The model quantifies direct emissions from project construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. Where project-specific inputs were not available, default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) for Merced County was used to calculate GHG emissions associated with the project. Complete results from CalEEMod, as well as site-specific inputs and assumptions are included in the Appendix.

To determine whether the proposed project would result in a 29 percent reduction in BAU GHG emissions, two emissions scenarios were calculated and compared, which include the following (see Appendix for additional detail):

- 1) **BAU Scenario** - is reflective of a realistic project scenario that would occur absent project design features and state regulations enacted as a result of AB 32, and is consistent with the SJVAPCD's and ARB's definition of BAU;⁵ and
- 2) **Project Scenario** - is also reflective of a realistic project scenario that includes voluntary project features and further state regulations enacted as a result of AB 32. The state regulations accounted for in the Project Scenario include the Renewable Portfolio Standard, Title 24 Energy Efficiency Building Standards, Low Carbon Fuel Standard, and the Pavley I Standard. The project features accounted for in the Project Scenario include the installation of low-flow fixtures and systems, pedestrian access on-site and contiguous with the site, and bicycle parking, as well as the provision of neighborhood commercial uses which would increase the diversity of land uses within a quarter mile radius of the project.

Impacts

Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction of the proposed project would generate GHG emissions through on-site use of heavy-duty construction equipment and off-site vehicle trips made by construction workers and haul/delivery trucks that would travel to and from the project site. Construction of the proposed project would be completed in approximately eight months. To evaluate GHG emissions from project construction, construction emissions are amortized over the life of the project (approximately 20-years as a conservative estimate) and added to the operational emissions. As shown in Table 1, both the BAU Scenario and Project Scenario would generate approximately 221 MT CO₂E total or 11 MT CO₂E per year when amortized over a 20-year period.

Operation of the proposed project would result in GHG emissions from the following primary sources: energy (electricity and natural gas used on-site), mobile (on-road mobile vehicle traffic generated by the project), solid waste disposal by the land use, water usage by the land use, and area sources (landscaping equipment). Table 1 shows the proposed project would generate an estimated 3,387 MT CO₂E per year under the BAU Scenario and approximately 2,103 MT CO₂E per year under the Project Scenario. The difference in GHG emissions between the BAU Scenario and Project Scenario can be attributed to the voluntary project features (i.e., low-flow fixtures, provision of neighborhood commercial uses, pedestrian access, and bicycle parking), the Renewable Portfolio Standard, Title 24 Energy Efficiency Building Standards, Low Carbon Fuel Standard, and Pavley I Standard.

As shown in Table 1, under the BAU Scenario, the proposed project would generate approximately 3,398 MT CO₂E per year from both construction and operation, while the

⁵ The SJVAPCD and ARB define BAU as total baseline emissions for all emissions sources projected for the year 2020, assuming no change in GHG emissions per unit of activity (or carbon intensity) as established for the baseline period, 2002-2004. BAU does not account for the reduction in GHGs that would result from federal, state, or regional regulations for the reduction of emissions after 2002-2004 (SJVAPCD, 2009). As such, the BAU Scenario for the project uses mobile source operational emission factors from the year 2005 (CalEEMod does not provide data for any years between 2002 and 2004; 2005 was used and provides a more conservative estimate).

proposed project under the Project Scenario would generate approximately 2,114 MT CO₂E per year from both construction and operation.

Table 1: Estimate of Project-related GHG Emissions for BAU and Project Scenarios

| Source | GHG Emissions (MT CO ₂ E per Year) | |
|--|---|------------------|
| | BAU Scenario | Project Scenario |
| Construction Emissions | | |
| Mobile Source (20-year amortization) | 11 | 11 |
| Construction Emissions Subtotal | 11 | 11 |
| Operational Emissions | | |
| Area | <0.2 | <0.2 |
| Energy | 232 | 120 |
| Mobile | 3,109 | 1,946 |
| Solid Waste | 30 | 30 |
| Water | 16 | 8.4 |
| Operational Emissions Total | 3,387 | 2,103 |
| Total GHG Emissions | 3,398 | 2,114 |

**See the Appendix for detailed CalEEMod results.*

As shown in Table 2, the Project Scenario would reduce BAU emissions by 1,284 MT CO₂E per year. Therefore, the proposed project demonstrates an approximately 38percent reduction below the BAU Scenario and would be considered less than significant.

Table 2: Summary of Project Reduction from BAU Scenario

| | GHG Emissions (MT CO ₂ E per Year) |
|--|---|
| Total BAU Scenario | 3,398 |
| Total Project Scenario | 2,114 |
| Difference Between BAU and Project Scenarios | 1,284 |
| Reduction from BAU Scenario | 38% |
| Project Meets or Exceeds 29% Threshold (less-than-significant) | Yes |

Would the proposed project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

As previously mentioned, AB 32 identifies a statewide target to reduce GHG emissions to 1990 levels by 2020, which is equivalent to “cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 15 percent from today’s levels” (Scoping Plan, 2008). The City’s Climate Action Plan (2012) also establishes a target to reduce GHG emissions 15 percent below 2008 levels, consistent with AB 32 and its Scoping Plan. Construction and operation of the proposed project would achieve a 38 percent reduction in GHG emissions compared to BAU, which exceeds the reduction targets identified in the Scoping Plan and City’s Climate Action Plan.

In addition, the proposed project would support many of the goals identified in the Climate Action Plan. The project would help reduce vehicle miles traveled by providing neighborhood commercial services and providing bicycle parking and pedestrian access. The proposed project would also facilitate water conservation. As such, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and impacts would be less-than-significant.

REFERENCES

- California Air Pollution Control Officers Association (CAPCOA). *Quantifying Greenhouse Gas Mitigation Measures*. August 2010.
- CAPCOA. *CEQA & Climate Change*. January 2008.
- CAPCOA. *CalEEMod User's Guide*. July 2013.
- California Air Resources Board (ARB). May 2014. *Greenhouse Gas Inventory Data – 2000 to 2012*. Available at: http://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf
- California Air Resources Board (ARB). August 2013. *Greenhouse Gas Inventory - 2020 Emissions Forecast*. Available at: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>
- California Climate Action Registry. *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*. Version 3.1. January 2009. Available at: <http://www.theclimateregistry.org/downloads/GRP.pdf>
- California Environmental Protection Agency (CalEPA). *Climate Action Team Biennial Report. Final Report*. April 2010. Available at: <http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/CAT-1000-2010-005.PDF>
- California Environmental Protection Agency (CalEPA), March 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.PDF
- City of Merced. *2011 Inventory of Community and Government Operations Greenhouse Gas Emissions*. Available at: <http://www.cityofmerced.org/civicax/filebank/blobdload.aspx?BlobID=13780>
- City of Merced. *Merced Climate Action Plan*. August 2012. Available at: http://cityofmerced.org/depts/cd/planning/climate_action_plan/default.asp
- City of Merced. *Climate Action Plan: Implementation Approach Technical Memorandum*. February 17, 2014. Available at: <http://www.cityofmerced.org/civicax/filebank/blobdload.aspx?BlobID=13781>
- Intergovernmental Panel on Climate Change [IPCC], 2006. *Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. [Penman, J.; Gytarsky, M.; Hiraishi, T.; Irving, W.; Krug, T.]. Paris: OECD, 2006.
- Intergovernmental Panel on Climate Change [IPCC], 2007: *Summary for Policymakers*. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment*



Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Intergovernmental Panel on Climate Change [IPCC], 2013: *Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2013. Available at:
www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf

San Joaquin Valley Air Pollution Control District. *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*. December 2009. Available at: http://www.valleyair.org/programs/CCAP/CCAP_idx.htm

San Joaquin Valley Air Pollution Control District. *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. December 2009. Available at:
http://www.valleyair.org/programs/CCAP/CCAP_idx.htm

APPENDIX D

TRAFFIC IMPACT ANALYSIS

Note: This analysis was previously prepared for General Plan Amendment #14-06 and Zone Change #421. The project remains similar in size and impacts, therefore, no additional analysis was required.



Draft Traffic Impact Analysis Report

Commercial Development at the southeast corner of Yosemite Avenue and McKee Road

Merced, CA

January 30, 2015



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Executive Summary

This report presents the results of the Traffic Impact Analysis (TIA) conducted for the proposed commercial development located at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced, California. The project proposes construction of three new buildings totaling 62,000 square feet built on a 5.42-acre site. The development would be constructed in two phases as per the site plan, and will consist of few eateries and retail shops. The current parcel is mostly vacant land with two single family homes. Per City of Merced's land use map, the project is zoned for low density residential. Therefore, a rezoning application will have to be filed with the City of Merced for the proposed commercial development.



The purpose of this Traffic Impact Analysis is to evaluate the potential traffic impacts, identify short-term and long-term roadway circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process. The scope of work was prepared in consultation with the City of Merced staff. Roadway system operations were evaluated under the following scenarios:

1. Existing Conditions
2. Existing plus Project Conditions
3. Existing plus Approved Conditions
4. Existing plus Approved plus Project Conditions
5. Cumulative Conditions
6. Cumulative plus Project Conditions



Project Trip Generation

The proposed project trip rates were obtained from the standard reference *Trip Generation*, 9th Edition, published by the Institute of Transportation Engineers (ITE). The proposed project is estimated to generate 1,721 net new daily trips, 39 net new a.m. peak hour trips and 150 net new p.m. peak hour trips.



Project Trip Distribution

Trip distribution assumptions for the proposed project were developed based on existing travel patterns, Merced County Association of Governments (MCAG) travel demand model, and knowledge of the study area. Project trips were assigned to the study intersections based on the following trip distribution assumptions:

- 50 percent from/ to west of Yosemite Avenue and McKee Road
- 20 percent from/ to south of Yosemite Avenue and McKee Road
- 20 percent from/ to east of Hatch Road and Yosemite Avenue
- 5 percent from/ to Hatch Road
- 5 percent from/ to Whitewater Way





Project Impacts

Intersection Impacts

Existing plus Project Traffic Conditions

The intersections of Yosemite Avenue and Parsons Avenue operates at an unacceptable Level of Service. In order to improve the intersections operations, it is recommended to modify the westbound approach to accommodate an additional 100 ft. shared thru/right turn lane. In addition, re-stripe the existing shared left/thru/right lane to shared left/thru lane.



Existing plus Approved plus Project Traffic Conditions

The intersections of Yosemite Avenue and Parsons Avenue operates at an unacceptable Level of Service. In order to improve the intersections operations, the same mitigation measures are recommended as in Existing plus Project Conditions.



Cumulative (2035) plus Project Traffic Conditions

The intersections of Yosemite Avenue / Parsons Avenue and McKee Road / Olive Avenue operates at an unacceptable Level of Service. In order to improve the intersection operations the following mitigation measures are recommended:



Yosemite Avenue and Parsons Avenue

The same mitigation measures are recommended as in Existing plus Project Conditions.

Olive Avenue and McKee Road

- Southbound Approach
 - Remove the adjacent on-street parking for 100 ft. on the southbound approach.
 - Re-stripe the approach as shared left/thru lane and shared right/thru lane.
 - Remove the adjacent on-street parking for 100 ft. on the southbound receiving lane and stripe it as a lane drop.
- Northbound Approach
 - Remove the adjacent on-street parking for 100 ft. on the northbound approach.
 - Re-stripe the approach as shared left/thru lane and shared right/thru lane.
 - Remove the adjacent on-street parking for 100 ft. on the northbound receiving lane and stripe it as a lane drop. Although this might not be feasible due to residential driveways.



If the proposed lane modification changes are not feasible, it is recommended to install a traffic signal to improve the level of service operations to acceptable levels.

Roadway Segment Impacts

Based on the results of the roadway segment analysis, it can be expected that the study roadway segments would operate at or better than the City of Merced's LOS threshold of 'D'.





Weekday vs Sunday Analysis

Based on the comparison of ADT between weekday and Sunday, it was determined that the Sunday ADT's were either lower or about the same as that of the weekday ADT's. Therefore, all recommended mitigation measures under all scenarios for the weekday operations would also apply to Sunday traffic.



Queuing Analysis

At the intersection of Olive Avenue and McKee Road, It is recommended to increase the eastbound left turn lane storage capacity from 60 to 100 feet. This would require re-striping the eastbound left turn approach and reduction of the TWLT lane to the west of this intersection.



Site-Access, On-Site Circulation, and Parking

TJKM reviewed the project site plan to evaluate on-site circulation and access to the project. The proposed project's access will be via one full access driveway on McKee Road, one right-in and right-out driveway on Yosemite Avenue and one full access driveway on Whitewater Way for the single-family home subdivision to the east. A separate entrance only driveway is provided for service trucks on Yosemite Avenue at the northeast corner of the project site and an exit only driveway is provided onto McKee Road at the southwest corner of project site. The project also provides enough parking spaces based on size of development, this will result in adequate on-site circulation with minor to no delays to adjacent roadways.





Introduction

This report presents the results of the Traffic Impact Analysis (TIA) conducted for the proposed commercial development located at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced, California, as shown in Figure 1. The project proposes construction of a shopping center with few eateries and retail shops, see site plan on Figure 2



Purpose

The purpose of this Traffic Impact Analysis is to evaluate the potential traffic impacts, identify short-term and long-term roadway circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process. The scope of work was prepared in consultation with the City of Merced staff.



Project Study Area

Study Intersections

TJKM evaluated traffic conditions at the study intersections during a.m. and p.m. peak hours for a typical weekday and also on Sunday. The study intersections were selected in consultation with the City staff. The peak periods were observed between 7:00 a.m. - 9:00 a.m. and 4:00 p.m. - 6:00 p.m. The study intersections and the associated traffic controls are as follows:

1. Yosemite Avenue and Parsons Avenue/ Gardner Avenue (All -Way Stop)
2. Yosemite Avenue and McKee Road (Signal)
3. Yosemite Avenue and Hatch Road (Side-Street Stop)
4. Olive Avenue and McKee Road (All -Way Stop)



Project Driveways

TJKM evaluated the proposed project traffic at the following project driveways:

1. Yosemite Avenue and Project Driveway
2. McKee Road and Project Driveway
3. Whitewater Way and Project Driveway



Roadway Segments

TJKM evaluated the traffic operations at the following roadway segments:

1. Yosemite Avenue, between Parsons Avenue and McKee Road
2. McKee Road, between Yosemite Avenue and Silverado Avenue





Intersection Analysis Scenarios

The study intersections were evaluated during the a.m. and p.m. peak hours for the following scenarios:



- **Existing Traffic Conditions** – This scenario evaluates existing traffic volumes and roadway conditions based on traffic counts and field surveys.
- **Existing Plus Project Traffic Conditions** – This scenario is similar to Existing Conditions, but with addition of traffic projected to be generated from the proposed project.
- **Existing Plus Approved Traffic Conditions** – This scenario evaluates existing volumes plus traffic from approved but not yet constructed developments in the area.
- **Existing Plus Approved Plus Project Traffic Conditions** - This scenario is similar to Existing Plus Approved Conditions, but with addition of traffic projected to be generated from the proposed project.
- **Cumulative (2035) No Project Conditions** – This scenario evaluates total traffic volumes and roadway conditions based on the year 2035 without the proposed project.
- **Cumulative (2035) Plus Project Conditions** – This scenario is similar to Cumulative No Project Conditions, but with addition of traffic projected to be generated from the proposed project.



Level of Service Analysis Methodology

Level of Service is a qualitative index of the performance of an element of the transportation system. Level of Service (LOS) is a rating scale running from A to F, with LOS A indicating no congestion, and LOS F indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for unsignalized, signalized intersections and roadway segments.



The *2000 Highway Capacity Manual* is the standard reference published by the Transportation Research Board, and contains the specific criteria and methods to be used in assessing LOS. HCS 2000 and Synchro software were used to define LOS for the intersections in this study.



The City of Merced's Vision 2030 General Plan- Transportation and Circulation Element Table 4.3 "Daily Roadway Segment Level of Service Thresholds by Roadway Type" was used to define the LOS for the roadway segments in this study. Details regarding the HCM methodology and roadway segment's LOS threshold are in Appendix A.

Criteria of Significance



The Merced Vision 2030 General Plan Transportation and Circulation Element has established LOS D as the acceptable level of traffic congestion on larger roads and major intersections. LOS D is used to evaluate the potential significance of LOS impacts to intersections and segments within the City of Merced and in its sphere of influence (SOI).



Vicinity Map

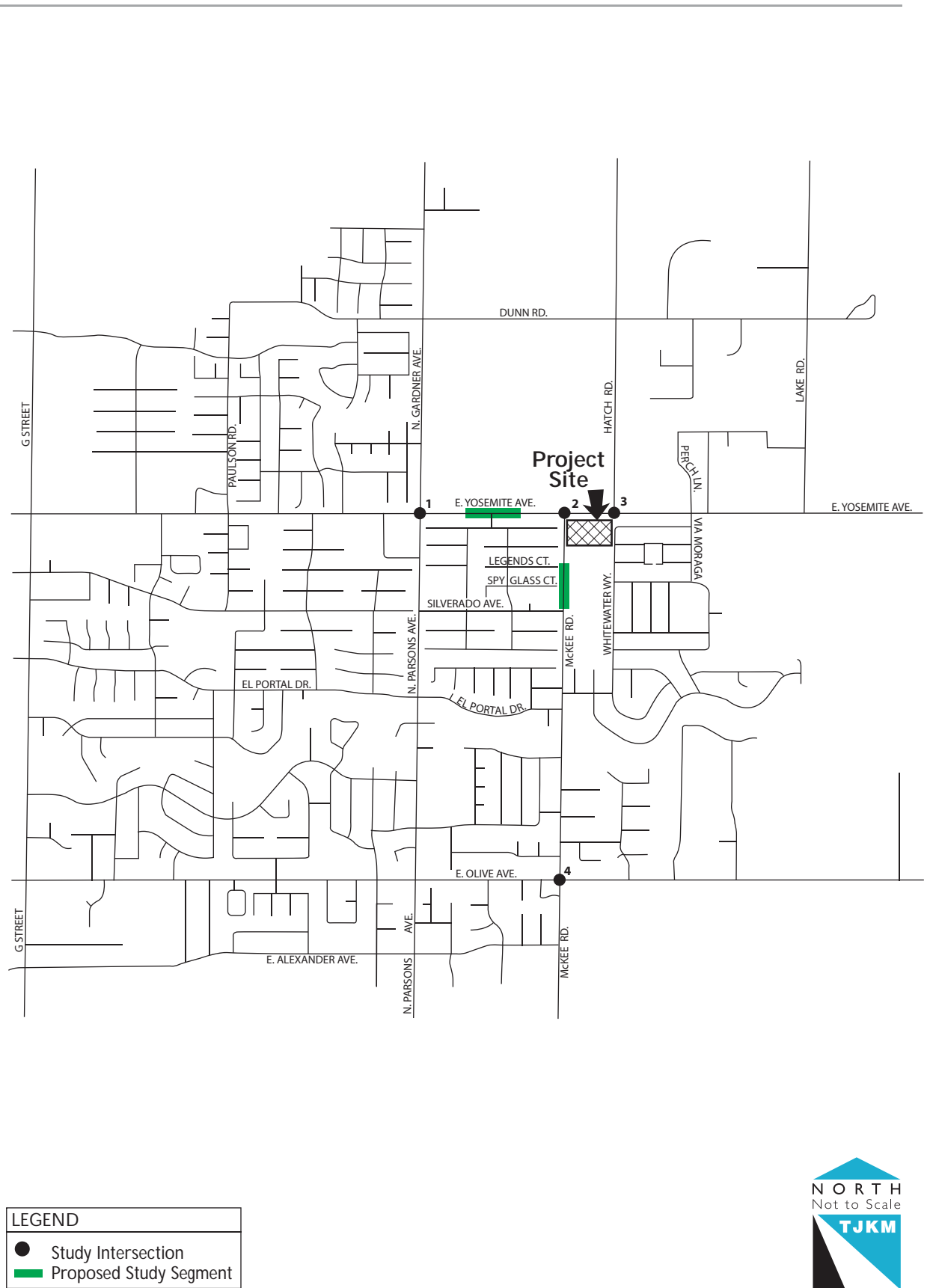


Figure 1

Site Plan

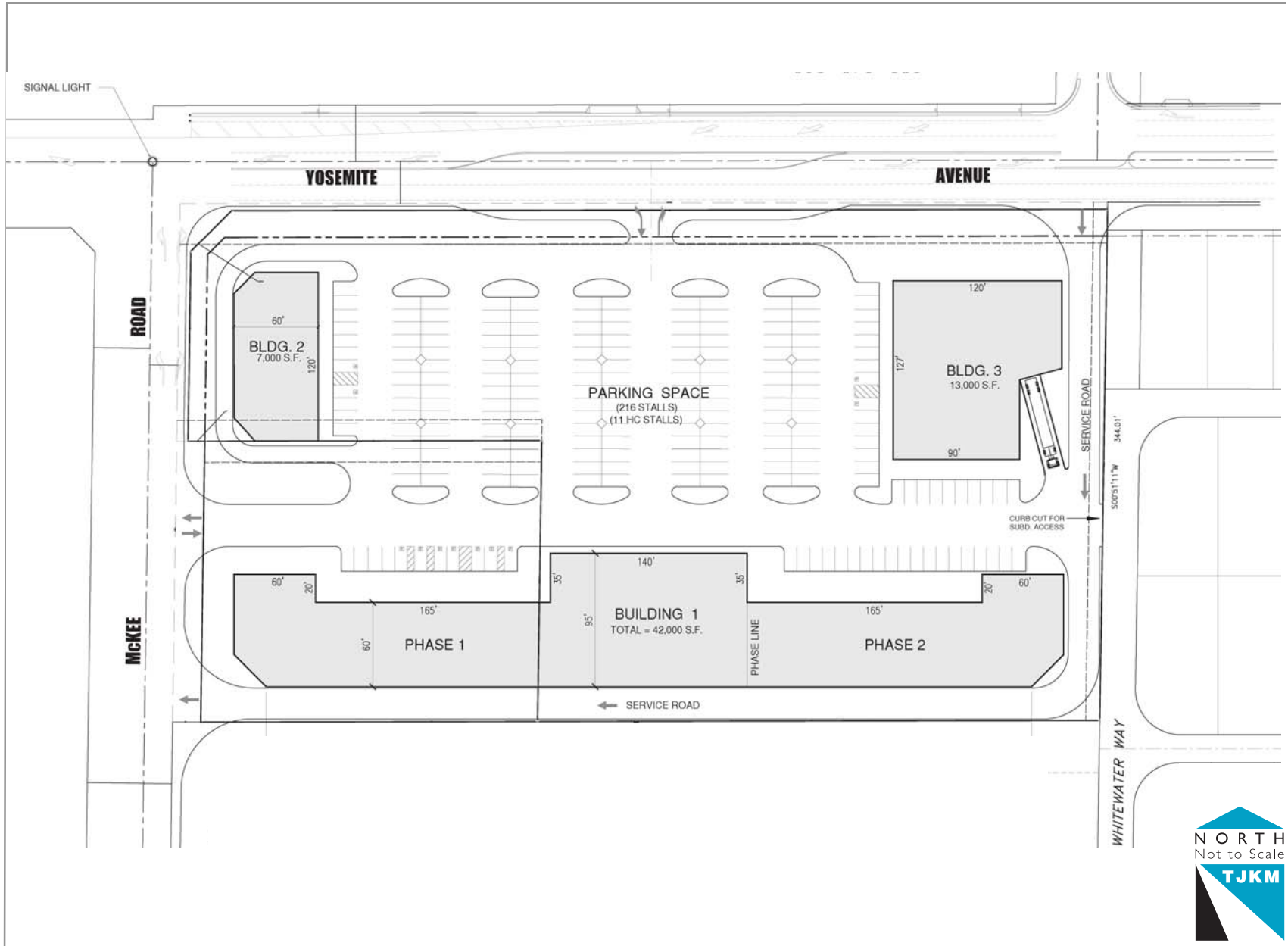


Figure 2



Existing Conditions

Roadway Network

The project site and surrounding study area are illustrated in Figure 1. Important roadways adjacent to the project site are discussed below.



Yosemite Avenue is a four-lane, east-west divided arterial road that connects Snelling Highway to the west and N Arboleda Drive to the east. Near the project site, Yosemite Avenue has a three-lane cross-section with two lanes running east and one lane running west. Near the project site, Yosemite Avenue includes bike lanes on both sides of the roadway. The posted speed limit is between 45 and 50 miles per hour (mph). Yosemite Avenue provides direct access to the project site.



McKee Road is a two-lane, north-south collector that extends between Yosemite Avenue to the north and E Santa Fe Avenue to the south. McKee Road includes on-street parking on both sides of the roadway. The speed limit along McKee Road near the project site is 40 mph. McKee Road provides direct access to the project site.



Hatch Road is a two-lane, north-south local roadway that runs between E Cardella Road to the north and Yosemite Avenue to the south.



Parsons Avenue / Gardner Avenue is a two-lane, north-south arterial that extends between E Cardella Road to the north and Stretch Road to the south. The posted speed limit is between 40 and 45 miles per hour (mph).

Whitewater Way is a two-lane, north-south local roadway that would connect the residents near the project site with the proposed project. Whitewater Way provides direct access to the project site.



Existing Transit Facilities

Merced County Transit, or “The Bus”, is the transit operator in the City of Merced. At present, UC transit routes operate near the proposed project. Retention of the existing routes and the increase or decrease of route intervals is dependent on transit ridership and on available funding.

Existing Pedestrian and Bike Facilities

Currently, Class II bike lanes exist adjacent to the proposed project site along Yosemite Avenue. The existing bike lanes are in conformance with the *Merced County Regional Bicycle Transportation Plan*.

Pedestrian facilities include sidewalks and crosswalks. Crosswalks are present across all legs of the intersection of Olive Avenue and McKee Road. Crosswalks are present on the southern and eastern leg of the intersection of Yosemite Avenue and McKee Road. A part of McKee Road has sidewalks along the northern side.



Existing Peak Hour Traffic Volumes

The weekday and Sunday peak hour turning movement volumes at the study intersections during the a.m. and p.m. peak hours were based on the counts that were collected during January 2015. The existing weekday turning movement volumes, lane geometry and intersection controls are illustrated in Figure 3. Existing traffic counts are provided in Appendix B.



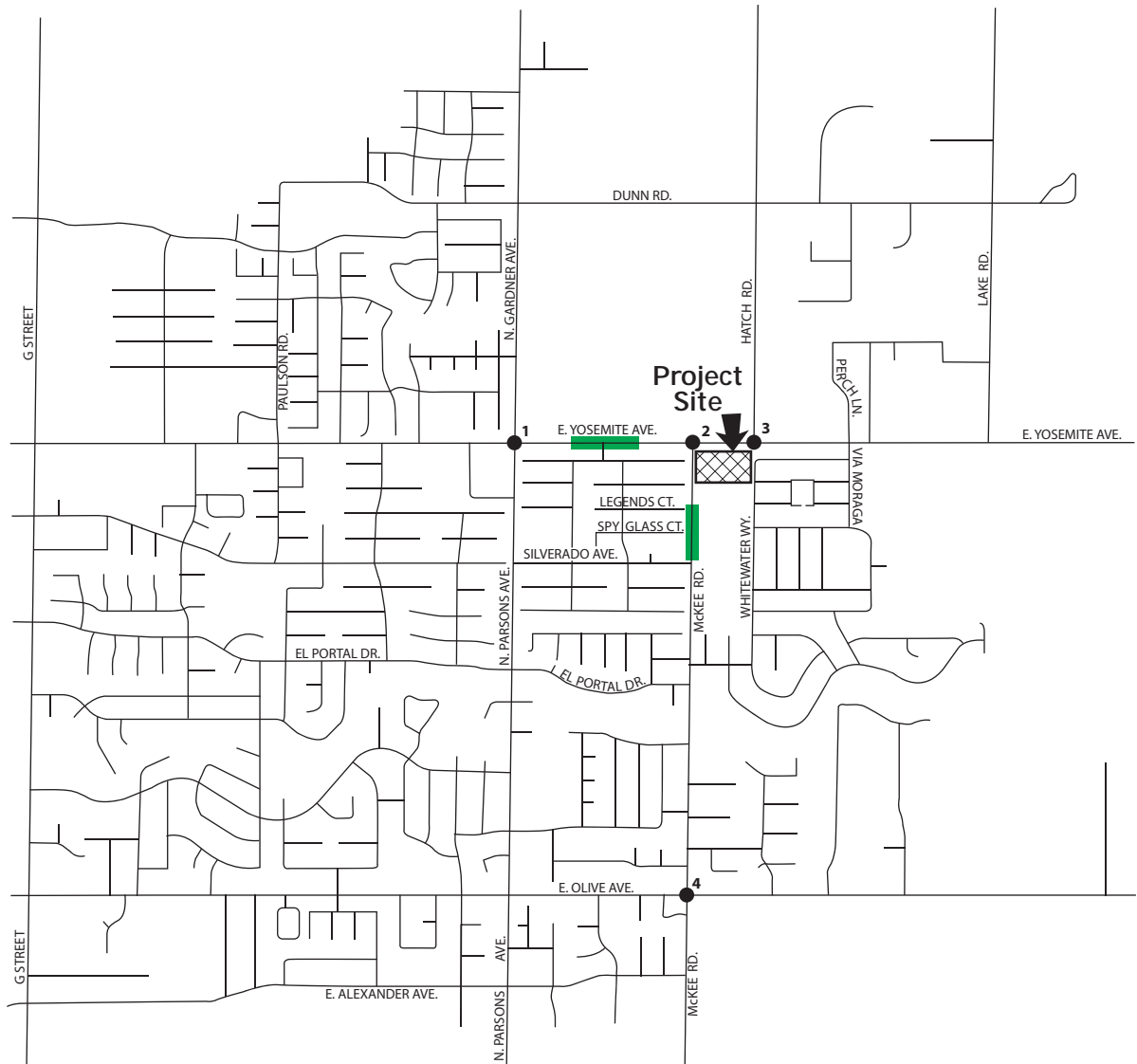
Existing Roadway Segment Volumes

The seven day bi-directional Average Daily Traffic (ADT) at the study roadway segments were collected during January 2015. The ADT counts are provided in Appendix B.

Existing Conditions Traffic Volumes, Lane Geometry, and Controls



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|--|--|--|--|
| <p>23 (18)
49 (30)
28 (11)
17 (19)
373 (298)
15 (36)
17 (33)
273 (276)
101 (138)
154 (102)
19 (48)
22 (16)</p> | <p>232 (199)
78 (69)
131 (137)
122 (129)
199 (136)
73 (38)</p> | <p>25 (9)
2 (1)
212 (247)
5 (4)
5 (25)
193 (145)</p> | <p>55 (30)
302 (208)
32 (30)
33 (23)
104 (88)
40 (16)
59 (53)
48 (138)
60 (97)
98 (73)
263 (209)
13 (22)</p> |



| LEGEND | |
|--------|------------------------|
| ● | Study Intersection |
| ■ | Proposed Study Segment |
| XX | AM Peak Hour Volumes |
| (XX) | PM Peak Hour Volumes |



Figure 3



Existing Level of Service Analysis

Table 1 and Table 2 below summarize the levels of service at the study intersections and roadway segments respectively. Levels of service worksheets for the existing traffic conditions are provided in Appendix C.

Table 1: Intersection Level of Service Analysis - Existing Conditions

| ID | Intersection | Intersection Control | A.M. Peak Hour | | P.M. Peak Hour | |
|----|----------------------------------|----------------------|----------------|-----|----------------|-----|
| | | | Average Delay | LOS | Average Delay | LOS |
| 1 | Yosemite Avenue & Parsons Avenue | All -Way Stop | 36.3 | E | 16.8 | C |
| 2 | Yosemite Avenue & McKee Road | Signal | 17.5 | B | 16.5 | B |
| 3 | Yosemite Avenue & Hatch Road | Side-Street Stop | 9.2 | A | 9.3 | A |
| 4 | Olive Avenue & McKee Road | All -Way Stop | 21.2 | C | 15.4 | C |

Notes: 1. LOS = Level of Service;
2. Average intersection delay expressed in seconds per vehicle for signalized intersections and all way stop controlled intersections. Total control delay for the worst movement is presented for stop controlled intersections.
Bold indicates deficient intersection operations.

Table 2: Roadway Segment Level of Service Analysis - Existing Conditions

| ID | Limits | Lanes | 24-hr Volume | LOS |
|-----------------|--|-------|--------------|-----|
| Yosemite Avenue | Between Parsons Avenue and McKee Road | 3 | 7,081 | C |
| McKee Road | Between Yosemite Avenue and Silverado Avenue | 2 | 4,263 | C |

Notes: LOS = Level of Service per the city of Merced Vision 2030 General Plan Transportation and Circulation Element Table 4.3 "Daily Roadway Segment Level of Service Thresholds by Roadway Type"

Traffic Signal Warrants

Based on TJKM's peak hour signal warrant analysis, the intersection of Yosemite Avenue and Parsons Avenue meets the signal warrant during the a.m. peak hour. It is worth noting that MUTCD states "satisfaction of a signal warrant or warrants shall not in itself require the installation of a "traffic signal". Based on the impact criteria, it is recommended that prior to installation of a traffic signal, the remaining California MUTCD warrants as applicable be conducted. Peak Hour Signal Warrant sheets are provided in Appendix J.





Proposed Project



Project Description

The proposed commercial development is located at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced, California. The project proposes construction of three new buildings totaling 62,000 square feet built on a 5.42-acre site. The project plans to build a shopping center with few eateries and retail shops. The proposed development would be constructed in two phases as per the Site plan. The current parcel is a mostly vacant lot with two single-family homes on the parcel.



The proposed project is bound by Yosemite Avenue to the North, McKee Road to the west, Whitewater Way to the East and Project's Service Road to the South. The proposed development will be approximately 2 miles west of University of California, Merced. Per City of Merced's land use map, the project is zoned for low density residential. Therefore, a rezoning application will have to be filed with the City for the proposed commercial development.



According to the site plan, access to the proposed development will be via one proposed full access driveway on McKee Road, one proposed full access driveway on Whitewater Way and one proposed right-in & right-out driveway on Yosemite Avenue. In addition, a separate entrance only driveway is provided for service trucks on Yosemite Avenue at the northeast corner of the project site and an exit only driveway is provided onto McKee Road at the southwest corner of project site.



Project Trip Generation

The proposed project trip rates were obtained from the standard reference *Trip Generation*, 9th Edition, published by the Institute of Transportation Engineers (ITE). The trip generation estimates were developed using the rates for "Shopping Center" (ITE Land Use 820). The proposed project is expected to generate 1,721 net daily trips, including 39 net trips during the a.m. peak hour and 150 net trips during the p.m. peak hour. Per City's request, the trip generation estimates include a passer-by trip reduction of 35 percent. Table 3 summarizes the proposed project trip generation.

Table 3: Proposed Project Trip Generation

| Land Use (ITE Code) | Size | Daily | | A.M. Peak Hour Trips | | | | | P.M. Peak Hour Trips | | | | |
|---------------------------------|-----------------------|-------------------|--------------|----------------------|-----------|-----------|-----------|-----------|----------------------|-----------|-----------|-----------|------------|
| | | Rate ² | Trips | Rate | (In:Out)% | In | Out | Total | Rate | (In:Out)% | In | Out | Total |
| Shopping Center (820) | 62.0 KSF ¹ | 42.70 | 2,647 | 0.96 | 62:38 | 37 | 23 | 60 | 3.71 | 48:52 | 110 | 120 | 230 |
| Passer-By-Trip Reductions (35%) | | | (926) | | | (13) | (8) | (21) | | | (38) | (42) | (80) |
| Total New Project Trips | | | 1,721 | | | 24 | 15 | 39 | | | 72 | 78 | 150 |

Notes: 1. KSF = Thousand Square Feet

2. Rate = Trips per KSF

Source: Trip Generation (9th Edition), Institute of Transportation Engineer (2012)



Project Trip Distribution and Assignment



Trip distribution assumptions for the proposed project were developed based on existing travel patterns, Merced County Association of Governments (MCAG) travel demand model, and knowledge of the study area. Project trips were assigned to the study intersections based on the following trip distribution assumptions:





- 50 percent from/ to west of Yosemite Avenue and Mckee Road
- 20 percent from/ to south of Yosemite Avenue and Mckee Road
- 20 percent from/ to east of Hatch Road and Yosemite Avenue
- 5 percent from/ to Hatch Road
- 5 percent from/ to Whitewater Way



Figure 4 illustrates the project trip distribution and Project Only trip assignment at the study intersections. Figure 5 shows the project trips at the proposed driveways.

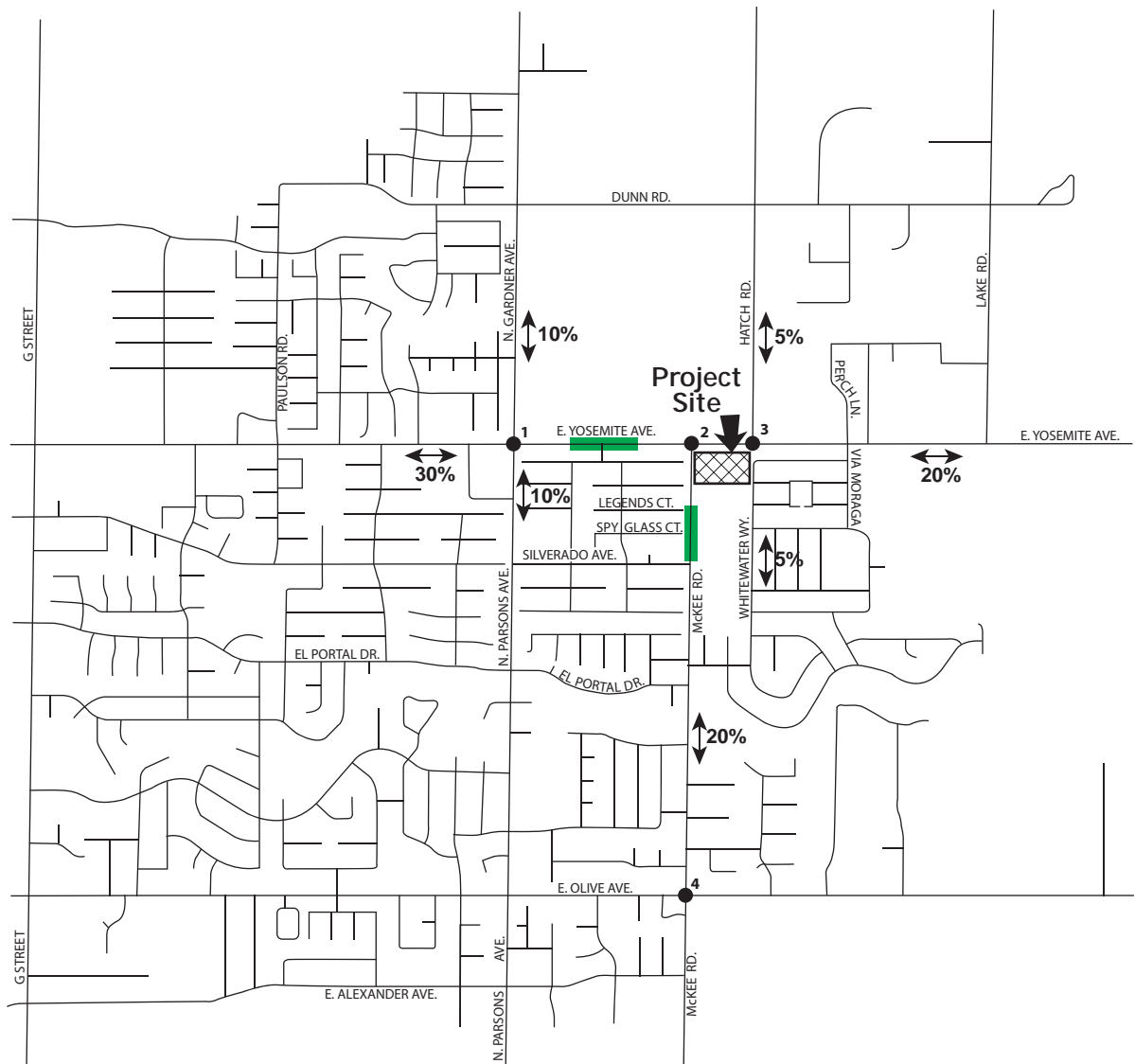
The Existing plus Project turning movement volumes resulting from project trip assignment are illustrated in Figure 6.



Project Trip Distribution and Assignment



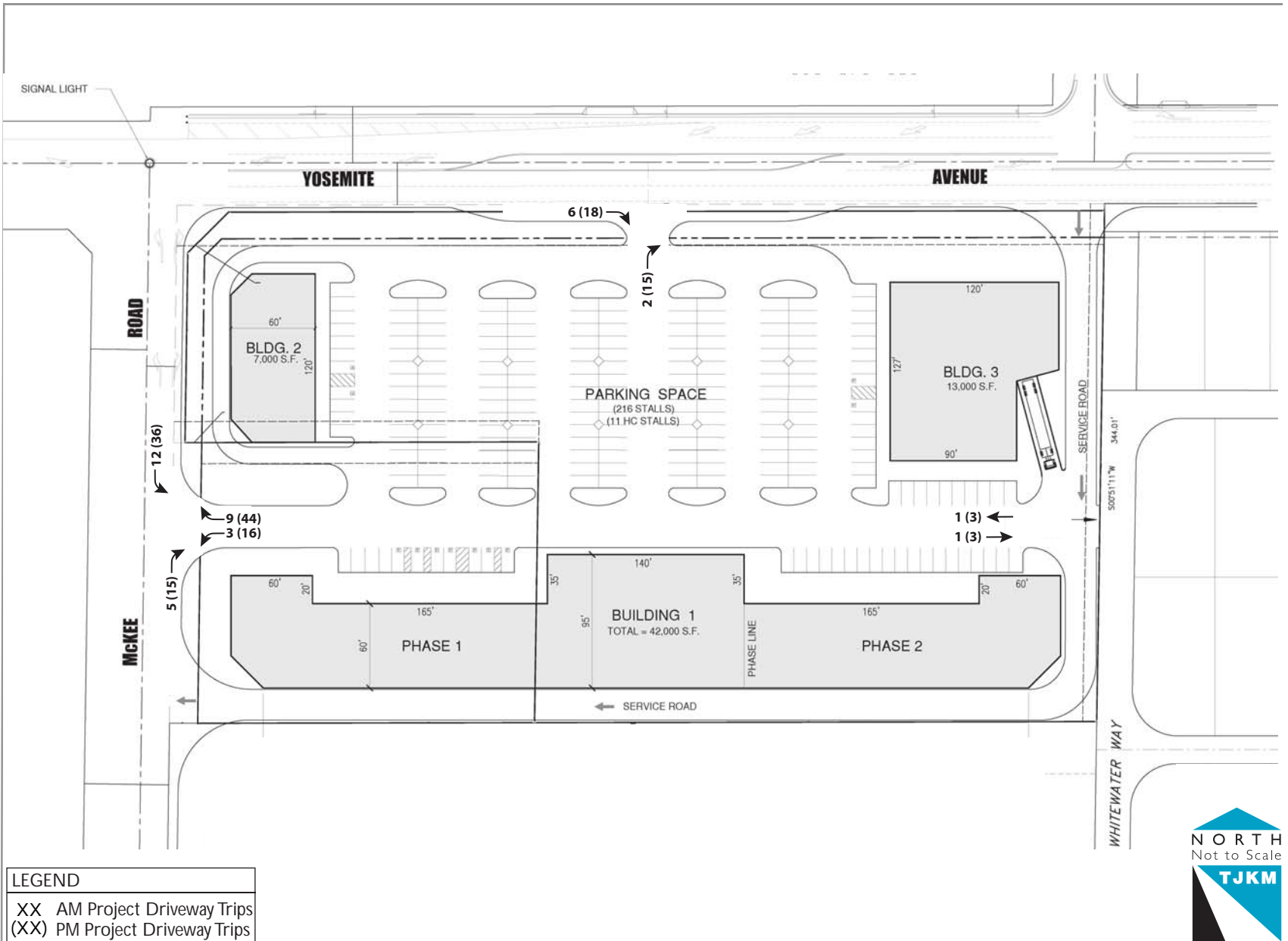
| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|---|---|---|--|
| | | | |



| LEGEND | |
|--------|------------------------|
| ● | Study Intersection |
| ■ | Proposed Study Segment |
| XX | AM Peak Hour Trips |
| (XX) | PM Peak Hour Trips |
| XX% | Trip Distribution |



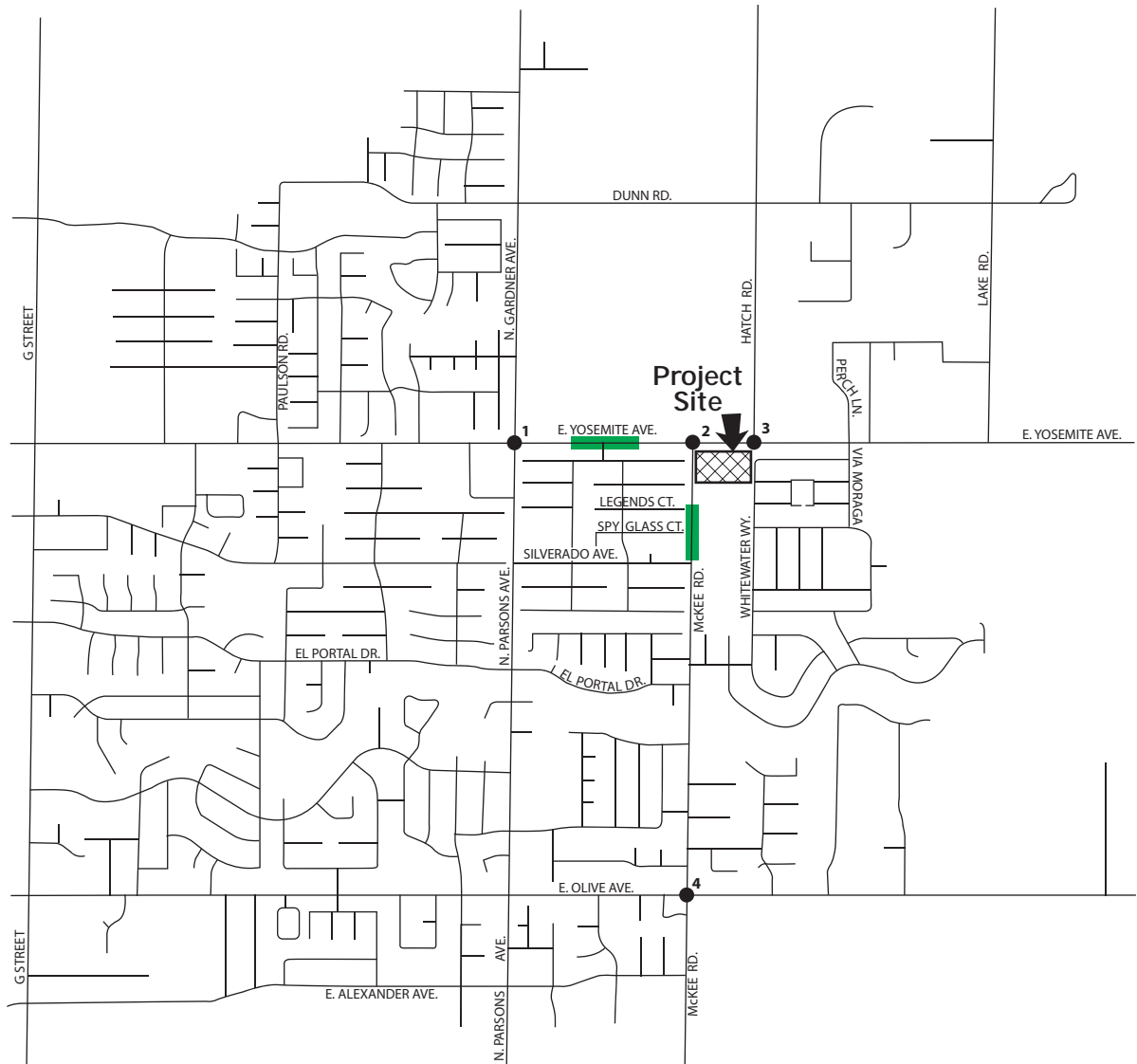
Project Driveway Trip Assignment



Existing plus Project Conditions Traffic Volumes, Lane Geometry, and Controls



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|--|--|---|--|
| <p>23 (18)
49 (30)
30 (18)
19 (27)
377 (322)
17 (43)
17 (33)
281 (300)
101 (138)
154 (102)
19 (48)
24 (23)</p> | <p>232 (199)
84 (87)
137 (155)
128 (147)
207 (175)
74 (43)</p> | <p>26 (12)
2 (1)
217 (262)
5 (4)
6 (29)
195 (161)</p> | <p>56 (36)
303 (214)
33 (34)
34 (26)
104 (88)
40 (16)
61 (59)
48 (138)
60 (97)
98 (73)
265 (215)
13 (22)</p> |



| LEGEND | |
|--------|------------------------|
| ● | Study Intersection |
| ■ | Proposed Study Segment |
| XX | AM Peak Hour Volumes |
| (XX) | PM Peak Hour Volumes |



Figure 6



Existing plus Project Level of Service Analysis

Table 4 and Table 5 below summarize the levels of service at the study intersections and the roadway segments respectively. The project trips on the roadway segments were calculated by distributing the proposed project daily trips (from trip generation estimate) based on project trip distribution assumptions. The study intersection levels of service calculation results for this scenario are contained in Appendix D.

Table 4: Intersection Level of Service Analysis – Existing plus Project Conditions

| ID | Intersection | Peak Hour | Existing Conditions | | Existing plus Project Conditions | | Mitigated Conditions | |
|----|----------------------------------|-----------|----------------------------|------------------|----------------------------------|------------------|----------------------------|------------------|
| | | | Average Delay ² | LOS ¹ | Average Delay ² | LOS ¹ | Average Delay ² | LOS ¹ |
| 1 | Yosemite Avenue & Parsons Avenue | AM | 36.3 | E | 38.1 | E | 15.8 | C |
| | | PM | 16.8 | C | 20.6 | C | 13.4 | B |
| 2 | Yosemite Avenue & McKee Road | AM | 17.5 | B | 17.8 | B | | |
| | | PM | 16.5 | B | 17.9 | B | | |
| 3 | Yosemite Avenue & Hatch Road | AM | 9.2 | A | 9.2 | A | | |
| | | PM | 9.3 | A | 9.4 | A | | |
| 4 | McKee Road & Olive Avenue | AM | 21.2 | C | 21.7 | C | | |
| | | PM | 15.4 | C | 16.2 | C | | |

Notes: 1. LOS = Level of Service;
2. Average intersection delay expressed in second per vehicle for signalized intersections and all way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop controlled intersections.
Bold indicates deficient intersection operations.

Table 5: Roadway Segment Level of Service Analysis – Existing plus Project Conditions

| ID | Limits | Lanes | 24-hr Volume | LOS |
|-----------------|--|-------|--------------|-----|
| Yosemite Avenue | Between Parsons Avenue and McKee Road | 3 | 7,942 | C |
| McKee Road | Between Yosemite Avenue and Silverado Avenue | 2 | 4,607 | C |

Notes: LOS = Level of Service per the city of Merced Vision 2030 General Plan Transportation and Circulation Element Table 4.3 “Daily Roadway Segment Level of Service Thresholds by Roadway Type”

Traffic Signal Warrants

Based on TJKM’s peak hour signal warrant analysis, the intersection of Yosemite Avenue and Parsons Avenue warrants a traffic signal under this scenario. It is worth noting that MUTCD states “satisfaction of a signal warrant or warrants shall not in itself require the installation of a “traffic signal”; Based on the impact criteria, it is recommended that prior to installation of a traffic signal, the remaining California MUTCD warrants as applicable be conducted. Peak Hour Signal Warrant sheets are provided in Appendix J.



