2 EXECUTIVE SUMMARY

2.1 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The proposed project includes development of a Wal-Mart Stores East LP regional distribution center (approximately 1.1 million square feet) and associated facilities on 230 acres in the southeast area of the City of Merced and would primarily store and distribute nongrocery goods to Wal-Mart retail stores located throughout the region. No retail commercial is proposed as part of the project. The proposed regional distribution center would operate 24-hours per day and would employ approximately 1,200 employees (1,050 employees to work at the facility and an additional 150 employees as drivers).

The entitlements required for this proposed project consist of the following:

- Site Plan Approval (required of all principally permitted uses in industrial zones);
- City of Merced General Plan amendment (This is required because the undeveloped Kibby Road right-of-way is proposed to be abandoned between Childs Avenue and Gerard Avenue. Because Kibby Road is designated in the Circulation Element of the General Plan, a General Plan Amendment is required before action can be taken to abandon the unused right-of-way); and
- right-of-way abandonment (Kibby Road).

Subsequent to these actions, the City will be responsible for the issuance of building permits.

Construction is anticipated to last approximately 12 months.

2.2 PROJECT OBJECTIVES

The City's objectives for the project include the following:

- to develop the industrially zoned area in the City with permitted industrial uses;
- to locate industrial projects in areas with good access to major highway transportation links, and provide opportunities for buffers between industrial and nonindustrial uses;
- to encourage development of industrial projects that will create jobs, including full-time, nonseasonal employment opportunities for local residents;
- to encourage development of projects that will contribute toward improving roadways adjacent to the proposed development site; and
- to ensure that industrial areas are developed in an attractive manner.

The project applicant has developed objectives consisting of the following:

- to develop a project consistent with the City of Merced General Plan (City General Plan) and zoning ordinance,
- to develop a distribution/warehouse facility near other industrial uses,

- to construct and operate a distribution/warehouse facility in Merced County to take advantage of the strategic location between large urban centers and smaller urban and rural markets throughout the Central Valley in California,
- to construct a distribution/warehouse facility on a site sufficiently large (a minimum of 230 acres) to allow necessary building space and parking for trucks and employees,
- to construct a distribution/warehouse facility with sufficient space (approximately 1.2 million square feet) to allow operational efficiency and adequate distribution of goods to stores in a broad geographic area in California,
- to locate a distribution/warehouse facility with access to a regional roadway network including interstate, state, and regional roads,
- to locate a distribution/warehouse facility in an area well served by major local thoroughfares to minimize truck traffic traveling through residential neighborhoods,
- to provide sufficient parking for trucks and employees to minimize impacts to the surrounding area, and
- to take advantage of an existing labor pool living in the Merced area.

2.3 ALTERNATIVES

2.3.1 NO PROJECT ALTERNATIVE

This alternative assumes that the site would not be developed with the proposed project, but due to the site's large size, its industrial land use designation and zoning, its proximity to the freeway and major public infrastructure, it is unlikely that the project site would remain indefinitely vacant. It is therefore assumed under the No Project Alternative that the site would be developed with some type of industrial or warehouse development in the near term in accordance with the City's existing land use regulations with approximately 1.1 million square feet of warehouse or industrial use, similar to the proposed project. It is conceivable that another company would view the site as ideally suited for a regional distribution center similar to what is proposed by Wal-Mart.

2.3.2 REDESIGNED SITE PLAN

This alternative assumes that the site would be developed with identical size and extent of development, number of employees, and number of vehicle trips as the proposed project. As with the proposed project, a majority of the site would be cleared of vegetation and graded to accommodate approximately 1.1 million square feet of building, parking and driveways, and landscaping. Buildings and other proposed features on-site have been shifted to the east under this alternative to provide an increased buffer to residential development to the west and driveway access, as well as all truck loading and unloading has been shifted to the eastern edge of the site. This alternative has been identified as a means of reducing certain potential environmental impacts that cannot be sufficiently reduced in the proposed project solely through mitigation measures. This alternative is intended to reduce the following potential impacts on the closest residential communities in Merced: air quality, traffic, and noise. Areas west of the project site are designated for residential development.

2.3.3 REDUCED SITE PLAN AND OPERATIONS

This alternative assumes that the site would be developed 25% less site disturbance, 24% less floor area, 25% less impervious surface area, 25% fewer employees, and 25% fewer daily tractor trailer trips. This alternative is intended to reduce the potential impacts on the closest residential communities in Merced.

2.3.4 OFF-SITE ALTERNATIVES

Three alternative sites located within the City or unincorporated County were identified by City staff as having sufficient land area and zoning designations to accommodate a warehouse distribution center with approximately 1.1 million square feet of floor area and similar site development requirements to that of the proposed project. Each of the sites is in the southern portion of the City (or unincorporated County), in areas designated for, or near, industrial development and relatively close to major transportation routes. The City directed that alternative sites be identified and analyzed in terms of environmental impact, in addition to alternative versions of the proposed project on the site selected by Wal-Mart. Alternative sites are analyzed to see if development with the use currently proposed by Wal-Mart would result in different potential impacts.

ALTERNATIVE SITE #1

Alternative Site #1 is approximately 200-250 acres in size and is located immediately south of the proposed project site. It is roughly bordered by the following streets: Gerard Avenue, Mission Avenue, the future extension of Campus Parkway, and Tower Road. This site is within the Merced city limits and is directly south of the proposed project site. To see the alternative site locations, refer to Exhibit 5-4 in Section 5 "Alternatives to the Proposed Project."

ALTERNATIVE SITE #2

Alternative Site #2 is located on the west side of SR 99, approximately 1 mile west/southwest of the project site. This site is northeast of the intersection of South Henry Street and East Mission Avenue, and just southwest of State SR 99. The site is roughly 250 acres in land area. This site is in unincorporated Merced County.

ALTERNATIVE SITE #3

Alternative Site #3 is located between Dickenson Ferry Road, Thornton Road, and immediately south of Merced Municipal Airport. The site is roughly 250 acres in land area. This site is in unincorporated Merced County.

2.3.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an "environmentally superior" alternative among the alternatives considered be selected and the reasons for such selection disclosed. The Reduced Site Plan and Operations alternative has been identified as having fewer potential environmental effects than the proposed project and the other alternatives that were analyzed in the EIR. The Reduced Site Plan and Operations alternative would be expected to have fewer impacts on the following resources:

- agricultural resources,
- air quality,
- biological resources (special-status species),
- cultural resources,
- hydrology and water quality,
- noise,
- utilities and public services,
- transportation and traffic, and
- visual resources.

In addition to being the environmentally superior alternative, the Reduced Site Plan and Operations alternative would meet all of the project objectives identified by the City and project proponent, except the following:

To construct a distribution/warehouse facility with sufficient space (approximately 1.2 million square feet) to allow operational efficiency and adequate distribution of goods to stores in a broad geographic area in California.

While the Reduced Site Plan and Operations alternative would meet the objectives related to siting the project (i.e. locating the facility in an industrially zoned area with access to major local and regional roadways), with 825,000 square feet of floor area, it would not meet the size component of the objective which has identified by the project proponent.

The Redesigned Site Plan Alternative shares many of the same environmental impacts with the proposed project, with reductions to a few of the project impacts, and the alternative meets all of the project objectives.

2.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Section 15123 of the State CEQA Guidelines requires that a summary of an EIR identify areas of controversy known to the lead agency, including issues raised by agencies and the public. During the public comment period for the NOP, various comment letters were received regarding the proposed project. These letters are included as Appendix A of this EIR. In general, areas of potential controversy known to the City include: traffic congestion, hazardous materials handling, on-site security, urban decay, visual impacts, conversion of farmland, heat island effect, traffic hazards, pedestrian safety, proximity to residences and schools, air quality and health, noise increases, climate change, water quality and flooding, water supply, wastewater capacity, drainage system capacity, population and housing, growth inducement, economic effects, school impacts, employee wages and benefits, and property values. To the extent that these issues are considered to be "environmental impacts" under CEQA, these issues are addressed in the DEIR.

2.5 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Table 2-1 summarizes the environmental impacts of the project, levels of significance before mitigation, recommended mitigation measures, and levels of significance after the application of mitigation measures.

Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.1 Agricultural Resources			
4.1-1: Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The proposed project would result in the conversion of Prime Farmland. The project would result in a significant impact.	S	The City's General Plan EIR further concludes that to achieve the goals of maintaining a compact urban form, and other types of land-use compatibility issues, mitigation that would eliminate the loss of agricultural land to urban development is not possible. Therefore, because no mitigation is available to reduce this impact, the impact would remain significant and unavoidable. This conclusion is consistent with the conclusion of the EIR prepared for the Merced Vision 2015 General Plan. It should be noted that the City considered the significant impact associated with the conversion of farmland resulting from buildout of the General Plan and adopted a Statement of Overriding Considerations (Resolution No. 97-22).	SU
4.1-2: Conflict with Existing Zoning for Agricultural Use, or a Williamson Act Contract. The project site is neither zoned for agriculture nor is it in a Williamson Act contract; therefore, the proposed project would have no impact.	NI	No mitigation is required.	LTS
4.1-3: Other Changes in the Environment that Could Result in Conversion of Farmland to Nonagricultural Use. The proposed project could foster future farmland conversions; however, the project conforms to the City's plans and designations. This impact would be considered less than significant.	LTS	No mitigation is required.	LTS
4.1-4: Potential for Inconsistency with Merced General Plan Goals and Policies Relevant to Protection of Agriculture. The proposed project conforms to the City's planning documents and designations, making this impact less than significant.	LTS	No mitigation is required.	LTS
4.2 Air Quality			
4.2-1: Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors. Project-generated, construction-related emissions of ROG and NO_X would exceed SJVAPCD's significance threshold of 10 TPY. In addition, with respect to construction-related emissions of PM_{10},	S	**4.2-1a: Comply with SJVAPCD's Indirect Source Review Rule (Rule 9510).** Construction of the proposed project shall comply with SJVAPCD's ISR rule (Rule 9510), as required by law. The	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
SJVAPCD-recommended control measures beyond compliance with Regulation VIII-Fugitive Dust Prohibition are not incorporated into the project design. Thus, project-generated, construction- related emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of Merced County. As a result, this would be a significant impact.		applicant shall submit and have approved an Air Impact Assessment (AIA) application to SJVAPCD no later than applying for a final discretionary approval with the City of Merced. The AIA application shall be submitted on a form provided by the SJVAPCD and contain, but not be limited to, the applicant's name and address, detailed project description, on-site emission reduction checklist, monitoring and reporting schedule, and an AIA. The AIA shall quantify construction NO_X and PM_{10} emissions associated with the project. This assessment shall include: an estimate of construction emissions prior to the implementation of mitigation measures; a list of the mitigation measures to be applied to the project; an estimate of emissions for each applicable pollutant for the project, or each phase thereof, following the implementation of mitigation; and a calculation of the applicable off-site fee, if required by Rule 9510. The general mitigation requirements in the assessment, as contained in the ISR rule, shall include the following: ► Exhaust emissions for construction equipment greater than 50 horsepower used or associated with the development project shall be reduced by 20% of the total NO_X and by 45% of the total PM_{10} emissions from the statewide average as estimated by ARB. ► Methods employed by the applicant to reduce construction emissions to the degree noted above include using less polluting construction equipment, including the use of add-on controls, cleaner fuels, or newer lower emitting equipment. The emissions reduction targets listed above shall be met through any combination of on-site emission reduction measures or offset fees, including those required and additional measures listed in Mitigation Measure 4.2-1b below. The requirements listed above can be met through any combination of on-site emission reduction measures or offset fees, including those required and additional measures listed in Mitigation Measures 4.2-1b and 4.2-1c below; however, any on-site emission	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		reductions must be both quantifiable and verifiable to be credited towards the requirements of the ISR Rule. **4.2-1b: Implement Measures to Reduce Construction-Related Diesel Equipment Exhaust Emissions.** The following required mitigation measures shall be implemented by the project applicant to reduce construction-related diesel equipment exhaust emissions regardless of whether the emission reductions can be quantified and documented. However, any emissions reductions attained by these measures that can be quantified and documented can be credited to achieve the ISR reduction goals discussed in Mitigation Measure 4.2-1a. These required measures are listed below. **Required Measures to Reduce Construction-Related Diesel Equipment Exhaust Emission** ► Cease construction activity on forecasted Spare the Air Days. ► Staging areas for heavy-duty construction equipment shall be located as far as possible from sensitive receptors. They shall be located on site and not be within 1,000 feet of the project boundary. ► Before construction contracts are issued, the project applicant shall perform a review of new technology in consultation with SJVAPCD, as it relates to heavy-duty diesel equipment, to determine what (if any) advances in emissions reductions are available for use and are economically feasible. Construction contract and bid specifications shall require contractors to utilize the available and economically feasible technology on a percentage of the equipment fleet, as determined by SJVAPCD. ► When not in use, idling of on-site equipment shall be minimized. Under no conditions shall on-site equipment be left idling for more than 5 minutes. ► Prohibit the use of trucks with off-road engines to haul materials on-site. Use trucks with on-road engines instead.	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		In addition, measures implemented to achieve the above ISR reduction goals required by Mitigation Measure 4.2-1a may include, but are not limited to the additional measures listed below. **Additional Operational Emission Reduction Measures** Use alternate fuels and emission controls to further reduce NOX and PM10 exhaust emissions above the minimum requirements set forth in the ISR rule. Replace/substitute fossil-fueled (e.g., diesel) equipment with electrically driven equivalents (provided they are not run via a portable generator set). Use ARB-certified alternative fueled engines in construction equipment. Alternative fueled equipment may be powered by compressed natural gas, liquid propane gas, electric motors, or other ARB-certified off-road technologies. (To find engines certified by ARB, see http://www.arb.ca.gov/msprog/offroad/cert/cert.php.) ► Provide commercial electric power to the project site in adequate capacity to avoid or minimize the use of portable electric generators and equipment. ► Limit the hours of operation of heavy duty diesel equipment and/or the amount of equipment in use at any one time. **4.2-1c: Implement an Emissions Reduction Agreement with SJVAPCD to Reduce Construction Emissions of ROG and NOX.** The Applicant shall enter into an emissions reduction agreement with SJVAPCD to reduce net ROG and NO_x emissions to less than 10 TPY. This agreement includes an emission reduction program, whereby the Applicant funds projects in the SJVAB, such as replacement and destruction of old engines with new more efficient engines. The agreement requires the Applicant to identify and propose opportunities for the reduction of emissions to fully mitigate the project's construction emissions to less than significant, and includes opportunities for removal or retrofication of stationary, transportation, indirect, and/or mobile-source equipment. Each	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		proposal requires SJVAPCD approval and verification of emission reduction prior to receiving final discretionary approval of the project from the City of Merced. The emissions reduction agreement must be implemented *in addition to* the Required Measures to Reduce Construction-Related Diesel Equipment Exhaust Emission listed in Mitigation Measure 4.2-1b. Development and implementation of the emissions reduction agreement shall be fully funded by the Applicant. To the extent feasible, preference shall be given to off-site emission reduction projects that are located in or in close proximity to the City of Merced. If approved by SJVAPCD, the Applicant may develop an emissions reduction agreement that also fulfills the compliance requirements of SJVAPCD's ISR Rule (Rule 9510). **4.2-1d: Comply with SJVAPCD's Regulation VIII-Fugitive Dust Prohibitions and Implement All Applicable Control Measures.** Construction of the proposed project shall comply with SJVAPCD's Regulation VIII-Fugitive Dust Prohibitions and implement all applicable control measures, as required by law. Regulation VIII contains, but is not limited to, the following required control measures: ► Prewater site sufficient to limit visible dust emissions (VDE) to 20% opacity. ► Phase work to reduce the amount of disturbed surface area at any one time. ► During active operations, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity. ► During active operations, construct and maintain wind barriers sufficient to limit VDE to 20% opacity. ► During active operations, apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		► An owner/operator shall limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour (mph). ► An owner/operator shall post speed limit signs that meet State and Federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads. ► When handling bulk materials, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity. ► When handling bulk material, construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. ► When storing bulk materials, comply with the conditions for a stabilized surface as listed above. ► When storing bulk materials, cover bulk materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action. ► When storing bulk materials construct and maintain wind barriers sufficient to limit VDE to 20% opacity and with less than 50% porosity. If utilizing fences or wind barriers, apply water or chemical/organic stabilizers/suppressants to limit VDE to 20% opacity or utilize a 3-sided structure with a height at least equal to the height of the storage pile and with less than 50% porosity. ► Limit vehicular speed while traveling on the work site sufficient to limit VDE to 20% opacity. ► Load all haul trucks such that the freeboard is not less than 6 inches when material is transported across any paved public access road sufficient to limit VDE to 20% opacity.	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		► Apply water to the top of the load sufficient to limit VDE to 20% opacity. ► Cover haul trucks with a tarp or other suitable cover. ► Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site; and prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and load all haul trucks such that the freeboard is not less than 6 inches when material is transported on any paved public access road, and apply water to the top of the load sufficient to limit VDE to 20% opacity; or cover haul trucks with a tarp or other suitable cover. ► Owners/operators shall remove all visible carryout and trackout at the end of each workday. ► An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall take actions for the prevention and mitigation of carryout and trackout. ► Within urban areas, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site. ► Within rural areas, construction projects 10 acres or more in size, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of a site. ► For sites with paved interior roads, an owner/operator shall prevent and mitigate carryout and trackout. ► Cleanup of carryout and trackout shall be accomplished by manually sweeping and picking-up; or operating a rotary brush or broom accompanied or preceded by sufficient wetting to limit VDE to 20% opacity; or operating a PM10-efficient street sweeper that has a pick-up efficiency of at least 80%; or	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		flushing with water, if curbs or gutters are not present and where the use of water would not result as a source of trackout material or result in adverse impacts on storm water drainage systems or violate any National Pollutant Discharge Elimination System permit program. ► An owner/operator shall submit a Dust Control Plan to the Air Pollution Control Officer (APCO) before the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for nonresidential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least 3 days. Construction activities shall not commence until the APCO has approved or conditionally approved the Dust Control Plan. An owner/operator shall provide written notification to the APCO within 10 days before the commencement of earthmoving activities via fax or mail. The requirement to submit a dust control plan shall apply to all such activities conducted for residential and nonresidential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity. **4.2-1e: Implement SJVAPCD-Recommended Enhanced and Additional Dust Control Measures.** The following SJVAPCD-recommended enhanced and additional control measure shall be implemented to further reduce emissions of fugitive PM_{10} dust. ► Install sandbags or other erosion control measures to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1%. ► Suspend excavation and grading activity when winds exceed 20 mph. ► Limit area subject to excavation, grading, and other construction activity at any one time.	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.2-2: Generation of Long-Term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursor Emissions. Operation-related activities would result in project-generated emissions of ROG and NO_X that exceed SJVAPCD's significance threshold of 10 TPY (refer to Table 4.2-7). Thus, project-generated, operation-related emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of Merced County. In addition, because SJVAPCD's significance thresholds approximately correlate with reductions from heavy-duty vehicles and land use project emission reduction requirements in the SIP, project-generated emissions could also conflict with any air quality planning efforts. As a result, this would be a significant impact.	S	**4.2-2a: Comply with SJVAPCD's Indirect Source Review Rule (Rule 9510)** Similar to Mitigation Measure 4.2-1a, which addresses construction-related emissions, operation of the proposed project shall comply with SJVAPCD's ISR rule (Rule 9510), as required by law. The applicant shall submit an AIA application to SJVAPCD no later than applying for a final discretionary approval with the City of Merced. The AIA application shall be submitted on a form provided by the SJVAPCD and contain, but not be limited to, the applicant's name and address, detailed project description, on-site emission reduction checklist, monitoring and reporting schedule, and an AIA. The AIA shall quantify operational NO_X and PM_{10} emissions associated with the project. This shall include the estimated operational baseline emissions (i.e., before mitigation), and the mitigated emissions for each applicable pollutant for the project, or each phase thereof, and shall quantify the off-site fee, if applicable. General mitigation requirements, as contained in the ISR rule, include the following: Applicants shall reduce 33.3%, of the project's operational baseline NO_X emissions over a period of ten years as quantified in the approved AIA. Applicants shall reduce 50% of the project's operational baseline PM_{10} emissions over a period of ten years as quantified in the approved AIA. The requirements listed above can be met through any combination of on-site emission reduction measures or offset fees, including those required and additional measures listed in Mitigation Measures 4.2-2b, 4.2-2c, 4.2-2d, and 4.2-2e for emissions of CAPs; and Mitigation Measures 4.2-6b and 4.2-6d for emissions of GHGs below; however, any on-site reductions of CAP emissions must be both quantifiable and verifiable to be credited towards the requirements of the ISR Rule. **4.2-2b: Develop and Implement an Employee Trip Reduction Program to Reduce Operational Emissions.**	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		The applicant shall develop and implement an employee trip reduction program that minimizes the percentage of employee commute trips in single occupancy vehicles. At a minimum, the program shall ensure that at least 25% of employee commute trips occur by some other transportation mode than a single occupancy vehicle. This program shall be fully funded by the applicant and be developed in consultation with the City of Merced, the Transit Joint Powers Authority for Merced County, and SJVAPCD. Measures that result in quantifiable trip reductions can also be counted as reductions in NO_X and PM_{10} emissions with respect to compliance with the ISR rule mentioned in Mitigation Measure 4.2-2a. The program shall be managed by an on-site Employee Transportation Coordinator employed and appointed by the applicant. A designated Transportation Manager shall also be on duty during each shift to manage the program. The 25% reduction in single occupancy vehicle trips by employees shall be achieved within 3 years of the opening of the distribution center. The reduction program and its effectiveness shall be evaluated annually and reported to the City of Merced. As part of the program, the applicant shall provide a display case or kiosk that displays all of the program information in a prominent area accessible to employees (e.g., break room, cafeteria, or entrance). Elements of the employee trip reduction program may include, but are not limited to, the following measures: Provide carpool ride matching assistance for employees, assistance with vanpool formation, and provisions of vanpool vehicles. Provide a separate site entrance exclusively for employee shuttles, carpools, vanpools, public transit, and cyclists that allows for more convenient and expedient access to and from the site during peak turnover periods (i.e., shift changes). Design and provide preferential parking for carpool and vanpool vehicles. Design features may include a separate parking lot for carpool and vanpool vehicles that is closer to the employee building entrance than the parking lot for single occupancy vehicles and/or covered parking spaces for carpool and vanpool vehicles. Other	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		potential design features include connecting the preferential parking lot to the employee entrance of the building with shaded, landscaped walkways or with open-air, covered walkways. Implement parking fees for single occupancy vehicle commuters or a parking cash-out program for employees. Make available free public transit passes to all employees if public transit service is expanded to serve the project site. Provide adequate bicycle parking/racks in a covered, secure area. Provide an adequate number of showers, changing areas, and locker facilities to accommodate employees who bike to work (typically one shower and 3 lockers for every 25 employees of a shift). Fund the design and installation of bikeways or bike lanes along local roads that provide access to the site. Implement compressed work schedules for employees (e.g., 4 shifts per week for full time employees). Operate free employee shuttle or vanpool system that serves employees according to their shift times and places of residence. Low-emissions shuttle or vanpool vehicles shall be used (e.g., hybrid, CGN, or electric). Provide a covered area for the on-site employee shuttle stop or vanpool parking lot and an open-air covered walkway connection to the employee entrance of the building to provide summertime shade and protection from rain. Provide incentives for employees who take their children to child daycare centers to select nearby centers and designate these centers as official stops of the free employee shuttle or vanpool system. Incentives may include, but are not limited to, the subsidization of daycare rates or the negotiation of group discounts for children of employees at these childcare providers. An on-site child daycare center shall be provided only if supported by the findings of a comprehensive HRA performed in consultation with SJVAPCD. Time employee work shifts according to the class times at nearby K–12 schools and/or have employee shuttles or vanpools make stops at nearby K–12 schools.	

Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		4.2-2c: Implement Recommended Mitigation Measures to Reduce Operational Emissions. The following required mitigation measures shall be implemented by the project applicant to reduce operation-related emissions regardless of whether the emission reductions can be quantified and documented for compliance with the ISR rule required by Mitigation Measure 4.2-2a or whether they result in a quantifiable reduction of employee commute trips in single occupancy vehicles. However, any emissions reductions attained by these measures that can be quantified and documented can be credited to achieve the ISR reduction goals discussed in Mitigation Measure 4.2-2a.or employee trip reduction goals discussed in Mitigation Measure 4.2-2b. These required measures are listed below. The applicant's participation in EPA's SmartWay Transport Partnership (EPA 2007) shall include the portion of its haul truck fleet that is based at or serves the Merced distribution center and shall continue participation of this truck fleet in the Partnership for as long as the Partnership or a similar successor program exists. The Applicant shall fully fund or contribute its fair share of funding for the development of a Class II Bike Lanes along Childs Avenue and Gerard Avenue from Parsons Avenue to the project's eastern boundary line that would connect the proposed project to nearby land uses, including the residential neighborhoods to the west along Childs Avenue and Gerard Avenue. Building bicycle lanes at these locations is consistent with the City of Merced Bicycle Plan, which was adopted on October 20, 2008 and meets requirements of the California Bicycle Transportation Act (1994) and qualifies the City of Merced to receive state funding for bicycle projects. The City shall determine the Applicant's fair share monetary contribution to the development of these bicycle lanes and the Applicant shall pay its fair share at the same time building permit fees are due to the City. Provide on-site shops and services for employees including a cafeteria and a bank/ATM.	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		Use only electric-powered landscape maintenance equipment to care for landscaped areas. If this work is hired out to a landscaping company, then the contract shall prohibit the use of gasoline or diesel powered landscape maintenance equipment. Building and site design shall include electrical outlets around the exterior of the units to enable use of electric landscape maintenance equipment. **4.2-2d: Implement Additional Operational On-Site Emission Reduction Measures.** Where feasible, additional measures shall be implemented to reduce operational emissions. Such measures shall include, but are not limited to the additional measures listed below. If, however, the additional measures listed below are technologically or economically infeasible, the Applicant shall submit a written report to the City of Merced Planning & Permitting demonstrating such infeasibility. Approval of this report shall be received by the Applicant prior to receiving final discretionary approval of the project from the City of Merced Planning & Permitting. Purchase and operate electric or hybrid-powered yard tractors (e.g., Volk-brand tractors) to serve as "yard trucks" that move trailers to and from the trailer yard and loading docks. Provide electric maintenance equipment, install solar, low-emission, or central water heaters, increase building insulation beyond Title 24 requirements, orient buildings to take advantage of solar heating and natural cooling and use passive solar designs, energy efficient windows (double pane and/or Low-E), highly reflective roofing materials, cool pavement, radiant heat barrier, install photovoltaic cells, programmable thermostats for all heating and cooling systems, awnings or other shading mechanisms for windows, patio, and walkway overhangs, ceiling fans, utilize passive solar cooling and heating designs, utilize day lighting systems such as skylights, light shelves, and interior transom windows. The project shall include as many clean alternative energy features as possible to promote energy self-sufficiency (e.g., photovoltaic	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		cells, solar thermal electricity systems, small wind turbines). **4.2-2e: Implement an Emissions Reduction Agreement with SJVAPCD to Reduce Operational Emissions of ROG and NO_X.** The Applicant shall enter into an emissions reduction agreement with SJVAPCD to reduce net ROG and NO_x emissions to less than 10 TPY. This agreement includes an emission reduction program, whereby the applicant funds projects in the SJVAB, such as replacement and destruction of old engines with new more efficient engines. The agreement requires the Applicant to identify and propose opportunities for the reduction of emissions to fully mitigate the project's operational emissions of ROG and NO_x to less than 10 TPY, and includes opportunities for removal or retrofit of stationary, transportation, indirect, and/or mobile-source equipment. Each proposal requires SJVAPCD approval and verification of emission reduction prior to receiving final discretionary approval of the project from the City of Merced. The emissions reduction agreement shall be implemented in addition to the Employee Trip Reduction Program required by Mitigation Measure 4.2-2b, the set of Recommended Mitigation Measures to Reduce Operational Emissions required by Mitigation Measure 4.2-2c, and the set of Additional Operational On-Site Emission Reduction Measures required by Mitigation Measure 4.2-d. However, any emission reductions achieved through these measures that are quantifiable and verifiable could effectively reduce the amount of additional, off-site reductions that must be obtained through the emissions reduction agreement. (Furthermore, any quantifiable and verifiable emissions of CAPs that would result as an added benefit from implementation of Mitigation Measures 4.2-6b and 4.2-6d, which are designed to achieve GHG reductions as discussed under Impact 4.2-6 below, could also effectively reduce the amount of additional, off-site reductions that must be obtained through the emissions reduction agreement.) To the extent feasible, the selection of program for reducing operational emissions of CAPs established in the agreement shall give preference to off-site emission reduction projects that are located in or in close proximity to the City of Merced. If approved by SJVAPCD the Applicant may develop an emissions reduction agreement that also fulfills the compliance requirements of	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		SJVAPCD's ISR Rule (Rule 9510) discussed in Mitigation Measure 4.2-2a. Development and implementation of the emissions reduction agreement shall be fully funded by the Applicant.	
4.2-3: Generation of Long-Term, Operation-Related (Local) Mobile-Source Emissions of CO. Based on SJVAPCD's screening criteria, project-generated long-term operational local mobile-source emissions of CO would not result in or substantially contribute to emissions concentrations that exceed the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm, respectively. As a result, this impact would be less than significant.	LTS	No mitigation is required.	LTS
4.2-4: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants. Construction and operation of the proposed project would result in increased health risk levels associated with short-and long-term emissions of diesel PM and other TACs. However, the incremental increase in health risk levels, including cancer risk and noncancer chronic risk, would not exceed applicable thresholds at nearby sensitive receptors. As a result, this impact would be less than significant.	LTS	No mitigation is required.	LTS
4.2-5: Exposure of Sensitive Receptors to Emissions of Odors. Construction and operation of the proposed project would not result in the frequent exposure of receptors to substantial objectionable odor emissions. As a result, this impact would be less than significant.	LTS	No mitigation is required.	LTS
4.2-6: Generation of Emissions of Greenhouse Gases. Construction- and operation-related activities of the proposed project would result in a considerable net increase in emissions of CO_2 and other greenhouse gases. These levels would constitute a considerable net increase in GHG emissions. In addition, this increase would conflict with the state's AB 32 goals, which require reductions in statewide emissions levels of GHGs. As a result, this impact would be considered significant.	S	**4.2-6a: Implement Mitigation Measures 4.2-1a and 4.2-1b.** The applicant shall implement Mitigation Measures 4.2-1a and 4.2-1b, which will have the added benefit of reducing construction-related emissions of CO_2. **4.2-6b: Ensure On-Site Yard Trucks are Maintained and Meet On-Road Truck Emissions Standards.** The applicant shall ensure that all on-site "yard trucks" have ARB-approved on-road truck engines that meet on-road truck emissions standards and are maintained in proper working condition	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		according to manufacturer specifications. **4.2-6c: Implement Mitigation Measures 4.2-2a, 4.2-2b, 4.2-2c, and 4.2-2d.** The applicant shall implement Mitigation Measures 4.2-2a, 4.2-2b, 4.2-2c, and 4.2-2d, which will have the added benefit of reducing project-generated, operation-related emissions of CO_2. **4.2-6d: Implement Effective Mitigation Measures.** The following measures, as well as any other effective mitigation measures, shall be implemented by the project applicant to further reduce operation-related emissions of CO_2. ► Install solar panels in all available areas of the project site, including the roof of the warehouse building, the buffer areas surrounding the paved truck yards and employee parking lot, and covered parking areas, walkways and outdoor areas, to supply electricity for on-site use. This measure would be consistent with the Merced Vision 2015 General Plan Policy SD-3.1, which is to promote the use of solar energy technology (City of Merced 1995). ► Determine which local electricity provider, Pacific Gas and Electric Company or Merced Irrigation District, produces electricity with the lowest CO2-equivalent output emission rate (lb/MWh) and select this provider to meet remaining electricity demand of on-site operations. ► Retain the portion of the existing almond orchard located between the proposed truck gate and future Campus Parkway. For all almond trees that are subject to removal, participate in an urban and community forestry program (such as the UrbanWood program managed by the Urban Forest Ecosystems Institute [Urban Forest Ecosystems Institute 2007]) in which tree wood is harvested for an end-use that would retain its carbon sequestration (e.g., furniture building, cabinet making). For all nonharvestable almond trees that are subject to removal, develop an off-site tree program that includes a level of tree planting that, at a minimum, increases	

