**CITY OF MERCED**
**Planning & Permitting Division**

**STAFF REPORT: #20-01** **AGENDA ITEM: 4.1**

**FROM:** Kim Espinosa, Planning Manager
**PLANNING COMMISSION MEETING DATE:** Jan. 22, 2020

**PREPARED BY:** Julie Nelson, Associate Planner

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**SUBJECT:** **Conditional Use Permit #1238,** initiated by Merced Holdings, LP, property owner. This application involves a request to construct a mixed-use development with 214 apartment units and approximately 37,117 square feet of commercial uses within four buildings (two 2-story buildings and two 3-story buildings) on an approximately 5.94-acre parcel, generally located at the southeast corner of Yosemite Avenue and McKee Road. The property has a General Plan designation of Neighborhood Commercial (CN) and is zoned Neighborhood Commercial (C-N). *PUBLIC HEARING*

**ACTION:** Approve/Disapprove/Modify

1) Environmental Review #19-37 (Mitigated Negative Declaration)
2) Conditional Use Permit #1238

## SUMMARY

The proposed project would be located on a 5.94-acre parcel at the southeast corner of Yosemite Avenue and McKee Road (Attachment A). The project is a mixed-use project consisting of 214 dwelling units and approximately 37,117 square feet of commercial space (retail and office). These uses would be contained within four separate buildings on the site (refer to the Site Plan at Attachment B). This number was reduced from 224 units subsequent to the public hearing notice for the project being published. Buildings 1 and 3 would be 2-story buildings and Buildings 2 and 4 would be 3-story buildings. Building 1 would contain residential units on both floors of the building. Buildings 2 and 4 would have a combination of retail space and common area for the residents. Building 3 would have office uses on the first floor and residential uses on the second floor. The project would provide a total of 127,206 square feet of residential living space, 12,544 square feet of community space for the residential tenants, 12,255 square feet of office space, and 22,672 square feet of retail commercial space. The floor plans for each building are provided at Attachment C. The elevations and renderings are provided at Attachment D.

The residential units would include one, two, and three bedroom units. The development would have 82 - 1 bedroom/1bath units; 112 - 2 bedroom/2 bath units; and, 20 - 3 bedroom/3 bath units. The one bedroom units would vary in size depending on whether the unit includes a balcony. A one bedroom unit with a balcony would have 276 square feet and without a balcony, it would have

300 square feet. The two-bedroom units would be 576 square feet with a 24-square-foot balcony, and the three bedroom units would be 876 square feet with a 24-square-foot balcony. The floor plans for each unit type are provided at Attachment E.

Within a C-N zone, multi-family uses are allowed with approval of a Conditional Use Permit (CUP). 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 approval 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. Instead of requiring two separate processes for the project, the Conditional Use Permit will also address the interface regulations. The C-N zone allows commercial uses such as most retail uses, personal service uses, and offices.

The Planning Commission reviewed a similar project for this site on August 21, 2019, as part of a General Plan Amendment and Zone Change. The project at that time included 428 efficiency dwelling units and 18,000 square feet of commercial space. The Planning Commission recommended approval of the General Plan Amendment and Zone Change, but denied the Conditional Use Permit to approve the project. The City Council also denied the Conditional Use Permit on appeal, but approved the General Plan Amendment and Zone Change making the land use designations consistent for the entire site.

The applicant has worked with staff to revise the project in a way that would meet the General Plan requirements and address some of the concerns from the neighborhood. The table provided at Attachment F shows a comparison of the previous project to the new project, which includes reducing the number of units, adding office space, reducing the height of Buildings 1 and 3, increasing the setbacks for Buildings 1 and 3, increasing the size of the promenade area, and committing to constructing the project to meet the standards for LEED (Leadership in Energy and Environmental Design) certification (Silver level or higher). Additionally, the developer has been in negotiations with UC Merced and has received a Letter of Intent (LOI) from the UC indicating their intent to continue negotiations for a program to house UCM graduate students, post doctorate students, and visiting faculty (Attachment G). They are considering negotiations for a master lease for some portion of the residential units and office space. Because the project complies with General Plan and Zoning regulations, Planning staff is recommending approval of the project.

## RECOMMENDATION

Planning staff recommends that the Planning Commission approve Environmental Review #19-37 (Mitigated Negative Declaration) and Conditional Use Permit #1238, subject to the following conditions (and the Draft Resolution at Attachment L of Planning Commission Staff Report #20-01):

*1) The proposed project shall be constructed/designed in substantial compliance with the Site Plan, Floor Plan, Elevations, and Renderings (Attachments B, C, D, and E of Planning Commission Staff Report #20-01), 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 Planning Commission

Resolution #3049 for General Plan Amendment #14-06 and Zone Change #421 and Planning Commission Resolution #4025 for General Plan Amendment #19-02 and Zone Change #426 previously approved for this site.

*4) All other applicable codes, ordinances, policies, etc. adopted by the City of Merced shall apply.

*5) 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.

*6) 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.

*7) 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.

*8) The project shall comply with all mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #19-37 (Exhibit B of Planning Commission Resolution #4035 - Attachment K of Planning Commission Staff Report #20-01) and all applicable mitigation measures outlined in the Mitigation Monitoring Program for Initial Study #14-32 (Appendix A of Initial Study #19-37, Attachment K of Staff Report #20-01).

*9) Due to constraints in the existing sewer collection system, the project shall be allowed to release wastewater into the City's system at a rate of 8,000 gallons per day (gpd) during

peak hours. All wastewater in excess of this amount shall be stored on-site in an approved wastewater storage tank or other method approved by the Public Works Director and/or City Engineer to be released during off-peak hours. A flow monitor shall be installed with a telemetry or SCADA system approved by the Public Works Director and/or City Engineer to monitor the flow and ensure compliance with this requirement. The City shall periodically monitor the flow. Should the flow exceed 8,000 gpd during peak hours, the City may use any legal remedies available to gain compliance with this condition.

*10) The developer shall provide an operations and maintenance plan for the on-site wastewater storage tank to address the timing of the off-peak discharge, emergency procedures for breakdowns and repairs, and odor control. The plan shall include steps to ensure ongoing objectionable odors do not affect the site or surrounding area. The operations and maintenance plan shall be approved by the City Public Works Director and/or City Engineer.

*11) A minimum of 15% of the site shall be covered with landscaping as required by Section 20.36 (Table 20.36-1) of the Zoning Ordinance. Landscaping and irrigation shall be required to meet the City's Water Efficient Landscape Ordinance and the requirements of Zoning Ordinance Section 20.36.040.

*12) 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. Illuminated signs may be illuminated until 10:00 p.m. or the end of the business day, whichever is later.

*13) 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. Any existing improvements that are damaged or that do not meet current standards shall be repaired or replaced as required by the City Engineer.

*14) 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.

*15) Appropriate turning radii shall be provided within the parking areas to allow for Fire Department and refuse truck access.

*16) 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).

*17) 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).

*18) All storm water shall be contained on-site for a minimum of 48 hours, then released into the City's storm water system at a rate not to exceed the 2-year pre-development flow or as approved by the City Engineer.

*19) 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.

*20) 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.

*21) 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 park strips, high quality artificial turf (approved by the City Engineer and Development Services Director) shall be installed.

*22) 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.

*23) 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.

*24) 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.

*25) Each building shall be provided with a Fire Department Connection.

*26) 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.

*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) The developer shall use proper dust control procedures during site development in accordance with San Joaquin Valley Air Pollution Control District rules.

*29) All parking lot and other exterior lighting shall be oriented in such a way so that is does not spill over onto adjacent properties.

*30) In order to comply with the parking requirements for this project, a parking demand analysis would be required in order for the project to qualify for the mixed-use reduction allowed by Section 20.38.050 (F). This study shall be provided at the time of building permit submittal and shall be approved by the Director of Development Services. In no case shall the reduction be greater than 30% as allowed by the Zoning Ordinance.

31) 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.

32) A minimum 8-foot high concrete block wall shall be installed along the southern property line. A minimum five-foot wide landscaping area adjacent to the wall shall be provided to allow for the planting of vines or other appropriate landscape material.

33) 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.

34) All construction activity shall be conducted between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday.

35) All walking paths, bicycle and vehicle parking areas, and recreational areas shall be provided with sufficient lighting to ensure a safe environment.

36) All mechanical equipment shall be screened from public view.

(*) Denotes non-discretionary conditions.

## PROJECT DESCRIPTION

The proposed project requires Conditional Use Permit approval to allow the construction of a mixed-use project on approximately 5.94 acres of land located at the southeast corner of Yosemite Avenue and McKee Road. The mixed-use project combines 214 multi-family residential units with approximately 37,117 square feet of commercial space (retail and office). These uses would be located within four buildings on the site, two of which would be 2-story buildings and two that would be 3-story buildings. The commercial space, along with common/community areas for the residential tenants would be located on the first floor of Buildings 2, 3, and 4. Building 1 would contain only residential units.

No specific tenants have been identified for the retail portions of the project located within Buildings 2 and 4. However, the Floor Plans for Buildings 2 and 4 identify the types of tenants the developer envisions for this project. These uses could include service related uses such as barbershops and nail salons, general retail uses, and restaurant/food uses. The first floor of Building 3 is designated for office space. The developer has received a Letter of Intent (LOI) from UC Merced to occupy the office space and to use some of the residential units for grad-student housing. The floor plans for the commercial areas of Buildings 2, 3, and 4 are provided at Attachment C.

The apartment complex would have an on-site manager and would use a key-fob entry system to increase security and allow better monitoring of the number of tenants residing in the complex. Each apartment would be issued a certain number of key-fobs which would give them access to the buildings, their apartment, and the common areas. The key-fobs would also be required to enable power to the units which would make it more difficult for an unregistered tenant to stay in the unit.

**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 (across Whitewater Way) | 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). 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. On October 7, 2019, the City Council approved a General Plan and Zone Change changing the land use designation for this newly acquired area consistent with the rest of the site (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.

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.

When the City Council approved the General Plan Amendment and Zone Change on October 7, 2019, they also considered the appeal of the Planning Commission's denial of Conditional Use Permit (CUP) #1231 to allow a mixed-use project consisting of 428 Efficiency Dwelling Units and approximately 18,000 square feet of retail commercial space. The City Council upheld the Planning Commission's denial of CUP #1231 based on density, traffic congestion, and concerns regarding sewer capacity.

**FINDINGS/CONSIDERATIONS:**

**General Plan Compliance and Policies Related to This Application**

A) The proposed mixed-use project complies with the General Plan designation of Neighborhood Commercial (CN) and the Zoning classification of Neighborhood Commercial (C-N). The proposed commercial uses comply with the General Plan designation of Neighborhood Commercial (CN). Although the General Plan encourages mixed-use developments, it does not specifically address the density allowed within a commercial zone for a mixed-use project. The *Merced Vision 2030 General Plan* includes two classifications for higher density residential uses – High-Medium Density (HMD) and High Density (HD). The High-Medium designation allows 12 to 24 units per acre, while the High Density designation allows 24 to 36 units per acre. The proposed project has a density of 36 units per acre, which is consistent with the High Density (HD) designations. Therefore, because there is no definitive designation for a mixed use project and there are General Plan policies that encourage higher density and alternate housing types (see below), the City has relied upon the High Density designation to determine compliance with the General Plan. Based on this designation, the proposed multi-family portion of the project would comply with the General Plan.

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 the multi-family dwelling units.

*Policy 1.1.e* *Encourage Alternate Housing Types*

The proposed project would include one, two, and three-bedroom apartments. The units range in size from 276 square feet for a one-bedroom unit with a balcony, to 876 square feet for a 3 bedroom unit. This mixture provides a variety of different housing types to meet the growing need of housing within the community and supports this policy of providing alternate housing types.

*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 meets the density requirements of 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.

**Zoning Ordinance Compliance – Conditional Use Permit Required Findings**

B) Section 20.68.020 sets forth specific Findings that must be made in order for the Planning Commission to approve a Conditional Use Permit. These Findings are provided below.

1. *The proposed use is consistent with the purpose and standards of the zoning district, the General Plan, and any adopted area or neighborhood plan, specific plan, or community plan.*

   The purpose of a Neighborhood Commercial (C-N) zone is to provide areas for shopping centers and other commercial uses that serve the day-to-day needs of a residential neighborhood. The C-N zone allows a variety of commercial uses and residential uses, subject to approval of a Conditional Use Permit. The proposed project would provide a variety of retail and restaurant uses to serve the tenants of the project as well as the surrounding neighborhood. With the approval of the requested Conditional Use Permit, the project would comply with the requirements and purpose of the C-N Zone.

   As described in Finding A above, the project meets the requirements of the General Plan. There are no other area, specific, or neighborhood plans for this area.

2. *The location, size, design, and operating characteristics of the proposed use will be compatible with the existing and future land uses in the vicinity of the subject property.*

   As described above, the commercial uses are allowed within a C-N zone. The proposed multi-family component of the project is a conditional use. The developer has revised the project to address some of the concerns expressed with the previously proposed project. The building heights have been reduced for the buildings on the east and west side of the site closest to the existing residential uses. The setbacks have been increased for those buildings as well in an effort to reduce impacts on the surrounding neighborhood. The site is surrounded by residential uses and a church to the north. Therefore, residential uses are common in this area. Another apartment complex is currently under construction east of this site at the corner of Yosemite and Lake Road, in the same general vicinity, which provides a mixture of housing units for the area. Given the proximity to the UC, multi-family

uses are appropriate for this area. Therefore, through the implementation of the conditions of approval, the proposed apartment project (as part of the overall mixed-use project) would be compatible with the existing and future land uses in the vicinity.

3. *The proposed use will not be detrimental to the public health, safety, and welfare of the City.*

   The proposed project does not include any uses that would be detrimental to the public health, safety, and welfare of the City. The project would be required to annex to the City's Community Facilities District to pay for costs related to police and fire safety. Implementation of the conditions of approval and adherence to all Building and Fire Codes, and City Standards would prevent the project from having any detrimental effect on the health safety, and welfare of the City.

4. *The proposed use is properly located within the City and adequately served by existing or planned services and infrastructure.*

   The project site is an in-fill site near the edge of the City's eastern boundary, surrounded by residential uses. The project would be adequately served by the City's water system. Through the implementation of the conditions of approval, the project would be adequately served by the City's sewer and storm water systems. Additionally, the project would be required to pay Public Facilities Impact Fees to help pay for future improvements needed to the City's infrastructure.

**Traffic/Circulation**

C) The project site is located at the southeast corner of Yosemite Avenue and McKee Road. Yosemite Avenue, east of Parsons Avenue 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.

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 B of Planning Commission Staff Report #20-01). 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 #22 of the Conditional Use Permit Conditions.

Traffic Impact Analysis

A traffic analysis was prepared for the proposed project by K2 Traffic Engineering, Inc. This analysis studied the following roadway segments:

1. Yosemite Avenue between Parsons Avenue and McKee Road.
2. McKee Road between Yosemite Avenue and Silverado Road.

The following intersections were also studied:

1. Yosemite Avenue at Parsons Avenue/Gardner Avenue
2. Yosemite Avenue at McKee Road
3. Yosemite Avenue at Hatch Road
4. McKee Road at Olive Avenue

The analysis looked at six different scenarios to determine the impact of the project. The scenarios included:

1. Existing Conditions
2. Existing Conditions plus Project
3. Existing plus Approved Conditions
4. Existing plus Approved Conditions, plus Project
5. Cumulative Year (2035) without Project Conditions
6. Cumulative Year (2035) with Project Conditions

The traffic analysis determined that the proposed project would generate a total of 1,876 Average Daily Trips (ADT's). After standard reductions are given for transit and bicycle use, pass-by traffic, and internal capture, the total net ADT's are 1,184. The trip generation numbers are provided on page 13 of the traffic analysis (Appendix D of the Initial Study at Attachment K of Planning Commission Staff Report #20-01)

The *Merced Vision 2030 General Plan* establishes an acceptable Level of Service (LOS) as LOS D for intersection and roadway operations. The traffic study found that, under existing conditions, the LOS for the intersection at Yosemite Avenue and Parsons/Gardner Avenue currently operates at an LOS F for AM Peak Hour traffic and an LOS E for PM Peak Hour traffic. Additionally, the intersection of McKee Road and Olive Avenue operate at an LOS E and LOS D, respectively. The other two intersections studied (Yosemite Avenue at McKee Road and Yosemite Avenue at Hatch Road) operate at acceptable levels of service (LOS B or better).

With the addition of the proposed project, the intersection at Yosemite Avenue and Parsons/Gardner Avenue, the level of service would be reduced to LOS F and LOS E for the AM and PM peak hours, respectively. The level of service for McKee Road and Olive Avenue would remain an LOS E for the AM peak hour traffic. All other intersections would retain an LOS D or better rating. Under the Cumulative 2035 with project scenario, these same intersections are reduced to an LOS F for both AM and PM peak hours.

The traffic study also conducted a Peak Hour Signal Warrant Analysis and found that signal warrants are satisfied for signals at the intersections of Yosemite Avenue and Parsons/Gardner Avenue and McKee Road and Olive Avenue.

The traffic study recommended the following mitigation measures:

**TRA-01** Pay a proportionate share of the cost of the traffic signal at the intersection of Yosemite Avenue and Parsons/Gardner Avenue.

**TRA-02** Pay a proportionate share of the cost of the traffic signal at the intersection of McKee Road and Olive Avenue.

Because these intersections are currently operating at a level of service below LOS D (the standard established by the General Plan), and the project impacts are not the cause of the existing problems with these intersections, the project would only be required to contribute a fair share to the cost of the traffic signals. The fair share contribution is based on the projects impacts, which in this case would be 2.4% of the cost of the traffic signal at Yosemite Avenue and Parsons/Gardner Avenue and 1.4% of the cost of the signal at McKee Road and Olive Avenue. The applicants would be eligible for reimbursement for up to 100% of the cost for the Yosemite Avenue and Parsons/Gardner Avenue traffic signal, which is an arterial/arterial intersection, through the City's Public Facilities Financing Program (PFFP). The McKee Road and Olive Avenue intersection would be eligible for up to 50% reimbursement through the PFFP as an arterial/collector intersection. The other 50% would be reimbursed if the owners of the 4 corners do any improvements that would require them to provide mitigation. The City would collect the money for reimbursement for up to 15 years.

In addition to contributing to the cost of the traffic signals, the project would be providing access to alternate forms of transportation to reduce the impacts from the project. The developer would provide on-site pick-up/drop-off areas for Uber and Lyft, provide bicycles for tenants to use, and possibly provide Zip cars and/or scooters that could be used by the tenants.

In comparison to the previously proposed mixed-use project, the ADT's are reduced from 2,215 ADT's to 1,876 ADT's (gross, with no reductions given) and 1,146 net. It should also be noted that this amount is less than the estimated traffic generation for the proposed shopping center that was approved for this site in 2014.

Additional mitigation measures were adopted with the General Plan Amendment and Zone Change approved in 2019. The development would be required to comply with the applicable mitigation measures as determined by the City Engineer.

**Parking**

D) 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 339 parking spaces.

Parking for the commercial portion of the project would be based on the actual uses. When

the parking requirements are based on the square footage of the tenant space, the Zoning Ordinance allows a reduction in the floor area for non-public space. In this case, a standard 15% reduction was applied when calculating the parking requirements for the office and retail portions of the project. General office uses require one parking space for every 250 square feet of floor area and retail spaces generally require one space for every 300 square feet of floor area (not including restaurant uses). Based on these requirements, the required parking for the office portion would be 49 spaces and for the retail portion, 64 spaces. This brings the total number of required parking spaces to 452.

The project site provides a total of 386 parking spaces which includes 25 motorcycle parking stalls. In addition, the project provides 70 bicycle parking spaces. Although the total number of spaces required is 452, the Zoning Ordinance allows reductions based on certain criteria. If the project site is located within 400 feet of an approved bus stop, a 5% reduction may be given. Up to a 30% reduction may be given for mixed use developments with the approval of a parking demand study approved by the Director of Development Services. Based on the current design and number of parking spaces provided, the project would need the 5% reduction for a transit stop and a 15% reduction for the mixed-uses granted to comply with the parking requirements. However, it should be noted that through the building permit process, the number of stalls may change given the need to provide trash enclosures and other possible minor site modifications, which could increase the reduction amount. In no case would the reduction be greater than 30% as allowed by the Zoning Ordinance.

The developer will be working with UC Merced to move the bus stop near Yosemite Avenue and Via Moraga closer to their site, so they could qualify for the 5% reduction previously described. In addition, the developer will be providing pick-up/drop-off locations for Uber and Lyft to encourage ride sharing, offering bicycles, and possibly Zip cars and scooters for their tenants to use to reduce the actual number of parking spaces needed. Also, because this is a mixed-use project, it is likely there would be commercial uses that would not need parking in the evenings, which would leave additional spaces open for the other uses during these hours. Condition #30 requires the developer to provide a parking demand analysis demonstrating that a reduction is warranted prior to the issuance of a building permit.

As previously mentioned, the project will also provide indoor bicycle storage facilities as well as bicycle parking for the commercial uses. The site has easy access to the bicycle trail system which could encourage the use of bicycles rather than cars.

Although the Zoning Ordinance allows for parking reductions, it is important that sufficient parking still be maintained on the site to prevent parking from spilling out into the adjacent neighborhoods.

**Public Improvements/City Services**

E) *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 project site is limited to discharging a maximum of 8,000 gallons per day of wastewater during peak hours. Additional wastewater shall be contained onsite and discharged at off-peak hours (refer to Conditions #9 and #10). This condition also requires a monitoring system to allow the City to monitor the flow and requires the developer to ensure the onsite storage tank doesn't emit objectionable odors.

*Stormwater*

An 18-inch storm drain exists in Yosemite Avenue. The project would be required to comply with the State Post Construction Standards and to retain storm water on-site and meter it into the City's system (Conditions #17 and 18).

**Building Design**

F) The proposed building designs would be similar to the style of the buildings at UC Merced. The 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. Buildings 1 and 3 are two-story buildings and Buildings 2 and 4 are three-story buildings. The elevations are provided at Attachment D of Planning Commission Staff Report #20-01. The table below provides a breakdown of each building by the number of stories, uses and number of residential units, and building height.

***BUILDING DETAILS***

| Building No. | Stories | 1st Floor | 2nd Floor | 3rd Floor | Total Square Feet | Height (to top of parapet) |
|---|---|---|---|---|---|---|
| 1 | 2 | 22 units | 27 units | n/a | 30,456 | 26' 1 1/8" |
| 2 | 3 | Retail/Resident Space | 34 units | 33 units | 57,622 | 33' 11" |
| 3 | 2 | Office | 29 units | n/a | 30,533 | 26' 1 1/8" |
| 4 | 3 | Retail/Resident Space | 34 units | 35 units | 58,262 | 33' 11" |
| TOTAL UNITS | | 214 | | | 176,873 | |

The development would have 82 - 1 bedroom/1bath units, 112 - 2 bedroom/2 bath units, and 20 - 3 bedroom/3 bath units. The one-bedroom units would vary in size depending on whether the unit includes a balcony. A one-bedroom unit with a balcony would have 276 square feet and without a balcony it would have 300 square feet. The two-bedroom units would be 576 square feet with a 24-square-foot balcony, and the three bedroom units would be 876 square feet with a 24-square-foot balcony. Access to all the units would be through an interior corridor, which would increase safety for the tenants.

Building 1 is a two-story building with residential units on both floors. Buildings 2 and 4 are three-story buildings with commercial space and common areas for the residential tenants on the first floor and residential units on the second and third floors. Building 3 is a two-story building with office space on the first floor and residential units on the second floor.

The floor plans for each building are provided at Attachment C of Planning Commission Staff Report #20-01. These plans show the residential units as well as the areas for commercial uses and common/community areas for the residential tenants. The floor plans at Attachment E of Planning Commission Staff Report #20-01 show the layout of each of the different unit types.

The common/community areas in Buildings 2 and 4 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 H of Planning Commission Staff Report #20-01). This area would provide an additional outdoor area for tenants to lounge and socialize. The lounge area would be located near the center of the roof and would include tables, chairs, etc. for the tenants to use while in this area. There would be a 42-inch-high railing around the lounge area separating it from the rest of the roof-top area for safety purposes.

Security

The building and the site have been designed to incorporate security features for the safety of the tenants and the surrounding area. The buildings have been designed with linear hallways to ensure line of site as residents enter and exist their units. Access to the buildings and individual units would be through a key-fob security system. Each tenant on the lease would be issued a key-fob. This key-fob would not only allow access to the buildings and individual units, but would also have to be in the unit in order for the power to come on. This means of access and security helps to ensure only the tenants listed on the lease are staying in the units and also provides security against unwanted guests. There will be emergency call boxes placed throughout the site that will connect directly to the Police Department in case of emergency. There will also be an on-site manager to deal with emergency and security issues.

**Site Design**

G) 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 85 feet from McKee Road (increased from approximately 50 feet in the previous design), Building 3 is approximately 82 feet from the from the eastern property line near Whitewater Way (an increase from 55 feet), and Building 4 is approximately 125 feet from the southern property line.

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 the Site Plan at Attachment B of Planning Commission Staff Report #20-01) 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 eight-foot tall block wall would separate the project from the residential uses to the south of the site (Condition #32).

Distance to Adjacent Residential Uses

The previous project design included all three-story buildings. The applicant has revised the design and reduced Buildings 1 and 3 to two-story buildings. The two-story buildings would have a height of approximately 26 feet. Buildings 2 and 4 are three-story buildings and would have a height of approximately 34 feet. On the roof of each of the buildings there would be an elevator shaft and screening for the mechanical equipment that would extend above the roof line. The homes on the west side of McKee Road are approximately 75 feet from the western property line of the project site. Building 1 is located closest to McKee Road and would be set back approximately 85 feet from the western property line of the project site, making the closest home approximately 160 feet away from Building 1. Refer to Attachment I of Planning Commission Staff Report #20-01.

The nearest home across Yosemite Avenue is approximately 180 feet from the project site. The distance from Building 2 to the nearest home across Yosemite Avenue would be approximately 370 feet and from Building 3 it would be approximately 300 feet.

The homes to the east across Whitewater Way are approximately 40 feet from the project site. Building 3 would be approximately 125 feet from these homes.

The nearest home to the south is located approximately 40 feet from the southern property line of the project site. 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 1 which would be approximately 140 feet away. It should be noted that the owner of the property to the south recently sold the developer approximately ½ acre of land in order for this development to expand to the south. This ½ acre was the subject of the recent General Plan Amendment and Zone Change approved in October 2019.

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 Streets 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 (refer to Page 2 of Attachment I).

As described below in the Landscaping Section (Finding H), 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**

H) As shown on the site plan at Attachment B of Planning Commission Staff Report #20-01, 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 has been increased from 11,300 square feet to 28,500 square feet. This area would be landscaped to create a welcoming outdoor area. 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. Compliance with these requirements is also included in Condition #11.

**Neighborhood Impact/Interface**

I) 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 January 14, 2020, at Yosemite Church. The afternoon (3:00 p.m.) meeting was attended by approximately 10 people and the evening meeting (6:00 p.m.) was attended by approximately 25-30 people.

The neighbors had questions regarding the on-site sewer storage, the density, the parking, the tenants expected for the retail portion of the project, whether the units would be for college students, and traffic impacts.

Raj Joshi, the developer's representative, addressed the questions and explained that they are looking to develop this site in order to serve the UC and are working with the UC on an agreement to house graduate, doctorate, and post-doctorate students. He explained that this site is the closest vacant site to the UC that has access to City facilities, (i.e., sewer and water). He further explained that he has been working with the City's Public Works Director, Ken Elwin, on the sewer capacity and on-site storage issues. Mr. Joshi pointed out the incentives they would be implementing to reduce the need for vehicles such as providing bicycles and bicycle parking, providing Uber and Lyft drop-off/pick-up areas, installing a bus stop in front of their site, and possibly providing Zip cars for the tenants. In addition, there could be a reduction in rent if the tenant agrees not to have a vehicle. He explained that the traffic study done for this project recommended that this project pay a proportionate share of the cost of traffic signals at Yosemite Avenue & Parsons/Gardner Avenue and Olive Avenue and McKee Road. Additionally, they would be required to modify the striping at these intersections to help with the existing congestion at in these

areas. It should be noted that a development is only required to mitigate the impacts related to their project. The existing conditions are not the responsibility of the development.