Mitigation Measures

In order to improve the level of service at the deficient intersection, TJKM recommends the following mitigation measures:

Yosemite Avenue and Parsons Avenue



Modify the westbound approach to accommodate an additional 100 ft. shared thru/right turn lane. In addition, re-stripe the existing shared left/thru/right lane to shared left/thru lane.





Existing plus Approved Conditions

This scenario evaluates existing volumes plus traffic from approved but not yet constructed developments in the area.



Approved Project Trip Generation

Per City's request, the trips from Wathen Commercial Project located at the northeast corner of G Street and Yosemite Avenue were included for this analysis. The project proposes construction of a Hotel, Restaurant, Pharmacy, Bank and a few office buildings. The trips for the project were estimated based on the Trip Generation (9th Edition) Manual published by the Institute of Transportation Engineers (ITE) and data provided by the City staff (See Appendix K). Table 6 summarizes the project trip generation.



Table 6: Approved Project Trip Generation

| Land Use (ITE Code) | Size | Daily | | A.M. Peak Hour Trips | | | | | P.M. Peak Hour Trips | | | | |
|--------------------------------|-----------------------|-------------------|--------------|----------------------|-----------|------------|------------|------------|----------------------|-----------|------------|------------|------------|
| | | Rate ² | Trips | Rate | (In:Out)% | In | Out | Total | Rate | (In:Out)% | In | Out | Total |
| Hotel (310) | 84 Rooms | 8.17 | 686 | 0.53 | 59:41 | 26 | 18 | 44 | 0.60 | 51:49 | 25 | 25 | 50 |
| Restaurant (932) | 5.88 KSF ¹ | 127.15 | 748 | 10.81 | 55:45 | 35 | 28 | 63 | 9.85 | 60:40 | 34 | 23 | 57 |
| Pharmacy (880) | 17.34 KSF | 90.06 | 1,561 | 2.94 | 65:35 | 32 | 18 | 50 | 8.40 | 49:51 | 71 | 74 | 145 |
| Bank w/ Drive-Thru (912) | 4.54 KSF | 148.15 | 672 | 12.08 | 57:43 | 31 | 23 | 54 | 24.30 | 50:50 | 55 | 55 | 110 |
| Medical Office (720) | 34.54 KSF | 36.13 | 1,247 | 2.39 | 79:21 | 65 | 17 | 82 | 3.57 | 28:72 | 34 | 89 | 123 |
| General Office (710) | 23.02 KSF | 11.03 | 253 | 1.56 | 88:12 | 31 | 4 | 35 | 1.49 | 17:83 | 6 | 28 | 34 |
| Total New Project Trips | | | 5,167 | | | 220 | 108 | 328 | | | 225 | 294 | 519 |

Notes: 1. KSF = Thousand Square Feet

2. Rate = Trips per KSF

Source: Trip Generation (9th Edition), Institute of Transportation Engineer (2012)



Approved Project Trip Distribution and Assignment

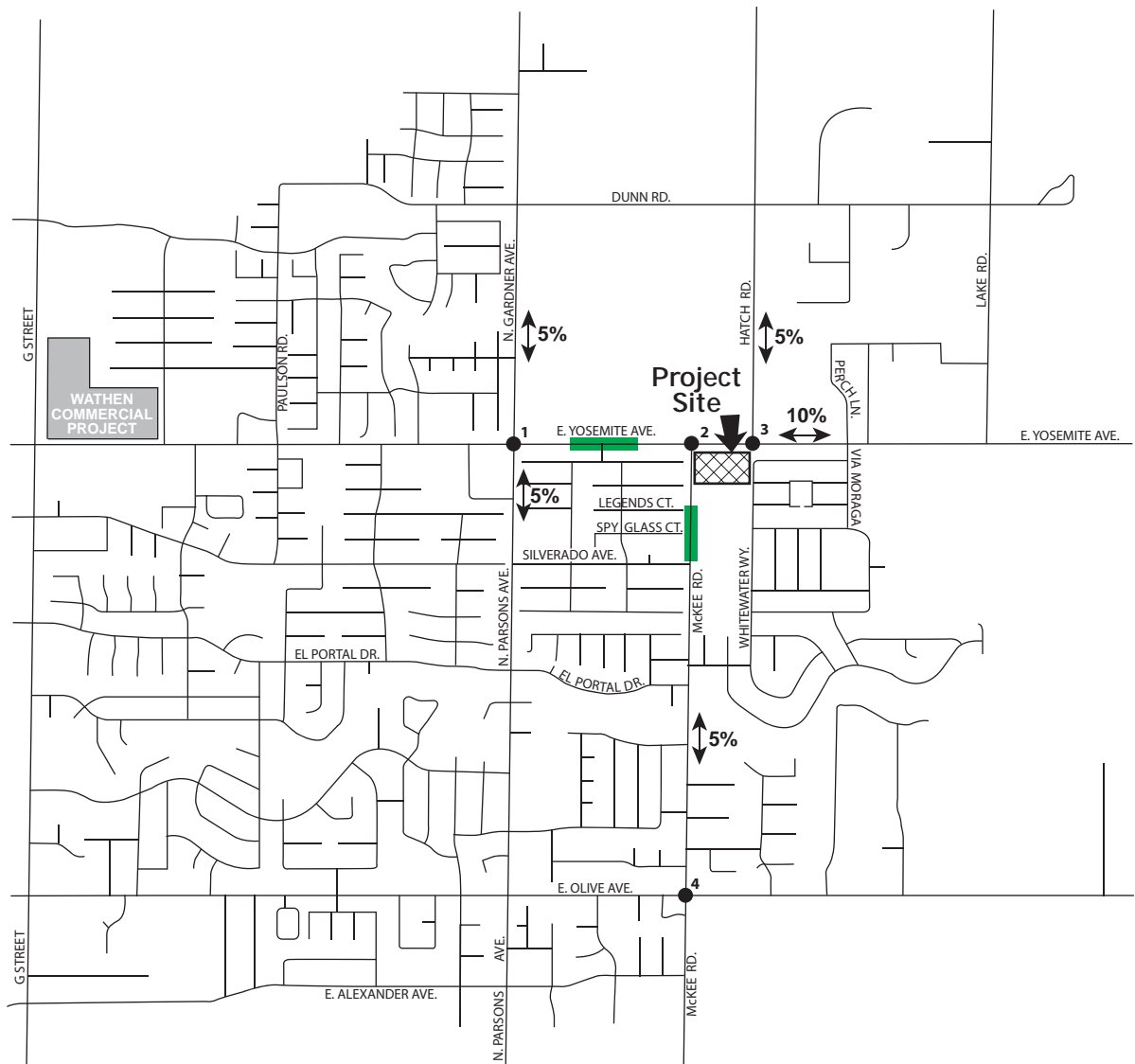
Trip distribution assumptions for the above-approved project were developed based on the existing travel patterns and knowledge of the study area. Among the trips that would be generated from the approved project, only 30 percent of the trips are assumed to pass through the study intersections. The trip distribution and assignment assumptions at the study intersections for the above referenced project in the project vicinity are illustrated in Figure 7. The assigned trips were added to Existing Conditions traffic volumes to generate Existing plus Approved Conditions' traffic volumes. The resulting intersection turning movement volumes at the study intersections for this scenario are shown in Figure 8.



Approved Project Trip Distribution and Assignment



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|---|---|---|--|
| | | | |



| LEGEND | |
|--------|------------------------|
| ● | Study Intersection |
| ■ | Proposed Study Segment |
| XX | AM Peak Hour Trips |
| (XX) | PM Peak Hour Trips |
| XX% | Trip Distribution |



Existing plus Approved Project Conditions Traffic Volumes, Lane Geometry, and Controls



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|---|--|--|--|
| <p>34 (29)
49 (30)
28 (11)
17 (19)
417 (344)
15 (36)
23 (48)
294 (335)
107 (153)
165 (113)
9 (48)
22 (16)</p> | <p>265 (234)
78 (69)
147 (181)
127 (144)
210 (147)
73 (38)</p> | <p>36 (20)
2 (1)
234 (271)
5 (4)
10 (40)
204 (174)</p> | <p>56 (33)
305 (217)
33 (33)
37 (27)
104 (88)
40 (16)
61 (55)
48 (138)
60 (97)
98 (73)
268 (214)
13 (22)</p> |

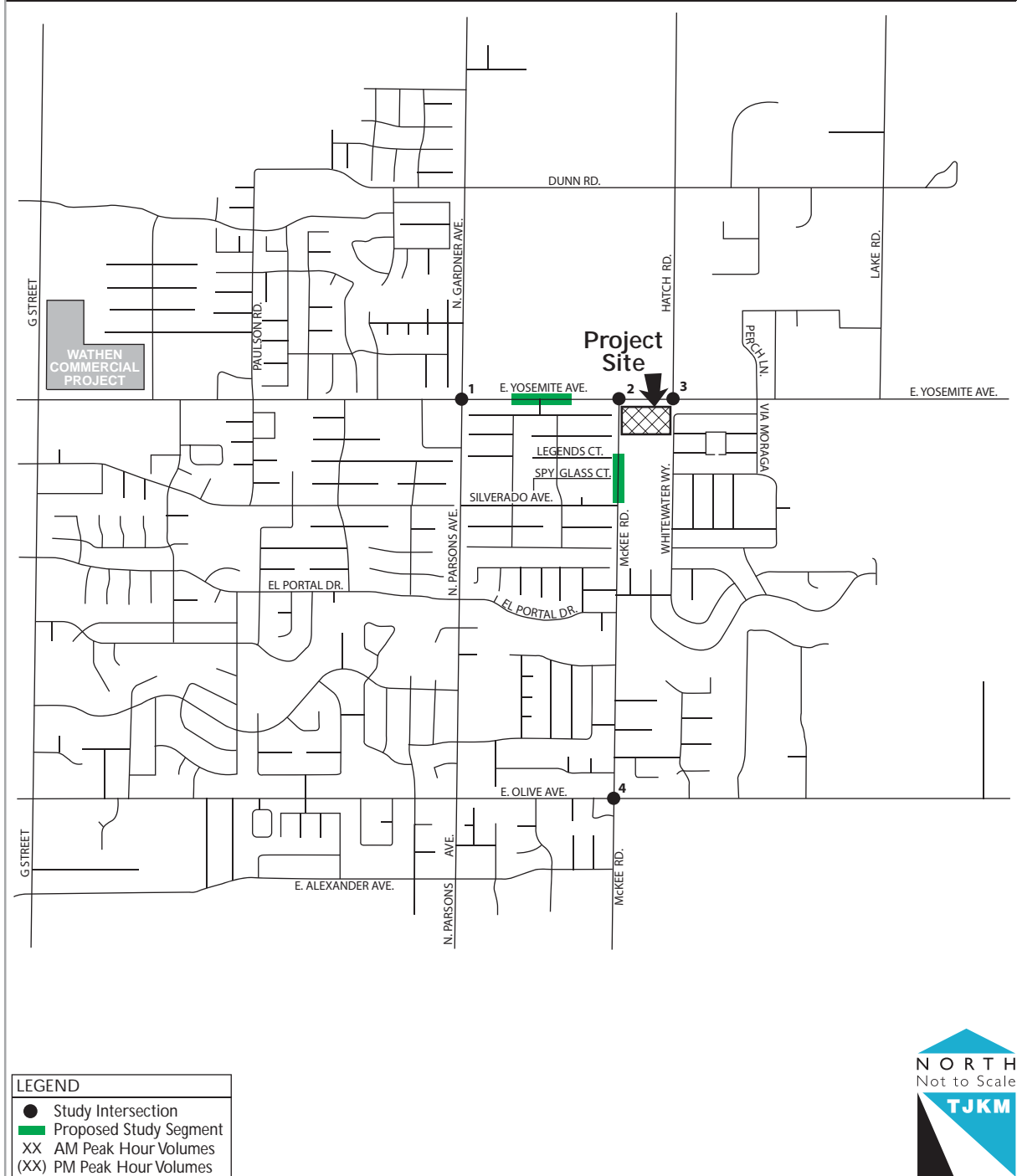


Figure 8



Existing plus Approved Level of Service Analysis

Table 7 and Table 8 below summarize the levels of service at the study intersections and the roadway segments respectively. The study intersection levels of service calculation results for this scenario are contained in Appendix E.

Table 7: Intersection Level of Service Analysis – Existing plus Approved Conditions

| ID | Intersection | Intersection Control | A.M. Peak Hour | | P.M. Peak Hour | |
|----|----------------------------------|----------------------|----------------------------|------------------|----------------|-----|
| | | | Average Delay ² | LOS ¹ | Average Delay | LOS |
| 1 | Yosemite Avenue & Parsons Avenue | All -Way Stop | 53.4 | F | 23.2 | C |
| 2 | Yosemite Avenue & McKee Road | Signal | 17.5 | B | 16.8 | B |
| 3 | Yosemite Avenue & Hatch Road | Side-Street Stop | 9.4 | A | 9.6 | A |
| 4 | Olive Avenue & McKee Road | All -Way Stop | 22.2 | C | 16.2 | C |

Notes: 1. LOS = Level of Service;
2. Average intersection delay expressed in seconds per vehicle for signalized intersections and all way stop controlled intersections. Total control delay for the worst movement is presented for stop controlled intersections.
Bold indicates deficient intersection operations.

Table 8: Roadway Segment Level of Service Analysis - Existing plus Approved Conditions

| ID | Limits | Lanes | 24-hr Volume | LOS |
|-----------------|--|-------|--------------|-----|
| Yosemite Avenue | Between Parsons Avenue and McKee Road | 3 | 8,114 | C |
| McKee Road | Between Yosemite Avenue and Silverado Avenue | 2 | 4,521 | C |

Notes: LOS = Level of Service per the city of Merced Vision 2030 General Plan Transportation and Circulation Element Table 4.3 "Daily Roadway Segment Level of Service Thresholds by Roadway Type"

Traffic Signal Warrants

Based on TJKM's peak hour signal warrant analysis, the intersections of Yosemite Avenue and Parsons Avenue, and McKee Road and Olive Avenue satisfies the signal warrants. However, the intersection of McKee Road and Olive Avenue continues to operate at an acceptable Level of Service C during both peak hours. Therefore, a traffic signal is not recommended at this intersection. Though the intersection of Parsons Avenue and Yosemite Avenue meets the peak hour warrants, it is recommended to investigate a full set of warrants to reach a decision. Peak Hour Signal Warrant sheets are provided in Appendix J.





Existing plus Approved plus Project Level of Service Analysis

Table 9 and Table 10 below summarize the level of service at the study intersections and the roadway segments respectively. LOS worksheets are provided in Appendix F. Figure 9 shows the turning movement volumes for Existing plus Approved plus Project Conditions.

Table 9: Intersection Level of Service Analysis – Existing plus Approved plus Project Conditions

| ID | Intersection | Peak Hour | Existing plus Approved Conditions | | Existing plus Approved plus Project Conditions | | Mitigated Conditions | |
|----|----------------------------------|-----------|-----------------------------------|------------------|--|------------------|----------------------------|------------------|
| | | | Average Delay ² | LOS ¹ | Average Delay ² | LOS ¹ | Average Delay ² | LOS ¹ |
| 1 | Yosemite Avenue & Parsons Avenue | AM | 53.4 | F | 57.7 | F | 18.2 | C |
| | | PM | 23.2 | C | 31.3 | D | 16.2 | C |
| 2 | Yosemite Avenue & McKee Road | AM | 17.5 | B | 17.8 | B | | |
| | | PM | 16.8 | B | 17.8 | B | | |
| 3 | Yosemite Avenue & Hatch Road | AM | 9.4 | A | 9.4 | A | | |
| | | PM | 9.6 | A | 9.7 | A | | |
| 4 | McKee Road & Olive Avenue | AM | 22.2 | C | 22.8 | C | | |
| | | PM | 16.2 | C | 17.1 | C | | |

Notes: 1. LOS = Level of Service;
2. Average intersection delay expressed in second per vehicle for signalized intersections and all way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop controlled intersections.
Bold indicates deficient intersection operations.



Table 10: Roadway Segment Level of Service Analysis - Existing plus Approved plus Project Conditions

| ID | Limits | Lanes | 24-hr Volume | LOS |
|-----------------|--|-------|--------------|-----|
| Yosemite Avenue | Between Parsons Avenue and McKee Road | 3 | 8,975 | C |
| McKee Road | Between Yosemite Avenue and Silverado Avenue | 2 | 4,866 | D |

Notes: LOS = Level of Service per the city of Merced Vision 2030 General Plan Transportation and Circulation Element Table 4.3 "Daily Roadway Segment Level of Service Thresholds by Roadway Type"

Traffic Signal Warrants

Based on TJKM's peak hour signal warrant analysis, the intersections of Yosemite Avenue and Parsons Avenue, and McKee Road and Olive Avenue satisfies the signal warrants. However, the intersection of McKee Road and Olive Avenue continues to operate at an acceptable Level of Service C during both peak hours. Therefore, a traffic signal is not recommended at this intersection. Though the intersection of Parsons Avenue and Yosemite Avenue meets the peak hour warrants, it is recommended to investigate a full set of warrants to reach a decision. Peak Hour Signal Warrant sheets are provided in Appendix J.





Mitigation Measures

In order to improve the level of service at the intersection of Yosemite Avenue and Parsons Avenue, TJKM recommends the same lane modification as in existing plus project scenario.



Existing plus Approved plus Project Conditions Traffic Volumes, Lane Geometry, and Controls



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|---|--|--|--|
| <p>34 (29)
49 (30)
30 (18)
19 (27)
421 (368)
17 (43)
23 (48)
302 (359)
107 (153)
165 (113)
9 (48)
24 (23)</p> | <p>265 (234)
84 (87)
153 (199)
133 (162)
218 (186)
74 (43)</p> | <p>37 (23)
2 (1)
239 (286)
5 (4)
11 (44)
206 (190)</p> | <p>57 (39)
306 (223)
34 (37)
38 (30)
104 (88)
40 (16)
63 (61)
48 (138)
60 (97)
98 (73)
270 (220)
13 (22)</p> |

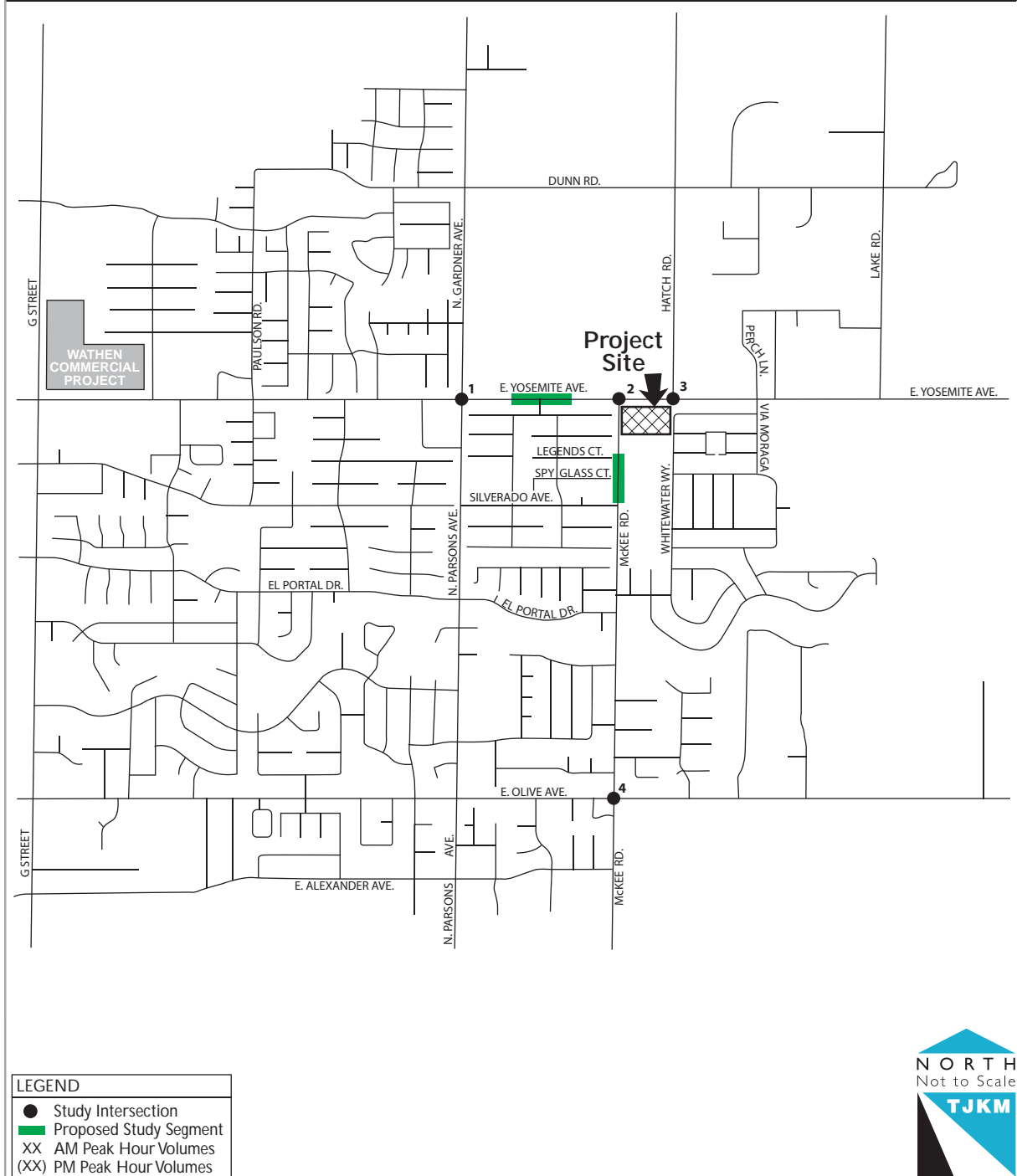


Figure 9



Cumulative Year 2035 No Project Conditions

Cumulative Year 2035 no project traffic volumes were obtained by using MCAG travel demand model along with the increment method between the Base Year 2010 and the Cumulative Year 2035. The model provided a percent growth per year based on the improvements identified in the area. The growth rate was applied to the existing volumes to calculate the peak hour turning movements for Year 2035 No Project Conditions. Figure 10 shows the turning movement volumes. Table 11 and 12 below summarizes the levels of service at the study intersections and roadway segments respectively. See Appendix G for the LOS worksheets and Appendix I for travel demand model runs.

Table 11: Intersection Level of Service Analysis – Cumulative Year 2035 No Project Conditions

| ID | Intersection | Intersection Control | A.M. Peak Hour | | P.M. Peak Hour | |
|----|----------------------------------|----------------------|----------------------------|------------------|----------------|----------|
| | | | Average Delay ² | LOS ¹ | Average Delay | LOS |
| 1 | Yosemite Avenue & Parsons Avenue | All -Way Stop | 99.6 | F | 52.8 | F |
| 2 | Yosemite Avenue & McKee Road | Signal | 19.2 | B | 17.7 | B |
| 3 | Yosemite Avenue & Hatch Road | Side-Street Stop | 9.5 | A | 9.5 | A |
| 4 | Olive Avenue & McKee Road | All -Way Stop | 113.0 | F | 59.0 | F |

Notes: 1. LOS = Level of Service;
2. Average intersection delay expressed in seconds per vehicle for signalized intersections and all way stop controlled intersections. Total control delay for the worst movement is presented for stop-controlled intersections.
Bold indicates deficient intersection operations.

Table 12: Roadway Segment Level of Service Analysis – Cumulative Year 2035 No Project Conditions

| ID | Limits | Lanes | 24-hr Volume | LOS |
|-----------------|--|----------------|--------------|-----|
| Yosemite Avenue | Between Parsons Avenue and McKee Road | 4 ¹ | 10,522 | C |
| McKee Road | Between Yosemite Avenue and Silverado Avenue | 2 | 6,335 | D |

Notes: LOS = Level of Service per the city of Merced Vision 2030 General Plan Transportation and Circulation Element Table 4.3 “Daily Roadway Segment Level of Service Thresholds by Roadway Type”
1. Based on Merced Vision 2030 General Plan, Yosemite Avenue between Parsons Avenue and McKee Road will be upgraded to two lanes in either direction.

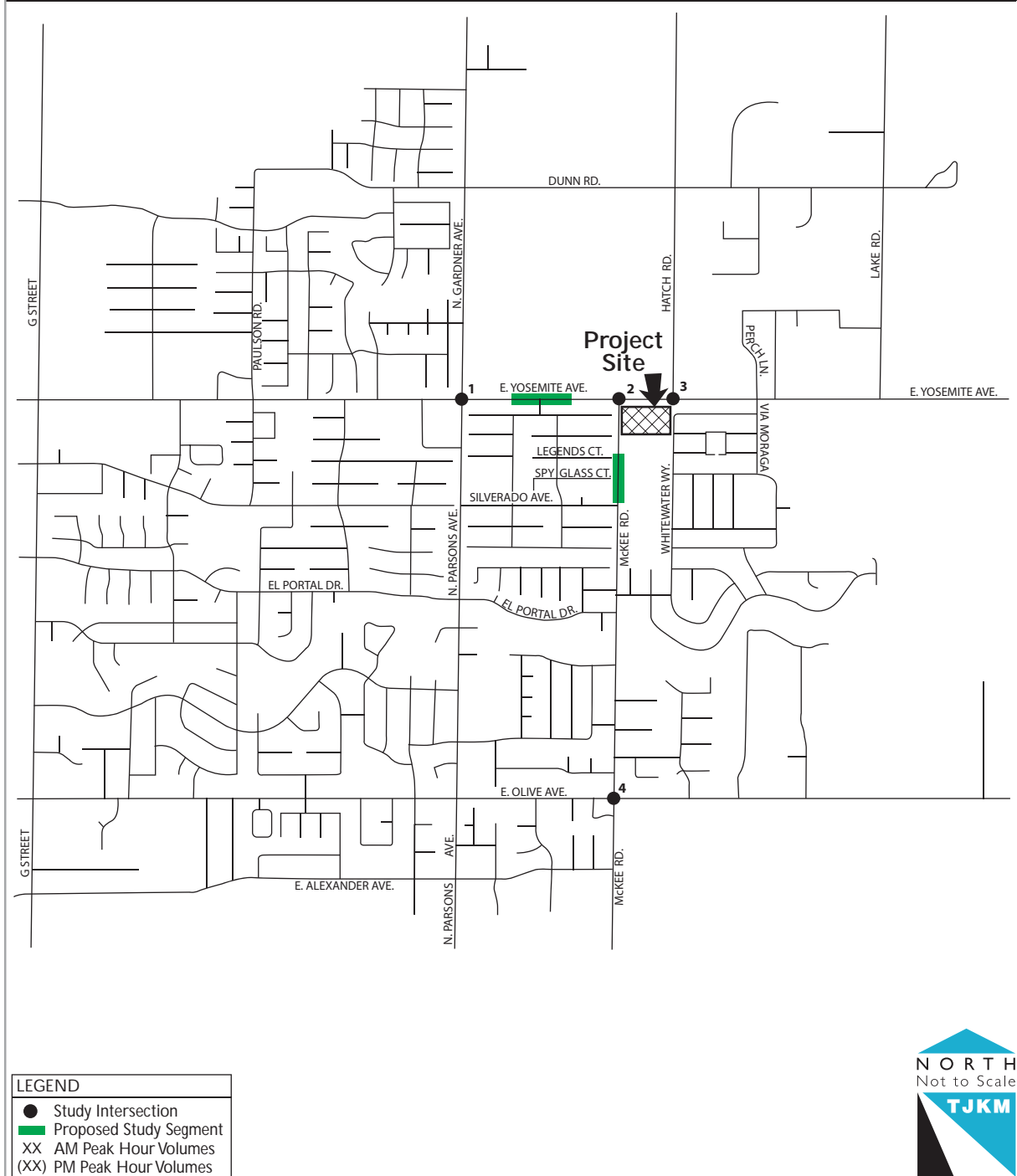
Traffic Signal Warrants

Based on TJKM’s peak hour warrant analysis, the intersections of Yosemite Avenue and Parsons Avenue, and McKee Road and Olive Avenue meets the signal warrants. It is worth noting that MUTCD states “satisfaction of a signal warrant or warrants shall not in itself require the installation of a “traffic signal”; Based on the impact criteria, it is recommended that prior to installation of a traffic signal, the remaining California MUTCD warrants as applicable be conducted.

Year 2035 No Project Conditions Traffic Volumes, Lane Geometry, and Controls



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|--|---|---|--|
| <p>34 (27)
73 (45)
42 (16)
25 (28)
554 (443)
22 (53)
25 (49)
406 (410)
150 (205)
229 (152)
58 (71)
33 (24)</p> | <p>345 (296)
116 (103)
195 (204)
181 (192)
296 (202)
108 (56)</p> | <p>37 (13)
3 (1)
215 (367)
7 (6)
7 (37)
287 (215)</p> | <p>82 (45)
449 (309)
48 (45)
49 (34)
155 (131)
59 (24)
88 (79)
71 (205)
89 (144)
146 (108)
391 (311)
19 (33)</p> |





Cumulative Year 2035 plus Project Conditions

Cumulative Year 2035 Plus project traffic volumes were obtained by adding the project-generated trips No Project volumes to see the impacts of the project in Cumulative Year 2035. Figure 11 shows the turning movement volumes. Table 13 and 14 below summaries the level of service at the study intersections and roadway segments respectively. See Appendix H for the LOS worksheets.

Table 13: Intersection Level of Service Analysis – Cumulative Year 2035 plus Project Conditions

| ID | Intersection | Peak Hour | Cumulative 2035
No Project
Conditions | | Cumulative 2035
Plus Project
Conditions | | Mitigated Conditions | |
|----|----------------------------------|-----------|---|------------------|---|------------------|----------------------------|------------------|
| | | | Average Delay ² | LOS ¹ | Average Delay ² | LOS ¹ | Average Delay ² | LOS ¹ |
| 1 | Yosemite Avenue & Parsons Avenue | AM | 99.6 | F | 104.4 | F | 27.0 | D |
| | | PM | 52.8 | F | 69.3 | F | 24.9 | C |
| 2 | Yosemite Avenue & McKee Road | AM | 19.2 | B | 19.5 | B | | |
| | | PM | 17.7 | B | 19.3 | B | | |
| 3 | Yosemite Avenue & Hatch Road | AM | 9.5 | A | 9.5 | A | | |
| | | PM | 9.5 | A | 9.6 | A | | |
| 4 | McKee Road & Olive Avenue | AM | 113.0 | F | 115.2 | F | 22.7 | C |
| | | PM | 59.0 | F | 65.9 | F | 20.4 | C |

Notes: 1. LOS = Level of Service;
2. Average intersection delay expressed in second per vehicle for signalized intersections and all way stop controlled intersections. Total control delay for the worst movement is presented for side-street stop controlled intersections.
Bold indicates deficient intersection operations.

Table 14: Segment Level of Service Analysis - Cumulative Year 2035 plus Project Conditions

| ID | Limits | Lanes | 24-hr Volume | LOS |
|-----------------|--|----------------|--------------|-----|
| Yosemite Avenue | Between Parsons Avenue and McKee Road | 4 ¹ | 11,382 | C |
| McKee Road | Between Yosemite Avenue and Silverado Avenue | 2 | 6,679 | D |

Notes: LOS = Level of Service per the city of Merced Vision 2030 General Plan Transportation and Circulation Element Table 4.3 "Daily Roadway Segment Level of Service Thresholds by Roadway Type"
1. Based on Merced Vision 2030 General Plan, Yosemite Avenue between Parsons Avenue and McKee Road will be upgraded to two lanes in either direction.



Traffic Signal Warrants

Based on TJKM's peak hour warrant analysis, the intersections of Yosemite Avenue and Parsons Avenue, and McKee Road and Olive Avenue are recommended to be signalized under Cumulative Year 2035 plus Project traffic conditions. It is worth noting that MUTCD states "satisfaction of a signal warrant or warrants shall not in itself require the installation of a "traffic signal"; Based on the impact criteria, it is recommended that prior to installation of a traffic signal, the remaining California MUTCD warrants as applicable be conducted.



Mitigation Measures

In order to improve the level of service at the deficient intersections, TJKM recommends the following mitigation measures:



Yosemite Avenue and Parsons Avenue

Modify the westbound approach to accommodate an additional 100 ft. shared thru/right turn lane. In addition, re-stripe the existing shared left/thru/right lane to shared left/thru lane.



Olive Avenue and McKee Road

- Southbound Approach
 - Remove the adjacent on-street parking for 100 ft. on the southbound approach.
 - Re-stripe the approach as shared left/thru lane and shared right/thru lane.
 - Remove the adjacent on-street parking for 100 ft. on the southbound receiving lane and stripe it as a lane drop.
- Northbound Approach
 - Remove the adjacent on-street parking for 100 ft. on the northbound approach.
 - Re-stripe the approach as shared left/thru lane and shared right/thru lane.
 - Remove the adjacent on-street parking for 100 ft. on the northbound receiving lane and stripe it as a lane drop. Although this might not be feasible due to residential driveways.



If the proposed lane modification changes are not feasible, it is recommended to install a traffic signal to improve the level of service operations to acceptable levels.



Year 2035 plus Project Conditions Traffic Volumes, Lane Geometry, and Controls



| Intersection #1
N. Parsons Ave./E. Yosemite Ave. | Intersection #2
Hatch Rd./E. Yosemite Ave. | Intersection #3
Hatch Rd./E. Yosemite Ave. | Intersection #4
McKee Rd./E. Olive Ave. |
|---|---|---|--|
| | | | |

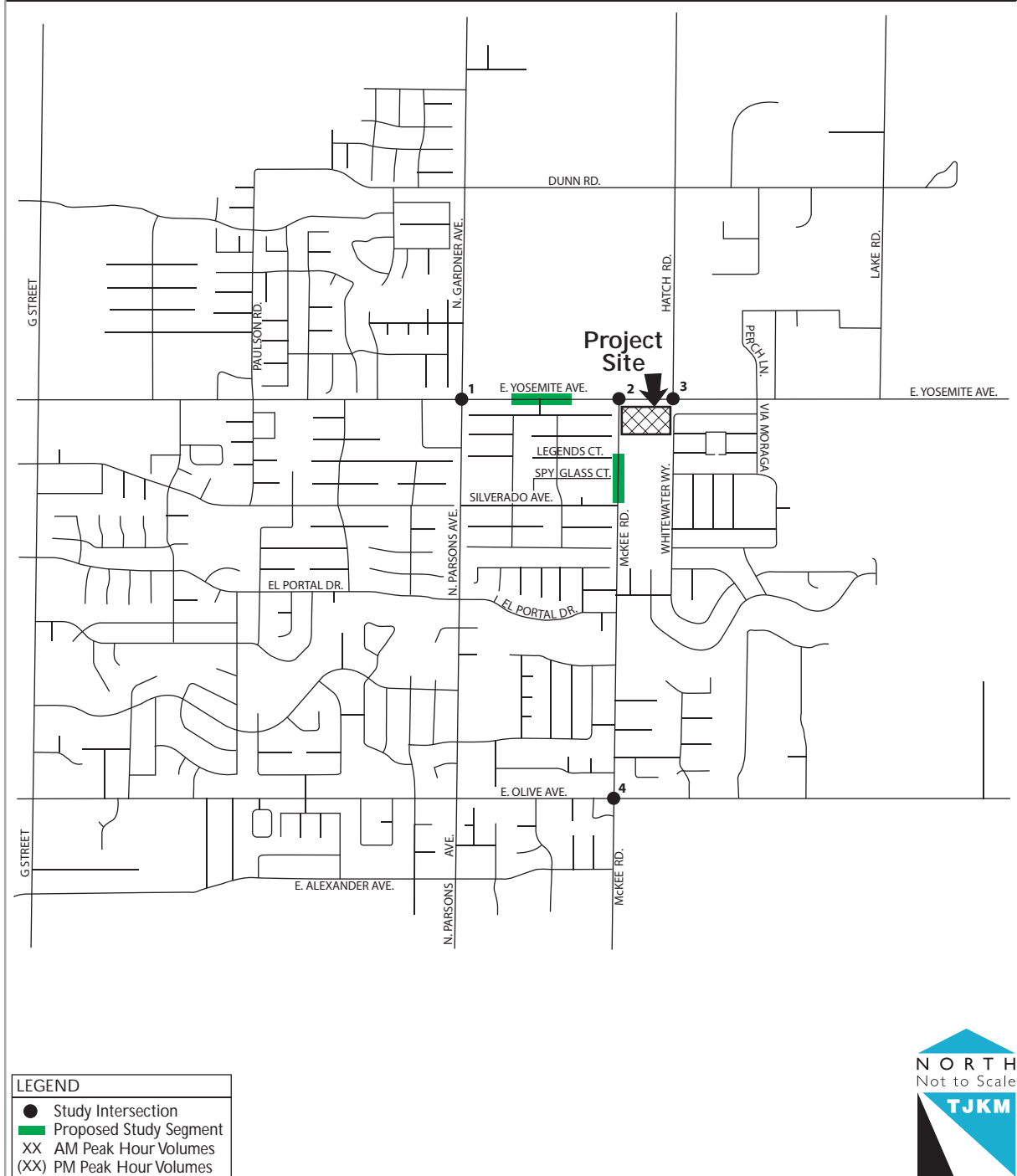


Figure 11



Queuing Analysis

Table 15 and 16 provides a queue length summary for left and right turn lanes at the study intersections under all study scenarios. Queuing analysis was completed using Synchro output information. Synchro provides both 50th and 95th percentile maximum queue lengths in feet. According to the Synchro manual, “the 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile volumes.” The queues shown on Table 15 and 16 are the 95th percentile queue lengths for the respective lane movements.

Table 15: Queuing Analysis – Existing and Existing plus Approved Conditions

| No | Intersection | Existing Queue Storage Length (FT) | | Peak Hour | Existing | Existing plus Project | Existing plus Approved | Existing plus Approved and Project |
|----|----------------------------------|------------------------------------|-----|-----------|----------|-----------------------|------------------------|------------------------------------|
| 1 | Yosemite Avenue / Parsons Avenue | SBR | 190 | AM | 40 | 40 | 40 | 60 |
| | | | | PM | 40 | 40 | 60 | 60 |
| 2 | Yosemite Avenue / McKee Road | NBR | 120 | AM | 60 | 80 | 100 | 120 |
| | | | | PM | 40 | 60 | 40 | 60 |
| | | WBL | 160 | AM | 100 | 120 | 100 | 120 |
| | | | | PM | 80 | 120 | 100 | 120 |
| 3 | Yosemite Avenue / Hatch Road | EBL | 150 | AM | 20 | 60 | 20 | 40 |
| | | | | PM | 20 | 40 | 40 | 40 |
| 4 | Olive Avenue / McKee Road | EBL | 60 | AM | 40 | 60 | 60 | 60 |
| | | | | PM | 40 | 60 | 60 | 60 |

Table 16: Queuing Analysis – Cumulative Conditions

| No. | Intersection Name | Existing Queue Storage Length (FT) | | Peak Hour | Cumulative Year 2030 No Project | Cumulative Year 2030 Plus Project |
|-----|----------------------------------|------------------------------------|-----|-----------|---------------------------------|-----------------------------------|
| 1 | Yosemite Avenue / Parsons Avenue | SBR | 190 | AM | 40 | 40 |
| | | | | PM | 60 | 60 |
| 2 | Yosemite Avenue / McKee Road | NBR | 120 | AM | 120 | 120 |
| | | | | PM | 40 | 60 |
| | | WBL | 160 | AM | 120 | 140 |
| | | | | PM | 120 | 120 |
| 3 | Yosemite Avenue / Hatch Road | EBL | 150 | AM | 20 | 40 |
| | | | | PM | 40 | 40 |
| 4 | Olive Avenue / McKee Road | EBL | 60 | AM | 60 | 60 |
| | | | | PM | 100 | 100 |



Based on the Synchro output files it is recommended that the storage capacity for the following be considered for the City's Year 2030 circulation network:

1. Intersection of Olive Avenue / McKee Road

It is recommended to increase the eastbound left turn lane storage capacity from 60 to 100 feet. This would require re-striping the eastbound left turn approach and reduction of the TWLT lane to the west of this intersection.



Weekday ADT Vs Sunday ADT

The weekday Average Daily Traffic (ADT) were compared with the Sunday ADT to determine whether an LOS analysis is required for the Sunday peak hour traffic volumes. As a result, it was determined that the Sunday ADT's were lower than the weekday ADT during a.m. peak hour and p.m. peak hour whereas Sunday ADT's were about the same during the midday peak. Therefore, in an effort to analyze the worst case scenario, only the weekday peak hour traffic volumes were analyzed. Table 17 summarizes the weekday ADT and Sunday ADT.



Table 17: Summary of ADT – Weekday vs Sunday

| Roadway Segment | Time of Day | ADT | | Percent Difference |
|---|---------------------------------|---------|---------|--------------------|
| | | Weekend | Weekday | |
| Yosemite Avenue Between Parsons Avenue & McKee Road | A.M. - (7:00 a.m. - 9:00 a.m.) | 242 | 1088 | 78% |
| | M.D. - (11:00 a.m. - 1:00 p.m.) | 880 | 808 | -9% |
| | P.M. - (4:00 p.m. - 6:00 p.m.) | 605 | 1227 | 51% |
| McKee Road North of Silverado Avenue | A.M. - (7:00 a.m. - 9:00 a.m.) | 152 | 690 | 78% |
| | M.D. - (11:00 a.m. - 1:00 p.m.) | 470 | 477 | 1% |
| | P.M. - (4:00 p.m. - 6:00 p.m.) | 359 | 733 | 51% |



Project Site Circulation and Access

TJKM reviewed the project site plan to evaluate on-site circulation and access to the project. The proposed project's access will be via one full access driveway on McKee Road, one right-in and right-out driveway on Yosemite Avenue and one full access driveway on Whitewater Way for the single-family home subdivision to the east. A separate entrance only driveway is provided for service trucks on Yosemite Avenue at the northeast corner of the project site and an exit only driveway is provided onto McKee Road at the southwest corner of project site. The project also provides enough parking spaces based on size of development, this will result in adequate on-site circulation with minor to no delays to adjacent roadways.





Conclusions and Recommendations

TJKM has reached the following conclusions for the proposed commercial development at the southeast corner of Yosemite Avenue and McKee Road:



Existing Conditions

Under Existing conditions, the study intersections are operating at or better than the City of Merced's LOS threshold with the exception of the intersection of Yosemite Avenue and Parsons Avenue, which currently operates at LOS E.



Existing plus Project Conditions

Under Existing plus Project conditions, the study intersections are expected to operate at or better than the City of Merced's LOS threshold with the exception of the intersection of Yosemite Avenue and Parsons Avenue, which continues to operate at LOS E.

In order to improve the intersections operations, it is recommended to modify the westbound approach to accommodate an additional 100 ft. shared thru/right turn lane. In addition, re-stripe the existing shared left/thru/right lane to shared left/thru lane.



Existing plus Approved Conditions

Under Existing plus Approved conditions, the study intersections are expected to operate at or better than the City of Merced's LOS threshold with the exception of the intersection of Yosemite Avenue and Parsons Avenue, which is expected to operate at LOS F.



Existing plus Approved plus Project Conditions

Under Existing plus Approved plus Project conditions, the study intersections are expected to continue to operate at or better than the City of Merced's LOS threshold with the exception of the intersection of Yosemite Avenue and Parsons Avenue, which is expected to operate at LOS F.

In order to improve the intersections operations, same mitigation measures are recommended as in Existing plus project conditions.



Cumulative Year 2035 No Project Conditions

Under Cumulative Year 2035 No Project conditions, the study intersections are projected to operate at or better than the City of Merced's LOS threshold with the exception of the following intersections:

- Yosemite Avenue and Parsons Avenue, which is projected to operate at LOS F.
- Olive Avenue and McKee Road, which is projected to operate at LOS F.





Cumulative Year 2035 plus Project Conditions

Under Cumulative Year 2035 plus Project conditions, the study intersections are expected to continue to operate at or better than the City of Merced's LOS threshold with the exception of the following intersections:

- Yosemite Avenue and Parsons Avenue, which is projected to operate at LOS F.
- Olive Avenue and McKee Road, which is projected to operate at LOS F.



In order to improve the intersections operations, same mitigation measures are recommended as in Existing plus project conditions.



Yosemite Avenue and Parsons Avenue

The same mitigation measures are recommended as in Existing plus Project Conditions.

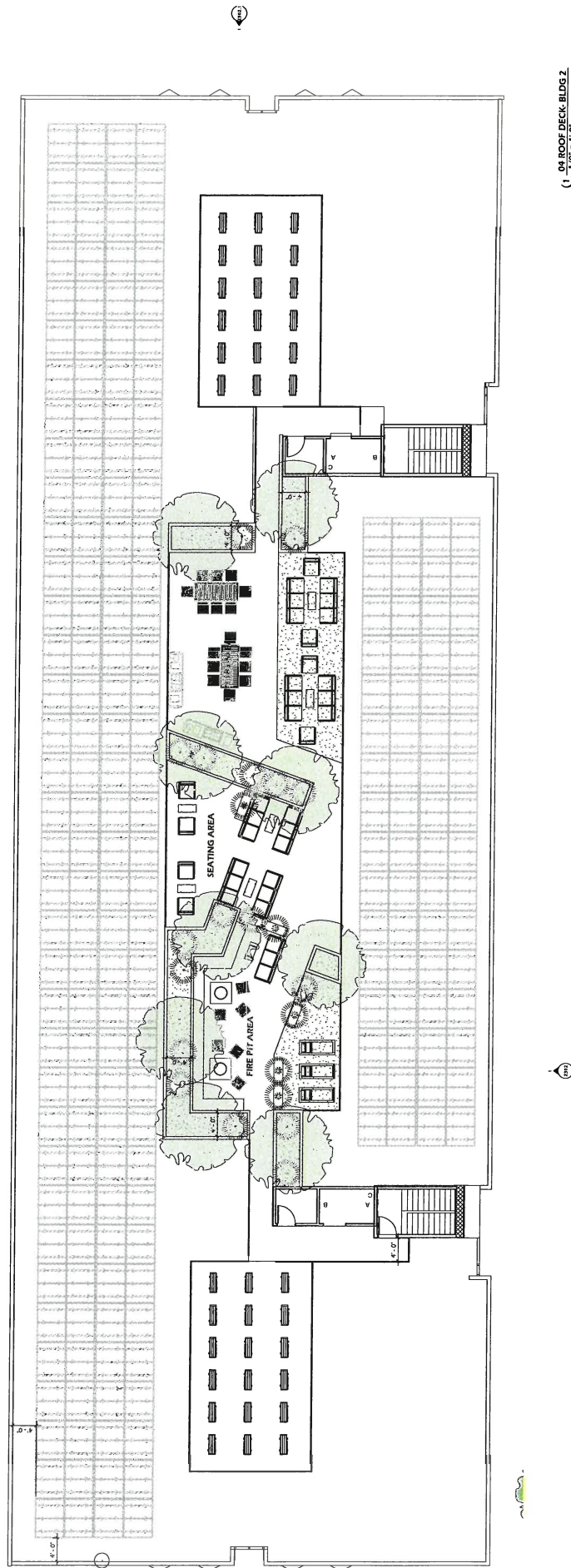
Olive Avenue and McKee Road

- Southbound Approach
 - Remove the adjacent on-street parking for 100 ft. on the southbound approach.
 - Re-stripe the approach as shared left/thru lane and shared right/thru lane.
 - Remove the adjacent on-street parking for 100 ft. on the southbound receiving lane and stripe it as a lane drop.
- Northbound Approach
 - Remove the adjacent on-street parking for 100 ft. on the northbound approach.
 - Re-stripe the approach as shared left/thru lane and shared right/thru lane.
 - Remove the adjacent on-street parking for 100 ft. on the northbound receiving lane and stripe it as a lane drop. Although this might not be feasible due to residential driveways.



If the proposed lane modification changes are not feasible, it is recommended to install a traffic signal to improve the level of service operations to acceptable levels.





04 ROOF DECK BLDG 2
1/8" = 1'-0"

ATTACHMENT 11

ferrierArchitectureStudio

MER

MERCED HOLDINGS LP

CONDITIONAL USE
PERMIT

AUGUST 8, 2019

ROOFTOP DECK

2102.4
1" = 1'-0"

This is an apple to apple comparison based on Current Merced Parkign Code, without any reductions or special considerations

| Scenario 1
36 DU/Acre
3 Bedrooms per DU
2 Beds Per Bedroom | | Scenario 2
36 DU/Acre
3 Bedrooms per DU
1 Beds Per Bedroom | | Scenario 3
36 DU/ Acre
2.5 Efficiency units(EU)= 1-3bedroom DU
single occupancy | | Proposed Development
36 DU/ Acre
2.5 Efficiency units(EU)= 1-3bedroom DU
single occupancy
Only 435 Efficiency units | |
|---|--------------------|---|-------------------|--|-------------------|---|-------------------|
| Du/Acre | 36 | Du/Acre | 36 | Du/Acre | 36 | Du/Acre | 36 |
| Bedroom/DU | 3 | Bedroom/DU | 3 | EDU @ 2.5 Beds per DU | 2.5 | EDU @ 2.5 EU per DU | 2.5 |
| Property size (acres) | 5.94 | Property size (acres) | 5.94 | Property size (acres) | 5.94 | Property size (acres) | 5.94 |
| Total DU | 214 | Total DU | 214 | Total Dwelling unit equivalents | 214 | Total Dwelling unit equivalents | 214 |
| Beds per Bedroom | 2 | Beds per Bedroom | 1 | Beds per Bedroom | 1 | Beds per Bedroom | 1 |
| <u>Total Beds/Residents on Site</u> | <u>1283</u> | <u>Total Beds on Site</u> | <u>642</u> | <u>Total Beds on Site</u> | <u>535</u> | <u>Total Beds on Site</u> | <u>428</u> |
| Parking per DU (first 30 units) | 1.75 | Parking per DU (first 30 units) | 1.75 | Parking per DU (first 30 units) | 1.75 | Parking per DU (first 30 units) | 1.75 |
| Additional Bedrooms | 0.5 | Additional Bedrooms | 0.5 | Additional Bedrooms | 0.5 | Additional Bedrooms | 0.5 |
| Total Parking spaces (for 3 bed) | 2.25 | Total Parking spaces (for 3 bed) | 2.25 | Total Parking spaces (for 3 bed) | 2.25 | Total Parking spaces (for 3 bed) | 2.25 |
| Parking per DU (31+ units) | 1.5 | Parking per DU (31+ units) | 1.5 | Parking per DU (31+ units) | 1.5 | Parking per DU (31+ units) | 1.5 |
| Additional Bedrooms | 0.5 | Additional Bedrooms | 0.5 | Additional Bedrooms | 0.5 | Additional Bedrooms | 0.5 |
| Total Parking spaces (for 3 bed) | 2 | Total Parking spaces (for 3 bed) | 2 | Total Parking spaces (for 3 bed) | 2 | Total Parking spaces (for 3 bed) | 2 |
| Total Parking required | 435 | Total Parking required | 435 | Total Parking required | 435 | Total Parking required | 348 |
| Parking Per Bed/Resident | 0.339179 | Parking Per Bed/Resident | 0.678358 | Parking Per Bed/Resident | 0.813692 | Parking Per Bed/Resident | 0.813692 |

[illegible]

699



19TH ST

370'

18TH ST

111'

408'

MST

153'

NST

MAIN ST

ATTACHMENT 14





1620 N. CARPENTER ROAD
BUILDING B
MODESTO, CALIFORNIA 95351

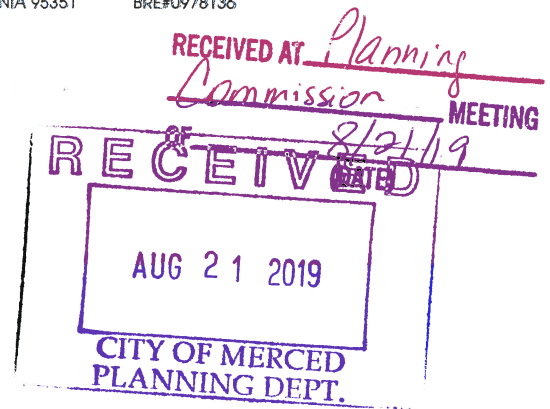
PHONE: 209.526.8242
BRIGHT-HOMES.COM
BRE#0978136

August 21, 2019

City of Merced Planning Commission
C/O Ms. Julie Nelson
678 W. 18th Street
Merced, CA 95340

Subject: Conditional Use Permit # 1231

Dear Ms. Nelson,



We are writing to express our disapproval to the application for Conditional Use Permit #1231 scheduled for Public Hearing as Item 4.2 of the Planning Commissions Agenda for the meeting on August 21, 2019.