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		carbon sequestration by an amount equivalent to what would have been sequestered by the almond orchard during its lifetime. This program shall be funded by the applicant and reviewed for comment by an independent Certified Arborist unaffiliated with the Applicant. Final approval of the program shall be provided by the City. Components of the program may include, but not be limited to, providing urban tree canopy in the City of Merced, or reforestation in suitable areas outside the City. Upon its completion, the California Urban Forestry Greenhouse Gas Reporting Protocol shall be used to assess this mitigation program. At the time of writing this document, the Center for Urban Forest Research expects to complete the California Urban Forestry Greenhouse Gas Reporting Protocol with the California Climate Action Registry sometime in 2008 (Center for Urban Forest Research 2007). All unused vegetation and tree material shall be shipped to the nearest composting facility, or landfill that is equipped with a methane collection system, or biomass power plant. Tree and vegetative material should not be burned on or off-site unless used as fuel in a biomass power plant. ► The applicant shall inventory all emissions of GHGs associated with operation of the project according to the most recently established methodologies of the CCAR or ARB. This inventory shall include mobile-source GHG emissions associated with trips by Wal-mart trucks traveling to and from the distribution center, and on-site vehicles that are part of Wal-mart's vehicle fleet. At the time of writing this report the most recently established methodology is the California Climate Action Registry's General Reporting Protocol, Version 2.2 (CCAR 2007).	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.3 Biological Resources			
4.3-1: Effects on Special-Status Plants. Implementation of the proposed project would result in loss of agricultural and ruderal habitats, which are unsuitable for special-status plants known to occur in the region. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.3-2: Effects on Special-Status Wildlife. Implementation of the proposed project would result in loss of approximately 150 acres of suitable foraging habitat for Swainson's hawk and could result in destruction and/or disturbance of occupied burrowing owl burrows. Other special-status wildlife species known to occur in the project vicinity are unlikely to occur on the project site and would not be affected by project implementation. This impact would be potentially significant.	PS	**4.3-2: Implement Measures to Minimize Potential Project Effects on Swainson's Hawk and Burrowing Owl.** To minimize potential project effects on Swainson's hawk and burrowing owl, the project applicant shall do the following: **Swainson's Hawk** ► Loss of Swainson's hawk foraging habitat shall be compensated for by preservation and management of foraging habitat of at least a similar quality at an appropriate off-site location. Specific measures to offset the loss of foraging habitat shall be developed in consultation with DFG pursuant to DFG's "Draft Non-regulatory Guidelines for Determining Appropriate Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni)." Compensatory mitigation shall be provided for any loss of suitable foraging habitat, including fallow or active agricultural fields (not orchards), before any grading on the site begins. ► Mitigation lands shall be either grassland or croplands (i.e., row crops or alfalfa) that provide suitable Swainson's hawk foraging habitat and shall be located within 10 miles of a known active nest site. In accordance with DFG mitigation guidelines (DFG 1994), habitat shall be provided at a ratio of 0.75 acre of mitigation land for each acre of foraging habitat that would be lost within 5 miles of, but greater than 1 mile from, the nearest active nest. ► Long-term protection of mitigation lands shall be ensured through fee title acquisition, conservation easement, or other suitable mechanisms. Long-term management of mitigation lands shall be ensured by establishing a management endowment or other suitable funding source.	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		Burrowing Owl ► The project applicant shall hire a qualified biologist to conduct preconstruction surveys for burrowing owl to determine whether burrowing owls occupy the site during the breeding and/or nesting season. The timing and methodology for the surveys shall be consistent with DFG and Burrowing Owl Consortium survey guidelines. Winter surveys shall be conducted on four separate days between December 1 and January 31. Nesting season surveys shall be conducted on four separate days between February 1 and August 31, with at least two of the survey days during the peak nesting season (April 15–July 15). ► If no burrowing owls are documented during the surveys, the site shall be regularly maintained in a manner that ensures owls do not occupy the site in the future (e.g., regular discing of open areas). No further mitigation shall be necessary. ► If burrowing owls are discovered on the project site, the project applicant shall immediately notify and coordinate with DFG regarding implementation of passive relocation methods to exclude the owls from the site prior to initiating construction activities. Exclusion shall be conducted through installation of one-way doors at the burrow entrances and subsequent destruction of the burrows to preclude re-occupation. Passive relocation may only be conducted during the non-nesting season (September 31–January 31). After relocation, the site shall be regularly monitored to confirm that burrowing owls have not re-occupied the site. If the site is re-occupied, exclusion measures shall be repeated, in coordination with DFG. ► In addition to exclusion of the owls from the site, the project applicant shall consult with DFG to provide appropriate compensation for loss of burrowing owl habitat. To offset the loss of foraging and burrow habitat on the project site, DFG recommends, in their 1995 Staff Report on Burrowing Owl Mitigation, a minimum of 6.5 acres of foraging habitat (calculated on a 100 meter {approximately 300 ft.} foraging	

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		radius around the burrow) per pair or unpaired resident bird, should be acquired and permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to the Department. Mitigation for loss of Swainson's hawk foraging habitat could, upon approval by DFG, be used concurrently to mitigate for the loss of burrowing owl habitat. ► Long-term protection of mitigation lands shall be ensured through fee title acquisition, conservation easement, or other suitable mechanisms. Long-term management of mitigation lands shall be ensured by establishing a management endowment or other suitable funding source.	
4.3-3: Effects on Sensitive Habitats. Implementation of the proposed project would result in loss of agricultural and ruderal habitats that are not considered sensitive by any biological resource agencies or conservation organizations. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.3-4: Effects of Wildlife Movement. Implementation of the project would not substantially interfere with wildlife movement or impede the use of wildlife nursery site. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.3-5: Consistency with Local Plans, Policies, and Ordinances. Implementation of the project could conflict or be inconsistent with the City of Merced General Plan. This impact would be significant.	S	**4.3-5: Implement Measures to Minimize Conflict with the City's General Plan.** Implementation of Mitigation Measure 4.3-2 would reduce the impact on consistency with the City's General Plan to a less-than-significant level.	LTS
4.3-6: Consistency with Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Conservation Plan. Implementation of the project would not conflict with or be inconsistent with any conservation plans because no such plans apply to the project site. This impact would be considered less than significant.	LTS	No mitigation is required.	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.4 Cultural Resources			
4.4-1: Destruction/Damage to As-Yet Undiscovered Cultural Resources. Subsurface disturbances could potentially destroy or damage of as-yet undiscovered prehistoric or historic cultural resources. If these resources were to represent "unique archaeological resources" or "historic resources" as defined by CEQA, a significant impact would occur.	S	**4.4-1: Contact Cultural Resources Specialist for Potential Cultural Finds during Project-Related Ground-Disturbing Activities.** If unrecorded cultural resources are encountered during project-related ground-disturbing activities, a qualified professional cultural resources specialist shall be contacted to assess the potential significance of the find. If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during project-related construction activities, ground disturbances in the area of the find will be halted and a qualified professional archaeologist will be notified regarding the discovery. The archaeologist shall determine whether the resource is potentially significant per the CRHR and develop appropriate mitigation. The preferred mitigation would be preservation in place. If that is not feasible, a mitigation plan would be prepared and implemented and could include, but not necessarily be limited to documentary research; subsurface testing; data recovery; the analysis of excavated materials; preparation of a technical report; and curation of the collection and supporting documentation at a qualified institution.	LTS
4.4-2: Potential to Uncover Human Remains. Subsurface disturbances could potentially uncover unmarked historic-era and prehistoric Native American burials. Any such disturbance would represent a significant impact.	S	**4.4-2: Stop Potentially Damaging Work if Human Remains Are Uncovered during Construction, Assess the Significance of the Find, and Pursue Appropriate Management.** In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the contractor and/or the project proponent shall immediately halt potentially damaging excavation in the area of the burial and notify the Merced County Coroner and a professional archaeologist to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated Most Likely Descendent (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting on notification of a discovery of Native American human remains are identified in California PRC Section 5097.9. Implementation of Assembly Bill (AB) 2641 requires that the following procedures be implemented: Upon the discovery of Native American remains, the procedures above regarding involvement of the County Coroner, notification of the NAHC, and identification of a MLD shall be followed. The landowner shall ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards and practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendents, or other culturally appropriate treatment may be discussed. AB 2641 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the landowner shall comply with one or more of the following: (1) Record the site with the NAHC or the appropriate Information Center (2) Utilize an open-space or conservation zoning designation or easement (3) Record a document with the county in which the property is located	

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Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.5 Geology, Minerals, Soils, and Paleontological Resources			
4.5-1: Disturbance of Paleontological Resources during Earth-Moving Activities. Previously undiscovered paleontological resources could be present in sediments of the Modesto Formation that underlie the project site. Therefore, construction activities could potentially disturb unknown subsurface paleontological resources. Destruction of "significant" paleontological resources would be a potentially significant impact.	PS	**4.5-1: Implement Construction Personnel Training and Recover Paleontological Resources if Encountered.** To minimize potential adverse impacts on unique, scientifically important paleontological resources, the project applicant shall do the following: ► Before the start of grading or excavation activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This worker training shall be prepared and presented by a qualified paleontologist or archaeologist. ► If paleontological resources are discovered during earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find and shall notify the City planning department. The project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a proposed mitigation plan in accordance with SVP guidelines (1995). The proposed mitigation plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations determined by the lead agency to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.	LTS