During the review process for the previous proposal, the neighborhood voiced concerns regarding having bars and nightclubs in this project. The developer agreed that they would not allow bars and/or nightclubs to be located within their project. Refer to Condition #33 for the restrictions placed on the uses selling alcoholic beverages.

Public hearing notices are typically sent to all property owners within 300 feet of the project site. In this case, notices were sent to all property owners within 500 feet of the site as well as an extended area on McKee and Hatch Roads. To date, staff has not had any comments other than those heard at the community meetings held by the developer.

**Signage**

J) 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 #12).

**Land Use/Density Issues**

K) The project proposes to construct a mixed-use project to include 214 multi-family dwelling units and approximately 37,117 square feet of commercial space (retail and office). As described in Finding A, the proposed land uses are allowable under the current Zoning designation of Neighborhood Commercial, with the residential portion requiring Conditional Use Permit approval. The residential portion of the project has a density of 36 units per acre. This density is consistent with the General Plan designation of High Density Residential (HD) which allows 24 to 36 units per acre. The density of the project is consistent with the density requirements of the High Density Residential (HD) designation which allows 24 to 36 units per acre.

The Neighborhood Commercial (C-N) zone allows a variety of commercial uses. The table at Attachment J of Planning Commission Staff Report #20-01 provides a list of the types of uses allowed. As mentioned above in the Neighborhood Impact section, the developer has agreed to limitations on the types of uses.

**Environmental Clearance**

L) The Planning staff has conducted an environmental review (Initial Study # 19-37) 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 #19-37) is being recommended (Attachment K of Planning Commission Staff Report #20-01).

Attachments:

A) Location Map
B) Site Plan
C) Building Floor Plans
D) Elevations & Rendering

E) Unit Floor Plans
F) Project Comparison
G) Letter of Intent from UC Merced
H) Roof-top deck
I) Distance Illustration
J) C-N Zone Uses
K) Initial Study #19-37
L) Draft Planning Commission Resolution

Ref: *N:\SHARED\PLANNING\STAFFREP\SR2020\SR 20-01- CUP 1238 (Yosemite & McKee) .docx*

Attachment Matrix for
Planning Commission Staff Report #20-01

| Staff Report #20-01 Attachment | Administrative Report Attachment |
|---|---|
| Attachment A – Location Map | Attachment 1 – Location Map |
| Attachment B – Site Plan | Attachment 2 – Site Plan |
| Attachment C – Building Floor Plans | Attachment 4 – Building Floor Plans |
| Attachment D – Elevations | Attachment 5 – Elevations |
| Attachment E – Unit Floor Plans | Attachment 6 – Unit Floor Plans |
| Attachment F – The Hub Side-by Side | Attachment 15 – The Hub Side-by-Side |
| Attachment H – Roof-top Deck | Attachment 7 – Roof-top Deck |
| Attachment I – Distance Comparison | Attachment 8 – Distance Comparison |
| Attachment L – Draft Planning Commission Resolution #4035 | Attachment 9 – Planning Commission Resolution #4035 |

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(209) 228-4055

January 6, 2020

Joe Englanoff
Merced Holdings, LP
9701 W Pico Blvd, Unit 201
Los Angeles, CA 90035

This letter expresses the University of California Merced's (UCM) interest in the property commonly known as "The Hub at Yosemite", located at 3492 McKee Rd, Merced California, 95340 ("The Hub"). UCM desires to express to the City of Merced Planning Commission its support of both the proposed development and developer's application for the proposed Conditional Use Permit. It is our understanding that the developer desires to complete the first phase of the project by July 2021 to allow tenants to move-in beginning in August 2021. We expect The Hub to provide much needed housing for UCM graduate students, post docs and visiting faculty.

Following final approval by the Merced City Council, UCM intends to negotiate with the developer, Merced Holdings L.P., for a program to house UCM graduate student, post doc, and visiting faculty occupancy. The parties are considering the negotiation of a master lease for some portion of the residential units and office space located within The Hub.

While this letter expresses support of the development known as "The Hub at Yosemite," UCM has not committed to a particular course of action with respect to The Hub, and nothing herein imposes any obligation or commitment to proceed with negotiations. Any and all legal rights and obligations between the parties will come into existence only if and when both UCM and the developer, in their sole and absolute discretion, execute definitive agreements. This letter shall not be deemed to confer any rights upon any person or entity or give rise to any right or cause of action, contractual or otherwise. No third party should act in reliance hereon.

Sincerely,

Michael McLeod
Vice Chancellor, Chief Operating Officer
Physical Operations, Planning and Development

## 20.10.020 Land Use Regulations for Commercial Zoning Districts

**A. Permitted Uses.** Table 20.10-1 identifies land uses permitted in commercial zoning districts.

### TABLE 20.10-1 PERMITTED LAND USES IN THE COMMERCIAL ZONING DISTRICTS

| Key | Zoning District [1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **P** Permitted Use<br>**M** Minor Use Permit Required<br>**SP** Site Plan Review Permit Required<br>**C** Conditional Use Permit Required<br>**X** Use Not Allowed | C-O | C-N | C-C | C-SC | C-T | C-G | B-P | Additional Regulations |
| **RESIDENTIAL USES** | | | | | | | | |
| Group/Transitional/Supportive Housing | X | X | P [3] | X | X | X | X | |
| Live/Work Units | C | C | P [2] | X | X | X | X | Sec. 20.44.080 |
| Multiple-Family Dwellings | C | C | P | X | X | X | X | |
| Residential Care Facilities, Small *(6 or Less)* | X | X | P [3] | X | X | X | X | |
| Residential Care Facilities, Large *(More than 6 residents)* | X | X | P [3] | X | X | X | X | |
| Single-Room Occupancy | X | X | P [3] | X | X | X | X | Sec. 20.44.120 |
| **COMMUNITY USES** | | | | | | | | |
| Community Assembly | C | C | C | X | C | C | C | |
| Community Garden | SP | SP | SP | SP | X | SP | X | Sec. 20.44.050 |
| Colleges and Trade Schools | C | C | C | SP[9] | X | C | C | |
| Convalescent or Nursing Homes | C | C | C | X | X | X | X | |
| Cultural Institutions | C | C | C | X | C | C | C | |
| Day Care Centers (Children & Adults) | M | M | M | X | X | X | SP | |
| Emergency Shelters | X | X | C | X | C | P | X | Sec.20.44.150 |
| Government Offices | P | P | P | X | C | C | C | |
| Hospitals and Surgery Centers | C | C | C | X | X | X | C | |
| Instructional Services | P | P | P | X | X | X | SP | |
| Medical Offices and Clinics | P | P | P | X | X | X | C | |
| Parks and Recreational Facilities | C | C | C | X | X | X | C | |
| Public Safety Facilities | SP | SP | P | C | SP | SP | SP | |
| Rehabilitation Centers | P | P [6] | P[10] | X | X | C | C | |
| Social Assistance Services | C | C | C | X | SP | P | X | |

| Key | Zoning District [1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **P** Permitted Use<br>**M** Minor Use Permit Required<br>**SP** Site Plan Review Permit Required<br>**C** Conditional Use Permit Required<br>**X** Use Not Allowed | C-O | C-N | C-C | C-SC | C-T | C-G | B-P | Additional Regulations |
| **COMMERCIAL USES** | | | | | | | | |
| Alcoholic Beverage Sales [7] | X | P [7][8] | P [7] | C [7][8] | P [7] | P [7] | SP [7] | Sec.20.44.010 |
| Bail Bond Businesses | C | X | C [10] | X | C | C | C | |
| Bars and Nightclubs | X | C | C | X | C | C | C | |
| Banks, Retail | P | P | P | P [9] | SP | SP | SP | |
| Bed and Breakfast | X | X | C | X | C | C | X | Sec.20.44.030 |
| Building Supplies/Home Improvement | X | X | C | X | SP | P | SP | |
| Business Support Services | X | C | M | X | P | P | SP | |
| Cardrooms [5] | X | X | C [5] | X | C [5] | C [5] | X | Chapter 9.08 |
| Cemeteries and Mausoleums | X | X | C | X | C | P | X | |
| Check Cashing/Payday Loan Establishments | C | X | C [10] | X | C | C | C | Sec.20.44.040 |
| Commercial Cannabis Businesses | Refer to Table 20.44-1 in Section 20.44.170 | | | | | | | |
| Commercial Recreation, Indoor (Except Below) | X | SP | SP | SP[9] | P | SP | C | |
| Multi-Screen (6 or More) Movie Theaters | X | C | P | X | C | X | C | |
| Commercial Recreation, Outdoor | X | X | X | SP [9] | P | C | C | |
| Drive-Through and Drive-Up Sales | C | C | SP | SP [9] | P | P | SP | |
| Equipment Sales and Rental | X | X | X | X | P | P | SP | |
| Farmer's Market | C | SP | SP | SP | SP | SP | SP | Sec.20.50.030B |
| Flea Market | X | X | X | X | C | C | C | |
| Funeral Parlors and Mortuaries | C | C | C | X | C | P | C | |
| Gas and Service Stations/Car Washes | X | C | SP | SP [9] | P | P | SP | Sec.20.44.070 |
| Hotels and Motels | X | X | P | X | P | C | C | |
| Hookah Lounges | X | C | C | X | C | C | C | |
| Kennels | X | X | X | X | C | P | C | |
| Maintenance and Repair Services | X | X | X | X | P | P | SP | |
| Massage Establishments | C [16] | C [16] | C [16] | X | C [16] | C [16] | X | Chapter 5.44 |
| Massage Therapy—Sole Practitioner | P[17] | P[17] | P[17] | X | C [16] | C [16] | X | Chapter 5.44 |
| Mobile Food Vendors | C | C | C [10] | X | SP [11] | SP | C | Sec. 5.54 & 20.44.020 |
| Mobile Home Sales | X | X | X | X | P | P | SP | |
| Office, Professional | P | P | P | SP [9] | SP | SP | SP | |

| Key | Zoning District [1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **P** Permitted Use<br>**M** Minor Use Permit Required<br>**SP** Site Plan Review Permit Required<br>**C** Conditional Use Permit Required<br>**X** Use Not Allowed | C-O | C-N | C-C | C-SC | C-T | C-G | B-P | Additional Regulations |
| **COMMERCIAL USES (Continued)** | | | | | | | | |
| Pawn Shops | X | X | C [10] | X | X | P | X | |
| Personal Services | SP | P | P | P [9] | SP | SP | SP [12] | |
| Retail, General | SP[12] | P | P | P [9] | P | SP | SP | |
| Restaurants | C [13] | P [8] | P | SP [9] | P | M | SP [12] [13] | |
| Tattoo Parlors | X | SP | M | X | M | M | SP | |
| Tobacco Retailers [18] | X | P [18] | P [18] | P [18] | P [18] | P [18] | SP[18] | Sec.20.44.160 |
| Vehicle Parts and Accessories Sales | X | P | P | X | P | P | SP | |
| Vehicle Rentals | X | X | M | X | P | P | SP | |
| Vehicle Repair and Maintenance, Major | X | X | X | X | C | P | C | |
| Vehicle Repair and Maintenance, Minor | X | SP | P | X | P | P | C | |
| Vehicle Sales | X | X | P [10] [14] | X | P | P | C | |
| **INDUSTRIAL USES** | | | | | | | | |
| Manufacturing and Processing, General | X | X | X | X | X | M | C | |
| Manufacturing and Processing, Light | X | X | X | X | X | P | SP | |
| Research and Development | C | X | C | X | SP | SP | P | |
| Warehousing, Wholesaling, and Distribution | X | X | SP[15] | X | P | P | SP | |
| Wrecking & Salvage Establishments | X | X | X | X | C | C | X | Sec.20.44.140 |
| **TRANSPORTATION, COMMUNICATION, AND UTILITY USES** | | | | | | | | |
| Airports | X | X | X | X | C | C | C | |
| Freight Terminals | X | X | X | X | C | C | C | |
| Heliports | C | X | C | X | C | C | C | |
| Parking Facilities | P | P | P | P[9] | P | P | P | |
| Public/Mini Storage | X | X | X | X | M | M | SP | |
| Recycling Collection Facilities | | | | | | | | Sec.20.44.090 |
| Reverse Vending Machines | P | P | P | M[9] | P | P | P | |
| Small Collection Facilities | SP | SP | SP | SP[9] | SP | SP | SP | |
| Large Collection Facilities | X | X | X | X | C | C | C | |
| Utilities, Major | C | C | C | X | C | C | C | |
| Utilities, Minor | P | P | P | P[9] | P | P | P | |
| Wireless Communications Facilities | See Chapter 20.58 | | | | | | | |

Notes:

[1] A Site Plan Review Permit may be required per Chapter 20.32 (Interface Regulations) regardless of the uses shown in Table 20.10-1.

[2] Residential use on the ground floor is prohibited unless it is located on the back of the property where it is not visible or approved with a Conditional Use Permit.

[3] Prohibited as a single use. Permitted as part of a residential mixed-use project.

[4] Use shall not exceed 20,000 square feet.

[5] 24 hour operations limited to C-T and C-C zones per Chapter 9.08 (Gaming).

[6] Rehabilitation centers for drug, methadone, and alcohol are prohibited.

[7] A Conditional Use Permit is required for establishments smaller than 20,000 square feet.

[8] A Conditional Use Permit is required for alcoholic beverage sales for on-site consumption.

[9] Permitted only as part of a shopping center or other retail establishment with a minimum of 20,000 square feet of floor area devoted to the sale of groceries.

[10] Prohibited in the City Center area between 19th and 16th Streets and O Street and Martin Luther King, Jr. Way, including properties fronting on either side of each of the above streets, except vehicle sales showrooms can be allowed.


[11] Includes refreshment stands.

[12] Permitted only as an ancillary use to serve employees, not to occupy more than 5,000 square feet.

[13] Conditional Use Permit required unless the use is ancillary to a principal permitted use. For restaurants, Conditional Use Permit is required unless the uses are conducted in and entered from within the building with no outside advertising.

[14] A Site Plan Review Permit is required for used vehicle sales.

[15] Temporary warehousing and storage only is allowed per the requirements of Section 20.10.030(D).

[16] Provided that a massage establishment permit has not been revoked at that location within 12 months of the application for a conditional use permit and a massage establishment permit is obtained pursuant to Chapter 5.44.

[17] Must have valid certificate from State of California as a massage therapist or massage practitioner pursuant to the Massage Therapy Act (Business and Professions Code Section 4600 *et seq.)*.

[18] Prohibited within 1,000 feet of schools and other uses per Sec. 20.44.160, unless building over 20,000 square feet.

## 20.10.030 Development Standards and Guidelines for Commercial Zoning Districts

**A. General Standards.** Table 20.10-2 identifies development standards that apply to all parcels and structures located in commercial zoning districts. See Figure 20.10-1.

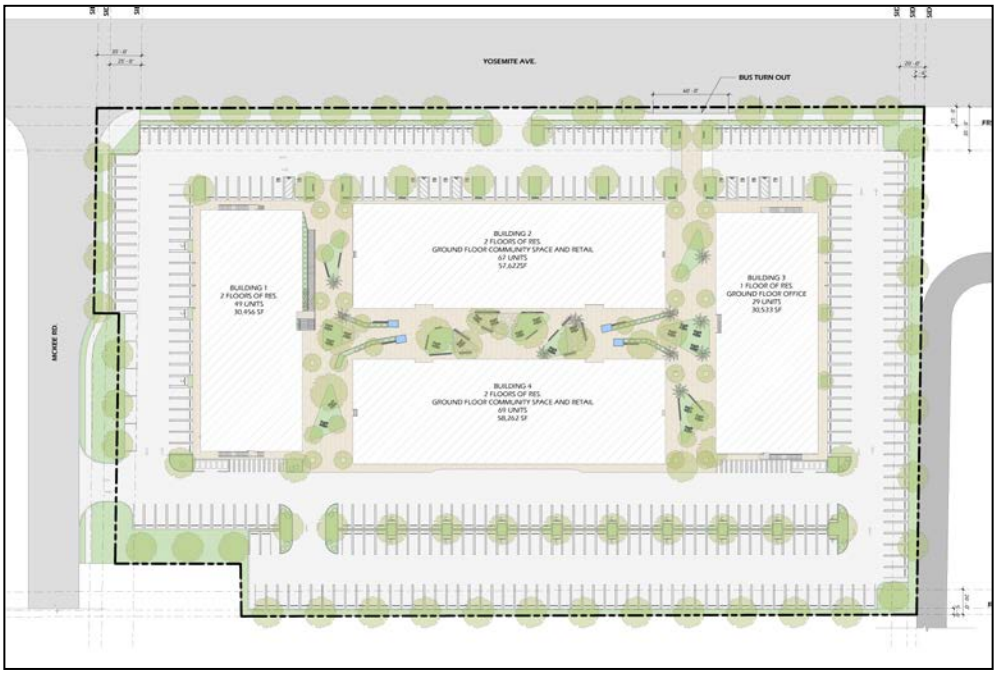
**B. Outdoor Operation of Uses.**

1. The outdoor operation of a land use in the C-C and C-N zoning districts shall require approval of a Site Plan Review Permit. Outdoor dining in accordance with Chapter 12.36 (Restaurant Encroachment Permits), outdoor recreation,

# INITIAL STUDY #19-37

## Conditional Use Permit #1238

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: Conditional Use Permit #1238**

**INITIAL STUDY:** #19-37

**DATE RECEIVED:** November 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 January 22, 2020 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

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## 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***

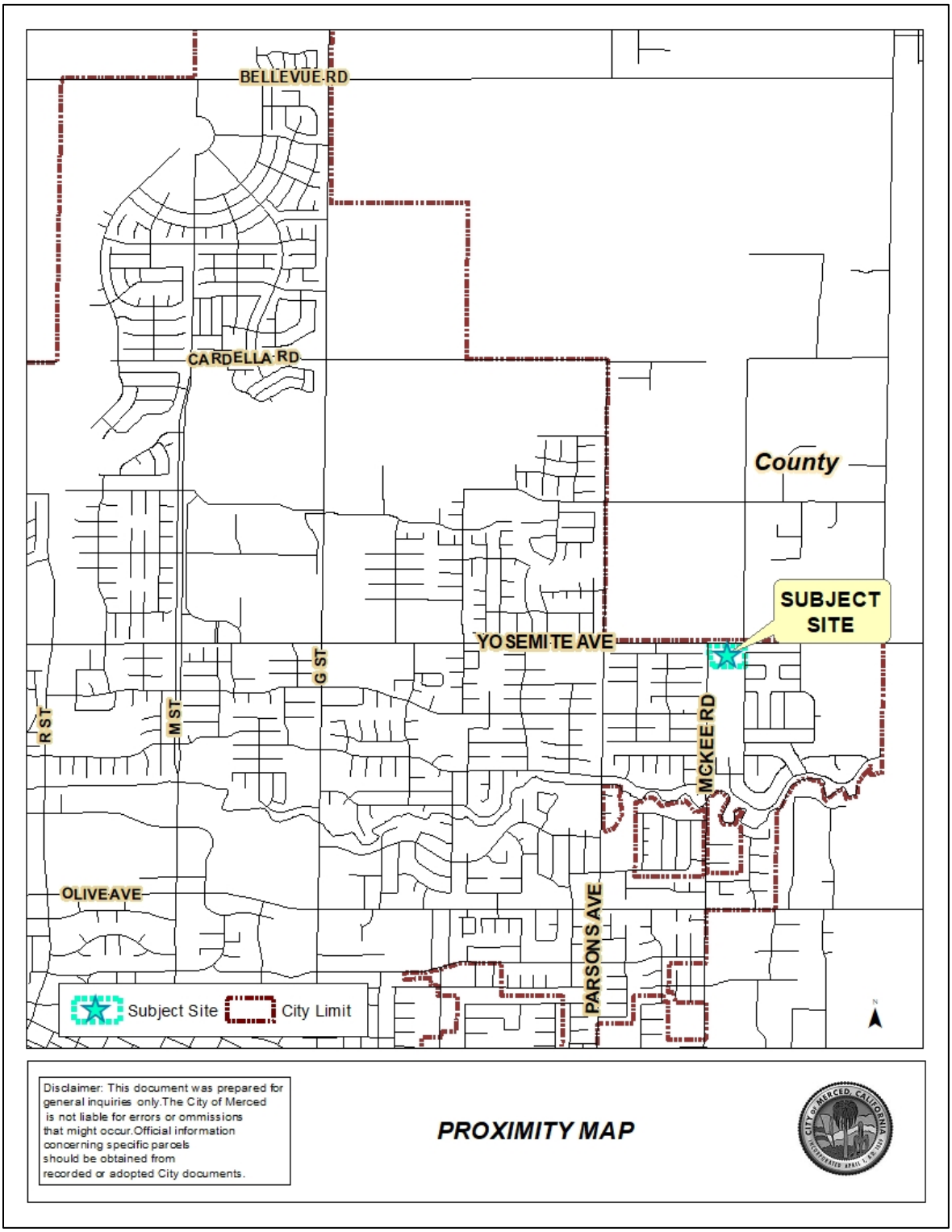


***Figure 2***
***Subject Site & Surrounding Uses***

## Project Description

The proposed project is a request for a Conditional Use Permit to allow the construction of a mixed-use development to include 21 4 apartment units and approximately 37,000 square feet of commercial space (retail and offices) within four buildings (two 2-story buildings and two 3-story buildings) on an approximately 5.94-acre parcel. The General Plan designation is Neighborhood Commercial and the Zoning classification is Neighborhood Commercial (C-N).

The 214 apartment units would contain a mixture of 1, 2, and 3-bedroom apartments and approximately 8,000 square feet of resident/community space. Buildings 1 and 3 (refer to the Site Plan at Figure 3) would be 2-story buildings and Buildings 2 and 4 would be 3-story buildings. The ground floor of Building 3 would provide commercial office space and the ground floors of Buildings 2 and 4 would provide a mixture of resident/community space and commercial uses. 394 parking spaces would be provided to serve the uses. The table below provides a breakdown of the units, stories, building heights, and sizes. The floor plans for each building are provided at Figures 4-A through 4-D (pages 7-12). The building height shown in the table below is the height to the top of the parapet of each building. Each building would have an additional screen for mechanical equipment that would be approximately 2-3 feet in height and an elevator shaft that would be approximately 8-9 feet in height. Building 2 includes a roof-top deck for tenants to have an additional open space/recreation area. This area would include a lounging area with tables and chairs as well as trees to add shade. The building elevations are provided at Figures 5-A, 5-B, 5-C, 5-D, and 5-E.

***BUILDING DETAILS***

| Building No. | Stories | 1st Floor | 2nd Floor | 3rd Floor | Total Square Feet | Height (to top of parapet) |
|---|---|---|---|---|---|---|
| 1 | 2 | 22 units | 27 units | n/a | 30,456 | 26’ 1 1/8” |
| 2 | 3 | Retail/Resident Space | 34 units | 33 units | 57,622 | 33’ 11” |
| 3 | 2 | Office | 29 units | n/a | 30,533 | 26’ 1 1/8” |
| 4 | 3 | Retail/Resident Space | 34 units | 35 units | 58,262 | 33’ 11” |
| TOTAL UNITS | | 214 | | | 176,873 | |

The development will have 82- 1 bedroom/1bath units, 112 - 2 bedroom/2 bath units, and, 20 - 3 bedroom/3 bath units. The one-bedroom units would vary in size depending on whether the unit includes a balcony. A one-bedroom unit with a balcony would have 276 square feet and without a balcony it would have 300 square feet. The two-bedroom units would be 576 square feet with a 24-square-foot balcony, and the three bedroom units would be 876 square feet with a 24-square-foot balcony.

Parking

The project would provide 386 spaces to serve the residential uses as well as the commercial uses. These spaces include 25 motorcycle parking spaces as well as 361 automobile parking spaces (including handicap accessible spaces). Additionally, the project would provide 70 bicycle

parking spaces located within the buildings for the residents. As per code requirements, short-term bike parking would be provided for the commercial uses as well.

Typically, parking for the residential portion of the project would require 339 spaces and the commercial uses (office and retail) would require 113 spaces for a total requirement of 452 spaces. The Zoning Ordinance allows up to a 30% reduction for a mixed-use development with the approval of a parking demand analysis approved by the Development Services Director. With the 30% reduction, the parking requirement would be reduced to 316 spaces.

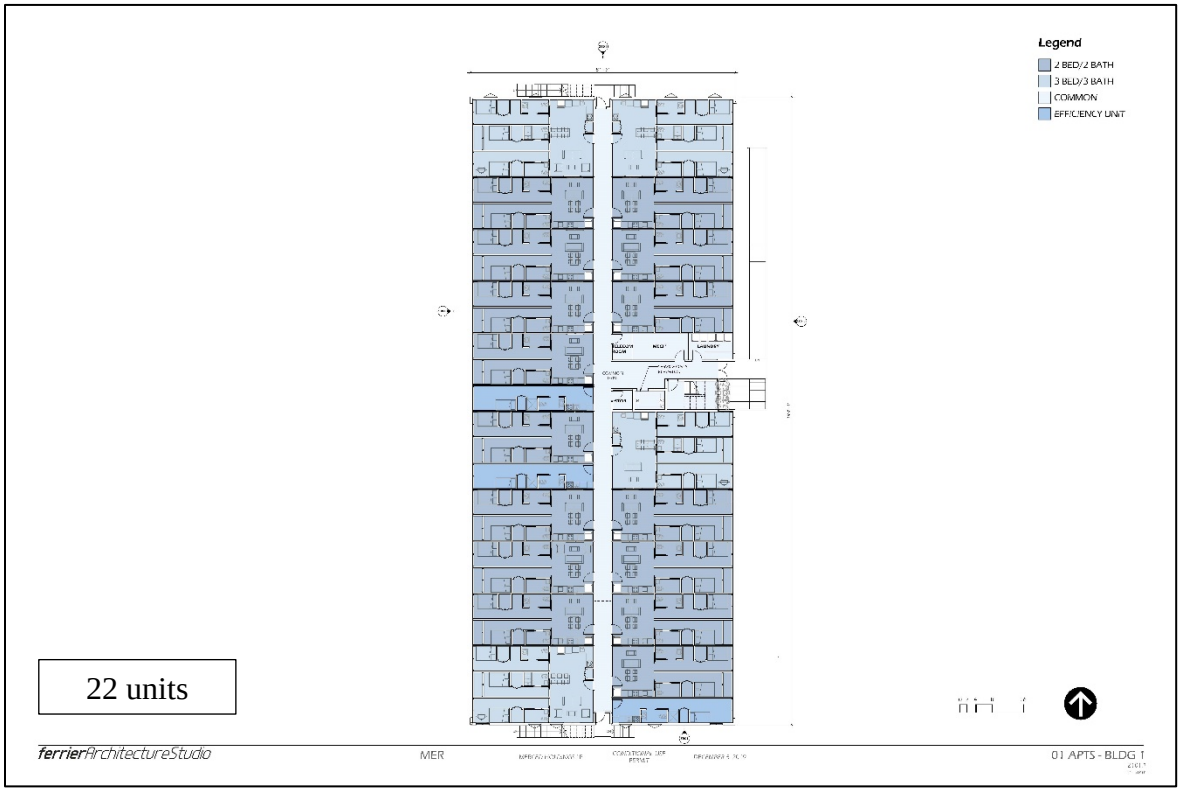
The developer will be implementing measures to reduce the need for parking on the site. The developer will be working with UC Merced to move the bus stop near Yosemite Avenue and Via Moraga closer to their site, so they could qualify for a 5% reduction based on the location of a transit stop. In addition, the developer will be providing pick-up/drop-off locations for Uber and Lyft to encourage ride sharing, offering bicycles, and possibly Zip cars and scooters for their tenants to use to reduce the actual number of parking spaces needed. Also, because this is a mixed-use project, it is likely there would be commercial uses that would not need parking in the evenings, which would leave additional spaces open for the other uses during these hours.