As you know Bright Development is currently building in the area at the Summer Creek Phase 1 Subdivision and is preparing to start land development activities on Phase 2 of the same project.

Bright Development was looking forward to the development of a retail commercial project on the southeast corner of Yosemite Avenue and McKee Road. We feel that a Retail Commercial Center at that location will be convenient and beneficial to the many existing and future single-family residents of the area. We support the General Plan Amendment and Rezone Application to change the property designation to Neighborhood Commercial.

Bright Development does not support the proposal to add 428 Efficiency Dwelling Units to the site via Conditional Use Permit #1232 for the following reasons:

- The density of the proposed project at 72 Units Per Acre is out of scale with the single-family residences in the area.
- The retail portion of the project will no longer be Neighborhood Commercial.
- Projects of this nature should be located adjacent or within the boundaries of the institutions they serve, where prospective residents can easily take advantage of school amenities.
- What will happen to this facility when student housing facilities planned within the University Community are constructed?

The project does not seem well thought out and does not look like it will be beneficial for prospective tenants, surrounding residents, or the City of Merced. For these reasons we strongly encourage the Planning Commission to deny Conditional Use Permit #1232.

Sincerely,

David W. Butz
Bright Development

CITY OF MERCED
Planning Commission

Resolution #4025

WHEREAS, the Merced City Planning Commission at its regular meeting of August 21, 2019, held a public hearing and considered **General Plan Amendment #19-02 and Zone Change #426**, initiated by Merced Holdings, LP, property owner. The General Plan Amendment and Zone Change application is a request to change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN) and change the Zoning designation from R-1-6 to Neighborhood Commercial (C-N) for approximately 22,670 square feet of land located approximately 360 feet south of Yosemite Avenue, on the east side of McKee Road; also known as Assessor's Parcel Number 008-310-038; and,

WHEREAS, the Merced City Planning Commission concurs with Finding K of Staff Report #19-22; and, the following additional finding:

L. To promote orderly development in a community, a single parcel should usually have only a single consistent General Plan land use designation and a single zoning designation. Therefore, the General Plan designation and zoning for the 22,670-square-foot strip of land along the southern property line of this parcel should be changed to match the Neighborhood Commercial (CN) land use designation and the Neighborhood Commercial (C-N) zoning designation as the rest of the parcel.

NOW THEREFORE, after reviewing the City's Initial Study and Draft Environmental Determination, and fully discussing all the issues, the Merced City Planning Commission does resolve to hereby recommend to City Council adoption of a Mitigated Negative Declaration regarding Environmental Review #19-18, and approval of General Plan Amendment #19-02 and Zone Change #426, subject to the Conditions set forth in Exhibit A attached hereto and incorporated herein by this reference.

Upon motion by Commissioner HARISS, seconded by Commissioner PADILLA, and carried by the following vote:

AYES: Commissioners Camper, Dylina, Harris, Padilla, and Chairperson Drexel

NOES: None

ABSENT: Commissioner Rashe


ABSTAIN: None (one vacancy)

PLANNING COMMISSION RESOLUTION # 4025

Page 2

August 21, 2019

Adopted this 21st day of August 2019


Chairperson, Planning Commission of
the City of Merced, California

ATTEST:


Secretary

Attachment:

Exhibit A – Conditions of Approval

Exhibit B – Mitigation Monitoring Program

n:\shared\planning\PC Resolutions\GPA #19-02

Conditions of Approval
Planning Commission Resolution #4025
General Plan Amendment #19-02
Zone Change #426

1. The proposed General Plan Amendment and Zone Change shall be as shown on the Proposed Land Use Map at Attachment B of Staff Report #19-22.
2. The proposed project shall comply with all standard Municipal Code and Subdivision Map Act requirements as applied by the City Engineering Department.
3. The Project shall comply with the applicable conditions set forth in Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 previously approved for this site.
4. All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.
5. Approval of the General Plan Amendment and Zone Change is subject to the applicant's entering into a written (developer) agreement that they agree to all the conditions and shall pay all City and school district fees, taxes, and/or assessments, in effect on the date of any subsequent subdivision and/or permit approval, any increase in those fees, taxes, or assessments, and any new fees, taxes, or assessments, which are in effect at the time the building permits are issued, which may include public facilities impact fees, a regional traffic impact fee, Mello-Roos taxes—whether for infrastructure, services, or any other activity or project authorized by the Mello-Roos law, etc. Payment shall be made for each phase at the time of building permit issuance for such phase unless an Ordinance or other requirement of the City requires payment of such fees, taxes, and or assessments at an earlier or subsequent time. Said agreement to be approved by the City Council prior to the adoption of the ordinance, resolution, or minute action.
6. The developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory

EXHIBIT A
of Planning Commission Resolution #4025

Page 1

agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against any governmental entity in which developer/applicant's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the developer/applicant of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the developer/applicant shall not thereafter be responsible to indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.

7. The developer/applicant shall construct and operate the project in strict compliance with the approvals granted herein, City standards, laws, and ordinances, and in compliance with all State and Federal laws, regulations, and standards. In the event of a conflict between City laws and standards and a State or Federal law, regulation, or standard, the stricter or higher standard shall control.
8. Community Facilities District (CFD) formation is required for annual operating costs for police and fire services as well as storm drainage, public landscaping, street trees, streetlights, parks and open space. CFD procedures shall be initiated before final map approval or issuance of a building permit, whichever comes first. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received.
9. The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-18 (Exhibit B of Planning Commission Resolution #J of Staff Report #19-22) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-18, Attachment I of Staff Report #19-22)

n:shared:planning:PC Resolutions:GPA#19-02 ZC #426 Exhibit A

ENVIRONMENTAL REVIEW #19-18

Mitigation Monitoring Program

MITIGATION MONITORING CONTENTS

This mitigation monitoring program includes a brief discussion of the legal basis and purpose of the mitigation monitoring program, a key to understanding the monitoring matrix, a discussion of noncompliance complaints, and the mitigation monitoring matrix itself.

LEGAL BASIS AND PURPOSE OF THE MITIGATION MONITORING PROGRAM

Public Resource Code (PRC) 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report or mitigated negative declaration. This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The City of Merced has adopted its own “Mitigation Monitoring and Reporting Program” (MMC 19.28). The City’s program was developed in accordance with the advisory publication, *Tracking CEQA Mitigation Measures*, from the Governor’s Office of Planning and Research.

As required by MMC 19.28.050, the following findings are made:

- 1) The requirements of the adopted mitigation monitoring program for the General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231 shall run with the real property. Successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program.
- 2) Prior to any lease, sale, transfer, or conveyance of any portion of the subject real property, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made.

MITIGATION MONITORING PROCEDURES

In most cases, mitigation measures can be monitored through the City’s construction plan approval/plan check process. When the approved project plans and specifications, with mitigation measures, are submitted to the City Development Services Department, a copy of the monitoring checklist will be attached to the submittal. The Mitigation Monitoring Checklist will be filled out upon project approval with mitigation measures required. As project plans and specifications are checked, compliance with each mitigation measure can be reviewed.

In instances where mitigation requires on-going monitoring, the Mitigation Monitoring Checklist will be used until monitoring is no longer necessary. The Development Services Department will be required to file periodic reports on how the implementation of various mitigation measures is progressing or is being maintained. Department staff may be required to conduct periodic inspections to assure compliance. In some instances, outside agencies and/or consultants may be required to conduct necessary periodic inspections as part of the mitigation monitoring program. Fees may be imposed per MMC 19.28.070 for the cost of implementing the monitoring program.

GENERAL PLAN MITIGATION MEASURES

As a second tier environmental document, Initial Study #19-18 incorporates some mitigation measures adopted as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (SCH# 2008071069), as mitigation for potential impacts of the Project.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the project. The complaint shall be directed to the Director of Development Services in written form providing specific information on the asserted violation. The Director of Development Services shall cause an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the Director of Development Services shall cause appropriate actions to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue. Merced Municipal Code (MMC) Sections 19.28.080 and 19.28.090 outline the criminal penalties and civil and administrative remedies which may be incurred in the event of noncompliance. MMC 19.28.100 spells out the appeals procedures.

MONITORING MATRIX

The following pages provide a series of tables identifying the mitigation measures proposed specifically for General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231. The columns within the tables are defined as follows:

| | |
|--|---|
| Mitigation Measure: | Describes the Mitigation Measure (referenced by number). |
| Timing: | Identifies at what point in time or phase of the project that the mitigation measure will be completed. |
| Agency/Department Consultation: | This column references any public agency or City department with which coordination is required to satisfy the identified mitigation measure. |
| Verification: | These columns will be initialed and dated by the individual designated to verify adherence to the project specific mitigation. |

General Plan Amendment #19-02/Zone Change #426/Conditional Use Permit #1231
Mitigation Monitoring Checklist

| | |
|---------------------------|------------------|
| Project Name: | File Number: |
| Approval Date: | Project Location |
| Brief Project Description | |

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring Requirements (MMC 19.28) with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

| 5) Cultural Resources | | | | |
|-----------------------|--------|---|---------------|-----------------------------|
| <i>Impact</i> | | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> |
| | CUL-1) | <p>If unknown pre-contact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations.</p> <p>Cultural resources materials may include pre-contact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations shall be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.</p> <p>The applicant shall inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:</p> | | |
| <i>a</i> | | | | |

(continued on next page)

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|---|------------------|-----------------------------|--|
| a | <p>“The subsurface of the construction site is sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells.”</p> <p>The City shall verify that the language has been included in the grading plans prior to issuance of a grading permit or other permitted project action that includes ground-disturbing activities on the project site.</p> | Building Permits | Planning Department | |
| b | CUL-2) Implementation of Mitigation Measure CUL-1. | Building Permits | Planning Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|---|------------------|-----------------------------|--|
| c | CUL-3) If human remains are identified during construction and cannot be preserved in place, the applicant shall fund: 1) the removal and documentation of the human remains from the project corridor by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, 2) the scientific analysis of the remains by a qualified archaeologist, should such analysis be permitted by the Native American Most Likely Descendant, and 3) the reburial of the remains, as appropriate. All excavation, analysis, and reburial of Native American human remains shall be done in consultation with the Native American Most Likely Descendant, as identified by the California Native American Heritage Commission. | Building Permits | Planning Department | |
| 6) Energy | | | | |
| a | ENE-1) The applicant shall comply with all applicable California Energy Code, AB 341, and San Joaquin Valley Air Pollution Control District rules and regulations regulating energy efficiency and waste. | Building Permits | Building Department | |
| b | ENE-2) Implementation of Mitigation Measure ENE-1. | Building Permits | Building Department | |

| 7) Geology and Soils | | | | |
|---------------------------------------|--|-------------------------------|-----------------------------|--|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| b | GEO-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit. | Building/Encroachment Permits | Engineering Department | |
| | GEO-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02. | Building/Encroachment Permits | Engineering Department | |
| 8) Hydrology and Water Quality | | | | |
| a | HYDRO-1) To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities. | Building/Encroachment Permits | Engineering Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|--|--------------------------------|-----------------------------|--|
| a | HYDRO-2 If any storm drainage from the site is to drain into MID facilities, the developer shall first enter into a "Storm Drainage Agreement" with MID and pay all applicable fees. | Building/ Encroachment Permits | Engineering Department | |
| a | HYDRO-3) To reduce the potential for degradation of surface water quality during project operation, a SWPPP shall be prepared for the proposed project. The SWPPP shall describe specific programs to minimize stormwater pollution resulting from the proposed project. Specifically, the SWPPP shall identify and describe source control measures, treatment controls, and BMP maintenance requirements to ensure that the project complies with post-construction stormwater management requirements of the RWQCB. | Building/ Encroachment Permits | Engineering Department | |
| c | HYDRO-4 Prior to issuance of a building permit or as required by the City Engineer, the developer shall demonstrate to the City that storm drainage facilities are adequate to meet the Project demands and that improvements are consistent with the City Standards and the City's Storm Drain Master Plan. | Building/ Encroachment Permits | Engineering Department | |

| 13) Noise | | | | |
|------------|---|-----------------|----------------------|---------------------------------------|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| NOI-1) | <p>To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:</p> <ul style="list-style-type: none"> • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction disturbance area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited). • The construction contractor shall locate, to the maximum extent practical, on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. | Building Permit | Building Department | |
| a | (continued on next page) | | | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|---------------------------------------|---|-----------------|---------------------------------|--|
| | <ul style="list-style-type: none"> The construction contractor shall limit all noise producing construction activities, including deliveries and warming up of equipment, to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No such work shall be permitted on Sundays or federal holidays without prior approval from the City. | Building Permit | Planning Department | |
| 17) Transportation and Traffic | | | | |
| a | <p>TRA-01 The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)</p> <p>-or-</p> <p>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.</p> | Building Permit | Planning/Engineering Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|--|-----------------|---------------------------------|--|
| TRA-02 | <p>The following modifications to the intersection of Olive Avenue and McKee Road shall be made:</p> <p><u>Southbound Approach:</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the southbound approach. • Re-stripe the approach as shared left/thru lane and share right/thru lane. • Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop. <p><u>Northbound Approach</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the north bound approach. • Re-stripe the approach as shared left/thru lane and shared right/thru lane. • Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area. | Building Permit | Planning/Engineering Department | |
| b | <p>TRA-03 The developer shall work with the Transit Joint Powers Authority of Merced County (The Bus) to locate a bus stop within ½-mile of the project site.</p> | Building Permit | Planning/Engineering Department | |

CITY OF MERCED
Planning Commission

Resolution #4026

WHEREAS, the Merced City Planning Commission at its regular meeting of August 21, 2019, held a public hearing and considered **Conditional Use Permit #1231**, initiated by Merced Holdings, LP, property owner. is a request to allow the construction of 428 Efficiency Dwelling Units and 18,000 square feet of retail on 5.94 acres of land with a General Plan designation of Neighborhood Commercial (CN) and Zoning designation of Neighborhood Commercial (C-N) generally located at the southeast corner of Yosemite Avenue and McKee Road; also known as Assessor's Parcel Number (APN) 008-310-038; and,

WHEREAS, the Merced City Planning Commission concurs with the following Finding:

M. After conducting a public hearing, considering all the public testimony, and the information in Staff Report #19-22, the Planning Commission voted to deny Conditional Use Permit #1231 for the following reasons: 1) traffic in the vicinity of the project is already problematic with high traffic volumes, constrained rights-of-way that make turning movements difficult, and congestion at various times of the day, so the traffic study from the previous commercial project approved on the site in 2015 should be updated to address the traffic impacts and possible mitigation for the current mixed-use project; 2) the sewer line in Yosemite Avenue is constricted and would require an alternative means of discharging wastewater from the site during peak flow times through the use of an on-site wastewater storage system, which could cause impacts on the existing wastewater infrastructure in the area; 3) the people/acre density and parking calculations that show compliance with City plans and codes rely on the requirement that the efficiency units be limited to one occupant, raising fair housing concerns in regards to married people and others, which might make this requirement unenforceable.

NOW THEREFORE, after reviewing the City's Initial Study and Draft Environmental Determination, and fully discussing all the issues, the Merced City Planning Commission does resolve to adopt a Mitigated Negative Declaration regarding Environmental Review #19-18, and to deny Conditional Use Permit #1231.

Upon motion by Commissioner HARRIS, seconded by Commissioner PADILLA, and carried by the following vote:

AYES: Commissioner Camper, Dylina, Harris, and Padilla

NOES: Chairperson Drexel

ABSENT: Commissioner Rashe (one vacancy)

ABSTAIN: None

PLANNING COMMISSION RESOLUTION # 4026

Page 2

August 21, 2019

Adopted this 21st day of August 2019.



Chairperson, Planning Commission of
the City of Merced, California

ATTEST:



Secretary

Planning Commission Minutes Excerpts
AUGUST 21, 2019

- 4.2 General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231, initiated by Merced Holdings, LP, property owner. The General Plan Amendment and Zone Change application is a request to change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN) and change the Zoning designation from R-1-6 to Neighborhood Commercial (C-N) for approximately 22,670 square feet of land located approximately 360 feet south of Yosemite Avenue, on the east side of McKee Road. The Conditional Use Permit application is a request to allow the construction of 428 Efficiency Dwelling Units and 18,000 square feet of retail on 5.94 acres of land with a General Plan designation of Neighborhood Commercial (CN) and Zoning designation of Neighborhood Commercial (C-N) generally located at the southeast corner of Yosemite Avenue and McKee Road.

Associate Planner NELSON reviewed the report on this item. For further information refer to Staff Report #19-22.

Public testimony was opened at 7:36 p.m.

Speakers from the Audience in Favor:

RAJ JOSHI, Applicant, Los Angeles
JOE ENGLEHOFF, Applicant, Los Angeles

Speakers from the Audience in Opposition:

CASEY STEED, Merced
DAVE BUTZ, Modesto
RICARDO TORRES, Merced
LILY WALKER, Merced
CURTIS GORMAN, Merced
IRENE SANCHEZ, Merced

Speaker from the Audience Neutral:

FRANK CLICK, Merced

Public testimony was completed at 8:42 p.m.

Commissioner PADILLA ask for clarification about the single occupancy requirement and questioned whether or not it was discriminatory to married couples.

Attorney FLORES explained that the subject of occupancy would be negotiated between the landlord and tenant.

Commissioner PADILLA expressed concern over security and whether there would be alcohol sold for off-site consumption in the commercial area.

Mr. ENGELHOFF stated that they were open to hiring private security and that they would have a heavy camera presence at the property, and key fobs to enter the building. He stated that there would also be emergency phones placed throughout the property. He also clarified that there would be no bars, but if a restaurant wanted to serve alcohol, it could be brought before the Planning Commission.

Commissioner HARRIS expressed the need for more rental properties in Merced and questioned whether the project was intended for UC Merced students.

Mr. ENGELHOFF explained that this project would not be exclusively for UC Merced students and all tenants would be welcome there.

Commissioner DYLINE asked for clarification on the type of financial incentives the applicants would offer to residents who agreed to use public transit instead of a personal vehicle.

Mr. ENGELHOFF stated that they would offer financial incentives, namely a reduction in monthly rent.

Chairperson DREXEL questioned why this project was not located closer to UC Merced.

Mr. ENGELHOFF explained that the project wanted to be located within the City of Merced in order to have access to City water and sewer services.

M/S HARRIS-PADILLA, and carried by the following vote, to adopt a Mitigated Negative Declaration regarding Environmental Review #19-15, and

to recommend approval of General Plan Amendment #19-02 and Zone Change #426 (RESOLUTION #4025):

AYES: Commissioners Camper, Dylina, Harris, Padilla and Chairperson Drexel
NOES: None
ABSENT: Rashe (one vacancy)
ABSTAIN: None

M/S HARRIS-PADILLA, and carried by the following vote, to deny Conditional Use Permit #1231, subject to Finding M as follows (RESOLUTION #4026):

“M. After conducting a public hearing, considering all the public testimony, and the information in Staff Report #19-22, the Planning Commission voted to deny Conditional Use Permit #1231 for the following reasons: 1) traffic in the vicinity of the project is already problematic with high traffic volumes, constrained rights-of-way that make turning movements difficult, and congestion at various times of the day, so the traffic study from the previous commercial project approved on the site in 2015 should be updated to address the traffic impacts and possible mitigation for the current mixed-use project; 2) the sewer line in Yosemite Avenue is constricted and would require an alternative means of discharging wastewater from the site during peak flow times through the use of an on-site wastewater storage system, which could cause impacts on the existing wastewater infrastructure in the area; 3) the people/acre density and parking calculations that show compliance with City plans and codes rely on the requirement that the efficiency units be limited to one occupant, raising fair housing concerns in regards to married people and others, which might make this requirement unenforceable.”

Planning Manager ESPINOSA explained the appeals process to the applicant.

AYES: Commissioners Camper, Dylina Harris, and Padilla
NOES: Chairperson Drexel
ABSENT: Commissioner Rashe (one vacancy)
ABSTAIN: None

Planning Commission Minutes Excerpts
AUGUST 21, 2019

- 4.1 (Consent) Conditional Use Permit #1232, initiated by United Signs System, applicant for Isenberg and Ericson, Inc., property owner. This application involves a request to install a 20-foot-tall freestanding pylon sign for the shopping center located at 3155 R Street. The subject site is generally located on the west side of R Street, approximately 575 feet north of W. Olive Avenue. This property is located within Planned Development (P-D) #7 and has a Regional/Community Commercial (RC) General Plan Designation.

As a consent item, there was no staff presentation. For further information, refer to Staff Report #19-21.

Speaker from the Audience in Favor:

DAMON RICHMOND, Applicant, Modesto

No one spoke in opposition to the project.

Public testimony was completed at 7:06 p.m.

M/S DYLINA-HARRIS, and carried by the following vote, to adopt a Categorical Exemption regarding Environmental Review #19-19, and approve Conditional Use Permit #1232, subject to the Findings and eleven (11) Conditions set forth in Staff Report #19-21 (RESOLUTION #4024):

AYES: Commissioners Camper, Dylina, Harris, Padilla, and
Chairperson Drexel

NOES: None

ABSENT: Rashe (one vacancy)

ABSTAIN: None

CITY OF MERCED
Planning & Permitting Division

STAFF REPORT: #19-22

AGENDA ITEM: 4.2

FROM: Kim Espinosa,
Planning Manager

PLANNING COMMISSION
MEETING DATE: Aug. 21, 2019

PREPARED BY: Julie Nelson,
Associate Planner

CITY COUNCIL
MEETING DATE: Oct. 7, 2019
(Tentative)

SUBJECT: **General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231.** This application was initiated by Merced Holdings, LP, property owner. The General Plan Amendment and Zone Change application is a request to change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN) and change the Zoning designation from R-1-6 to Neighborhood Commercial (C-N) for approximately 22,670 square feet of land located approximately 360 feet south of Yosemite Avenue, on the east side of McKee Road. The Conditional Use Permit application is a request to allow the construction of 428 Efficiency Dwelling Units and 18,000 square feet of retail on 5.94 acres of land with a General Plan designation of Neighborhood Commercial (CN) and Zoning designation of Neighborhood Commercial (C-N) generally located at the southeast corner of Yosemite Avenue and McKee Road.
PUBLIC HEARING

ACTION: **PLANNING COMMISSION:**

Recommendation to City Council

- 1) Environmental Review #19-18 (Mitigated Negative Declaration)
- 2) General Plan Amendment #19-02
- 3) Zone Change #426

Approve/Disapprove/Modify

- 1) Conditional Use Permit #1231 (contingent on City Council approval of the General Plan Amendment and Zone Change)

CITY COUNCIL:

Approve/Disapprove/Modify

- 1) Environmental Review #19-18 (Mitigated Negative Declaration)
- 2) General Plan Amendment #19-02
- 3) Zone Change #426

SUMMARY

The proposed project is on a 5.94-acre parcel located at the southeast corner of Yosemite Avenue and McKee Road (Attachment A) and includes a request for General Plan Amendment and Zone Change for 22,670 square feet of lot area along the southern property line of the Subject Site (refer to the Proposed Land Use Map at Attachment B). The application also includes a request for a Conditional Use Permit to allow a mixed use project including 428 Efficiency Dwelling Units and retail space (see the Plot Plan and Site Plan at Attachment C).

As shown on the Proposed Land Use Map at Attachment B, the majority of the site has a General Plan designation of Neighborhood Commercial (CN) and a Zoning designation of Neighborhood Commercial (C-N). However, the developer recently acquired approximately 22,670 square feet of land from the adjacent parcel to the south. This area currently has a General Plan designation of Low Density Residential (LD) and a Zoning designation of R-1-6. The proposed General Plan Amendment would change this area from Low Density Residential (LD) to Neighborhood Commercial (CN) and the Zoning designation from R-1-6 to Neighborhood Commercial (C-N).

Within a C-N zone, multi-family uses are allowed with approval of a Conditional Use Permit (CUP). The property owner has submitted an application for a CUP to allow a mixed use development that would include 428 Efficiency Dwelling Units (EDU's), 18,000 square feet of space dedicated to amenities for the residential units (i.e., gym, study/community areas, etc.), as well as 18,000 square feet of retail space.

There would be a total of four buildings constructed on the site. All of the buildings would be three-stories tall. Buildings 1 and 3 as shown on the site plan at Attachment C would each contain 102 units, while Buildings 2 and 4 would each contain 112 units. Buildings 2 and 4 would have a mixture of retail commercial uses and community/common area for the residential tenants on the ground floor. The building elevations are provided at Attachment D as well as renderings at Attachment E.

Each residential unit would be approximately 330 square feet in size and would be limited to a single occupant. The units would include kitchen facilities, a bathroom, and a living/sleeping area. The proposed floor plan for the efficiency dwelling units, the commercial area, and the shared common tenant areas is provided at Attachment F.

The density proposed for this project based on the number of units exceeds what is allowed by the General Plan. However, because the proposal is for Efficiency Dwelling Units with a single occupant, the actual number of people on the site could be less than the number of people allowed with a traditional multi-family apartment complex. As shown in the table below, a multi-family apartment complex developed at the maximum density allowed under the General Plan (High Density – 36 units/acre), could have 428 people in the complex if each unit were a 2 bedroom unit (assuming one person per bedroom). If the units were all 3 bedroom units, that number would increase to 642 people (assuming one person per bedroom). If more than one person shared the bedrooms, the number would increase accordingly. Additional details on the density and number of people on the site is provided under the Land Use Section (Finding A) of this report.

| DENSITY & PEOPLE PER ACRE | | | | | | |
|---------------------------|---------|-------------------|--------------------|-----------|-----------------|-------------|
| Acres | Density | Max
Units/Acre | Allowed
DU/Acre | Bdrm/Unit | Total
People | People/Acre |
| 5.94 | HD | 36 | 214 | 2 | 428 | 72 |
| 5.94 | HD | 36 | 214 | 3 | 642 | 108 |
| Proposed Project | | | | | | |
| 5.94 | | | | 1 | 428 | 72 |

The proposed General Plan Amendment and Zone Change require City Council approval. Therefore, the Planning Commission would be making a recommendation to the City Council on these items. Even if the Planning Commission does not wish to approve the project, consideration should be given to recommending approval of the General Plan Amendment and Zone Change to make the land use designations consistent for the entire parcel. If the Planning Commission votes to recommend approval of the General Plan Amendment and Zone Change, staff has provided conditions of approval to be included with a recommendation of approval.

The Planning Commission is the final decision-maker for the Conditional Use Permit. However, the Planning Commission's decision is subject to appeal. If the Planning Commission votes to approve the Conditional Use Permit, the approval would be contingent upon the City Council approving the proposed General Plan Amendment and Zone Change (refer to Condition #5 of the Conditional Use Permit conditions). Staff has prepared conditions of approval for the Conditional Use Permit if the Planning Commission votes to approve the request.

If the Planning Commission recommends denial of the General Plan Amendment and Zone Change or denies the Conditional Use Permit, it would be appropriate to provide staff with direction to prepare Findings in Denial for the project. If the Planning Commission denies the Conditional Use Permit, this decision could be appealed to the City Council.

GENERAL PLAN AMENDMENT AND ZONE CHANGE

Planning staff recommends that the Planning Commission recommend approval of Environmental Review #19-18 (Mitigated Negative Declaration), General Plan Amendment #19-02 and Zone Change #426 (including the adoption of the Resolution at Attachment L) subject to the following conditions:

- *1) The proposed General Plan Amendment and Zone Change shall be as shown on the Proposed Land Use Map at Attachment B of Staff Report #19-22.
- *2) The proposed project shall comply with all standard Municipal Code and Subdivision Map Act requirements as applied by the City Engineering Department.
- *3) The Project shall comply with the applicable conditions set forth in Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 previously approved for this site.
- *4) All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.
- *5) Approval of the General Plan Amendment and Zone Change is subject to the applicant's entering into a written (developer) agreement that they agree to all the conditions and shall

pay all City and school district fees, taxes, and/or assessments, in effect on the date of any subsequent subdivision and/or permit approval, any increase in those fees, taxes, or assessments, and any new fees, taxes, or assessments, which are in effect at the time the building permits are issued, which may include public facilities impact fees, a regional traffic impact fee, Mello-Roos taxes—whether for infrastructure, services, or any other activity or project authorized by the Mello-Roos law, etc. Payment shall be made for each phase at the time of building permit issuance for such phase unless an Ordinance or other requirement of the City requires payment of such fees, taxes, and or assessments at an earlier or subsequent time. Said agreement to be approved by the City Council prior to the adoption of the ordinance, resolution, or minute action.

- *6) The developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against any governmental entity in which developer/applicant's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the developer/applicant of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the developer/applicant shall not thereafter be responsible to indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.
- *7) The developer/applicant shall construct and operate the project in strict compliance with the approvals granted herein, City standards, laws, and ordinances, and in compliance with all State and Federal laws, regulations, and standards. In the event of a conflict between City laws and standards and a State or Federal law, regulation, or standard, the stricter or higher standard shall control.
- *8) Community Facilities District (CFD) formation is required for annual operating costs for police and fire services as well as storm drainage, public landscaping, street trees, streetlights, parks and open space. CFD procedures shall be initiated before final map approval or issuance of a building permit, whichever comes first. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received.

- *9) The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-18 (Exhibit B of Planning Commission Resolution #J) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-18, Attachment KI of Staff Report #19-22).

(*) Denotes non-discretionary conditions.

CONDITIONAL USE PERMIT

If the Planning Commission wishes to approve Conditional Use Permit #1231, staff recommends the approval include Environmental Review #19-18 (Mitigated Negative Declaration), and the adoption of the Resolution at Attachment M) subject to the following conditions:

- *1) The proposed shall be constructed/designed in substantial compliance with the Site Plan, Floor Plan, Elevations, and Renderings (Attachments C, D, E, F, and G of Planning Commission Staff Report #19-22), except as modified by the conditions.
- *2) The proposed project shall comply with all standard Municipal Code and Subdivision Map Act requirements as applied by the City Engineering Department.
- *3) The Project shall comply with the applicable conditions set forth in Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 previously approved for this site.
- *4) All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.
- *5) The approval of this Conditional Use Permit is contingent on City Council approval of General Plan Amendment #19-02 and Zone Change #426. The effective date of the Conditional Use Permit approval will be the effective date of the City Council approval of the General Plan Amendment and Zone Change. If the General Plan Amendment and Zone change are not approved, the Planning Commission's approval of the Conditional Use Permit will be null and void.
- *6) The developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against any governmental entity in which developer/applicant's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the developer/applicant of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the developer/applicant shall not thereafter be responsible to

- indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.
- *7) The developer/applicant shall construct and operate the project in strict compliance with the approvals granted herein, City standards, laws, and ordinances, and in compliance with all State and Federal laws, regulations, and standards. In the event of a conflict between City laws and standards and a State or Federal law, regulation, or standard, the stricter or higher standard shall control.
 - *8) Community Facilities District (CFD) formation is required for annual operating costs for police and fire services as well as storm drainage, public landscaping, street trees, street lights, parks and open space. CFD procedures shall be initiated before final map approval or issuance of a building permit, whichever comes first. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received.
 - *9) The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-18 (Exhibit B of Planning Commission Resolution #K) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-18, Attachment K of Staff Report #19-22).
 - *10) All signs shall comply with the North Merced Sign Ordinance and Section 20.62.040 (B)(2) of the City's Zoning Ordinance for signs in a Neighborhood Commercial (C-N) zone.
 - *11) The applicant shall construct all missing improvements along the property frontage on Yosemite Avenue and McKee Road including, but not limited to, sidewalk, curb, gutter, street lights, and street trees.
 - *12) All necessary right-of-way along the property frontage, including Yosemite Avenue, McKee Road, and Whitewater Way, needed for public improvements shall be dedicated prior to the issuance of the first building permit.
 - *13) Appropriate turning radii shall be provided within the parking areas to allow for Fire Department and refuse truck access.
 - *14) Parking lot trees shall be installed per City Parking Lot Landscape Standards and Section 20.38.070 (F). At a minimum, parking lot trees shall be provided at a ratio of one tree for every six parking spaces. Trees shall be a minimum of 15-gallons, and be of a type that provides a 30-foot minimum canopy at maturity (trees shall be selected from the City's approved tree list).
 - *15) All projects on this site shall comply with Post Construction Standards in accordance with the requirement for the City's Phase II MS-4 Permit (Municipal Separate Storm Sewer System).

- *16) Prior to issuance of the first grading/building permit for any project on the site, the applicant shall demonstrate compliance with San Joaquin Valley Air Pollution Control District Rule 9510 to the Planning Department. Changes to the site plan resulting from compliance with Rule 9510 are subject to review by City Staff or the Planning Commission, as determined by the Director of Development Services.
- *17) Bicycle parking for all projects on the site shall meet the minimum requirements of the California Green Building Code and Merced Municipal Code Section 20.38.080.
- *18) All landscaping on the site shall be in compliance with the City's Water Efficient Landscaping and Irrigation Ordinance (Merced Municipal Code Section 17.60) and all state-mandated conservation and drought restrictions as well as the City's Zoning Ordinance Section 20.36 – Landscaping.
- *19) Irrigation for all onsite landscaping shall be provided by a low-volume system in accordance with the State's Emergency Regulation for Statewide Urban Water Conservation or any other state or city-mandated water regulations dealing with the current drought conditions.
- *20) All landscaping in the public right-of-way shall comply with the most recently adopted water regulations by the State and City addressing water conservation measures. If turf is proposed to be installed in medians or parkstrips, high quality artificial turf (approved by the City Engineer and Development Services Director) shall be installed.
- *21) If it is determined by the Fire Department that emergency vehicle access to Whitewater Way is needed to adequately serve the site or the surrounding area, the developer shall work with the City to provide such access, including an emergency gate with appropriate knox boxes, etc. as required by the Fire Department.
- *22) For buildings over 30 feet tall, a minimum 26-foot-wide drive aisle shall be provided for emergency vehicle access. The developer shall work with the Fire Department to determine the areas that need the 26-foot-wide drive aisle.
- *23) A fire control room may be required for the buildings on the site. The applicant shall work with the Fire Department to determine the location of the fire control room. Additional fire control rooms may be required at the discretion of the Fire Chief.
- *24) Each building shall be provided with a Fire Department Connection.
- *25) Buildings that do not provide an elevator (other than a freight elevator) shall be provided with an additional exit. The developer shall work with the Chief Building Official to determine the number of exits required for each building.
- *26) Each unit shall be provided with cooking facilities, other than a hot plate or microwave, as well as bathroom facilities per the California Building Code definition of an "Efficiency Dwelling Unit."
- *27) A minimum turning radius of 33 feet inside, curb-to-curb and 49 feet wall-to-wall for fire apparatus access must be provided throughout the project site or as required by the Fire Department.

- *28) All storm water shall be retained onsite and metered out to the City's storm water system in accordance with City Standards, subject to a storm drain plan approved by the City Engineer.
- *29) The developer shall use proper dust control procedures during site development in accordance with San Joaquin Valley Air Pollution Control District rules.
- *30) All parking lot and other exterior lighting shall be oriented in such a way so that it does not spill over onto adjacent properties.
- 31) Each unit shall be only be rented to a single occupant. At no time shall more than one person reside in each unit.
- 32) The owner/developer shall work with the City Engineer and Public Works Director to determine the best method for wastewater discharge from the site. This may be accomplished by providing an on-site storage system to capture wastewater and store it for discharge to the City's wastewater system during off-peak hours. The City Engineer and/or Public Works Director shall have final approval of the method used.
- 33) Containers for refuse and recycled goods shall be stored in enclosures that are designed with colors compatible with the buildings and shall be constructed to meet City Standards. At the Building Permit stage, the developer shall work with the City Refuse Department to determine the best location for these enclosures to ensure proper access is provided for City Refuse Trucks as well as the number of containers needed to adequately serve the site. Use of a trash compactor should be considered to reduce the number of pick-ups per week.
- 34) A minimum 6-foot high concrete block wall shall be installed along the southern property line. The height of the wall could be increased, not to exceed 8-feet tall, if required by the Planning Commission. A minimum five-foot wide landscaping area shall be provided to allow for the planting of vines or other appropriate landscape material.
- 35) Drive-thru uses, bars, nightclubs, and large convenience markets similar to a 7-Eleven type store are not allowed. Small convenience markets intended to serve the tenants or the immediate neighborhood could be allowed. Restaurants serving alcohol could be allowed with Conditional Use Permit approval.
- 36) All construction activity shall be conducted between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday.
- 37) All walking paths, bicycle and vehicle parking areas, and recreational areas shall be provided with sufficient lighting to ensure a safe environment.
- 38) All mechanical equipment shall be screened from public view.

(*) Denotes non-discretionary conditions.

PROJECT DESCRIPTION

The proposed project consists of a General Plan Amendment, Zone Change, and Conditional Use Permit to allow the construction of a mixed-use project. The General Plan Amendment would change the land use designation for approximately 22,670 square feet of land from Low Density Residential (LD) to Neighborhood Commercial (CN). The Zone Change would change the zoning for this same area from R-1-6 to Neighborhood Commercial (C-N). These changes are reflected on the Proposed Land Use Map at Attachment B.

The Conditional Use Permit would allow the construction of a mixed use project containing 428 Efficiency Dwelling Units, 18,000 square feet of community/common area for the residents, and 18,000 square feet of retail space (refer to the Site Plan at Attachment C). The uses would be contained within four three-story buildings. The retail space and community/common area space would be interspersed throughout the first floor of Buildings 2 and 4.

Although no specific tenants have been identified for the retail portion of the project, the Floor Plan at Attachment F, identifies the types of uses the developer envisions for the project. These uses could include service related uses such as barbershops and nail salons, general retail uses, and restaurant/food uses.

A project description provided by the applicant is provided at Attachment H.

Surrounding Uses
Attachment A

| Surrounding Land | Existing Use of Land | Zoning Designation | City General Plan Land Use Designation |
|-------------------------|--|---------------------------|---|
| North | Single-Family Residential/Church/School (across Yosemite Avenue) | County | Rural Residential (RR) |
| South | Single-Family Residential | R-1-6 | Low Density Residential (LD) |
| East | Single-Family Residential | P-D #52 | Low Density Residential (LD) |
| West | Single-Family Residential (across McKee Road) | R-1-6 | Low Density Residential (LD) |

BACKGROUND

The project site was annexed to the City in 2003 as part of the Hunt Farms Annexation. The project site is currently vacant, but was previously occupied by two single-family dwellings (these were demolished in 2017). The site is currently zoned Neighborhood Commercial (C-N), with a small portion of the site being zoned R-1-6. The subject site consists of two individual lots [Assessor's Parcel Numbers (APN's): 008-310-053 and -038 totaling 5.94 acres]. Recently, 22,670 square feet of lot area was acquired from the neighboring property to the south and made part of APN 008-310-053 (Proposed Land Use Map at Attachment B). This area is currently designated on the *Merced Vision 2030 General Plan* Land Use Map as Low Density Residential and has a zoning designation of R-1-6. The proposed General Plan Amendment and Zone Change would amend

the General Plan designation to Neighborhood Commercial (CN) and the zoning designation to Neighborhood Commercial (C-N) for this 22,670-square-foot area.

In 2014, the owner applied for a General Plan Amendment and Zone Change to change the entire site from Low Density Residential (LD) and R-1-6 to Neighborhood Commercial (CN). At that time, the owner proposed the construction of a 62,000-square-foot retail commercial center that would have included a small grocery store, a fast-food restaurant (with a drive-through), and other retail uses appropriate to the Neighborhood Commercial (C-N) zone. The City Council approved the General Plan Amendment and Zone Change to Neighborhood Commercial in 2015.

When the General Plan Amendment and Zone Change were approved in 2015, the City Council had two options for the Shopping Center design on the project site. One option included providing direct access to Whitewater Way from Yosemite Avenue, and the other option did not provide access other an entrance-only service road to serve commercial uses proposed on the site. The City Council voted to prohibit direct access from Yosemite Avenue to Whitewater Way and instead, approved the option with an entrance-only service road.

FINDINGS/CONSIDERATIONS:

General Plan Compliance and Policies Related to This Application

- A) The *Merced Vision 2030 General Plan* uses the number of units to determine density of a project. Typically, density would be determined by dividing the number of proposed units by the total gross acres. The General Plan has a range of multi-family densities as shown in the table below.

| Density Classification | Units/Acre |
|---------------------------------------|-------------------|
| Low-Medium Density Residential (LMD) | 6 to 12 |
| High-Medium Density Residential (HMD) | 12 to 24 |
| High Density Residential (HD) | 24 to 36 |

The Zoning designations that correlate to the multi-family General Plan designations would be R-2, R-3-1.5, R-3, and R-4.

While using the above calculation for determining density has been the long-standing practice and the method used in the General Plan, a new way of looking at density has emerged. With the increase in the number of bedrooms recently being proposed in many multi-family projects, an increase in the number of people occupying a site has become a topic of interest when considering density rather than just the number of units.

As shown in the table below, based on a High Density General Plan designation allowing 36 units per acre, a maximum of 214 units could be constructed on the site. However, if the units were 2 or 3 bedroom units (considering one person per bedroom), the number of people on the site would actually be equal to or higher than what the number of people would be under the current proposal which includes Efficiency Dwelling Units for a single occupant. If more than one person resided in each bedroom, the number would be even greater.

| DENSITY & PEOPLE PER ACRE | | | | | | |
|---------------------------|---------|-------------------|--------------------|-----------|-----------------|-------------|
| Acres | Density | Max
Units/Acre | Allowed
DU/Acre | Bdrm/Unit | Total
People | People/Acre |
| 5.94 | HD | 36 | 214 | 2 | 428 | 72 |
| 5.94 | HD | 36 | 214 | 3 | 642 | 108 |
| Proposed Project | | | | | | |
| 5.94 | | | | 1 | 428 | 72 |

The proposed density would be above the City's maximum density standard for units/acre. However, in considering the actual number of people per acre, the number of people would be less than what could feasibly be allowed if the site were developed with 2 or 3 bedroom units. The average household size for Merced is approximately 3 persons per household. If 75% of the site was developed with housing for a total of 161 units, based on the average household size, there could be as many as 483 residents on the site with an average of 81 people/acre. The current proposal would have 72 people/acre.

Based on the foregoing analysis, the density could be considered equal to that of the High Density Residential (HD) General Plan Designation.

The Housing Element of the *Merced Vision 2030 General Plan* includes policies supporting affordable housing, mixed-use development, and higher densities.

Policy H-1.1 *Support Increased in Residential Zoning Districts*

Although the proposed project would not be located within a residential zone, it does provide an opportunity for a higher density project to provide needed housing within the City.

Policy H 1.1.c *Encourage Mixed Use Development*

The proposed project would provide a mixture of retail commercial uses to serve the neighborhood and multi-family efficiency dwelling units.

Policy 1.1.e *Encourage Alternate Housing Types*

The proposed project would include efficiency dwelling units that would essentially house a single occupant within an approximately 350-square-foot unit. Each unit would provide kitchen facilities, a bathroom, and living and sleeping areas. This type of unit is unusual for the City of Merced. This policy encourages housing designs with a smaller footprint as a form of alternate housing.

Policy 1.8b *Prioritize City efforts to encourage residential development by focusing on in-fill development and densification within the existing City Limits.*

The proposed project is on an in-fill site and as explained above, when considering the number of people per acre, proposes a density that is equal to the City's highest density classification.

The following are Land Use Policies and Implementing Actions of the General Plan that could be met with the proposed project.

Policy L-1.1

Promote Balanced Development Which Provides Jobs, Services, and Housing.

Implementing Action 1.1.a: Promote mixed use development combining compatible employment, service and residential elements.

Implementing Action 1.1.c: Determine the types of housing opportunities needed for the type of employment opportunities being created in the City.

The Zoning Ordinance does not specify a density for multi-family housing allowed within a C-N zone, it merely states that multi-family uses are allowed within the C-N zone as a Conditional Use. Therefore, approval of the proposed Conditional Use Permit would bring the project into compliance with the Zoning Ordinance.

Traffic/Circulation

- B) The project site is located at the southeast corner of Yosemite Avenue and McKee Road. Yosemite Avenue, east of Parsons is designated as a “Special Street Section” in the *Merced Vision 2030 General Plan*. As such, the ultimate right-of-way for this road is 94 feet. McKee Road is a Collector Road with an ultimate right of way of 74 feet. The project would have access from Yosemite Avenue (right-in/right-out only) and McKee Road (full access). Both the intersections of Yosemite Avenue and McKee and Yosemite Avenue and Via Moraga (approximately 0.3 miles east of McKee Road) are signalized.

Yosemite Avenue Access

The primary access on Yosemite Avenue would be a driveway that is located approximately 320 feet east of the intersection of Yosemite Avenue and McKee Road (refer to the Site Plan at Attachment C). This driveway would provide right in/right out access only. The existing median in Yosemite Avenue would remain unchanged along the project site frontage. No other access to the site would be provided on Yosemite Avenue.

McKee Road Access

The primary access on McKee Road would be through a driveway located approximately 195 feet south of the intersection of Yosemite Avenue and McKee Road. This driveway would allow both left and right turning movements.

Whitewater Way

No access is proposed to Whitewater Way from the project site, unless the Fire Department requires an emergency access per Condition #21 of the Conditional Use Permit Conditions.

Traffic Impact Analysis

Transportation and traffic impacts were previously analyzed for this site with General Plan Amendment #14-06 and Zone Change #421. A traffic analysis was prepared as part of Initial Study #14-32 at the time the previous General Plan Amendment and Zone Change were considered and approved (Appendix D of Initial Study #19-15 at Attachment K). The traffic analysis at that time analyzed impacts associated with a 62,000-square-foot shopping center. When comparing the previous project to the current project, it was

determined that the level of impacts were similar based on traffic generation rates for the dwelling units being based on the number of occupants rather than the number of units (similar to the analysis for Land Use and Density). Using a rate of 3.31 average daily trips (ADT's) per resident, there would be 1,417 ADT's for the residential portion of the project. The exact type of tenants that would occupy the commercial portion of the project is unknown. Therefore, the same calculation method was used for this project as used in the previous analysis (Specialty Retail). Based on this calculation, the retail portion of the project would add an additional 798 ADT's, bringing the total estimated ADT's for the mixed-use project to 2,214 ADT's. The previous traffic analysis estimated a total of 2,647 ADT's for the previously proposed 62,000-square-foot shopping center. The previously analysis allowed for a 35% reduction of trips based on "pass-by" traffic (traffic that would already be on the roadway, not making a specific trip to the subject location). This reduction resulted in a net of 1,721 ADT's.

The previous traffic analysis analyzed the following road segments and intersections.

Roadways:

- Yosemite Avenue between Parsons Avenue and McKee Road
- McKee Road between Yosemite Avenue and Silverado Avenue

Intersections:

- Yosemite Avenue and Parsons Avenue
- Yosemite Avenue and McKee Road
- Yosemite Avenue and Hatch Road
- McKee Road and Olive Avenue

The quality of traffic operating conditions is rated by Level of Service (LOS) Categories A through F, ("A" being the best). LOS A indicates free-flow traffic conditions with little or no delay. LOS F represents over-saturated conditions where traffic flows exceed capacity resulting in long queues and delays. The City of Merced has adopted LOS D as the standard for streets to operate at an acceptable level.

Yosemite Avenue and Parsons/Gardner

The previous analysis found that all the intersections studied would operate at an acceptable level of service (LOS), except the intersection of Yosemite Avenue and Parsons Avenue/Gardner Road. This intersection would operate at an LOS F under the existing, plus project scenario. The intersection currently operates at an LOS E. The City's General Plan identifies a level of service (LOS) D as acceptable. The following Mitigation Measure is recommended in Initial Study #19-18 for this project to ensure this intersection operates at an acceptable level of service (see the Mitigation Monitoring Program at Exhibit B of the Planning Commission Resolution at Attachment M).

Mitigation Measure

- TRA-01 The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a

shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)

-or-

The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.

Olive Avenue and McKee Road

The intersection of Olive Avenue and McKee Road would also decrease from LOS C to LOS F under the Cumulative 2035 scenario analyzed by the previous traffic study. The following Mitigation Measure is recommended for this intersection which would bring the level of service back to an LOS C (the existing LOS).

Mitigation Measure

TRA-02 The following modifications to the intersection of Olive Avenue and McKee Road shall be made:

Southbound Approach:

- Remove the adjacent on-street parking for 100 feet on the southbound approach.
- Re-stripe the approach as shared left/through lane and share right/through lane.
- Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop.

Northbound Approach

- Remove the adjacent on-street parking for 100 feet on the north bound approach.
- Re-stripe the approach as shared left/through lane and shared right/through lane.
- Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area.

It should be noted that a traffic signal is planned for this intersection in the future. The cost of the signal would be the responsibility of the City of Merced. The traffic analysis determined that this intersection meets the Manual on Uniform Traffic Control Devices (MUTCD) warrants for traffic signals. However, the traffic analysis recommends that prior to installation of a traffic signal, the remaining MUTCD warrants be conducted to determine if the need exists for a traffic signal at this time. Because the cost of the traffic signal would be borne by the City, it was determined that the recommended mitigation was more feasible at this time.

In addition to the mitigation for the intersection at Parsons and Yosemite Avenues, all previously approved mitigation measures approved at the time of annexation would still apply.

The project would incentivize the use of alternate transportation by offering a discount on rent for residents who don't have a vehicle. Additionally, they will provide specific areas for Uber and Lyft pick-ups, and they are exploring the possibility of offering rentals of bicycles, scooters, and zip cars. The site is also located near transit stops for The Bus and Cat Tracks.

Although the estimated average daily trips for the proposed mixed-use project is slightly higher than the net result for the previously proposed shopping center, no reductions have been applied to the ADT's for the mixed-use project for pass-by traffic or transit and bicycle facilities. When consideration is given to the alternate transportation available and encouraged on the project site, it is likely that the ADT's generated by the current project would be approximately equal to the previously proposed project.

Parking

- C) The Zoning Ordinance requires 1.75 spaces of parking for each multi-family unit up to 30 units, plus an additional 1.5 spaces for each unit over 30. There is also an increase in the number of spaces required based on the number of bedrooms and bathrooms in a unit (refer to Attachment I for an excerpt of the Zoning Ordinance). Based on this calculation, the residential portion of this project would require 650 parking spaces.

Parking for the commercial portion of the project would be based on the actual uses. Since the uses are unknown at this point, but expected to be a mixture of retail, service, and restaurant uses, a factor of one space for every 250 square feet of floor area was used to calculate the required parking for the commercial portion of the project. The Zoning Ordinance allows a 15% reduction in floor area for non-usable commercial space such as restrooms, storage areas, etc. Using this formula, the parking requirements for the commercial portion of the project would be 61 spaces.