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Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.5-2: Risks to People and Structures from Surface Fault Rupture and Strong Seismic Ground Shaking. The project site is located in an area of low seismic activity and structures at the site would be designed in accordance with CBC standards. Therefore, this impact is considered less than significant.	LTS	No mitigation is required.	LTS
4.5-3: Risks to People and Structures from Seismically-Induced Liquefaction and/or Subsidence. While the project site is located in an area of low seismic activity, localized areas of the project site may pose a hazard related to liquefaction and/or subsidence if seismic activity were to occur. Therefore, this impact is considered potentially significant.	PS	**4.5-3a: Prepare a Final Geotechnical Design Report and Implement All Applicable Recommendations.** Before the approval of grading plans for all project phases, a final geotechnical subsurface investigation report shall be prepared by the project applicant(s) for the proposed development and shall be submitted to the City. The final geotechnical engineering report shall address and make recommendations on the following: ► site preparation; ► appropriate sources and types of fill; ► potential need for soil amendments; ► road, pavement, and parking areas; ► structural foundations, including retaining wall design; ► grading practices; ► erosion/winterization; ► expansive/unstable soils; and ► liquefaction. The geotechnical investigation shall include subsurface testing of soil and groundwater conditions and determine appropriate foundation designs that are consistent with the CBC. Recommendations contained in the geotechnical engineering report shall be noted on the grading plans and implemented as appropriate before the issuance of building permits. Design and construction of all new development in all phases of the project shall be in accordance with the CBC. It is the responsibility of the project applicant(s) to provide for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the report.	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		4.5-3b: Provide On-Site Construction Monitoring by a Geotechnical Engineer. All earthwork shall be monitored by a geotechnical engineer retained by the project applicant(s). The geotechnical engineer shall provide oversight during all excavation, placement of fill, and disposal of materials removed from and deposited on the subject site and other sites. Before export/import of any soil to/from an off-site location, the project applicant(s) shall obtain a grading permit from the City Inspection Services Division.	
4.5-4: Potential Temporary, Short-Term Construction-Related Erosion. Construction activities during project implementation would involve grading and movement of earth, which could expose soils to erosion and result in the loss of topsoil. This impact is considered **potentially significant**.	PS	**4.5-4: Prepare and Implement a Grading and Erosion Control Plan.** A grading and erosion control plan shall be prepared by a California Registered Civil Engineer retained by the project applicant(s) for all project phases. The grading and erosion control plan shall be submitted to the City Inspection Services Division before issuance of grading permits for all new development within the project site. The plan shall be consistent with Appendix Chapter A33 of the CBC as well as the City's National Pollutant Discharge Elimination System (NPDES) permit and shall include the site-specific grading associated with development for all project phases. The plan shall include the location, implementation schedule, and maintenance schedule of all erosion and sediment control measures, a description of measures designed to control dust and stabilize the construction-site road and entrance, and a description of the location and methods of storage and disposal of construction materials. Erosion and sediment control measures could include the use of detention basins, berms, swales, wattles, and silt fencing. Stabilization of construction entrances to minimize trackout (control dust) is commonly achieved by installing filter fabric and crushed rock to a depth of approximately 1 foot. The project applicant(s) shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials. **Implement Mitigation Measures 4.5-4 and 4.6-1a.**	LTS

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4.5-5: Potential Damage to Structures from Construction on Expansive Soils. Portions of the project site are underlain by soils that have a moderate to high potential for expansion when wet. Construction in these soils may result in foundation movements that could cause damage to overlying structures. This impact is considered **significant**.	S	**4.5-5: Implement Mitigation Measures 4.5-3a and 4.5-3b.**	LTS
4.6 Hydrology and Water Quality			
4.6-1: Short-Term Degradation of Water Quality from Project-Related Construction Activities. Construction disturbances associated with the proposed project would create the potential for soil erosion and sedimentation of stormwater drainage systems and runoff to the Merced Irrigation District Doane Lateral Canal west of the proposed project site. The construction process may also involve the potential for releases of other pollutants to surface waters and/or the future storm drain system, including oil and gas, chemical substances used in the construction process, accidental discharges, waste concrete and wash water. This impact is considered potentially significant.	PS	**4.6-1a.Acquire Appropriate Regulatory Permits and Implement SWPPP and BMPs.** Before the approval of grading permits and improvement plans, the project applicant for all project phases shall consult with the City of Merced, the SWRCB, and the Central Valley RWQCB to acquire the appropriate regulatory approvals that may be necessary to obtain a SWRCB statewide NPDES stormwater permit for general construction activity, and any other necessary site-specific Waste Discharge Requirements WDRs or waivers under the Porter-Cologne Act. The project applicant shall prepare and submit the appropriate Notice of Intent (NOIs) and prepare the SWPPP and any other necessary engineering plans and specifications for pollution prevention and control. After completion of construction and issuance of a Notice of Completion by the City of Merced, the project applicant shall prepare and submit the appropriate Notice of Termination (NOT) of the NOI. The SWPPP and best management practices (BMPs) therein shall identify and specify: ► the use of erosion and sediment-control BMPs, including construction techniques that will reduce the potential for runoff as well as other measures to be implemented during construction. These may include but not be limited to sedimentation ponds, inlet protection, perforated riser pipes, check dams and silt fences; ► the means of waste disposal; ► the implementation of approved local plans, nonstormwater-management controls, permanent postconstruction BMPs, and	LTS

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		inspection and maintenance responsibilities; ► the pollutants that are likely to be used during construction that could be present in stormwater drainage and nonstormwater discharges, and other types of materials used for equipment operation; ► spill prevention and contingency measures, including measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills; ► personnel training requirements and procedures that will be used to ensure that workers are aware of permit requirements and proper installation methods for BMPs specified in the SWPPP; and ► the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. Where applicable, BMPs identified in the SWPPP shall be in place throughout all site work and construction and shall be used in all subsequent site development activities. BMPs shall include the following measures: ► Implementing temporary erosion-control measures in disturbed areas to minimize discharge of sediment into nearby drainage conveyances. These measures may include silt fences, staked straw bales or wattles, sediment/silt basins and traps, geofabric, sandbag dikes, and temporary vegetation. ► Establishing permanent vegetative cover to reduce erosion in areas disturbed by construction by slowing runoff velocities, trapping sediment, and enhancing filtration and transpiration. ► Using drainage swales, ditches, and earth dikes to control erosion and runoff by conveying surface runoff down sloping land, intercepting and diverting runoff to a watercourse or channel, preventing sheet flow over sloped surfaces, preventing runoff accumulation at the base of a grade, and avoiding flood damage along roadways and facility infrastructure.	

