

APPENDIX C
Master List of Mitigation Measures
EXPANDED INITIAL STUDY #01-32
FAHRENS CREEK NORTH

A. EARTH

PROJECT SPECIFIC MITIGATION MEASURES:

- A-1 Grading and excavation shall be conducted according to City of Merced standards to reduce the effects of disruptions, displacement, compactions, and over-covering of soils.
- A-2 The Project applicants shall prepare grading plans for individual projects for review and approval by the City of Merced Inspection Services, Engineering, and Public Works Departments prior to approval of building permits. The grading plans shall include the nature and extent of work proposed, phasing, and minimize the effects of disruptions, displacement, compaction, and over-covering of soils.
- A-3 Prior to approval of any improvement or building plans, the City shall review plans for drainage and storm water run-off control systems and their component facilities, as required, to ensure that these systems are non-erosive in design.
- A-4 Upon completion of construction, subsequent Projects 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, subject to the approval of the City.
- A-5 Projects under review shall be required to submit temporary erosion control plans for construction activities.
- A-6 Prior to the issuance of a building permit, the applicant shall design all structures according to the Uniform Building Code Seismic Section 3.
- A-7 A soils report shall be prepared by a qualified soils or civil engineer, consistent with the provisions of the State Subdivision Map Act, prior to approval of a final subdivision map or building permit, if applicable as required by Merced Municipal Code.
- A-8 Building plans shall be reviewed by a registered engineer specializing in geo-technical assessments to ensure that the soils can support the load.

B. AIR

PROJECT SPECIFIC MITIGATION MEASURES:

- B-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.
- B-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.
- B-3** All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- B-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.
- B-5** Construction site vehicle speeds shall be limited to 15 miles per hour.
- B-6** If used, petroleum-based dust palliatives shall meet the road oil requirements of the District's rule regarding Cutback Asphalt Paving Materials.
- B-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.
- B-8** All internal combustion engine-driven equipment shall be properly maintained and well tuned according to the manufacturer's specifications.
- B-9** When reasonably available and economically feasible, diesel powered or electric equipment shall be utilized in lieu of gasoline powered engines.
- B-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.
- B-11** Prior to issuance of a grading permit, the project will be required to comply with District Regulation VIII. Specifically, the rules that apply to this project are: Rule 8010 (Administrative Requirements) and Rule 8020 (Construction, Demolition, Excavation, and Extraction Activities). Additional rules that may apply to this project depending on construction practices employed are: Rule 8030 (Handling and Storage of Bulk Materials), Rule 8060 (Paved and Unpaved Roads), and Rule 8070 (Parking , Shipping, Receiving, Transfer, Fueling, and Service Areas).

- B-12** At the discretion of the Director of Development Services, subsequent projects within the Project boundaries may be required to submit an air quality analysis to the City prior to construction. Such studies shall outline any impacts associated with specific processes or activities to be present on-site.

APPLICABLE MITIGATION MEASURE OF THE GENERAL PLAN EIR:

- (B-13)** (General Plan Mitigation Measure 1-d) Development construction activity shall implement appropriate dust (PM10) suppression techniques as required by the SJVRAPCD.

C. WATER

PROJECT SPECIFIC MITIGATION MEASURES:

- C-1** Prior to approval of a Final Map or subsequent development projects, 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 any updates.
- C-2** Prior to alteration or removal of the existing elevated YVRR roadbed in the eastern portion of the project area, the property owner shall demonstrate, through competent analysis acceptable to the City of Merced, what effect(s) removal of the roadbed will have on area flood waters delineated in the Special Flood Hazard Area identified on the east side of the roadbed, including impacts to other properties.
- C-3** Prior to approval of subsequent development projects, the applicants shall demonstrate to the City that temporary erosion control measures will be followed during construction.
- C-4** As individual projects are determined, the applicants shall provide detailed information to the City regarding projected water usage. The applicants shall provide all water system needs (including wells, water mains, etc.) for individual projects or pay equivalent fees to insure the construction of the necessary water infrastructure.
- C-5** Areas within 100-year flood plains will be required to comply with all pertinent provisions of the City's Flood Damage Prevention Ordinance (MMC 17.48) and all updates.