The applicant is proposing a total of 412 parking spaces as shown in the table below:

| Parking Type | Spaces | Parking Type | Spaces |
|--------------------|--------|--------------------|--------|
| Motorcycle/Scooter | 36 | Accessible Parking | 12 |
| Standard Parking | 290 | Compact Parking | 74 |

The applicant provided an analysis of the City's parking requirements based on the actual number of people occupying a unit (Attachment J). Based on this analysis, an apartment project that has 214 3-bedroom units with one person per bedroom would be required to provide 435 parking spaces under the City's Zoning Ordinance, which equates to 0.68 spaces per bed/resident.

The applicant's analysis shows that they are providing 0.81 spaces per unit which exceeds the 0.68 which would be required for a typical development with 3 bedroom units. Using the factor of 0.81 spaces/unit, the parking required for the residential use would be 348 spaces. The site proved 412 spaces which would be slightly more than what is estimated

for the retail uses plus the residential uses. In addition to the parking spaces provided, the development would have a dedicated area for Uber and Lyft pickups to help encourage the use of alternative transportation. The proximity to bus stops would also help encourage the use of public transportation rather than having a personal vehicle.

In addition to the vehicle parking provided, indoor bicycle storage facilities would be provided to encourage the use of bicycles. The site has easy access to the bicycle trail system which could encourage the use of bicycles rather than cars.

The Zoning Ordinance (MMC Section 20.38.050 – Attachment I) also allows for reductions in parking requirements for mixed used projects, projects near transit, and other reductions which could be applied to this project.

If insufficient parking is required on-site, however, tenant parking could spill out into the adjacent neighborhood. The Moraga neighborhood has very narrow streets and limited on-street parking so this could be an issue.

Public Improvements/City Services

D) *Water*

There is a 16-inch water line in Yosemite Avenue and another 16-inch line in McKee Road to serve the project site. The City's water supply would be sufficient to serve the proposed project.

Sewer

A 6-inch sewer force main line exists in Yosemite Avenue which flows to G Street, then continues out to the Waste Water Treatment Plant. There is no sewer line in McKee Road. Due to constrictions in the Yosemite Avenue line, the proposed project would need to provide an alternative to discharging the wastewater generated from the site into the Yosemite Avenue line during peak flow times. The developer has been working with the City's Public Works Director on a solution for this issue. One solution may be to provide underground storage for the projects wastewater discharge and release the wastewater during off-peak hours. Condition #32 of the recommended conditions for the Conditional Use Permit requires the developer to work with the City Engineer and Public Works Director to find a satisfactory solution for this issue.

Stormwater

An 18-inch storm drain exists in Yosemite Avenue. The project would be required to retain storm water on-site and meter it into the City's system (Condition #28).

Building Design

- E) The proposed building designs would be similar to the style of the buildings at UC Merced. The three story buildings would have clean lines and use a variety of building materials to provide interest. The balconies on the upper floors are staggered to add additional interest. The elevations are provided at Attachment D and E. The table below provides a breakdown of each building by unit number and building height.

BUILDING DETAILS

| Building No. | Stories | Units | Use | Total Square Feet | Height (to top of parapet) |
|---------------------|----------------|--------------|------------------------------------|--------------------------|-----------------------------------|
| 1 | 3 | 102 | Residential | 34,560 | 33' 4 ¼" |
| 2 | 3 | 112 | Residential/Retail/
Common Area | 59,520 | 31' 10 ¼" |
| 3 | 3 | 102 | Residential | 34,560 | 33' 4 ¼" |
| 4 | 3 | 112 | Residential/Retail/
Common Area | 59,520 | 31' 10 ¼" |
| TOTAL | | 428 | | 188,160 | |

Each residential unit would be approximately 330 square feet and contain a kitchen, bathroom, and living/sleeping area. The units are designed for a single occupant. Some of the units include a balcony and some don't have balconies, which would slightly increase the indoor living area. The balconies have been staggered to help provide depth and interest to the building elevations. All the units would have access through the interior of the building, which would increase security for the tenants.

The floor plan (Attachment F) provided for each unit may be slightly modified depending on handicap accessibility requirements. As currently designed, every unit within the project is handicap accessible. In order to meet the accessibility requirements, the shower area is separated from the water closet area in order to provide the necessary space for wheelchair accessibility. If not all the units have to be accessible, the floor plan would be modified to combine these two areas. The developer will work with the Chief Building Official to determine the requirements for accessibility.

Buildings 2 and 4 have a mixture of commercial space and common space for the residential tenants on the first floor of each building. The common areas would include amenities such as a gym, a kitchen/community area for gatherings and events, a meditation room, a study area, a media room, indoor bike storage area, laundry facilities, and a management office, mailroom, and office center for tenants. Building 2 also provides a roof-top deck area to provide additional outdoor open space for the tenants (Attachment G). This area would provide an additional outdoor area for tenants to lounge and socialize.

Site Design

- F) The project site is located at the southeast corner of Yosemite Avenue and McKee Road. The site is designed to keep the buildings near the center of the site away from the residential uses. The front building (Building 2) is set back approximately 75 feet from Yosemite Avenue. Building 1 is approximately 50 feet from McKee Road, Building 3 is approximately 125 feet from the southern property line, and Building 4 is approximately 55 feet from the eastern property line near Whitewater Way.

Parking is provided around the perimeter of the site and between the buildings. Bicycle parking is provided inside Building 4.

A promenade area is provided between Buildings 2 and 4 (refer to Page 2 of Attachment C as well as the renderings at Attachment E) which will include landscaping, tables, and chairs/benches to provide an open space area for the tenants and customers of the

commercial uses. The developers envision this area would be used by customers of the food establishments and other retail uses as well as the residential tenants.

A minimum six-foot tall block wall would separate the project from the residential uses to the south of the site (Condition #34). This height may be increased to 8 feet if the Planning Commission desires.

Distance to Adjacent Residential Uses

All the buildings on the site would be 3-stories tall and between 31 and 33 feet tall. The homes on the west side of McKee are approximately 50 feet from the western property line. Building 1 is located closest to McKee Road and would be approximately 90 feet from the western property line on the project site. With the additional 50-foot setback from the property line, Building 1 would be approximately 140 feet from the nearest residential unit.

The nearest home across Yosemite Avenue is approximately 200 feet from the project site. With the additional setback on Yosemite Avenue, the distance from Building 2 to the home would be approximately 275 feet.

The homes to the east across Whitewater Way are approximately 25 feet from the project site. Building 4 would be approximately 95 feet from these homes.

The nearest home to the south is located approximately 45 feet from the southern property line. The proposed site design has been considerate of the proximity of this home and includes a larger landscape buffer in the area immediately adjacent to this home. The nearest building to this home would be Building 3 which would be over 125 feet away.

For context, the block where City Hall is located between M and N Streets is approximately 400 feet long. The distance from the corner of 18th and M Street to the edge of the alley between 18th Street and Main Street is approximately 150 feet. Therefore, the nearest home across McKee Road would be approximately equal to the distance from the corner of 18th Street and M Street to the northern edge of the alley. The nearest home across Yosemite Avenue would be over half a City Block from the nearest building on the site. The homes on Whitewater Way would be close to the distance between City Hall and the UC Merced Building across 18th Street.

As described below in the Landscaping Section (Finding G), the site would be provided with dense landscaping to help buffer the surrounding uses from noise and lights and to help provide privacy between the uses.

Landscaping

- G) As shown on the site plan at Attachment C, a 15-foot landscape area is provided along Yosemite Avenue. The landscape area along McKee road is over 14 feet wide and along Whitewater Way, the landscape area is approximately 7.5 feet wide. The landscape area along the southern property line is 5 feet wide, but would also have a concrete block wall to provide a separation from the adjacent residential uses.

As described above, the promenade area between Buildings 2 and 4 would be landscaped to create a welcoming outdoor area (Attachment E). Parking lot trees would be provided

throughout the site in compliance with the City's Parking Lot Landscape Standards.

According to Table 20.36-1 of the Zoning Ordinance, the site is required to provide a minimum landscape area equal to 15% of the project site. Landscaping and irrigation shall be required to meet the City's Water Efficient Landscape Ordinance.

Neighborhood Impact/Interface

- H) As previously described, the project site is surrounded by residential uses as well as Yosemite Church and Providence School to the north across Yosemite Avenue. The developer held two neighborhood meetings on August 13, 2019, at Yosemite Church. The first meeting was held at 3:00 p.m., but no one from the neighborhood attended. At this meeting there were people who work at the church in attendance, but no neighborhood residents. The second meeting was held at 6:00 p.m. There were 6 people in attendance at this meeting. Some of the neighbors in attendance voiced concerns about the number of people on the site and the traffic impacts. There was also concerns voiced from one of the neighbors across Yosemite Avenue about the building heights and the ability of the residential tenants being able to see into their back yard. There were also questions about where the customers for the retail uses would park. The neighbors also noted that they don't want uses like nightclubs or bars to be allowed in the commercial areas.

Neighborhood Commercial zones allow multi-family uses with approval of a Conditional Use Permit. The City's interface regulations apply when a commercial use is adjacent to or across the street from a residential use. The purpose of the Interface Regulations is to protect existing residential neighborhoods and to ensure that new development is designed in a manner to minimize negative impacts on nearby uses to the greatest extent possible.

The height of the buildings would be taller than most of the other buildings in the area. However, Yosemite Church's main building is close to the same height as the proposed buildings. There are several two-story homes in the area, and most are less than 30 feet in height, but a few have steeper roofs and higher peaks making them approximately 28 feet tall.

As discussed in the traffic section of this report, the traffic generated by the proposed mixed-use project would be comparable to that of the previously proposed shopping center. Mitigation measures are included to help minimize the effects of the additional traffic in the area.

Public hearing notices were sent to all property owners within 300 feet of the site. To date, staff has not had any comments other than those heard at the community meetings held by the developer.

Signage

- I) All signs on the site would be required to comply with the North Merced Sign Ordinance and the Neighborhood Commercial sign regulations. As such, with illuminated signs may be required to shut off at 10:00 p.m. (Condition #10 for the Conditional Use Permit).

Land Use/Density Issues

- J) As outlined in the General Plan section above (Finding A), the proposed density for this project is higher than is typically allowed based on the number of units. However, in looking at the actual number of people, the density would be comparable to that of a High Density Residential designation. In 2015, the City Council approved a Conditional Use Permit for a multi-family project located east of G Street at Merrill Place. This project contained 216 units with 1, 2, 3, and 4 bedrooms. Although the density based on the number of units was consistent with the General Plan, the actual number of people on the site far exceeded the density. This project would have allowed 678 people (considering one person per bedroom) on 9.7 acres for a density of 70 people/acre. The proposed mixed use project under consideration would have a density of 71 people/acre. Because the proposed Efficiency Dwelling Units would be for a single occupant, the density would not be greater than 71 people/acre. The project on G Street and Merrill could exceed 70 people/acre because there is no limit on the number of people allowed in a bedroom.

Environmental Clearance

- K) The Planning staff has conducted an environmental review (Initial Study # 19-18) of the project in accordance with the requirements of the California Environmental Quality Act (CEQA), and a Draft Mitigated Negative Declaration (i.e., no significant effects in this case because of the mitigation measures and/or modifications described in Initial Study #19-18) is being recommended (Attachment K).

Attachments:

- A) Location Map
- B) Proposed Land Use Changes
- C) Plot Plan and Site Plan
- D) Elevations
- E) Renderings
- F) Floor Plan
- G) Rooftop Deck
- H) Project Description from Applicant
- I) Zoning Ordinance Excerpt – Parking Requirements
- J) Parking Analysis
- K) Initial Study
- L) Draft Planning Commission Resolution for General Plan Amendment and Zone Change
- M) Draft Planning Commission Resolution for Conditional Use Permit

Ref: N:\SHARED\PLANNING\STAFFREP\SR2019\SR 19-22- GPA #19-02_ZC#426_CUP #1231.docx

REFER TO ATTACHMENTS 1, 2, 4, 6 THROUGH 8, 10 AND 11
OF ADMINISTRATIVE REPORT FOR ATTACHMENTS A
THROUGH G, J AND K OF PLANNING COMMISSION STAFF
REPORT #19-22

Note: Because this is not an official City document, the City Seal was removed from the document on 9/19/2019.

University Village at Yosemite

The project site is located on two parcels totaling approximately 5.94 acres at the southeast corner of Yosemite Avenue and McKee Road (APNs 008-310-038 and 008-310-050) in the City of Merced.

The areas of the new buildings would be approximately 183,520 square feet, 147,520 square feet of residential area and 18,000 square feet of commercial/retail and 18,000 square feet of student/resident facilities. The site will also include a pedestrian promenade between Building 1 and Building 3 catering to both the residents and community. The project also would include approximately 376 parking spots, with 9 ADA parking stalls. In addition, the project will focus on green building and living methods, and include bicycle parking, pedestrian site access, and the installation of low-flow fixtures and systems.

Construction of the proposed project would involve site preparation, very minor grading, building construction, and architectural coating. Without the time and cost associated with subterranean infrastructure, construction would take approximately twelve months.

The project site is currently zoned C-N. The project site is currently undeveloped with no structures on the property.

With a vision for “Tomorrow’s Merced, Today”, we are proposing a student focused, green community environment to support the growth of both UC Merced and the City of Merced. With housing currently one of the biggest problems facing Merced and UC Merced, overcrowding on campus has forced students to seek ever more residential settings requiring 5 and 6 students to occupy a single family residence, deep in to residential neighborhoods not accessible to mass transit and lacking public infrastructure to support this population.

We have a unique opportunity to benefit both the UC Merced population and the City as a whole by creating a wonderful student community environment, focused on efficient living arrangements with communal meeting and study areas, and on-site retail and quick-serve restaurants to support both the on-site community as well as the surrounding community at large.

With an overall community plan geared towards mass transit, public transit and green transit, we intend to heavily promote alternatives to independent car ownership. Some of the options we intend to promote in order to accomplish this goal are:

- Promoting CALTRACK (E-1, E-2, and Fastcat lines) usage among students with Stops directly in front of the property
- “The Bus” (UC Merced route-Local) stops located within steps of the facility

- Planned partnerships with ride-sharing companies Lyft and Uber
- On-site rental Bicycles and Zip-Cars
- Excess bicycle and moped parking

By providing several alternative and more cost effective options, students won't have a need to incur the additional expenses associated with traditional transportation. By providing so many more cost effective transportation options, we believe that a majority of our residents will forego car ownership for their day to day transit needs and enjoy the financial savings along with environmental impacts of commuting responsibly.

With a focus on clean building practices and long term sustainability, we shall focus on any and all ways to support green building methods, and minimizing community impact in the process, which may include recycled material, off-site construction, solar panels and walkways, low-flow fixtures and systems and timed and sensor based lighting.

By creating the onsite retail, service and quick serve dining options, we intend to not only contain residents need to venture off-site for these services, but also intend to benefit the greater surrounding community through these offerings. With minimal retail and food options in the immediate area, The Food Court and quick retail and services offered in the retail center will also support the immediate area residents. All of these retail areas proposed are situated on Yosemite Ave, so as to preserve the serenity of the residential surrounding.

We look forward to working with the immediate community and the community at large to create what will hopefully become a template for efficient and affordable student housing. By focusing on mass transit and green building to minimize community and environmental impact, we intend to be a long term partner with the City of Merced to help create the infrastructure needed to support continued growth and prosperity.

B. Changes in Existing Structures and Uses.

1. Additional parking shall be required for a change in use or any modification to an existing structure that results in an increase in the unit of measurement used to determine the amount of required off-street parking as specified in Table 20.38-1 (Off-Street Parking Requirements).
2. Additional off-street parking shall be required only to accommodate the incremental change or expansion of the structure or use. Additional parking shall not be required to remedy parking deficiencies existing prior to the change to an existing structure or use.
3. Additional parking for nonresidential uses is not required if the parking needed to accommodate the change is either:
 - a. Two or fewer parking spaces; or,
 - b. Ten (10) percent or less of the total required off-street parking spaces for the use.

TABLE 20.38-1 OFF-STREET PARKING REQUIREMENTS

| Land Uses | Number of Required Parking Spaces |
|--|---|
| RESIDENTIAL LAND USES | |
| Caretaker's Home | 1 per unit |
| Duplexes | 1.75 spaces per each unit up to 30 units and 1.5 spaces per each unit thereafter |
| Group Homes and Facilities | 1 per unit plus 1 per 300 sq. ft. of office and other nonresidential areas |
| Group Housing | 1 per unit |
| Live/Work Units | 1.75 per unit |
| Mobile Home Parks | 1 per unit and 1 per office or employee |
| Multiple Family Dwellings/Condominiums | 1.75 spaces per unit of 2 bedrooms or less up to 30 units and 1.5 spaces per unit thereafter, plus 0.5 spaces per additional bedroom over 2 in each unit and 1.0 spaces per additional full or partial bathroom over 3 in each unit |
| Residential Care Facilities, Small | 1 per unit |
| Residential Care Facilities, Large (Includes Convalescent/Nursing Homes) | 1 per 4 beds; plus 1 per 300 sq. ft. of office or 1 per employee, whichever is greater |
| Secondary Dwelling Units ("Second Units") | One or two bedrooms: 1 per unit;
Three or more bedrooms: 2 per unit |

C. Off-Site Parking.

1. For multi-family housing and non-residential uses, the Site Plan Review Committee may approve off-site parking if it finds that practical difficulties prevent the parking from being located on the same lot it is intended to serve.

2. Off-site parking shall be located within 400 feet of the use it is intended to serve or another reasonable distance as determined by the Site Plan Review Committee.



3. If off-site parking is approved, a covenant record, approved by the City Attorney, shall be filed with the County Recorder. The covenant record shall require the owner of the property where the off-site parking is located to

continue to maintain the parking space so long as the building, structure, or improvement is maintained within the City. This covenant shall stipulate that the title and right to use the spaces shall not be subject to multiple covenants or contracts for use, or termination, without prior written consent of the City.

D. Parking for Persons with Disabilities.

1. Parking spaces for persons with disabilities shall be provided in compliance with California Code of Regulations Title 24.
2. Parking spaces required for the disabled shall count toward compliance with the number of parking spaces required by Table 20.38-1.



20.38.050 Parking Reductions

The minimum number of required off-street parking spaces as specified in Table 20.38-1 may be reduced as described below.

- A. Shared Parking.** Multiple land uses on a single parcel or development site may use shared parking facilities when operations for the land uses are not normally conducted during the same hours, or when hours of peak use differ. Requests for the use of shared parking may be approved if:

1. A parking demand study approved by the Director of Development Services demonstrates that there will be no substantial conflicts between the land uses' principal hours of operation and periods of peak parking demand;

2. The total number of parking spaces required for the land uses does not exceed the number of parking spaces anticipated at periods of maximum use;
3. The proposed shared parking facility is located no further than 400 feet from the primary entrance of the land use which it serves; and,
4. A covenant record as described in Section 20.38.040.C.3 shall be recorded.

B. Common Parking Facilities. Common parking facilities, public or private, may be provided in lieu of the individual requirements contained in this chapter, provided, the total of such off-street parking facilities, when used together, shall not be less than the sum of the various uses computed separately. Such common facilities shall be approved by the Planning Commission with a Conditional Use Permit, and the Planning Commission may grant a reduction in the total required parking for the uses by no more than fifteen percent.

C. Low Demand. The number of parking spaces may be reduced if the land use will not utilize the required number of spaces due to the nature of the specific use, as demonstrated by a parking demand study approved by the Director of Development Services.

D. Transportation Demand Management Plan. The number of parking spaces may be reduced by the Director of Development Services up to 20 percent if the project applicant prepares a Transportation Demand Management Plan which demonstrates a reduction in the demand for off-street parking spaces by encouraging the use of transit, ridesharing, biking, walking, or travel outside of peak hours.



E. Bus Stop/Transportation Facility Credit. The number of parking spaces may be reduced by up to 5 percent for commercial or multiple-family development projects within 400 feet of a City-approved bus stop. If a commercial or multiple-family development project is located within 400 feet of a transit center, the project may reduce parking spaces by up to 10 percent.

F. Mixed-Use Projects. A mixed-use project with commercial and residential units may reduce parking requirements by up to 30 percent as demonstrated by a parking demand analysis approved by the Director of Development Services.

RESOLUTION NO. 2019-_____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERCED, CALIFORNIA, APPROVING A MITIGATED NEGATIVE DECLARATION FOR GENERAL PLAN AMENDMENT #19-02 AND ZONE CHANGE #426, APPROVING GENERAL PLAN AMENDMENT #19-02 TO CHANGE THE GENERAL PLAN DESIGNATION FROM LOW DENSITY RESIDENTIAL (LD) TO NEIGHBORHOOD COMMERCIAL (CN) FOR APPROXIMATELY 0.52 ACRES OF LAND GENERALLY LOCATED ON THE EAST SIDE OF MCKEE APPROXIMATELY 360 FEET SOUTH OF YOSEMITE AVENUE, AND APPROVING A LEGISLATIVE ACTION AGREEMENT FOR THE SAME

WHEREAS, the City is processing an application for a General Plan Amendment for 0.52 acres of land generally located on the east side of McKee Road, approximately 360 feet south of Yosemite Avenue, and more particularly described in Exhibit A and shown on the map at Exhibit B, both attached hereto and incorporated herein by this reference, where an environmental review was required; and

WHEREAS, the Planning Commission of the City of Merced held a noticed public hearing on August 21, 2019, at which time all those interested in the matter were provided the opportunity to speak or provide written or oral testimony regarding the application; and

WHEREAS, after hearing all of the evidence and testimony, the Planning Commission adopted Resolution #4025, attached hereto as Exhibit C, and incorporated herein by reference, recommending that the City Council approve the General Plan Amendment and Environmental Review (Mitigated Negative Declaration); and

WHEREAS, The City Council held a noticed public hearing on October 7, 2019, at which time all those interested in the matter were provided the opportunity to speak or to provide written or oral testimony regarding the application.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MERCED AS FOLLOWS:

SECTION 1. CALIFORNIA ENVIRONMENTAL QUALITY ACT.

Based upon the evidence and testimony in the record at the City Council public hearing, the City Council exercising its independent judgment and review, hereby adopts and approves the Mitigated Negative Declaration following Environmental Review #19-18 pursuant to the provisions of the California Environmental Quality Act.

SECTION 2. GENERAL PLAN AMENDMENT ADOPTION.

The General Plan of the City of Merced is hereby amended by approving General Plan Amendment #19-02, which changes the General Plan designation of 0.52 acres of land generally located on the east side of McKee Road, approximately 360 feet south of Yosemite Avenue from Low Density Residential (LD) to Neighborhood Commercial (CN) as shown on Exhibit D, attached hereto and incorporated herein by this reference.

SECTION 3. APPROVAL OF LEGISLATIVE ACTION

AGREEMENT. The Legislative Action Agreement between the City of Merced and Merced Holdings, L.P., a Nevada Limited Partnership, pertaining to the approvals granted herein and the development of the property subject to these approvals is hereby approved. The approvals granted herein are contingent upon the property owner executing and returning the Legislative Action Agreement and the documents being recorded. The City Manager or Assistant City Manager is hereby authorized to execute the Legislative Action Agreement on behalf of the City of Merced.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the ____ day of _____ 2019, by the following vote:

AYES: Council Members:

NOES: Council Members:

ABSENT: Council Members:

ABSTAIN: Council Members:

APPROVED:


Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

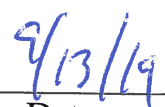
BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:



City Attorney



Date

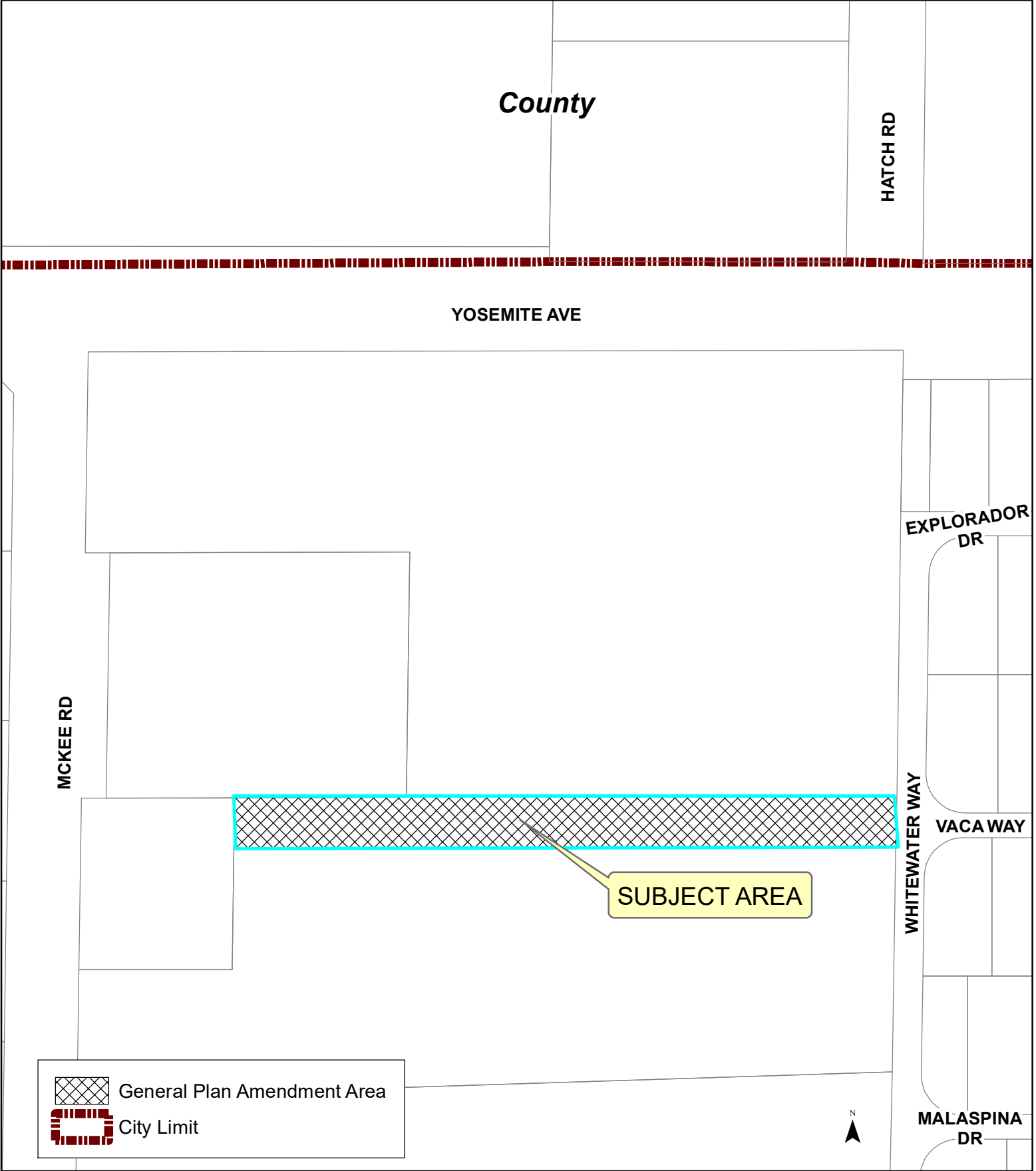
EXHIBIT A
LEGAL DESCRIPTION

The East 539.75 feet of the following described Parcel 2, per Grant Deed recorded as Document No. 2010-045178, Merced County Records; the West line of said east 539.75 feet being the Northerly extension of the East line of Parcel 1 as described in said Grant Deed, said Northerly extension ending at a point on the South line of Parcel 1 as shown on Parcel Map recorded in Book 58 at Page 44, Merced County Records. The above Parcel 2 being described as follows:

All that portion of Lot 150 as shown on the map entitled "Map of Bradley's Addition No. 3 to Merced, California" filed January 4, 1911, in Vol. 4 of Official Plats, at Page 43, Merced County Records, described as follows:

Beginning at a point on the West lines of said Lot 150, said point being S. 0 deg. 51' W. 406.01 feet from the Northwest corner of said Lot 150; thence N. 89 deg. 54' E. parallel with the North line of said Lot 150, a distance of 660 feet to a point on the East line of said Lot 150, said point being S. 0 deg. 51' W. 406.01 feet from the Northeast corner of said Lot 150; thence N. 0 deg. 51' E. along the East line of said Lot 150 a distance of 42 feet; thence S. 89 deg. 54' W. parallel with the North line of said Lot 150, a distance of 660 feet to the West line of said Lot 150; thence S. 0 deg. 51' W. along the West line of said Lot 150, a distance of 42 feet to the point of beginning.

Containing approximately 22,669.57 square feet (0.52 acres +/-)



Disclaimer: This document was prepared for general inquiries only. The City of Merced is not liable for errors or omissions that might occur. Official information concerning specific parcels should be obtained from recorded or adopted City documents.

GENERAL PLAN AMENDMENT #19-02
SUBJECT AREA
(0.52 Acres +/-)
EXHIBIT B



CITY OF MERCED
Planning Commission

Resolution #4025

WHEREAS, the Merced City Planning Commission at its regular meeting of August 21, 2019, held a public hearing and considered **General Plan Amendment #19-02 and Zone Change #426**, initiated by Merced Holdings, LP, property owner. The General Plan Amendment and Zone Change application is a request to change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN) and change the Zoning designation from R-1-6 to Neighborhood Commercial (C-N) for approximately 22,670 square feet of land located approximately 360 feet south of Yosemite Avenue, on the east side of McKee Road; also known as Assessor's Parcel Number 008-310-038; and,

WHEREAS, the Merced City Planning Commission concurs with Finding K of Staff Report #19-22; and, the following additional finding:

L. To promote orderly development in a community, a single parcel should usually have only a single consistent General Plan land use designation and a single zoning designation. Therefore, the General Plan designation and zoning for the 22,670-square-foot strip of land along the southern property line of this parcel should be changed to match the Neighborhood Commercial (CN) land use designation and the Neighborhood Commercial (C-N) zoning designation as the rest of the parcel.

NOW THEREFORE, after reviewing the City's Initial Study and Draft Environmental Determination, and fully discussing all the issues, the Merced City Planning Commission does resolve to hereby recommend to City Council adoption of a Mitigated Negative Declaration regarding Environmental Review #19-18, and approval of General Plan Amendment #19-02 and Zone Change #426, subject to the Conditions set forth in Exhibit A attached hereto and incorporated herein by this reference.

Upon motion by Commissioner HARISS, seconded by Commissioner PADILLA, and carried by the following vote:

AYES: Commissioners Camper, Dylina, Harris, Padilla, and Chairperson Drexel

NOES: None

ABSENT: Commissioner Rashe


ABSTAIN: None (one vacancy)

PLANNING COMMISSION RESOLUTION # 4025

Page 2

August 21, 2019

Adopted this 21st day of August 2019


Chairperson, Planning Commission of
the City of Merced, California

ATTEST:


Secretary

Attachment:

Exhibit A – Conditions of Approval

Exhibit B – Mitigation Monitoring Program

n:\shared\planning\PC Resolutions\GPA #19-02

Conditions of Approval
Planning Commission Resolution #4025
General Plan Amendment #19-02
Zone Change #426

1. The proposed General Plan Amendment and Zone Change shall be as shown on the Proposed Land Use Map at Attachment B of Staff Report #19-22.
2. The proposed project shall comply with all standard Municipal Code and Subdivision Map Act requirements as applied by the City Engineering Department.
3. The Project shall comply with the applicable conditions set forth in Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 previously approved for this site.
4. All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.
5. Approval of the General Plan Amendment and Zone Change is subject to the applicant's entering into a written (developer) agreement that they agree to all the conditions and shall pay all City and school district fees, taxes, and/or assessments, in effect on the date of any subsequent subdivision and/or permit approval, any increase in those fees, taxes, or assessments, and any new fees, taxes, or assessments, which are in effect at the time the building permits are issued, which may include public facilities impact fees, a regional traffic impact fee, Mello-Roos taxes—whether for infrastructure, services, or any other activity or project authorized by the Mello-Roos law, etc. Payment shall be made for each phase at the time of building permit issuance for such phase unless an Ordinance or other requirement of the City requires payment of such fees, taxes, and or assessments at an earlier or subsequent time. Said agreement to be approved by the City Council prior to the adoption of the ordinance, resolution, or minute action.
6. The developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory

EXHIBIT A
of Planning Commission Resolution #4025

Page 1

agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against any governmental entity in which developer/applicant's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the developer/applicant of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the developer/applicant shall not thereafter be responsible to indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.

7. The developer/applicant shall construct and operate the project in strict compliance with the approvals granted herein, City standards, laws, and ordinances, and in compliance with all State and Federal laws, regulations, and standards. In the event of a conflict between City laws and standards and a State or Federal law, regulation, or standard, the stricter or higher standard shall control.
8. Community Facilities District (CFD) formation is required for annual operating costs for police and fire services as well as storm drainage, public landscaping, street trees, streetlights, parks and open space. CFD procedures shall be initiated before final map approval or issuance of a building permit, whichever comes first. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received.
9. The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-18 (Exhibit B of Planning Commission Resolution #J of Staff Report #19-22) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-18, Attachment I of Staff Report #19-22)

n:shared:planning:PC Resolutions:GPA#19-02 ZC #426 Exhibit A

ENVIRONMENTAL REVIEW #19-18

Mitigation Monitoring Program

MITIGATION MONITORING CONTENTS

This mitigation monitoring program includes a brief discussion of the legal basis and purpose of the mitigation monitoring program, a key to understanding the monitoring matrix, a discussion of noncompliance complaints, and the mitigation monitoring matrix itself.

LEGAL BASIS AND PURPOSE OF THE MITIGATION MONITORING PROGRAM

Public Resource Code (PRC) 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report or mitigated negative declaration. This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The City of Merced has adopted its own “Mitigation Monitoring and Reporting Program” (MMC 19.28). The City’s program was developed in accordance with the advisory publication, *Tracking CEQA Mitigation Measures*, from the Governor’s Office of Planning and Research.

As required by MMC 19.28.050, the following findings are made:

- 1) The requirements of the adopted mitigation monitoring program for the General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231 shall run with the real property. Successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program.
- 2) Prior to any lease, sale, transfer, or conveyance of any portion of the subject real property, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made.

MITIGATION MONITORING PROCEDURES

In most cases, mitigation measures can be monitored through the City’s construction plan approval/plan check process. When the approved project plans and specifications, with mitigation measures, are submitted to the City Development Services Department, a copy of the monitoring checklist will be attached to the submittal. The Mitigation Monitoring Checklist will be filled out upon project approval with mitigation measures required. As project plans and specifications are checked, compliance with each mitigation measure can be reviewed.

In instances where mitigation requires on-going monitoring, the Mitigation Monitoring Checklist will be used until monitoring is no longer necessary. The Development Services Department will be required to file periodic reports on how the implementation of various mitigation measures is progressing or is being maintained. Department staff may be required to conduct periodic inspections to assure compliance. In some instances, outside agencies and/or consultants may be required to conduct necessary periodic inspections as part of the mitigation monitoring program. Fees may be imposed per MMC 19.28.070 for the cost of implementing the monitoring program.

GENERAL PLAN MITIGATION MEASURES

As a second tier environmental document, Initial Study #19-18 incorporates some mitigation measures adopted as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (SCH# 2008071069), as mitigation for potential impacts of the Project.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the project. The complaint shall be directed to the Director of Development Services in written form providing specific information on the asserted violation. The Director of Development Services shall cause an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the Director of Development Services shall cause appropriate actions to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue. Merced Municipal Code (MMC) Sections 19.28.080 and 19.28.090 outline the criminal penalties and civil and administrative remedies which may be incurred in the event of noncompliance. MMC 19.28.100 spells out the appeals procedures.

MONITORING MATRIX

The following pages provide a series of tables identifying the mitigation measures proposed specifically for General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231. The columns within the tables are defined as follows:

| | |
|--|---|
| Mitigation Measure: | Describes the Mitigation Measure (referenced by number). |
| Timing: | Identifies at what point in time or phase of the project that the mitigation measure will be completed. |
| Agency/Department Consultation: | This column references any public agency or City department with which coordination is required to satisfy the identified mitigation measure. |
| Verification: | These columns will be initialed and dated by the individual designated to verify adherence to the project specific mitigation. |

General Plan Amendment #19-02/Zone Change #426/Conditional Use Permit #1231
Mitigation Monitoring Checklist

| | |
|---------------------------|------------------|
| Project Name: | File Number: |
| Approval Date: | Project Location |
| Brief Project Description | |

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring Requirements (MMC 19.28) with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

| 5) Cultural Resources | | | | |
|-----------------------|--------|---|---------------|-----------------------------|
| <i>Impact</i> | | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> |
| | CUL-1) | <p>If unknown pre-contact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations.</p> <p>Cultural resources materials may include pre-contact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations shall be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.</p> <p>The applicant shall inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:</p> | | |
| <i>a</i> | | | | |

(continued on next page)

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|---|------------------|-----------------------------|--|
| a | <p>“The subsurface of the construction site is sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells.”</p> <p>The City shall verify that the language has been included in the grading plans prior to issuance of a grading permit or other permitted project action that includes ground-disturbing activities on the project site.</p> | Building Permits | Planning Department | |
| b | CUL-2) Implementation of Mitigation Measure CUL-1. | Building Permits | Planning Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|---|------------------|-----------------------------|--|
| c | CUL-3) If human remains are identified during construction and cannot be preserved in place, the applicant shall fund: 1) the removal and documentation of the human remains from the project corridor by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, 2) the scientific analysis of the remains by a qualified archaeologist, should such analysis be permitted by the Native American Most Likely Descendant, and 3) the reburial of the remains, as appropriate. All excavation, analysis, and reburial of Native American human remains shall be done in consultation with the Native American Most Likely Descendant, as identified by the California Native American Heritage Commission. | Building Permits | Planning Department | |
| 6) Energy | | | | |
| a | ENE-1) The applicant shall comply with all applicable California Energy Code, AB 341, and San Joaquin Valley Air Pollution Control District rules and regulations regulating energy efficiency and waste. | Building Permits | Building Department | |
| b | ENE-2) Implementation of Mitigation Measure ENE-1. | Building Permits | Building Department | |

| 7) Geology and Soils | | | | |
|---------------------------------------|--|--------------------------------|-----------------------------|--|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| b | GEO-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit. | Building/ Encroachment Permits | Engineering Department | |
| | GEO-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02. | Building/ Encroachment Permits | Engineering Department | |
| 8) Hydrology and Water Quality | | | | |
| a | HYDRO-1) To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities. | Building/ Encroachment Permits | Engineering Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|--|--------------------------------|-----------------------------|--|
| a | HYDRO-2 If any storm drainage from the site is to drain into MID facilities, the developer shall first enter into a "Storm Drainage Agreement" with MID and pay all applicable fees. | Building/ Encroachment Permits | Engineering Department | |
| a | HYDRO-3) To reduce the potential for degradation of surface water quality during project operation, a SWPPP shall be prepared for the proposed project. The SWPPP shall describe specific programs to minimize stormwater pollution resulting from the proposed project. Specifically, the SWPPP shall identify and describe source control measures, treatment controls, and BMP maintenance requirements to ensure that the project complies with post-construction stormwater management requirements of the RWQCB. | Building/ Encroachment Permits | Engineering Department | |
| c | HYDRO-4 Prior to issuance of a building permit or as required by the City Engineer, the developer shall demonstrate to the City that storm drainage facilities are adequate to meet the Project demands and that improvements are consistent with the City Standards and the City's Storm Drain Master Plan. | Building/ Encroachment Permits | Engineering Department | |

| 13) Noise | | | | |
|------------|---|-----------------|----------------------|---------------------------------------|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| NOI-1) | <p>To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:</p> <ul style="list-style-type: none"> • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction disturbance area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited). • The construction contractor shall locate, to the maximum extent practical, on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. | Building Permit | Building Department | |
| a | (continued on next page) | | | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|---------------------------------------|---|-----------------|---------------------------------|--|
| | <ul style="list-style-type: none"> The construction contractor shall limit all noise producing construction activities, including deliveries and warming up of equipment, to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No such work shall be permitted on Sundays or federal holidays without prior approval from the City. | Building Permit | Planning Department | |
| 17) Transportation and Traffic | | | | |
| a | <p>TRA-01 The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)</p> <p>-or-</p> <p>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.</p> | Building Permit | Planning/Engineering Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|--|-----------------|---------------------------------|--|
| TRA-02 | <p>The following modifications to the intersection of Olive Avenue and McKee Road shall be made:</p> <p><u>Southbound Approach:</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the southbound approach. • Re-stripe the approach as shared left/thru lane and share right/thru lane. • Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop. <p><u>Northbound Approach</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the north bound approach. • Re-stripe the approach as shared left/thru lane and shared right/thru lane. • Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area. | Building Permit | Planning/Engineering Department | |
| b | <p>TRA-03 The developer shall work with the Transit Joint Powers Authority of Merced County (The Bus) to locate a bus stop within ½-mile of the project site.</p> | Building Permit | Planning/Engineering Department | |

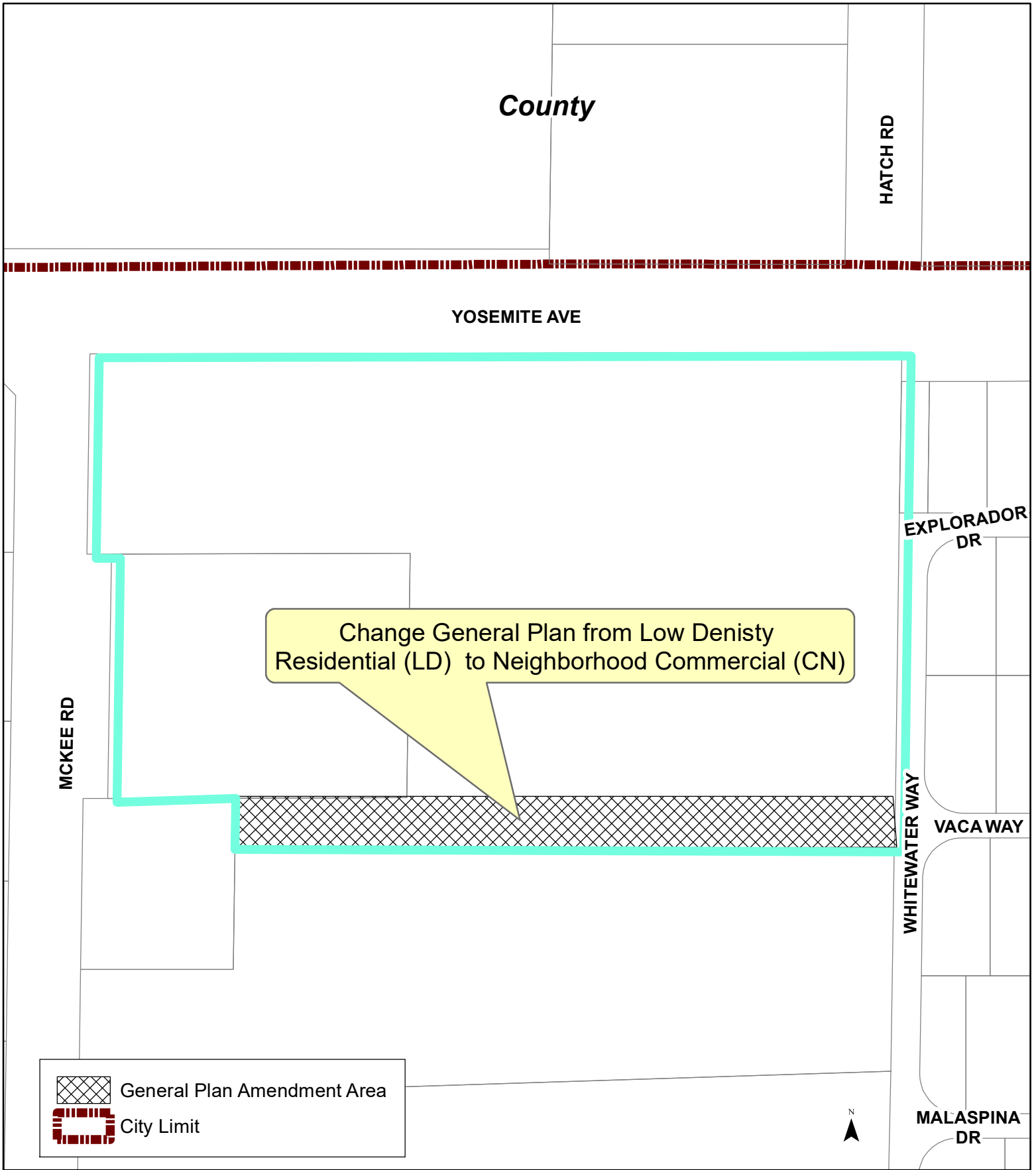
| | | |
|---|--|-------------------------------|
| <p>19) <i>Utilities and Service Systems</i></p> | <p>UTI-01) The project shall provide for on-site storage of wastewater in an underground storage tank, then release the wastewater into the City's system during off-peak hours or an alternative approved by the City Engineer. Details to be worked out with the City Engineer prior to construction.</p> | <p>Engineering Department</p> |
|---|--|-------------------------------|

Certificate of Completion:

By signing below, the environmental coordinator confirms that the required mitigation measures have been implemented as evidenced by the Schedule of Tasks and Sign-Off Checklist, and that all direct and indirect costs have been paid. This act constitutes the issuance of a *Certificate of Completion*.

Environmental Coordinator

Date _____



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GENERAL PLAN AMENDMENT #19-02

EXHIBIT D



ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
AMENDING THE OFFICIAL ZONING MAP BY
REZONING APPROXIMATELY 0.52 ACRES OF
LAND GENERALLY LOCATED ON THE EAST
SIDE OF MCKEE ROAD, APPROXIMATELY 360
FEET SOUTH OF YOSEMITE AVENUE FROM R-
1-6 TO NEIGHBORHOOD COMMERCIAL (C-N)**

**THE CITY COUNCIL OF THE CITY OF MERCED DOES ORDAIN
AS FOLLOWS:**

SECTION 1. AMENDMENT TO CODE. The property described in Exhibit "A," and shown on the map at Exhibit "B," attached hereto, and by this reference made a part hereof, is hereby rezoned as shown on said map from R-1-6 to Neighborhood Commercial (C-N).

SECTION 2. CHANGE OF MAP. The Director of Development Services is hereby directed to make the appropriate markings on the Official Zoning Map in conformance with this Ordinance and the provisions of Title 20 of the Merced Municipal Code.

SECTION 3. EFFECTIVE DATE. This Ordinance shall be in full force and effect thirty (30) days after its adoption.

SECTION 4. SEVERABILITY. If any section, subsection, subdivision, sentence, clause, phrase, or portion of this Ordinance, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance, and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 5. PUBLICATION. The City Clerk is directed to cause a summary of this Ordinance to be published in the official newspaper at least once within fifteen (15) days after its adoption showing the vote thereon.

The foregoing Ordinance was introduced at a regular meeting of the City Council of the City of Merced on the ____ day of _____ 2019, and was passed and adopted at a regular meeting of said City Council held on the ____ day of _____ 2019, by the following called vote:

AYES: Council Members:

NOES: Council Members:

ABSTAIN: Council Members:

ABSENT: Council Members:

APPROVED:

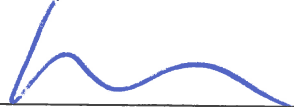
Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:



City Attorney

9/13/19

Date

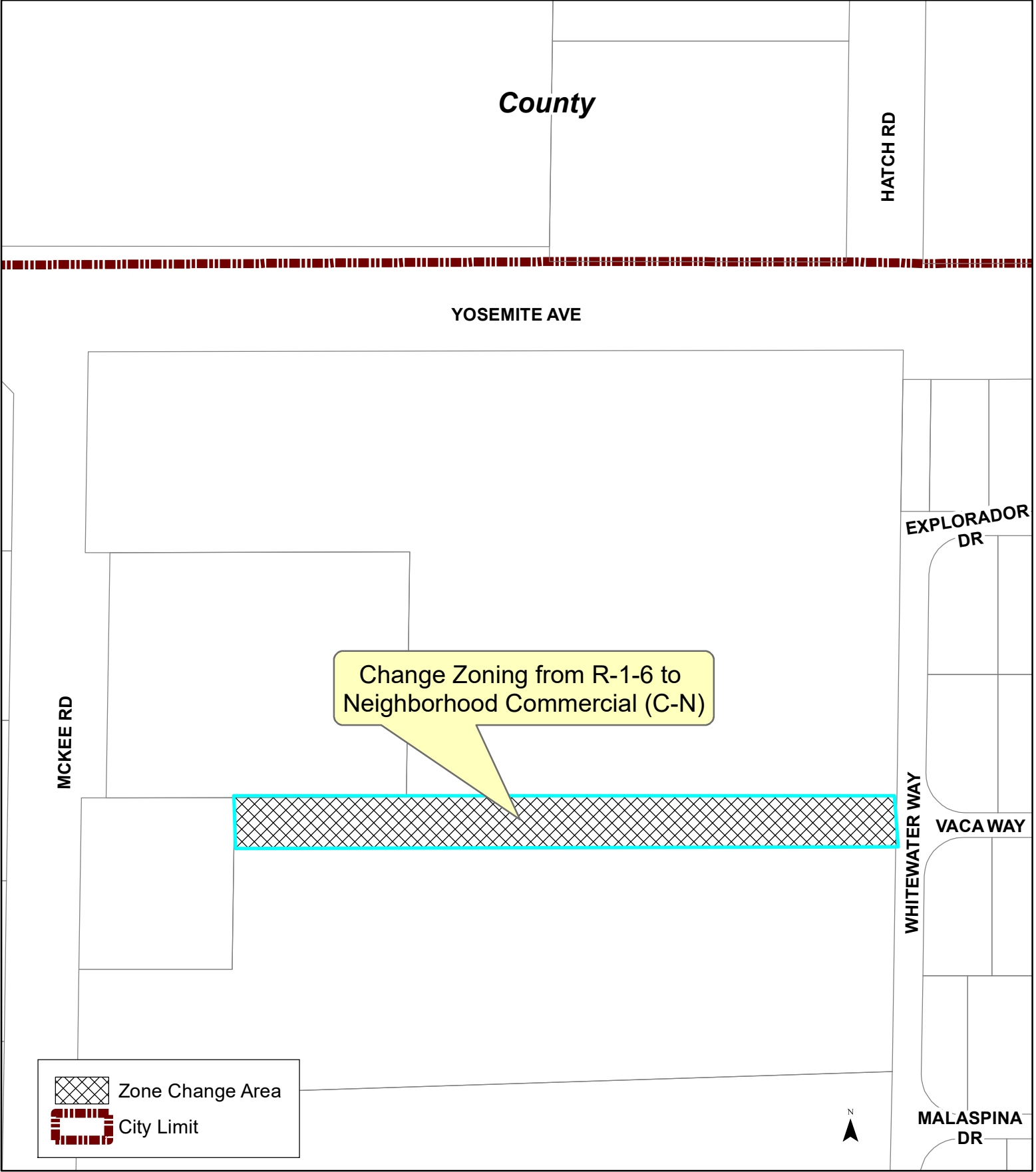
EXHIBIT A
LEGAL DESCRIPTION

The East 539.75 feet of the following described Parcel 2, per Grant Deed recorded as Document No. 2010-045178, Merced County Records; the West line of said east 539.75 feet being the Northerly extension of the East line of Parcel 1 as described in said Grant Deed, said Northerly extension ending at a point on the South line of Parcel 1 as shown on Parcel Map recorded in Book 58 at Page 44, Merced County Records. The above Parcel 2 being described as follows:

All that portion of Lot 150 as shown on the map entitled "Map of Bradley's Addition No. 3 to Merced, California" filed January 4, 1911, in Vol. 4 of Official Plats, at Page 43, Merced County Records, described as follows:

Beginning at a point on the West lines of said Lot 150, said point being S. 0 deg. 51' W. 406.01 feet from the Northwest corner of said Lot 150; thence N. 89 deg. 54' E. parallel with the North line of said Lot 150, a distance of 660 feet to a point on the East line of said Lot 150, said point being S. 0 deg. 51' W. 406.01 feet from the Northeast corner of said Lot 150; thence N. 0 deg. 51' E. along the East line of said Lot 150 a distance of 42 feet; thence S. 89 deg. 54' W. parallel with the North line of said Lot 150, a distance of 660 feet to the West line of said Lot 150; thence S. 0 deg. 51' W. along the West line of said Lot 150, a distance of 42 feet to the point of beginning.