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Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		All construction contractors shall retain a copy of the approved SWPPP on the construction site. Implementation of Mitigation Measure 4.6-1a would reduce the potentially significant impact of water quality degradation from project-related construction activities to a less-than-significant level because the project applicant would conform to applicable local and state regulations regulating construction discharges and successfully implement the SWPPP. However, Mitigation Measure 4.6-1b, discussed below, is necessary to assure that the measures put in place by Mitigation Measure 4.6-1a are properly maintained during the life of the project. **4.6-1b: Establish a Maintenance Entity for BMPs.** The project applicant shall establish a maintenance district, Community Facilities District (CFD), or other maintenance entity acceptable to the City of Merced and the MID, prior to recordation of any Final Maps, to provide funding for the operation, maintenance, and replacement costs of the stormwater BMPs. The maintenance entity shall insure that stormwater runoff shall meet all state and local water quality requirements, through modification of BMPs or stormwater pretreatment measures if required.	
4.6-2: Long-Term Degradation of Surface Water Quality from Project-Related Contaminants. The conversion of undeveloped land to urban land uses would alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Overall, the potential for the proposed project to cause or contribute to long-term discharges of urban contaminants (e.g., oil and grease, trace metals and organics, trash) into the stormwater drainage system would increase compared to existing conditions. This impact is considered **potentially significant**.	PS	**4.6-2. Develop and Implement a BMP and Water Quality Maintenance and Monitoring Plan.** Design standards for water quality treatment are being formulated that would meet or exceed City of Merced Storm Drain Master Plan and Standard Design requirements. The design standards, when completed, will incorporate the adopted City of Merced Master Storm Drain Plan and Design guidance (City of Merced 2002): ► Excavated Open Channels – 60-foot right-of-way open channels would convey runoff through areas where the estimated peak flow rates from a watershed exceed the capacity of a 66-foot storm drain. These open channels would include landscaping and bike paths for recreational opportunities. They shall be turfed or otherwise protected to	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		prevent erosion. A minimum of 1 foot of freeboard shall be maintained above the design 10-year water surface elevation to the top of the banks. One side of the channel shall provide for all weather maintenance unless the channel is adjacent to a public road. ► Storm Drains – Underground storm drain pipelines would be utilized. Storm drain trunk lines would be sized to convey the 10-year discharges operating under uniform flow conditions, and shall be located in public streets. ► Stormwater Detention Facilities – The two stormwater detention basins, one draining the north portion of the proposed project site and the other draining the south portion, have been designed to accommodate runoff generated during a 50-year 24-hour storm event under General Plan buildout conditions, with the rate of outflow being limited to the discharge generated by the watershed during a 2-year storm event under existing conditions. Detention basins have been conceptually designed with a maximum depth of 5 feet below ground surface due to the relatively shallow depth to groundwater in some of the areas surrounding the proposed Project. One foot of freeboard from the 50-year 24-hour storm to the top of the basin has also been included in the conceptual design. ► Pump Stations – Due to the relative flatness of the proposed Project terrain, pump stations would be used to augment the gravity flow draining of the detention basins. The pumps have been conceptually designed to handle the 2-year discharge flow from the basins. Facilities would consist of a low flow pump, a high flow pump, and a backup pump. The stormwater treatment system would reduce the increased amount of stormwater runoff and associated erosion created by the proposed project site. The runoff would be collected by overland flow and an underground storm sewer system into detention ponds to control the quantity of runoff exiting the site. The quality of runoff would be controlled by sedimentation ponds, biological	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		treatment of the water by vegetation, infiltration of the water into the ground and a skimmer plate to skim floatable objects from the water surface. Implementation of these mitigation measures would reduce impacts to a less-than-significant level. **Design Criteria and Methodology** To design a treatment system that meets or exceeds the City and MID guidelines and standards for stormwater quantity and quality that must be met or exceeded, the site was analyzed to determine the peak discharge rates for the predeveloped and developed conditions under various storm event scenarios (Carter-Burgess 2007). The City requires the detention ponds to be designed (1) to store water deposited on site by the so-called 50-year storm and (2) to control the allowable discharge from developed conditions so as not to exceed the 2-year predeveloped discharge (City of Merced 2002). The City also has a requirement that the ponds be dry in 48 hours, if the maximum discharge rate will allow it. The MID requires that the allowable discharge from developed conditions not exceed the 10-year storm. However, the MID requested that the maximum allowable discharge be 2,200 gpm (gallons per minute), which is less than both the 10-year storm and the 2-year predeveloped discharge rates. The MID maximum allowable rate of 2,200 gpm, lower than the City's discharge rate of 8,960 gpm, was agreed on by the City and MID (Carter-Burgess 2007). The 24-hour rainfall values were selected from NMFS Atlas 14, Volume I by the National Oceanic and Atmosphere Administration. Time of concentration values were computed based on the methods in the Soil Conservation Service Technical Report Manual SCS TR-55, widely used for calculating stormwater runoff in small urban watersheds (USDA 1986). The detention ponds were size based on volume required to hold the stormwater runoff from a 100-year storm event. The computer program Interconnected Pond Routing by Streamline Technologies, Inc., a FEMA approved stormwater modeling system, was utilized to rout the various storms through the detention ponds and the pump station. The 2-year, 10-year, 25-year, 50-year and 100-year 24-	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		Hour Storms were used in the analysis to size the stormwater conveyances such that they would handle the water volumes of all of those stormwater volumes. **Pre- and Postdevelopment Conditions** The site is currently used as farmland, with cultivation of alfalfa and almonds being the primary crops. Site topography indicates that the site slopes from northeast to southwest, with elevations ranging from approximately 195 feet msl near the northeast corner to approximately 187 feet msl at the southwest corner. Stormwater runoff from the site currently ponds in a low lying area near the southwest corner of the site and eventually spills over to a roadside ditch running to the west along the north side of Gerard Avenue. The development of the approximately 235 acre site would create approximately 110 acres of impervious surface area. To offset the additional impervious area, a series of detention ponds would be constructed around the perimeter of the site area to store stormwater runoff (Exhibit 4.6-2). The detention ponds would be utilized to control the quantity and quality of runoff. The retention time of the stormwater in the ponds would allow additional stormwater infiltration into the soil (Infiltration rates are described in Mitigation measure 4.6-4).As determined by MID based on their review of the proposed Project Preliminary Site Drainage Analysis (Carter-Burgess 2007), stormwater would be pumped from the detention ponds into a connection to an existing irrigation canal. The preferred pump location is shown on Exhibit 4.6-2. The preferred project canal to receive the stormwater runoff would be MID Fairfield Canal (Exhibit 4.6-3). This is the canal preferred by the MID as well based on their review of the proposed Project Preliminary Site Drainage Analysis (Carter-Burgess, 2007). To discharge in to this canal, a pump station would be located near the northeast corner of the development. Stormwater would be pumped in a closed system within the property owned by Wal-Mart, City right-of-way and MID easement/property to Fairfield Canal. In the event the Fairfield Canal could not be utilized, the alternative canal to receive the flow would be the Farmdale Lateral (Exhibit 4.6-4).	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		To reach the Farmdale Lateral, a pump station would be located near the southwest corner of the development (Exhibit 4.6-5). Stormwater would be pumped in a closed system within the property owned by Wal-Mart, City right-of-way or easement and MID easement/property to the Farmdale Lateral. The detention ponds and the drainage channels would be grassed-lined to help filter stormwater runoff. In addition all of the ponds would be interconnected to each other and a discharge pipe would connect the detention ponds to the wet well basin of the pump station. The inlet side of this discharge pipe would have a skimmer plate on it to prevent floating contaminants from entering the wet well basin and leaving the site. Using the maximum discharge rate of 2,200 gpm as required by the MID, the ponds could not be drained within 48 hours for the 10-year storm, as required by the City. Therefore the City would agree to allow longer drawdown duration time for the system. The drawdown durations for the 10-year, 25-year, 50-year and 100-year would be approximately 72 hours, 88 hours, 95 hours and 108 hours, respectively. These drawdown times assume that once the pumps start pumping they would operate continuously; however, the pumps would be controlled by MID. If MID determined that downstream conditions warranted the discharge from the proposed project site be discontinued, then MID would have the ability to shut the pumps down to discontinue the discharge. This would then increase the duration stormwater would remain in the ponds and the additional volume that could infiltrate into the soil. The 10-year, 24-Hour storm runoff volume for the entire 235 acre site for predeveloped conditions is 10.7 af and for developed conditions is 26.2 af. Permanent water quality improvement BMPs may include but not be limited to unlined detention ponds for filtration, biological treatment of runoff over vegetation, skimmer plates on discharge structures and sedimentation basins. The expected pollutant removal success rates listed in Table 4.6-1 suggest that multiple BMPs, when properly installed and maintained, can achieve nearly 100% sediment removal. Multiple temporary construction and	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		permanent BMPs would therefore be used in combination to achieve this result. Although 100% contaminant removal is often infeasible, BMPs would be selected and designed with the objective of achieving maximum contaminant removal, using the best available technology that is economically feasible, and explicitly identifying the expected level of BMP effectiveness in removing contaminants. In summary, the stormwater management design for the proposed project would consist of the following measures to safely convey on-site and off-site flows through the project site, and prevent increased flood hazard on downstream areas by limiting peak discharges to below pre-project levels. ► Stormwater would be captured and conveyed in a closed system within the property owned by Wal-Mart, City right-of-way and MID easement/property ► Detention ponds in the system would be sized based on volume required to hold the stormwater runoff from a 100-year storm event ► Stormwater would be conveyed to Fairfield Canal (preferred) or Farmdale Lateral (alternative) ► Discharge would be limited to 2,200 gpm for all storm events. The finish floor elevation of each structure on the site would be at least 2 feet above the existing ground elevation at the location of the structure, pursuant to City requirements for development within Zone A. The proposed project would meet or exceed City requirements for development within Zone A, and the stormwater management system would safely convey runoff from the 100-year storm.	
4.6-3: On-Site and Off-Site Flooding Hazards from Increased Stormwater Runoff. The proposed project would alter the ground surface and drainage patterns of the majority of the site, creating approximately 110 acres of impervious surface area. This impact is considered potentially significant.	PS	Implementation of Mitigation Measure 4.6-2.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.6-4: Depletion of Groundwater Supplies or Substantial Interference with Groundwater Recharge. The impervious surface area resulting from the proposed project has the potential to interfere with groundwater recharge compared to existing conditions. However, the existing groundwater recharge potential of the site is low due low permeability soil characteristics, and the existing agricultural uses utilize groundwater at a rate greater than that which would be lost to recharge via impermeable surfaces. Therefore this impact is less than significant.	LTS	No mitigation is required.	LTS
4.6-5: Proposed Project Structures within the 100-year Flood Zone Could Impede or Redirect Flood Flows. Portions of the proposed project are within the 100-year flood zone. However, the project stormwater management system, and compliance with City requirements regarding placement of structures in the flood zone, makes this impact less than significant.	LTS	No mitigation is required.	LTS
4.6-6: Wells Not Properly Decommissioned Could Directly Transport Effluent Irrigation Water to the Groundwater Aquifer. The irrigation well on the northeastern portion of the proposed project site has a potential for negative impacts to the site if not removed or filled in a proper manner. The well would be decommissioned pursuant to applicable State and City requirements. Therefore, this impact is less than significant.	LTS	No mitigation is required.	LTS
4.6-7: Potential Exposure to 200-Year Flood Prior to Implementation of SB 5. The project site is located within an area that will require 200-year flood protection as required by SB5, as described in Section 1.2 "Regulatory Setting" above. The potential exists for exposure of the proposed project to the 200-year flood. Therefore this impact is potentially significant.	PS	**4.6-6: Comply with SB 5 Criteria Establishing 200-Year Urban Flood Protection.** Prior to submittal to the City of development agreements, tentative maps or rezones after 2015, but potentially sooner depending on when the Central Valley Flood Protection Plan takes effect, the project applicant would be required to show that one of three conditions would be met: ► flood management facilities provide level of protection necessary to withstand 200-year flood event; ► the development agreement or other entitlements include conditions that provide protections necessary to withstand	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		200-year flood event; or ► the local flood management agency has made adequate progress on construction of a flood protection system that will result in protections necessary to withstand 200-year flood event by 2025.	
4.7 Land Use			
4.7-1: Effects on Adjacent Land Uses/Division of an Established Community. The project site would be located in a planned buildout area and would not divide an established community. This would be a less-than-significant impact.	LTS	No mitigation is required.	LTS
4.7-2: Effects on State and Local Plans and Policies. The proposed project is in compliance with all state and local plans and policies and would result in a less-than-significant impact.	LTS	No mitigation is required.	LTS
4.7-3: Effects on Habitat Conservation Plans. The proposed project site is not located in any habitat conservation plan area and would therefore have a no impact.	NI	No mitigation is required.	LTS
4.8 Noise			
4.8-1: Short-Term Construction Noise. Short-term construction-generated noise levels could exceed local exterior noise standards for non-transportation noise sources (Table 4.8-6) or result in a noticeable increase in ambient noise levels (i.e., 3 dBA CNEL) at existing nearby off-site sensitive land uses. This would be a significant impact.	S	**4.8-1: Regulate Construction before Approval of Implementation Plans.** Prior to approval of Implementation Plans and subsequent projects, the City shall require the applicant to regulate construction as follows: ► Construction shall occur only in the daytime hours between 7 a.m. to 6 p.m., daily. ► Construction staging areas shall be set back from nearby off-site sensitive receptors, as much as possible, including the new Crossing at River Oaks/Sandcastle housing development located west of the site, the existing farmhouse located across Gerard Avenue near the southwest corner of the site, and the	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		existing farmhouse located east of the site across Tower Road. ► Construction equipment mufflers shall be well tuned and maintained according to the manufacturer's specifications, and the equipment's standard noise reduction devices shall be maintained in good working order. ► Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (according to the manufacturers' specifications) and by shrouding or shielding impact tools. All equipment shall have sound-control devices no less effective than those provided by the manufacturer. ► To further address the nuisance impact of project construction, construction contractors shall implement the following: • Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the City in the event of problems. • An on-site complaint and enforcement manager shall be posted to respond to and track complaints and questions related to noise. ► The transportation management plan that is required by Mitigation Measure 4.11-2a and 2b in Section 4.11, "Traffic and Transportation," shall route construction-related traffic away from Weaver Elementary School, Pioneer Elementary School, and residences in the area.	
4.8-2: Stationary- and Area-Source Noise. Noise levels generated by stationary- and area-noise sources on the project site would not exceed local land use compatibility noise level standards at existing nearby noise-sensitive land uses. This would be a less-than-significant impact of the proposed project.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.8-3: Long-Term Operational Traffic Noise. Implementation of the proposed project would result in increases in traffic noise levels greater than 3 dBA and cause traffic noise levels to exceed the City's 60 dBA Ldn exterior noise standard at sensitive receptors within the city limits. This would be a significant impact.	S	**4.8-3: Implement Measures to Reduce Exposure to Traffic Noise from Project.** The project applicant shall implement the following measures to reduce the exposure of existing sensitive receptors to project-generated traffic noise levels: ► The applicant shall offer the owners of the two affected residences on the east side of Tower Road between SR 140 and Gerard Avenue and the single residence located on the south side of Gerard Avenue between Campus Parkway and the project site entrances the installation of a sound barrier along the property line of their affected residential properties. The sound barriers must be constructed of solid material (e.g., wood, brick, adobe, an earthen berm, or combination thereof). All barriers shall blend into the overall landscape and have an aesthetically pleasing appearance that agrees with the color and rural character of the houses and the general area, and not become the dominant visual element of the community. Relocation of the driveway at each residence may be necessary in order to preclude having gaps in the sound barrier. Relocation of landscaping may also be necessary to achieve an aesthetically pleasing appearance. The owners of the affected properties may choose to refuse this offer; however, the offer shall be made available to subsequent owners of the property. If an existing owner refuses these measures a deed notice must be included with any future sale of the property to comply with California state real estate law, which requires that sellers of real property disclose "any fact materially affecting the value and desirability of the property" (California Civil Code, Section 1102.1[a]) and shall indicate that the applicant agrees to install a sound barrier, as described above.. The applicant shall be responsible for all costs incurred by the implementation of this mitigation measure. ► To ensure compliance with applicable noise standards, a site-specific noise study shall be conducted by the City or its approved consultant to determine specific noise barrier design.	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		The applicant shall be responsible for all costs incurred by the implementation of this mitigation measure. ► The cost to fully implement this mitigation measure, including related studies, and design and installation shall be completely funded by the applicant. ► The applicant shall maintain its truck fleet in proper working condition, including truck mufflers and exhaust systems, according to manufacturers' specifications.	
4.8-4: Intermittent Single-Event Noise from Trucks Passing Off-Site Sensitive Receptors. Intermittent Single-Event Noise Level increases from Trucks Passing Off-Site Sensitive Receptors would result in a significant impact**.**	S	Implement Mitigation Measure 4.8-3.	LTS
4.8-5: Exposure of Sensitive Receptors or Generation of Excessive Vibration Levels. Short-term construction-generated vibration levels and truck vibration levels during long-term operations would not exceed Caltrans's recommended standard of 0.2 in/sec PPV with respect to the prevention of structural damage for normal buildings or FTA's maximum acceptable vibration standard of 80 VdB regarding human response for residential uses (i.e., annoyance) at nearby existing residential dwellings. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.8-6: Land Use Compatibility of Proposed Project with On-Site Noise Levels. As a light industrial land use, the proposed project would not be considered a noise sensitive receptor and existing and future projected noise levels are not expected to exceed the City's "normally acceptable" noise standard of 75 L_{dn} for industrial land uses. Therefore, exposure of proposed facility to noise generated at surrounding land uses would be a less-than-significant impact.	LTS	No mitigation is required.	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.9 Population and Housing			
4.9-1: Potential for Directly or Indirectly Inducing Substantial Unplanned Population Growth in an Area. Development of the proposed project would not directly or indirectly induce population growth, but is expected to induce retail service development near the site. The potential impact is less than significant	LTS	No mitigation is required.	LTS
4.9-2: Potential to Displace People or Housing, Necessitating Construction Elsewhere. The project site is undeveloped. There is no housing or population that would be displaced by the proposed construction. There is no impact.	NI	No mitigation is required.	LTS
4.10 Public Health and Hazards			
4.10-1: C**reate a Safety Hazard to Construction Workers and the General Public from Potential Release of Unknown or Previously Undiscovered Hazardous Materials during Construction.** No "recognized environmental concerns" (RECs) have been identified to date on the project site. However, excavation and construction activities in the area could result in the exposure of construction workers and the general public to hazardous materials, including petroleum hydrocarbons, pesticides, herbicides, and fertilizers; contaminated debris; elevated levels of chemicals that could be hazardous; or hazardous substances that could be inadvertently spilled or otherwise spread. In addition, if contaminated sites in the area are not remediated before use of the site, then residents and others could be exposed to hazardous materials. This impact would be significant.	S	**Mitigation Measure 4.10-1: Remediate Unknown or Previously Undiscovered On-Site Hazardous Materials.** If, during site preparation and construction activities, previously undiscovered or unknown evidence of hazardous materials contamination is observed or suspected through either obvious or implied indicators (i.e., stained or odorous soil), construction activities shall immediately cease in the area of the find. MCDEH and the City of Merced Environmental Health Division staff shall be immediately consulted, and the project applicant shall contract with a qualified consultant registered in DTSC's Registered Environmental Assessor Program to assess the extent to which soil and/or groundwater has been adversely affected by past activities. This investigation shall follow DTSC guidelines and shall include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. If necessary, risk assessments shall include a DTSC Preliminary Endangerment Assessment or no further action determination, or equivalent. Any required remediation shall include a DTSC Remedial Action Work Plan or equivalent. The site shall be remediated in accordance with recommendations made by a qualified environmental consultant registered in DTSC's	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		Registered Environmental Assessor Program; MCDEH; the City of Merced Environmental Health Division staff; Central Valley RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies as generally described above. The agencies involved would be dependent on the type and extent of contamination. Site preparation and construction activities shall not proceed until remediation is completed to the satisfaction of MCDEH and the City of Merced Environmental Health Division.	
4.10-2: Create a Significant Hazard to Construction Workers and the General Public through the Use of Hazardous Materials during Construction of the Project. The proposed project would involve the storage, use, and transport of hazardous materials at the project site during construction activities. Compliance with federal, state, and local hazardous materials regulations, which would be monitored by the state and/or local jurisdictions, would reduce impacts associated with the use, transport, and storage of hazardous materials during construction. Therefore, impacts related to creation of significant hazards to the public or the environment would be less than significant.	LTS	No mitigation is required.	LTS
4.10-3: Create a Significant Hazard to the General Public through the Routine Use of Hazardous Materials during Operation of the Project. The proposed project would use many materials, some of which are considered hazardous, during the course of its daily operations. Compliance with federal, state, and local hazardous materials regulations, which would be monitored by the state and/or local jurisdictions, would reduce impacts associated with the use, transport, and storage of hazardous materials during operation of the project. Therefore, impacts related to creation of significant hazards to the public or the environment would be less than significant.	LTS	No mitigation is required.	LTS
4.10-4: Create a Significant Hazard through the Transport of Hazardous Materials Adjacent to Schools in the Vicinity of the Project. The proposed project would require transportation of materials, some of which are considered hazardous, during	S	Implementation of Mitigation Measure 4.11-2b.	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
construction of the proposed project and through the course of its daily operations. Based on the designated truck routes to and from the project site (see Section 4.11, Traffic and Transportation), no tractor trailer traffic is expected to travel past any of these schools; however, there is a potential for trucks to stray from their expected routes occasionally and pass by these schools. Therefore, impacts related to creation of significant hazards to students would be significant.			
4.10-5: Exposure to Electromagnetic Fields. The proposed project would be in close proximity to electrical transmission lines on the project site and would potentially result in health hazards associated with exposure to EMFs emitted from these lines. Because the proposed warehouse building and associated uses would be constructed approximately 400 feet from these transmission lines, the exposure to EMFs would be minimal and the proposed location of on-site facilities would be adequate to reduce potential hazards associated with electromagnetic fields. This impact would be **less than significant**.	LTS	No mitigation is required.	LTS
4.10-6: Exposure of People or Structures to Wildfire Fires. The project site is not located in a designated wildland fire area, a High Fire Hazard Severity Zone, or a SRA area. Therefore, the project would not expose people or structures to significant risk of loss of injury involving wildland fires. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.11 Traffic and Transportation			
4.11-1: Effects on Level of Service. Implementation of the project would not cause study intersections and roadway segments to exceed level of service standards. For intersections and roadway segments that already exceed level of service standards, the project would not contribute more than 5% of the total volume. This impact is considered less than significant.	LTS	No mitigation is required.	LTS