APPLICABLE MITIGATION MEASURES OF THE GENERAL PLAN EIR:

- (C-6)** General Plan Mitigation Measure 2-a: When site-specific development proposals with direct discharge into the area's surface water system are submitted to the City for review and action, Best Management options should be evaluated to determine need and feasibility.
- (C-7)** General Plan Mitigation Measure 2-b: Water conservation policy of the City should be periodically reviewed to determine need,

appropriateness, and feasibility of implementing conservation practices suggested in the Merced Water Supply Plan.

E. ANIMAL LIFE

APPLICABLE MITIGATION MEASURES OF THE SPECIAL-STATUS SPECIES ASSESSMENT:

- E-1** Under the Planned Development (P-D) rezoning for the AREA X portion of the proposed annexation, the designation for the Official Site Utilization Plan (SUP) for the area will be A-1-20 or one house per 20 acre minimum size lot, generally consistent with the current County A-1 (agricultural) zoning. However, additional conditions shall be incorporated in the Official SUP to require a biological assessment by a qualified biologist registered to perform such assessments, for vernal wetlands and related sensitive-type areas, prior to any development approvals, including building permits, land leveling, road construction, lot splits, or any other physical or administrative changes or approvals within AREA X.
- E-2** For any kind of development-related activity taking place in proximity to those portions of the Fahrens Creek corridor located within AREA X, with regard to the Giant Garter Snake: a) provide environmental awareness training to contractors or others doing work in this area; b) restrict construction along the Creek to only the snake's active season (May 1 through September 30, unless further evaluation provided in E-1 above adjusts these dates); and c) have a qualified biologist conduct pre-construction surveys 24 hours in advance of construction activities.

F. NOISE

PROJECT SPECIFIC MITIGATION MEASURES:

- F-1** A 6 foot or higher sound wall or earthen berm (or combination of both), or some other acceptable method for achieving comparable noise reduction, may need to be constructed to meet the City's outdoor noise level standards of DNL 60dB for new residential development adjacent to perimeter arterials (Cardella Road and "R" Street). Depending upon the DNLs and the acoustical shielding provided by the first row of buildings (if any), existing and new residential development located a greater distance from the perimeter arterials may require lower sound walls or a combination of sound attenuation measures. As an alternative to sound walls, new dwelling units may be oriented so that the outdoor use areas would be shielded by the building.
- As necessary detailed noise projections should be prepared to corroborate earlier noise studies/projections and actual height

requirements for sound walls, prior to recordation of final maps for each phase of residential development falling within applicable noise zones.

- F-2 Project residential developments constructed within pertinent noise zones in proximity to Cardella Road and “R” Street would require sound-rated windows, as well as sound-rated exterior wall assemblies where necessary, or other acceptable methods of sound attenuation to achieve comparable noise reductions, to be consistent with the 45 dB interior noise level maximum.
- F-3 Trucks used for the development of Fahrens Creek North will be required to use the City’s designated truck routes, to be demonstrated by the project applicant through the submittal of a construction traffic plan to the City Engineer prior to the issuance of grading permits.
- F-4 All construction activity shall be conducted in accordance with City of Merced standards for times of operation.
- F-5 Grading and construction activity shall be limited to daylight hours (between 7 a.m. and 7 p.m.) in areas where noise sensitive receptors are located.
- F-6 In noise sensitive areas, construction equipment, compressors, and generators shall be fitted with heavy duty mufflers specifically designed to reduce noise impacts.

G. LIGHT and GLARE

PROJECT SPECIFIC MITIGATION MEASURE:

- G-1 The applicants shall utilize lighting fixtures of minimal wattage necessary to provide adequate lighting for security, commercial/industrial operations, and circulation. Light spill shall be controlled by baffles, cut-off lenses, and fixture height necessary to minimize spill-over onto adjacent properties. Prior to building permit approvals, lighting plans shall be submitted for review by the City which specifies lighting type, location, and methods for minimizing spill.

M. TRANSPORTATION/CIRCULATION

PROJECT SPECIFIC MITIGATION MEASURES:

- M-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).