Zoning

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 properties to the north of the site are not within the City Limits, but are 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 -Site Plan***

***Figure 4-A - Floor Plan-Building 1***
***First Floor***




***Second Floor***

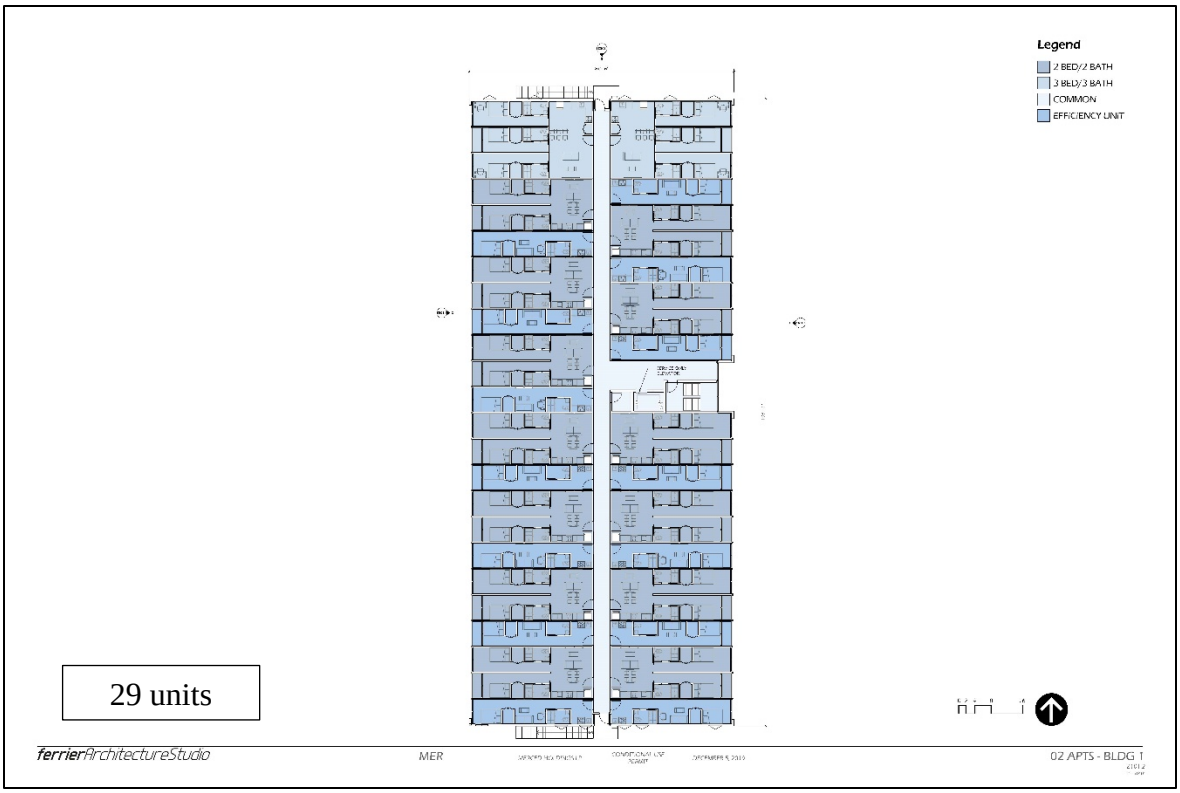


***Figure 4-B - Floor Plan-Building 2***
***First Floor – Retail/Resident Space***


***Second Floor - Apartments***

***Third Floor – Apartments***


***Roof-Top Resident Area***

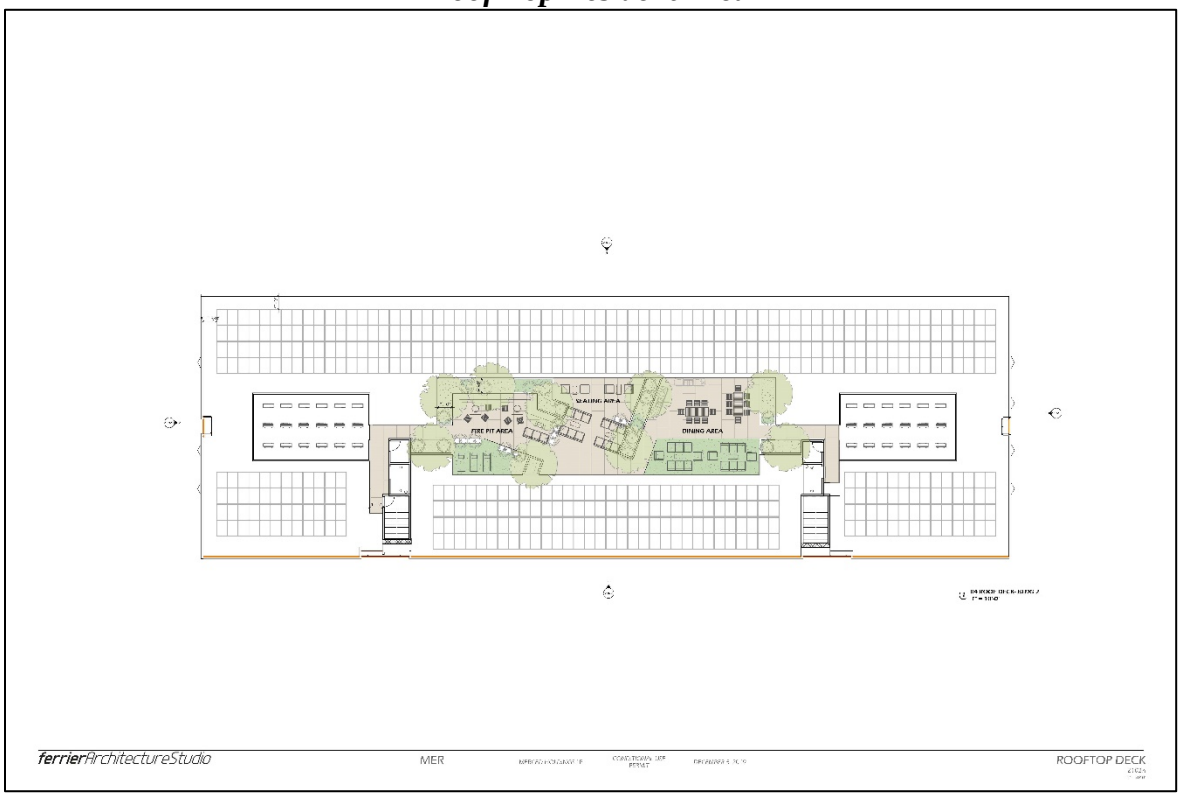
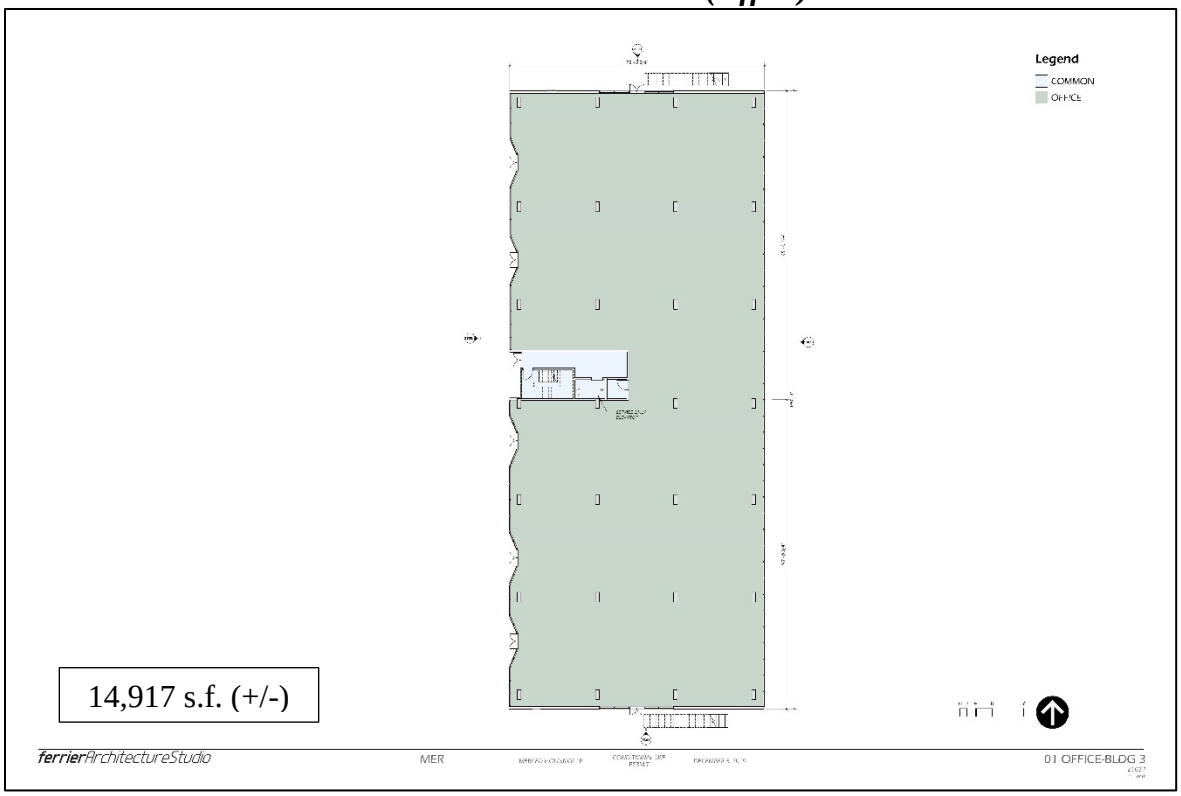
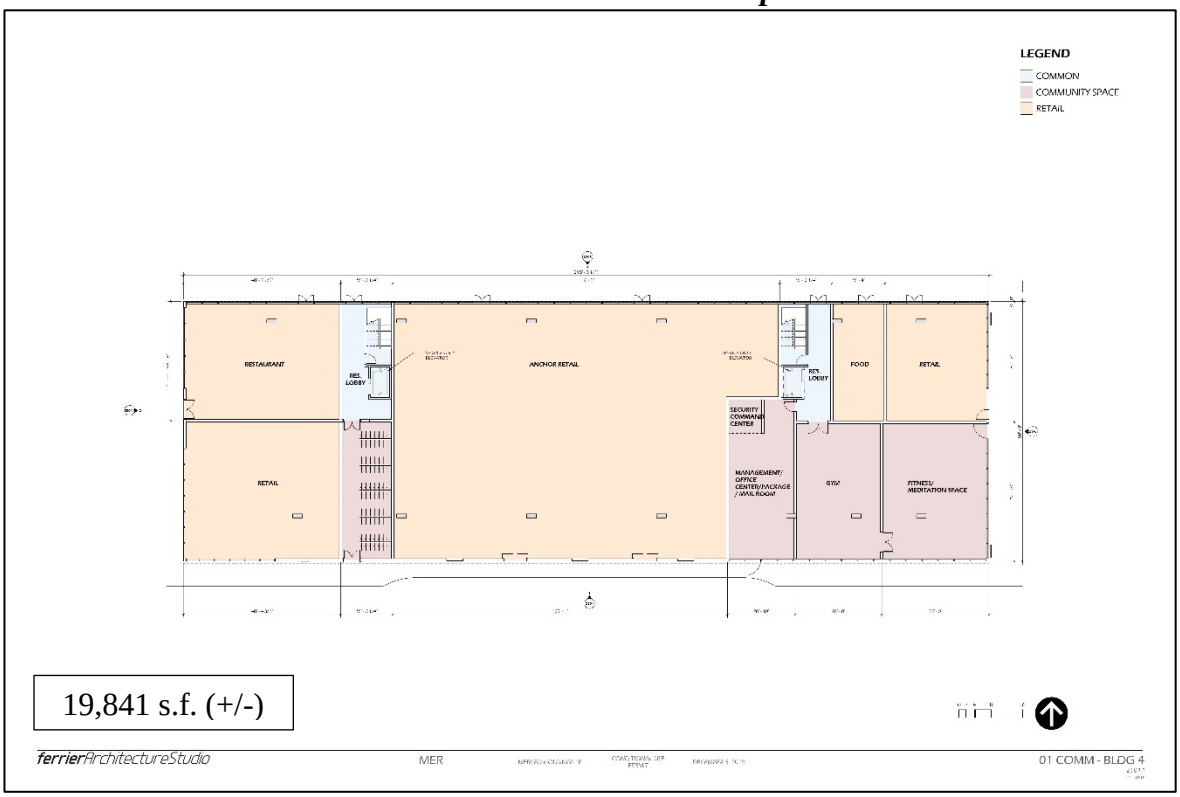


***Figure 4-C - Floor Plan-Building 3***
***First Floor- Commercial (Office)***




***Second Floor – Apartments***

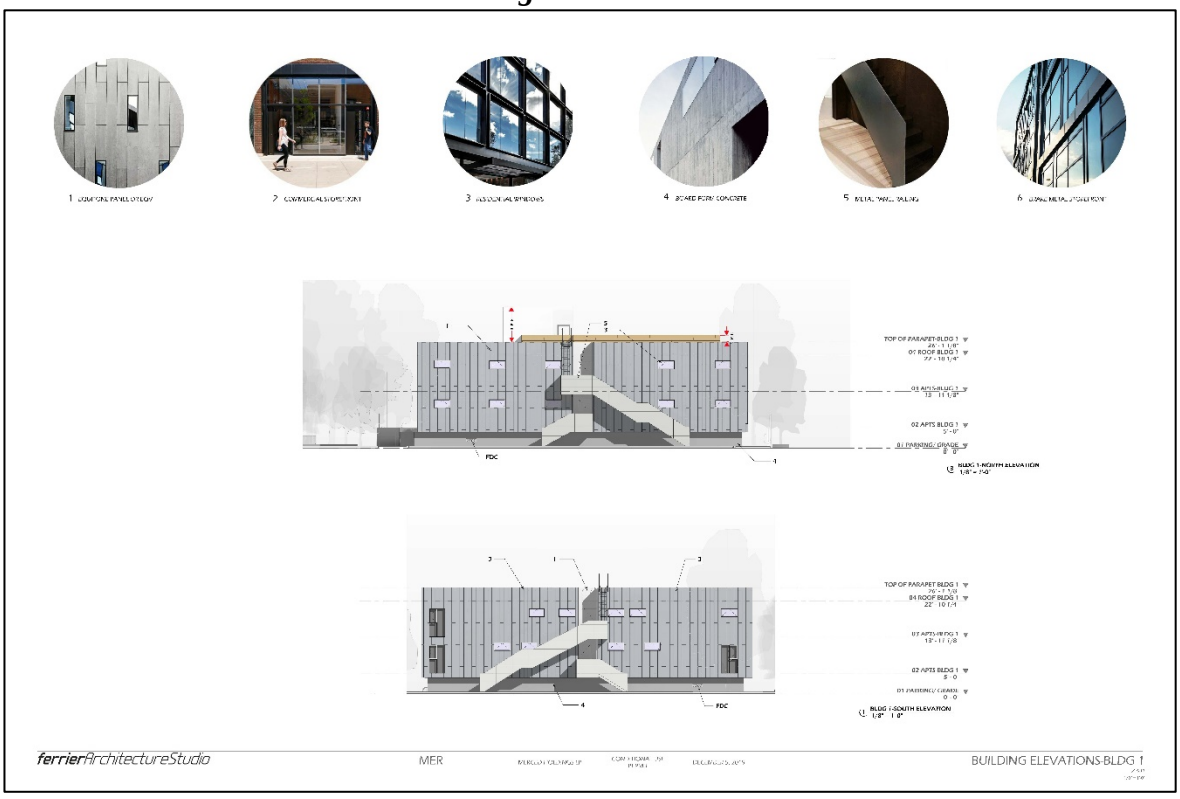
***Figure 4-D - Floor Plan-Building 4***
***First Floor – Retail/Resident Space***




***Second Floor - Apartments***

***Building 4 - Third Floor - Apartments***

***Figure 5-A – Elevations***
***Building 1 – North/South***




***Building 1 – East/West***

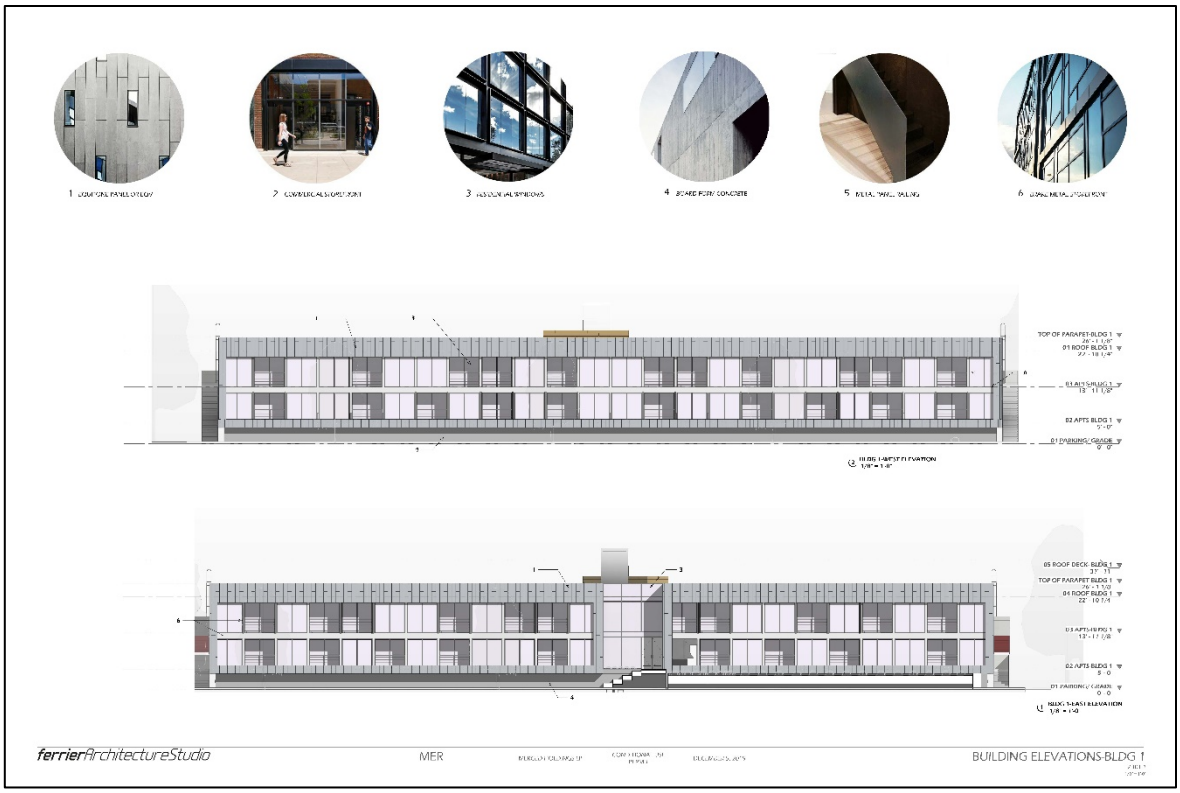
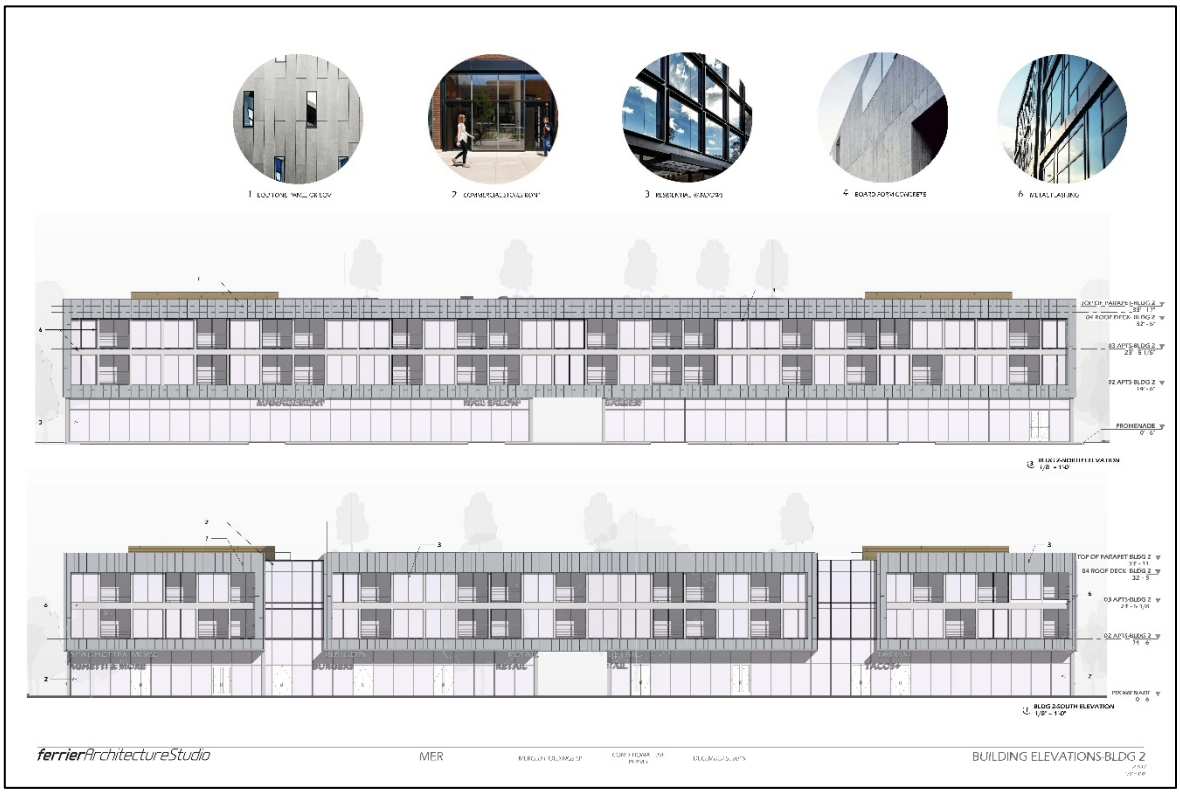


***Figure 5-B – Elevations***
***Building 2 – North/South***




***Building 2 – East/West***

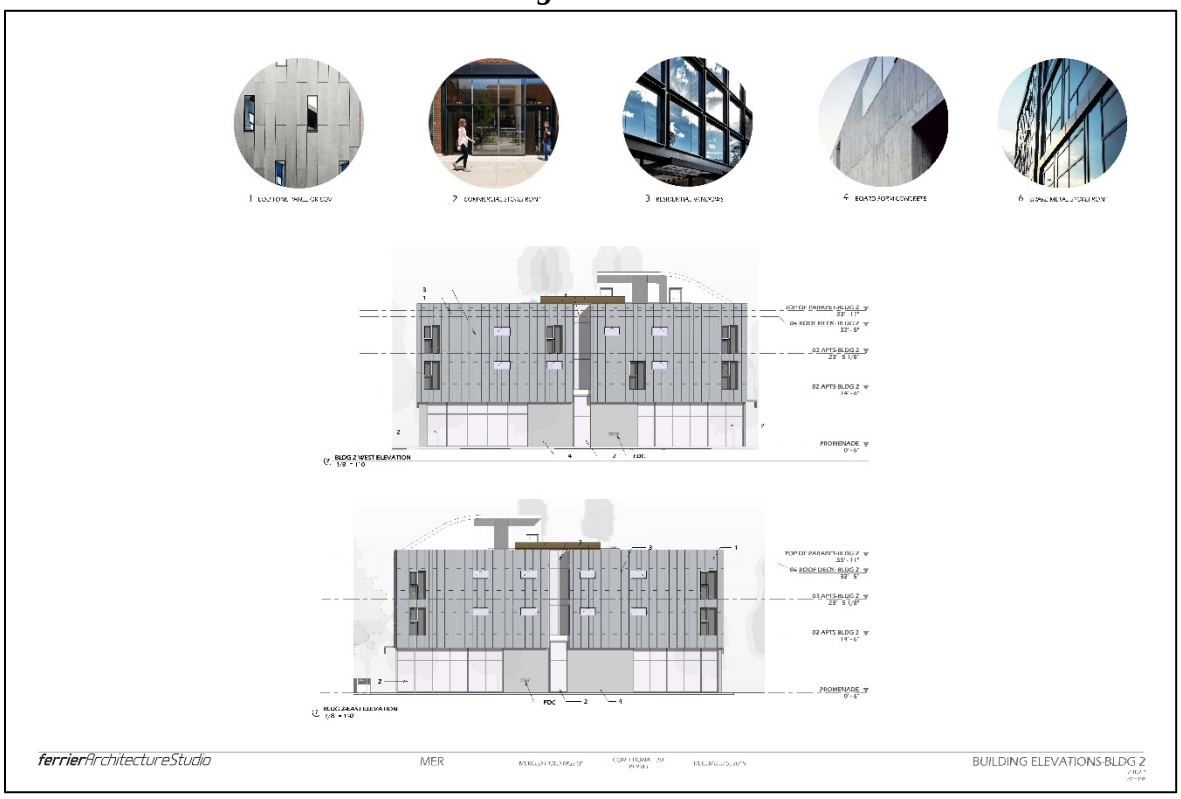
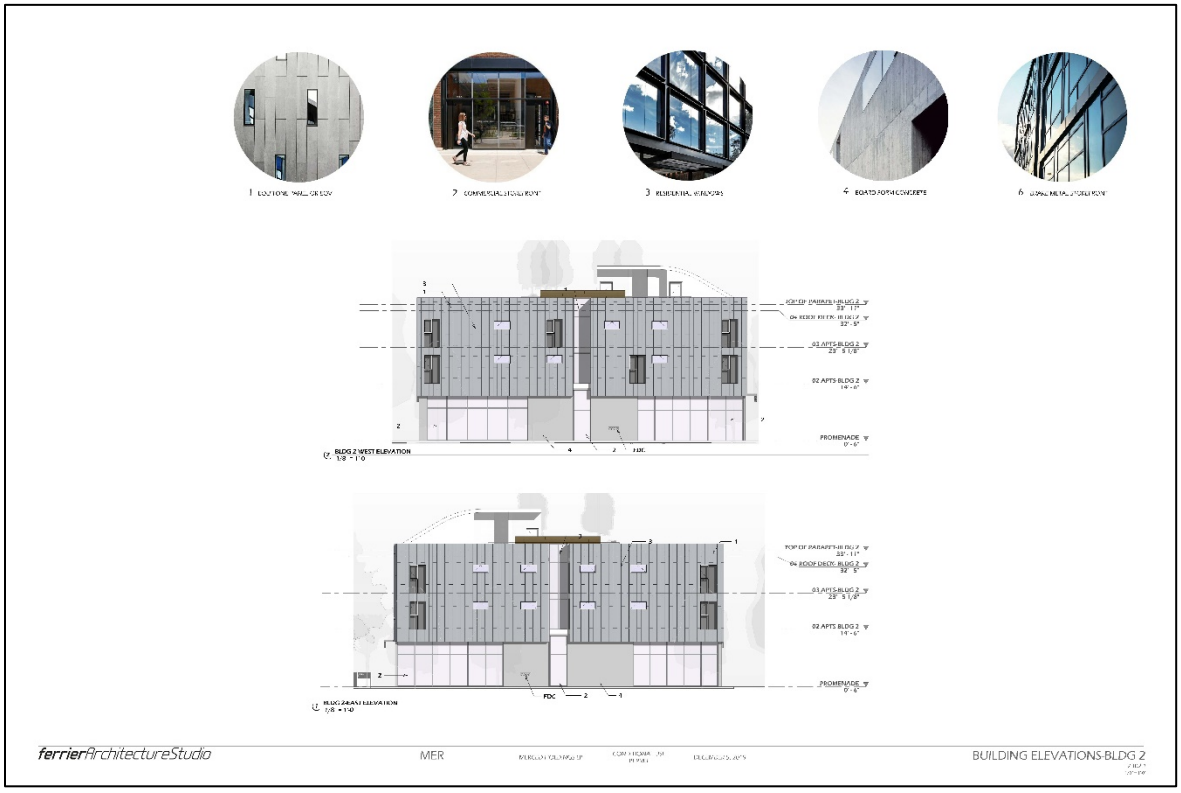