Containing approximately 22,669.57 square feet (0.52 acres +/-)



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ZONE CHANGE #426



RECORDING REQUESTED BY:

City of Merced, A California charter
municipal corporation

WHEN RECORDED MAIL TO:

City of Merced
City Clerk
678 West 18th Street
Merced, California 95340

**Exempt from Recording Fees Per
Government Code Section 6103**

(Above for Recorder's Use Only)

LEGISLATIVE ACTION AGREEMENT

THIS AGREEMENT is made and entered into as of this _____ day of _____ 2019 by and between the City of Merced, a California Charter Law Municipal Corporation ("City") and Merced Holdings, LP, a Nevada Limited Partnership ("Owner").

W I T N E S S E T H

WHEREAS, Owner has applied to the City for a General Plan Amendment and Zone Change (the "Entitlements") for approximately 0.52 acres of land located at the east side of McKee Road, and approximately 360 feet south of Yosemite Avenue, and as legally described on Exhibit "A," and shown on the Map at Exhibit "B," attached hereto and incorporated herein by this reference; and

WHEREAS, City is willing to consider Owner's request provided that certain conditions are met.

NOW, THEREFORE, in consideration of the mutual covenants, promises, and representations contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged and agreed, the parties hereto agree as follows:

1. Owner, for himself and all successors thereto, agrees to pay all City and school district fees, taxes, and/or assessments in effect on the date of subdivision and/or permit approval, any increase in those fees, taxes, and/or assessments, and any new fees, taxes, and/or assessments which are in effect at the time water/sewer connection and/or building or encroachment permits are issued, which may include public facility impact fees, other impact fees as applicable, and any Mello-Roos taxes—whether for infrastructure, services, or any other activity or project authorized by the Mello-Roos law, etc., (and to comply with the additional conditions set forth in Exhibit "C," (Planning Commission Resolution #4025), attached hereto and incorporated herein by this reference). Payment shall be made at the time of building permit

issuance unless an Ordinance or other requirement of the City mandates or permits payment of such fees, taxes, and/or assessments at an earlier or subsequent time.

2. Owner desires to comply with the conditions of approval set forth on Exhibit "C," and within this Agreement and acknowledges that the conditions are necessary to mitigate the environmental impact caused by Owner's development or are necessary to offset the costs to the City generated by Owner's development including sewer connection costs pursuant to Chapter 15.16 of the Merced Municipal Code.

3. Owner agrees to pay all sewer connection costs imposed by the City as delineated in Section 15.16.070 of the Merced Municipal Code and to pay all other costs required by Chapter 15.16 of the Merced Municipal Code.

4. The Owner shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, Owner shall indemnify, protect, defend, and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against another governmental entity in which Owner's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the Owner of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the Owner shall not thereafter be responsible to indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.

5. City, on its part, agrees to rezone the subject property to Neighborhood Commercial (C-N) and change the General Plan (City approval) in accordance with Exhibit "B."

6. No building permit or other permit shall be issued that is not in compliance with this Agreement.

7. It is expressly agreed that this Agreement is not intended to limit the power of the City to impose other requirements, limitations, or fees, etc., as a condition of development, and does not relieve the Owner from complying with all other requirements that may be imposed as a condition of development, whether now in existence or hereinafter imposed by the City whether by zone change, subdivision map approval, ordinance, resolution, use permit, or otherwise. The parties agree that this Paragraph does not apply to the approval of a final map and issuance of building permits for project(s) subject to this Agreement on the property described in Exhibit "A."

8. To the extent allowed by law, the conditions of this Agreement constitute covenants running with the land, and shall be enforceable by the City or by any present or future owner of any of the land described in Exhibit "A."

9. Owner agrees to comply with and abide by all conditions set forth by the City relating to the development of the property subject to this Agreement, including installation of all required public improvements.

10. In the event of default by Owner, and in addition to any other remedy available to the City, the City shall have the right to rezone the land back to its original designation and/or to de-annex the land as appropriate.

11. In the event that either City or the Owner shall at any time or times waive any breach of this Agreement by the other, such waiver shall not constitute a waiver of any other or succeeding breach of this Agreement, whether of the same or any other covenant, condition or obligation. Waiver shall not be deemed effective until and unless signed by the waiving party.

12. This Agreement and all matters relating to it shall be governed by the laws of the State of California and any action brought relating to this agreement shall be held exclusively in a state court in the County of Merced.

13. This Agreement shall not be amended, modified, or otherwise changed unless in writing and signed by both parties hereto.

14. This Agreement constitutes the entire understanding and agreement of the parties and supersedes all previous and/or contemporaneous understanding or agreement between the parties with respect to all or any part of the subject matter hereof.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the date first above written.

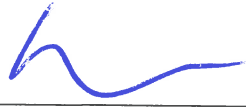
CITY OF MERCED
A California Charter Law Municipal Corporation

BY: _____
City Manager

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

APPROVED AS TO FORM:

BY:  9/13/19
City Attorney Date

ACCOUNT DATA:

BY: _____
Verified by Finance Officer

OWNER
MERCED HOLDINGS, LP,
A Nevada Limited Partnership

By: Joseph S. Englanhoff

Its: _____

ADDRESS: 9701 West Pico Blvc, Ste 201A
Los Angeles, CA 90035

TELEPHONE: (805) 743-9630

FAX: _____

E-MAIL: joe.englanhoff@gmail.com

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of _____)

On _____ before me, _____
(insert name and title of the officer)

personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of _____)

On _____ before me, _____
(insert name and title of the officer)

personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
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his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

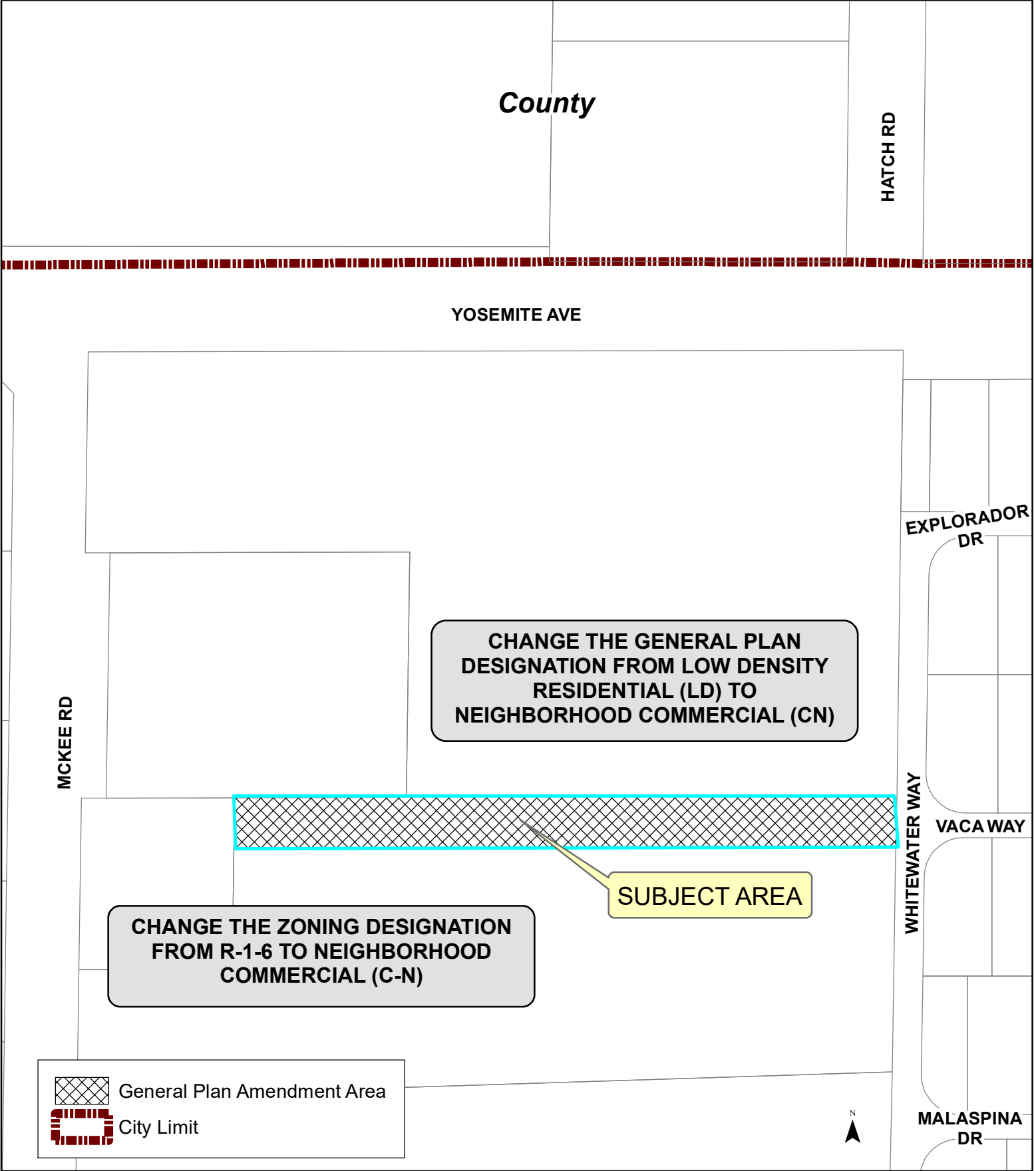
EXHIBIT A
LEGAL DESCRIPTION

The East 539.75 feet of the following described Parcel 2, per Grant Deed recorded as Document No. 2010-045178, Merced County Records; the West line of said east 539.75 feet being the Northerly extension of the East line of Parcel 1 as described in said Grant Deed, said Northerly extension ending at a point on the South line of Parcel 1 as shown on Parcel Map recorded in Book 58 at Page 44, Merced County Records. The above Parcel 2 being described as follows:

All that portion of Lot 150 as shown on the map entitled "Map of Bradley's Addition No. 3 to Merced, California" filed January 4, 1911, in Vol. 4 of Official Plats, at Page 43, Merced County Records, described as follows:

Beginning at a point on the West lines of said Lot 150, said point being S. 0 deg. 51' W. 406.01 feet from the Northwest corner of said Lot 150; thence N. 89 deg. 54' E. parallel with the North line of said Lot 150, a distance of 660 feet to a point on the East line of said Lot 150, said point being S. 0 deg. 51' W. 406.01 feet from the Northeast corner of said Lot 150; thence N. 0 deg. 51' E. along the East line of said Lot 150 a distance of 42 feet; thence S. 89 deg. 54' W. parallel with the North line of said Lot 150, a distance of 660 feet to the West line of said Lot 150; thence S. 0 deg. 51' W. along the West line of said Lot 150, a distance of 42 feet to the point of beginning.

Containing approximately 22,669.57 square feet (0.52 acres +/-)



Disclaimer: This document was prepared for general inquiries only. The City of Merced is not liable for errors or omissions that might occur. Official information concerning specific parcels should be obtained from recorded or adopted City documents.

GENERAL PLAN AMENDMENT #19-02
ZONE CHANGE #426
SUBJECT AREA
(0.52 Acres +/-)
EXHIBIT B



CITY OF MERCED
Planning Commission

Resolution #4025

WHEREAS, the Merced City Planning Commission at its regular meeting of August 21, 2019, held a public hearing and considered **General Plan Amendment #19-02 and Zone Change #426**, initiated by Merced Holdings, LP, property owner. The General Plan Amendment and Zone Change application is a request to change the General Plan designation from Low Density Residential (LD) to Neighborhood Commercial (CN) and change the Zoning designation from R-1-6 to Neighborhood Commercial (C-N) for approximately 22,670 square feet of land located approximately 360 feet south of Yosemite Avenue, on the east side of McKee Road; also known as Assessor's Parcel Number 008-310-038; and,

WHEREAS, the Merced City Planning Commission concurs with Finding K of Staff Report #19-22; and, the following additional finding:

L. To promote orderly development in a community, a single parcel should usually have only a single consistent General Plan land use designation and a single zoning designation. Therefore, the General Plan designation and zoning for the 22,670-square-foot strip of land along the southern property line of this parcel should be changed to match the Neighborhood Commercial (CN) land use designation and the Neighborhood Commercial (C-N) zoning designation as the rest of the parcel.

NOW THEREFORE, after reviewing the City's Initial Study and Draft Environmental Determination, and fully discussing all the issues, the Merced City Planning Commission does resolve to hereby recommend to City Council adoption of a Mitigated Negative Declaration regarding Environmental Review #19-18, and approval of General Plan Amendment #19-02 and Zone Change #426, subject to the Conditions set forth in Exhibit A attached hereto and incorporated herein by this reference.

Upon motion by Commissioner HARISS, seconded by Commissioner PADILLA, and carried by the following vote:

AYES: Commissioners Camper, Dylina, Harris, Padilla, and Chairperson Drexel

NOES: None

ABSENT: Commissioner Rashe


ABSTAIN: None (one vacancy)

PLANNING COMMISSION RESOLUTION # 4025

Page 2

August 21, 2019

Adopted this 21st day of August 2019


Chairperson, Planning Commission of
the City of Merced, California

ATTEST:


Secretary

Attachment:

Exhibit A – Conditions of Approval

Exhibit B – Mitigation Monitoring Program

n:\shared\planning\PC Resolutions\GPA #19-02

Conditions of Approval
Planning Commission Resolution #4025
General Plan Amendment #19-02
Zone Change #426

1. The proposed General Plan Amendment and Zone Change shall be as shown on the Proposed Land Use Map at Attachment B of Staff Report #19-22.
2. The proposed project shall comply with all standard Municipal Code and Subdivision Map Act requirements as applied by the City Engineering Department.
3. The Project shall comply with the applicable conditions set forth in Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 previously approved for this site.
4. All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.
5. Approval of the General Plan Amendment and Zone Change is subject to the applicant's entering into a written (developer) agreement that they agree to all the conditions and shall pay all City and school district fees, taxes, and/or assessments, in effect on the date of any subsequent subdivision and/or permit approval, any increase in those fees, taxes, or assessments, and any new fees, taxes, or assessments, which are in effect at the time the building permits are issued, which may include public facilities impact fees, a regional traffic impact fee, Mello-Roos taxes—whether for infrastructure, services, or any other activity or project authorized by the Mello-Roos law, etc. Payment shall be made for each phase at the time of building permit issuance for such phase unless an Ordinance or other requirement of the City requires payment of such fees, taxes, and or assessments at an earlier or subsequent time. Said agreement to be approved by the City Council prior to the adoption of the ordinance, resolution, or minute action.
6. The developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, and any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof, from any and all claims, actions, suits, proceedings, or judgments against the City, or any agency or instrumentality thereof, and any officers, officials, employees, or agents thereof to attack, set aside, void, or annul, an approval of the City, or any agency or instrumentality thereof, advisory

EXHIBIT A
of Planning Commission Resolution #4025

Page 1

agency, appeal board, or legislative body, including actions approved by the voters of the City, concerning the project and the approvals granted herein. Furthermore, developer/applicant shall indemnify, protect, defend (with counsel selected by the City), and hold harmless the City, or any agency or instrumentality thereof, against any and all claims, actions, suits, proceedings, or judgments against any governmental entity in which developer/applicant's project is subject to that other governmental entity's approval and a condition of such approval is that the City indemnify and defend such governmental entity. City shall promptly notify the developer/applicant of any claim, action, or proceeding. City shall further cooperate fully in the defense of the action. Should the City fail to either promptly notify or cooperate fully, the developer/applicant shall not thereafter be responsible to indemnify, defend, protect, or hold harmless the City, any agency or instrumentality thereof, or any of its officers, officials, employees, or agents.

7. The developer/applicant shall construct and operate the project in strict compliance with the approvals granted herein, City standards, laws, and ordinances, and in compliance with all State and Federal laws, regulations, and standards. In the event of a conflict between City laws and standards and a State or Federal law, regulation, or standard, the stricter or higher standard shall control.
8. Community Facilities District (CFD) formation is required for annual operating costs for police and fire services as well as storm drainage, public landscaping, street trees, streetlights, parks and open space. CFD procedures shall be initiated before final map approval or issuance of a building permit, whichever comes first. Developer/Owner shall submit a request agreeing to such a procedure, waiving right to protest and post deposit as determined by the City Engineer to be sufficient to cover procedure costs and maintenance costs expected prior to first assessments being received.
9. The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-18 (Exhibit B of Planning Commission Resolution #J of Staff Report #19-22) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-18, Attachment I of Staff Report #19-22)

n:shared:planning:PC Resolutions:GPA#19-02 ZC #426 Exhibit A

ENVIRONMENTAL REVIEW #19-18

Mitigation Monitoring Program

MITIGATION MONITORING CONTENTS

This mitigation monitoring program includes a brief discussion of the legal basis and purpose of the mitigation monitoring program, a key to understanding the monitoring matrix, a discussion of noncompliance complaints, and the mitigation monitoring matrix itself.

LEGAL BASIS AND PURPOSE OF THE MITIGATION MONITORING PROGRAM

Public Resource Code (PRC) 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report or mitigated negative declaration. This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The City of Merced has adopted its own “Mitigation Monitoring and Reporting Program” (MMC 19.28). The City’s program was developed in accordance with the advisory publication, *Tracking CEQA Mitigation Measures*, from the Governor’s Office of Planning and Research.

As required by MMC 19.28.050, the following findings are made:

- 1) The requirements of the adopted mitigation monitoring program for the General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231 shall run with the real property. Successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program.
- 2) Prior to any lease, sale, transfer, or conveyance of any portion of the subject real property, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made.

MITIGATION MONITORING PROCEDURES

In most cases, mitigation measures can be monitored through the City’s construction plan approval/plan check process. When the approved project plans and specifications, with mitigation measures, are submitted to the City Development Services Department, a copy of the monitoring checklist will be attached to the submittal. The Mitigation Monitoring Checklist will be filled out upon project approval with mitigation measures required. As project plans and specifications are checked, compliance with each mitigation measure can be reviewed.

In instances where mitigation requires on-going monitoring, the Mitigation Monitoring Checklist will be used until monitoring is no longer necessary. The Development Services Department will be required to file periodic reports on how the implementation of various mitigation measures is progressing or is being maintained. Department staff may be required to conduct periodic inspections to assure compliance. In some instances, outside agencies and/or consultants may be required to conduct necessary periodic inspections as part of the mitigation monitoring program. Fees may be imposed per MMC 19.28.070 for the cost of implementing the monitoring program.

GENERAL PLAN MITIGATION MEASURES

As a second tier environmental document, Initial Study #19-18 incorporates some mitigation measures adopted as part of the *Merced Vision 2030 General Plan Program Environmental Impact Report* (SCH# 2008071069), as mitigation for potential impacts of the Project.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures associated with the project. The complaint shall be directed to the Director of Development Services in written form providing specific information on the asserted violation. The Director of Development Services shall cause an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the Director of Development Services shall cause appropriate actions to remedy any violation. The complainant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue. Merced Municipal Code (MMC) Sections 19.28.080 and 19.28.090 outline the criminal penalties and civil and administrative remedies which may be incurred in the event of noncompliance. MMC 19.28.100 spells out the appeals procedures.

MONITORING MATRIX

The following pages provide a series of tables identifying the mitigation measures proposed specifically for General Plan Amendment #19-02, Zone Change #426, and Conditional Use Permit #1231. The columns within the tables are defined as follows:

| | |
|--|---|
| Mitigation Measure: | Describes the Mitigation Measure (referenced by number). |
| Timing: | Identifies at what point in time or phase of the project that the mitigation measure will be completed. |
| Agency/Department Consultation: | This column references any public agency or City department with which coordination is required to satisfy the identified mitigation measure. |
| Verification: | These columns will be initialed and dated by the individual designated to verify adherence to the project specific mitigation. |

General Plan Amendment #19-02/Zone Change #426/Conditional Use Permit #1231
Mitigation Monitoring Checklist

| | |
|---------------------------|------------------|
| Project Name: | File Number: |
| Approval Date: | Project Location |
| Brief Project Description | |

The following environmental mitigation measures were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City of Merced's Mitigation Monitoring Requirements (MMC 19.28) with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

| 5) Cultural Resources | | | | |
|-----------------------|--------|---|---------------|-----------------------------|
| <i>Impact</i> | | <i>Mitigation Measures</i> | <i>Timing</i> | <i>Agency or Department</i> |
| | CUL-1) | <p>If unknown pre-contact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations.</p> <p>Cultural resources materials may include pre-contact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations shall be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.</p> <p>The applicant shall inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:</p> | | |
| <i>a</i> | | | | |

(continued on next page)

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|---|------------------|-----------------------------|--|
| a | <p>“The subsurface of the construction site is sensitive for archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells.”</p> <p>The City shall verify that the language has been included in the grading plans prior to issuance of a grading permit or other permitted project action that includes ground-disturbing activities on the project site.</p> | Building Permits | Planning Department | |
| b | CUL-2) Implementation of Mitigation Measure CUL-1. | Building Permits | Planning Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|---|------------------|-----------------------------|--|
| c | CUL-3) If human remains are identified during construction and cannot be preserved in place, the applicant shall fund: 1) the removal and documentation of the human remains from the project corridor by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, 2) the scientific analysis of the remains by a qualified archaeologist, should such analysis be permitted by the Native American Most Likely Descendant, and 3) the reburial of the remains, as appropriate. All excavation, analysis, and reburial of Native American human remains shall be done in consultation with the Native American Most Likely Descendant, as identified by the California Native American Heritage Commission. | Building Permits | Planning Department | |
| 6) Energy | | | | |
| a | ENE-1) The applicant shall comply with all applicable California Energy Code, AB 341, and San Joaquin Valley Air Pollution Control District rules and regulations regulating energy efficiency and waste. | Building Permits | Building Department | |
| b | ENE-2) Implementation of Mitigation Measure ENE-1. | Building Permits | Building Department | |

| 7) Geology and Soils | | | | |
|---------------------------------------|--|--------------------------------|-----------------------------|--|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| b | GEO-1) The project shall comply with all requirements of the State Water Resources Board (SWRCB) and obtain a General Construction Activity Stormwater Permit. | Building/ Encroachment Permits | Engineering Department | |
| | GEO-2) The project shall comply with all applicable mitigation measures for Expanded Initial Study #02-27 for General Plan Amendment #02-02 and Annexation/Pre-Zoning Application #02-02. | Building/ Encroachment Permits | Engineering Department | |
| 8) Hydrology and Water Quality | | | | |
| a | HYDRO-1) To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities. | Building/ Encroachment Permits | Engineering Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|--|--------------------------------|-----------------------------|--|
| a | HYDRO-2 If any storm drainage from the site is to drain into MID facilities, the developer shall first enter into a "Storm Drainage Agreement" with MID and pay all applicable fees. | Building/ Encroachment Permits | Engineering Department | |
| a | HYDRO-3) To reduce the potential for degradation of surface water quality during project operation, a SWPPP shall be prepared for the proposed project. The SWPPP shall describe specific programs to minimize stormwater pollution resulting from the proposed project. Specifically, the SWPPP shall identify and describe source control measures, treatment controls, and BMP maintenance requirements to ensure that the project complies with post-construction stormwater management requirements of the RWQCB. | Building/ Encroachment Permits | Engineering Department | |
| c | HYDRO-4 Prior to issuance of a building permit or as required by the City Engineer, the developer shall demonstrate to the City that storm drainage facilities are adequate to meet the Project demands and that improvements are consistent with the City Standards and the City's Storm Drain Master Plan. | Building/ Encroachment Permits | Engineering Department | |

| 13) Noise | | | | |
|------------|---|-----------------|----------------------|---------------------------------------|
| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
| NOI-1) | <p>To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:</p> <ul style="list-style-type: none"> • The construction contractor shall ensure that all internal combustion engine-driven equipment is equipped with mufflers that are in good condition and appropriate for the equipment. • The construction contractor shall locate stationary noise-generating equipment as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction disturbance area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited). • The construction contractor shall locate, to the maximum extent practical, on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. | Building Permit | Building Department | |
| a | (continued on next page) | | | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|---------------------------------------|---|-----------------|---------------------------------|--|
| | <ul style="list-style-type: none"> The construction contractor shall limit all noise producing construction activities, including deliveries and warming up of equipment, to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No such work shall be permitted on Sundays or federal holidays without prior approval from the City. | Building Permit | Planning Department | |
| 17) Transportation and Traffic | | | | |
| a | <p>TRA-01 The westbound lane of Yosemite Avenue at Parsons Avenue shall be modified to accommodate an additional 200-foot shared thru/right turn lane. In addition, the existing shared left/thru/right lane shall be restriped to be a shared left/thru lane. (The Traffic Analysis recommended an additional 100 foot lane be installed. The City Engineer recommends the length of the lane be increased to 200 feet.)</p> <p>-or-</p> <p>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer.</p> | Building Permit | Planning/Engineering Department | |

| Impact No. | Mitigation Measures | Timing | Agency or Department | City Verification (date and initials) |
|-------------------|--|-----------------|---------------------------------|--|
| TRA-02 | <p>The following modifications to the intersection of Olive Avenue and McKee Road shall be made:</p> <p><u>Southbound Approach:</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the southbound approach. • Re-stripe the approach as shared left/thru lane and share right/thru lane. • Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop. <p><u>Northbound Approach</u></p> <ul style="list-style-type: none"> • Remove the adjacent on-street parking for 100 feet on the north bound approach. • Re-stripe the approach as shared left/thru lane and shared right/thru lane. • Remove the adjacent on-street parking for 100 feet on the northbound receiving lane and stripe it as a lane drop. The City Engineer shall determine if this measure is feasible due to the location of residential driveways in this area. | Building Permit | Planning/Engineering Department | |
| b | <p>TRA-03 The developer shall work with the Transit Joint Powers Authority of Merced County (The Bus) to locate a bus stop within ½-mile of the project site.</p> | Building Permit | Planning/Engineering Department | |

| 19) Utilities and Service Systems | | | |
|-----------------------------------|--|-----------------|------------------------|
| c | UTI-01) The project shall provide for on-site storage of wastewater in an underground storage tank, then release the wastewater into the City's system during off-peak hours or an alternative approved by the City Engineer. Details to be worked out with the City Engineer prior to construction. | Building Permit | Engineering Department |

Certificate of Completion:

By signing below, the environmental coordinator confirms that the required mitigation measures have been implemented as evidenced by the Schedule of Tasks and Sign-Off Checklist, and that all direct and indirect costs have been paid. This act constitutes the issuance of a *Certificate of Completion*.

 Environmental Coordinator

 Date



Yosemite & McKee

Southeast Corner

University Village at Yosemite Apartments/

Mixed-Use Project

Yosemite Church/
Providence School

Single Family
Residential

County

HATCH RD

YOSEMITE AVE

PEBBLE BEACH DR

Single Family
Residential

SPANISH BAY CT

MC KEERD

**SUBJECT
SITE**

EXPLORADOR DR

Single Family
Residential

Single Family
Residential

WHITEWATER WAY

LEGENDS CT

City Limit

801

NAR

Background

- General Plan and Zone Change approved in 2015 to change original site from Low Density Residential to Neighborhood Commercial.
- Proposed 62,000 s.f. Shopping Center.
- Owner recently acquired 0.52 Acres (approximately 22,670 s.f.) from the adjacent property to the south.

Property recently
acquired.



ROAD

MCKEE

BLDG. 2
7,000 S.F.

PARKING SPACE
(216 STALLS)
(11 HC STALLS)

Entrance only Access
from Yosemite into
Shopping Center.

BLDG. 3
13,000 S.F.

BUILDING 1
TOTAL = 42,000 S.F.

PHASE 1

PHASE 2

Previously approved 62,000 S.F. Shopping Center

General Plan Amendment #19-02 & Zone Change #426



Project Description

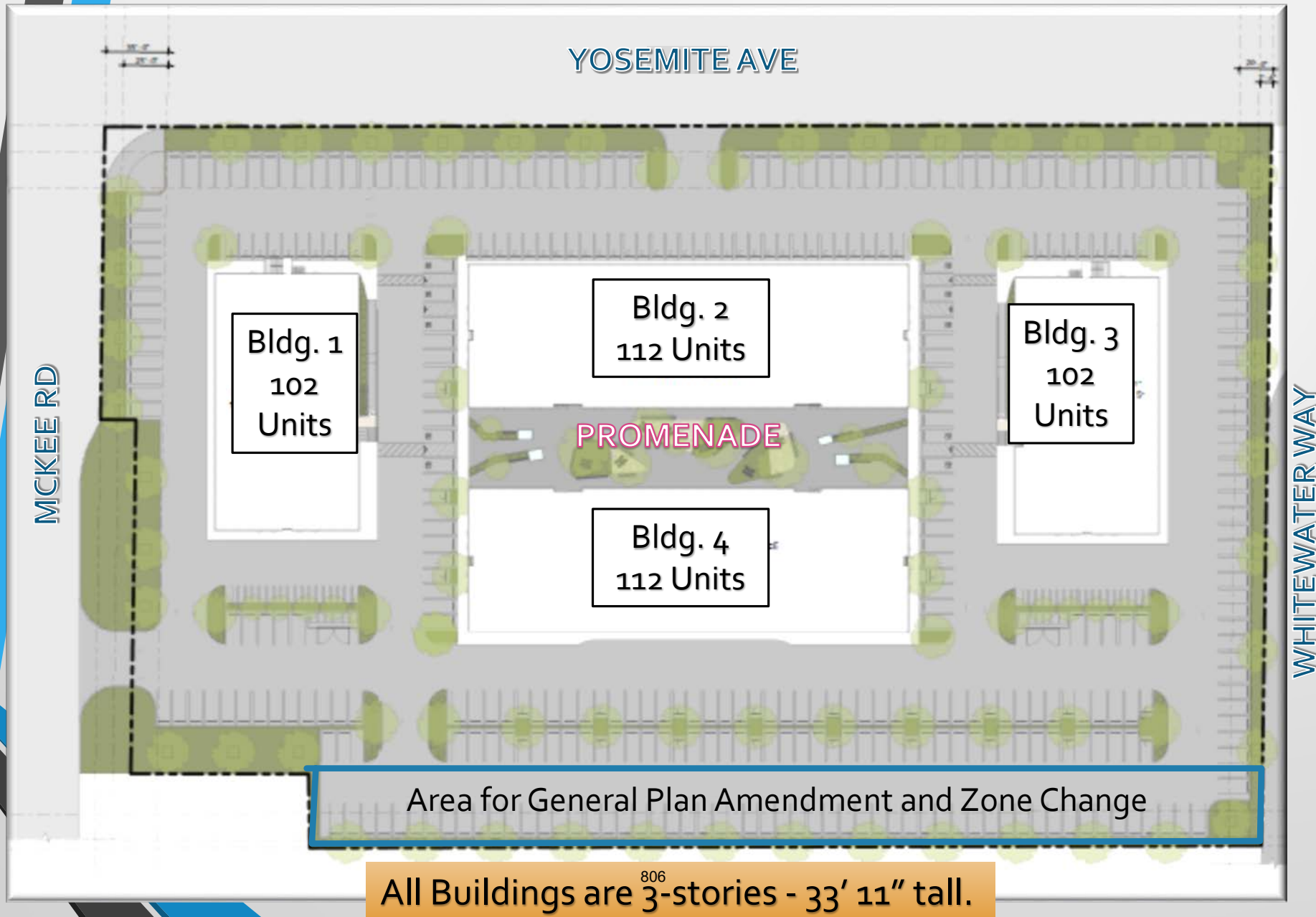
CONDITIONAL USE PERMIT #1231

- Site: 5.94 Acres
- Four Buildings (3-stories)
- Commercial S.F. : 18,000 S.F.
- Residential Community/Amenity Area: 18,000 S.F.
- Total Residential Units: 428 Efficiency Dwelling Units

Multi-Family Dwellings Allowed with Conditional Use Permit (CUP) in C-N Zone.

- An Efficiency Dwelling Unit is a small dwelling usually consisting of a single-room within a multi-family structure.
- Typically designed for a single occupant.
- Developer has agreed to limit units to a single occupant.

Site Plan



Density

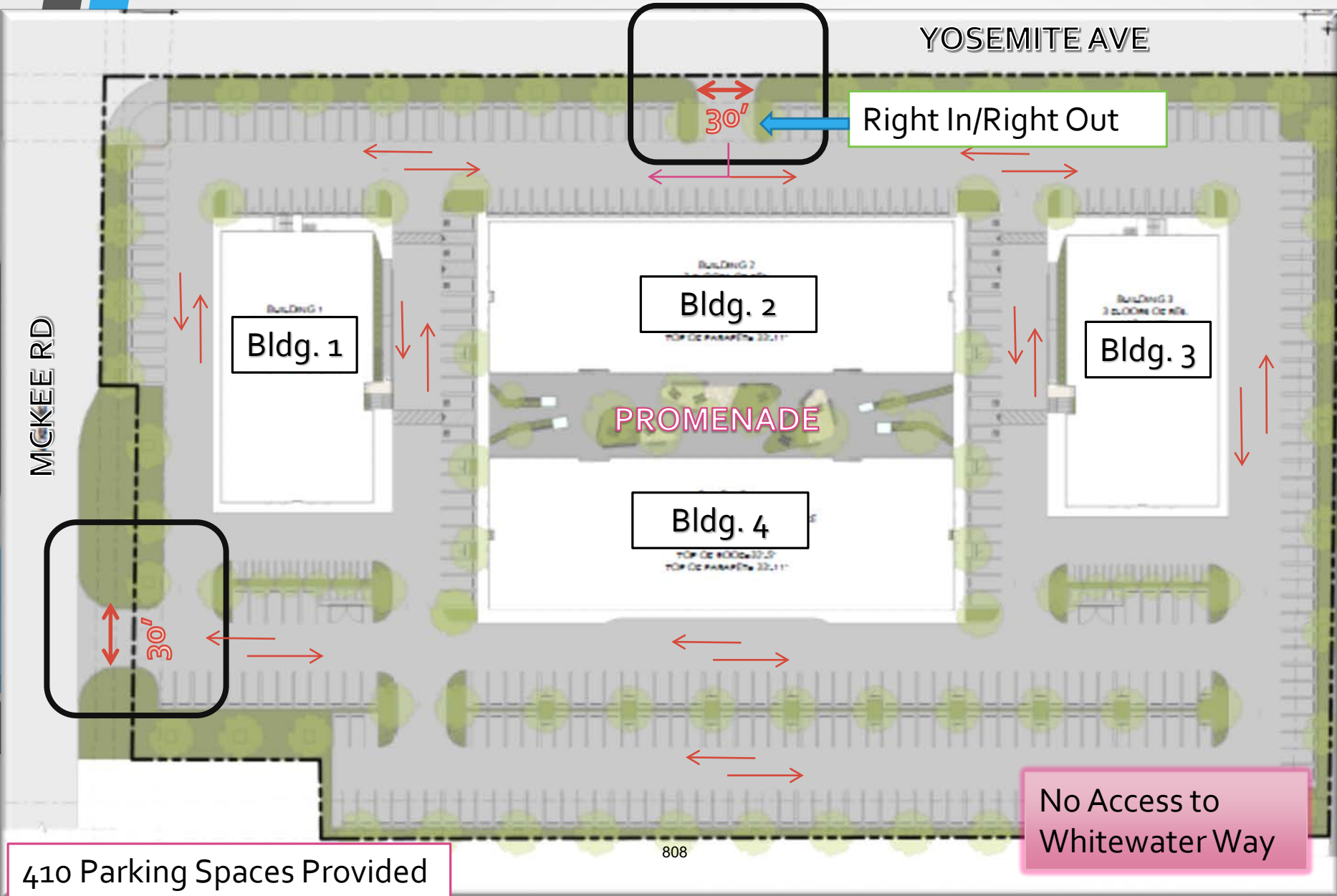
| DENSITY & PEOPLE PER ACRE | | | | | | |
|---------------------------|---------|----------------|-----------------|-----------|--------------|-------------|
| Acres | Density | Max Units/Acre | Allowed DU/Acre | Bdrm/Unit | Total People | People/Acre |
| 5.94 | HD | 36 | 214 | 2 | 428 | 72 |
| 5.94 | HD | 36 | 214 | 3 | 642 | 108 |
| Proposed Project | | | | | | |
| 5.94 | | | | 1 | 428 | 72 |

Number of people would be equal to 214 units with 2 bedrooms/unit.

Average household is approximately 3 persons per household.

Population within High Density Residential is estimated to be 72.8 to 108.7 persons per acre.

Circulation & Parking



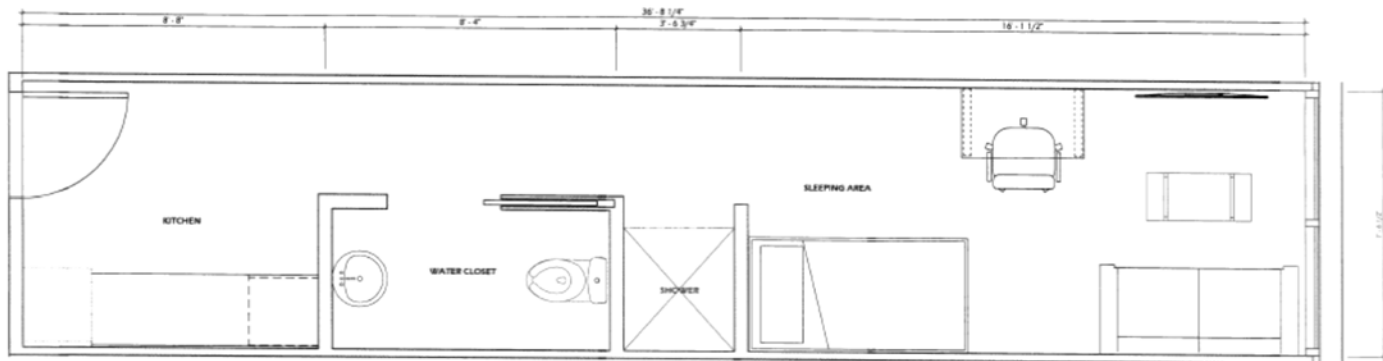
Parking

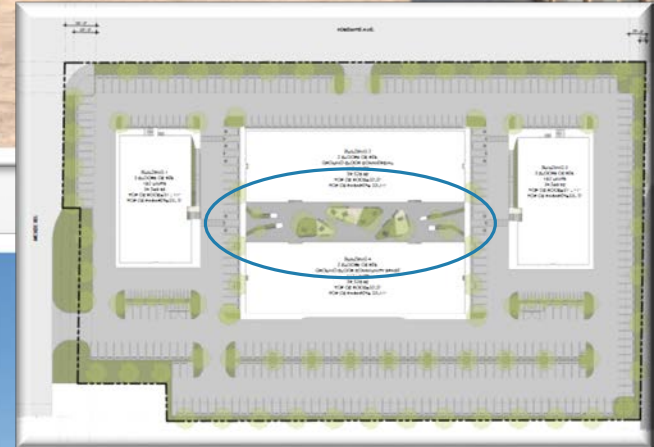
- Per the Zoning Ordinance, the project would require 650 parking spaces for the residential uses and an additional 61 spaces for the commercial uses (total of 711 spaces).
- Project proposes 410 spaces (mixture of motorcycle, scooter, and vehicles).
- Average Parking Requirements per resident for a 3 bed/3 bath apartment (single occupant per bedroom) = 0.68 spaces/resident.
- Proposed Project – 0.81 spaces/resident.

- ☐ Bicycle parking also provided (indoor covered parking).
- ☐ Uber/Lyft pick-up areas provided.
- ☐ Incentives for tenants without cars.
- ☐ Site located near bus stops.⁸⁰⁹

Building Design

Efficiency Dwelling Unit Floor Plan





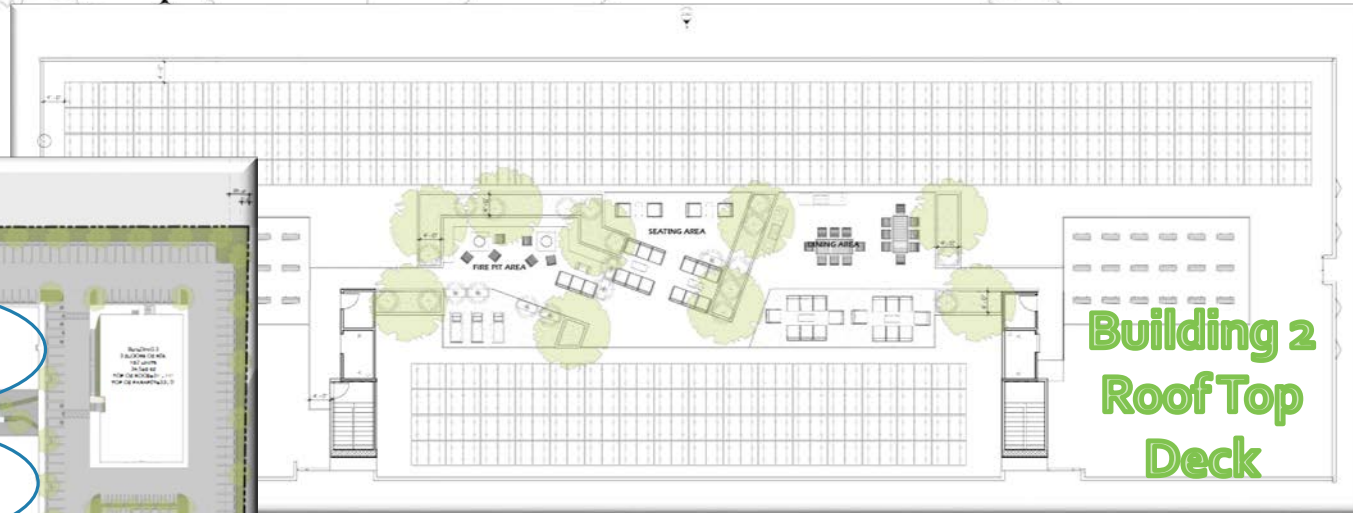
Yosemite Avenue Elevation



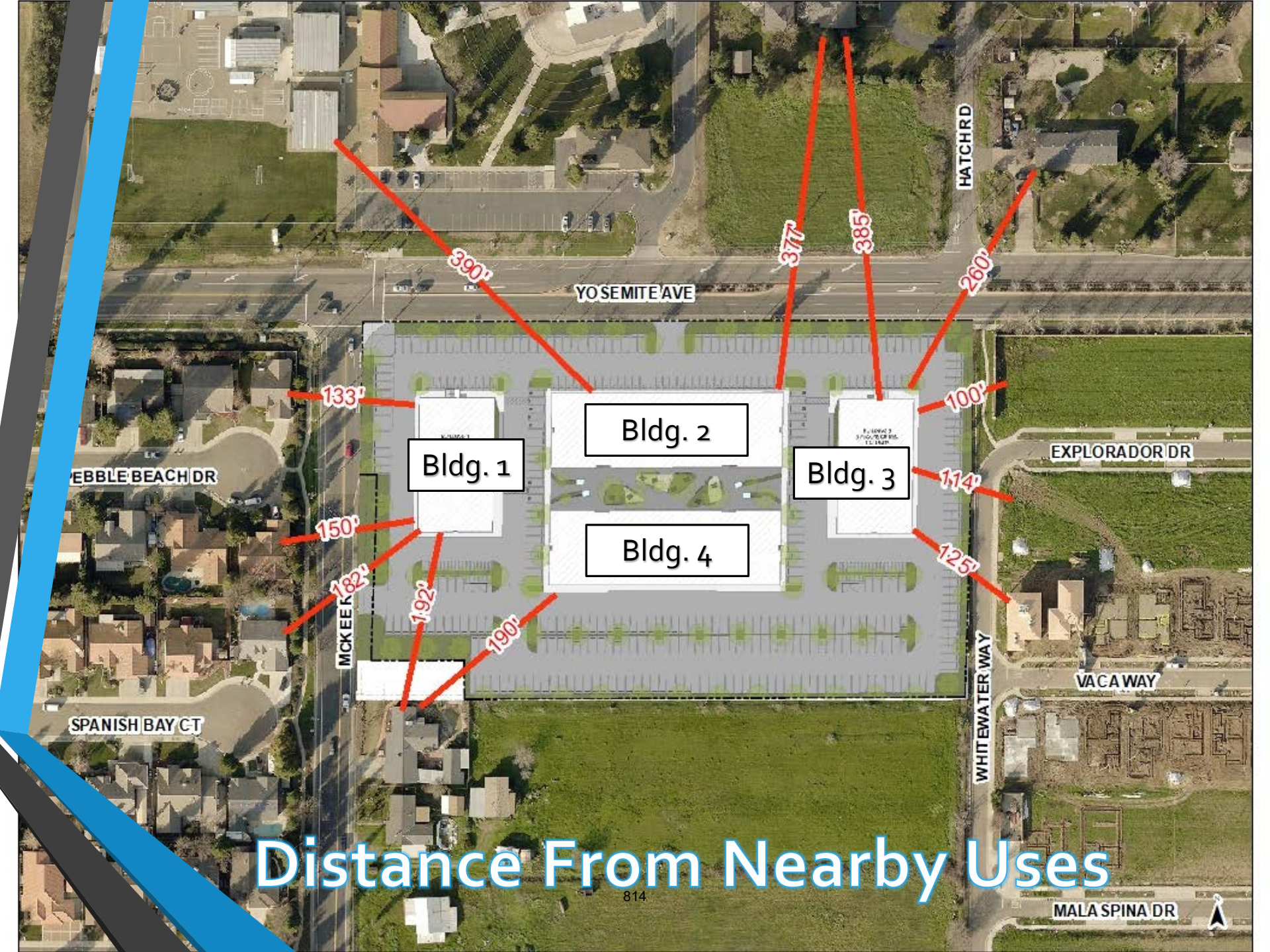
Buildings 2 & 4 Ground Floor



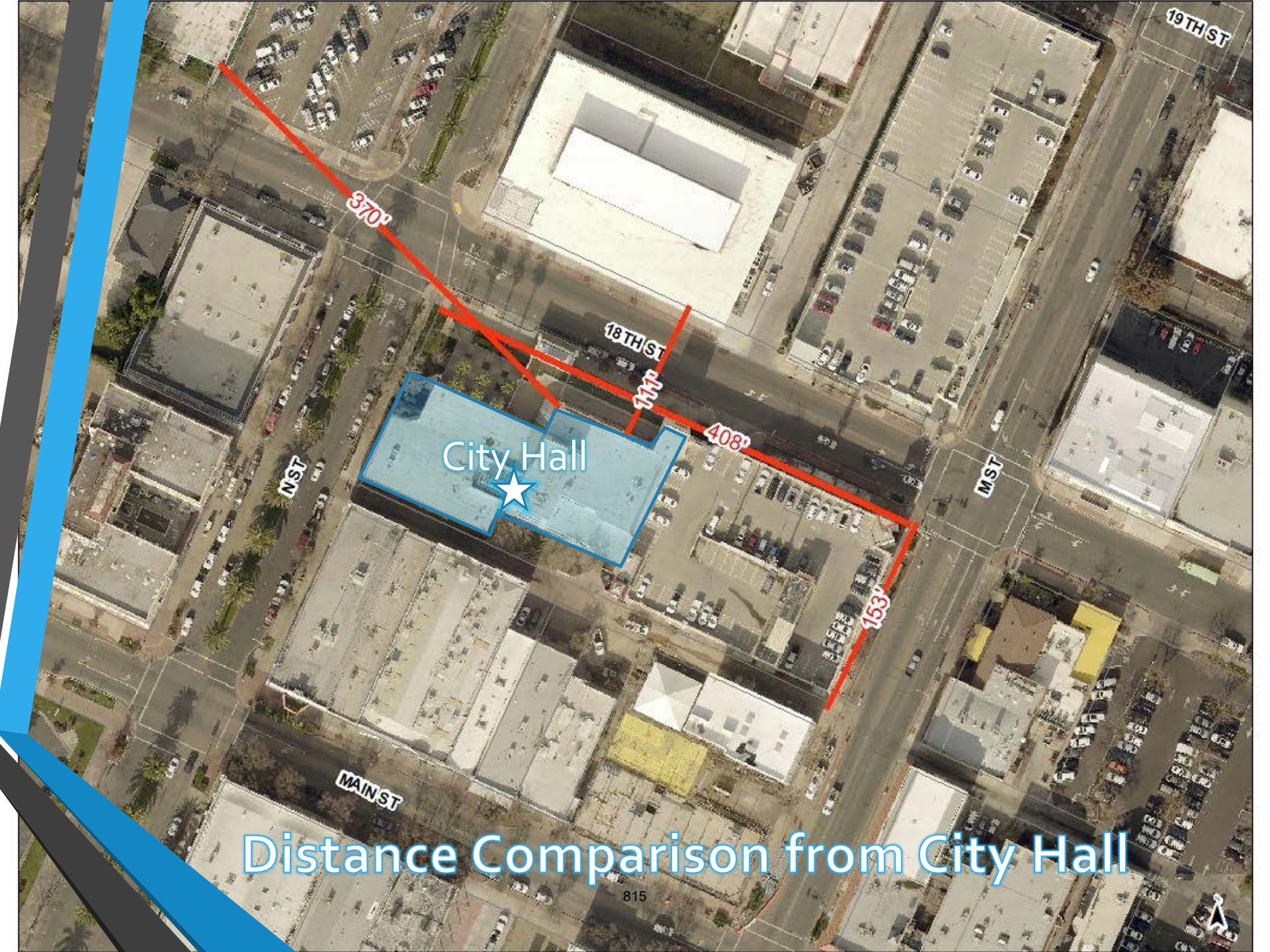
Building 2 & 4 2nd & 3rd Floors (112 Units/Floor)



**Building 2
Roof Top
Deck**



Distance From Nearby Uses



City Hall

Distance Comparison from City Hall

Traffic

- Compared traffic generated by proposed use to the previous shopping center proposed for the site.
- Used the traffic generation rate for apartments based on number of residents.
- Estimated 1,417 Average Daily Trips (ADT's) for dwelling units.
- Estimated 798 ADT's for commercial uses.
- Total of 2,215 ADT's.
- Traffic estimated for Shopping Center 2,647 ADT's.

Applicant provided updated traffic analysis.
Details provided at meeting.

Neighborhood Meeting

- Developer held 2 neighborhood meetings on August 13, 2019.
- Staff from Yosemite Church attended the meeting at 3:00 p.m., but no one else from the neighborhood was in attendance.
- Six people from the neighborhood attended the 6:00 p.m. meeting.