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4.11-2: Design Feature Hazards, Vehicle Stacking, and Parking Capacity. Implementation of the project would include truck traffic using roadways in the project vicinity, tractor trailer trucks that could potentially park in the project vicinity, and truck operations on streets where school buses operate. The impact is potentially significant.	PS	**4.11-2a: Accommodate All Delivery Truck Parking On-Site.** The project design shall incorporate a designated on-site waiting area within the site between Gerard Road and the truck gate that is located further within the site. This area shall be large enough to accommodate at least 20 inbound delivery trucks. It is recommended that the access roadway be designed to have a temporary parking area located between Gerard Avenue and the truck entrance gate. The parking area shall be paved and marked as a designated waiting area for delivery trucks, and shall not impede access to the site. The holding area(s) shall be located in the interior of the project site and be more than 1,000 feet from all off-site residences, which is a distance threshold identified in the Noise Analysis of this EIR. If the waiting area(s) are located closer than 1,000 feet to off-site residences then sound barrier(s) shall be implemented into the design to ensure that on-site truck idling would not result in an exceedence of the nighttime standard of 45 A-weighted decibels energy-equivalent noise level established by the Merced General Plan (Table N-5). Wal-Mart shall instruct all delivery truck drivers not to park, stand, wait, or stay overnight along local roadways. In order to minimize noise and vehicle emissions, idling in the waiting area shall be limited by Wal-Mart to 5 minutes, as required by 13 CCR Chapter 10, Section 2485. **4.11-2b: Manage Truck Traffic on Local Streets.** To reduce hazards on local roadways associated with truck traffic during *construction operations*, Wal-Mart Stores East LP shall ensure that its primary construction contractor implements the following measures: a. Develop and implement a construction truck traffic safety plan in coordination with the City of Merced, County of Merced, and Caltrans. The construction contractor shall develop a plan for traffic safety assurance for the County roadways in the project vicinity. The contractor shall submit the plan to the City Development Services Department for approval before the initiation of construction-related activity	LTS

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Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		that could adversely affect traffic on City, County, and State roadways. The plan(s) may call for the following elements, based on the requirements of each agency: ► posting warnings about the potential presence of slow-moving construction vehicles; ► using traffic control personnel when appropriate; ► scheduling truck trips outside of peak morning and evening traffic periods to the extent feasible; ► placing and maintaining barriers and installing traffic control devices necessary for safety, as specified in Caltrans's *Manual of Traffic Controls for Construction and Maintenance Works Zones* and in accordance with City and County requirements; and ► maintaining routes for passage of emergency response vehicles through roadways affected by construction activities. The contractor shall train construction personnel in appropriate safety measures as described in the plan(s), and shall implement the adopted plan(s). b. *Minimize the accumulation of mud and dirt on local roadways*. All operations shall limit or expeditiously remove the accumulation of project-generated mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The construction contractor shall sweep the paved roadways (water sweeper with reclaimed water recommended) at the end of each day if substantial volumes of soil material have been carried onto adjacent paved, public roads from the project sites. To reduce hazards on local roadways associated with truck traffic during *ongoing operations*, Wal-Mart Stores East LP shall ensure implement the following measures: c. *Develop and implement a truck route plan*. Tractor trailers approaching and departing from the distribution center shall be limited to the following roadways from SR 99 and SR 140:	

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		Campus Parkway, Mission Avenue west of Campus Parkway, Gerard Avenue east of Campus Parkway, and Tower Road. Wal-Mart shall regularly and routinely instruct its employees, contract truck drivers, and vendors of these roadway limitations.	
4.11-3: Emergency Access Impacts. The project shows two access points to the site, both along Gerard Avenue. Emergency service providers may require additional access to a site this large with the operations as proposed. The impact is potentially significant.	PS	**4.11-3: Provide Emergency Access Gate and Driveway.** The project applicant shall modify the site plan to show a third point of ingress and egress on Childs Avenue that is gated and available only for emergency purposes. The emergency access driveway on-site shall be of a width and design acceptable to the City and shall provide unimpeded access to all structures on the site.	LTS
4.11-4: Construction Traffic and Parking. Implementation of the project would involve use of roadways in the vicinity of the project by construction employees and for moving construction equipment on- and off-site. While roadways in the vicinity are capable of accommodating construction traffic and streets abutting the site are capable of accommodating construction worker vehicles, construction vehicles entering and leaving the site could create impacts on local roadways. The impact is a potentially-significant.	PS	Mitigation Measure 4.11-2b will ensure that impacts are reduced to a less-than-significant level.	LTS
4.11-5: Transit, Pedestrian, and Bicycle Impacts. The project could increase demand for public transit in the project site vicinity and affect existing and future pedestrian and bicycle access in the project vicinity. The impact is potentially significant.	PS	**4.11-4: Update Safe Routes to School Plan.** The City shall ensure that the Safe Routes to School Plans are appropriately updated such that school bus and pedestrian routes in the vicinity of the Wal-Mart are revised as appropriate to avoid potential conflicts taking into account the project's potential increase in truck traffic and potential truck routes.	LTS
4.12 Utilities and Public Services			
4.12-1: Increased Demand for Water Supply and Distribution. Implementation of the proposed project would increase demand on the existing water supply and water distribution systems. Existing water supply and distribution facilities would be adequate to serve	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
the project. Therefore, this impact is considered less than significant.			
4.12-2: Demand for Wastewater Treatment and Conveyance Facilities. Implementation of the proposed project would increase demand for wastewater treatment and conveyance facilities. Existing wastewater treatment facilities and the City's wastewater conveyance facilities would be adequate to serve the project. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.12-3: Increased Generation of Solid Waste. The proposed project would incrementally increase the amount of solid waste generated in the City. Because the Highway 59 Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs and because the project would also comply with all federal, state, and local statutes and regulations and the Merced Municipal Code related to solid waste reduction and recycling, this impact would be a less than significant.	LTS	No mitigation is required.	LTS
4.12-4: Increased Demand for Electricity and Required Extension of Electrical Infrastructure. Implementation of the proposed project would increase demand for electricity and electrical infrastructure. PG&E or MID would be able to provide electricity to the project site, and the increase in demand for electricity would not be substantial in relation to the existing electricity consumption in PG&E's or MID's service area. The City of Merced has identified the need to reduce energy demands in new development, and the proposed project would be required to include energy efficiency measures in project designs; therefore, this impact would be potentially significant.	PS	**4.12-4: Incorporated Energy Efficiency Features into Project Designs** The project applicant shall prepare and submit to the City a sustainability plan, which shall incorporate the following energy efficiency features in project designs: ► providing electric maintenance equipment; ► using solar, low-emissions, or central water heaters; ► increasing building insulation beyond Title 24 requirements; ► orienting buildings to take advantage of solar heating and natural cooling; ► limiting the amount of glass on the south and west facades and providing solar protection for south-facing walls through landscaping or earth sheltering; ► installing thermal insulation, double-paned windows, high-tech window glazing, vapor barriers, and controlled air filtration to reduce energy consumption;	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		► installing skylights, light pipes, light shelves, exterior shade panels, and reflectors to transfer light to the interior of the building; and ► using clean alternative energy features, such as photovoltaic cells, solar panels, small wind turbines, and/or fuel cells, to generate power and reduce power consumption.	
4.12-5: Increased Demand for Natural Gas and Required Extension of Natural Gas Infrastructure. Implementation of the proposed project would increase demand for natural gas. PG&E would provide natural gas to the project site, and the increase in demand for natural gas would not be substantial in relation to the existing natural gas consumption in PG&E's service area. The City of Merced has identified the need to reduce energy demands in new development, and the proposed project would be required to include energy efficiency measures in project designs; therefore, this impact would be potentially significant.	PS	**4.12-5: Implement Mitigation Measures 4.12-4.** The applicant shall implement Mitigation Measure 4.12-4 above to reduce potentially significant impacts associated with increased demands for energy to a less-than-significant level by ensuring the proposed project includes energy efficiency measures in project designs.	LTS
4.12-6: Required Extension of Telecommunications Services. Implementation of the proposed project would require extension of existing telecommunication services. AT&T would provide service to the project site and upgrade existing facilities, as necessary, to serve the project. This impact would be less than significant.	LTS	No mitigation is required.	LTS
4.12-7: Increased Demand for Fire Protection Facilities, Systems, Equipment, and Services. Development of the proposed project would result in increased demand for fire protection facilities and services. The City of Merced Fire Department has indicated it would be capable of serving the proposed project, project designs would incorporate all California Fire Code requirements, and project applicant would be required to pay its fair share of costs through payment of the Public Facilities Impact Fees and Permit Inspection Fees; therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
4.12-8: Increased Demand for Police Protection Facilities, Systems, Equipment, and Services. Development of the proposed project would result in increased demand for police protection facilities and services. Project designs would incorporate on-site security measures, and the project applicant would be required to pay its fair share of costs through payment of the Public Facilities Impact Fees; therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
4.13 Visual Resources			
4.13-1: **Effects on a Scenic Vista, or Damage to a Scenic Resource.** The project site would be located in an area planned for industrial development and with existing industrial uses in the vicinity. The site is not a scenic vista or in a notable viewshed, and does not contain scenic resources. Therefore, implementation of the project would result in a less-than-significant impact.	LTS	No mitigation is required.	LTS
4.13-2: Substantial Degradation of the Visual Character or Quality of the Site and Surroundings. The project would alter the visual character of the proposed site itself and significantly impact the visual character of the surrounding area, resulting in a potentially significant impact.	SU	**4.13-2. Prepare and Submit a Landscaping Plan.** The applicant shall prepare and submit a landscaping plan to the satisfaction of the City that includes the following features and accomplishes the following objectives on the site ► The developer shall plant trees (minimum 15 gallon) no further than 30 feet apart, on site along the perimeter roads surrounding the project site, including Childs Avenue, Gerard Avenue, and Tower Road. These trees are in addition to the street trees required every 40 feet per City Standards. Shrubs and turf shall be combined with the trees in a minimum 15-foot wide landscape strip along the entire project perimeter which abut public streets. Irrigation shall be provided to all landscape areas. A detailed landscape and irrigation plan per MMC 17.60 shall be approved by City staff at the building permit stage. ► Parking lot trees at a minimum of one for each six spaces (per MMC 20.58.385) shall be required in all employee and visitor parking areas on site. Parking lot trees, however, shall not be	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		required in truck or trailer parking areas. ► Existing almond trees shall be preserved in any areas of the site that are to be left undeveloped by buildings, parking areas, driveways, drainage basins, etc. The developer shall submit a plan showing the location of existing trees and the proposed development and the City shall approve a plan at the building permit stage for preserving as many trees as feasible. ► All vegetation shall be maintained by an automatic irrigation system. The landscaping and irrigation plans and details shall be subject to review and approval by the City. The City shall create and adopt a mechanism that will ensure that Wal-Mart Stores East, LP maintains the landscaping in accordance with the adopted plan.	
4.13-3: Create Substantial Light or Glare That Would Affect Nighttime Views. The illumination level upon and from the site would change noticeably as a result of the proposed project, resulting in a potentially significant impact on light or glare.	PS	**Mitigation Measure 4.13-3. Prepare and Submit a Lighting Plan.** The applicant shall prepare a lighting plan for review and approval by the City of Merced. The lighting plan shall identify the design and placement, orientation, and illumination level (in watts) of all light fixtures. The lighting plan shall be designed so that illumination is focused downward upon targeted horizontal surfaces. Illumination of vertical surfaces shall be minimized. The lighting plan shall specify that no illumination source (including light bulb and reflector) shall be visible beyond the property line. The exception to this performance standard is at driveway intersections with public streets.	LTS
4.13-4: Substantially Conflict with Goals and Policies in the Merced Vision 2015 General Plan. The project would be located in an area planned for industrial development. The project is consistent with the City's General Plan goals, policies, and land use designation and would result in a less-than-significant impact.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
CUMULATIVE IMPACTS			
Agricultural Resources			
Cumulative Agricultural Land Impact. The project would contribute to cumulative loss of farmland in the region. This is a cumulatively considerable incremental contribution, and the cumulative impact is therefore considered significant.	S	According to Department of Conservation (DOC), 565 acres of Prime Farmland, 177 acres of Farmland of Statewide Importance, 55 acres of Unique Farmland, and 231 acres of Farmland of Local Importance were converted to urban and built-up land between 2000 and 2002 in Merced County. As of 2004, there were 535,562 acres of Farmland in the County. In the period between 2000 and 2004, 7,149 acres of Prime Farmland and 3,345 acres of Farmland of Statewide Importance were lost, and 71 acres of Unique Farmland was gained for a net loss of 10,423 acres over this four-year period. The continued loss of high-quality farmland in the City and surrounding areas of Merced County is a significant cumulative impact. The project would result in a loss of approximately 158.2 acres of Prime Farmland, 57.87 acres of Farmland of Statewide Importance, and 12.61 acres of Unique Farmland, which is considered a cumulatively considerable contribution to this cumulative impact when considered along with past farmland conversions identified above and planned future development proposed in the City of Merced, as shown in the list at the beginning of this section. The City has adopted a Statement of Overriding Considerations for conversion of agricultural land throughout the City's Specific Urban Development Plan (SUDP). Regardless, the impact represents a cumulatively considerable incremental contribution and is significant cumulative impact.	SU
Air Quality			
Cumulative Air Quality Impact (Construction and Operations). The project would not contribute to cumulative degradation of air quality in the region as a result of construction (short term) and operational (long term) air emissions. This would not be a cumulatively considerable incremental contribution, and the project's cumulative impact would be less than significant.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Cumulative Air Quality Impact (Carbon Monoxide). Traffic associated with project operations would not exceed standards for carbon monoxide concentrations at nearby intersections. This would not be a cumulatively considerable incremental contribution, and the project's cumulative impact would be less than significant.	LTS	No mitigation is required.	LTS
Cumulative Air Quality Impact (Toxic Air Emissions). Project operations would not result in the release of toxic air emissions that constitute a public health risk at existing or potential future sensitive receptors, based on SJVAPCD's thresholds. This would not be a cumulatively considerable incremental contribution, and the project's cumulative impact would be less than significant.	LTS	No mitigation is required.	LTS
Cumulative Air Quality Impact (Greenhouse Gas Emissions). Project construction and operations would result in release of carbon dioxide and other greenhouse gases. Even with mitigation measures, the project would result in a net increase of greenhouse gasses and conflict with California's Assembly Bill (AB) 32 goals. This would potentially be a cumulatively considerable incremental contribution, and the cumulative impact would be therefore considered significant.	S	Project implementation would also result in significant air quality impacts with respect to global climate change from both construction- and operation-related emissions of carbon dioxide (CO_2) and other greenhouse gases. Implementation of Mitigation Measures 4.2-6a, 4.2-6b, 4.2-6c, and 4.2-6d would lessen these impacts by requiring specific measures to reduce and/or offset CO_2 emissions. In addition, implementation of Mitigation Measures 4.2-1a and 4.2-2a, which require the project to comply with SJVAPCD's Indirect Source Review (ISR) rule, and Mitigation Measures 4.2-1c and 4.2-2e, which require implementation of an emissions reduction agreement with SJVAPCD, would also result in a reduction in operational CO_2 emissions. However, the extent of the reduction is not quantifiable at the time of writing of this EIR and the resultant contribution of CO_2 emissions by the project may potentially be substantial. Despite mitigation this net increase may potentially conflict with the state's AB 32 goal to reduce statewide GHG emissions to 1990 levels by 2020. Moreover, CO_2 emissions attributable to the project would contribute to the existing and projected global warming trend. Thus, the project's contribution to the significant impact of global climate change would be considered cumulatively considerable, and the project would result in a significant cumulative impact.	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Biological Resources			
Cumulative Biological Resources Impact (Special Status Species Foraging Habitat). Project construction would result in the conversion of foraging habitat that supports Swainson's hawk and burrowing owl. However, because of proposed mitigation, the project's contribution to habitat loss would be mitigated to a less-than-significant level. However, there is a cumulatively considerable incremental contribution, and the project would result in a significant cumulative impact.	S	Implementation of the proposed project would result in loss of approximately 150 acres of suitable foraging habitat for Swainson's hawk and could result in destruction and/or disturbance of occupied burrowing owl burrows. These special-status species are very susceptible to impacts as a result of land development activities occurring throughout the San Joaquin Valley. While it is possible to minimize impacts through avoidance and to preserve compensation habitat, a net loss nevertheless results from the impact. Mitigation included in Section 4.3, "Biological Resources," would be implemented to address potential direct effects on these resources. Preservation and management of Swainson's hawk foraging habitat at an off site location, and surveys and other avoidance measures for burrowing owl as described in Mitigation Measure 4.3-2 would reduce potential impacts to Swainson's hawk and burrowing owl to a less-than-significant level.	LTS
Cultural Resources			
Cumulative Cultural Resources Impact. As a result of research conducted and mitigation measures proposed, project construction would not contribute to the cumulative loss of cultural resources in the region. This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Geology, Soils, and Paleontology			
Cumulative Geology and Soils Impact. Project construction would be subject to adopted construction standards, thus ensuring that impacts associated with soils and geology would not occur. This is a less-than-significant cumulative impact.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Cumulative Geology and Soils Impact. Project construction would be subject to adopted construction standards, thus ensuring that impacts associated with soils and geology would not occur. This is a less-than-significant cumulative impact.	LTS	No mitigation is required.	LTS
Cumulative Paleontological Resources Impact. As a result of research conducted and the anticipated low occurrence, project construction would not contribute to the cumulative loss of paleontological resources in the region. This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Hazards and Hazardous Materials			
Cumulative Hazards and Hazardous Materials Impact. Existing laws addressing storage, transport, and disposal of hazardous materials that may be stored and used at the project site are subject to existing regulations. This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Hydrology and Water Quality			
Cumulative Hydrology and Water Quality Impact. Existing laws address water resources at the project site, and construction and operation of the proposed project would be subject to existing regulations. This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Land Use			
Cumulative Land Use Impact. The proposed project is consistent with local land use regulations and would not result in an incremental contribution to potential division of an established community or adverse affects on adjacent land uses. The project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Noise			
Cumulative Noise Impact. Transportation source noise would extend beyond the project site along existing and future approved offsite roads. Project traffic can cause significant traffic noise impacts to sensitive uses along these roadways. This is a cumulatively considerable incremental contribution, and the project's cumulative impact would be significant.	S	Because the City has not developed a noise ordinance (Espinosa, pers. comm. 2006), the City has elected to adopt the time-of-day exemption established by the Merced County Noise Ordinance for construction noise. Construction activities occurring during the daytime hours are exempt from the noise limits set forth in the Merced County Noise Ordinance (Merced County Code [Code 18.41.070]). Under the terms of the County Code, in order to qualify for this exemption, construction equipment must be fitted with factory installed muffling devices and maintained in good working order, and staging areas must be set back away from off-site sensitive receptors as much as possible. For the proposed project, it was determined that adherence to the existing County noise regulations would be sufficient to avoid significant construction noise impacts. While the construction noise sources associated with the proposed project could be considered exempt if limited to the daytime, there is no guarantee that other noise in the area would be created only during the exempt daytime hours. Therefore, significant cumulative noise impacts associated with construction activities could occur. However, noise levels are not directly additive and attenuate rapidly with distance. Thus, if construction of nearby projects occurs simultaneously, these projects would likely not result in cumulative impacts unless sites are being developed in close proximity to one another and expose sensitive receptors to significant noise levels at the same time. Because the proposed project would not result in significant construction noise impacts after mitigation, it would not contribute to any such significant cumulative noise impacts. Stationary noise associated with the proposed project would not result in exceedence of the City's general plan policies or Merced County's (County's) noise regulations at off-site sensitive receptors. While the noise from any stationary noise sources associated with the proposed project could be controlled at the source (via noise walls, enclosures, site planning), there is no	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		guarantee that all other projects in the area would include such noise controls. Hence, significant cumulative noise impacts associated with stationary noise sources could occur. However, because the proposed project would not result in significant stationary noise impacts, it would result in a small contribution to any significant cumulative noise impacts. While construction- and stationary-source noise can be controlled onsite at the point of origin, transportation-source noise may extend beyond a project site along existing and future approved offsite roads. Project traffic can cause significant traffic noise impacts to sensitive uses along these roadways. As described in Section 4.8, "Noise," implementation of the proposed project would result in significant and unavoidable long-term traffic-generated noise impacts under baseline plus project conditions at residences along the segment of Tower Road between State Route (SR) 140 and Childs Avenue, the segment of Tower Road between Childs Avenue and Gerard Avenue, and the segment of Gerard Avenue between Campus Parkway and the project site entrances. In addition, truck trips generated by the proposed project would result in significant and unavoidable single-event noise level (SENL) impacts at residential land uses located near affected road segments. As explained in the traffic noise analysis of Section 4.8, traffic noise increases would result in significant and unavoidable impacts at the project level at residential receptors along some area roads, including the farm house located along the south side of the segment of Gerard Avenue between Campus Parkway and the project site entrances. Under cumulative conditions, project-generated traffic would cause the traffic noise level to increase 12.4 dBA along this road segment. A 14.7 dBA traffic noise level increase would occur along the segment of Gerard Avenue between the project site entrances and Tower Road; however, no sensitive receptors are located along this road segment. The combined cumulative increase in traffic on local roadways anticipated from the proposed project and regional growth would result in a substantial number of additional existing and proposed	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		sensitive receptors. Thus, the traffic noise impacts from the proposed project and related projects, taken together, are considered cumulatively significant. Future development in the project area may generate additional traffic volume, including truck trips that pass by sensitive receptors, thereby increasing traffic noise, as shown in Table 4.8-10, and the frequency of exposure to SENLs. While some of the future planning projects in the area may result in removal and/or redevelopment of some existing affected receptors, and thereby serve as an opportunity to provide design features that reduce exposure to traffic noise and SENLs, there is no guarantee that these design features would be sufficient.	
Population and Housing			
Cumulative Population and Housing Impact. The project is consistent with existing local land use policies and regulations and would not result in a cumulatively considerable incremental contribution. The cumulative impact is therefore less than significant.	LTS	No mitigation is required.	LTS
Utilities and Public Services			
Utilities—Water			
Cumulative Water Supply Impact. Based on a water supply assessment prepared for the proposed project, there are sufficient water resources to support the proposed project. . This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Utilities—Wastewater			
Cumulative Wastewater Impact. The approved WWTP expansion would accommodate wastewater demand of the project and related projects. Therefore the project's increase in demand is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Utilities—Electricity			
Cumulative Electrical Impact. Because sufficient electricity supplies are available to support cumulative development and cumulative electricity impacts from the proposed project and related projects, the cumulative impact of the project would not result in a cumulatively considerable incremental contribution, and the project's cumulative impact would be less than significant.	LTS	No mitigation is required.	LTS
Utilities—Natural Gas			
Cumulative Natural Gas Impact. Sufficient natural gas supplies are available to support cumulative development and cumulative natural gas demands from the proposed project and related projects. . This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Public Services—Solid Waste			
Cumulative Solid Waste Impact. Existing storage and conveyance capacity would be adequate to serve the project and other development in its service area. . This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Public Services—Police, Fire, and Schools			
Existing fire and police protection services would be adequate to serve the proposed project. . This is not a cumulatively considerable incremental contribution, and the project's cumulative impact is less than significant.	LTS	No mitigation is required.	LTS
Transportation/Traffic *(See Table 2-2 immediately following this table for the project's fair share contribution)*			