***Figure 5-C – Elevations***
***Building 3 – East/West***




***Building 3 – North/South***

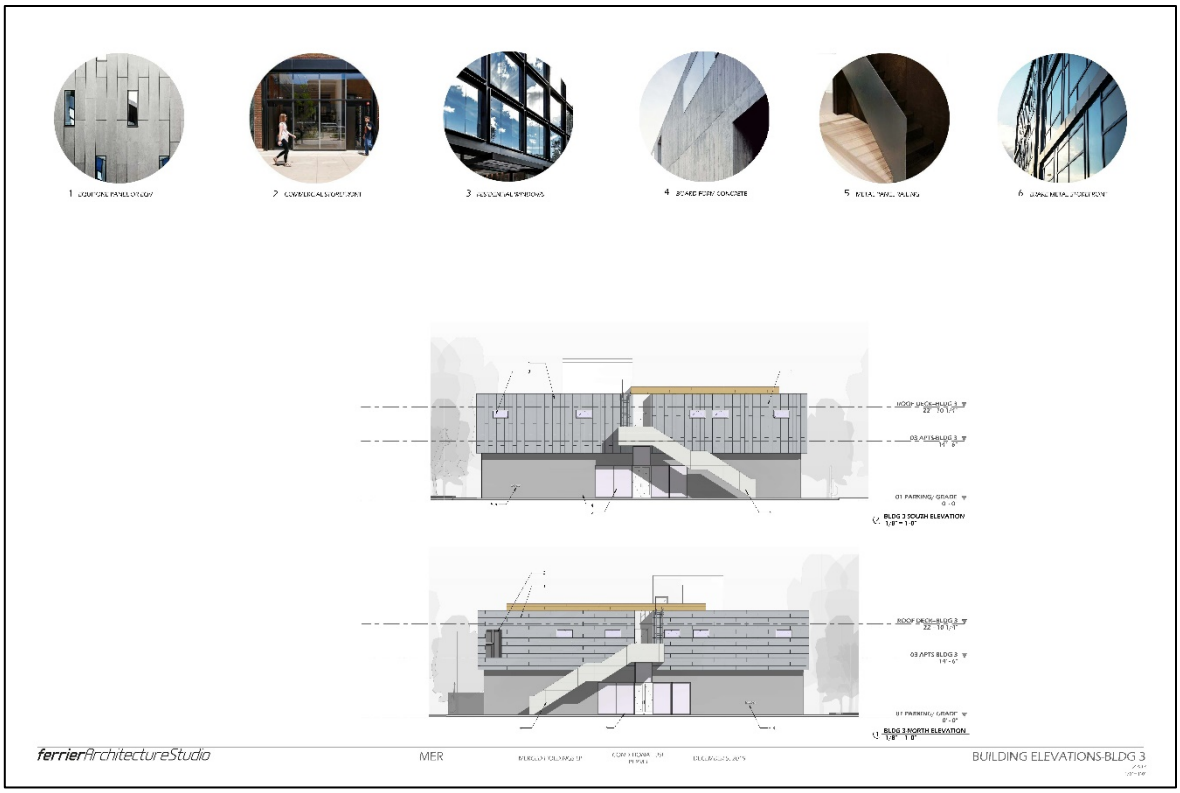


***Figure 5-D – Elevations***
***Building 4 – North/South***


***Building 4 – East/West***

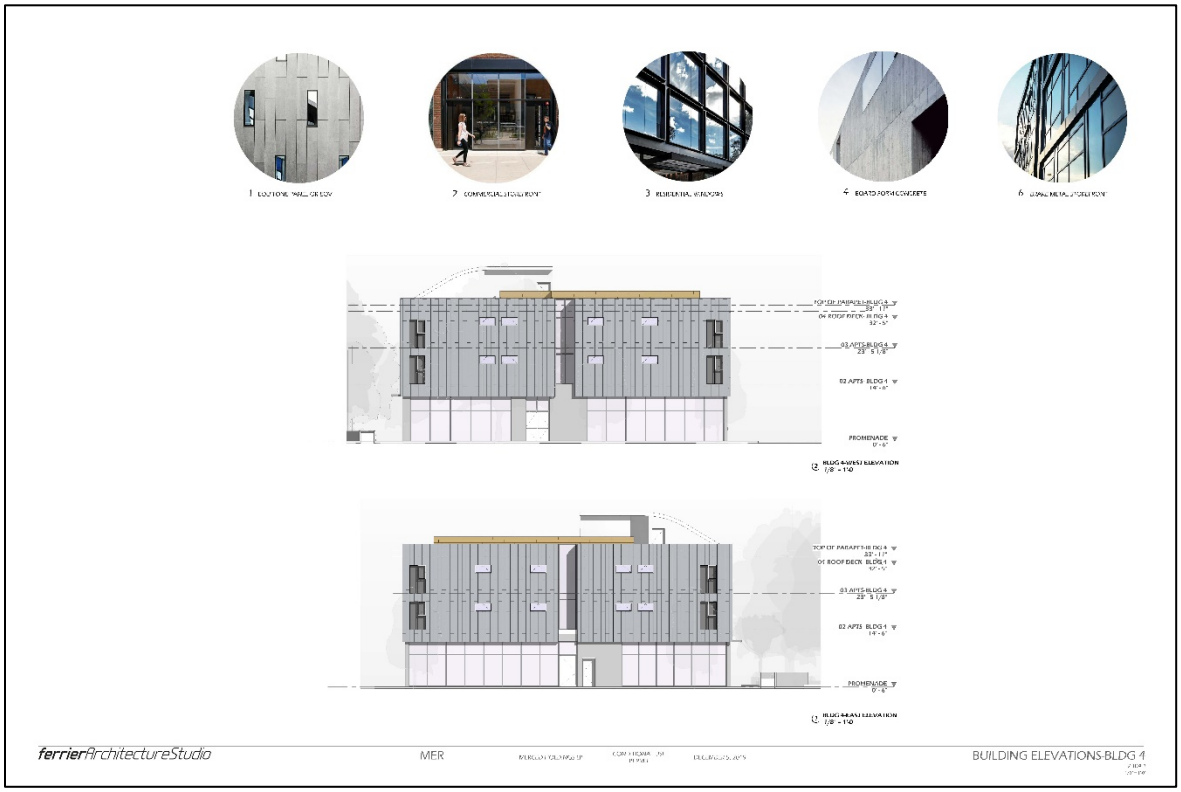
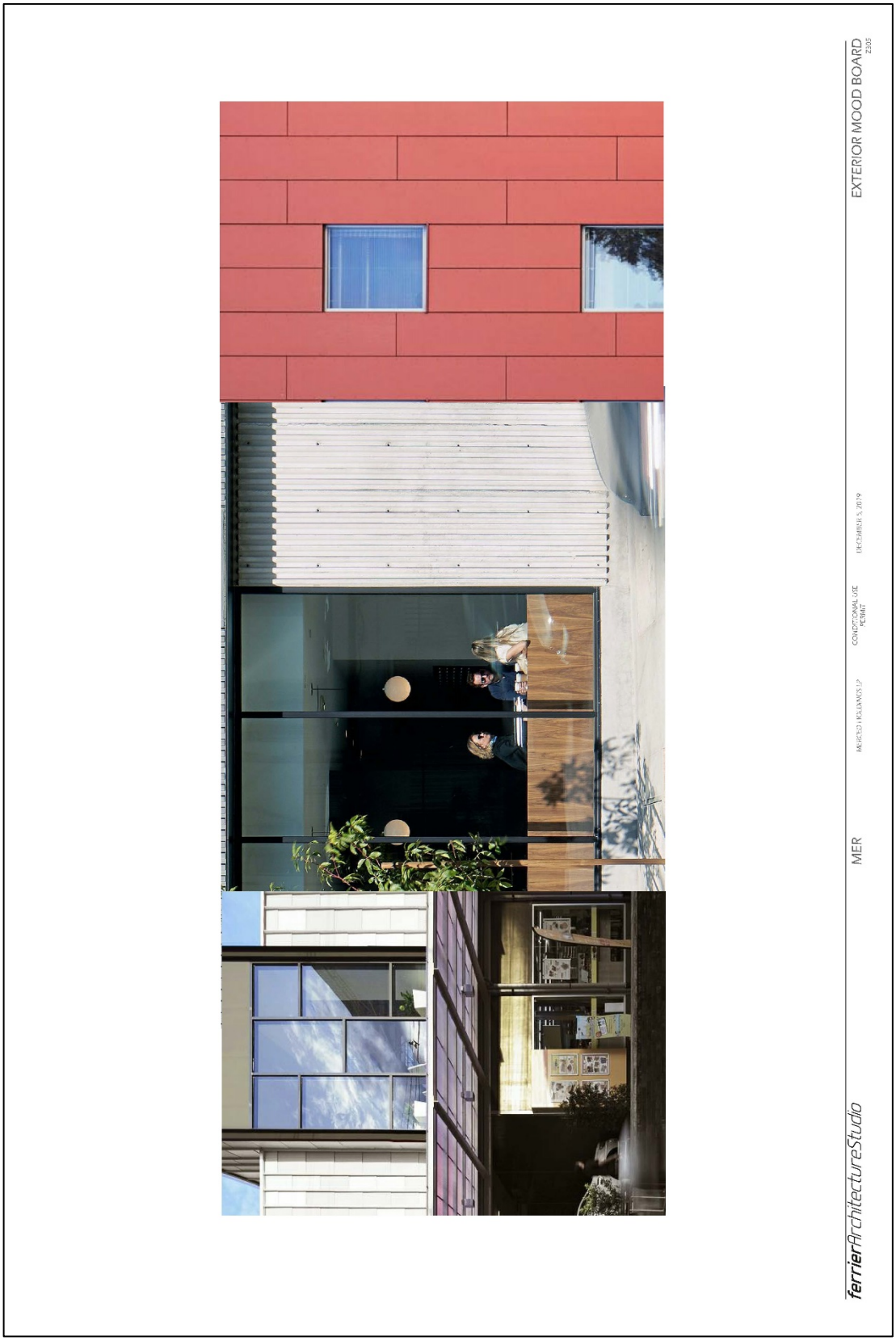


***Figure 5-E – Colored Rendering***



## 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.

Environmental Review #19-18 was approved with General Plan Amendment #19-02 and Zone Change #426 on October 6, 2019, that changed the General Plan and Zoning designations for 0.52 acres to Neighborhood Commercial. The Mitigation Measures for Environmental Review #19-18 have been included in the Mitigation Monitoring Program for this environmental review (#19-37). 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. The proposed commercial uses (both retail and office uses) are allowed within a C-N zone, but would be subject to interface regulations as required by Section 20.32.

## 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 November 25, 2019.

B. The checklist was prepared on December 30, 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 — Date
Environmental Coordinator, City of Merced

Distributed for Public Review: January 2, 2020

# 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 buildings ranging in height from 26' 1-1/8" (2-stories – Buildings 1 and 3) to 33' 11" (3-stories- Buildings 2 and 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 5-A through 5-D on pages 13 through 17).

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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **1. Aesthetics.** 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? | | | ✓ | |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| 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 site is Neighborhood Commercial (C-N). The proposed buildings would not exceed the maximum height allowed in the adjacent 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 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 surrounding 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **2. Agriculture and Forestry Resources.** 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 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**.

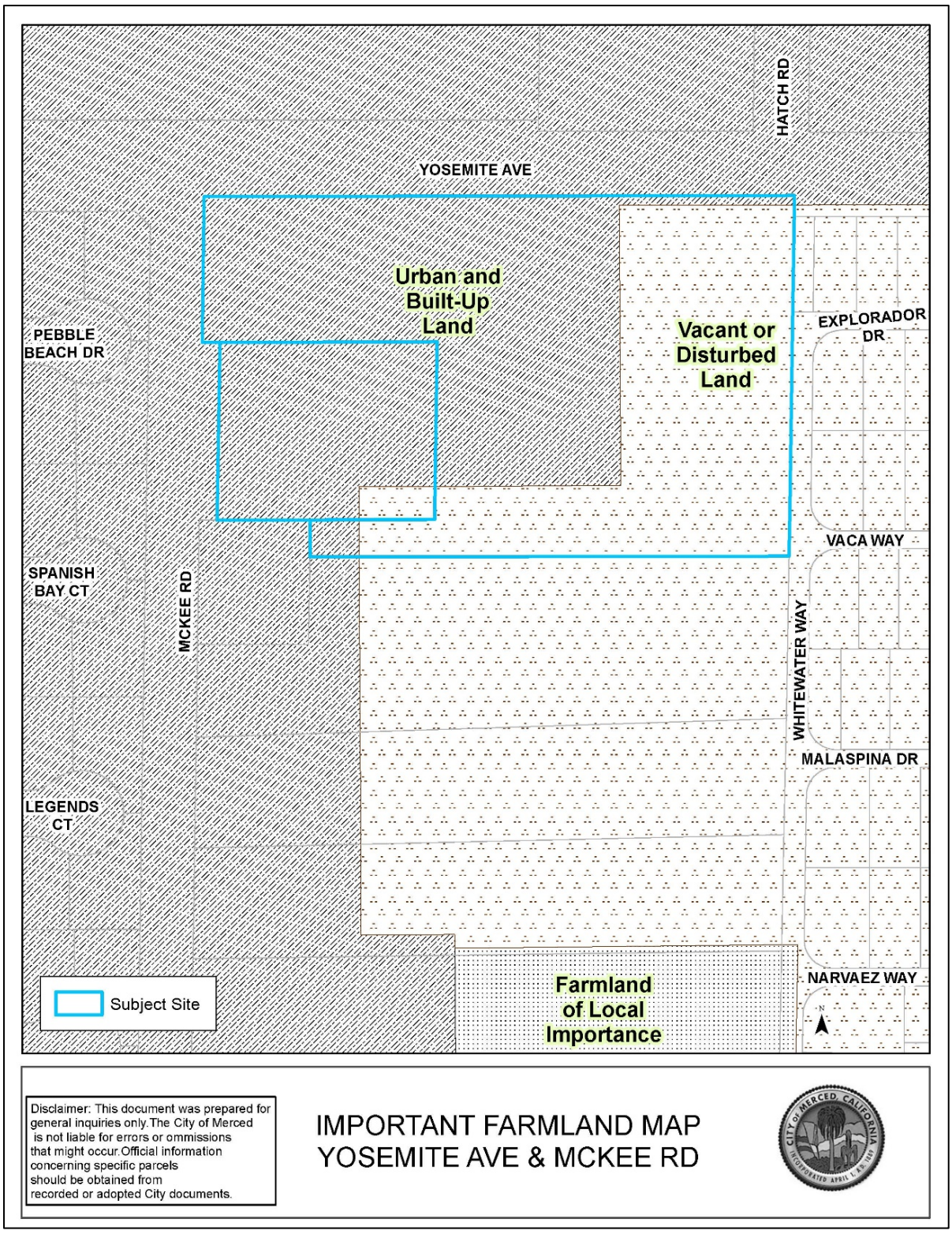
d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

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 6 - 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.

The Air Quality Analysis found at Appendix B was originally prepared for the original project that included 428 apartment units and approximately 18,000 square feet of commercial space. The current project has been revised and the number of units reduced to 214 units. This analysis is based, in part, on the projected average daily trips for the project determined by the traffic analysis. The revised traffic analysis determined the current plan of 214 apartments and approximately 37,000 square feet of commercial space (retail and office) would result in fewer average daily trips (ADT's) (1,184 ADT's v. 1,322 ADT's for the original project). Although the commercial space is larger, these uses typically generate fewer air quality impacts than a typical residential use would. Additionally, the buildings are reduced in size, therefore the construction impacts would be less. Therefore, the original Air Quality Analysis remains sufficient for this project. For additional information, please refer to the Air Quality Analysis prepared by Rincon Consultants found at Appendix B.

The revised project would also be LEED certified (Silver or higher) which would help mitigate any potential impacts.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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? | | | ✓ | |
| 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?*

As described above, the Air Quality Analysis found at Appendix B was prepared for the original project which included 428 units and approximately 18,000 square feet of commercial space. However, because the number of units was reduced and the Average Daily Trips (ADT's) for the project were reduced, the original Air Quality Analysis remains sufficient for the revised project. There would be no commercial uses that would create a significant impact on air quality. As such, based on the Air Quality Analysis, 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). Because the project has been reduced in size, the construction impacts would be less than or equal to the impacts analyzed in the original Air Quality Analysis. Therefore, 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.

Due to constraints in the City's sewer system, the project would be required to install an underground wastewater storage tank. The project would be able to discharge a maximum of 8,000 gallons per day during peak hours. The remainder of the wastewater would be stored in the underground tank. Although the tank would be underground, it is possible that at certain times during maintenance or if there were a problem with the sewer system that objectionable odors could be emitted from the tank. In order to reduce any impacts associated with the storage tank, the following mitigation measure is recommended to reduce this impact to **less than significant with mitigation.**

***Mitigation Measures:***

AQ-1 - The developer shall provide an operations and maintenance plan for the on-site wastewater storage tank to address the timing of the off-peak discharge, emergency procedures for breakdowns and repairs, and odor control. The plan shall include steps to ensure ongoing objectionable odors do not affect the site or surrounding area. The operations and maintenance plan shall be approved by the City Public Works Director and/or City Engineer.

## 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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) *Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?* | | | | ✓ |

***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.**

| ***Goal Area OS-1: Open Space for the Preservation of Natural Resources*** | |
|---|---|
| **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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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.**

***<u>Mitigation Measures:</u>***

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. **Energy.** 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 persent 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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.

| *Goal Area S-2: Seismic Safety:* | |
|---|---|
| **Goal**<br><br>**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 hazaRoad 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. Additionally, the project is now slated to be constructed to meet LEED Silver requirements which would reduce any impacts even further than estimated with the analysis. 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).

The current project has been modified since the Greenhouse Gas Analysis was completed. The project has reduced the number of apartments from 428 to 214, increased the commercial space from 18,000 to 22,672 square feet and added 14,455 square feet of office

space. The project will not be developed to meet LEED certification requirements for LEED Silver or higher. Based on these factors it was determined the previous Greenhouse Gas analysis remained sufficient.

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 $CO_2E$ total or 11 MT $CO_2E$ 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 $CO_2E$ per year under the BAU Scenario and 2,103 MT $CO_2E$ 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 StandaRoad

As shown in Table 1, under the BAU Scenario, the proposed project would generate approximately 3,398 MT $CO_2E$ per year from both construction and operation, while the proposed project under the Project Scenario would generate approximately 2,114 MT $CO_2E$ per year from both construction and operation.

**Table 1: Project-related GHG Emissions for BAU Scenario and Project Scenario**

| | **GHG Emissions (MT $CO_2E$ per Year)** | |
|---|---|---|
| **Source** | **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 $CO_2E$ 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 $CO_2E$ 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **9. <u>Hazards and Hazardous Materials.</u>**<br>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? | | | | ✓ |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | 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? | | | | ✓ |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | ✓ |
| 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.

| *Goal Area S-7: Hazardous Materials* | |
|---|---|
| **Goal**<br><br>**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.

| *Goal Area S-1: Disaster Preparedness* | |
|---|---|
| **Goal**<br><br>**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.

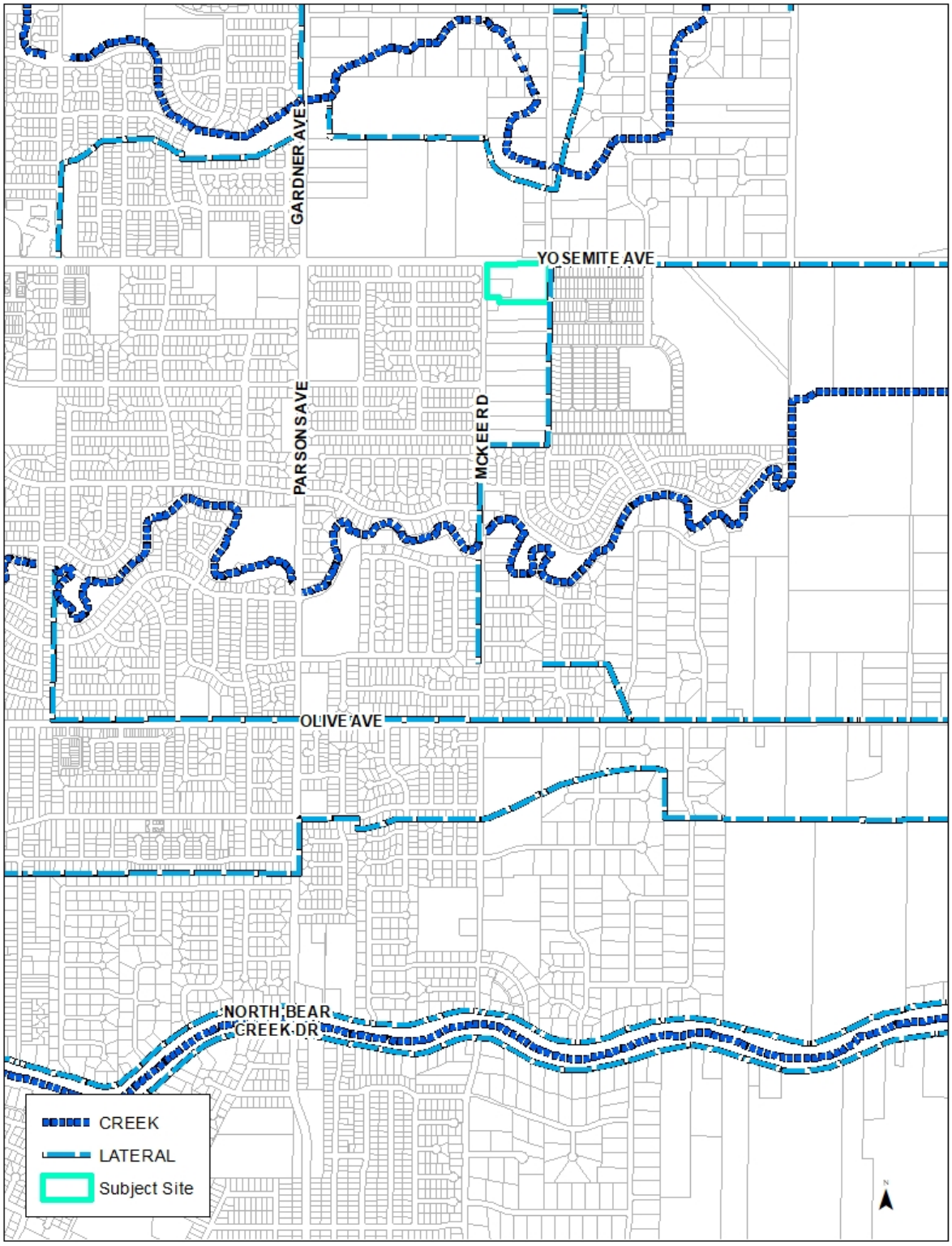
**Storm Drainage/Flooding**

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 7 on Page 50.

***Figure 7 - Waterways***



| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **10. <u>Hydrology and Water Quality.</u>**<br>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 hazaRoad Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

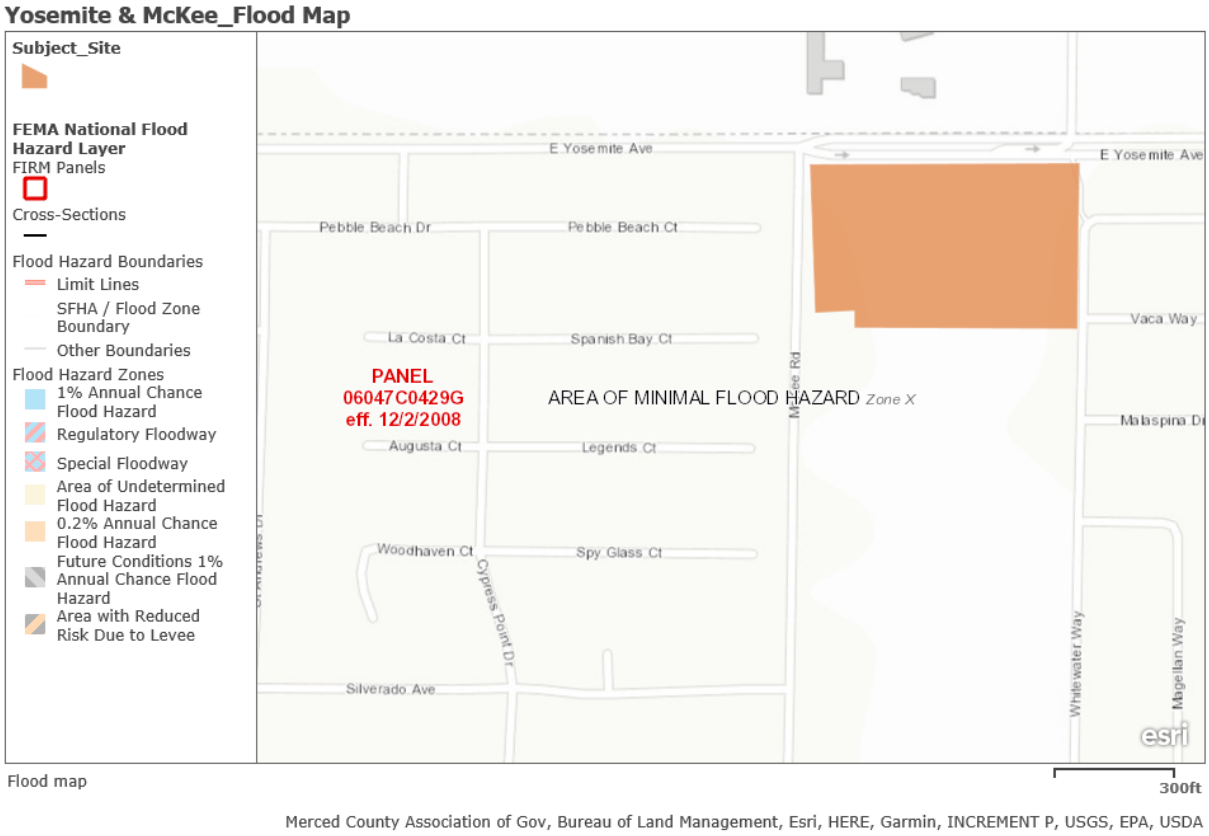
The site is not in a tsunami or seiche zone and would not present a risk for release of pollutants due to inundation. This impact is **less than significant.**

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 8 - FEMA Flood Map***




## 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 site has a General Plan designation of Neighborhood Commercial (CN) and is zoned Neighborhood Commercial(C-N). The proposed residential portion of the mixed-use project would require Conditional Use Permit approval. Because the project site is adjacent to residential uses (refer to the Surrounding Uses table below), inter-face regulations as required by Section 20.32 of the Zoning Ordinance apply. As such, Site Plan Review would be required for the project. However, because the project also requires Conditional Use Permit approval, the inter-face regulations would be reviewed with the CUP.

**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). The General Plan designation for this area was recently changed from Low Density (LD) to Neighborhood Commercial (CN) and the zoning designation was changed from R-1-6 to Neighborhood Commercial (C-N).

In 2014, the owner applied for a General Plan Amendment and Zone Change to change the original parcels (not including the 22,670 square feet recently added) 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.

In 2019, the applicant applied for a General Plan Amendment, Zone Change, and Conditional Use Permit to allow the construction of a mixed-use project that consisted of 428 units and approximately 18,000 square feet of retail. The General Plan Amendment and Zone Change only applied to a small strip of land (0.52 acres) recently acquired from the property owner to the south. The General Plan Amendment and Zone Change were approved making the General Plan and Zoning designations consistent for the entire site. However the Conditional Use Permit (CUP) was not approved. Therefore the applicant has revised the project reducing the number of units, increasing the retail area, and adding office space.

**Project Characteristics**

The current project consists of a Conditional Use Permit for the entire 5.94 acres to allow the construction of a mixed-use project consisting of 214 apartments consisting of 1, 2, and 3 bedroom units and approximately 37,117 square feet of commercial space for retail and office uses along

with associated parking for the proposed uses. The development would consist of two 2-story buildings and two 3-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 DETAILS***

| Building No. | Stories | 1st Floor | 2nd Floor | 3rd Floor | Total Square Feet | Height (to top of parapet) |
|---|---|---|---|---|---|---|
| 1 | 2 | 22 units | 27 units | n/a | 30,456 | 26' 1 1/8" |
| 2 | 3 | Retail/Resident Space | 34 units | 33 units | 57,622 | 33' 11" |
| 3 | 2 | Office | 29 units | n/a | 30,533 | 26' 1 1/8" |
| 4 | 3 | Retail/Resident Space | 34 units | 35 units | 58,262 | 33' 11" |
| TOTAL UNITS | | 214 | | | 176,873 | |

Building 2 would include 8,615 square feet of retail/commercial and 8,363 square feet of community/common space for the residents on the first floor. Building 4 would have 14,057 square feet retail space and 4,181 square feet of community/common area for the tenants to use on the first floor. Additionally, a roof-top deck is proposed on top of Building 2 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 approximately 37,117 square feet of commercial space (retail and office uses) in addition to the 214 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 developer is working with UC Merced to occupy the office space and a number of the apartments. Although a final agreement has not been reach, the developer is in receipt of a Letter of Intent (LOI) from UC Merced indicating their interest.