Concerns

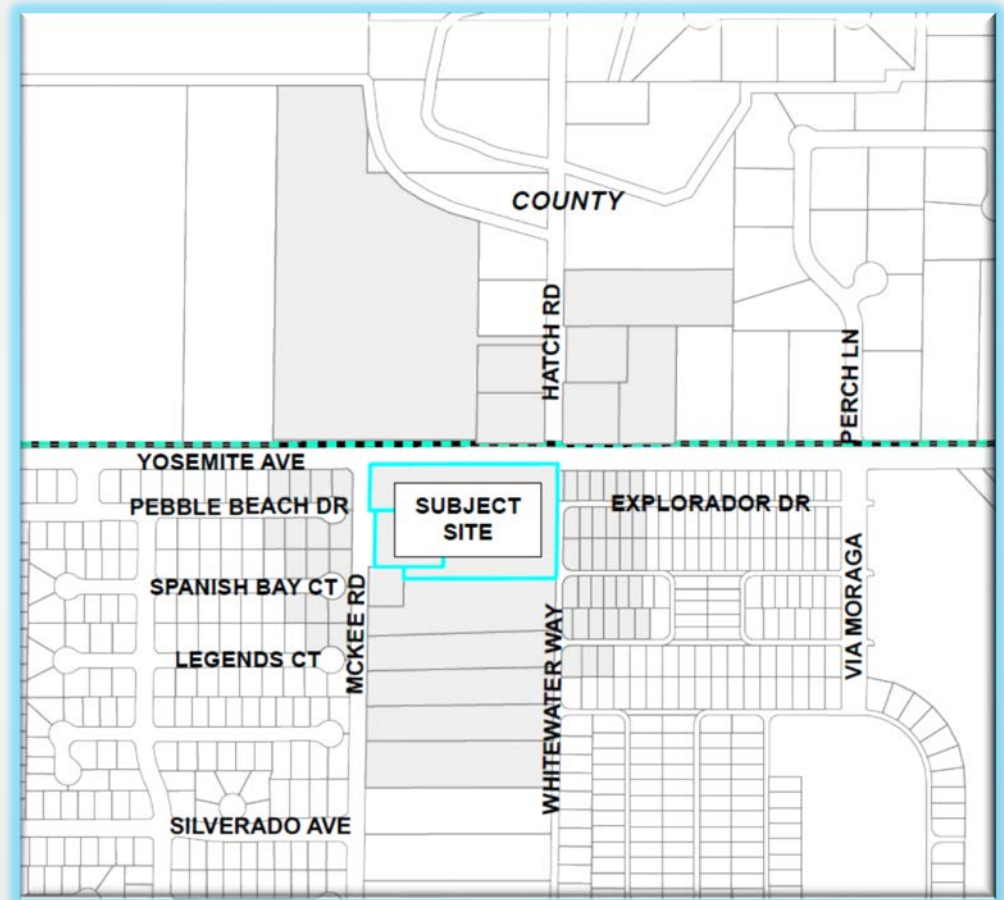
- Traffic Impacts.
- Number of units.
- Did not want bars and nightclubs.
- Visibility onto residential property.

Neighborhood Impact

- Traffic is comparable to previously approved shopping center.
- Nearest home would be 100 feet from Building 3.
- Other homes would be 133' to 385' away.
- Block wall along southern property line to separate from adjacent residential.
- Building height is taller than most homes in the area, but is similar in height to Yosemite Church and some houses in the Silverado Subdivision to the west.

Public Hearing Notices

- Property owners within 300' notified.
- Notification extended to include anyone who spoke at the Planning Commission meeting.





- Mitigated Negative Declaration Recommended.
- Mitigation Measures would reduce potential impacts to a less than significant level.
- Mitigation Monitoring Program listing the required mitigation measures is provided at Appendix B of Initial Study #19-18 (Attachment 10 of Administrative Report).

Planning Commission Action

- Public hearing held on August 21, 2019.
- Planning Commission recommended approval of General Plan Amendment #19-02 and Zone Change #426 (including Environmental Review).
- Denied Conditional Use Permit #1231

Applicant appealed the Planning Commission's denial of CUP #1231.

City Council Action

Approve/Disapprove/Modify

Action #1

- ☐ Environmental Review #19-18
- ☐ General Plan Amendment #19-02
- ☐ Zone Change #426
- ☐ Authorize City Manager or Assistant City Manager to Execute the Legislative Action Agreement.

Action #2

Provide Findings and Direction to Staff regarding the Appeal of Conditional Use Permit #1231.



ADMINISTRATIVE REPORT

Agenda Item J.5.

Meeting Date: 10/7/2019

Report Prepared by: Francisco Mendoza-Gonzalez, Associate Planner, Development Services

SUBJECT: Public Hearing and Adoption of Resolution to Abandon a Sewer Easement and Working Easement at 3600 G Street, Generally Located on the Northeast Corner of G Street and Yosemite Avenue (Vacation #19-04)

REPORT IN BRIEF

Considers the abandonment of an old sewer easement and working easement at 3600 G Street.

RECOMMENDATION

City Council - Adopt a motion adopting **Resolution 2019-61**, a Resolution of the City Council of the City of Merced, California, ordering the vacation of a sewer easement and working easement at the northeast corner of G Street and Yosemite Avenue (Vacation #19-04).

ALTERNATIVES

1. Approve as recommended by the Planning Commission and staff; or,
2. Approve, subject to modifications by the City Council; or,
3. Deny; or,
4. Refer back to staff for reconsideration of specific items (specific items to be addressed in the motion); or
5. Continue to a future meeting (date and time to be specified in motion).

AUTHORITY

Part 3, Chapter 3 of the Streets and Highways Code of the State of California authorizes the City Council to vacate a right-of-way or easement. The vacation shall be made by adoption of a resolution setting a public hearing pursuant to Section 8320 of the Streets and Highways Code, and shall be recorded pursuant to Section 8325. The City of Merced Administrative Policies and Procedures No. A-6 provides direction to staff for processing vacation requests, and City Resolution 86-80 establishes a policy concerning costs associated with the vacation.

CITY COUNCIL PRIORITIES

Not applicable.

DISCUSSION

Request

The subject site is a vacant 19.7-acre parcel zoned Planned Development (P-D) #72 with General

Plan designations of Commercial Professional Office (CO) and High-Medium Density Residential (HMD). The applicant is requesting the vacation of an old Sewer Easement and Working Easement as described in Attachment 2 and shown at Attachment 3, located at the northeast corner of Yosemite Avenue and G Street (Attachment 1). These easements were dedicated to the City by deed during the late 1980's for sewer purposes. The City's Engineering Department reviewed this proposal, looked through several records, and could not determine the original purpose for these easements or find a specific project that they were reserved for, and thus determined that these easements would not be needed for any future City-related projects. The City's Engineering Department recommends vacating these easements to give the property owner full rights to develop their land. If the City needs additional easements on this property, they can be requested when the property owner submits land use applications to develop this site.

After contacting all utility companies in the area, it was determined that no utilities were located within these easements, and there are no plans to use these easements in the future. Therefore, these easements are no longer needed and should be abandoned to give the property owners full use of their property. The General Plan does not address the abandonment of easements; and thus, this action does not conflict with any General Plan policies, text, or maps, so it can be considered "consistent."

History and Past Actions

At the Planning Commission meeting of July 17, 2019, the Planning Commission reviewed the vacation for consistency with the City's General Plan and found, by unanimous vote of those present, that the proposed vacation does not conflict with any General Plan policies, text, or maps, and is, therefore, consistent with the General Plan.

On September 3, 2019, the City Council adopted a Resolution of Intention (Resolution #2019-55) and set October 7, 2019, as the date for the public hearing to consider Vacation #19-04 (see Attachments 4).

Recommendation

Staff is recommending the adoption of the Resolution at Attachment 5 to vacate the storm sewer easement and working easement as described above.

IMPACT ON CITY RESOURCES

There would be no impact on City resources with this action.

ATTACHMENTS

1. Location Map
2. Legal Description
3. Vacation Map
4. City Council Resolution to set the Public Hearing for Vacation #19-04
5. Draft City Council Resolution for Vacation #19-04
6. Presentation



Exhibit A

Order No.
Escrow No.
Loan No.,

WHEN RECORDED MAIL TO:

CITY OF MERCED
P.O. BOX 2068
MERCED, CA 95344-0068

19900

RECORDED BY

City of Merced
JUL 29 1987 10:40am

VOL 2623 PAGE 361

OFFICIAL RECORDS OF
MERCED COUNTY
CALIFORNIA

LARRY G. GILSDORF

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

SAME AS ABOVE

EASEMENT DEED

For a Valuable consideration, receipt of which is hereby acknowledged,
Spalding G. Wathen and Della Wathen,

hereby grants to the City of Merced, a Municipal Corporation, an easement
for sewer purposes, over and across the southwest portion of Lot 57,
according to that certain map entitled "TOWNE SUB-DIVISION,
YOSEMITE COLONY," filed for record October 13, 1891 in Book 1 of
Official Plats at Page 22, now appearing in Volume 2 of Official
Plats at Page 22, Merced County Records, and being in the
southwest quarter of Section 8, T. 7 S. R. 14 E., M.D.B. & M.,
Merced County California, being more particularly described as
follows:

The south 15.00 feet of the west 50.00 feet of said Lot 57,
the south line of said 15.00 foot strip of land being the north
line of Yosemite Avenue.

Also a working easement over the south 35.00 feet of the
west 70.00 feet of said Lot 57, the south line of said 70.00 foot
strip of land being the north line of Yosemite Avenue.

Subject to rights of way of record, if any.

Said working easement shall terminate upon filing of a Notice of Completion.

A.P.N. 60-040-73



VOL 2623 PAGE 361

Dated July 10, 1987

Spalding G. Wathen
Spalding G. Wathen

Dated July 10, 1987

Della Wathen
Della Wathen

CITY OF MERCED

Approved Description:

By: Sharon M. Lohr 7-24-87
(Engineering Dept.) Date

Approved Form:

By: S.M. 7/27/87
City Attorney Date

Reference: North Mercel Survey

STATE OF CALIFORNIA

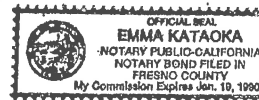
COUNTY OF Fresno } ss.

On July 10, 1987 before me, the under-
signed, a Notary Public in and for said County and State, personally
appeared Spalding G. Wathen and
Della Wathen

known to me
to be the persons whose names are subscribed to the within
instrument and acknowledged that they executed the same.

Emma Kataoka
Signature of Notary
Emma Kataoka

FOR NOTARY SEAL OR STAMP



Assessor's Parcel No. _____

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name
L-1 (G.S.) (Rev. 4-75) 8 pt.

Street Address

City & State

VOL 2623 PAGE 362



CITY OF MERCED

"Gateway to Yosemite"



CITY CLERK'S CERTIFICATE

I, STEVEN S. CARRIGAN, City Clerk of the City of Merced, California, do hereby certify that the attached document, entitled:

RESOLUTION 2019-55

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERCED, CALIFORNIA, DECLARING ITS INTENTION TO VACATE A SEWER EASEMENT AND WORKING EASEMENT AT 3600 G STREET, GENERALLY LOCATED ON THE NORTHEAST CORNER OF G STREET AND YOSEMITE AVENUE (VACATION #19-04) AND SETTING TIME AND PLACE FOR PUBLIC HEARING

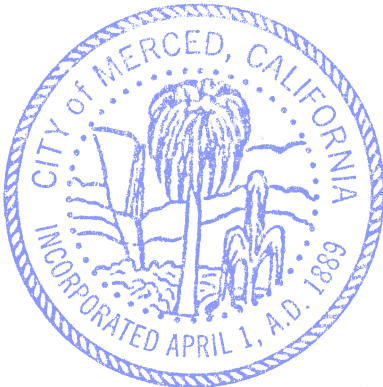
is a true and correct copy of the original on file in the Office of the Merced City Clerk, Merced, California.

DATED: September 4, 2019

STEVEN S. CARRIGAN, CITY CLERK

BY:

JENNIFER LEVESQUE
Deputy City Clerk



RESOLUTION NO. 2019- 55

**A RESOLUTION OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
DECLARING ITS INTENTION TO VACATE A
SEWER EASEMENT AND WORKING
EASEMENT AT 3600 G STREET, GENERALLY
LOCATED ON THE NORTHEAST CORNER OF G
STREET AND YOSEMITE AVENUE (VACATION
#19-04) AND SETTING TIME AND PLACE FOR
PUBLIC HEARING**

WHEREAS, the City Engineer of the City of Merced has recommended that the hereinafter described portions of easements are unnecessary for prospective public purposes; and

WHEREAS, the City Engineer has filed maps or plans with the City Clerk of the City of Merced showing the portions of the easements to be vacated at a specific time that will be determined.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DETERMINE, FIND, AND ORDER AS FOLLOWS:

SECTION 1. The City Council of the City of Merced declares its intention to proceed under the provisions of Part 3 of the Streets and Highways Code of the State of California, being the Public Streets, Highways, and Service Easements Vacation Law, Chapter 3, to vacate a sewer easement and working easement at 3600 G Street, generally located on the northeast corner of G Street and Yosemite Avenue (Vacation #19-04), as described in Exhibit "A" and shown on the map at Exhibits "B" attached hereto and incorporated herein by this reference.

SECTION 2. Reference is made to the maps and plans which are filed in the office of the City Clerk of the City of Merced for further particulars as to the proposed vacation and reservation.

SECTION 3. October 7, 2019, at the hour of 6:00 p.m. of said day in the Council Chamber of the City Council, 678 West 18th Street, Merced, California, is fixed as the time and place for hearing all persons interested in or objecting to the proposed vacation. Said hearing may be postponed or continued.

SECTION 4. The City Engineer is directed to post or cause to be posted at least two weeks before the date set for hearing not less than two (2) notices of vacation of easements, not more than three hundred (300) feet apart, conspicuously along the lines of said portion of the public street proposed to be vacated, stating adoption of this resolution and the time and place of the hearing herein called. Posting a copy of this resolution shall constitute the posting of the required notice.

SECTION 5. The City Clerk is directed to cause a copy of this Resolution to be published once each week for two successive weeks prior to the public hearing in the official newspaper.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the 3rd day of September 2019, by the following vote:

AYES: 7

Council Members: BLAKE, ECHEVARRIA, MARTINEZ,
MCLEOD, MURPHY, SERRATTO, SHELTON

NOES:0

Council Members: NONE

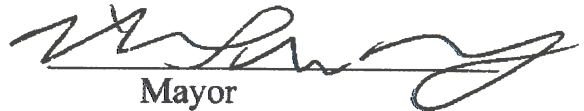
ABSENT:0

Council Members: NONE

ABSTAIN: 0

Council Members: NONE

APPROVED:



Mayor

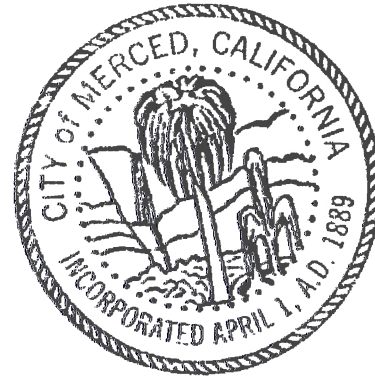
ATTEST:

STEVE CARRIGAN, CITY CLERK

BY:

Assistant/Deputy City Clerk

(SEAL)



APPROVED AS TO FORM:



City Attorney

8/11/19

Date

Exhibit A

Order No.
Exec No.
Lden No.

WHEN RECORDED MAIL TO:

CITY OF MERCED
P.O. BOX 2068
MERCED, CA 95344-0068

19900

RECORDED BY

City of Merced

29-1997

VOL 2623 PAGE 361

OFFICIAL RECORDS OF
MERCED COUNTY
CALIFORNIA
LAND & PLANNING

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL, TAX STATEMENTS TO:

SAME AS ABOVE

EASEMENT DEED

For a Valuable consideration, receipt of which is hereby acknowledged,
Spalding G. Mathen and Della Mathen,

hereby grants to the City of Merced, a Municipal Corporation, an easement
for sewer purposes, over and across the southwest portion of Lot 57,
according to that certain map entitled "TOWNE SUB-DIVISION,
YOSEMITE COLONY," filed for record October 13, 1991 in Book 1 of
Official Plats at Page 32, now appearing in Volume 2 of Official
Plats at Page 32, Merced County Records, and being in the
southwest quarter of Section 8, T. 7 S. R. 14 E., M.D.B. & M.,
Merced County California, being more particularly described as
follows:

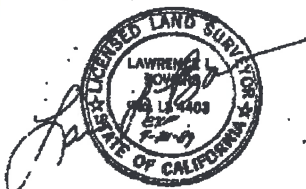
The south 15.00 feet of the west 60.00 feet of said Lot 57,
the south line of said 15.00 foot strip of land being the north
line of Yosemite Avenue.

Also a working easement over the south 35.00 feet of the
west 70.00 feet of said Lot 57, the south line of said 70.00 foot
strip of land being the north line of Yosemite Avenue.

Subject to rights of way of record, if any.

Said working easement shall terminate upon filing of a Notice of Completion.

A.P.N. 60-040-73



VOL 2623 PAGE 361

Dated July 10, 1987

Spalding G. Watkins
Spalding G. Watkins

Dated July 10, 1987

Debra Watkins
Debra Watkins

CITY OF MERCED

Approved Description:

By: Spalding G. Watkins 7-24-87
Engineering Dept. Date

Approved Form:

By: S. J. [Signature] 7/27/87
City Attorney Date

Reference: North Merced River

STATE OF CALIFORNIA
COUNTY OF FRESNO ss.
On July 10, 1987 before me, the undersigned, a Notary Public in and for said County and State, personally appeared Spalding G. Watkins and Debra Watkins

known to me to be the persons whose names subscribed to the within instrument and acknowledged that they executed the same.

Spalding G. Watkins
Signature of Notary
Emma Katschka

FOR NOTARY SEAL OR STAMP



Amateur's Payroll No. _____

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name _____
E-1 (02-2) (Rev. 6-72) 0-20

Street Address _____

City & State _____

Vol. 2623 Page 362

THEWORKS / Page 3 of 4



RESOLUTION NO. 2019-_____

**A RESOLUTION OF THE CITY COUNCIL
OF THE CITY OF MERCED, CALIFORNIA
ORDERING THE VACATION OF A SEWER
EASEMENT AND WORKING EASEMENT
AT THE NORTHEAST CORNER OF G
STREET AND YOSEMITE AVENUE
(VACATION #19-04)**

WHEREAS, by adoption of Resolution No. 2019-55 on September 3, 2019, the City Council declared its intention to consider the vacation of a portion of easements in the City of Merced, consisting of a sewer easement and working easement at 3600 G Street, generally located at the northeast corner of G Street and Yosemite Avenue (Vacation #19-04), and more particularly described in Exhibit A and shown in Exhibit B, attached hereto and incorporated herein by this reference, and set a public hearing thereon; and

WHEREAS, Resolution No. 2019-55 fixed a time and place for hearing all persons interested in or objecting to the proposed vacation to wit: On Monday, October 7, 2019, at the hour of 6:00 p.m. of said day, in the Council Chambers of the City Council, 678 West 18th Street, Merced, California, which said time was not less than fifteen (15) days from the above-mentioned date and passage of Resolution No. 2019-55; and

WHEREAS, Resolution No. 2019-55 was published in the manner prescribed by Section 8320 of the Streets and Highways Code of the State of California; and

WHEREAS, the public hearing occurred on October 7, 2019; and

WHEREAS, On September 17, 2019, notices were conspicuously posted along the lines of the property proposed to be vacated, which notices consisted of copies of Resolution No. 2019-55; and

WHEREAS, the vacation of the dedication as proposed by Resolution No. 2019-55 was submitted to the Planning Commission on July 17, 2019, which found the proposed vacation to be in conformity with the general plan.

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

SECTION 1. The City Council finds from all of the evidence submitted that the easements in the City of Merced, as described on Exhibit A and shown on Exhibit B, is unnecessary for present or prospective easements use.

SECTION 2. It is hereby ordered that the irrevocable offer of dedication for public use and any and all interests held by the city concerning the above described property be and the same is hereby vacated, pursuant to the provisions of Part 3, Division 9, of the Streets and Highways Code of the State of California, being the Public Streets, Highways, and Services Easements Vacation Law, section 8300 *et seq.*

SECTION 3. The City Clerk is directed to cause a certified copy of this resolution, attested under seal of the City of Merced, to be recorded in the Office of the County Recorder of Merced County.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the ____ of _____, 2019, by the following called vote:

AYES: Council Members:

NOES: Council Members:

ABSTAIN: Council Members:

ABSENT: Council Members:

APPROVED:

Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

BY: Phuoc A. Trinh 9.3-19
City Attorney Date

Exhibit A

Order No.
Escrow No.
Loan No.,

WHEN RECORDED MAIL TO:

CITY OF MERCED
P.O. BOX 2068
MERCED, CA 95344-0068

19900

RECORDED BY

29-1987

VOL. 2623 PAGE 361

OFF. RECORDS OF
MERCED COUNTY
CALIFORNIA
LARRY S. CILADORN

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

SAME AS ABOVE

EASEMENT DEED

For a Valuable consideration, receipt of which is hereby acknowledged,
Spalding G. Mathen and Della Mathen,

hereby grants to the City of Merced, a Municipal Corporation, an easement
for sewer purposes, over and across the southwest portion of Lot 57,
according to that certain map entitled "TOWNE SUB-DIVISION,
YOSEMITE COLONY," filed for record October 13, 1891 in Book 1 of
Official Plate at Page 22, now appearing in Volume 2 of Official
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southwest quarter of Section 8, T. 7 S. R. 14 E., M.D.B. & M.,
Merced County California, being more particularly described as
follows:

The south 15.00 feet of the west 50.00 feet of said Lot 57,
the south line of said 15.00 foot strip of land being the north
line of Yosemite Avenue.

Also a working easement over the south 35.00 feet of the
west 70.00 feet of said Lot 57, the south line of said 70.00 foot
strip of land being the north line of Yosemite Avenue.

Subject to rights of way of record, if any.

Said working easement shall terminate upon filing of a Notice of Completion.
A.P.M. 60-040-73



VOL. 2623 PAGE 361

Dated July 10, 1987

Spalding G. Wathen
Spalding G. Wathen

Dated July 10, 1987

Della Wathen
Della Wathen

CITY OF MERCED

Approved Description:

By: Thomas J. Davis 7-24-87
(Engineering Dept.) Date

Approved Form:

By: S. J. [Signature] 7/27/87
City Attorney Date

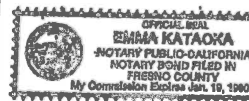
Reference: North Merced Survey

STATE OF CALIFORNIA
COUNTY OF FRESNO } SS.
On July 10, 1987 before me, the under-
signed, a Notary Public in and for said County and State, personally
appeared Spalding G. Wathen and
Della Wathen

to be the persons whose names are subscribed to the within
instrument and acknowledged that they executed the same.

[Signature]
Signature of Notary
Emma Kataoka

FOR NOTARY SEAL OR STAMP



Assessor's Parcel No. _____

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name
L-1 (G.S.) (Rev. 4-75) 8 pt.

Street Address

City & State

VOL 2623 PAGE 362

Exhibit B

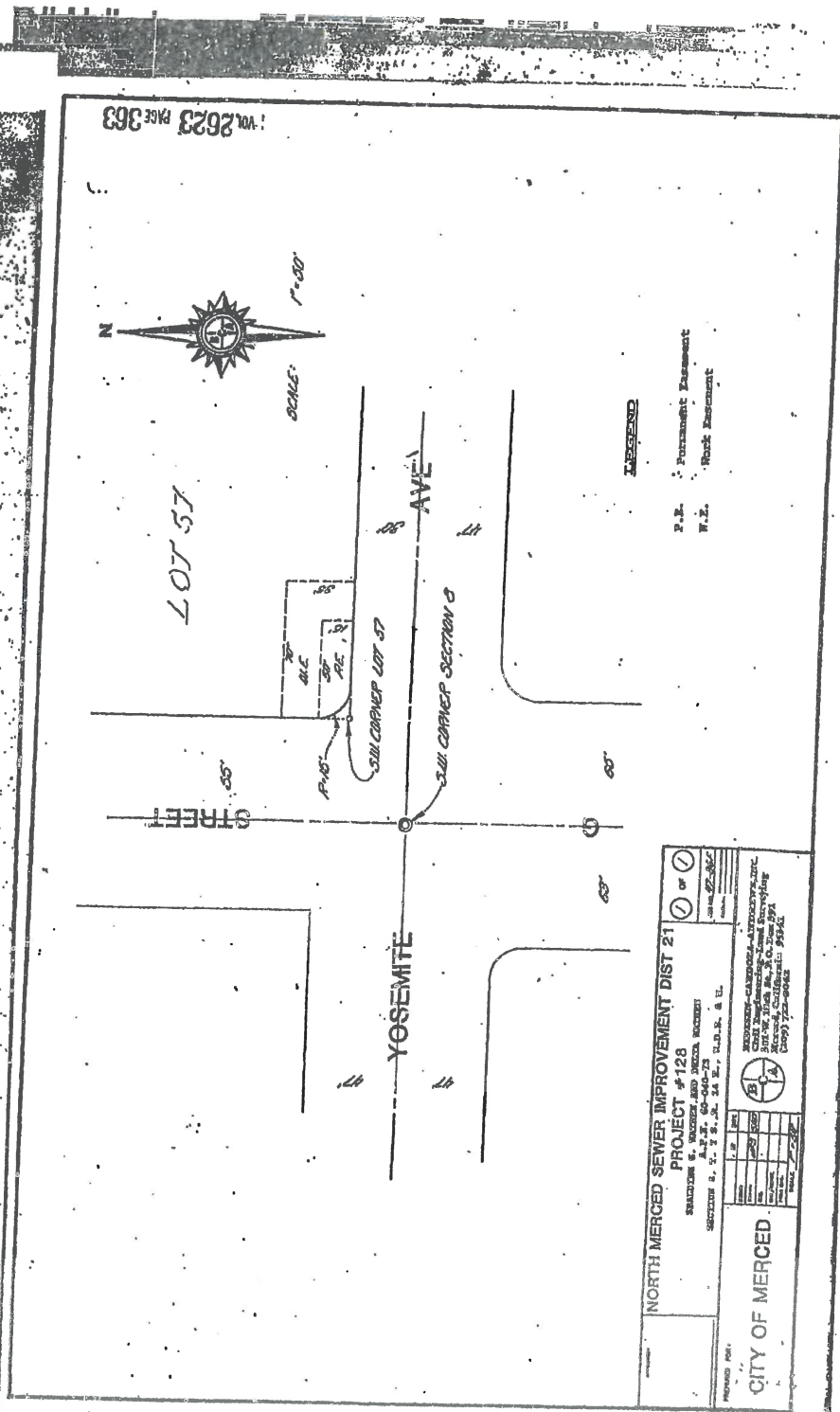


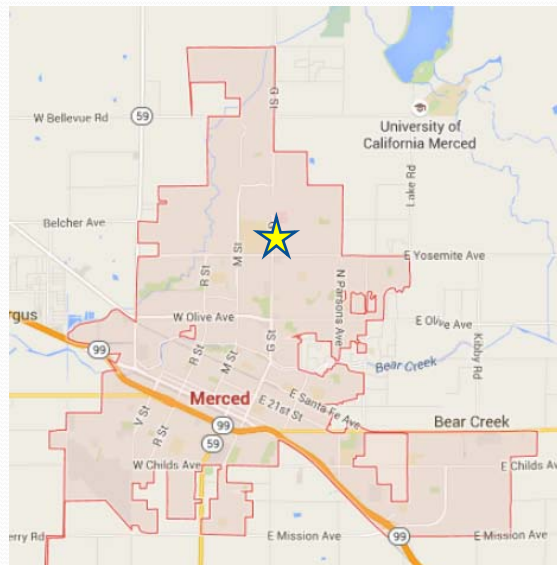
EXHIBIT B

Vacation #19-04

Abandon Sewer and Working Easements
Commercial/Residential Lot
3600 G Street

City Council Meeting
October 7, 2019
Francisco Mendoza, Associate Planner

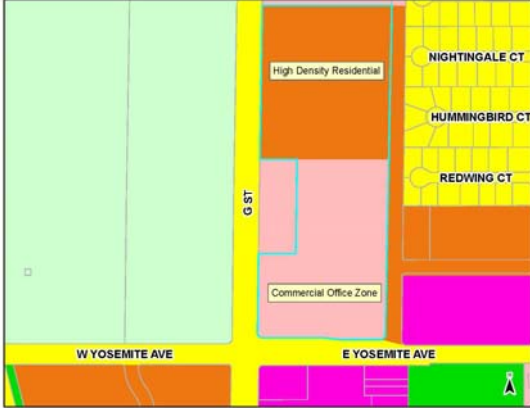
City-Wide Context



Location Map




- Easements prohibit development near them.
- Easements were granted to the City during the 1980's.
- The Engineering Department could not determine the original purpose or need for the easements.
- Staff reached out to all local utility companies and the City's Public Works Department. Nobody had existing utilities or plans/needs to use the easements.
- Vacating the easements would give the property owner the ability to develop more of their land.



- The subject site has a General Plan designation of High Density Residential and Commercial Office.
- The Planning Department has not received applications to develop this parcel at this time.
- After reviewing a proposal, the Engineering Department could request easements as needed as part of conditions of approval.

City Council and Planning Commission

- On September 3, 2019, the City Council approved a resolution to set a public hearing to vacate the easement.
- On July 17, 2019, the Planning Commission adopted a Finding showing that the proposed Vacation is consistent with the General Plan.



Action: After the public hearing, City Council may approve, deny, or continue Vacation #19-04.



ADMINISTRATIVE REPORT

Agenda Item J.6.

Meeting Date: 10/7/2019

Report Prepared by: Joseph Chavez, Director of Parks and Community Services

SUBJECT: Public Hearing and Potential Introduction of Ordinance to Revise Park Hours and Amending Section 14.04.070 - Hours - Permits to Reflect Approved New Park Hours

REPORT IN BRIEF

Public Hearing regarding revision of park hours and update of Code of Ordinances Title 14, Chapter 14.04, Amending Section 14.04.070 - Hours - Permits.

RECOMMENDATION

City Council - Adopt a motion introducing **Ordinance 2505**, an Ordinance of the City Council of the City of Merced, California, amending Section 14.04.070, "Hours - Permit," of the Merced Municipal Code regarding City parks.

ALTERNATIVES

1. Introduce Ordinance; or,
2. Modify Ordinance for introduction (identify specific findings and/or conditions amended to be addressed in the motion); or,
3. Deny as recommended Recreation and Parks Commission; or,
4. Refer back to the Recreation and Parks Commission for reconsideration of specific items (specific items to be addressed in the motion); or,
5. Continue to a future meeting (date and time to be specified in the motion).

AUTHORITY

This request revises the park hours listed in Merced Municipal Code (MMC) Title 14, Chapter 14.04, Section 14.74.070.

CITY COUNCIL PRIORITIES

As provided for in the 2019-20 Adopted Budget.

DISCUSSION

In response to public comments at the June 3, 2019, City Council requested that staff evaluate various options to address illegal activity in and around the City of Merced's extensive park network. Staff meet with interested Council members to identify a strategy, which included amending park hours to mirror a "dusk to dawn" approach. In addition to this change, staff are also working to install additional security cameras and enhancing Police patrol efforts in all parks to address safety concern in public spaces ensuring parks area available for all residents to enjoy.

Staff presented a revision of park hours to the Recreation and Parks Commission during the meeting on September 23, 2019. The Commission denied the approval of the new park hours, because they wanted more information on the reasons for changing the hours. Currently, the public may not be in any city park between the hours of 11:00 p.m. and 5:00 a.m. The proposed amendment would change the existing Municipal Code, (Title 14, Chapter 14.04) Section 14.74.070 - Hours - Permits, to the following:

March 1st to October 31st - 8:00 a.m. to 9:00 p.m.
November 1st to February 28/29 - 8:00 a.m. to 6:00 p.m.

Additional requirements are also added to clarify usage permitted by the City for authorized activities, special events or private parties. Those exceptions will be specific to parks with stadium lighting, such as Joe Herb Park, McNamara Park, and the Youth Sports Complex. An annual permit may be issued to applicants who use the park for community and/or private events on a regular basis. The Chief of Police will continue to issue permits for exempted use. The updated ordinance enables the Director of Parks and Community Services, the City Manager and his designees to issue permits as well.

IMPACT ON CITY RESOURCES

The impact on City resources is unknown at this time. Potential costs may include new signage, update of the Municipal Code, and additional policing of the park to ensure new hours are observed.

ATTACHMENTS

1. Draft Ordinance

ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
AMENDING SECTION 14.04.070, "HOURS—
PERMIT," OF THE MERCED MUNICIPAL CODE
REGARDING CITY PARKS**

**THE CITY COUNCIL OF THE CITY OF MERCED DOES ORDAIN
AS FOLLOWS:**

SECTION 1. AMENDMENT TO CODE. Section 14.04.070,
"Hours—Permits," of the Merced Municipal Code is hereby amended to read as
follows:

"14.04.070 Hours—Permit.

It is unlawful and a misdemeanor, subject to
punishment in accordance with Chapter 1.12 of
this Code, for any person to be or remain in any
city park between hours of nine p.m. and eight
a.m. of the following day from March 1 to October
31, or between the hours of six p.m. and eight a.m.
of the following day from November 1 to February
28/29 without having received a permit to do so
from the Chief of Police of the City, Director of
Parks and Recreation, the City Manager, or their
designees.

Exceptions to time restrictions shall be permitted
for City-sponsored events or annual permit holders
in parks with stadium-style lighting."

SECTION 2. EFFECTIVE DATE. This Ordinance shall be in full
force and effect thirty (30) days after its adoption.

SECTION 3. SEVERABILITY. If any section, subsection,
subdivision, sentence, clause, phrase, or portion of this Ordinance, is for any
reason held to be invalid or unconstitutional by the decision of any court of
competent jurisdiction, such decision shall not affect the validity of the remaining

portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance, and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

SECTION 4. PUBLICATION. The City Clerk is directed to cause a summary of this Ordinance to be published in the official newspaper at least once within fifteen (15) days after its adoption showing the vote thereon.

The foregoing Ordinance was introduced at a regular meeting of the City Council of the City of Merced on the ____ day of _____, 2019, and was passed and adopted at a regular meeting of said City Council held on the ____ day of _____, 2019, by the following called vote:

AYES: Council Members:

NOES: Council Members:

ABSTAIN: Council Members:

ABSENT: Council Members:

APPROVED:


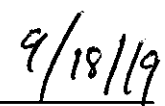
Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

City Attorney **Date**



ADMINISTRATIVE REPORT

Agenda Item K.1.

Meeting Date: 10/7/2019

Report Prepared by: John Tresidder, Assistant City Clerk, City Clerk's Office

SUBJECT: Adoption of Resolutions for Calling a Special Election for March 3, 2020 for the Purpose of Placing a Ballot Measure Before the Voters to Amend Various Sections of the City of Merced Charter and Requesting the Merced County Board of Supervisors Consolidate Said Election with the Statewide Primary Election Being Held on the Same Date

REPORT IN BRIEF

Consideration of Resolutions Calling a March 3, 2020 Special Municipal Election for the purpose of placing a measure on the ballot regarding amending various sections of the City of Merced Charter and requesting the County Board of Supervisors consolidate the City's election with the Statewide Primary Election being held on the same date.

RECOMMENDATION

City Council - Adopt a motion:

- A. Adopting **Resolution 2019-67**, a Resolution of the City Council of the City of Merced, California, calling a Special Municipal Election to be held on March 3, 2020, for the Purpose of Submitting a Ballot Measure to Amend Various Sections of the City of Merced Charter to the Electorate; and,
- B. Adopting **Resolution 2019-68**, a Resolution of the City Council of the City of Merced, California, requesting that the Board of Supervisors of the County of Merced, California provide for the consolidation of a Special Municipal Election and a Ballot Measure with the Statewide Primary Election to be held on March 3, 2020; and,
- C. Approving the form and ballot question of the City Council sponsored Measure; and,
- D. Directing the City Manager/City Clerk and the City Attorney's Office to execute documents appropriate to carry out the tasks necessary for the Special Municipal Election and to take actions related thereto; **or**,
- E. Directing staff to make adjustments to the form or number of ballot questions being proposed, suggesting any language changes to the items going before the electorate and directing staff to return to the October 21, 2019 meeting for final adoption of the amended resolutions.

ALTERNATIVES

- 1. Approve, as recommended by staff; or,
- 2. Approve, subject to other than recommended by staff (identify specific findings and/or conditions

amended to be addressed in the motion); or,

3. Deny; or,

4. Refer to staff for reconsideration of specific items (specific items to be addressed in the motion); or,

5. Continue to a future meeting (date and time to be specified in the motion).

AUTHORITY

Charter of the City of Merced, Sections 400 and 1000; and,
California Elections Code Section 10403;and,

CITY COUNCIL PRIORITIES

Placing a Ballot Measure on the March 2020 Primary to update the City of Merced Charter.

DISCUSSION

In March, Mayor Murphy requested a review of the City of Merced Charter document for potential updates to be placed on a future ballot. The City Council agreed and appointed a Citizens Advisory Charter Review Committee to take on the charge of the Council to review and make recommendations to the Council on potential updates and changes to the Charter.

The Citizens Advisory Charter Review Committee met over several months and held five meetings to review City Council recommended sections and also reviewed sections suggested by individual members of the committee.

At the regular meeting held on September 3, 2019, the City Council received the Final Report of the Citizens Advisory Charter Review Committee which outlined several recommended updates to the City of Merced Charter that could be placed on the March 2020 Statewide Primary Election.

Council directed staff to prepare the necessary resolutions for calling an election and also directed staff to create a single question for the ballot encompassing the proposed amendments.

The resolution calling the election contains the ballot question and text of the proposed changes. The City Council should determine if the language is clear and adequately informs the voters of the nature of the measure. Now is the time to propose any revisions or changes to the ballot question, number of ballot questions, or proposed language changes to the Charter.

The City has consistently recognized a cost savings in previous years by consolidating the General Municipal Election with the Consolidated District Election and the Unified District Election conducted by the Merced County Elections Office. The County has trained staff and volunteers, in addition to the necessary equipment, software, and locations to conduct elections efficiently and economically. Therefore, staff recommends that the City Council call for the Special Municipal Election on March 3, 2020 and consolidate the Special Municipal Election with the Statewide Primary Election on March 3, 2020, per the two resolutions at Attachments 1 and 2.

IMPACT ON CITY RESOURCES

The Registrar of Voters has provided a rough estimate of between \$12,000 and \$25,000 depending

on the number of ballot questions. \$20,000 was placed in the FY 2019/20 Budget.

ATTACHMENTS

1. Resolution 2019-67 (Calling the Election)
2. Exhibits
3. Resolution 2019-68 (Consolidating the Election)

RESOLUTION NO. 2019-__

**A RESOLUTION OF THE CITY COUNCIL OF
THE CITY OF MERCED, CALIFORNIA,
CALLING A SPECIAL MUNICIPAL ELECTION
FOR ORDERING THE SUBMISSION OF A
BALLOT MEASURE UPDATING THE CITY'S
CHARTER TO THE QUALIFIED VOTERS OF
THE CITY AT THE STATEWIDE PRIMARY
ELECTION TO BE HELD ON MARCH 3, 2020**

WHEREAS, the City Council has set a priority to review and update the City's Charter; and,

WHEREAS, the City Council to further the goal of reviewing and updating the City's Charter appointed a Citizens Advisory Charter Review Committee to develop and make recommendations for modification and update to the City's Charter; and,

WHEREAS, the Citizens Committee completed its Charge on August 22, 2019 and submitted its Final Report to the City Council at a regular meeting held on September 3, 2019; and,

WHEREAS, the City Council heard public comment on the proposed amendments and determined at its regular meeting of September 3, 2019 to place a Charter measure on the March Statewide Primary ballot, including, amendments to the Charter to repeal section 1112, add sections 713 and 714, and amendments to sections 400, 402, 604, 707, 711 and 1051; and,

WHEREAS, pursuant to article XI, section 3 of the California Constitution and sections 1415 and 9255 of the Elections Code, the City Council may propose on its own motion, a proposal to revise or amend the City Charter; and,

WHEREAS, Section 1001 of the City Charter provides for all other municipal elections that may be held by authority of this Charter, or of any law, shall be known as special municipal elections; and,

WHEREAS, Section 1003(A) of the City Charter provides that “. . . all elections . . . shall be held in accordance with the procedural provisions of the Elections Code of the State of California.”; and,

WHEREAS, the California Elections Code authorizes the filing of an impartial analysis and the filing of arguments for or against any ballot proposition and rebuttal arguments.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MERCED DOES HEREBY RESOLVE, DECLARE, DETERMINE, AND ORDER AS FOLLOWS:

SECTION 1. Pursuant to section 1001 of the City Charter, a special municipal election shall be, and is hereby ordered to be, held in and for the City of Merced on Tuesday, March 3, 2020, for the object and purpose of submitting to the qualified voters the measure set forth below.

SECTION 2. Said proposition, shall appear on the ballot for said election as set forth on Exhibit “A”.

SECTION 3. The text of the proposition Charter Amendment to be submitted to the voters is attached hereto as Exhibit “B”.

SECTION 4. The ballots to be used at the election shall be in form and content as required by law.

SECTION 5. The object and purpose of the proposed ballot measure is to update the City’s Charter.

SECTION 6. The proposition shall be submitted to the voters of the City of Merced as required by Article XI, § 3 of the California Constitution and section 1415 and 9255 of the Elections Code.

SECTION 7. The date for submission of primary arguments (for and against) for said proposition is hereby set for November 14, 2019; the date for submission of the City Attorney’s impartial analysis of said proposition is hereby set for November 4, 2019; and the date for submission of rebuttal arguments to said primary arguments is hereby set for November 25, 2019.

SECTION 8. Pursuant to the requirements in Elections Code Sections 9280 and 9282, the impartial analysis shall not exceed 500 words in length, and the arguments shall not exceed 300 words in length.

SECTION 9. The City Attorney is directed to prepare all necessary documents, and the City Attorney and City Clerk are directed to take all further actions necessary for purposes of this election, including the preparation of an impartial analysis of the proposition showing the effect of the proposition on the existing law and the operation of the proposition.

SECTION 10. The City Clerk is directed to Elections Code Sections 9283 and 9287 to ensure statutory compliance governing the submission of ballot arguments and to further determine priority of the submitted ballot arguments.

SECTION 11. The special municipal election hereby called for March 3, 2020 shall be and is hereby ordered consolidated with the Statewide Primary to be held within the City on said date, and within the territory affected by the consolidation, all as required by and pursuant to law; and the election precincts, polling places and officers of election within the City of Merced for said municipal election hereby called shall be the same as those selected and designated by the Board of Supervisors of the County of Merced for said consolidated election and set forth in the notice of election officers and polling places for said consolidated election published or to be published by the County Clerk of said County, as required by law, to which notice reference is hereby specifically made for a designation of the precincts, polling places, and election officers of the municipal election hereby called. The Board of Supervisors of said County is authorized to canvass, or cause to be canvassed, the returns of said special municipal election with respect to the votes cast in the City of Merced and to certify the results to this City Council.

SECTION 12. Said special municipal election hereby called shall be held and conducted, and the votes thereof received and canvassed, and the return thereof made, and the result thereof ascertained and determined in accordance with the special election laws of the State of California, except as herein provided or as otherwise provided for in the City Charter.

SECTION 13. All persons qualified to vote at municipal elections in the City of Merced shall be qualified to vote at said special municipal election.

SECTION 14. The polls for the election shall be open at seven o'clock a.m. of the day of the election and shall remain open continuously from that time until eight o'clock p.m. of the same day when the polls shall be closed, and the election officers shall thereupon proceed to canvass the ballots cast there at.

SECTION 15. In all particulars not recited in this Resolution, the election shall be held and conducted as provided by law for holding regularly scheduled Consolidated Elections.

SECTION 16. The City Clerk is authorized, instructed, and directed to procure and furnish any and all official ballots, notices, printed matter and all supplies, equipment and paraphernalia that may be necessary in order to properly and lawfully conduct the election.

SECTION 17. Notice of the time and place of holding the election is given and the City Clerk is authorized, instructed, and directed to give further or additional notice of the election, in time, form, and manner as required by law.

SECTION 18. At the next regular meeting of this City Council occurring after the returns of said special municipal election have been canvassed by the Board of Supervisors of the County of Merced, and the certification of the results thereof to this City Council, or at a special meeting called thereafter for such purpose, this City Council shall cause to be spread upon its minutes a statement of the results of said special municipal election as ascertained by said canvass.

SECTION 19. The City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original Resolutions, and to take other appropriate actions necessary to ensure the placement of said proposition before the voters of the City of Merced at said regularly scheduled Consolidated Election.

PASSED AND ADOPTED by the City Council of the City of Merced
at a regular meeting held on the ____ day of _____ 2019, by the
following called vote:

AYES: Council Members:

NOES: Council Members:

ABSTAIN: Council Members:

ABSENT: Council Members:

APPROVED:

Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM

City Attorney

Date

EXHIBIT "A"

VOTE FOR ONE

| | | |
|--|-----|-----|
| <p>Shall the Merced City Charter be amended to:</p> <ul style="list-style-type: none">• Impose a limit of two consecutive 4 year terms for Mayor• Establish a city wide citizens' stipend setting commission• Remove an outdated secondary financial reserve fund• Impose budget and reporting requirements on the Finance Officer• Impose by district appointments to the Planning Commission and Recreation and Parks Commission• Establish a citywide citizens' tax accountability committee | YES | (+) |
| | NO | (+) |

EXHIBIT "A"

Proposed Charter Amendments

We, the People of the City of Merced do hereby repeal Section 1112, add Sections 713 and 714, and amend Sections 400, 402, 604, 707, 711, 1051 of the City Charter to read as follows:

Sec. 400. - Number and term.

A. The City Council shall consist of a Mayor elected from the City at large and six City Council Members elected by single-member district election at the times and in the manner provided in this Charter.

B. The Mayor shall serve a term of ~~two (2)~~ four (4) years and until his/her successor is elected and qualified. The Mayor shall be limited to no more than two, ~~two-year~~ four-year terms. For purposes of this subsection, a "term" shall be defined to include serving fifty percent plus one day of a term as Mayor, while service as Mayor for fifty percent or less of a term shall not constitute a term for purposes of term limits.

C. Individual City Council Members shall serve a term of four (4) years and until his/her successor is elected and qualified. Individual City Council Members shall be limited to no more than two, four-year terms. For purposes of this subsection, a "term" shall be defined to include serving fifty-percent plus one day of a term as a City Council Member, while service as a City Council Member for fifty percent or less of a term shall not constitute a term for purposes of term limits.

D. Once the Mayor or an individual City Council Member has served the maximum number of terms in that respective office, he/she shall be ineligible to be elected or appointed to that office again.

E. District boundaries shall be drawn by ordinance.

Sec. 402. – Compensation and Reimbursement.

A. The members of the City Council, including the Mayor, shall receive ~~no compensation~~ a monthly stipend for their services as such, ~~but shall receive reimbursement on order of the city council for~~

~~council authorized traveling and other expenses when on official duty~~ and shall receive reimbursement for expenses incurred while performing official duties of their office. ~~In addition, each member shall receive the sum of twenty dollars per month, which amount shall be deemed to be reimbursement of other out-of-pocket expenditures and costs imposed upon him in serving as a city councilman.~~ Absence of a ~~councilman~~ council member, including the Mayor, from all regular and special meetings of the council during any calendar month shall render such ~~councilman~~ council member ineligible to receive such stipend for such calendar month.

B. There shall be established a Citizens' Stipend Setting Commission consisting of seven (7) members to be appointed by the City Council from the qualified electors of the City. Six (6) members will be appointed by district and one (1) member will be appointed at large.

1. The Commission shall hold two (2) public hearings between March 1st and June 30th of every even-numbered year and shall recommend, by majority vote and in writing, to the Council the amount of the monthly stipend which it deems appropriate for the members of the Council for the two (2) year period beginning January 1st of the next year. The amount recommended for each council member shall be the same.
2. The Commission shall hold two (2) public hearings between March 1st and June 30th of a Mayoral election year and shall recommend, by majority vote and in writing, to the Council the amount of the monthly stipend which it deems appropriate for the Mayor for his/her entire term beginning in January of the next year. The stipend recommended for the Mayor shall, at a minimum, be the same as the other council members; however, the Commission may recommend providing the Mayor with reasonable compensation beyond his/her stipend as a member of the City Council.

3. The Council shall, by resolution, adopt the stipends as recommended by the Commission, or in some lesser amount, but in no event may it increase the amount. Stipends of the council members and Mayor may be reduced at any time by two-thirds (2/3) vote of the Council. Stipends shall remain in effect until amended by a subsequent resolution adopted pursuant to the provisions of this section.

Sec. 604. - Finance officer—Powers and duties.

The Finance Officer shall have power and be required to:

- A. Have charge of the administration of the financial affairs of the City under the direction of the City Manager;
- B. Compile the budget expense and revenue estimates for the ~~City Manager~~ City Council, based upon the City Manager's proposed budget; and at the end of the fiscal year, prepare and submit a complete report on the finances of the City to the City Council in consultation with the City Manager;
- C. Supervise and be responsible for the disbursement of all moneys and have control over all expenditures to insure that budget appropriations are not exceeded; audit all purchase orders before issuance; audit and approve before payment, all bills, invoices, payrolls, demands or charges against the City government and, with the advice of the City Attorney, when necessary, determine the regularity, legality and correctness of such claims, demands or charges;
- D. Maintain a general accounting system for the City government and each of its offices, departments and agencies;
- E. Keep separate accounts for the items of appropriation contained in the City budget, each of which accounts shall show the amount of the appropriation, the amounts paid therefrom, the unpaid obligations against it and the unencumbered balance; require reports of the receipts and disbursements from each receiving and expending agency of the City government to be made daily or at such intervals as he/she may deem expedient;

- F. Submit to the City Council and the City Manager a monthly statement of all receipts and disbursements in sufficient detail to show the exact financial condition of the City; and as of the end of each fiscal year, submit a complete financial statement and report;
- G. Collect all taxes, assessments, license fees and other revenues of the City, or for whose collection the City is responsible, and receive all money receivable by the City from the county, state or federal government, or from any court, or from any office, department or agency of the City;
- H. Have custody of all public funds belonging to or under the control of the City or any office, department, or agency of the City government, and deposit all funds coming into his/her hands in such depository as may be designated by Resolution of the City Council, or, if no such Resolution be adopted, by the City Manager, and in compliance with all of the provisions of the State Constitution and laws of the State, governing the handling, depositing and securing of public funds;
- I. Supervise the keeping of current inventories of all property of the City by all City departments, offices and agencies;
- J. Establish a centralized purchasing system for all City offices, departments and agencies; and,
- K. Prepare rules and regulations governing the contracting for, purchasing, storing, distribution, or disposal of all supplies, materials and equipment required by any office, department or agency of the City government and recommend them to the City Manager and the City Council for adoption by Ordinance; and prepare administrative policies and procedures implementing this Section and recommend them for review and approval by the City Manager.

Sec. 707. - Planning commission.

There shall be a City Planning Commission consisting of seven members to be appointed by the City Council from the qualified electors of the City, none of whom shall hold any paid office or employment in the City government. Six (6) members will be appointed from each of the six (6) districts and one (1) member will

be appointed at large. Should a district appointment remain vacant for more than ninety (90) days, the City Council has the authority and may elect to appoint an otherwise-qualified at large member to fill the district vacancy. The number of members to comprise the commission may be changed by Ordinance of the City Council to not less than five nor more than nine members.

The services of the City Engineer, City Attorney, Chief Building Official, Director of Development Services and other City staff shall be made available to such commission.

Sec. 711. - Recreation and parks commission.