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Cumulative Traffic Impact— SR 140 and Parsons Avenue Intersection Operation (2030 No Project). Cumulative traffic growth without the project would cause the SR 140 and Parsons Avenue intersection to operate at an unacceptable LOS (LOS E or F) during the a.m. and p.m. peak hour. This is a cumulatively considerable impact that would occur without the proposed project.	N/A (No Project)	**6-1: Intersection of SR 140 and Parsons Avenue.** Under the 2030 Cumulative No Project Conditions, traffic on SR 140 would operate at deficient LOS F due to high traffic volumes along SR 140. In order to achieve acceptable levels of service, the intersection would have to have a revised traffic signal timing plan as part of a regular signal maintenance routine. This would improve the intersection to operate at an acceptable LOS of D during the a.m. peak hour for the 2030 Cumulative No Project Condition.	N/A (No Project)
Cumulative Traffic Impact— SR 140 and Baker Drive Intersection Operation (2030 No Project). Cumulative traffic growth without the project would cause the SR 140 and Baker Drive intersection to operate at an unacceptable LOS (LOS E or F) during both a.m. and p.m. peak hours. This is a cumulatively considerable impact that would occur without the proposed project.	N/A (No Project)	**6-2: Intersection of SR 140 and Baker Drive.** Under the 2010 Background and 2030 Cumulative No Project Conditions, traffic on Baker Drive would operate at deficient LOS (LOS E or F) due to high traffic volumes on SR 140. The intersection would also meet the traffic signal warrant under both 2010 Background and 2030 Cumulative No Project Conditions. In order to achieve acceptable levels of service, the intersection would have to be signalized to accommodate the southbound left-turn traffic. This would improve the intersection to LOS C during both a.m. and p.m. peak hours under the 2010 Background Conditions and the 2030 Cumulative No Project Conditions.	N/A (No Project)
Cumulative Traffic Impact— SR 140 and Kibby Road Intersection Operation (2030 No Project). Cumulative traffic growth without the project would cause the SR 140 and Kibby Road Intersection to operate at an unacceptable LOS (LOS E or F) during both a.m. and p.m. peak hours. This is a cumulatively considerable impact that would occur without the proposed project.	N/A (No Project)	**6-3: Intersection of SR 140 and Kibby Road.** Under the 2030 Cumulative No Project Conditions, the northbound and southbound traffic on Kibby Road would deteriorate to deficient LOS. Even though the peak hour traffic volumes on SR 140 would be relatively light, the operating condition would not be improved by lane re-striping or adding a lane in any direction. The intersection would also meet the traffic signal warrant under the 2030 Cumulative No Project Conditions. In order to achieve acceptable levels of service, the intersection would have to be signalized and the signal would need to be synchronized with the railroad signal just south of the intersection. This would improve the operating condition on Kibby Road approaches to acceptable LOS (LOS D or better) and maintain the intersection operating conditions at LOS B during both a.m. and p.m. peak hours.	N/A (No Project)

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
Cumulative Traffic Impact— Childs Avenue and SR 99 Northbound Off-ramp Operations (2030 No Project). Cumulative traffic growth without the project would cause the Childs Avenue and SR 99 Northbound Off-ramp to operate at an unacceptable LOS (LOS E or F) during both a.m. and p.m. peak hours. This is a cumulatively considerable impact that would occur without the proposed project.	N/A (No Project)	**6-4: Intersection of Childs Avenue and SR 99 Northbound Off-Ramp.** This intersection would operate at LOS F under the 2010 Background and 2030 Cumulative No Project Conditions during both a.m. and p.m. peak hours. The intersection would also meet the peak hour traffic signal warrant under both 2010 Background and 2030 Cumulative No Project Conditions. In order to achieve acceptable levels of service under 2010 Background Conditions, the intersection would have to be signalized and the eastbound approach would have to widened to two lanes. The intersection would operate at acceptable levels of service under 2030 Cumulative No Project Conditions by adding the second westbound left-turn lane in addition to widening the eastbound approach. The improvement, however, may not be feasible within the existing right-of-way due to the overcross structure. The measures would improve the intersection to LOS C during the a.m. and p.m. peak hours under both the 2010 Background Conditions and the 2030 Cumulative No Project Conditions.	N/A (No Project)
Cumulative Traffic Impact— Childs Avenue at SR 99 Southbound Off-ramp Operations (2030 No Project). Cumulative traffic growth without the project would cause the Childs Avenue at SR 99 Southbound Off-ramp to operate at an unacceptable LOS (LOS E or F) during both a.m. and p.m. peak hours. This is a cumulatively considerable impact that would occur without the proposed project.	N/A (No Project)	**6-5: Intersection of Childs Avenue and SR 99 Southbound Off-Ramp.** This intersection would operate at LOS F during the p.m. peak hour and would meet a peak hour signal warrant under the 2010 Background Conditions. This intersection would operate at LOS F the 2030 Cumulative No Project Conditions during the both a.m. and p.m. peak hours. The improvement would include adding a second left-turn lane to the southbound approach, adding a westbound left-turn lane, and that the intersection be signalized and coordinated with the intersection of Childs Avenue at SR 99 northbound off-ramp. This would improve the intersection to LOS C during the p.m. peak hour under the 2010 Background Conditions and for both peak hours for the 2030 Cumulative No Project Condition.	N/A (No Project)
Cumulative Traffic Impact—Childs Avenue at Parsons Avenue Intersection Operation (2030 No Project). Cumulative traffic growth without the project would cause the Childs Avenue at Parsons Avenue intersection to operate at an unacceptable LOS	N/A (No Project)	**6-6: Intersection of Childs Avenue and Parsons Avenue.** Under 2030 Cumulative No Project Conditions, traffic at the intersection would deteriorate to LOS E for both of the a.m. and p.m. peak hours. In order to achieve acceptable levels of service, the signalized	N/A (No Project)