The General Plan encourages mixed-use developments, it does not specifically address the density allowed within a commercial zone for a mixed-use project. The *Merced Vision 2030 General Plan* includes two classifications for higher density residential uses – High-Medium Density (HMD) and High Density (HD). The High-Medium designation allows 12 to 24 units per acre, while the High Density designation allows 24 to 36 units per acre. The proposed project has a density of 36 units per acre, which is consistent with the High Density (HD) designations. Therefore, because there is no definitive designation for a mixed use project and there are General Plan policies that encourage higher density and alternate housing types (see below), the City has relied upon the High Density designation to determine compliance with the General Plan. Based on this designation, the proposed multi-family portion of the project would comply with the General Plan.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **11. Land Use and Planning.** 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.**

c) *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?*

As described above, the project complies with the General Plan Designation of High Density Residential with an average density of 36 units per acre. The following General Plan policies support mixed-use developments and higher density residential developments. The project would have a **less than significant impact.**

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.

## 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 BoaRoad 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **12. Mineral Resources.** 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 of 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **13. Noise.** 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.

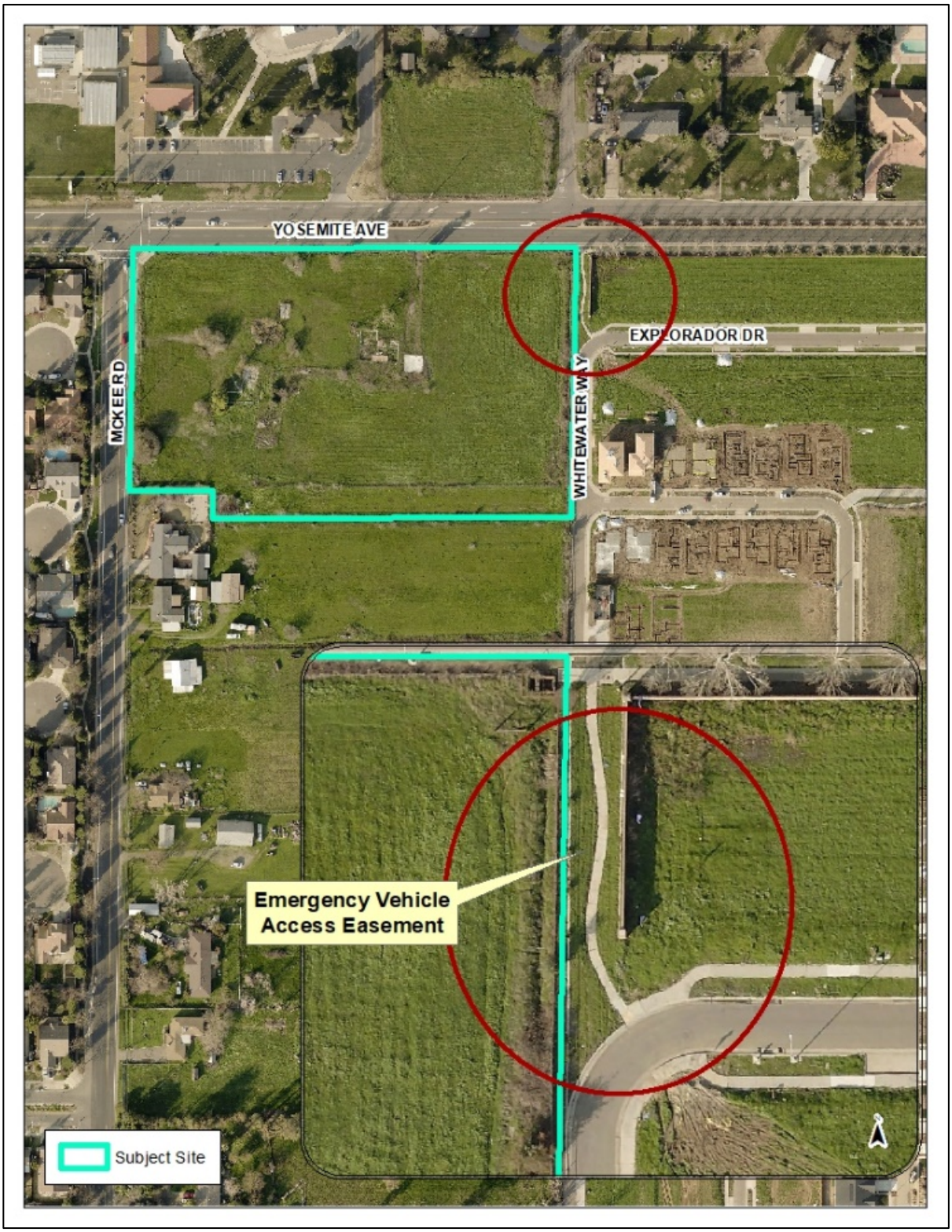
b) *Generation of excessive groundborne vibration or groundborne noise levels?*

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 9 - 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 214 apartments and approximately 37,117 square feet of 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **14. Population and Housing.** 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 214 dwelling units, with a mixture of one, two, and three-bedroom units. As previously explained, the unit density is slightly 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 falls within the General Plan estimate of 72.8 persons per acre for a site with a High Density General Plan designation. 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 158 total new students [132 Elementary School (K-8) students, and 26 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.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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 132 Elementary School (K-8) students and 26 High School students. This project is intended primarily for college students and faculty, however, it is not exclusively limited to this. Therefore, there could be some impact on schools. Therefore, as with all development, 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 ½ mile south of the site.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **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 214 units which, in turn, would introduce new 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 ½ mile to the east of the site. The project would provide an approximately 29,500-square-foot outdoor greenspace and promenade area for the tenants. 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 Avenue 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 Road and Yosemite Avenue 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 214 Dwelling Units and approximately 37,117 square feet of commercial space (retail and office). 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.

The developer originally prepared a traffic analysis for this project site in 2014. The traffic generation from the previously proposed mixed-use project consisting of 428 units and 18,000 square feet of commercial to the traffic generation for the project in 2014. Therefore, no additional analysis was required. However, with the currently revised project consisting of 214 units and approximately 37,000 square feet of commercial (retail and off), an updated traffic analysis was provided. This analysis determined the impacts of the currently proposed project to be less than both previous projects.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **17. Transportation/Traffic.** 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)? | | ✓ | | |
| 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?*

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.

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 B). 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 #22 of the Conditional Use Permit Conditions.

Traffic Impact Analysis

A traffic analysis was prepared for the proposed project by K2 Traffic Engineering, Inc. This analysis studied the following roadway segments:

1. Yosemite Avenue between Parsons Avenue and McKee Road.
2. McKee Road between Yosemite Avenue and Silverado Road.

The following intersections were also studied:

1. Yosemite Avenue at Parsons Avenue/Gardner Avenue
2. Yosemite Avenue at McKee Road
3. Yosemite Avenue at Hatch Road
4. McKee Road at Olive Avenue

The analysis looked at six different scenarios to determine the impact of the project. The scenarios included:

1. Existing Conditions
2. Existing Conditions plus Project
3. Existing plus Approved Conditions
4. Existing plus Approved Conditions, plus Project
5. Cumulative Year (2035) without Project Conditions
6. Cumulative Year (2035) with Project Conditions

The traffic analysis determined that the proposed project would generate a total of 1,876. After standard reductions are given for transit and bicycle use, pass-by traffic, and internal capture, the total net ADT's are 1,184. The trip generation numbers are provided on page 13 of the traffic analysis.

The *Merced Vision 2030 General Plan* establishes an acceptable Level of Service (LOS) as LOS D for intersection and roadway operations. The traffic study found that, under existing conditions, the LOS for the intersection at Yosemite Avenue and Parsons/Gardner Avenue currently operates at an LOS F for AM Peak Hour traffic and an LOS E for PM Peak Hour traffic. Additionally, the intersection of McKee Road and Olive Avenue operates at an LOS E and LOS D, respectively. The other two intersections studied (Yosemite Avenue at McKee Road and Yosemite Avenue at Hatch Road) operate at acceptable levels of service (LOS B or better).

With the addition of the proposed project, the intersection at Yosemite Avenue and Parsons/Gardner Avenue, the level of service would be reduced to LOS F and LOS E for the AM and PM peak hours, respectively. The level of service for McKee Road and Olive Avenue would remain an LOS E for the AM peak hour traffic. All other intersections would retain an LOS D or better rating. Under the Cumulative 2035 with project scenario, these same intersections are reduced to an LOS F for both AM and PM peak hours.

The traffic study also conducted a Peak Hour Signal Warrant Analysis and found that signal warrants are satisfied for signals at the intersections of Yosemite Avenue and Parsons/Gardner Avenue and McKee Road and Olive Avenue.

The traffic study recommended the following mitigation measures:

Install traffic signals at the intersection of Yosemite Avenue and Parsons/Gardener Avenue and at the intersection of McKee Road and Olive Avenue.

Because these intersections are currently operating at a level of service below LOS D (the standard established by the General Plan), and the project impacts are not the cause of the existing problems with these intersections, the project would only be required to contribute a fair share to the cost of the traffic signals. The fair share contribution is based on the projects impacts, which in this case would be 2.4% of the cost of the traffic signal at Yosemite Avenue and Parsons/Gardner Avenue and 1.4% of the cost of the signal at McKee Road and Olive Avenue.

In addition to contributing to the cost of the traffic signals, the project would be providing access to alternate forms of transportation to reduce the impacts from the project. The developer would provide on-site pick-up/drop-off areas for Uber and Lyft, provide bicycles for tenants to use, and possibly provide Zip cars and/or scooters that could be used by the tenants.

In comparison to the previously proposed mixed-use project, the ADT's are reduced from 2,215 ADT's to 1,876 ADT's (gross, with no reductions given) and 1,146 net. It should also be noted that this amount is less than the estimated traffic generation for the proposed shopping center that was approved for this site in 2014.

Additional mitigation measures were adopted with the General Plan Amendment and Zone Change approved in 2019. The development would be required to comply with the applicable mitigation measures as determined by the City Engineer.

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** Pay a proportionate share of the cost of the traffic signal at the intersection of Yosemite Avenue and Parsons/Gardner Avenue.

**The following mitigation measures were adopted with Initial Study #19-18 and would apply, unless deemed unnecessary by the City Engineer.**

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** Pay a proportionate share of the cost of the traffic signal at the intersection of McKee Road and Olive Avenue.

**The following mitigation measures were adopted with Initial Study #19-18 and would apply, unless deemed unnecessary by the City Engineer.**

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

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **18. Tribal Cultural Resources**<br>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 | | | | ✓ |
| 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 (ORoad 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 59 Landfill and the Highway 59 Compost Facility, located at 6040 North Highway 59, 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 59 and the Merced River. This site is restricted to concrete and earth material.

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **19. Utilities and Service Systems.** 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? | | | ✓ | |
| 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. The developer has proposed the use of an on-site storage facility for wastewater to be held and then pumped into the City's wastewater system and on to the treatment plant during off-peak hours. In order to determine the amount of on-site storage needed for the project, the City calculated the gallons per day as follows.

The project includes 214 units and approximately 37,117 square feet of commercial space. The project is expected to generate approximately 43,570 gallons per day (gpd) of wastewater. Under the current Sewer Master Plan, this site was estimated to have single-family dwellings consistent with R-1-6 zoning. Thus, the estimated sewer generation was 8,000 gpd. In order to prevent over-burdening the existing infrastructure, the project would need to retain wastewater in excess of 8,000 gpd on site and discharge it at off-peak hours. In order to ensure there is enough capacity for on-site storage and that the sewer generation is consistent with the General Plan, the developer would need to provide sufficient storage for any wastewater in excess of 8,000 gpd. Based on the estimated generation of 43,570, the on-site storage would need a capacity to hold a minimum of 35, 570 gpd.

With the implementation of on-site storage as described above, no new City Facilities would need to be constructed. 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 [refer to Item (a) above]. 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)** Due to constraints in the existing sewer collection system, the project shall be allowed to release wastewater into the City's system at a rate of 8,000 gallons per day (gpd) during peak hours. All wastewater in excess of this amount shall be stored on-site in an approved wastewater storage tank or other method approved by the Public Works Director and/or City Engineer to be released during off-peak hours. A flow monitor shall be installed with a telemetry or SCADA system approved by the Public Works Director and/or City Engineer to monitor the flow and ensure compliance with this requirement. The City shall periodically monitor the flow.

*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.**

d) *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 |
|---|---|---|---|---|
| **20. Wildfire.** If located in or near stat 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? | | | ✓ | |
| 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? | | | ✓ | |

| | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| 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. Mandatory Findings of Significance.** 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? | | | ✓ | |
| 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.

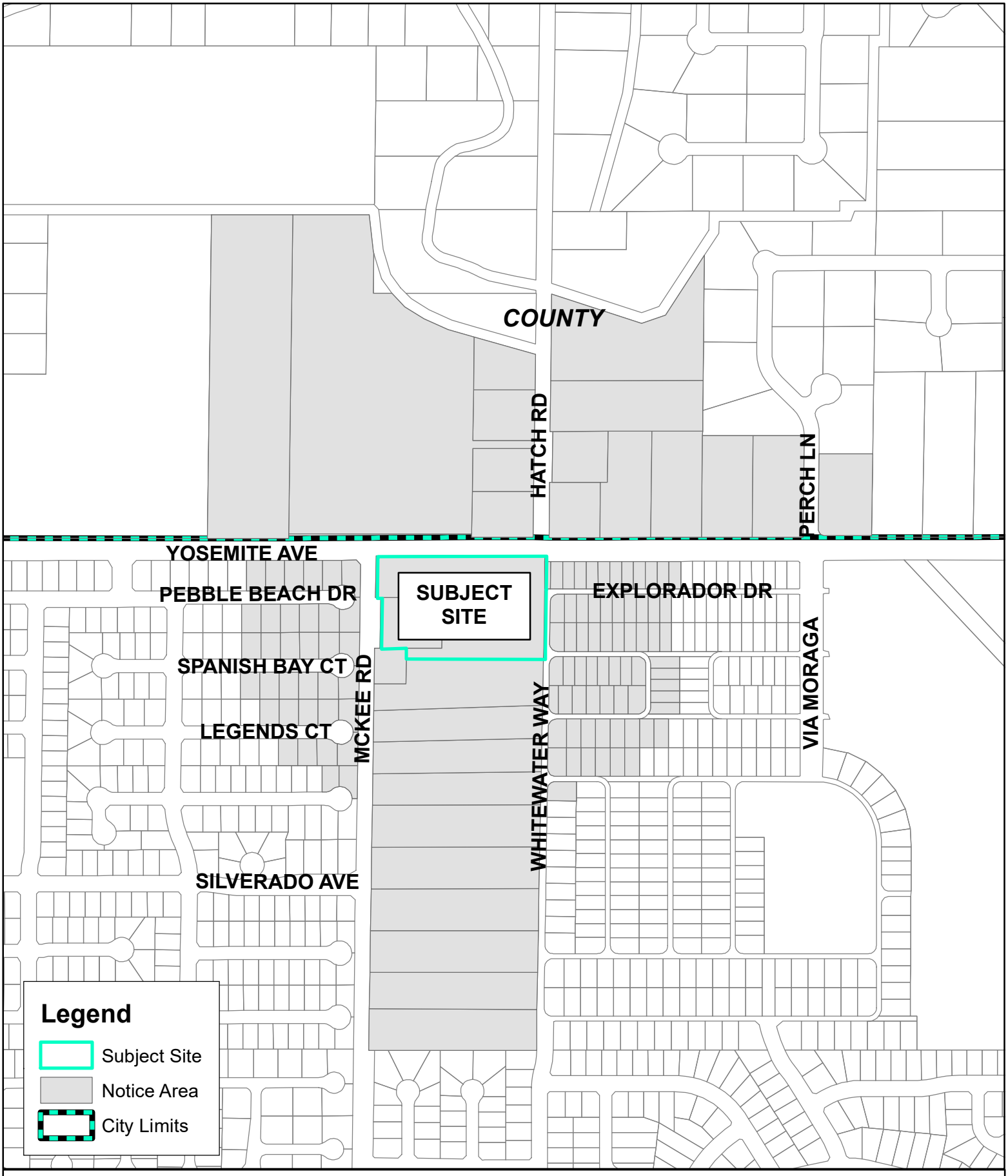
Potential impacts associated with the Project's development have been described in this Initial Study. All impacts were determined to either be **less than significant** or **less than significant with mitigation measures.**

Attachments:

A) Public Hearing Notice and Notice Area Map
B) Mitigation Monitoring Program

Appendices:

A) Mitigation Monitoring Program for Initial Study #19-18
B) Air Quality Analysis
C) Greenhouse Gas Analysis for General Plan Amendment #14-06
D) Traffic Analysis




Disclaimer: This document was prepared for general inquiries only. The City of Merced is not liable for errors or ommissions that might occur. Official information concerning specific parcels should be obtained from recorded or adopted City documents.

CONDITIONAL USE PERMIT #1238
THE HUB - MIXED USE PROJECT

# ENVIRONMENTAL REVIEW #19-37
# 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 Conditional Use Permit #1238 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 Conditional Use Permit #1238. 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. |

# Conditional Use Permit #1238
# 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** | | | | |
|---|---|---|---|---|
| ***Impact*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| *d* | AQ-1 The developer shall provide an operations and maintenance plan for the on-site wastewater storage tank to address the timing of the off-peak discharge, emergency procedures for breakdowns and repairs, and odor control. The plan shall include steps to ensure ongoing objectionable odors do not affect the site or surrounding area. The operations and maintenance plan shall be approved by the City Public Works Director and/or City Engineer. | Building Permit | Engineering/ Public Works | |
| **5) Cultural Resources** | | | | |
| *a* | 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.<br><br>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 the project implementation.<br><br>*(continued on next page)* | Building Permits | Planning Department | |

| | | | | | |
|---|---|---|---|---|---|
| ***a*** | | These additional studies may include, but are not limited to, recordation, archaeological excavation, or other forms of significance evaluations.<br><br>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:<br><br>"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."<br><br>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. | | | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| ***b*** | CUL-2) Implementation of Mitigation Measure CUL-1. | Building Permits | Planning Department | |
| ***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) Engergy*** | | | | |
| ***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 | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| ***7) Geology and Soils*** | | | | |
| ***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) To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the project:<br>• 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.<br>• 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.<br>*(continued on next page)* | | | |

| **13) Noise** | | | | |
|---|---|---|---|---|
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| ***a*** | • The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes is prohibited).<br>• 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.<br>• 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 | Building Department | |

| ***17) Transportation and Traffic*** | | | | |
|---|---|---|---|---|
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| ***a*** | **TRA-01** Pay a proportionate share of the cost of the traffic signal at the intersection of Yosemite Avenue and Parsons/Gardner Avenue.<br><br>**The following mitigation measures were adopted with Initial Study #19-18 and would apply, unless deemed unnecessary by the City Engineer.**<br><br>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.)<br><br>-or-<br><br>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer. | Building Permit | Planning/ Engineering Department | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| ***a*** | **TRA-02** Pay a proportionate share of the cost of the traffic signal at the intersection of McKee Road and Olive Avenue.<br><br>**The following mitigation measures were adopted with Initial Study #19-18 and would apply, unless deemed unnecessary by the City Engineer.**<br><br>The following modifications to the intersection of Olive Avenue and McKee Road shall be made:<br><br><u>Southbound Approach:</u><br>• Remove the adjacent on-street parking for 100 feet on the southbound approach.<br>• Re-stripe the approach as shared left/thru lane and share right/thru lane.<br>• Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop.<br><br><u>Northbound Approach</u><br>• Remove the adjacent on-street parking for 100 feet on the north bound approach.<br>• Re-stripe the approach as shared left/thru lane and shared right/thru lane.<br>• 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 | |

| *Impact No.* | *Mitigation Measures* | *Timing* | *Agency or Department* | *City Verification (date and initials)* |
|---|---|---|---|---|
| ***b*** | **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. | 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

# APPENDIX A
# MITIGATION MONITORING PROGRAM
# INITIAL STUDY #14-32

# ENVIRONMENTAL REVIEW #14-32
# 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 #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 meausre. |
| **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**

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| 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 | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| 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** | | | | |
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| 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** | | | | |
|---|---|---|---|---|
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| 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** | | | | |
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| 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 | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| 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** | | | | |
|---|---|---|---|---|
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| 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** | | | | |
| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
| O-1 | 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.)<br>-or-<br>The applicant shall be required to pay for their proportionate share of the above improvement as determined by the City Engineer. | Building Permit | Planning Department / Engineering | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| O-1 | O-2) The following modifications to the intersection of Olive Avenue and McKee Road shall be made:<br><br><u>Southbound Approach:</u><br>• Remove the adjacent on-street parking for 100 feet on the southbound approach.<br>• Re-strip the approach as shared left/thru lane and share right/thru lane.<br>• Remove the adjacent on-street parking for 100 feet on the southbound receiving lane and stripe it as a lane drop.<br><br><u>Northbound Approach</u><br>• Remove the adjacent on-street parking for 100 feet on the north bound approach.<br>• Re-strip the approach as shared left/thru lane and shared right/thru lane.<br>• 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 | |

| ***Impact No.*** | ***Mitigation Measures*** | ***Timing*** | ***Agency or Department*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| 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 *Expanded Initial Study #02-27.* |
| **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)* |
|---|---|---|---|
| ***2. AGRICULTURAL RESOURCES*** | | | |
| 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. | *Building Permits* | ***City Planning & Inspection Services*** | |

**EXHIBIT A**

| *Mitigation Measure* | *Timing* | *Agency or Department Consultation* | *City Verification (date and initials)* |
|---|---|---|---|
| ***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. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 3-3. All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 3-5. Construction site vehicle speeds shall be limited to 15 miles per hour. | *Building Permits* | *City Inspection Services* | |
| 3-6. If used, petroleum-based dust palliatives shall meet the road oil requirements of the District's rule regarding Cutback Asphalt Paving Materials. | *Building Permits* | *SJVUAPCD* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 3-8. All internal combustion engine-driven equipment shall be properly maintained and well tuned according to the manufacturer's specifications. | *Building Permits* | *City Inspection Services* | |

| ***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. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 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 ccnstruction 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). | *Building Permits* | *SJVUAPCD* | |
| 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.) | *Tentative Subdivision Map* | *City Planning and Merced County Transit Service* | |
| 3-13. Provide low nitrogen oxide (NOx) emitting and/or high efficiency water heaters. | *Building Permits* | *City Inspection Services* | |
| 3-14. Planting of deciduous trees on the south and westerly facing sides of buildings. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |

| ***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. | *Tentative Subdivision Map* | *City Planning* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 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.) | *Building Permits* | *City Inspection Services* | |
| 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). | *Building Permits* | *City Inspection Services* | |
| ***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 *Merced Vision 2015 General Plan* policy. | *Tentative Subdivision Map* | *City Planning* | |

| ***Mitigation Measure*** | ***Timing*** | ***Agency or Department Consultation*** | ***City Verification (date and initials)*** |
|---|---|---|---|
| 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. | *Tentative Subdivision Map* | *City Planning* | |
| ***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. | *Building Permits* | *City Planning* | |
| 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. | *Building Permits* | *City Planning* | |
| ***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. | *Building Permits* | *City Inspection Services* | |

| ***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. | *Building Permits* | *City Inspection Services* | |
| 6-3. Projects under review shall be required to submit temporary erosion control plans for construction activities. | *Building Permits* | *City Inspection Services* | |
| 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. | *Building Permits* | *City Inspection Services* | |
| 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.. | *Building Permits* | *City Inspection Services* | |
| ***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. | *Tentative Subdivision Map* | *City Planning* | |
| 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. | *Building Permits* | *City Planning* | |

| ***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:<br>• A maximum of 45 dB for interior noise level for residential projects.<br>• A maximum of 60 dB for exterior noise level, especially when outdoor activities are important components of a project.<br>• 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* | |

| *Mitigation Measure* | *Timing* | *Agency or Department Consultation* | *City Verification (date and initials)* |
|---|---|---|---|
| 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.) | *Tentative Subdivision Map* | *City Planning and County Planning* | |
| ***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. | *Building Permits* | *City Inspection Services* | |
| 15-2 *Traffic Signal at Yosemite and McKee or Hatch:* 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. | *Tentative Subdivision Map* | *City Planning* | |

| | ***Mitigation Measure*** | ***Timing*** | ***Agency or Department Consultation*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| 15-3 | *Yosemite Avenue:* 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. | *Tentative Subdivision Map* | *City Planning* | |
| 15-4 | *McKee Road*: 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. | *Tentative Subdivision Map* | *City Planning* | |
| 15-5 | *Local and Collector Streets*: 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 *Standard Designs for Common Engineering Structures*. No reimbursement is available for these roadways. | *Tentative Subdivision Map* | *City Planning* | |

| | ***Mitigation Measure*** | ***Timing*** | ***Agency or Department Consultation*** | ***City Verification (date and initials)*** |
|---|---|---|---|---|
| 15-6 | *Lake Road:* 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. | *Tentative Subdivision Map* | *City Planning and County Planning* | |
| | ***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. | *Tentative Subdivision Map* | *City Planning* | |

**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

| | *Mitigation Measure* | *Timing* | *Agency or Department Consultation* | *City Verification (date and initials)* |
|---|---|---|---|---|
| | ***Plant/Animal Life*** | | | |
| 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. | *Tentative Subdivision Map* | *City Planning* | Completed 10/2/02 with Biological Resources Inventory by Moore Biological Consultants (Appendix D) |
| | ***Traffic/Circulation*** | | | |
| 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." | *Tentative Subdivision Map* | *City Planning* | |
| 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. | *Certificate of Occupancy* | *City Planning* | |
| | ***Public Facilities/Services*** | | | |
| 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. | *Certificate of Occupancy* | *City Planning* | |

## 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. |

**Merced Vision 2015 General Plan**
**Mitigation Measure Monitoring Checklist--Form B**

**Monitoring Phase:** _____**Pre-Construction** _____**Construction**

**Project File Number:** _____

**Project Name:** _____

**Brief Project Description:** _____

**Project Location:** _____

**Requirement Met:**

| Date | Yes | No | Description of Mitigation Measures |
|---|---|---|---|
| _____ | ____ | ____ | 1._____ |
| _____ | ____ | ____ | 2._____ |
| _____ | ____ | ____ | 3._____ |
| _____ | ____ | ____ | 4._____ |
| _____ | ____ | ____ | 5._____ |

**Requirement On-Going:**

| Date | Yes | No | Description of Mitigation Measures |
|---|---|---|---|
| _____ | ____ | ____ | 1._____ |
| _____ | ____ | ____ | 2._____ |
| _____ | ____ | ____ | 3._____ |
| _____ | ____ | ____ | 4._____ |
| _____ | ____ | ____ | 5._____ |

| Trustee Agency | Date | Yes | No |
|---|---|---|---|
| 1._____ | _____ | ____ | _____ |
| 2._____ | _____ | ____ | _____ |
| 3._____ | _____ | ____ | _____ |
| 4._____ | _____ | ____ | _____ |

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_____ City Council _____ City Manager _____ Dev Serv Dir.. _____ Public Works Dir.
_____ City Engineer _____ Fire Chief _____ Police Chief _____ Leisure Services 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:_____

**EXHIBIT A**

# APPENDIX B
# AIR QUALITY ANALYSIS

Rincon Consultants, Inc.
4825 J Street, Suite 200
Sacramento, California 95819

916 706 1374 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

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 ($PM_{10}$), 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**

| | Maximum Annual Emissions (tons per year) | | | | | |
|---|---|---|---|---|---|---|
| Emission Source | 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, $SO_X$, $PM_{10}$, 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** |
| *SJVAPCD Construction Thresholds* | *10* | *10* | *100* | *27* | *15* | *15* |
| **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** |
| *SJVAPCD Operational Thresholds* | *10* | *10* | *100* | *27* | *15* | *15* |
| **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 Villege 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/MWhr)** | 641.35 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

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 HHD to 5% and added remaining ~10.4% to MHD

Area Mitigation -

Shoppes at University Villege 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 |

# 2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/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

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/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** |

| | 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 | N20 | 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**

| | 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 | | | | | |
| 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** |

## 2.2 Overall Operational

**Mitigated Operational**

| | 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 | | | | | |
| 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 | 162.4925 |
| 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** |

| | 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 | N20 | 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**

| 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**

| 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

### 3.2 Site Preparation - 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 | | | | | |
| 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 | 0.0000 | 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**

| | 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** |

## 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 | 0.0000 | 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** |

### 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** |

### 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 | | | | | | | | | | MT/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 | 0.0000 | 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** |

**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 | 0.0000 | 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** |

### 3.3 Grading - 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 | | | | | 0.0655 | 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 | 0.0000 | 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** |

**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 | 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** |

## 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** |

**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** |

## 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** |

**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** |

### 3.5 Paving - 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 | 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** |

**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 | 0.0000 | 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** |

## 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** |

### 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** |

### 3.5 Paving - 2021

**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 | 0.0113 | 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** |

**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 | 0.0000 | 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** |

## 3.5 Paving - 2021

### 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 | 0.0113 | 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** |

### 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 | 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

| | 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 | | | | | |
| 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** |

### 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 | 0.0000 | 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** |

## 3.6 Architectural Coating - 2021

**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 | | | | | |
| 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** |

**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 | 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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## 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

| | 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 | | | | | |
| Mitigated | 0.7728 | 7.6977 | 7.6656 | 0.0339 | 2.0274 | 0.0341 | 2.0614 | 0.5509 | 0.0322 | 0.5831 | 0.0000 | 3,147.9533 | 3,147.9533 | 0.2333 | 0.0000 | 3,153.7848 |
| Unmitigated | 0.7728 | 7.6977 | 7.6656 | 0.0339 | 2.0274 | 0.0341 | 2.0614 | 0.5509 | 0.0322 | 0.5831 | 0.0000 | 3,147.9533 | 3,147.9533 | 0.2333 | 0.0000 | 3,153.7848 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Apartments 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

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | 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

| | 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 |
| NaturalGas 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 |
| NaturalGas 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 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | 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** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| Land Use | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | 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** |

## 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | 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

| | 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 | | | | | |
| Mitigated | 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 |
| Unmitigated | 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 |

## 6.2 Area by SubCategory

**Unmitigated**

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | 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 | 0.0187 | 0.1601 | 0.0681 | 1.0200e-003 | | 0.0129 | 0.0129 | | 0.0129 | 0.0129 | 0.0000 | 185.4128 | 185.4128 | 3.5500e-003 | 3.4000e-003 | 186.5146 |
| 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** | **2.3669** | **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** |

## 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

| | 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 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | 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** |

## 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | 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** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**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 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | 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** |

## 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | 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** |

## 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**

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| 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:*

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

# Greenhouse Gas Study for The Shoppes at University Village

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**Appendix**

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 ($CO_2$), 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 ($CO_2$)** 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 ($CH_4$)** emissions result from the decomposition of organic waste in landfills and livestock enteric fermentation. $CH_4$ is also emitted during the production and transport of coal, natural gas, and oil.
- **Nitrous oxide ($N_2O$)** 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" ($CO_2E$), which compares the gas in question to that of the same mass of $CO_2$ ($CO_2$ has an intensity factor of one by definition).