There shall be a recreation and parks commission consisting of seven members to be appointed by the city council from the qualified electors of the city and no member of said commission shall hold any paid office or employment in the city government. Six (6) members will be appointed from each of the six (6) districts and one (1) member will be appointed at large. Should a district appointment remain vacant for more than ninety (90) days, the City Council has the authority and may elect to appoint an otherwise-qualified at large member to fill the district vacancy. The number of members to comprise the commission may be changed by ordinance of the city council to not less than five nor more than nine members. In the event the city council contracts with other agencies interested in recreation and parks for the joint exercise of any of such functions, such contract may provide for representation on the commission of otherwise qualified representatives of such agencies during the existence of such contract or extensions thereof.

Sec. 713. – Tax Transparency Commission.

There shall be a Tax Transparency Commission consisting of not less than seven (7) nor more than nine (9) members to be appointed by the City Council from the qualified electors of the City. Six (6) members will be appointed from each of the six (6) districts and the remaining member(s) will be appointed at large, and no member of said commission shall hold any paid office or employment in the city government. Should district appointments remain vacant for more than ninety (90) days, the City Council has the authority and may

elect to appoint an otherwise-qualified at large member to fill the vacancy. The Tax Transparency Commission shall meet quarterly.

Sec. 714. – Tax Transparency Commission—Powers and Duties.

The Tax Transparency Commission shall have authority to:

- A. Review the projected revenue and expenditures for the funds generated by each general or special tax measure.
- B. Make budget recommendations to the City Council in accordance with and to maintain compliance with each general or special tax measure.
- C. Review annual audits of each general or special tax measure and report any findings to the City Council.

Section 1051 – Definitions.

For purposes of this Part, the words, terms, and phrases set forth below shall have the meaning as set forth below:

"Candidate" means any person running for the office of Mayor or City Council.

"Contribution" means a cash or in-kind payment, or provision of goods and services which is made to the candidate or the candidate's agent for the purpose of promoting the candidate's campaign. A "contribution" includes a "loan" as defined herein.

"Entity" means a proprietorship, firm, partnership, joint venture, syndicate, business trust, company, corporation, limited liability company, association, and any other organization or group of persons acting in concert, other than a single person as defined in this Part.

"Election Cycle" means as follows:

1. For purposes of a candidate for the office of Mayor of the City, the term "election cycle" means any ~~two-year~~ **four-year period** commencing on January 1 following a City election for the office of Mayor, and concluding on December 31 following the next succeeding City election for the office of Mayor.
- 2.

2. For purposes of a candidate for the office of City Council, the term "election cycle" means any four-year period commencing on January 1 following a City election for the office of a City Council Member and concluding on December 31 following the next succeeding city election for that office.

"Loan" means the furnishing of cash, goods, or services to another party for temporary use with the agreement that it or its equivalent, with or without interest, will be returned. The term "loan" as used herein shall not include a candidate lending to his/her campaign from the candidate's personal resources—including obtaining a personal loan from a commercial lending institution, so long as the candidate is personally responsible for the repayment thereof.

"Person" means a single natural person.

~~Section 1112.—Cash basis fund.~~

~~The City Council shall maintain a revolving fund to be known as the "Cash Basis Fund," for the purpose of placing the payment of running expenses of the City on a cash basis. An operating reserve shall be built up in this Fund from any available sources in an amount that the City Council deems sufficient with which to meet all lawful demands against the City for the first five months, or other necessary period, of the succeeding fiscal year prior to the receipt of ad valorem tax revenues. Transfers may be made by the City Council from such Fund to any other fund or funds of such sum or sums as may be required for the purpose of placing such funds, as nearly as possible, on a cash basis.~~

~~All moneys so transferred from the Cash Basis Fund shall be returned thereto before the end of the fiscal year.~~

RESOLUTION NO. 2019-__

**A RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF MERCED, CALIFORNIA, REQUESTING
THAT THE BOARD OF SUPERVISORS OF THE
COUNTY OF MERCED, CALIFORNIA PROVIDE
FOR THE CONSOLIDATION OF A SPECIAL
MUNICIPAL ELECTION AND A BALLOT
MEASURE WITH THE STATEWIDE PRIMARY
ELECTION TO BE HELD ON MARCH 3, 2020**

WHEREAS, the City Council of the City of Merced has called a special municipal election, including a ballot measure proposition, to be held in the City of Merced on Tuesday, March 3, 2020, at which election will be submitted to the qualified electors of the City of Merced a proposition to amend various sections the City of Merced Charter.

WHEREAS, a Statewide Primary Election will be held on Tuesday, March 3, 2020, and it is the desire of this City Council that said special municipal election be consolidated with said Statewide Primary Election.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF
MERCED DOES HEREBY RESOLVE AS FOLLOWS:**

SECTION 1. The Board of Supervisors of the County of Merced is hereby requested to order the consolidation of said special municipal election with said Statewide Primary Election to be held on Tuesday, March 3, 2020, insofar as the City of Merced is concerned, and to further provide that within the territory affected by said Order of Consolidation, to wit: The City of Merced, the election precincts, polling places, and voting booths shall in every case be the same and there shall be one set of election officers in each of said precincts and to further provide that said measures hereinabove set forth shall be set forth in the ballots to be used at said election insofar as the same is held within the City of Merced.

SECTION 2. The Board of Supervisors of Merced County is hereby further requested to authorize the Registrar of Voters to canvass, or to cause to be canvassed, as provided by law, the returns of said special municipal election with respect to the votes cast in the City of Merced on the ballot measure proposition.

SECTION 3. The City Clerk is hereby authorized and directed to certify to the due adoption of this Resolution and to transmit a copy thereof so certified to the Merced County Board of Supervisors and to file a copy hereof so certified with the Registrar of the County of Merced.

SECTION 4. The City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original Resolutions and take other appropriate actions necessary to ensure the placement of said special municipal election before the voters of the City of Merced at said regularly scheduled Statewide Primary Election, including, but not limited to, transmitting a certified copy of this Resolution to the Merced County Board of Supervisors and to file a copy hereof so certified with the Registrar of the County of Merced.

SECTION 5. The City Clerk is hereby authorized and directed to reimburse the county in full for the services performed for said special municipal election upon receipt of an invoice from the Registrar of Voters - Elections office.

PASSED AND ADOPTED by the City Council of the City of Merced at a regular meeting held on the _____ day of _____ 2019, by the following called vote:

AYES: Council Members:

NOES: Council Members:

ABSTAIN: Council Members:

ABSENT: Council Members:

APPROVED:

Mayor

ATTEST:
STEVE CARRIGAN, CITY CLERK

BY: _____
Assistant/Deputy City Clerk

(SEAL)

APPROVED AS TO FORM:

City Attorney Date



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item L.1.

Meeting Date: 10/7/2019

SUBJECT: Mayor Murphy's Request to Discuss Naming a Park After a Member of the Hmong Community

REPORT IN BRIEF

Mayor Murphy's request to discuss naming a park after a member of the Hmong Community pursuant to City Council Administrative Policies and Procedures C-1.

RECOMMENDATION

It is requested Council give staff direction on this item.



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item L.2.

Meeting Date: 10/7/2019

SUBJECT: Mayor Murphy's Request to Discuss Hosting a Stage of the Amgen Tour of California Bike Race

REPORT IN BRIEF

Mayor Murphy's request to discuss hosting the Amgen Bike Tour pursuant to City Council Administrative Policies and Procedures C-1.

RECOMMENDATION

It is requested Council give staff direction on this item.



ADMINISTRATIVE REPORT

Agenda Item L.3.

Meeting Date: 10/7/2019

Report Prepared by: John Tresidder, Assistant City Clerk, City Clerk's Office

SUBJECT: Discussion on, and Potential Appointments to, the City of Merced Planning Commission (3 Vacancies)

REPORT IN BRIEF

Considers options for appointing individuals to the City of Merced Planning Commission.

RECOMMENDATION

City Council - Adopt a motion:

- A. Directing staff to schedule a Special Meeting to conduct interviews of Planning Commission applicants; **or**,
- B. Appointing a City Council subcommittee to complete interviews of the applicants and make recommendations to the full Council at the next Regular Meeting; **or**,
- C. Appointing one, two or three of the qualified applicants to the open seats either by Council District or At-Large at Council discretion; **or**,
- D. Continuing this item to a future meeting (specify date in motion).

AUTHORITY

City of Merced Charter Section 200, Section 702 and Section 707.

CITY COUNCIL PRIORITIES

N/A

DISCUSSION

There are currently three vacancies on the Planning Commission one of which expires in 2021 and the other two expire in 2023. Planning Commissioner Jeremy Martinez resigned from his seat in May of this year after moving out of the City limits. Peter Padilla's second term expired on July 1 of this year but Mr. Padilla has been gracious enough to continue to serve while awaiting a replacement to be appointed to his seat. At the Planning Commission meeting of September 18, Planning Commission Chair Scott Drexel announced his resignation as he will be moving from the area.

With the Planning Commission being the decision making body for important planning matters, it is

imperative that a quorum of members be present at each meeting. With only four members and a fifth temporary member awaiting a qualified replacement, the possibility of meetings being cancelled due to a lack of quorum increases.

A map of the current district location for the four current members is attached for Council reference to assist in the event that appointments are to be considered by Council District. Council may also choose to appoint in an at-large capacity as it sees fit.

Alternatively, the Council may wish to schedule interviews of the applicants at a Special Meeting of the entire Council, as has been the practice for the past few years, or appoint a City Council subcommittee to interview the applicants and make recommendations to the entire Council at the next regular meeting.

The City Clerk's Office has been actively recruiting to fill positions on the Commission through newspaper ads and social media posts. The City Clerk's Office has received seven applications for the Planning Commission vacancies.

The applicants are:

Stephanie Buttici - District 1
Renato Domingo - District 3
Nicholas Koenig - District 4
Casey Steed - District 4
Charles Reyburn - District 5
Jessie Espinosa - District 6
Jose Delgadillo - District 6

The current roster for the Commission is attached. The matter of appointment to this Commission is now before the Council.

History and Past Actions

The Planning Commission, created by City Charter, studies land subdivision, planning, and zoning matters. The Commission recommends to the City Council the adoption, amendment, or repeal of the City's Master Plan for the physical development of the City. The Commission consists of seven members who are qualified electors of the City of Merced. Meetings are generally held on the first and third Wednesdays of each month at 7:00 p.m.

IMPACT ON CITY RESOURCES

No impact on City resources.

ATTACHMENTS

1. Current Roster
2. Planning Commission Applications
3. Map of Planning Commissioners by District



PLANNING COMMISSION

BOARD ROSTER



MICHAEL J HARRIS

1st Term Jul 01, 2017 - Jul 01, 2021

Appointing Authority City Council
Position Vice-Chair



ROBERT DYLINEA

2nd Term Jul 01, 2017 - Jul 01, 2021

Appointing Authority City Council
Position Commissioner



MARY K CAMPER

1st Term Jul 01, 2016 - Jul 01, 2020

Appointing Authority City Council
Position Commissioner



SAMUEL J RASHE

1st Term Jul 01, 2018 - Jul 01, 2022

Appointing Authority City Council
Position Commissioner



VACANCY

Appointing Authority City Council
Position Commissioner
Office/Role Vice Chair



VACANCY

Appointing Authority City Council
Position Commissioner



VACANCY

Appointing Authority City Council
Position Commissioner

Profile

Stephanie

First Name

K

Middle Initial

Butticci

Last Name

UC Merced

Employer

Executive Assistant

Job Title

Email AddressPrimary PhoneAlternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ NoStreet AddressCitySuite or AptStatePostal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 1

Are you currently serving on a Board or Commission? If so, please list:No

Which Boards would you like to apply for?Planning Commission: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *☒ Some College, No Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

I'm interested in the betterment of our community. I returned to Merced after living in San Diego for over 20 years and was a bit disappointing that our city had not progressed more. It's now sees more homelessness, drugs and more violence than what I was use to growing up. I'd like to see that changed.

Please list your current employer and relevant volunteer experience.

UC Merced and work for VC Sam Traina. I am the committee chair for Research Week and for the last two years I chaired - Women and Entrepreneurship conference. I'm a Merced Sunrise Rotarian too.

What is your understanding of the roles and responsibilities of this Board or Commission?

Do you have experience or special knowledge pertaining to this Board or Commission?

No

Any other comments you would like to add that may assist the City Council in their decision?

Upload a Resume

Requirements

Question applies to multiple boards

AB 1234 Ethics Training

☒ I Agree *

Question applies to multiple boards

Attendance Policy

☒ I Agree *

Question applies to multiple boards

Statement of Economic Interests - FPPC Form 700

☒ I Agree *

Question applies to multiple boards

Oath of Office

☒ I Agree *

Question applies to multiple boards

Public Scrutiny

☒ I Agree *

Question applies to multiple boards

How did you hear about this vacancy? *

☒ A Friend

If you selected other, please indicate how you learned about the vacancy:

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Female

Date of Birth

Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

Skb

Profile

Renato

First Name

Domingo

Middle Initial

Last Name

Adriano & Associates

Employer

Partner

Job Title

Email Address

Primary Phone

Alternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ No

Street Address

City

Suite or Apt

State

Postal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 3

Are you currently serving on a Board or Commission? If so, please list:

No

Which Boards would you like to apply for?

Planning Commission: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *☒ Professional Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

I have practiced law since passing the California Bar in 1987. I worked as a deputy district attorney for Los Angeles County, transitioned to private practice in 1990 and then joined my wife who is also a lawyer at Adriano & Associates, a intellectual property law firm. I now spend time reading and investing in stocks and real estate. We bought our house in Merced in May 1918 because we want to be a part of Merced's growth and I like to learn more about the path and direction of Merced's growth through the Planning Commission.

Please list your current employer and relevant volunteer experience.

I am the managing partner of Adriano & Associates. I am a member of the foundation established by the Philippine American Bar Association of Los Angeles.

What is your understanding of the roles and responsibilities of this Board or Commission?

The role of the Planning Commission is to implement the General Plan of the city's growth and development in the projects submitted to the city council for consideration and approval. The Planning Commission is there to review these plans and recommend the appropriate action by the City Council.

Do you have experience or special knowledge pertaining to this Board or Commission?

I don't have special knowledge pertaining in land use, zoning, building and safety, environmental considerations aside from my background. My undergraduate degree at Pomona College in 1983 was in geology and my law degree from Loyola Law School in 1987.

Any other comments you would like to add that may assist the City Council in their decision?

I want to serve in the Planning Commission primarily to see the many issues that arise in a city's decision to direct and implement growth especially with the expansion of UC Merced.


Upload a Resume

Requirements

Question applies to multiple boards

AB 1234 Ethics Training

☒ I Agree *

Question applies to multiple boards

Attendance Policy

☒ I Agree *

Question applies to multiple boards

Statement of Economic Interests - FPPC Form 700

☒ I Agree *

Question applies to multiple boards

Oath of Office

☒ I Agree *

Question applies to multiple boards

Public Scrutiny

☒ I Agree *

Question applies to multiple boards

How did you hear about this vacancy? *

☒ City Website

If you selected other, please indicate how you learned about the vacancy:

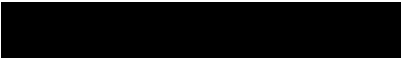
Demographics

Ethnicity

☒ Asian or Pacific Islander

Gender

☒ Male



Date of Birth

Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

/Renato Domingo/

Profile

Casey

First Name

Steed

Middle Initial

Last Name

self

Employer

Job Title

Email AddressPrimary PhoneAlternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ NoStreet AddressCitySuite or AptStatePostal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 4

Are you currently serving on a Board or Commission? If so, please list:

No

Which Boards would you like to apply for?

Planning Commission: Submitted

Citizens Advisory Charter Review Committee: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *

☒ Some College, No Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

Lived in the area for a while. Contribute to the process.

Please list your current employer and relevant volunteer experience.

Self, none

What is your understanding of the roles and responsibilities of this Board or Commission?

I understand the information as posted on the city website about the position.

Do you have experience or special knowledge pertaining to this Board or Commission?

No

Any other comments you would like to add that may assist the City Council in their decision?

No

[Upload a Resume](#)

Requirements

Question applies to multiple boards

AB 1234 Ethics Training

☒ I Agree *

Question applies to multiple boards

Attendance Policy

☒ I Agree *

Question applies to multiple boards

Statement of Economic Interests - FPPC Form 700

☒ I Agree *

Question applies to multiple boards

Oath of Office

☒ I Agree *

Question applies to multiple boards

Public Scrutiny

☒ I Agree *

Question applies to multiple boards

How did you hear about this vacancy? *

☒ Newspaper

If you selected other, please indicate how you learned about the vacancy:

Demographics

Ethnicity

☒ Unknown

Gender

☒ Male

Date of Birth

Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

C.S.

Profile

Nicholas

First Name

Koenig

Middle Initial

Last Name

WM J. KOENIG, INC.

Employer

ENROLLED AGENT

Job Title

Email Address

Primary Phone

Alternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ No

Street Address

City

Suite or Apt

State

Postal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 4

Are you currently serving on a Board or Commission? If so, please list:

Which Boards would you like to apply for?

Planning Commission: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *☒ Bachelor's Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

I have lived in Merced nearly all 30 years of my life in the exception of when I lived in Fresno where I received a bachelors degree and commissioned in the Army from Fresno State. I am currently an Enrolled Agent/Accountant for my families practice at Wm. J. Koenig Inc and have served in the Army for almost 12 years (currently a Commander of a Light Reconnaissance Troop in the National Guard). My goal is to be the change I wish to see in Merced and provide a future for my children in my hometown. I would like to help bring economic stability and employment opportunities for the younger generations in Merced

Please list your current employer and relevant volunteer experience.

Current Employer is Wm. J. Koenig, Inc. I have been a volunteer for Knights of Clumbus Mother of Theresa Council at St. Patricks Church for the last 12 years where we have thrown fundraisers for Mary's Mantle, Alpha Crisis Pregnancy Center, OLM School, and other non-profits. When I lived in Fresno I would volunteer at CASA events and assist in the setup and tear down of numerous events.I also currently assist in some UC Merced events in regards to the setup.

What is your understanding of the roles and responsibilities of this Board or Commission?

As commissioners, we act as advisers to the city council in the aspects of physical development of the City of Merced and any land sub-division, planning, and zoning matters.

Do you have experience or special knowledge pertaining to this Board or Commission?

I do not.

Any other comments you would like to add that may assist the City Council in their decision?

I was deployed as a Squadron Logistician and was responsible for the transportation and safe-keeping of over \$90M worth of Army equipment. I was responsible for establishing budgets and logistical timelines for our retrograde and eventual redeployment to the United States. My tenure resulted in zero loss of equipment.

[Upload a Resume](#)

Requirements

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ A Friend

If you selected other, please indicate how you learned about the vacancy:

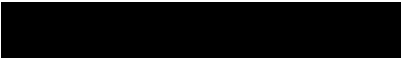
Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Male



Date of Birth

Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

NAK

Profile

Charles

First Name

W

Middle Initial

Reyburn

Last Name

MCOE Head Start

Employer

Cook

Job Title

Email AddressPrimary PhoneAlternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ NoStreet AddressCitySuite or AptStatePostal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 5

Are you currently serving on a Board or Commission? If so, please list:No

Which Boards would you like to apply for?Planning Commission: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *☒ Some College, No Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

I am born and raised in Merced. I take great pride in my city and help with-in our community in various ways.

Please list your current employer and relevant volunteer experience.

MCOE- Head Start Previously served on the measure C oversight committee. Small business owner

What is your understanding of the roles and responsibilities of this Board or Commission?

To offer recommendations to our city council regarding business planning and helping to shape our city into a prosperous place to live for all residents.

Do you have experience or special knowledge pertaining to this Board or Commission?

I am very familiar with Merced and the many business owners that operate with-in it. I want to be apart of shaping our community.

Any other comments you would like to add that may assist the City Council in their decision?

I make decisions and recommendations based on the facts that are provided, the current needs of our community, and what those choices will bring our city for years to come.


Upload a Resume

Requirements

Question applies to multiple boards

AB 1234 Ethics Training

☒ I Agree *

Question applies to multiple boards

Attendance Policy

☒ I Agree *

Question applies to multiple boards

Statement of Economic Interests - FPPC Form 700

☒ I Agree *

Question applies to multiple boards

Oath of Office

☒ I Agree *

Question applies to multiple boards

Public Scrutiny

☒ I Agree *

Question applies to multiple boards

How did you hear about this vacancy? *

☒ City Website

If you selected other, please indicate how you learned about the vacancy:

Self

Demographics

Ethnicity

☒ Caucasian/Non-Hispanic

Gender

☒ Male

Date of Birth

Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

CWR

Profile

Jessee

First Name

J.R.

Middle Initial

Espinosa

Last Name

UC Merced

Employer

Student

Job Title

Email AddressPrimary PhoneAlternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ NoStreet AddressCitySuite or AptStatePostal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 6

Are you currently serving on a Board or Commission? If so, please list:

Which Boards would you like to apply for?

Planning Commission: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *☒ Associate's Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

My name is Jessee Espinosa and I would consider myself a knowledgeable Mercedian. Merced is my home and I am committed to investing in it's long term growth and success. I have lived in Merced my whole life. I spent nearly a decade attending McSwain School from kindergarten to 8th grade; I then graduated from Buhach Colony High School. On May 24, 2019 I became a proud alumni of Merced College. In the fall I look forward to beginning my university experience at the University of California, Merced. I was recently accepted into a dynamic and collaborative community leadership academy sponsored by the Merced Chamber of Commerce. This experience not only gave me valuable insight into the soul of Merced, where we are and where we are going, but, additionally, I was empowered to embrace a unique skill set that has better enabled me to be a more effective citizen of Merced. To further this experience, I took the advice given by the Chamber at our graduation ceremony to seek out positions which would make good use of the skills we learned for the betterment of the community. That is what brings me to this application. It is my view that the City of Merced Planning Commission is an ideal position to aide in the building of a better and more sustainable community, as it functions to both help build a prospective general plan for the future of the community's path, and simultaneously helps to build that path in the present time, brick by brick, case by case, through recommendation power to the city council.

Please list your current employer and relevant volunteer experience.

My current occupation is a soon-to-be full time student at the University of California, Merced. I recently earned my Associate of Arts for Transfer from Merced College; during my time there I founded and led a successful debate program that attended two years of national competition where we explored through research, critical thinking and advocacy the intricacies of various government functions and policy structures. Additionally, I worked in the Merced College Student Government both as a Vice President of Judicial Affairs, and as a student representative. My governmental volunteer experience includes an internship I completed under Congressman Costa. As of May, 2019, I also am an alumni of the Leadership Merced Program, which taught us about various industries and sectors of Merced County, the problems they are facing, and approaches to better the situations. Community outreach and civic engagement is very important to me; I am an involved member of Lions International and am currently assigned as the facilitator and co-advisor for the Leo branch at Merced High. Additionally, I am a charter member of Rotary Community Corp. I am a Political Science major and am passionate about bipartisan political issues impacting intersections of government and policy. I also enjoyed assisting diverse political campaigns for local politicians during the 2018 election cycle and look forward to a lifelong career partnering with the community, policy and government.

What is your understanding of the roles and responsibilities of this Board or Commission?

It is my understanding that the Merced Planning Commission is tasked with helping ensure a sustainable growth path toward the future in context of the general plan. This also includes but is not limited to reviewing citizen requests to deviate from ordinance requirements and/or other zoning/housing requests; we would then deliver a recommendation for action to Merced City Council. As a responsible member of Merced's planning commission, my duties would include active and involved attendance on Wednesday's meetings at 7PM after the 1st and 3rd Monday of the month, to be knowledgeable on traditional regulatory documents including but not limited to local/state ordinances/codes and environmental documents (CEQA), to periodically update the city's general plan to be better aligned with the community's character and vision for the future. Utmost and furthermore, however, my position would require me to find a healthy balance between the public's interests and rights to access health, safety, and well-being, and the private sector's rights and business community's interests to promote sustainable economic development.

Do you have experience or special knowledge pertaining to this Board or Commission?

I have read extensively on the roles and responsibilities of a local planner, including but not limited to the following books and presentations: The Handbook of Urban Services: a Basic Guide for Local Government by Charles K. Coe, Planning Commission 101 by Placeworks, The Planning Commission's Role by Institute for Local Government, Land Use and Planning: Guide to Local Planning by Institute of Local Government, California Planning Guide: an Introduction to Planning in California by the Governor's Office of Planning and Research. These are preliminary readings to gain a fundamental understanding of what the position entails, and I am committed to further acquisition of knowledge during the course of my tenure on the commission. My personal, professional, and volunteer experience has equipped me with exceptional critical thinking skills leading toward finding solutions, an adaptability and open mindedness to work well with others and to listen and be inclusive of diverse perspectives. I possess committed willingness and drive to spend the time required to study and analyze materials necessary to make the best decision. I am also a life-long citizen of this city. I have over two decades of experience within the Merced community, and I plan on having decades more. My entire life, and my life's experience with the Merced community, has helped prepare me for this role.

Any other comments you would like to add that may assist the City Council in their decision?

I am confident I would be successful in this position. I have a high drive to achieve results, and I push myself to complete what I begin. I know I would be successful in this position, because I wouldn't allow myself to be anything but. I am aware that I am sure to encounter an issue I wasn't fully prepared for, but I believe I am bright enough and I know I'm hard-working enough to commit to figuring out how to solve the issue in front of me. My lengthy experience with debate has fostered excellent research and critical thinking skills, as well as a high quality mind for reading policy. But, beyond capability, I have a passion for this work. It's why I actively participate so much in the community, and actively engage and invest in those projects in which I am involved. There is a quote, "If you find a job you love, you'll never have to work another day in your life," and to me, that's exactly what this kind of work is for me. Serving the community on the Merced City Planning Commission would not be a job that I'm forced to go to, but exactly one I would want to spend my time doing. In addition to this, It is my firm belief that true passion and capability is a winning combination in a public policy advisor.


Upload a Resume

Requirements

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ A Friend

If you selected other, please indicate how you learned about the vacancy:

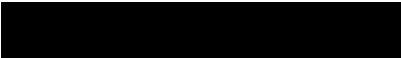
Demographics

Ethnicity

☒ Hispanic

Gender

☒ Male



Date of Birth

Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

JJRE

Profile

JOSE

First Name

J

Middle Initial

DELGADILLO

Last Name

RETIRED

Employer

Job Title

Email Address

Primary Phone

Alternate Phone

Are you 18 years of age or older? (Required)☒ Yes ☐ No

Question applies to multiple boards

Do you live within the City Limits of Merced? (Required)☒ Yes ☐ No

Street Address

City

Suite or Apt

State

Postal Code

Question applies to multiple boards

Are you a registered voter in the City of Merced? (Required)☒ Yes ☐ No

Which Council district do you live in? *☒ District 6

Are you currently serving on a Board or Commission? If so, please list:

MCAG-CAC

Which Boards would you like to apply for?

Planning Commission: Submitted

Question applies to multiple boards

Highest Level of Education Completed: *☒ Bachelor's Degree

Communication

The City of Merced uses email as a preferred method of communication regarding your application. Is this acceptable to you?

☒ Yes ☐ No

If you selected no, please identify how you would like to be contacted:

Interests & Experiences

Tell us about yourself, and why you are applying for this particular Board or Commission:

A current member of the Measure C Advisory Committee has strongly suggested I apply for this Commission. He and I have served in the Merced County Civil Grand Jury (five years), and as Commissioners for the Housing Authority for the County of Merced (nine years).

Please list your current employer and relevant volunteer experience.

I retired as Senior Planner from Union Pacific Railroad in 1999. Since that time I have been very active in very simple community service. However, since I relocated from San Francisco to Merced in 2006, I have been more involved. In my past 13 years I have served in the Civil Grand Jury for five years; and nine years as Commissioner for the Housing Authority for the County of Merced; currently Vice Chair for the Merced County Association of Governments Citizen Advisory Committee.

What is your understanding of the roles and responsibilities of this Board or Commission?


Being able to provide constructive recommendations to the City Council. I will become very familiar with everything the Council is responsible for so I and the other Commissioners provide constructive and sincere advice to the Council. The Council's performance could depend on the advice we provide to them concerning the developing of the City of Merced. My goal is to make this City a very business friendly - safe and productive.

Do you have experience or special knowledge pertaining to this Board or Commission?

None whatsoever.

Any other comments you would like to add that may assist the City Council in their decision?

I will reduce my participation with other community groups so I can attend as much as possible to the needs of the Planning Commission. I understand that my responsibilities will be much more than just the two meetings a month. I went through it with the Civil Grand Jury and the Housing Authority.


Upload a Resume

Requirements

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ I Agree *

☒ A Friend

If you selected other, please indicate how you learned about the vacancy:

Demographics

Ethnicity

☒ Hispanic

Gender

☒ Male

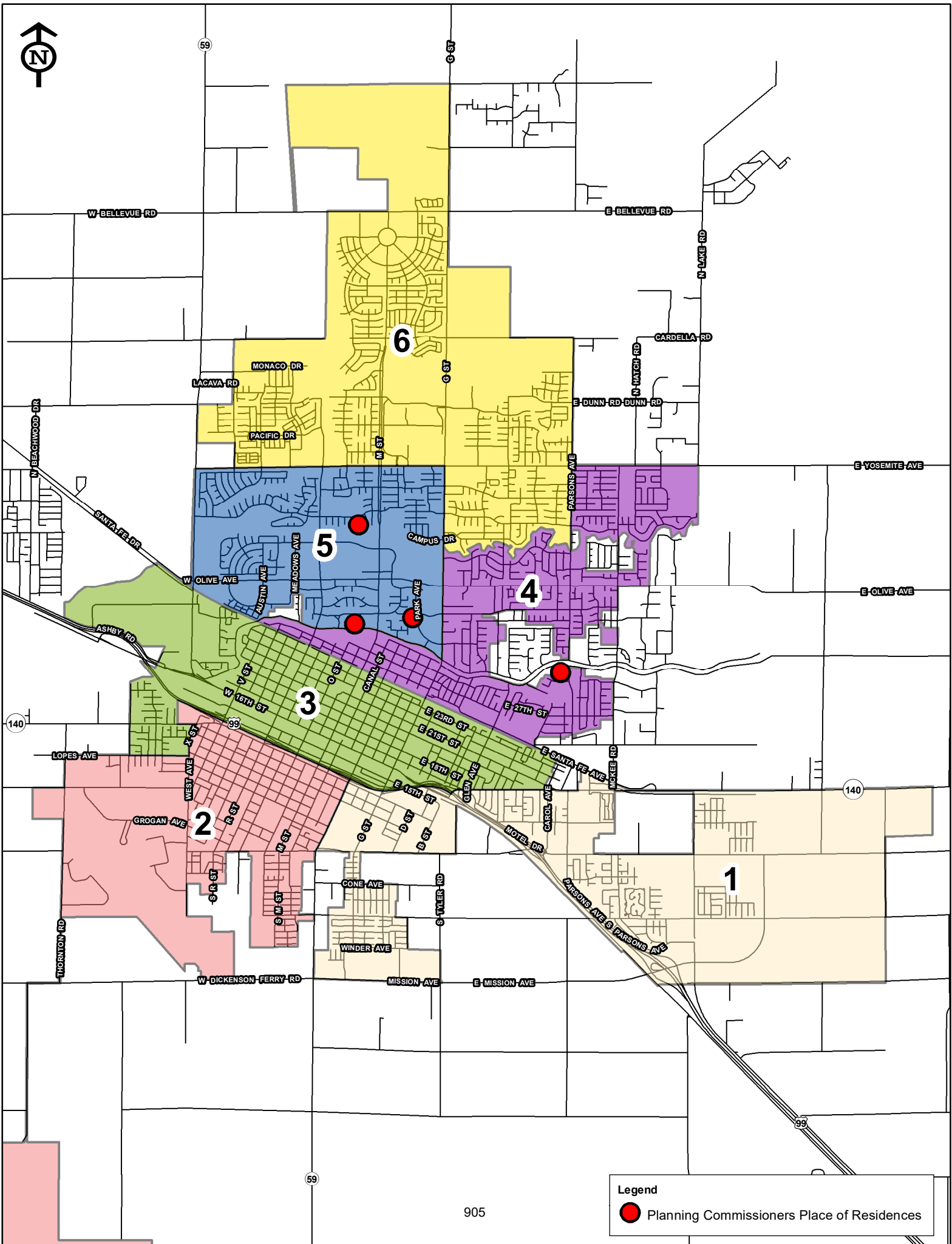


Date of Birth


Submission

I declare under penalty of disqualification or termination that all statements in this application are true and complete to the best of my knowledge.

JJD



Legend

 Planning Commissioners Place of Residences



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item L.4.

Meeting Date: 10/7/2019

Report Prepared by: John Tresidder, Assistant City Clerk, City Clerk's Office

SUBJECT: City Council Position on League of California Cities Resolutions

REPORT IN BRIEF

Provides direction to the City's official League of California Cities voting delegate on two proposed League Resolutions.

RECOMMENDATION

City Council - Adopt a motion stating the City's position on each of the two proposed League Resolutions and directing the City's official League voting delegate to cast votes as such at the League's Annual Business Meeting on Friday, October 18, 2019, at the Long Beach Convention Center.

ATTACHMENTS

1. League of California Cities Resolution Packet



Annual Conference Resolutions Packet

2019 Annual Conference Resolutions



*Long Beach, California
October 16 – 18, 2019*

INFORMATION AND PROCEDURES

RESOLUTIONS CONTAINED IN THIS PACKET: The League bylaws provide that resolutions shall be referred by the president to an appropriate policy committee for review and recommendation. Resolutions with committee recommendations shall then be considered by the General Resolutions Committee at the Annual Conference.

This year, two resolutions have been introduced for consideration at the Annual Conference and referred to League policy committees.

POLICY COMMITTEES: Two policy committees will meet at the Annual Conference to consider and take action on the resolutions referred to them. The committees are: Environmental Quality and Transportation, Communication & Public Works. The committees will meet from 9:00 – 11:00 a.m. on Wednesday, October 16, at the Hyatt Regency Long Beach. The sponsors of the resolutions have been notified of the time and location of the meeting.

GENERAL RESOLUTIONS COMMITTEE: This committee will meet at 1:00 p.m. on Thursday, October 17, at the Hyatt Regency Long Beach, to consider the reports of the policy committees regarding the resolutions. This committee includes one representative from each of the League's regional divisions, functional departments and standing policy committees, as well as other individuals appointed by the League president. Please check in at the registration desk for room location.

ANNUAL LUNCHEON/BUSINESS MEETING/GENERAL ASSEMBLY: This meeting will be held at 12:30 p.m. on Friday, October 18, at the Long Beach Convention Center.

PETITIONED RESOLUTIONS: For those issues that develop after the normal 60-day deadline, a resolution may be introduced at the Annual Conference with a petition signed by designated voting delegates of 10 percent of all member cities (48 valid signatures required) and presented to the Voting Delegates Desk at least 24 hours prior to the time set for convening the Annual Business Meeting of the General Assembly. This year, that deadline is 12:30 p.m., Thursday, October 17. Resolutions can be viewed on the League's Web site: www.cacities.org/resolutions.

Any questions concerning the resolutions procedures may be directed to Carly Shelby cshelby@cacities.org 916-658-8279 or Nick Romo nromo@cacities.org 916-658-8232 at the League office.

GUIDELINES FOR ANNUAL CONFERENCE RESOLUTIONS

Policy development is a vital and ongoing process within the League. The principal means for deciding policy on the important issues facing cities is through the League's seven standing policy committees and the board of directors. The process allows for timely consideration of issues in a changing environment and assures city officials the opportunity to both initiate and influence policy decisions.

Annual conference resolutions constitute an additional way to develop League policy. Resolutions should adhere to the following criteria.

Guidelines for Annual Conference Resolutions

1. Only issues that have a direct bearing on municipal affairs should be considered or adopted at the Annual Conference.
2. The issue is not of a purely local or regional concern.
3. The recommended policy should not simply restate existing League policy.
4. The resolution should be directed at achieving one of the following objectives:
 - (a) Focus public or media attention on an issue of major importance to cities.
 - (b) Establish a new direction for League policy by establishing general principles around which more detailed policies may be developed by policy committees and the board of directors.
 - (c) Consider important issues not adequately addressed by the policy committees and board of directors.
 - (d) Amend the League bylaws (requires 2/3 vote at General Assembly).

LOCATION OF MEETINGS

Policy Committee Meetings

Wednesday, October 16, 9:00 – 11:00 a.m.

Hyatt Regency Long Beach

200 South Pine Avenue, Long Beach

The following committees will be meeting:

1. Environmental Quality 10:00 - 11:00 a.m.
2. Transportation, Communication & Public Works 9:00 - 10:00 a.m.

General Resolutions Committee

Thursday, October 17, 1:00 p.m.

Hyatt Regency Long Beach

200 South Pine Avenue, Long Beach

Annual Business Meeting and General Assembly Luncheon

Friday, October 18, 12:30 p.m.

Long Beach Convention Center

300 East Ocean Boulevard, Long Beach

KEY TO ACTIONS TAKEN ON RESOLUTIONS

Resolutions have been grouped by policy committees to which they have been assigned.

| Number | Key Word Index | Reviewing Body Action | | |
|--------|----------------|---|---|---|
| | | 1 | 2 | 3 |
| | | 1 - Policy Committee Recommendation
to General Resolutions Committee
2 – General
Resolutions Committee
3 - General Assembly | | |

ENVIRONMENTAL QUALITY POLICY COMMITTEE

| | | 1 | 2 | 3 |
|---|---|---|---|---|
| 1 | Amendment to Rule 20A | | | |
| 2 | International Transboundary Pollution Flows | | | |

TRANSPORTATION, COMMUNICATION & PUBLIC WORKS POLICY COMMITTEE

| | | 1 | 2 | 3 |
|---|-----------------------|---|---|---|
| 1 | Amendment to Rule 20A | | | |

Information pertaining to the Annual Conference Resolutions will also be posted on each committee's page on the League website: www.cacities.org. The entire Resolutions Packet is posted at: www.cacities.org/resolutions.

KEY TO ACTIONS TAKEN ON RESOLUTIONS (*Continued*)

Resolutions have been grouped by policy committees to which they have been assigned.

KEY TO REVIEWING BODIES

1. Policy Committee
2. General Resolutions Committee
3. General Assembly

KEY TO ACTIONS TAKEN

- | | |
|-----|---|
| A | Approve |
| D | Disapprove |
| N | No Action |
| R | Refer to appropriate policy committee for study |
| a | Amend+ |
| Aa | Approve as amended+ |
| Aaa | Approve with additional amendment(s)+ |
| Ra | Refer as amended to appropriate policy committee for study+ |
| Raa | Additional amendments and refer+ |
| Da | Amend (for clarity or brevity) and Disapprove+ |
| Na | Amend (for clarity or brevity) and take No Action+ |
| W | Withdrawn by Sponsor |

ACTION FOOTNOTES

- * Subject matter covered in another resolution
- ** Existing League policy
- *** Local authority presently exists

Procedural Note:

The League of California Cities resolution process at the Annual Conference is guided by League Bylaws. A helpful explanation of this process can be found on the League's website by clicking on this link: [Guidelines for the Annual Conference Resolutions Process](#).

League of California Cities Resolution Process

REGULAR RESOLUTIONS

| Policy Committee Action | General Resolutions Committee Action | Calendar |
|-------------------------|--------------------------------------|--------------------------------------|
| Approve | Approve | Consent Calendar ¹ |
| Approve | Disapprove or Refer | Regular Calendar ² |
| Disapprove or Refer | Approve | Regular Calendar |
| Disapprove or Refer | Disapprove or Refer | Does not proceed to General Assembly |

PETITION RESOLUTIONS

| Policy Committee Action | General Resolutions Committee Action | Calendar |
|-------------------------------|--------------------------------------|--------------------------------------|
| Not Heard in Policy Committee | Approve | Consent Calendar |
| Not Heard in Policy Committee | Disapprove or Refer | Regular Calendar |
| Not Heard in Policy Committee | Disqualified per Bylaws Art. VI | Does not proceed to General Assembly |

Resolutions

- Submitted 60 days prior to conference *Bylaws Article VI, Sec. 4(a)*
- Signatures of at least 5 supporting cities or city officials submitted with the proposed resolution *Bylaws Article VI, Sec. 2*
- Assigned to policy committee(s) by League president *Bylaws Article VI, Sec. 4(b)(i)*
- Heard in policy committee(s) and report recommendation, if any, to GRC *Bylaws Article VI, Sec. 4(b)(ii)*
- Heard in GRC
 - Approved by policy committee(s) and GRC, goes on to General Assembly on consent calendar *2006 General Assembly Resolution Sec. 2(C)*
 - If amended/approved by all policy committee(s) to which it has been referred and disapproved by GRC, then goes on to General Assembly on the regular calendar. If not all policy committees to which it has been referred recommend amendment or approval, and the GRC disapproves or refers the resolution, the resolution does not move to the General Assembly *2006 General Assembly Resolution Sec. 2(A),(C); 1998 General Assembly Resolution, 1st Resolved Clause*
 - If disapproved by all policy committees to which it has been referred and disapproved by the GRC, resolution does not move to the General Assembly *2006 General Assembly Resolution Sec. 2(C)*
- Heard in General Assembly

¹ The consent calendar should only be used for resolutions where there is unanimity between the policy committees and the GRC that a resolution should be approved by the General Assembly, and therefore, it can be concluded that there will be less desire to debate the resolution on the floor.

² The regular calendar is for resolutions for which there is a difference in recommendations between the policy committees and the GRC.

Petitioned Resolutions

- Submitted by voting delegate *Bylaws Article VI, Sec. 5 (a)*
- Must be signed by voting delegates representing 10% of the member cities *Bylaws Article VI, Sec. 5 (c)*
- Signatures confirmed by League staff
- Submitted to the League president for confirmation 24 hours before the beginning of the General Assembly. *Bylaws Article VI, Sec. 5 (d)*
- Petition to be reviewed by Parliamentarian for required signatures of voting delegates and for form and substance *Bylaws Article VI, Sec. 5(e)*
- Parliamentarian's report is presented to chair of GRC
- Will be heard at GRC for action (GRC cannot amend but may recommend by a majority vote to the GA technical or clarifying amendments) *2006 General Assembly Resolution sec. 6(A), (B)*
- GRC may disqualify if:
 - Non-germane to city issues
 - Identical or substantially similar in substance to a resolution already under consideration *Bylaws Article VI, Sec. 5(e), (f)*
- Heard in General Assembly
 - General Assembly will consider the resolution following the other resolutions³ *Bylaws Article VI, Sec. 5(g)*
 - Substantive amendments that change the intent of the petitioned resolution may only be adopted by the GA *2006 General Assembly Resolution sec. 6(C)*

Voting Procedure in the General Assembly

Consent Calendar: Resolution approved by Policy Committee(s) and GRC. Petitioned resolution approved by GRC)

- GRC Chair will be asked to give the report from the GRC and will ask for adoption of the GRC's recommendations
- Ask delegates if there is a desire to call out a resolution for discussion
- A voting delegate may make a motion to remove a resolution from the consent calendar for discussion
- If a motion is made to pull a resolution, the General Assembly votes on whether to pull the resolution from the consent calendar.
- If a majority of the General Assembly votes to pull the resolution, set "called out" reso(s) aside. If the motion fails, the resolution remains on the consent calendar.
- If reso(s) not called out, or after 'called out' reso is set aside, then ask for vote on remaining resos left on consent
- Move on to debate on reso(s) called out
- After debate, a vote is taken
- Voting delegates vote on resolutions by raising their voting cards.⁴

³ Petitioned Resolutions on the Consent Calendar will be placed after all General Resolutions on the Consent Calendar. Petitioned Resolutions on the Regular Calendar will be placed after all General Resolutions on the Regular Calendar.

⁴ Amendments to League bylaws require 2/3 vote

Regular Calendar: Regular resolutions approved by Policy Committee(s)⁵, and GRC recommends disapproval or referral; Regular resolutions disapproved or referred by Policy Committee(s)⁶ and GRC approves; Petitioned resolutions disapproved or referred by the GRC.

- Open the floor to determine if a voting delegate wishes to debate a resolution on the regular calendar.
- If no voting delegate requests a debate on the resolution, a vote to ratify the recommendation of the GRC on the resolution is taken.
- Upon a motion by a voting delegate to debate a resolution, a debate shall be held if approved by a majority vote of the General Assembly. If a majority of the General Assembly to debate the resolution is not achieved, then a vote shall be taken on whether to ratify the GRC's recommendation. If a majority of the General Assembly approves of the motion to debate the resolution, debate will occur. After debate on the resolution, a vote is taken based upon the substitute motion that was made, if any, or on the question of ratifying the GRC's recommendation.
- Voting delegates vote by raising their voting cards.

⁵ Applies in the instance where the GRC recommendation of disapproval or refer is counter to the recommendations of the policy committees.

⁶ Applies in the instance where the GRC recommendation to approve is counter to the recommendations of the policy committees.

1. RESOLUTION OF THE LEAGUE OF CALIFORNIA CITIES CALLING ON THE CALIFORNIA PUBLIC UTILITIES COMMISSION TO AMEND RULE 20A TO ADD PROJECTS IN VERY HIGH FIRE HAZARD SEVERITY ZONES TO THE LIST OF ELIGIBILITY CRITERIA AND TO INCREASE FUNDING ALLOCATIONS FOR RULE 20A PROJECTS

Source: City of Rancho Palos Verdes

Concurrence of five or more cities/city officials

Cities: City of Hidden Hills, City of La Cañada Flintridge, City of Laguna Beach, City of Lakeport, City of Malibu, City of Moorpark, City of Nevada City, City of Palos Verdes Estates, City of Rolling Hills Estates, City of Rolling Hills, City of Ventura

Referred to: Environmental Quality Policy Committee; Transportation, Communications, and Public Works Policy Committee

WHEREAS, the California Public Utilities Commission regulates the undergrounding conversion of overhead utilities under Electric Tariff Rule 20 and;

WHEREAS, conversion projects deemed to have a public benefit are eligible to be funded by ratepayers under Rule 20A; and

WHEREAS, the criteria under Rule 20A largely restricts eligible projects to those along streets with high volumes of public traffic; and

WHEREAS, the cost of undergrounding projects that do not meet Rule 20A criteria is left mostly or entirely to property owners under other parts of Rule 20; and

WHEREAS, California is experiencing fire seasons of worsening severity; and

WHEREAS, undergrounding overhead utilities that can spark brush fires is an important tool in preventing them and offers a public benefit; and

WHEREAS, brush fires are not restricted to starting near streets with high volumes of public traffic; and

WHEREAS, expanding Rule 20A criteria to include Very High Fire Hazard Severity Zones would facilitate undergrounding projects that would help prevent fires; and

WHEREAS, expanding Rule 20A criteria as described above and increasing funding allocations for Rule 20A projects would lead to more undergrounding in Very High Fire Hazard Severity Zones; and now therefore let it be,

RESOLVED that the League of California Cities calls on the California Public Utilities Commission to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility and to increase funding allocations for Rule 20A projects.

Background Information on Resolution No. 1

Source: City of Rancho Palos Verdes

Background:

Rancho Palos Verdes is the most populated California city to have 90 percent or more of residents living in a Cal Fire-designated Very High Fire Hazard Severity Zone. Over the years, the Palos Verdes Peninsula has seen numerous brush fires that were determined to be caused by electrical utility equipment.

Across the state, some of the most destructive and deadly wildfires were sparked by power equipment. But when it comes to undergrounding overhead utilities, fire safety is not taken into account when considering using ratepayer funds to pay for these projects under California's Electric Tariff Rule 20 program. The program was largely intended to address visual blight when it was implemented in 1967. Under Rule 20A, utilities must allocate ratepayer funds to undergrounding conversion projects chosen by local governments that have a public benefit and meet one or more of the following criteria:

- Eliminate an unusually heavy concentration of overhead lines;
- Involve a street or road with a high volume of public traffic;
- Benefit a civic or public recreation area or area of unusual scenic interest; and,
- Be listed as an arterial street or major collector as defined in the Governor's Office of Planning and Research (OPR) Guidelines.

As we know, brush fires are not restricted to erupting in these limited areas. California's fire season has worsened in severity in recent years, claiming dozens of lives and destroying tens of thousands of structures in 2018 alone.

Excluding fire safety from Rule 20A eligibility criteria puts the task of undergrounding power lines in Very High Fire Hazard Severity Zones squarely on property owners who are proactive, willing and able to foot the bill.

The proposed resolution calls on the California Public Utilities Commission to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the proposed resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

If adopted, utilities will be incentivized to prioritize undergrounding projects that could potentially save millions of dollars and many lives.

League of California Cities Staff Analysis on Resolution No. 1

Staff: Rony Berdugo, Legislative Representative, Derek Dolfie, Legislative Representative, Caroline Cirrincione, Legislative Policy Analyst
Committees: Environmental Quality; Transportation, Communications, and Public Works

Summary:

This Resolution, in response to intensifying fire seasons and hazards associated with exposed energized utility lines, proposes that the League of California Cities (League) call upon the California Public Utilities Commission (CPUC) to amend the Rule 20A program by expanding the criteria for undergrounding overhead utilities to include projects in Very High Fire Hazard Severity Zones (VHFHSZ). This Resolution also proposes that the League call upon the CPUC to increase utilities' funding allocations for Rule 20A projects.

Background

California Wildfires and Utilities

Over the last several years, the increasing severity and frequency of California's wildfires have prompted state and local governments to seek urgent prevention and mitigation actions. Record breaking wildfires in Northern and Southern California in both 2017 and 2018 have caused destruction and loss of life. This severe fire trend has local officials seeking solutions to combat what is now a year-round fire season exacerbated by years of drought, intense weather patterns, untamed vegetation and global warming.

These conditions create a dangerous catalyst for wildfires caused by utilities as extreme wind and weather events make downed power lines more of a risk. In response to recent catastrophic wildfires, Governor Newsom established a Strike Force tasked with developing a "comprehensive roadmap" to address issues related to wildfires, climate change, and utilities. [The Strike Force report](#) acknowledges that measures to harden the electrical grid are critical to wildfire risk management. A key utility hardening strategy: undergrounding lines in extreme high-fire areas.

Governor Newsom's Wildfire Strike Force program report concludes, "It's not a question of "if" wildfire will strike, but "when."

Very High Fire Hazard Severity Zones

This Resolution seeks to expand the undergrounding of overhead utility lines in VHFHSZ. California [Government Code Section 51178](#) requires the Director of the California Department of Forestry and Fire Protection (CalFIRE) to identify areas in the state as VHFHSZ based on the potential fire hazard in those areas. VHFHSZ are determined based on fuel loading, slope, fire weather, and other relevant factors. These zones are in both local responsibility areas and state responsibility areas. Maps of the statewide and county by county VHFHSZ can be found [here](#).¹

¹ <https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

More than 25 million acres of California wildlands are classified under very high or extreme fire threat. Approximately 25 percent of the state's population, 11 million people, live in those high-risk areas. Additionally, over 350,000 Californians live in cities that are nearly encompassed within Cal Fire's maps of VHFHSZ. Similar to the proponents of this Resolution, City of Rancho Palos Verdes, over 75 communities have 90 percent or more of residents living in a VHFHSZ.

CPUC Rule 20 Program

The CPUC's Rule 20 program lays out the guidelines and procedures for converting overhead electric and telecommunication facilities to underground electric facilities. Rule 20 funding and criteria is provided at four levels. Levels A, B, and C, reflect progressively diminishing ratepayer funding for undergrounding projects. Recently added Rule 20D is a relatively new program that is specific to San Diego Gas and Electric (SDG&E), which was created in response to the destructive 2007 wildfires. Each of these levels will be discussed below:

Rule 20A

The first California overhead conversion program, Rule 20A, was created in 1967 under then Governor Ronald Reagan. The program was created to provide a consistent and structured means of undergrounding utility lines throughout the state with costs covered broadly by utility ratepayers.