- M-2** The developer shall construct all collector, local, or cul-de-sac streets within the Project boundaries to their ultimate right-of-way with full frontage improvements as defined by the *City of Merced Standard Designs for all Engineering Structures* and the *Merced Vision 2015 General Plan* and any amendments thereto, including expanded landscape corridors along designated collector streets. It is anticipated that this could include some contribution to the proposed Reverse Frontage Road North-South Collector to be located along the west boundary of AREA Z, based upon projected level of usage or some other measurement of proportional share. The timing of construction of the improvements would be governed by the Subdivision Map Act and/or local ordinance.
- M-3** The developer shall dedicate half the required right-of-way for all arterial and higher order streets adjacent to the Project boundaries as defined in the *Merced Vision 2015 General Plan*. This includes both Cardella Road and “R” Street (each adjacent to AREA X) as well as Cardella Road portions adjacent to AREA Y. If appropriate portions of AREA Z were to annex in the future, this would include pertinent segments of Cardella Road.
Consistent with Mitigation Measure 7.b of the *Merced Vision 2015 General Plan EIR*, where the extent of right-of-way dedication exceeds the City’s development standards for a collector street (currently 74 feet for a collector street located entirely within the Project and 37 feet for a collector abutting the Project), then the developer is eligible for reimbursements in accordance with the City’s Public Facilities Impact Fee Ordinance and guidelines, unless a traffic study determines that the Project’s traffic impacts require additional dedication.
- M-4** The developer shall construct the “collector equivalent” (74 feet) portion of the right-of-way, along with full frontage improvements along the Project boundaries and at least one travel lane in each direction, for all arterial and higher order streets within the Project boundaries. Consistent with Mitigation Measure 7.b of the *Merced Vision 2015 General Plan EIR*, where the extent of street improvements exceeds one-half of a “collector equivalent” street for a project fronting only one side of the street, the project is eligible for reimbursement for the cost of improvements exceeding the one-half “collector equivalent” in accordance with the City’s Public Facilities Impact Fee Ordinance and guidelines, unless a traffic study determines that the Project’s traffic impacts require additional improvements.

- M-5** The owner of each adjacent corner within AREA Y shall be responsible for that portion of the cost of a traffic signal designated in the City of Merced Public Facilities Impact Fee structure, to City standards and the satisfaction of the City Engineer, at each quarter-mile/half-mile collector intersection with Cardella Road; the same circumstances apply for owners of each adjacent corner within AREA X as they relate to the intersection of Lehigh Drive (extended) with "R" Street, whenever warrants are met in the judgment of the City Engineer. In such a case, installation of an intersection traffic signal by one developer could even be required at any of these locations by the City Engineer prior to full build-out of adjacent properties, if warrants are met, subject to adopted reimbursement requirements. Security shall be determined at the time of first subdivision map or other discretionary action.

APPLICABLE MITIGATION MEASURES OF THE GENERAL PLAN EIR:

- (M-6)** General Plan Mitigation Measure 7a: 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." (Note: Studies are not anticipated, based upon current projections, but could be required in the event of future changes).
- (M-7)** General Plan Mitigation Measure 7b: 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.

N. PUBLIC SERVICES

PROJECT SPECIFIC MITIGATION MEASURE:

- N-1** The applicants shall be required to provide a level of accessibility and rangeland management (firebreaks and/or disking) for fire suppression that is acceptable to and approved by the City of Merced

Site Specific Issues of a more significant nature than otherwise identified by Previous Environmental Review:

- N-2** Careful coordination is required between City, developer(s), and School District regarding phasing of infrastructure improvements within the general area, to achieve safe, adequate access for both school construction and operation.
- N-3** 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.

APPLICABLE MITIGATION MEASURES OF THE GENERAL PLAN EIR:

- (N-4) General Plan Mitigation Measure 8c: Site designs will need to be reviewed to assure that development does not hinder efficient and cost-effective public services delivery.
- (N-5) General Plan Mitigation Measure 8d: Development projects will be required to pay public facilities impact fees as established by the City in accordance with the requirements of State law.

T. CULTURAL RESOURCES

PROJECT SPECIFIC MITIGATION MEASURES:

- T-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.
- T-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.