State and Local GHG Emissions Levels. In 2012, California produced 459 million metric tons (MMT) $CO_2E$ (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 $CO_2E$ (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) $CO_2E$ 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 $CO_2E$) 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 $CO_2E$), 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 $CO_2E$ in 2020. Considering the updated BAU forecast of 506.8 MMT $CO_2E$, 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 $CO_2E$) 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 $CO_2E$ 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 $CO_2E$ total or 11 MT $CO_2E$ 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 $CO_2E$ per year under the BAU Scenario and approximately 2,103 MT $CO_2E$ 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 $CO_2E$ 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 $CO_2E$ per year from both construction and operation.

**Table 1: Estimate of Project-related GHG Emissions for BAU and Project Scenarios**

| Source | GHG Emissions (MT $CO_2E$ 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 $CO_2E$ 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 $CO_2E$ 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.

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# APPENDIX D
# TRAFFIC IMPACT ANALYSIS

# TRAFFIC IMPACT STUDY

## The Hub at Yosemite

A Mixed-Use Development

at the southeast corner of Yosemite Avenue and McKee Road

Merced, CA

Date: December 2, 2019

*Prepared For:*

**Merced Holding LP**

9701 W. Pico Blvd, #201

Los Angeles, CA 90035

*Prepared By:*

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Technical Appendices available upon request.

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# Traffic Impact Study for The Hub at Yosemite, a Mixed-Use Development at the southeast corner of Yosemite Avenue and McKee Road

Merced, CA


Prepared under the supervision of

Jende Kay Hsu, P.E., T. E.
California License # T2285

## EXECUTIVE SUMMARY

The proposed mixed-use development includes constructing four buildings totaling 176,873 square feet gross floor area, including 97 single-occupancy residential units, 112 two-bedroom and 15 three-bedroom dwelling units, 20,044 square feet of retail use and 12,528 square feet of office use. The project will be constructed in one phase.

With consideration of pass-by, transit, bicycle trips, and internal capture, the project is expected to have a net trip generation of 30 inbound and 34 outbound trips in the AM peak hour, 53 inbound and 54 outbound trips in the PM peak hour, and 1,184 daily trips. The study has analyzed the project's impact at nearby intersections with consideration of other approved projects and for the cumulative year (2035). The proposed development is expected to contribute a fair share of the construction cost for the following mitigation measures:

1. Install traffic signals at the intersection of Yosemite Avenue and Parsons/Gardner Avenue, and
2. Install traffic signals at the intersection of McKee Road and Olive Avenue.

The study determines that the fair share contribution is 2.4% of the signal improvement costs for the intersection of Yosemite Avenue and Parsons/Gardner Avenue, and 1.4% for the signal improvement costs for the intersection of McKee Road and Olive Avenue. With the implementation of the above mitigation measures, the project will not result in any significant impact to study intersections and roadways.

Site access will be provided by a right-in-right out driveway on Yosemite Avenue and a full-access driveway on McKee Road. A "One Way" sign (R6-1R) should be installed on Yosemite Avenue at the raised median facing the proposed driveway to ensure right-turn egress only.

The study conducted a queue analysis and found that all existing turn bays provide sufficient length to accommodate the 95th percentile queue at each study intersection. The parking lot are designed with adequate setbacks from public streets. On-site circulation appears properly functional and efficient without bottleneck.

The project site is on the UC Merced route and the nearest bus stop is located approximately a quarter mile from the project site. A new bus stop is recommended for each direction on Yosemite Avenue near McKee Road to promote ridership of public transit by future residents.

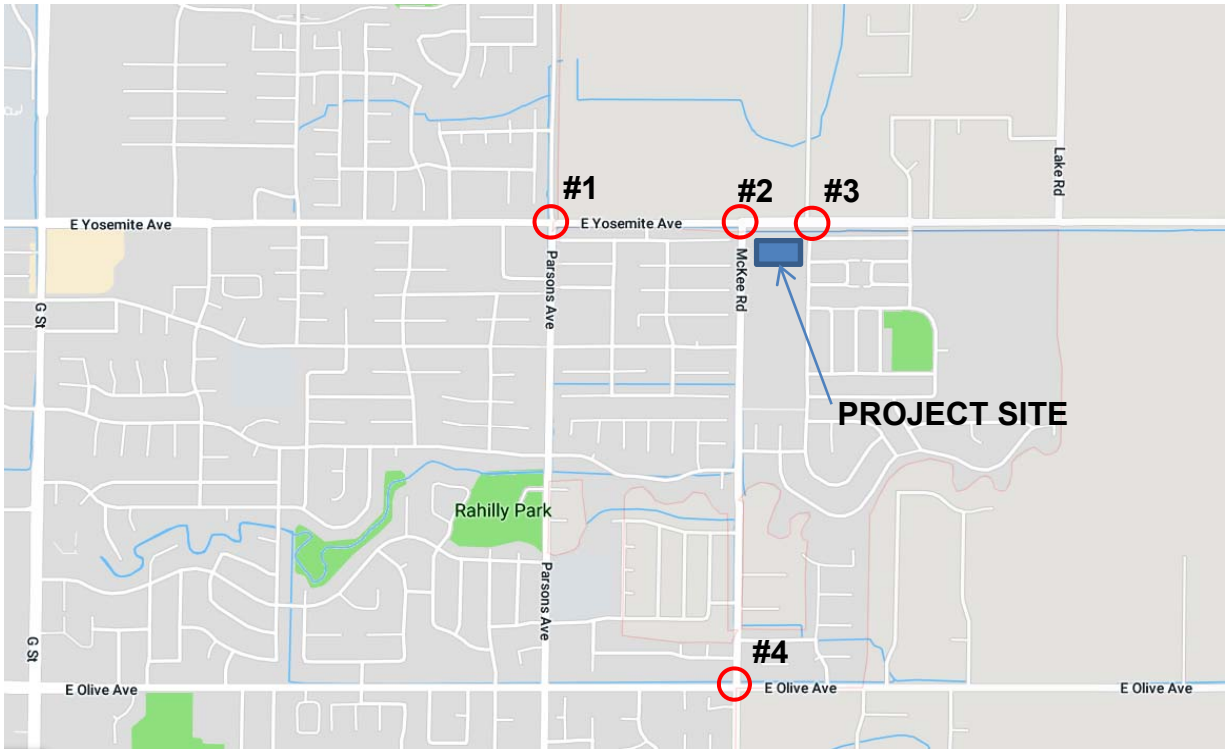
Crosswalks and ADA accessible ramps are currently present at the south and east legs of the intersection of Yosemite Avenue and McKee Road. However, there is no sidewalk along Yosemite Avenue or McKee Road at the project frontage. As part of the proposed development, the study recommends constructing ADA compliant sidewalks along Yosemite Avenue and McKee Road at the project frontage with consideration of the future bus stops.

## INTRODUCTION

The purpose of this study is to evaluate traffic impact of the proposed mixed-use development located at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced, California. This report is an update to the Draft Traffic Impact Analysis prepared by TJKM Transportation Consultants dated January 30, 2015. Vicinity map is shown in **Exhibit 1**.

The site is currently vacant and unimproved. The proposed mixed-use development includes constructing four buildings totaling 176,873 square feet gross floor area, including 97 single-occupancy residential units, 112 two-bedroom and 15 three-bedroom dwelling units, 20,044 square feet of retail use and 12,528 square feet of office use. The project will be constructed in one phase. The proposed site plan is shown in **Exhibit 2**.

The project provides two new driveways: a right-in-right-out driveway on Yosemite Avenue and a full-access driveway on McKee Road.

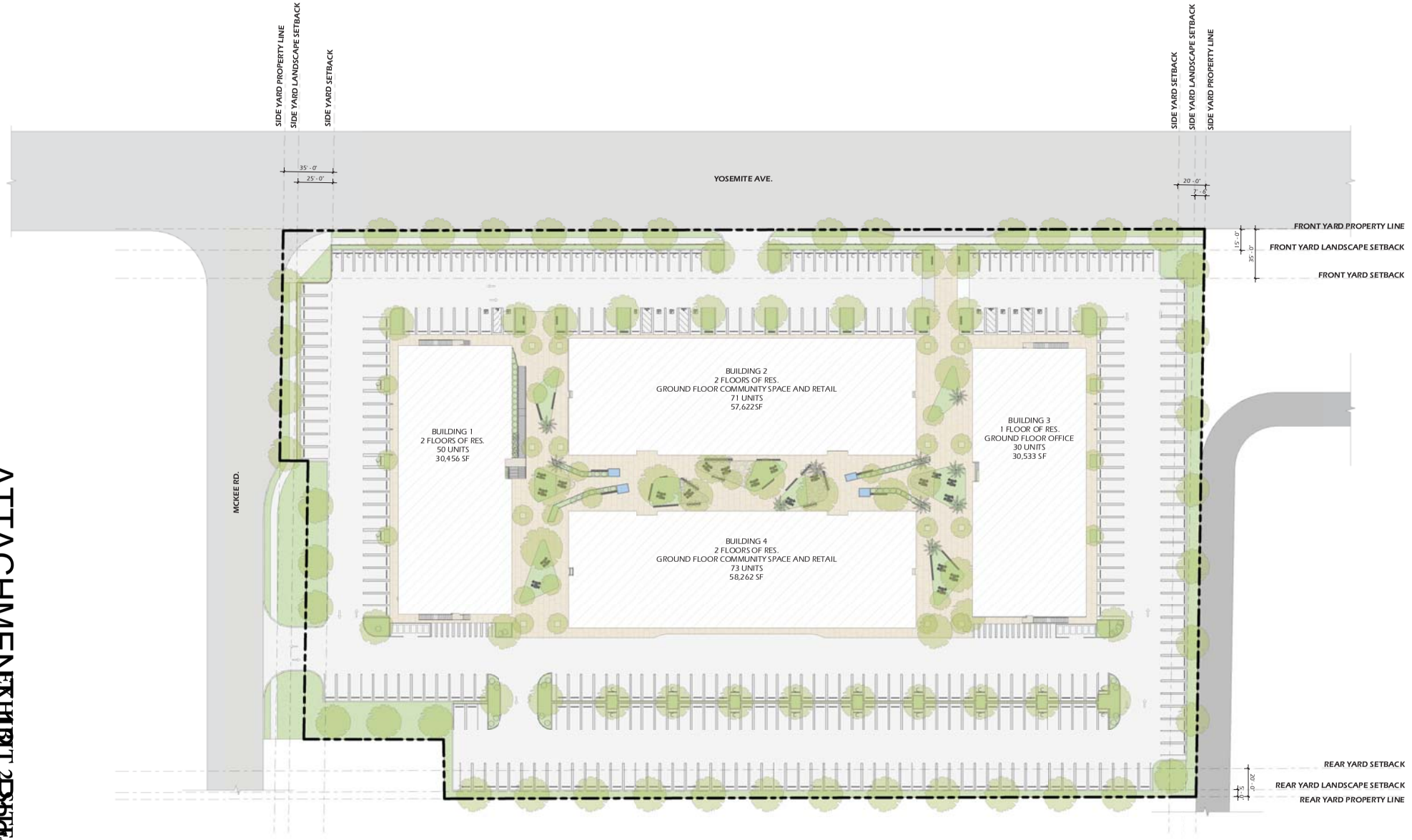



LEGEND

# Intersection #

**EXHIBIT 1. VICINITY MAP**

No Scale




ATTACHMENT 2 EXHIBIT 2 Page 12 of 19

## ANALYSIS METHODOLOGY

The study performed level-of-service analysis using SYNCHRO software and methodologies recommended by *Highway Capacity Manual (HCM 2000)* to evaluate traffic impacts before and after the project's generated traffic.

For signalized intersections, level of services are based on overall intersection delays. For unsignalized intersections, level of services are based on delays of the minor approach. Level of Services (LOS) criteria for signalized and unsignalized intersections are shown in **Tables 1** and **2**, respectively.

**Table 1. LOS Definitions for Signalized Intersections**

| LOS | Average Control Delay (seconds/vehicle) | General Description |
|---|---|---|
| A | 0 - 10 | Free Flow |
| B | >10 - 20 | Stable Flow (slight delays) |
| C | >20 - 35 | Stable Flow (acceptable delays) |
| D | >35 - 55 | Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding |
| E | >55 - 80 | Unstable flow (intolerable delay) |
| F | >80 | Forced flow (congested and queues fail to clear) |

**Table 2. LOS Definitions for Unsignalized Intersections**

| LOS | Average Control Delay of Minor Approach (seconds/vehicle) |
|---|---|
| A | 0 - 10 |
| B | >10 - 15 |
| C | >15 - 25 |
| D | >25 - 35 |
| E | >35 - 50 |
| F | >50 |

According to *Merced Vision 2030 General Plan,* daily roadway segment level of service thresholds by roadway type is shown in **Appendix A**.

## STUDY SCENARIOS

This study includes the following scenarios:

i. Existing Conditions
ii. Existing Conditions plus Project
iii. Existing plus Approved Conditions
iv. Existing plus Approved Conditions plus Project
v. Cumulative Year (2035) without Project Conditions
vi. Cumulative Year (2035) plus Project Conditions

This study includes both project driveways and the following study intersections for evaluation and level of service (LOS) analysis:

1. Yosemite Avenue at Parsons Avenue/Gardner Avenue (All-Way Stop)
2. Yosemite Avenue at McKee Road (Signal)
3. Yosemite Avenue at Hatch Road (Side-Street Stop)
4. McKee Road at Olive Avenue (All-Way Stop)

This study includes the following roadway segments for evaluation and analysis:

1. Yosemite Avenue between Parsons Avenue and McKee Road
2. McKee Road between Yosemite Avenue and Silverado Road

## EXISTING CONDITIONS

The project site is situated at the southeast corner of Yosemite Avenue and McKee Road in the City of Merced, California. Yosemite Avenue is an east-west divided arterial with two lanes in each direction at the project vicinity with raised median and left-turn pockets at major intersections. Bike lane is provided on both sides of the roadway and the posted speed limit is 50 mph at the project vicinity. Parking is prohibited on both sides of Placentia Avenue in the project vicinity.

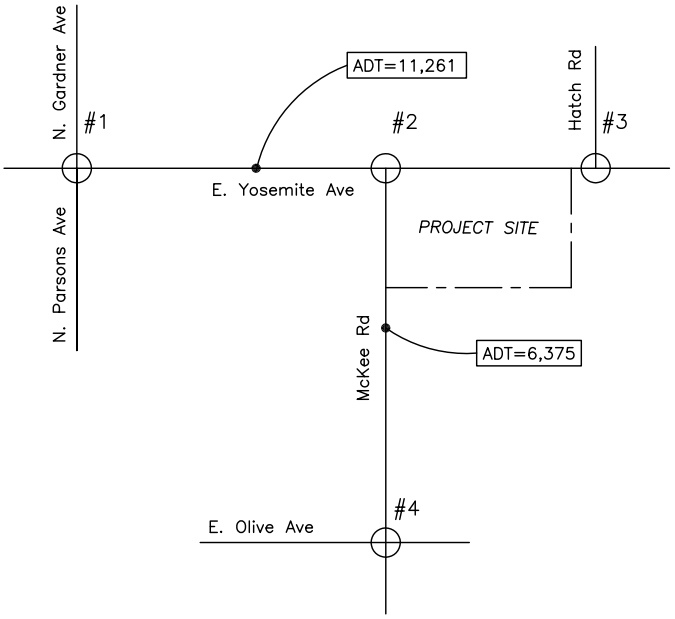
McKee Road is a two-lane, north-south collector that terminates northerly at Yosemite Avenue. The posted speed limit is 45 mph. The intersection of Yosemite Avenue and McKee Road is controlled by traffic signals.

Hatch Road is a two-lane, north-south local roadway that terminates southerly at Yosemite Avenue. Hatch Road allows right turn only at Yosemite Avenue and is controlled by a stop sign for southbound traffic.

Parsons Avenue/ Gardner Avenue is a two-lane, north-south arterial. The posted speed limit is 45 mph. The intersection of Yosemite Avenue and Parsons Avenue/ Gardner Avenue is controlled by stop signs in all approaches.

Olive Avenue is a two-lane, east-west collector. The posted speed limit is 40 mph. The intersection of Olive Avenue and McKee Road is controlled by stop signs in all approaches.

By the request of the City of Merced, all traffic data collection is conducted in September 2019, including intersection turning movement counts for the AM and PM peak hour on a typical weekday and Sunday, and 24-hour traffic volumes of roadway segments for five consecutive days. Existing lane configuration and traffic volumes are illustrated in **Exhibits 3**. Complete traffic data can be found in **Appendix B**.

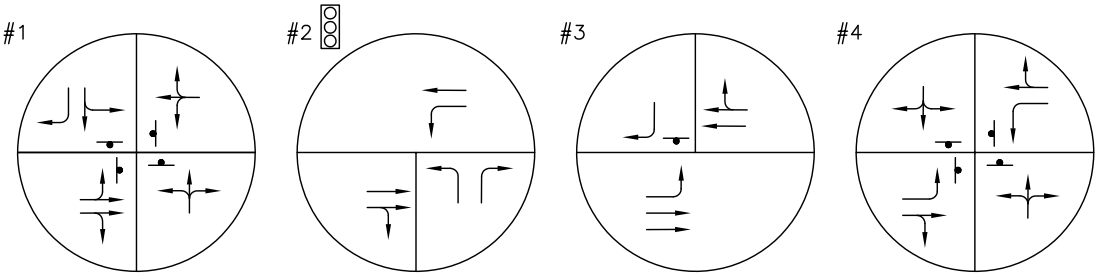



NORTH
NOT TO SCALE

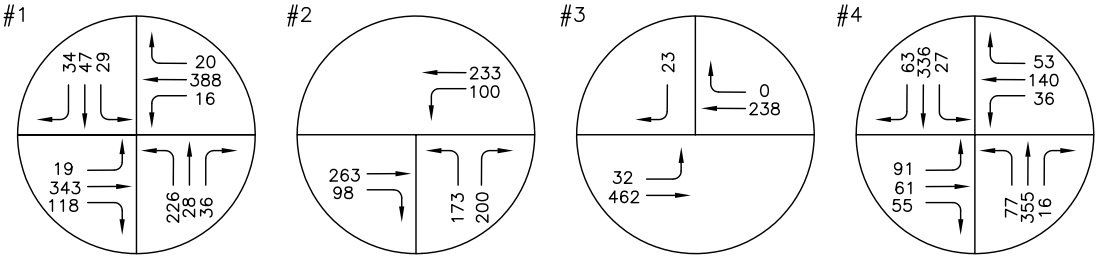
LEGENDS

- INTERSECTION
- TRAFFIC SIGNAL
- STOP SIGN

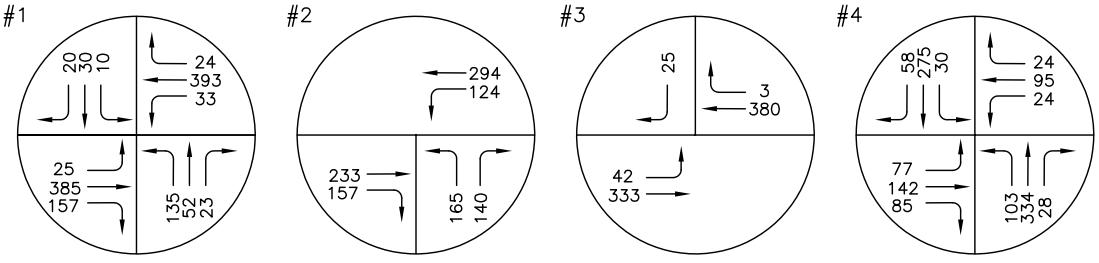
LANE CONFIGURATION




AM PEAK




PM PEAK




EXISTING LANE CONFIGURATION AND TRAFFIC VOLUMES

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

Both roadway segments, Yosemite Avenue and McKee Road, maintain LOS C in this study scenario. Level of services for study intersections in the AM and PM peak hours under existing conditions are shown in **Table 3**. The analysis worksheets can be found in **Appendix C**.

**Table 3. Traffic Analysis- Existing Conditions**

| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | LOS | Delay (s) | LOS | Delay (s) |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 50.3 | **E** | 40.2 |
| 2. Yosemite Ave at McKee Rd | Signal | B | 10.6 | B | 11.0 |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.3 | B | 10.0 |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 39.4 | D | 34.2 |

All studied intersections will maintain level of service "D" or better except the following criteria:

- Location #1, Yosemite Ave at Parsons Ave/Gardner Ave: LOS's F and E for the AM and PM peak hours, respectively.
- Location #4, McKee Road at Oliver Ave: LOS E for the AM peak hour.

The study conducted Peak Hour Signal Warrant Analysis and found that signal warrants are satisfied for both Locations #1 and 4 under existing conditions. The signal warrant analysis worksheets can be found in **Appendix D**.

## TRIP GENERATION

Trip generation represents the amount of traffic attracted and produced by the project development. Based upon the recommendations from *"Trip Generation"* Tenth Edition, published by the Institute of Transportation Engineers (ITE), as shown in **Table 3**.

**Table 3. Trip Generation Rate**

| Land Use | Unit | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|
| | | | Total | In | Out | Total | In | Out |
| Off-Campus Student Apartment (225) | Bedrooms | 3.15 | 0.12 | 0.05 | 0.07 | 0.26 | 0.13 | 0.13 |
| Multi-family Housing (Mid-Rise) (221) | Dwelling Unit | 5.44 | 0.36 | 0.09 | 0.27 | 0.44 | 0.27 | 0.17 |
| Shopping Center (820) | 1,000 SF | 37.75 | 0.94 | 0.58 | 0.36 | 3.81 | 1.83 | 1.98 |
| Office (710) | 1,000 SF | 9.74 | 1.16 | 1.00 | 0.16 | 1.15 | 0.18 | 0.97 |

The project consists of 97 single-occupancy residential units, 112 two-bedroom units, and 15 three-bedroom units. The trip generation rates for single-occupancy residential units are based on off-campus student apartment (Land Use 225). The trip generation rates for two and three-bedroom units are based on multi-family housing (mid-rise) (Land Use 221).

The trip generation estimates 20 percent transit and bicycle trip reduction for residential trips and 35 percent pass-by trip reduction for the retail trips. Internal Capture Reduction is calculated based on ITE's internal capture worksheets (NCHRP 684). The projected trips associated with the project are shown in **Table 4**.

## Table 4. Project Trip Generation

| Land Use | Unit | Quantity | AM Peak Hour | | | PM Peak Hour | | | Daily |
|---|---|---|---|---|---|---|---|---|---|
| | | | Rate | In | Out | Rate | In | Out | |
| Off-Campus Student Apartment (225) | Bedrooms | 97 | 12 | 5 | 7 | 24 | 13 | 11 | 306 |
| Multi-family Housing (Mid-Rise) (221) | Dwelling Unit | 127 | 46 | 11 | 35 | 56 | 34 | 22 | 691 |
| Transit & Bicycle Reduction | | (20%) | -12 | -3 | -8 | -16 | -9 | -7 | -199 |
| Shopping Center (820) | 1,000 SF | 20,044 | 19 | 12 | 7 | 76 | 37 | 39 | 757 |
| Pass-by Reduction | | (35%) | -7 | -4 | -2 | -27 | -13 | -14 | -265 |
| Internal Capture Reduction | | (13%) | -10 | -4 | -6 | -20 | -11 | -9 | -228 |
| Office (710) | 1,000 SF | 12,528 | 15 | 13 | 2 | 14 | 2 | 12 | 122 |
| **NET Trip Generation** | | | **64** | **30** | **34** | **107** | **53** | **54** | **1,184** |

The project is expected to generate 30 inbound and 34 outbound trips in the AM peak hour, 53 inbound and 54 outbound trips in the PM peak hour, and 1,184 daily trips.