Each year, Investor Owned Utilities (IOUs) propose their Rule 20A allocation amounts to the CPUC during annual general rate case proceedings. In this process, IOUs propose revised utility customer rates based on expected service costs, new energy procurement and projects for the following year, including Rule 20 allocations. The CPUC then reviews, amends, and approves IOU rates. Currently, the cumulative budgeted amount for Rule 20A for Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E) totals around \$95.7 million.

The funding set aside by IOUs for Rule 20A is allocated to local governments through a credit system, with each credit holding a value to be used solely for the costs of an undergrounding project. The credit system was created so that local governments and IOUs can complete undergrounding projects without municipal financing. Through Rule 20A, municipalities that have developed and received city council approval for an undergrounding plan receive annual credits from the IOU in their service area. At the last count by the CPUC, over 500 local governments (cities and counties) participate in the credit system.

While these credits have no inherent monetary value, they can be traded in or banked for the conversion of overhead lines. Municipalities can choose to accumulate their credits until their credit balance is sufficient to cover these conversion projects, or choose to borrow future undergrounding allocations for a period of up to five years. Once the cumulative balance of credits is sufficient to cover the cost of a conversion project, the municipality and the utility can move forward with the undergrounding. All of the planning, design, and construction is performed by the participating utility. Upon the completion of an undergrounding project, the utility is compensated through the local government's Rule 20A credits.

At the outset of the program, the amount of allocated credits were determined by a formula which factored in the number of utility meters within a municipality in comparison to the utilities' service territory. However, in recent years the formula has changed. Credit allocations for IOUs, except for PG&E, are now determined based on the allocation a city or county received in 1990 and is then adjusted for the following factors:

- 50% of the *change from the 1990* total budgeted amount is allocated for the ratio of the number of overhead meters in any city or unincorporated area to the total system overhead meters; and
- 50% of the *change from the 1990* total budgeted amount is allocated for the ratio of the number of meters (which includes older homes that have overhead services, and newer homes with completely underground services) in any city or the unincorporated area to the total system meters.

As noted, PG&E has a different funding formula for their Rule 20A credit allocations as they are not tied to the 1990 base allocation. Prior to 2011, PG&E was allocating approximately five to six percent of its revenue to the Rule 20A program. The CPUC decided in 2011 that PG&E's Rule 20A allocations should be reduced by almost half in an effort to decrease the growing accumulation of credits amongst local governments. Since 2011, PG&E's annual allocations for Rule 20A have been around \$41.3 million annually, which is between two and three percent of their total revenue.

Criteria for Rule 20A Projects

For an undergrounding project to qualify for the Rule 20A program, there are several criteria that need to be met. The project must have a public benefit and:

1. Eliminate an unusually heavy concentration of overhead lines
2. Involve a street or road with a high volume of public traffic
3. Benefit a civic or public recreation area or area of unusual scenic interest,
4. Be listed as an arterial street or major collector as defined in the Governor's Office of Planning and Research (OPR) Guidelines

Notably, fire safety is excluded from the list of criteria that favors aesthetic and other public safety projects.

Rule 20A Credit System Imbalance Threatens Program Effectiveness

Allocations are made by utilities each year for Rule 20A credits. These current budget allocations total \$95.7 million a year. Currently, the cumulative balance of credits throughout the state totals over \$1 billion dollars. The Rule 20A cumulative balances aggregated by region can be found [here](#).²

² Program Review, California Overhead Conversion Program, Rule 20A for Years 2011-2015, "The Billion Dollar Risk," California Public Utilities Commission.

[https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work_Products_\(2014_forward\)\(1\)/PPD_Rule_20-A.pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work_Products_(2014_forward)(1)/PPD_Rule_20-A.pdf)

Note: The existing credit allocation formulas do not consider a municipality's need or plans for overhead conversion projects, resulting in large credit balances in some jurisdictions.

Cities and counties are, however, able to trade or sell unallocated Rule 20A credits if they will not be used to fund local undergrounding projects. There have been several cases where one agency has sold their unused credits, often for less than the full dollar value of the credits themselves to another agency.

Rule 20B

Rule 20B projects are those that do not fit the Rule 20A criteria, but do, however, involve both sides of the street for at least 600 feet. These projects are typically done in conjunction with larger developments and are mostly paid for by the developer or applicant. Additionally, the applicant is responsible for the installation.

Rule 20C

Rule 20C projects are usually small projects that involve property owners. The majority of the cost is usually borne by the applicants. Rule 20C applies when the project does not qualify for either Rule 20A or Rule 20B.

Rule 20D--Wildfire Mitigation Undergrounding Program

Rule 20D was approved by the CPUC in January of 2014 and only applies to SDG&E. The Rule 20D program was established largely in response to the destructive wildfires that occurred in San Diego in 2007 as a wildfire mitigation undergrounding program. According to SDG&E, the objective of the Rule 20D undergrounding is exclusively for fire hardening as opposed to aesthetics. The program is limited in scope and is restricted to communities in SDG&E's Fire Threat Zone (now referred to as the [High Fire Threat District or HFTD](#)). As of this time, the program has yet to yield any projects and no projects are currently planned.

For an undergrounding project to qualify for the Rule 20D program, a minimum of three of the following criteria must be met. The project must be near, within, or impactful to:

- Critical electric infrastructure
- Remaining useful life of electric infrastructure
- Exposure to vegetation or tree contact
- Density and proximity of fuel
- Critical surrounding non-electric assets (including structures and sensitive environmental areas)
- Service to public agencies
- Accessibility for firefighters

Similar to Rule 20A, SDG&E must allocate funding each year through their general rate case proceedings to Rule 20D to be approved by the CPUC. This funding is separate from the allocations SDG&E makes for Rule 20A. However, the process of distributing this funding to localities is different. The amount of funding allocated to each city and county for Rule 20D is based on the ratio of the number of miles of overhead lines in SDG&E Fire Threat Zones in a city or county to the total miles of SDG&E overhead lines in the entire SDG&E fire zone. The

Rule 20D program is administered by the utility consistent with the existing reporting, engineering, accounting, and management practices for Rule 20A.

The Committee may want to consider whether Rule 20D should instead be expanded, adapted, or further utilized to support funding for overhead conversions within VHFHSZ throughout the state.

Fiscal Impact:

The costs to the State associated with this Resolution will be related to the staff and programmatic costs to the CPUC to take the necessary measures to consider and adopt changes to Rule 20A to include projects in VHFHSZ to the list of criteria for eligibility.

This Resolution calls for an unspecified increase in funding for Rule 20A projects, inferring that portions of increased funds will go towards newly eligible high fire hazard zones. While the Resolution does not request a specific amount be allocated, it can be assumed that these increased costs will be supported by utility ratepayers. According to the CPUC, the annual allocations towards Rule 20A are \$95.7 million.

The CPUC currently reports a cumulative credit surplus valued at roughly \$1 billion that in various regions, given the approval of expanded eligibility called for by this Resolution, could be used to supplement and reduce the level of new dollars needed to make a significant impact in VHFHSZ. The CPUC follows that overhead conversion projects range from \$93,000 per mile for rural construction to \$5 million per mile for urban construction.

The Resolution states that “California is experiencing fire seasons of worsening severity” which is supported by not only the tremendous loss of property and life from recent wildfires, but also in the rising costs associated with clean up, recovery, and other economic losses with high estimates in the hundreds of billions of dollars.

The Committee may wish to consider the costs associated with undergrounding utility lines in relation to the costs associated with past wildfires and wildfires to come.

Comments:

CPUC Currently Exploring Revisions to Rule 20

In May 2017, the CPUC issued an Order Instituting Rulemaking to Consider Revisions to Electric Rule 20 and Related Matters. The CPUC will primarily focus on revisions to Rule 20A but may make conforming changes to other parts of Rule 20. The League is a party in these proceedings will provide comments.

Beyond Rule 20A: Additional Options for Funding Undergrounding Projects

There are various ways in which cities can generate funding for undergrounding projects that fall outside of the scope of Rule 20A. At the local level, cities can choose to forgo the Rule 20A process and opt to use their own General Fund money for undergrounding. Other options are also discussed below:

Rule 20D Expansion

The City of Berkeley in a 2018 study titled [“Conceptual Study for Undergrounding Utility Wires in Berkeley.”](#) found that the city could possibly qualify for Rule 20D funding if they actively pursued this opportunity in partnership with PG&E and the CPUC.

One of the study’s recommendations is to advocate for release of 20D funds (now earmarked exclusively for SDG&E) to be used for more aggressive fire hardening techniques for above-ground utility poles and equipment, for undergrounding power lines, and for more aggressive utility pole and vegetation management practices in the Very High Hazard Fire Zone within Berkeley’s city limits.

As an alternative to changing the criteria for Rule 20A, the Committee may wish to consider whether there is the opportunity to advocate for the expansion of Rule 20D funding more broadly, expanding its reach to all IOU territories.

Franchise Surcharge Fees

Aside from Rule 20 allocations, cities can generate funding for undergrounding through franchise fee surcharges. For example, SDG&E currently operates under a 50-year City franchise that was granted in 1970. Under the franchises approved by the San Diego City Council in December 1970, SDG&E agreed to pay a franchise fee to the City equivalent to 3% of its gross receipts from the sales of both natural gas and electricity for 30 years.

These fees were renegotiated in 2000 and in 2001 an agreement was between the City of San Diego, SDG&E, and the CPUC to extend the existing franchise fee to include revenues collected from surcharges. SDG&E requested an increase of 3.88% to its existing electric franchise fee surcharge. The bulk, 3.53% of this increase is to be used for underground conversion of overhead electric wires.

Based on SDG&E's revenue projections, the increase would result in an additional surcharge revenue amount of approximately \$36.5 million per year. SDG&E estimates that this would create a monthly increase of approximately \$3.00 to a typical residential customer's electric bill. These surcharge revenues would pay for additional undergrounding projects including those that do not meet the Rule 20A criteria. The City of Santa Barbara has also adopted a similar franchise surcharge fee.

Having this funding source allows the City of San Diego to underground significantly more miles of above ground utility lines than other municipalities. However, the surcharge is currently being challenged in court, as it is argued that the City had SDG&E impose a tax without a ballot measure.

Utility Bankruptcy and Undergrounding Funding

In considering this Resolution, it is important to understand that Rule 20A allocations have been more substantial in the past. As mentioned earlier, prior to 2011, PG&E was allocating approximately 5% to 6% of its revenue to the Rule 20A program. Therefore, it is not unreasonable to encourage an increase in Rule 20A allocations as history shows that utilities had the capacity to do so in the past.

However, in a time where IOUs such as PG&E are facing bankruptcy as the result of utility caused wildfires, there is the possibility that expanding rule 20A funding will generate more costs for the ratepayers.

Questions to Consider:

- 1) Is Rule 20A or Rule 20D the more appropriate program to advocate for such an expansion?
- 2) Are there any wildfire risks outside of VHFHSZ that could be mitigated by undergrounding projects?

Existing League Policy:

Public Safety:

The League supports additional funding for local agencies to recoup the costs associated with fire safety in the community and timely mutual aid reimbursement for disaster response services in other jurisdictions. (pg. 43)

The League supports the fire service mission of saving lives and protecting property through fire prevention, disaster preparedness, hazardous-materials mitigation, specialized rescue, etc., as well as cities' authority and discretion to provide all emergency services to their communities. (pg. 43)

Transportation, Communication, and Public Works:

Existing telecommunications providers and new entrants shall adhere to local city policies on public utility undergrounding. (pg. 54)

The League supports protecting the additional funding for local transportation and other critical unmet infrastructure needs. (pg. 51)

The League supports innovative strategies including public private partnerships at the state and local levels to enhance public works funding. (pg. 52)

Environmental Quality

The League opposes any legislation that interferes with local utility rate setting authority and opposes any legislation that restricts the ability of a city to transfer revenue from a utility (or other enterprise activity) to the city's general fund. (pg. 9)

Cities should continue to have the authority to issue franchises and any program should be at least revenue neutral relative to revenue currently received from franchises. (pg. 9)

The League is concerned about the impacts of escalating energy prices on low income residents and small businesses. The League supports energy pricing structures and other mechanisms to soften the impacts on this segment of our community. (pg. 10)

2019 Strategic Goals

Improve Disaster Preparedness, Recovery and Climate Resiliency.

- Provide resources to cities and expand partnerships to better prepare for and recover from wildfires, seismic events, erosion, mudslides and other disasters.
- Improve community preparedness and resiliency to respond to climate-related, natural and man-made disasters.

Support:

The following letters of concurrence were received:

The City of Hidden Hills

The City of La Cañada Flintridge

The City of Laguna Beach

The City of Lakeport

The City of Malibu

The City of Moorpark

The City of Nevada City

The City of Palos Verdes Estates

The City of Rolling Hills Estates

The City of Rolling Hills

The City of Ventura

LETTERS OF CONCURRENCE

Resolution No. 1

Amendment to Rule 20A



City of Hidden Hills

6165 Spring Valley Road * Hidden Hills, California 91302
(818) 888-9281 * Fax (818) 719-0083

August 14, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, Suite 400
Sacramento, California 95814

Dear President Arbuckle:

The City of Hidden Hills supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

Larry G. Weber
Mayor



City Council
Leonard Pieroni, Mayor
Gregory C. Brown, Mayor Pro Tem
Jonathan C. Curtis
Michael T. Davitt
Terry M. Walker

August 14, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of La Cañada Flintridge supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The City of La Cañada Flintridge is one of the few Southern California cities in which 100% of the community within a Very High Fire Hazard Severity Zone. The City, in 1987, committed 100% of its 20A allocation for forty-five years from this year for a major downtown undergrounding project. Therefore, the only way our City can directly benefit from this Resolution is if there is an additional annual increased allocation for this purpose. Due to the extreme threat the City experienced at the time of the Station Fire, the City is keenly aware of the damage a fire may potentially cause, whether from utility issues or from natural causes. The City strongly supports any effort, including this Resolution, to reduce fire danger for the City's residents.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly with the City of La Cañada Flintridge in support.

Sincerely,

Leonard Pieroni
Mayor



July 25, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of Laguna Beach supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. Ten to the Top 20 most destructive fires in California were caused by electrical sources. The California's Rule 20A program, which allows local governments to pay for undergrounding of utilities costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it. We also believe that this program should redirect unused Rule 20A allocations from cities who have no undergrounding projects planned to the cities in Very High Fire Hazard Severity zones.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects. The City of Laguna Beach recommends that the resolution also be amended to call on the CPUC to redirect unused Rule 20A allocations from cities who have no undergrounding projects planned to the cities in Very High Fire Hazard Severity zones.

Nearly 90% of the City of Laguna Beach land area is designated under State Law and local ordinance as Very High Fire Hazard Severity Zone. While the City has used Rule 20A and 20B funding in the past to underground more than half of its overhead utilities, sufficient funding is not available to underground the remaining parts of the City.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.



July 25, 2019
Page 2

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bob Whalen", with a stylized, cursive script.

Bob Whalen
Mayor

CITY OF LAKEPORT

*Over 125 years of community
pride, progress and service*



August 7, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of Lakeport supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

Tim Barnes
Mayor
City of Lakeport

A handwritten signature in blue ink, appearing to read "Tim Barnes", is written over a faint, larger signature that appears to read "Jan Arbuckle".



City of Malibu

Jefferson Wagner, Mayor

23825 Stuart Ranch Road · Malibu, California · 90265-4861
Phone (310) 456-2489 · Fax (310) 456-3356 · www.malibucity.org

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

RE: City of Rancho Palos Verdes Proposed Resolution to Amend California Public Utilities Commission Rule 20A – SUPPORT

Dear Ms. Arbuckle:

At its Regular meeting on August 12, 2019, the Malibu City Council unanimously voted to support the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state, but California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, as well as willing and able to foot the bill. The City of Malibu agrees with Rancho Palos Verdes that Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission (CPUC) should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects. As a recent series of news stories on wildfire preparedness in California pointed out, there are more than 75 communities across the state with populations over 1,000, including Rancho Palos Verdes and Malibu, where at least 90 percent of residents live in a Cal Fire-designated Very High Fire Hazard Severity Zone.

It is well-known that electric utility equipment is a common fire source, and has sparked some of the most destructive blazes in our state's history. Moving power lines underground is, therefore, a critical tool in preventing them. Currently, Rule 20A primarily addresses visual blight, but with fire seasons worsening, it is key that fire safety also be considered when local governments pursue Rule 20A projects, and that annual funding allocations for the program be expanded.


It is worth noting that the State does have a program, Rule 20D, that factors in fire safety for funding undergrounding projects. However, this is limited to San Diego Gas & Electric Company projects in certain areas only. This needs to be expanded to include projects in all projects within designated Very High Fire Hazard Severity Zones.

Rancho PV League Resolution
Amend Rule 20A
August 15, 2019
Page 2 of 2

The proposed resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, the City of Malibu strongly concurs that the resolution should go before the General Assembly.

Sincerely,



Jefferson Wagner
Mayor

Cc: Honorable Members of the Malibu City Council
Reva Feldman, City Manager
Megan Barnes, City of Rancho Palos Verdes, mbarnes@rpvca.gov



CITY OF MOORPARK

799 Moorpark Avenue, Moorpark, California 93021
Main City Phone Number (805) 517-6200 | Fax (805) 532-2205 | moorpark@moorparkca.gov

July 24, 2019

SUBMITTED ELECTRONICALLY

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

RE: SUPPORT FOR RANCHO PALOS VERDES RESOLUTION RE: POWER LINE
UNDERGROUNDING

Dear President Arbuckle:

The City of Moorpark supports the City of Rancho Palos Verdes effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

All cities in Ventura County, including Moorpark, have wildfire prevention fresh in our memories following the highly destructive 2017-2018 Thomas Fire, which was caused by above-ground power lines. The 2018 Woolsey Fire similarly affected Ventura County, and lawsuits have been filed alleging it was also caused by above-ground power lines. Each of these fires caused billions of dollars in damages and highlight the importance of undergrounding power lines.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

A handwritten signature in blue ink that reads "Janice Parvin". The signature is fluid and cursive, with the first name "Janice" and last name "Parvin" clearly distinguishable.

Janice Parvin
Mayor

cc: City Council
City Manager



Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of Nevada City supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission (CPUC) should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The City of Nevada City would also like to add that the local agency be given the power to use private firms to do design, inspect and construct Rule 20A projects in local jurisdiction rather than be required to use the designated local utility. In addition, the City of Nevada City wants the CPUC to allow local jurisdictions to transfer excess funds between agencies to better serve projects in high fire hazard severity zones.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

Reinette Senum
Mayor
City of Nevada City



CITY OF
Palos Verdes Estates

July 25, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of Palos Verdes Estates supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's current Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

Mayor Kenneth J. Kao
City of Palos Verdes Estates

cc: PVE City Council
PVE Interim City Manager Petru
RPV City Manager Willmore



**City of
Rolling Hills Estates**

Judith Mitchell
Mayor

Velveth Schmitz
Mayor Pro Tem

Britt Huff
Council Member

Frank V. Zerunyan
Council Member

Steven Zuckerman
Council Member

August 14, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of Rolling Hills Estates supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,


Judith Mitchell
Mayor



City of Rolling Hills

INCORPORATED JANUARY 24, 1957

NO. 2 PORTUGUESE BEND ROAD
ROLLING HILLS, CALIF. 90274
(310) 377-1521
FAX: (310) 377-7288

August 14, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear Board of Directors:

The City of Rolling Hills supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,

Leah Mirsch
Mayor

July 29, 2019

Jan Arbuckle, President
League of California Cities
1400 K St., Ste. 400
Sacramento, CA 95814

Dear President Arbuckle:

The City of Ventura supports the City of Rancho Palos Verdes' effort to bring a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

Undergrounding power lines is an important tool in preventing destructive wildfires that have devastated communities across our state. But California's Rule 20A program, which allows local governments to pay for these costly projects with ratepayer funds, does not factor in fire safety for eligibility. Unless projects meet the program's limited eligibility criteria, they are left to be funded by property owners who are proactive, willing and able to foot the bill. We believe Rule 20A offers an important opportunity for fire prevention and that the California Public Utilities Commission should expand this program so more communities can utilize it.

The resolution calls on the CPUC to amend Rule 20A to include projects in Very High Fire Hazard Severity Zones to the list of criteria for eligibility. To facilitate more undergrounding projects in these high-risk zones, the resolution also calls on the CPUC to increase funding allocations for Rule 20A projects.

The resolution is also in line with one of the League's 2019 Strategic Goals of improving disaster preparedness, recovery and climate resiliency.

For these reasons, we concur that the resolution should go before the General Assembly.

Sincerely,



Alex D. McIntyre
City Manager

2. A RESOLUTION CALLING UPON THE FEDERAL AND STATE GOVERNMENTS TO ADDRESS THE DEVASTATING IMPACTS OF INTERNATIONAL TRANSBOUNDARY POLLUTION FLOWS INTO THE SOUTHERNMOST REGIONS OF CALIFORNIA AND THE PACIFIC OCEAN

Source: San Diego County Division

Concurrence of five or more cities/city officials

Cities: Calexico; Coronado; Imperial Beach; San Diego

Individual City Officials: City of Brawley: Mayor Pro Tem Norma Kastner-Jauregui; Council Members Sam Couchman, Luke Hamby, and George Nava. City of Escondido: Deputy Mayor Consuelo Martinez. City of La Mesa: Council Member Bill Baber. City of Santee: Mayor John Minto, City of Vista: Mayor Judy Ritter and Council Member Amanda Young Rigby

Referred to: Environmental Quality Policy Committee

WHEREAS, international transboundary rivers that carry water across the border from Mexico into Southern California are a major source of sewage, trash, chemicals, heavy metals and toxins; and

WHEREAS, transboundary flows threaten the health of residents in the United States and Mexico, harm important estuarine land and water of international significance, force closure of beaches, damage farmland, adversely impact the South San Diego County and Imperial County economy; compromise border security, and directly affect U.S. military readiness; and

WHEREAS, a significant amount of untreated sewage, sediment, hazardous chemicals and trash have been entering southern California through both the Tijuana River Watershed (75 percent of which is within Mexico) and New River flowing into southern California's coastal waterways and residential and agricultural communities in Imperial County eventually draining into the Salton Sea since the 1930s; and

WHEREAS, in February 2017, an estimated 143 million gallons of raw sewage flowed into the Tijuana River and ran downstream into the Pacific Ocean and similar cross border flows have caused beach closures at Border Field State Park that include 211 days in 2015; 162 days in 2016; 168 days in 2017; 101 days in 2018; and 187 days to date for 2019 as well as closure of a number of other beaches along the Pacific coastline each of those years; and

WHEREAS, approximately 132 million gallons of raw sewage has discharged into the New River flowing into California through communities in Imperial County, with 122 million gallons of it discharged in a 6-day period in early 2017; and

WHEREAS, the presence of pollution on state and federal public lands is creating unsafe conditions for visitors; these lands are taxpayer supported and intended to be managed for recreation, resource conservation and the enjoyment by the public, and

WHEREAS, the current insufficient and degrading infrastructure in the border zone poses a significant risk to the public health and safety of residents and the environment on both

sides of the border, and places the economic stress on cities that are struggling to mitigate the negative impacts of pollution; and

WHEREAS, the 1944 treaty between the United States and Mexico regarding *Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande* allocates flows on trans-border rivers between Mexico and the United States, and provides that the nations, through their respective sections of the International Boundary Water Commission shall give control of sanitation in cross border flows the highest priority; and

WHEREAS, in 1993, the United States and Mexico entered into the *Agreement Between the Government of the United States of America and the Government of the United Mexican States Concerning the Establishment of a North American Development Bank* which created the North American Development Bank (NADB) to certify and fund environmental infrastructure projects in border-area communities; and

WHEREAS, public concerns in response to widespread threats to public health and safety, damage to fish and wildlife resources and degradation to California's environment resulting from transboundary river flow pollution in the southernmost regions of the state requires urgent action by the Federal and State governments, and

WHEREAS, Congress authorized funding under the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Act and established the State and Tribal Assistance Grants (STAG) program for the U.S.-Mexico Border Water Infrastructure Program (BWIP) in 1996 to provide grants for high-priority water, wastewater, and storm-water infrastructure projects within 100 kilometers of the southern border; and

WHEREAS, the EPA administers the STAG and BWIP programs, and coordinates with the North American Development Bank (NADB) to allocate BWIP grant funds to projects in the border zone; and

WHEREAS, since its inception, the BWIP program has provided funding for projects in California, Arizona, New Mexico and Texas that would not have been constructed without the grant program; and

WHEREAS, the BWIP program was initially funded at \$100 million per year, but, over the last 20 years, has been continuously reduced to its current level of \$10 million; and

WHEREAS, in its FY 2020 Budget Request, the Administration proposed to eliminate the BWIP program; and

WHEREAS, officials from EPA Region 9, covering California, have identified a multitude of BWIP-eligible projects along the southern border totaling over \$300 million; and

WHEREAS, without federal partnership through the BWIP program and state support to address pollution, cities that are impacted by transboundary sewage and toxic waste flows are

left with limited resources to address a critical pollution and public health issue and limited legal remedies to address the problem; and

WHEREAS, the National Association of Counties, (NACo) at their Annual Conference on July 15, 2019 and the U.S. Conference of Mayors at their Annual Conference on in July 1, 2019 both enacted resolutions calling on the federal and state governments to work together to fund and address this environmental crisis; and

WHEREAS, local governments and the public support the State's primary objectives in complying with environmental laws including the Clean Water Act, Porter-Cologne Water Quality Control Act, and Endangered Species Act and are supported by substantial public investments at all levels of government to maintain a healthy and sustainable environment for future residents of California, and

WHEREAS, League of California Cities policy has long supported efforts to ensure water quality and oppose contamination of water resources; and

NOW, THEREFORE, BE IT RESOLVED at the League General Assembly, assembled at the League Annual Conference on October 18, 2019 in Long Beach, that the League calls upon the Federal and State governments to restore and ensure proper funding to the U.S- Mexico Border Water Infrastructure Program (BWIP) and recommit to working bi-nationally to develop and implement long-term solutions to address serious water quality and contamination issues, such as discharges of untreated sewage and polluted sediment and trash-laden transboundary flows originating from Mexico, that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

Background Information on Resolution No. 2

Source: San Diego County Division

Background:

Along California's southern border with Mexico, the New River in Imperial County and the Tijuana River in San Diego County are a major sources of raw sewage, trash, chemicals, heavy metals, and toxins that pollute local communities. Sewage contaminated flows in the Tijuana River have resulted in significant impacts to beach recreation that includes the closure of Border Field State Beach for more than 800 days over the last 5-years. Similarly, contaminated flows in the New River presents comparable hazards, impacts farm land, and contributes to the ongoing crisis in the Salton Sea. These transboundary flows threaten the health of residents in California and Mexico, harms the ecosystem, force closures at beaches, damage farm land, makes people sick, and adversely affects the economy of border communities. The root cause of this cross border pollution is from insufficient or failing water and wastewater infrastructure in the border zone and inadequate federal action to address the problem through existing border programs.

The severity of cross border pollution has continued to increase, due in part to the rapid growth of urban centers since the passage of the North American Free Trade Agreement (NAFTA). While economic growth has contributed to greater employment, the environmental infrastructure of the region has not kept pace, which is why Congress authorized the Border Water Infrastructure Program (BWIP) in 1996. The U.S. Environmental Protection Agency (EPA) administers the BWIP and coordinates with the North American Development Bank (NADB) to provide financing and technical support for projects on both sides of the U.S./Mexico border. Unfortunately, the current BWIP funding at \$10 million per year is only a fraction of the initial program budget that shares funding with the entire 2,000 mile Mexican border with California, Arizona, New Mexico and Texas. EPA officials from Region 9 have identified an immediate need for BWIP projects totaling over \$300 million just for California. Without federal partnerships through the BWIP and state support to address cross border pollution, cities that are impacted by transboundary sewage and toxic waste flows are left with limited resources to address a critical pollution and public health issue.

The International Boundary and Water Commission (IBWC) is another important federal stakeholder that, under the Treaty of 1944 with Mexico, must address border sanitation problems. While IBWC currently captures and treats some of the pollution generated in Mexico, it also redirects cross border flows without treatment directly into California.

Improving environmental and public health conditions for communities along the border is essential for maintaining strong border economy with Mexico. The IBWC, EPA, and NADB are the important federal partners with existing bi-national programs that are able to immediately implement solutions on cross border pollution. California is in a unique position to take the lead and work with local and federal partners to implement real solutions that will addresses the long standing and escalating water quality crisis along the border.

For those reasons, the cities of Imperial Beach and Coronado requested the San Diego County Division to propose a resolution at the 2019 League Annual Conference calling upon the federal

and state governments to address the devastating impacts of international transboundary pollution flows into the waterways of the southernmost regions of California, San Diego and Imperial Counties and the Pacific Ocean.

On August 12, 2019 at the regularly scheduled meeting of the San Diego County Division, the membership unanimously endorsed submittal of the resolution, with close to 75% membership present and voting.

The Imperial County Division does not have a scheduled meeting until after the deadline to submit proposed resolutions. However, the City of Calexico, which is most directly impacted by initial pollution flow of the New River from Mexicali, sent a letter in concurrence of this resolution as well as numerous city official from cities within Imperial County and the Imperial County Board of Supervisors. The League Imperial County Division will place a vote to support this resolution on the agenda of their September 26, 2019 meeting.

League of California Cities Staff Analysis on Resolution No. 2

Staff: Derek Dolfie, Legislative Representative
Carly Shelby, Legislative and Policy Development Assistant
Committees: Environmental Quality

Summary:

This Resolution states that the League of California Cities should call upon the State and Federal governments to restore and ensure proper funding for the U.S. – Mexico Border Water Infrastructure Program (BWIP) and work bi-nationally to address water quality issues resulting from transboundary flows from Mexico’s Tijuana River into the United States containing untreated sewage, polluted sediment, and trash.

Background:

The League of California Cities’ San Diego County Division is sponsoring this resolution to address their concerns over the contaminated flows from the Tijuana River into California that have resulted in the degradation of water quality and water recreational areas in Southern California.

The Tijuana River flows north through highly urbanized areas in Mexico before it enters the Tijuana River Estuary and eventually the Pacific Ocean via waterways in San Diego County in California. Urban growth in Tijuana has contributed to a rise in rates of upstream flows from water treatment facilities in Mexico. These treatment facilities have raised the amount of untreated sewage and waste in the Tijuana River due to faulty infrastructure and improper maintenance. The federal government refers to the river as an “impaired water body” because of the presence of pollutants in excess, which pose significant health risks to residents and visitors in communities on both sides of the border.

Federal Efforts to Address Pollution Crisis

To remedy the Tijuana River’s low water quality, the United States and Mexico entered into a Treaty in 1944 entitled: *Utilization of Waters of the Colorado River and Tijuana Rivers and of the Rio Grande – the International Boundary and Water Commission* (IBWC). The IBWC was designed to consist of a United States section and a Mexico section. Both sections were tasked with negotiating and implementing resolutions to address water pollution in the area, which includes overseeing the development of water treatment and diversion infrastructure.

After the formation of the IBWC, the U.S. and Mexico entered into a treaty in 1993 entitled: *Agreement Concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank*. This agreement established the North American Development Bank (NADB), which certifies and funds infrastructure projects located within 100 kilometers (62 miles) of the border line. The NADB supports federal programs like the Border Water Infrastructure Program (BWIP), which was initially funded at \$100 million, annually.

The degradation of existing water treatment infrastructure along the border coincides with the federal government’s defunding of the BWIP, which has steadily decreased from \$100 million in 1996 to \$10 million today. The Federal FY 2020 Budget proposes eliminating BWIP funding

altogether. EPA's regions 6 and 9 (includes U.S. states that border Mexico) have identified a number of eligible projects that address public health and environmental conditions along the border totaling \$340 million.

The NADB has funded the development of water infrastructure in both the U.S. and Mexico. Water diversion and treatment infrastructure along the U.S – Mexico border includes, but is not limited to, the following facilities:

- *The South Bay International Wastewater Treatment Plant (SBIWTP)*. This facility was constructed by the U.S. in 1990 and is located on the California side of the border and is operated under the jurisdiction of the IBWC. The SBIWTP serves as a diversion and treatment sewage plant to address the flow of untreated sewage from Mexico into the United States.
- *Pump Station CILA*. CILA was constructed by Mexico in 1991 and is located along the border in Mexico. This facility serves as the SBIWTP's Mexican counterpart.

Both the SBIWTP and CILA facilities have had a multitude of overflows containing untreated sewage and toxic waste that spills into the Tijuana River. The cause of overflows can be attributed to flows exceeding the maximum capacity that the infrastructure can accommodate (this is exacerbated during wet and rainy seasons) and failure to properly operate and maintain the facilities. Much of the existing infrastructure has not had updates or repairs for decades, causing overflows to become more frequent and severe. The most notable overflow occurred in February 2017, wherein 143 million gallons of polluting waste discharged into the Tijuana River; affecting the Tijuana Estuary, the Pacific Ocean, and Southern California's waterways.

State Actions

In response to the February 2017 overflow, the San Diego Water Board's Executive Officer sent a letter to the U.S. and Mexican IBWC Commissioners which included recommendations on how to improve existing infrastructure and communications methods between both nations.

In September of 2018, California Attorney General Xavier Becerra submitted a lawsuit against IBWC for Violating the Clean Water Act by allowing flows containing sewage and toxic waste to flow into California's waterways, posing a public health and ecological crisis. The cities of Imperial Beach, San Diego, Chula Vista, the Port of San Diego, and the San Diego Regional Water Quality Board have also filed suit against the IBWC. The suit is awaiting its first settlement conference on October 19, 2019. If parties are unable to reach a settlement, the case will go to trial.

Fiscal Impact:

California's economy is currently the sixth largest in the world, with tourism spending topping \$140.6 billion in 2018. In the past five years, San Diego's Border Field State Park has been closed for over 800 days because of pollution from the Tijuana River. A decline in the State's beach quality and reputation could carry macroeconomic effects that could ripple outside of the San Diego County region and affect coastal communities throughout California.

Existing League Policy

The League of California Cities has extensive language on water in its Summary of Existing Policy and Guiding Principles. Fundamentally, the League recognizes that beneficial water quality is essential to the health and welfare of California and all of its citizens. Additionally, the League advocates for local, state and federal governments to work cooperatively to ensure that water quality is maintained.

The following policy relates to the issue of water quality:

- Surface and groundwater should be protected from contamination.
- Requirements for wastewater discharge into surface water and groundwater to safeguard public health and protect beneficial uses should be supported.
- When addressing contamination in a water body, water boards should place priority emphasis on clean-up strategies targeting sources of pollution, rather than in stream or end-of-pipe treatment.
- Water development projects must be economically, environmentally and scientifically sound.
- The viability of rivers and streams for instream uses such as fishery habitat, recreation and aesthetics must be protected.
- Protection, maintenance, and restoration of fish and wildlife habitat and resources.

Click here to view the [Summary of Existing Policy and Guiding Principles 2018](#).

Comments:

1. Water quality issues are prevalent across California and have been a constant priority of the State's legislature and residents. In 2014, California's voters approved Proposition 1, which authorized \$7.5 billion in general obligation bonds to fund water quality improvement projects. In 2019, the Legislature reached an agreement to allocate \$130 million from the State's Greenhouse Gas Reduction Fund (GGRF) to address failing water infrastructure and bad water qualities for over one million of California's residents in rural communities. Water quality is not an issue unique to the County of San Diego and communities along the border.
2. Tijuana River cross-border pollution has caught national attention. Members of Congress have proposed recent funding solutions to address the pollution crisis, including:
 - In February of 2019, California Congressional Representatives Vargas, Peters, and Davis helped secure \$15 million for the EPA to use as part of its BWIP.
 - *H.R. 3895 (Vargas, Peters, 2019), The North American Development Bank Pollution Solution Act*. This bill seeks to support pollution mitigation efforts along the border by increasing the NADB's capital by \$1.5 billion.
 - *H.R. 4039 (Levin, 2019), The Border Water Infrastructure Improvement Act*. This bill proposes increasing funding to the BWIP from the existing \$10 million to \$150 million as a continuous appropriation until 2025.Additionally, the National Association of Counties (NACo) and the U.S. Conference of Mayors enacted resolutions in support of increased funding for U.S. – Mexico border water infrastructure to address the environmental crisis in 2019.

3. The border pollution problem has sparked action from local, state, and federal actors. Should this resolution be adopted, League membership should be aware that future action will be adapted by what is explicitly stated in the resolution's language. In current form, the resolution's resolve clause cites the BWIP as the only program that should receive reinstated and proper funding. League staff recommends the language be modified to state:

“NOW, THEREFORE, BE IT RESOLVED at the League General Assembly, assembled at the League Annual Conference on October 18, 2019 in Long Beach, that the League calls upon the Federal and State governments to restore and ensure proper funding for environmental infrastructure on the U.S. – Mexico Border, including to the U.S.–Mexico Border Water Infrastructure Program (BWIP), and recommit to working bi-nationally to develop and implement long-term solutions to address serious water quality and contamination issues, such as discharges of untreated sewage and polluted sediment and trash-laden transboundary flows originating from Mexico, that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.”

Modifying the language would ensure enough flexibility for the League to support funding mechanisms outside of the prescribed federally-operated BWIP.

4. It remains unclear if there is an appetite in Washington to fund border-related infrastructure projects that address environmental quality. Given the high probability of another overflow containing waste and sewage from the existing infrastructure operated by the IBWC, League membership should consider the outcome if no resolution is reached to address the issue.

Support:

The following letters of concurrence were received:

Cities:

The City of Calexico

The City of Coronado

The City of Imperial Beach

The City of San Diego

In their individual capacity:

Amanda Young Rigby, City of Vista Council Member

Bill Baber, City of La Mesa Council Member

Consuelo Martinez, City of Escondido Deputy Mayor

George A. Nava, City of Brawley Council Member

John Minto, City of Santee Mayor

Judy Ritter, City of Vista Mayor

Luke Hamby, City of Brawley Council Member

Norma Kastner-Jauregui, City of Brawley Mayor Pro-Tempore

Sam Couchman, City of Brawley Council Member

LETTERS OF CONCURRENCE

Resolution No. 2

International Transboundary
Pollution Flows



CITY OF CALEXICO

608 Heber Ave.
Calexico, CA 92231-2840
Tel: 760.768.2110
Fax: 760.768.2103
www.calexico.ca.gov

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, Suite 400
Sacramento, CA 95814

**RE: Environmental and Water Quality Impacts Of International Transboundary River
Pollution Flow Resolution**

President Arbuckle:

The city of Calexico strongly supports the San Diego County Division's effort to submit a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

The Division's resolution calls upon the Federal and State governments to restore and ensure proper funding of the Border Water Infrastructure Program (BWIP) to address the devastating impacts of international transboundary pollution flows into the waterways of the southernmost regions of California (San Diego and Imperial Counties) and the Pacific Ocean.

Local government and the public support the State's water and environmental quality objectives and League policy has long supported efforts to ensure water quality and oppose contamination of water resources. This resolution addresses the critical need for the federal and state governments to recommit to work bi-nationally to develop and implement long-term solutions to address serious water quality and contamination issues, such as discharges of untreated sewage and polluted sediment and trash-laden transboundary flows originating from Mexico, that result in significant health, environmental and safety concerns in communities along California's southern border impacting the state.

As members of the League, our city values the policy development process provided to the General Assembly. We appreciate your time on this issue.

Viva Calexico!

If you have any questions or require additional information, please do not hesitate to contact me at 760/768-2110.

Sincerely,

CITY OF CALEXICO

A handwritten signature in blue ink that reads "David Dale". The signature is written in a cursive, flowing style.

David Dale
City Manager

Cc: Honorable Mayor Bill Hodge

Viva Callexico!



CITY OF CORONADO

1825 STRAND WAY
CORONADO, CA 92118

OFFICE OF THE CITY MANAGER
(619) 522-7335
FAX (619) 522-7846

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, Suite 400
Sacramento, CA 95814

RE: Environmental and Water Quality Impacts of International Transboundary River Pollution Flows Resolution

This letter is written on behalf of and with the support of the Coronado City Council. The City of Coronado wholeheartedly supports the resolution adopted by the San Diego County and Imperial County Division of the California League of Cities.

The San Diego County Division's resolution calls upon the federal and state governments to restore and ensure proper funding of the U.S.-Mexico Border Water Infrastructure Program (BWIP) to address the devastating impacts of international transboundary pollution flows into the waterways of the southernmost regions of California (San Diego and Imperial Counties) and the Pacific Ocean.

The City has been working closely with the Environmental Protection Agency and other federal partners on the matter since early 2018. City leaders are committed to finding long-term, sustainable solutions to this problem. Through its advocacy and education efforts, the City of Coronado has raised national awareness of the problem among legislators, political appointees and career staff at federal agencies. These efforts have been successful. However, the City along with our coalition partners, look forward to more action to swiftly resolve this issue.

Local government and the public support the state's water and environmental quality objectives and League policy has long supported efforts to ensure water quality and oppose contamination of water resources. This resolution addresses the critical need for the federal and state governments to recommit to work bi-nationally to develop and implement long-term solutions to address serious water quality and contamination issues, such as discharges of untreated sewage and polluted sediment and trash-laden transboundary flows originating from Mexico, that result in significant health, environmental and safety concerns in communities along California's southern border impacting the state.

As members of the League, Coronado values the policy development process provided to the General Assembly. We appreciate your time on this issue. Please feel free to contact me if you have any questions.

Sincerely,



Blair King
Coronado City Manager

cc: Coronado Mayor and City Council
Bill Baber, President, San Diego County Division
c/o Catherine Hill, Regional Public Affairs Manager, San Diego County Division chill@cacities.org



City of Imperial Beach, California

OFFICE OF THE CITY MANAGER

825 Imperial Beach Blvd., Imperial Beach, CA 91932 Tel: (619) 423-8303 Fax: (619) 628-1395

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K St. Suite 400
Sacramento, CA 95814

RE: Environmental and Water Quality Impacts Of International Transboundary River
Pollution Flow Resolution

President Arbuckle:

The city of Imperial Beach appreciates and supports the San Diego County Division's effort to submit a resolution for consideration by the full membership of the League of California Cities.

The Division's resolution calls on Federal and State government to address the impacts of transboundary pollution flows into the Southwestern regions of California. The pollution in these areas is an environmental disaster that threatens the health and general welfare of residents near the Mexican border in Imperial and San Diego Counties.

I encourage all voting delegates and elected officials in attendance at the 2019 Annual League of California Cities Conference in Long Beach to support this important resolution as it addresses the critical need for the federal and state government to recommit to work bi-nationally to address the serious contamination issues and to develop and implement long-term solutions.

I am available for any questions or additional information related to this letter of support.

Sincerely,

Andy Hall
City Manager

Cc: Honorable Mayor Serge Dedina
Honorable Mayor Pro Tem Robert Patton
Honorable Councilmember Paloma Aguirre
Honorable Councilmember Ed Spriggs
Honorable Councilmember Mark West



City of Imperial Beach, California

OFFICE OF THE MAYOR

825 Imperial Beach Blvd., Imperial Beach, CA 91932 Tel: (619) 423-8303 Fax: (619) 628-1395

August 16, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, Suite 400
Sacramento, CA 95814

RE: Environmental and Water Quality Impacts Of International Transboundary River Pollution Flow Resolution

President Arbuckle:

The city of Imperial Beach strongly supports the San Diego County Division's effort to submit a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

The Division's resolution calls upon the Federal and State governments to restore and ensure proper funding of the Border Water Infrastructure Program (BWIP) to address the devastating impacts of international transboundary pollution flows into the waterways of the southernmost regions of California (San Diego and Imperial Counties) and the Pacific Ocean.

Local government and the public support the State's water and environmental quality objectives and League policy has long supported efforts to ensure water quality and oppose contamination of water resources. This resolution addresses the critical need for the federal and state governments to recommit to work bi-nationally to develop and implement long-term solutions to address serious water quality and contamination issues, such as discharges of untreated sewage and polluted sediment and trash-laden transboundary flows originating from Mexico, that result in significant health, environmental and safety concerns in communities along California's southern border impacting the state.

As members of the League, our city values the policy development process provided to the General Assembly. We appreciate your time on this issue. If you have any questions or require additional information, please do not hesitate to contact me at 619-423-8303.

Sincerely,

Serge Dedina
Mayor



THE CITY OF SAN DIEGO

KEVIN L. FAULCONER

Mayor

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, Suite 400
Sacramento, CA 95814

**RE: Environmental and Water Quality Impacts of International Transboundary River
Pollution Flow Resolution**

President Arbuckle:

The City of San Diego supports the San Diego County Division in their effort to submit a resolution to the General Assembly at the League of California Cities' 2019 Annual Conference in Long Beach.

To suppress the flow of pollution between the Mexico and Southern California's water channels, the Division requests for the Federal and State governments to give proper funding to the Border Water Infrastructure Program (BWIP).

The City of San Diego and its citizens have expressed their concerns about untreated sewage, polluted sediment and trash flowing from Mexico, into California, causing health, environmental and safety concerns. The State's water and environmental quality objectives and League policy has long supported efforts to ensure water quality and oppose contamination of water resources. With the Division's resolution, the great need for federal and state governments to reconsider working together, will help in developing a long-term solution to address serious water quality and contamination issues.

As members of the League, our City values the policy development process provided to the General Assembly. We appreciate your time on this issue.

Please contact me at (619)453-9946 if you have any questions.

Sincerely,

Denise Garcia
Director of International Affairs

Cc: Honorable Mayor Kevin L. Faulconer





AMANDA YOUNG RIGBY

CITY COUNCILWOMAN

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Re: Border Sewage Issues

Dear President Arbuckle;

As a Council Member in the City of Vista, and solely in my individual capacity as such, I write in **support** of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the constant sewage pollution issues at the international border with Mexico.

This Resolution requests that the federal and state governments recognize the paramount importance of this issue and address the devastating impacts that this constant contamination has on the southernmost regions of California and the Pacific coastline by requesting the necessary funding to develop and implement effective and long term solutions to the raw sewage contamination coming into San Diego and Imperial Counties from Mexico.

Although I have lived in Vista for 27 years now, I grew up in Imperial Beach and know well the severe health and environmental impact that this situation has had on our border communities for the **decades**.

As a member of the League, I value the League's ability to effectively advocate on behalf of not only our cities but in effect, our citizens, and this is an important issue for our entire state. Should you have any questions or comments, please contact me at the number below. Thank you for your consideration.

Most Sincerely,


Amanda Young Rigby
Council Member, City of Vista

cc: Vista City Council
Vista City Manager
Vista City Attorney
City of Imperial Beach
City of Coronado
City of Calexico
City of San Diego



**CITY OF
LA MESA**
JEWEL of the HILLS

August 16, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, Suite 400
Sacramento, CA 95814

RE: Environmental and Water Quality Impacts Of International Transboundary River Pollution Flows Resolution

President Arbuckle:

As a Council Member for the City of La Mesa and in my individual capacity, not on behalf of the full La Mesa City Council as a body or the City, I am writing you in support of the San Diego County Division's effort to submit a resolution for consideration by the General Assembly at the League's 2019 Annual Conference in Long Beach.

The Division's resolution calls upon the Federal and State governments to restore and ensure proper funding of the Border Water Infrastructure Program (BWIP) to address the devastating impacts of international transboundary pollution flows into the waterways of the southernmost regions of California (San Diego and Imperial Counties) and the Pacific Ocean.

As San Diego County Division President and a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at 619-667-1106, should you have any questions.

Sincerely,

BILL BABER
COUNCIL MEMBER CITY OF LA MESA
PRESIDENT, LEAGUE SAN DIEGO COUNTY DIVISION

August 16, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As one Council Member of the city of Escondido, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at cmartinez@escondido.org if you have any questions.

Sincerely,



Consuelo Martinez
Deputy Mayor

cc: Honorable Mayor and City Council Members
Jeffrey R. Epp, City Manager



CITY OF BRAWLEY

ADMINISTRATIVE OFFICES

383 Main Street
Brawley, CA 92227
Phone: (760) 351-3048
FAX: (760) 351-3088

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As one Council Member of the City of Brawley, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at (City email) if you have any questions.

Sincerely,

George A. Nava
City Council Member
City of Brawley

MAYOR
John W. Minto



CITY OF SANTEE

CITY COUNCIL
Ron Hall
Stephen Houlahan
Laura Koval
Rob McNelis

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As Mayor of the city of Santee, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at (JMinto@cityofsantee.ca.gov) if you have any questions.

Sincerely,

JOHN W. MINTO
Mayor
City of Santee



JUDY RITTER

MAYOR

August 16, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As Mayor of the city of Vista, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at jritter@cityofvista.com if you have any questions.

Sincerely,

Judy Ritter
Mayor
City of Vista



CITY OF BRAWLEY

ADMINISTRATIVE OFFICES

383 Main Street
Brawley, CA 92227
Phone: (760) 351-3048
FAX: (760) 351-3088

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As one Council Member of the City of Brawley, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at (City email) if you have any questions.

Sincerely,

Luke Hamby
City Council Member
City of Brawley



CITY OF BRAWLEY

ADMINISTRATIVE OFFICES

383 Main Street
Brawley, CA 92227
Phone: (760) 351-3048
FAX: (760) 351-3088

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As one Council Member of the City of Brawley, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at (City email) if you have any questions.

Sincerely,

Norma Kastner-Jauregui
Mayor Pro-Tempore
City of Brawley



CITY OF BRAWLEY

ADMINISTRATIVE OFFICES

383 Main Street
Brawley, CA 92227
Phone: (760) 351-3048
FAX: (760) 351-3088

August 15, 2019

Jan Arbuckle, President
League of California Cities
1400 K Street, 4th Floor
Sacramento, CA 95814

Dear President Arbuckle:

As one Council Member of the City of Brawley, and in my individual capacity and not on behalf of the Council as a body or the City, I write in support of the League of California Cities 2019 Annual Conference Resolution proposed by the San Diego County Division to address the transboundary river flow pollution impacting cities in San Diego and Imperial Counties.

This resolution calls upon the federal and state governments to address the devastating impacts of international transboundary pollution flows into the southernmost regions of California and the Pacific Ocean by requesting the necessary funding to develop solutions for pollution coming into San Diego County and Imperial County waterways through the Tijuana River and New River, respectively.

The passage of the proposed resolution by the San Diego County Division would provide support for the restoration of much needed funding and development and implementation of long-term solutions to address serious water quality and contamination issues, such as discharge of untreated sewage and polluted sediment and trash-laden transboundary flows that result in significant health, environmental, and safety concerns in communities along California's southern border impacting the state.

As a member of the League, I value the policy development process provided to the General Assembly. I appreciate your time on this issue. Please feel free to contact me at (City email) if you have any questions.

Sincerely,

Sam Couchman
City Council Member
City of Brawley



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item L.5.

Meeting Date: 10/7/2019

SUBJECT: Request to Add Item to Future Agenda

REPORT IN BRIEF

Provides members of the City Council to request that an item be placed on a future City Council agenda for initial consideration by the City Council.



CITY OF MERCED

Merced Civic Center
678 W. 18th Street
Merced, CA 95340

ADMINISTRATIVE REPORT

Agenda Item L.6.

Meeting Date: 10/7/2019

SUBJECT: City Council Comments

REPORT IN BRIEF

Provides an opportunity for the Mayor and/or Council Member(s) to make a brief announcement on any activity(ies) she/he has attended on behalf of the City and to make a brief announcement on future community events and/or activities. The Brown Act does not allow discussion or action by the legislative body under this section.