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
(LOS E or F) during both a.m. and p.m. peak hours. This is a cumulatively considerable impact that would occur without the proposed project.		intersection would need a revised signal timing plan as part of a regular signal maintenance routine. This would improve the intersection to operate at an acceptable LOS D during the a.m. and p.m. peak hours for the 2030 Cumulative No Project Condition. All other intersections would continue to operate at acceptable LOS (LOS D or better) **Roadway Segment Operating Conditions** Table 6-4 summarizes the roadway segment operating level of service under the 2030 Cumulative No Project Condition. For more information on existing, 2010, and cumulative traffic conditions, please refer to Appendix E. The addition of cumulative growth traffic would cause the roadway segment of SR 140 between Santa Fe Avenue and Kibby Road to deteriorate from LOS D to LOS E during the a.m. peak hour. All other study roadway segments would continue to operate at an acceptable LOS (LOS D or better).	
Cumulative Traffic Impact—Roadway Segment Operations (2030 No Project). SR 140 between Santa Fe Avenue and Kibby Road.	N/A (No Project)	**6-7: SR 140 between Santa Fe Avenue and Kibby Road.** It was determined that the roadway segment of SR 140 between Santa Fe Avenue and Kibby Road would deteriorate to LOS E under the 2030 Cumulative No Project Condition. Currently, the roadway is classified as a two-lane highway. By adding one lane in each direction in this segment, the roadway would be improved to operate at an acceptable LOS A. The widening of the roadway, however, may require right of way acquisition, the need for utility relocation, and approval by Caltrans.	N/A (No Project)
Cumulative Traffic Impact—Roadway Segment Operations (2030 No Project). Tower Road between SR 140 and Gerard Avenue.	N/A (No Project)	**6-8: Tower Road between SR 140 and Gerard Avenue.** Tower Road would be one of the truck access routes to the proposed Wal-Mart Distribution Center. Based on field observations, this roadway segment has poor pavement conditions, and the pavement markings along the middle of the road are faded. It is recommended that the roadway segment between SR 140 and Gerard Avenue be improved to address these issues. In addition, the Tower Road approaches to the intersection at	N/A (No Project)

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		Gerard Avenue (and the approaches along Gerard Avenue to Tower Road) should be improved to provide proper turning radii for standard trucks as classified under the Surface Transportation Assistance Act (STAA). It is also recommended that the intersection of Tower Road and SR 140 be widened to accommodate truck turning activities (such as providing turn bays and acceleration lane). The improvement would help maintain traffic flow on SR 140. As a Caltrans facility, the roadway widening on SR 140 would be required to follow Caltrans design standards and would need to be approved by Caltrans.2030 Cumulative No Project Condition Traffic Signal Warrant Analysis	
Cumulative Traffic Impact—Traffic Signal Operations (2030 No Project). Based on the signal warrant analysis results, five study area intersections would meet the signal warrant during the a.m. and while four would meet the signal warrant during the p.m. peak hour. This is a cumulatively considerable impact that would occur without the proposed project.	N/A (No Project)	Table 6-5 summarizes the traffic signal warrant analysis performed at the five unsignalized intersections that would operate at unacceptable level of service under the 2030 Cumulative No Project Condition. Detailed traffic signal warrant analysis sheets are included in Appendix E. Based on the signal warrant analysis results; all of the five intersections would meet the signal warrant during the a.m. peak hour while four intersections would meet the signal warrant during the p.m. peak hour. **2030 Cumulative with Project Condition** This section evaluates the 2030 Cumulative with Project Condition. In addition, all roadway improvements mentioned in the 2030 Cumulative Project Condition are assumed to be implemented and thus were included in this analysis. An adjustment was made to the distribution and assignment of trips to account for the extension of the Campus Parkway corridor and to allow for more circulation via Campus Parkway rather than via Parsons Avenue. The truck trips were also adjusted to allow for circulation via Campus Parkway between SR 140 and Gerard Avenue rather than Tower Road. **Intersection Operating Conditions** Intersection operational levels of service along with their associated delays are summarized in Table 6-6. Appendix E includes the detailed calculation level of service analysis sheets,	N/A (No Project)

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
		including the weekday a.m. and p.m. peak hours. For more information on existing, 2010, and cumulative traffic conditions, please refer to Appendix E. The study intersections that would operate at acceptable LOS (LOS D or better) under the 2030 Cumulative No Project Condition would continue to operate at acceptable LOS under the 2030 Cumulative with Project Condition with the exception of one intersection. At the intersection of Mission Avenue at SR 99 northbound off-ramp, the LOS would deteriorate from D to E. For the intersections that would operate at LOS E or F under the 2030 Cumulative No Project Condition, the proposed project would not contribute more than five percent of the intersection total volume at any of the intersections during either the a.m. or p.m. peak hours. Overall, the proposed project would result in significant cumulative impacts at one intersection during the p.m. peak hour. **Project's Share of Traffic** Table 6-7 provides a breakdown of project traffic for the purposes of calculating the fair share contribution towards any mitigation measures.	
Cumulative Traffic Impact—Intersection Operations (2030 with Project). The study intersections that would operate at acceptable LOS (LOS D or better) under the 2030 Cumulative No Project Condition would continue to operate at acceptable LOS under the 2030 Cumulative with Project Condition with the exception of one intersection. At the intersection of Mission Avenue at SR 99 northbound off-ramp, the LOS would deteriorate from D to E. For the intersections that would operate at LOS E or F under the 2030 Cumulative No Project Condition, the proposed project would not contribute more than 5% of the intersection total volume. Therefore, the proposed project would result one significant impact at the study intersections. The impact to the intersection of Mission Avenue at SR 99 northbound off-ramp is a	S	**6-9: Mission Avenue at SR 99 northbound off-ramp.** Restriping the northbound and westbound approaches would mitigate the impact at this intersection. It is proposed to restripe the northbound approach from a left-through turning movement and a right-only turning movement to a left-through-right turning movement and a right-only turning movement. The westbound approach would be restriped from two through lanes and one right-turn only lane to one through lane, one through-right lane, and one right-turn only lane. Restriping could be accomplished within the existing right-of-way. With these mitigation measures, the intersection of Mission Avenue at SR 99 northbound off-ramps would operate under LOS C conditions, fully mitigating the impact occurring in the p.m. peak hour under 2030 Cumulative with Project Conditions.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
cumulatively considerable incremental contribution, and the project's cumulative impact would be significant.			
Cumulative Traffic Impact—SR 140 Between Santa Fe Avenue and Kibby Road Roadway Segment Operations (2030 with Project). The addition of project traffic would cause the segment of SR 140 between Santa Fe Avenue and Kibby Road to deteriorate from LOS D under the 2030 Cumulative No Project Condition to LOS E during the p.m. peak hour. All other study roadway segments would operate at an acceptable LOS (LOS D or better). The impact to SR 140 is a cumulatively considerable incremental contribution, and the project's cumulative impact would be significant.	S	**6-10: SR 140 between Santa Fe Avenue and Kibby Road.** The addition of project traffic would cause the segment of SR 140 between Santa Fe Avenue and Kibby Road to deteriorate from LOS D under the 2030 Cumulative No Project Condition to LOS E during the p.m. peak hour. All other study roadway segments would operate at an acceptable LOS (LOS D or better). The level of service on SR 140 between Santa Fe Avenue and Kibby Road is a significant cumulative impact. The project's contribution to this significant impact is cumulatively considerable; therefore, the project's cumulative impact would be significant. By adding one lane in each direction in this segment, the roadway would be improved to operate at an acceptable LOS A. The widening of the roadway, however, may require right of way acquisition, the need for utility relocation and, approval by Caltrans. With implementation of this mitigation measure, the cumulative impact would be reduced to a less-than-significant level.	LTS
Cumulative Traffic Impact—Traffic Signal Operations (2030 with Project). Based on the signal warrant analysis results, all of five study area intersections would meet the signal warrant during the a.m. peak hour while four intersection would meet the signal warrant during the p.m. peak hour. The project's contribution to these intersections is a cumulatively considerable incremental contribution, and the project's cumulative impact would be significant.	S	Table 6-9 summarizes the traffic signal warrant analysis performed at the five unsignalized intersections that would operate at an unacceptable level of service under the 2030 Cumulative No Project Condition. For more information on existing, 2010, and cumulative traffic conditions, please refer to Appendix E. Similar to the 2030 Cumulative No Project Condition, a signal warrant would be met at all five of these intersections during the a.m. peak hour and four intersections during the p.m. peak hour. Impacts to these intersections will be reduced to less-than-significant levels by mitigation measures 6-9, 6-10, and 6-11.	LTS
Cumulative Traffic Impact -Tower Road between SR 140 and Gerard Avenue. Tower Road would be one of the truck access routes to the proposed Wal-Mart Distribution Center. Based on field observations, this roadway segment currently has poor	S	**6-11:** It is recommended that the roadway segment between SR 140 and Gerard Avenue be improved to address these issues. In addition, the Tower Road approaches to the intersection at Gerard Avenue (and the approaches along Gerard Avenue to Tower Road)	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
pavement conditions, and the pavement markings along the middle of the road are faded. The project's contribution to these intersections is a cumulatively considerable incremental contribution, and the project's cumulative impact would be significant.		should be improved to provide proper turning radii for standard trucks as classified under the Surface Transportation Assistance Act (STAA). The project would be responsible for paying its fair share contribution toward this implementation measure.	
Visual Resources			
Cumulative Visual Impact. The cumulative change of agricultural and open space views in the project region to urban land uses and the associated increase in nighttime light and glare and subsequent skyglow from past and planned future projects is a cumulatively considerable incremental contribution, and the project's cumulative impact would be significant.	S	Past and future urban development has changed, and will continue to alter, the visual character along roadway corridors in both the City and County. Generally speaking, these changes involve the replacement of grazing/rural lands and vast areas of open space to urban uses, thus altering and limiting the open space views available to motorists along these roadways and residents living in the area. This trend will continue as future development projects are constructed in the region and in the City as a whole, consistent with growth planned in the City and County General Plans. From a cumulative standpoint, substantial changes in visual conditions will continue as agricultural lands and open space are replaced by urban development. Increased urban development will also lead to increased nighttime light and glare and subsequent skyglow in the region and more limited views of the night sky. Although these cumulative impacts can be minimized to a degree through topographic screening of structures, use of outdoor lighting that limits glare, appropriate building design, and other measures, the significant cumulative impact cannot be fully mitigated. The cumulative change of agricultural and open-space views in the project region to urban land uses and the associated increase in nighttime light and glare and subsequent skyglow from past and planned future projects is a significant cumulative impact. The project's incremental contribution to these impacts is cumulatively considerable, and the project's cumulative impact is therefore considered significant.	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation	Significance after Mitigation
The following cumulative impacts are identified earlier in this section as "significant." ► Cumulative Agricultural Land Impact ► Cumulative Air Quality Impact (Greenhouse Gas Emissions) ► Cumulative Biological Resources Impact (Special Status Species Foraging Habitat) ► Cumulative Noise Impact ► Cumulative Traffic Impact—Intersection Operations (2030 with Project) ► Cumulative Traffic Impact—SR 140 Between Santa Fe Avenue and Kibby Road Roadway Segment ► Operations (2030 with Project) ► Cumulative Traffic Impact—Traffic Signal Operations (2030 with Project) ► Cumulative Traffic Impact -Tower Road between SR 140 and Gerard Avenue ► Cumulative Visual Impact Mitigation measures would not reduce these cumulative impacts to a less-than-significant level. Please refer to the discussion under 6.1.2 "Cumulative Impacts of the Proposed Project" above for more detailed discussion.			

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Note that the City may wish to calculate and require the project to contribute on a pro-rata basis to the improvements (Improvement Measures) described below and based on the information in Table 2-2 below, or identified in Table 6-7 on page 6-29.

Table 2-2
Project's Share of Traffic
2030 Cumulative with Project Condition

No	Study Intersection	Trips (veh/hr)						Percentages(%)					
		Project		2030 Cumulative		Total		Project		2030 Cumulative		Total	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	SR 140 / Parsons Avenue	31	41	2620	2302	2651	2343	1.2%	1.7%	98.8%	98.3%	100.0%	100.0%
2	SR 140 / Baker Drive	29	34	2028	1745	2057	1779	1.4%	1.9%	98.6%	98.1%	100.0%	100.0%
3	SR 140 / Kibby Road	13	43	1942	1580	1955	1623	0.7%	2.6%	99.3%	97.4%	100.0%	100.0%
4	Childs Avenue / SR 99 SB Off-Ramp	6	15	2588	2376	2594	2391	0.2%	0.6%	99.8%	99.4%	100.0%	100.0%
5	Childs Avenue / SR 99 NB Off-Ramp	7	25	2842	2725	2849	2750	0.2%	0.9%	99.8%	99.1%	100.0%	100.0%
6	Childs Avenue / Parsons Avenue	10	32	2765	2667	2775	2699	0.4%	1.2%	99.6%	98.8%	100.0%	100.0%
7	Childs Avenue / Coffee Street	9	32	1110	1075	1119	1107	0.8%	2.9%	99.2%	97.1%	100.0%	100.0%
8	Childs Avenue / Kibby Road	0	0	469	665	469	665	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%
9	Childs Avenue / Tower Road	23	77	405	679	428	756	5.4%	10.2%	94.6%	89.8%	100.0%	100.0%
10	Gerard Avenue / Coffee Street	5	18	693	749	698	767	0.7%	2.3%	99.3%	97.7%	100.0%	100.0%
11	Gerard Avenue / Tower Road	23	77	117	161	140	238	16.4%	32.4%	83.6%	67.6%	100.0%	100.0%
12	Mission Avenue / SR 99 SB Off-Ramps	165	165	2032	2332	2197	2497	7.5%	6.6%	92.5%	93.4%	100.0%	100.0%
13	Mission Avenue / SR 99 NB Off-Ramps	263	317	2656	3447	2919	3764	9.0%	8.4%	91.0%	91.6%	100.0%	100.0%
14	Mission Avenue / Coffee Street	262	317	2665	3493	2927	3810	9.0%	8.3%	91.0%	91.7%	100.0%	100.0%
15	Campus Parkway / Childs Avenue	300	383	1876	1916	2176	2299	13.8%	16.7%	86.2%	83.3%	100.0%	100.0%
16	Campus Parkway / Childs Avenue	33	48	1397	1415	1430	1463	2.3%	3.3%	97.7%	96.7%	100.0%	100.0%

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