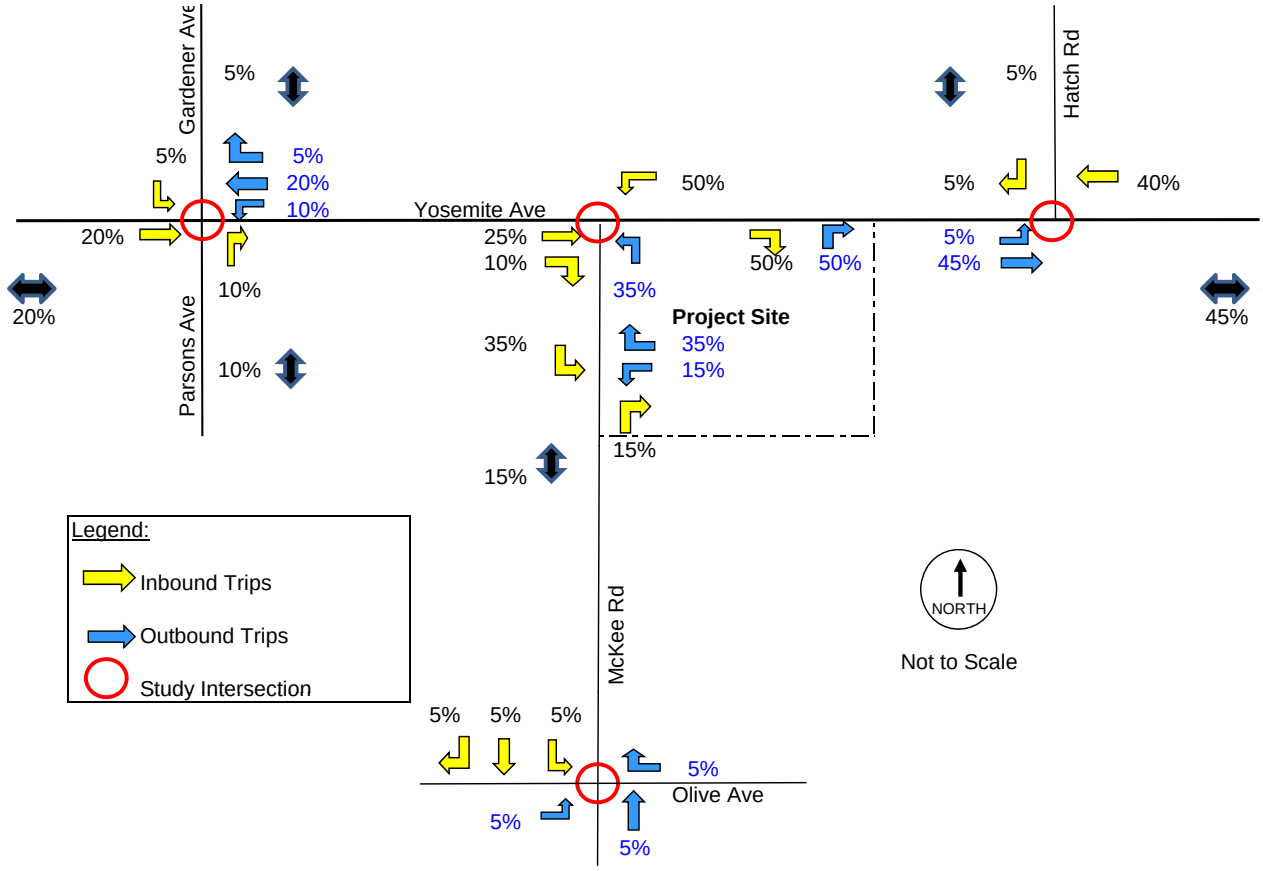
## TRIP DISTRIBUTION

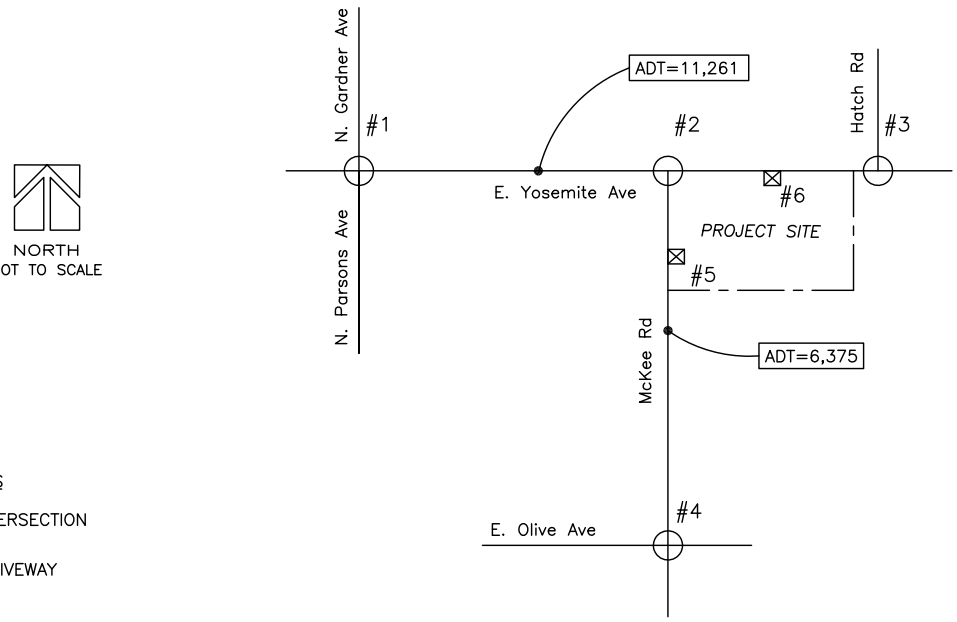
Trip distribution represents the directional orientation of traffic to and from the proposed project. Directional orientation is largely influenced by the geographical location of the site, among many other factors. The trip distribution pattern for the project is illustrated on **Exhibit 4**.

## TRAFFIC ASSIGNMENT

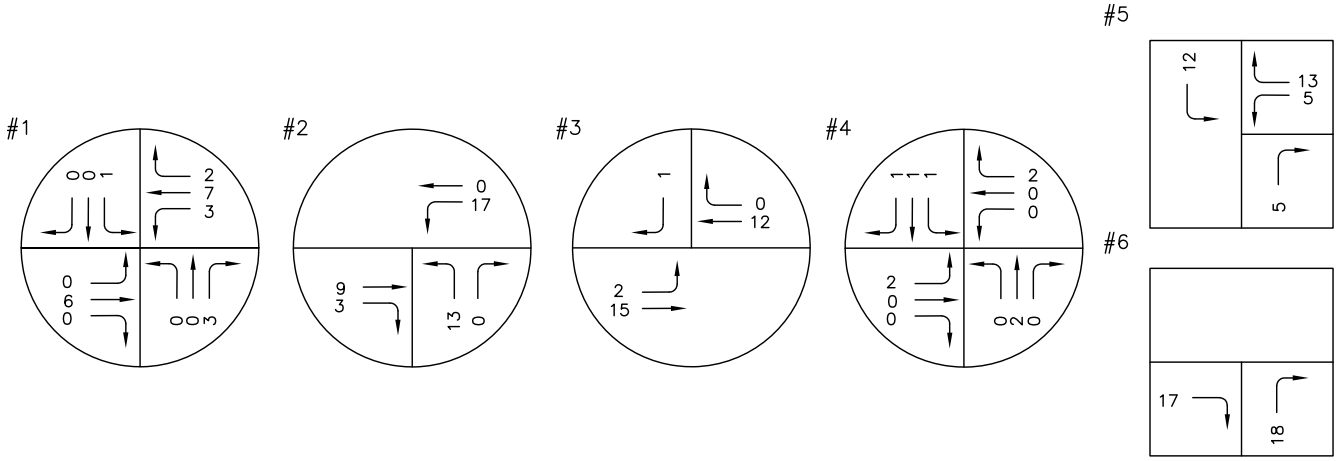
The traffic assignment to and from the Site has been based upon the results of trip generation, trip distribution, and access layouts. **Exhibit 5** illustrates the traffic assignment of the proposed project for the AM and PM peak hours.

**EXHIBIT 4. TRIP DISTRIBUTION**

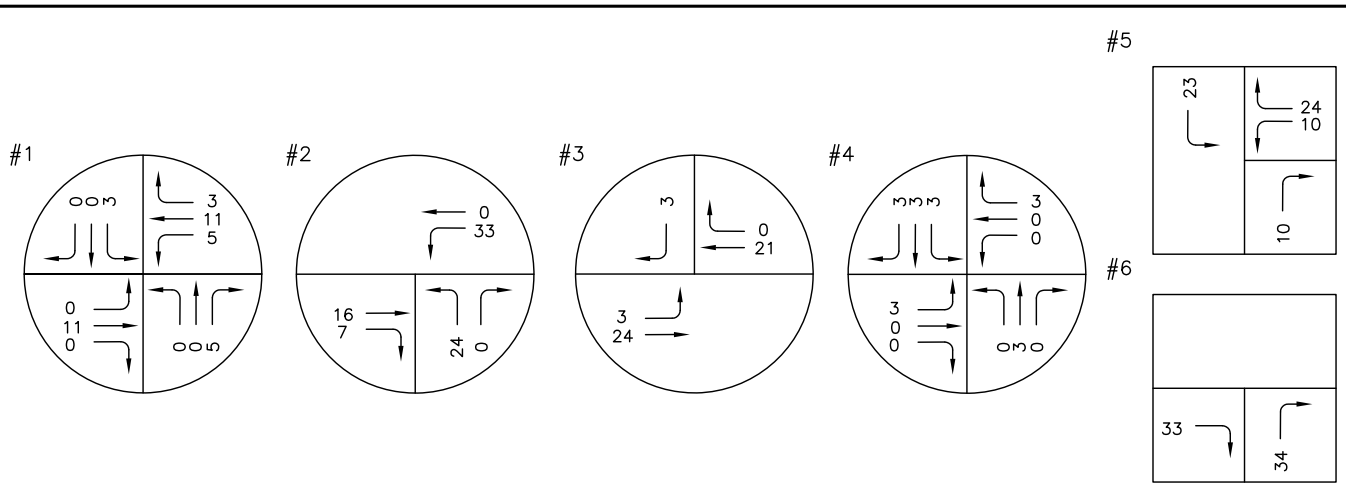





AM PEAK




PM PEAK




TRAFFIC ASSIGNMENT

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

*K2 TRAFFIC ENGINEERING*

EXHIBIT 5

## EXISTING CONDITIONS PLUS PROJECT

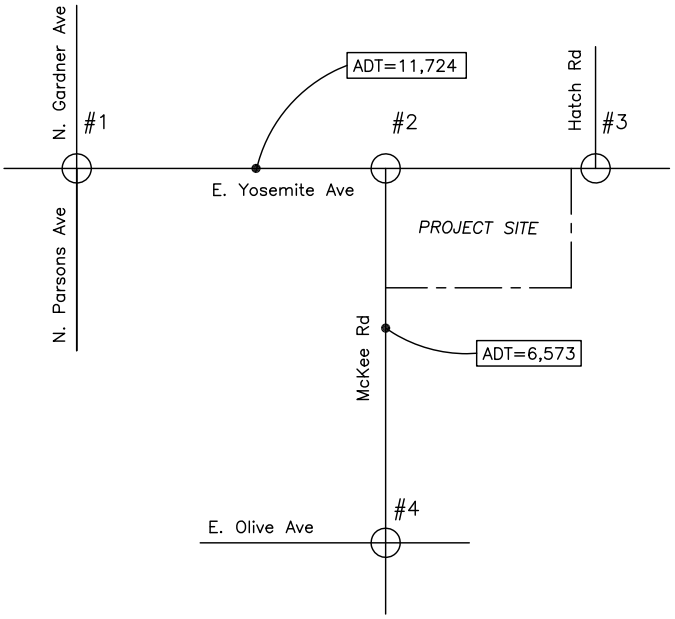
Traffic volumes of the existing condition plus project traffic are shown in **Exhibits 6**. Both roadway segments, Yosemite Avenue and McKee Road, maintain unchanged at LOS C in this study scenario. Level of services for study intersections in the AM and PM peak hours under this scenario are shown in **Table 5**.

**Table 5. Traffic Analysis- Existing Conditions Plus Project**

| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | LOS | Delay (s) | LOS | Delay (s) |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 54.4 | **E** | 45.0 |
| 2. Yosemite Ave at McKee Rd | Signal | B | 10.7 | B | 11.4 |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.3 | B | 10.1 |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 41.2 | **E** | 35.9 |

All studied intersections will maintain level of service "D" or better except the following criteria:

- Location #1, Yosemite Ave at Parsons Ave/Gardner Ave: LOS's F and E for the AM and PM peak hours, respectively.
- Location #4, McKee Road at Oliver Ave: LOS E for both AM and PM peak hours.

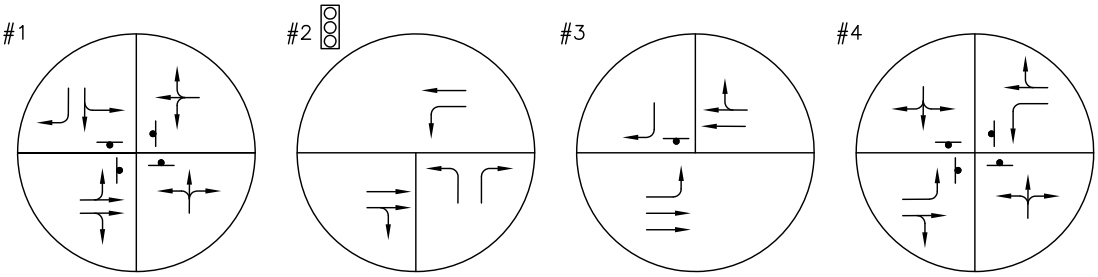



NORTH
NOT TO SCALE

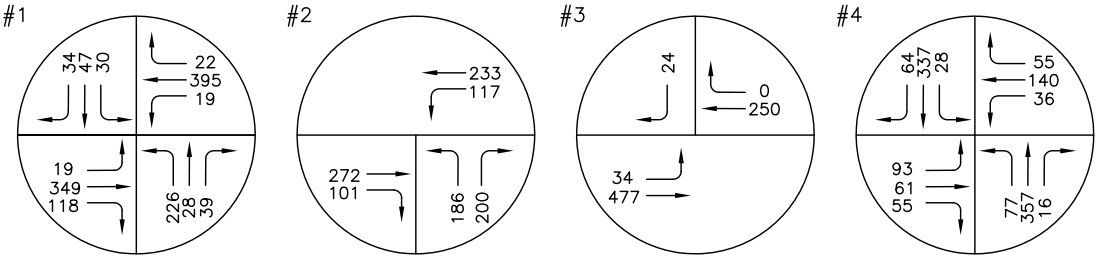
LEGENDS

- INTERSECTION
- TRAFFIC SIGNAL
- STOP SIGN

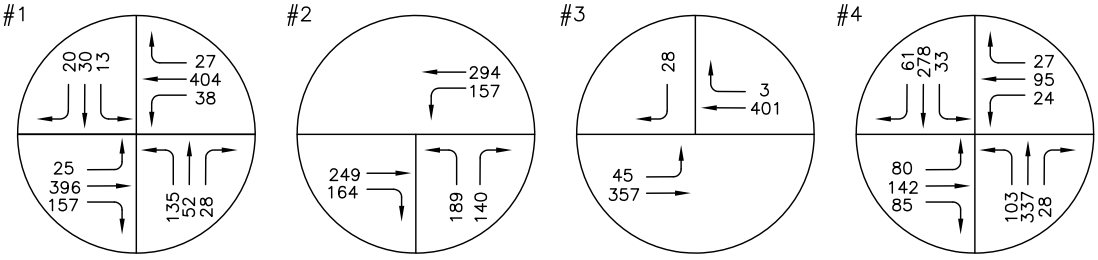
LANE CONFIGURATION




AM PEAK




PM PEAK




EXISTING PLUS PROJECT TRAFFIC VOLUMES

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

## APPROVED PROJECTS

Trip generation from other approved projects were taken into consideration. Based on information provided by the Planning Department of the City of Merced, the following approved developments are included:

- **Wathen Commercial -** This approved project is situated at the northeast corner of Yosemite Avenue and G Street. Proposed development includes a hotel, restaurant, pharmacy, bank, and office buildings.

- **University Village at Lake** - This approved project is situated at the southwest corner of Yosemite Avenue and Lake Road. Proposed development includes student apartments and commercial uses.

Location map of these approved projects is illustrated on **Exhibit 7**. **Exhibit 8** illustrates traffic volumes generated by these approved project at study intersections.

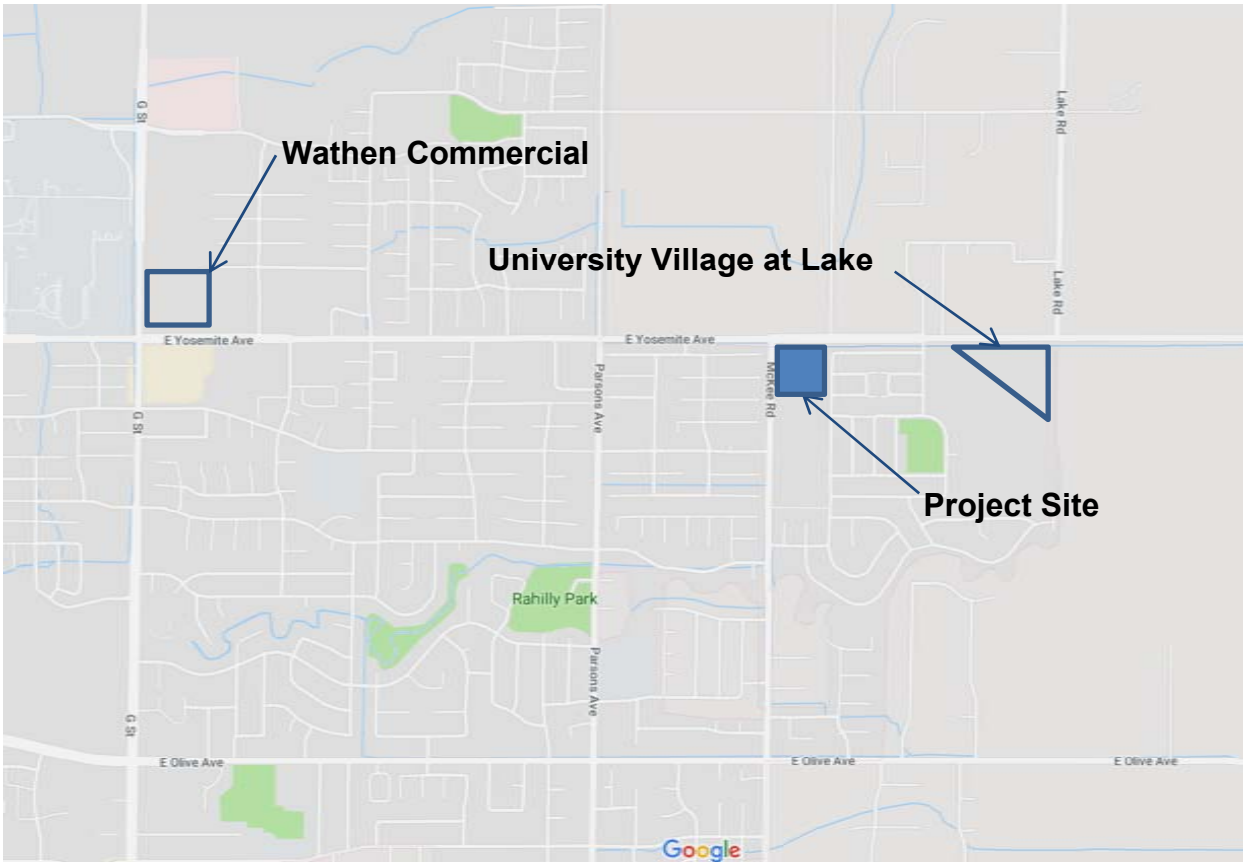
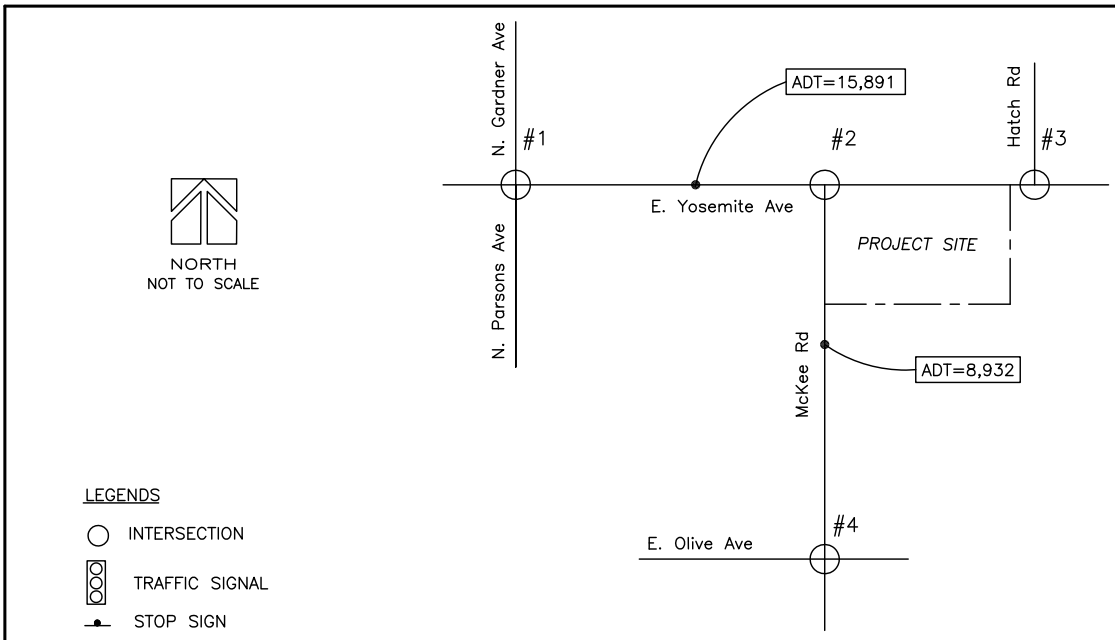
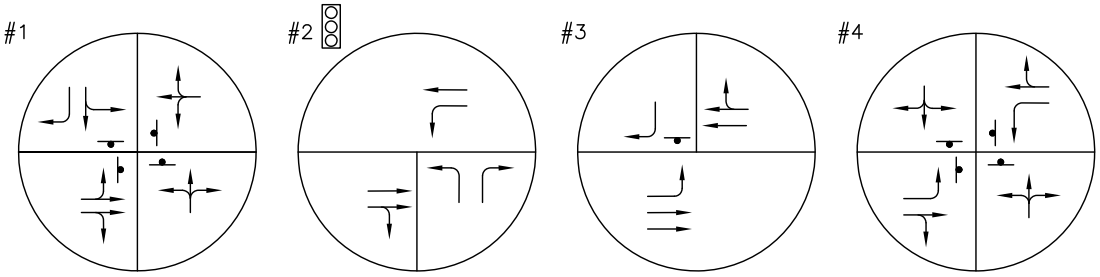



**EXHIBIT 7. LOCATION MAP OF APPROVED PROJECTS**

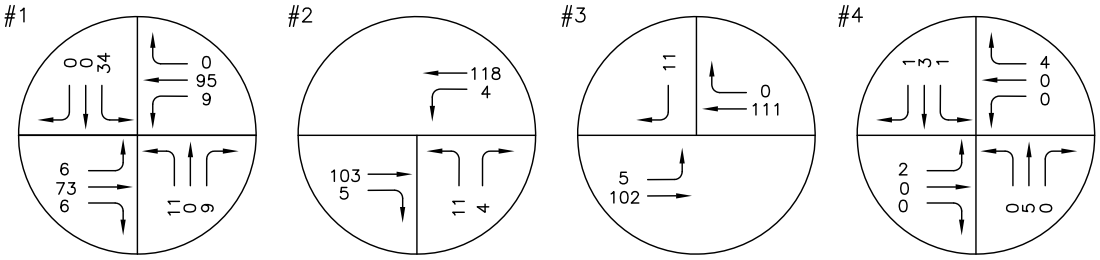
No Scale



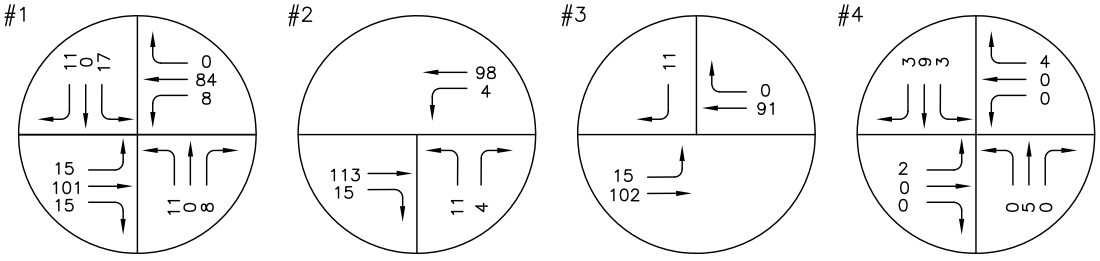

LANE CONFIGURATION




AM PEAK




PM PEAK




APPROVED PROJECTS TRAFFIC VOLUMES

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

*K2 TRAFFIC ENGINEERING*

## EXISTING PLUS APPROVED CONDITIONS

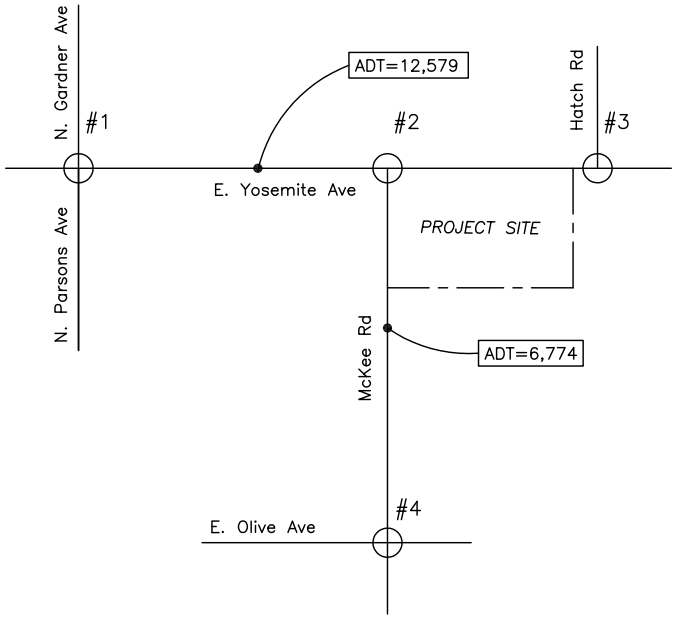
Traffic volumes of the existing condition plus project traffic are shown in **Exhibits 9**. Both roadway segments, Yosemite Avenue and McKee Road, remain unchanged at LOS C. Level of services for study intersections in the AM and PM peak hours under this scenario are shown in **Table 6**.

**Table 6. Traffic Analysis: Existing plus Approved Conditions**

| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | LOS | Delay (s) | LOS | Delay (s) |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 112.8 | **F** | 86.6 |
| 2. Yosemite Ave at McKee Rd | Signal | B | 11.6 | B | 12.2 |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.9 | B | 10.5 |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 42.7 | **E** | 37.4 |

All studied intersections will maintain level of service "D" or better except the following criteria:

- Location #1, Yosemite Ave at Parsons Ave/Gardner Ave: LOS's F and E for the AM and PM peak hours, respectively.
- Location #4, McKee Road at Oliver Ave: LOS E for both AM and PM peak hours.

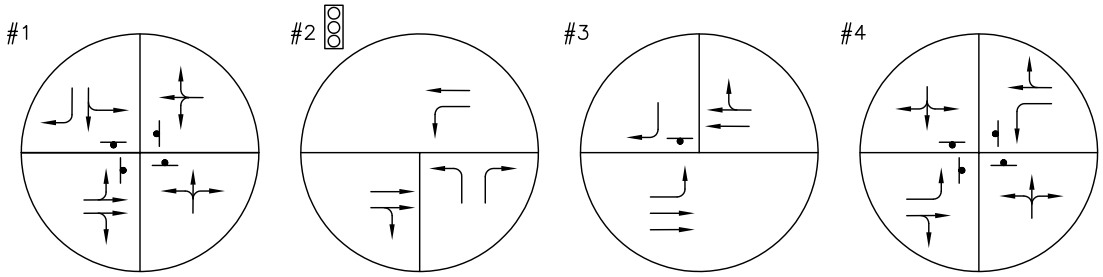



NORTH
NOT TO SCALE

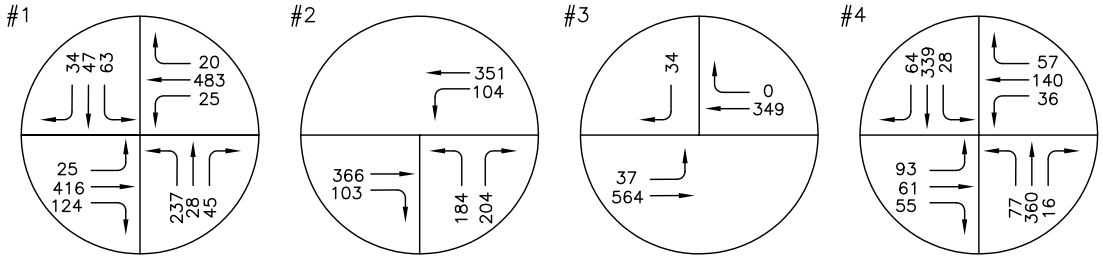
LEGENDS

- INTERSECTION
- TRAFFIC SIGNAL
- STOP SIGN

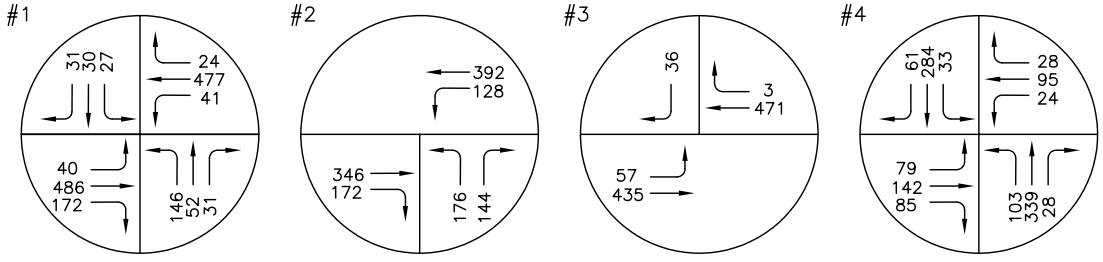
LANE CONFIGURATION




AM PEAK




PM PEAK




EXISTING PLUS APPROVED PROJECT
TRAFFIC VOLUMES

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

## EXISTING PLUS APPROVED PLUS PROJECT CONDITIONS

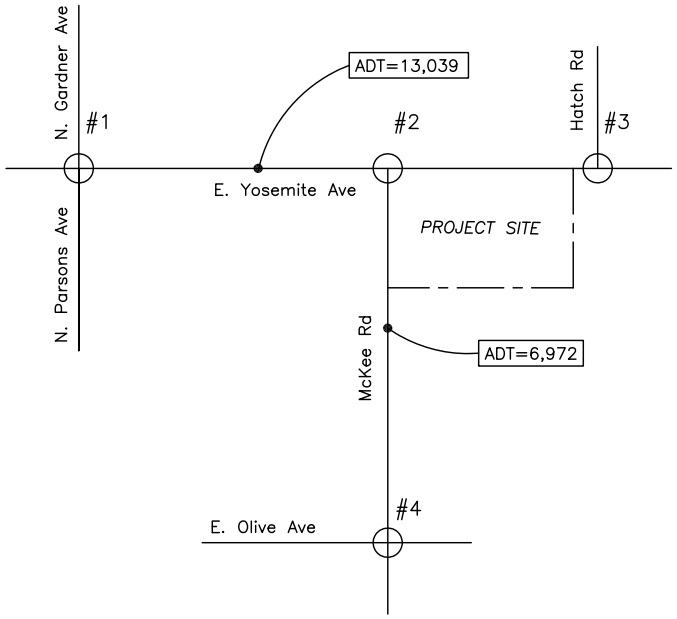
Traffic volumes for the existing plus approved projects after project completion are illustrated in **Exhibit 10**. Both roadway segments, Yosemite Avenue and McKee Road, remain unchanged at LOS C. Level of services for study intersections in the AM and PM peak hours under this scenario are shown in **Table 7**.

**Table 7. Traffic Analysis: Existing plus Approved plus Project Conditions**

| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | LOS | Delay (s) | LOS | Delay (s) |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 120.8 | **F** | 97.5 |
| 2. Yosemite Ave at McKee Rd | Signal | B | 11.7 | B | 12.7 |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.9 | B | 10.7 |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 44.6 | **E** | 40.1 |

All studied intersections will maintain level of service "D" or better except the following criteria:

- Location #1, Yosemite Ave at Parsons Ave/Gardner Ave: LOS's F and E for the AM and PM peak hours, respectively.
- Location #4, McKee Road at Oliver Ave: LOS E for both AM and PM peak hours.

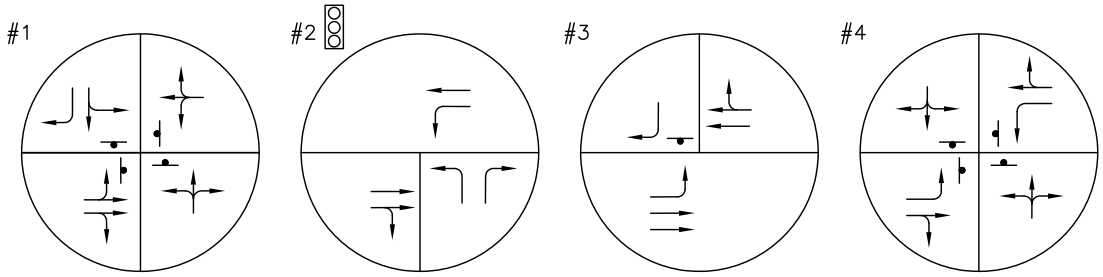



NORTH
NOT TO SCALE

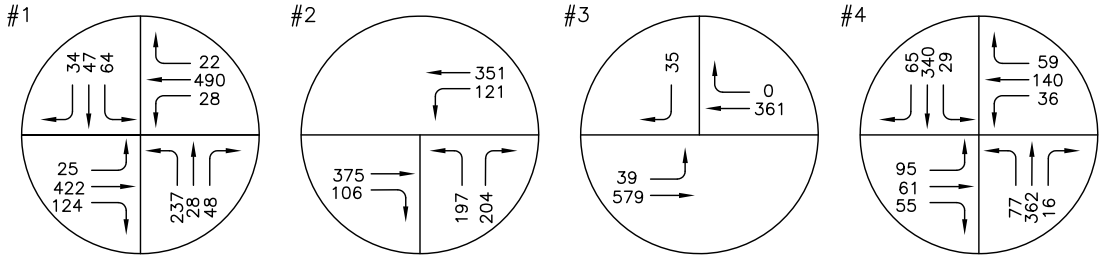
LEGENDS

- INTERSECTION
- TRAFFIC SIGNAL
- STOP SIGN

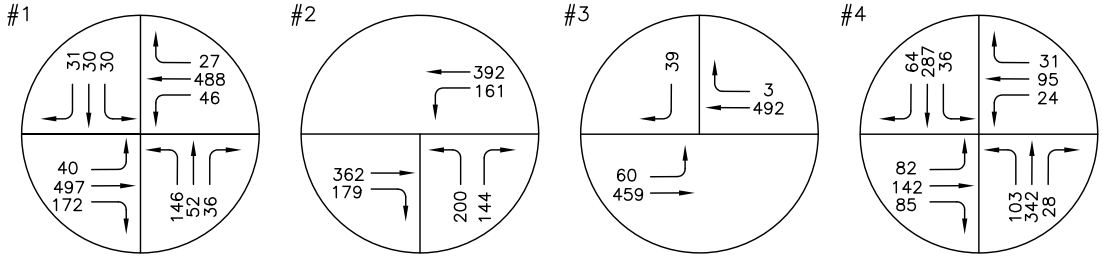
LANE CONFIGURATION




AM PEAK




PM PEAK




EXISTING PLUS APPROVED PLUS PROJECT
TRAFFIC VOLUMES

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

*K2 TRAFFIC ENGINEERING*

EXHIBIT 10

## CUMULATIVE YEAR (2035) WITHOUT PROJECT CONDITIONS

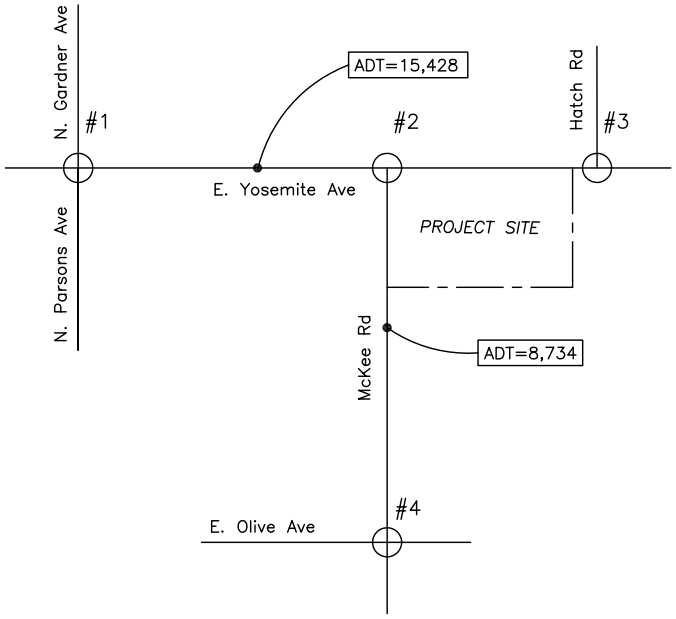
Cumulative Year 2035 without project traffic volumes were obtained by using MCAG travel demand model along with the increment method between the Base Year 2010 and the Cumulative Year 2035. The model provided a percent growth per year based on the improvements identified in the area. The growth rate was applied to the existing volumes to calculate the peak hour turning movements for Year 2035 without Project Conditions. Turning movement volumes are shown in **Exhibits 11** and travel demand model runs are shown in **Appendix E**. Both roadway segments, Yosemite Avenue and McKee Road, remain unchanged at LOS C. Level of services for study intersections in the AM and PM peak hours under this scenario are shown in **Table 8**.

**Table 8. Traffic Analysis: Cumulative Year (2035) without Project Conditions**

| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | LOS | Delay (s) | LOS | Delay (s) |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 168.8 | **F** | 145.0 |
| 2. Yosemite Ave at McKee Rd | Signal | B | 12.1 | B | 12.9 |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.7 | B | 10.8 |
| 4. McKee Rd at Olive Ave | AWSC | **F** | 164.9 | **F** | 150.4 |

All studied intersections will maintain level of service "D" or better except the following criteria:

- Location #1, Yosemite Ave at Parsons Ave/Gardner Ave: LOS's F and E for the AM and PM peak hours, respectively.
- Location #4, McKee Road at Oliver Ave: LOS E for both AM and PM peak hours.

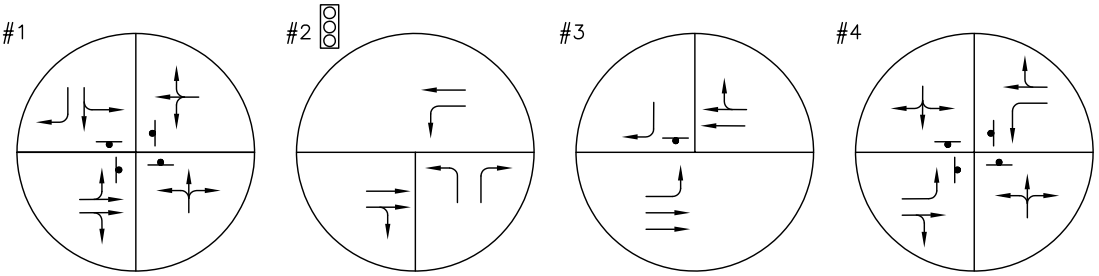



NORTH
NOT TO SCALE

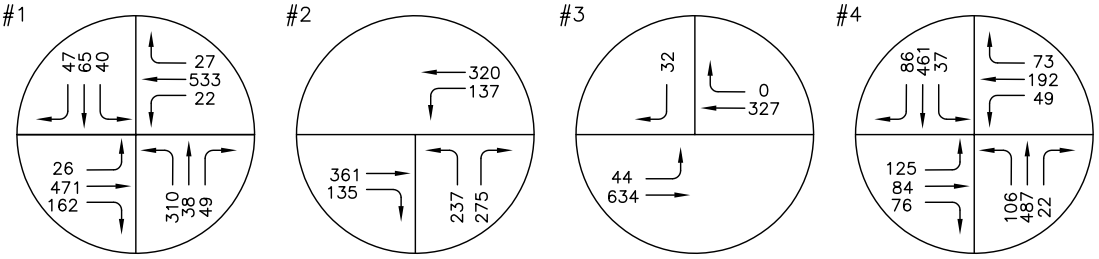
LEGENDS

- INTERSECTION
- TRAFFIC SIGNAL
- STOP SIGN

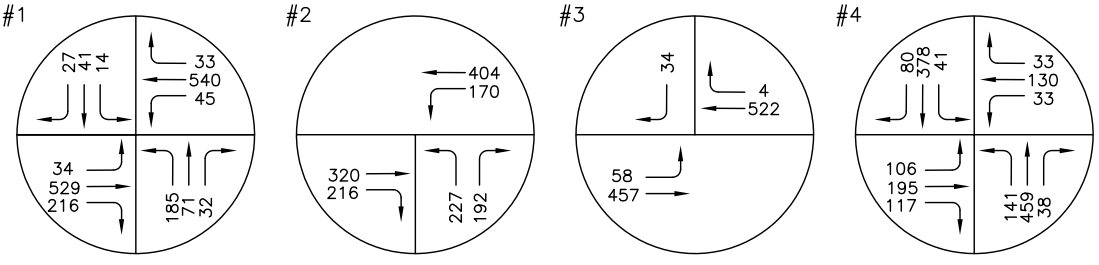
LANE CONFIGURATION




AM PEAK




PM PEAK




CUMULATIVE YEAR (2035) WITHOUT PROJECT
TRAFFIC VOLUME

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

## CUMULATIVE YEAR (2035) PLUS PROJECT CONDITIONS

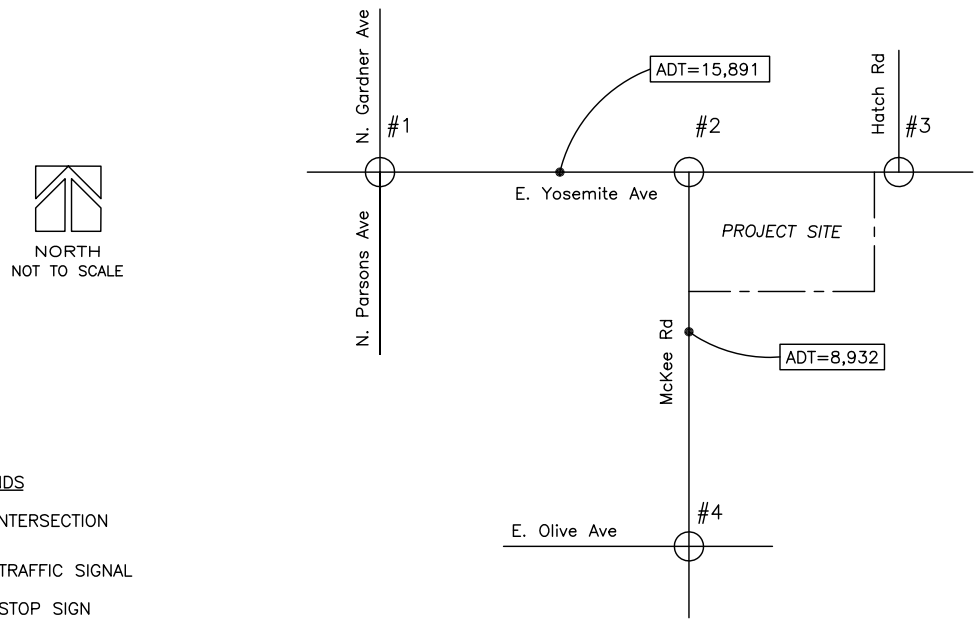
Traffic volumes for Cumulative Year 2035 plus project traffic volumes are illustrated in **Exhibit 12**. Both roadway segments, Yosemite Avenue and McKee Road, remain unchanged at LOS C. Level of services for study intersections in the AM and PM peak hours under this condition are shown in **Table 9**.

**Table 9. Cumulative Year (2035) plus Project Conditions**

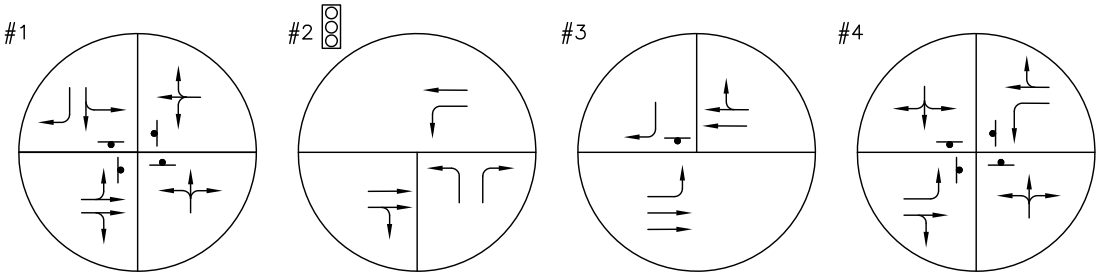
| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | LOS | Delay (s) | LOS | Delay (s) |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 175.8 | **F** | 158.1 |
| 2. Yosemite Ave at McKee Rd | Signal | B | 12.3 | B | 13.6 |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.8 | B | 11.0 |
| 4. McKee Rd at Olive Ave | AWSC | **F** | 168.7 | **F** | 155.1 |

All studied intersections will maintain level of service "D" or better except the following criteria:

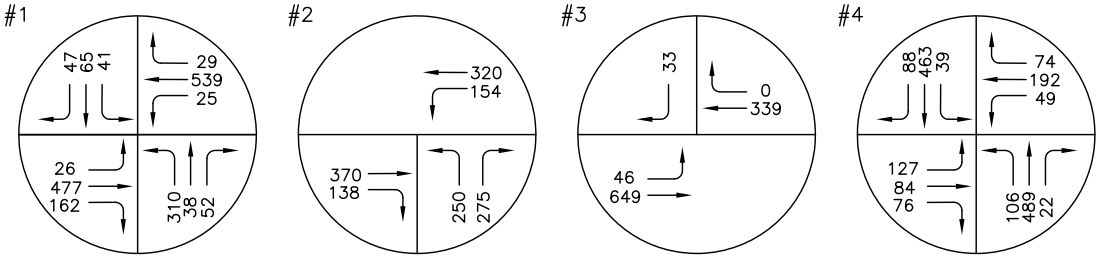
- Location #1, Yosemite Ave at Parsons Ave/Gardner Ave: LOS F for both AM and PM peak hours.
- Location #4, McKee Road at Oliver Ave: LOS F for both AM and PM peak hours.



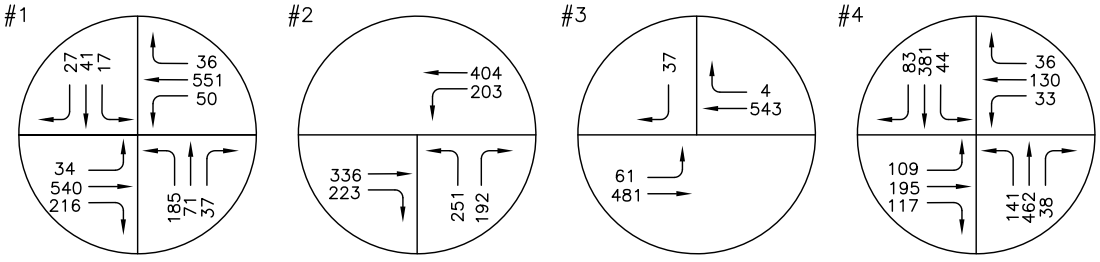

LANE CONFIGURATION




AM PEAK




PM PEAK




CUMULATIVE YEAR (2035) PLUS PROJECT

TRAFFIC VOLUME

The Hub at Yosemite
SEC of Yosemite Ave and McKee Rd, Merced

## THRESHOLD OF SIGNIFICANT IMPACT

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. For projects that propose uses or intensities above that contained in the General Plan, a significant impact at a study intersection is when the addition of project related trips causes either peak hour LOS to degrade from acceptable (LOS A thru D) to unacceptable levels (E or F) or the peak hour delay to increase as follows:

**Table 10. Threshold of Significant Impact**

| Pre-Project LOS | Peak Hour Delay Increase |
|---|---|
| A, B | 10.0 seconds |
| C | 8.0 seconds |
| D | 5.0 seconds |
| E | 2.0 seconds |
| F | 1.0 seconds |

For Existing Conditions, project's traffic impact at the study intersections are shown in **Table 9**.

**Table 11. Project Impact Analysis - Existing Conditions**

| Location | Control | Pre-Project Conditions | | Post Project Conditions | | Project-Related Increase | Signifi-cant Impact |
|---|---|---|---|---|---|---|---|
| | | LOS | Delay | LOS | Delay | | |
| **AM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 50.3 | **F** | 54.4 | 4.1 (>1) | **YES** |
| 2. Yosemite Ave at McKee Rd | Signal | B | 10.6 | B | 10.7 | 0.1 | No |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.3 | A | 9.3 | 0 | No |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 39.4 | **E** | 41.2 | 1.8 (<2) | No |
| **PM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **E** | 40.2 | **E** | 45.0 | 4.8 (>2) | **YES** |
| 2. Yosemite Ave at McKee Rd | Signal | B | 11.0 | B | 11.4 | 0.4 | No |
| 3. Yosemite Ave at Hatch Rd | TWSC | B | 10.0 | B | 10.1 | 0.1 | No |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 34.2 | **E** | 35.9 | 1.7 (<2) | No |

Based on the existing conditions, the project has a significant impact at the following intersection:

- Location #1, Yosemite Avenue at Parsons/Gardner Avenue

Mitigation measures will be discussed in the next chapter.

For Existing plus Approved Conditions, project's traffic impact at the study intersections are shown in **Table 10**.

**Table 12. Project Impact Analysis - Existing plus Approved Conditions**

| Location | Control | Pre-Project Conditions | | Post Project Conditions | | Project-Related Increase | Signifi-cant Impact |
|---|---|---|---|---|---|---|---|
| | | LOS | Delay | LOS | Delay | | |
| **AM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 112.8 | **F** | 120.8 | 8.0 (>1) | **YES** |
| 2. Yosemite Ave at McKee Rd | Signal | B | 11.6 | B | 11.7 | 0.1 | No |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.9 | A | 9.9 | 0 | No |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 42.7 | **E** | 44.6 | 1.9 (<2) | No |
| **PM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 86.6 | **F** | 97.5 | 10.9 (>1) | **YES** |
| 2. Yosemite Ave at McKee Rd | Signal | B | 12.2 | B | 12.7 | 0.5 | No |
| 3. Yosemite Ave at Hatch Rd | TWSC | B | 10.5 | B | 10.7 | 0.2 | No |
| 4. McKee Rd at Olive Ave | AWSC | **E** | 37.4 | **E** | 40.1 | 2.7 (>2) | **YES** |

Based on Existing plus Approved Conditions, the project has a significant impact at the following intersection:

- Location #1, Yosemite Avenue at Parsons/Gardner Avenue
- Location #4, McKee Road at Olive Avenue

Mitigation measures will be discussed in the next chapter.

For Cumulative Year (2035) Conditions, project's traffic impact at the study intersections are shown in **Table 11**.

**Table 13. Project Impact Analysis - Cumulative Year (2035) Conditions**

| Location | Control | Pre-Project Conditions | | Post Project Conditions | | Project-Related Increase | Signifi-cant Impact |
|---|---|---|---|---|---|---|---|
| | | LOS | Delay | LOS | Delay | | |
| **AM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 168.8 | **F** | 175.8 | 7.0 (>1) | **YES** |
| 2. Yosemite Ave at McKee Rd | Signal | B | 12.1 | B | 12.3 | 0.2 | No |
| 3. Yosemite Ave at Hatch Rd | TWSC | A | 9.7 | A | 9.8 | 0.1 | No |
| 4. McKee Rd at Olive Ave | AWSC | **F** | 164.9 | **F** | 168.7 | 3.8 (>2) | **YES** |
| **PM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | AWSC | **F** | 145.0 | **F** | 158.1 | 13.1 (>1) | **YES** |
| 2. Yosemite Ave at McKee Rd | Signal | B | 12.9 | B | 13.6 | 0.7 | No |
| 3. Yosemite Ave at Hatch Rd | TWSC | B | 10.8 | B | 11.0 | 0.2 | No |
| 4. McKee Rd at Olive Ave | AWSC | **F** | 150.4 | **F** | 155.1 | 4.7 (>2) | **YES** |

Based on Cumulative Year (2035) Conditions, the project has a significant impact at the following intersection:

- Location #1, Yosemite Avenue at Parsons/Gardner Avenue
- Location #4, McKee Road at Olive Avenue

Mitigation measures will be discussed in the next chapter.

## MITIGATION MEASURES

The following mitigation measures are recommended:

1. Install traffic signals at the intersection of Yosemite Avenue and Parsons/Gardner Avenue, and
2. Install traffic signals at the intersection of McKee Road and Olive Avenue.

With the above mitigation measures, all study intersections will maintain acceptable level of services, and the project will no longer result in any significant traffic impact, as shown in **Table 12**.

**Table 14. Project Impact Analysis - Mitigation Measure**

| Mitigated Location | Proposed Control | Existing Conditions plus Project | | Existing plus Approved Conditions plus Project | | Cumulative Year (2035) Conditions plus Project | |
|---|---|---|---|---|---|---|---|
| | | LOS | Delay | LOS | Delay | LOS | Delay |
| **AM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | Signal | B | 13.2 | B | 14.6 | B | 18.4 |
| 4. McKee Rd at Olive Ave | Signal | A | 7.8 | A | 7.9 | B | 12.9 |
| **PM PEAK** | | | | | | | |
| 1. Yosemite Ave at Parsons/Gardner Ave | Signal | B | 13.5 | C | 22.0 | B | 14.6 |
| 4. McKee Rd at Olive Ave | Signal | A | 7.6 | A | 7.7 | B | 11.3 |

## FAIR SHARE CONTRIBUTION

The fair share contribution represents the percentage of construction cost that the proposed development is expected to contribute toward the aforementioned mitigation measures. The fair share contribution is calculated based on the sum of project trips in the PM peak hour at the subject location for the Existing plus Approved Conditions as a percentage of total trips during the same period, as shown in **Table 14**.

**Table 15. Calculation of Fair Share Contribution**

| Traffic Signalization | Project Trip | Overall Trip (Existing plus Approved Conditions) | Project Contribution |
|---|---|---|---|
| **#1. Yosemite Ave at Parsons/Gardner Ave** | 38 | 1,557 | **2.4%** |
| **#4. McKee Road at Olive Ave** | 18 | 1,301 | **1.4%** |

As a pre-existing condition, both All-Way-Stop-Controlled intersections are warranted for traffic signals based on existing traffic volumes. As a mitigation measure, the proposed development should contribute a fair share of traffic signal, estimated as 2.4% and 1.4% of the traffic signal improvement costs for Locations #1 and 4, respectively.

## QUEUE ANALYSIS

The study conducted a queue analysis and found that all existing turn bays provide sufficient length to accommodate the 95th percentile queue at each study intersection. The summary of turning movement queue analysis are shown in **Table 10**.

**Table 16. Summary of Queue Analysis**

| Intersection | Turn Movement | 95th Percentile Queue (feet) | | | | Existing Turn Bay Length (feet) | Exceeds Capacity |
|---|---|---|---|---|---|---|---|
| | | Existing plus Approved Conditions plus Project | | Cumulative Year (2035) Conditions plus Project | | | |
| | | AM Peak | PM Peak | AM Peak | PM Peak | | |
| #1. Yosemite Ave at Parsons/Gardner Ave | SBR | 11 | 11 | 13 | 9 | 180 | No |
| #2. Yosemite Ave at McKee Rd | WBL | 59 | 144 | 80 | 143 | 160 | No |
| | NBR | 29 | 24 | 34 | 28 | 82 | No |
| #3. Yosemite Ave at Hatch Rd | EBL | 2 | 6 | 4 | 6 | 150 | No |
| #4. McKee Rd at Olive Ave | WBL | 20 | 15 | 24 | 19 | 120 | No |
| | EBL | 43 | 37 | 58 | 46 | 60 | No |

## SITE ACCESS

Site access will be provided by a right-in-right out driveway on Yosemite Avenue and a full-access driveway on McKee Road. A "One Way" sign (R6-1R) should be installed on Yosemite Avenue at the raised median facing the proposed driveway to ensure right-turn egress only.

## ON-SITE CIRCULATION

The parking lot are designed with adequate setbacks from public streets. On-site circulation appears properly functional and efficient without bottleneck. Nonetheless, the site plan is subject to final review and approval by the Fire Department, Planning Department and Traffic Engineer.

## TRANSIT FACILITIES

The project site is on the UC Merced route that runs along Yosemite Avenue and provides transit services to UC Merced, Merced College, and Mercy Medical Center. The nearest bus stop on Yosemite Avenue is located approximately a quarter mile from the project site, easterly at Perch Lane and westerly at Parsons Avenue / Gardner Avenue. With the proposed development, a new bus stop is recommended for each direction on Yosemite Avenue near McKee Road to promote ridership of public transit by future residents.

## PEDESTRIAN AND BIKE FACILITIES

Class II on-street bike lanes are currently provided on Yosemite Avenue in the project vicinity, in conformance with the *Merced County Regional Bicycle Transportation Plan.* This bike lane links easterly to a Class I bike path along Lake Road that connects to UC Merced campus.

Crosswalks and ADA accessible ramps are currently present at the south and east legs of the intersection of Yosemite Avenue and McKee Road. However, there is no sidewalk along Yosemite Avenue or McKee Road at the project frontage. As part of the proposed development, the study recommends constructing ADA compliant sidewalks along Yosemite Avenue and McKee Road at the project frontage with consideration of future bus stops.