There are no recorded paleontological resources located within a ½ mile radius of the project area. The alluvial fan deposits within the project area have greater potential for paleontological resources due to their Pleistocene age (AEC 2007). In addition, Riverside County lists the project area as a High B paleontological sensitivity. High B sensitivity indicates that fossils are likely to be encountered at or below four feet below ground surface, and may be impacted during excavation and construction activities (Riverside County Land Information System (2007).

As previously stated, the Phase 1 site is located in an area identified as having a "high sensitivity" for paleontological resources. The paleontological literature search indicated that there is potential for significant, nonrenewable resources that to encountered during on-site construction activities. Therefore, a paleontological resources impact mitigation program (PRIMP), including excavation monitoring by a qualified paleontologist, is recommended for earthmoving activities in Pleistocene sediments on the project site with potential to contain significant, nonrenewable paleontological resources. Although no paleontological resources were identified on site during the field survey, because of the location of the project site and associated sensitivity for paleontological resources, the potential exists that paleontological resources may be uncovered during construction. Thus, development of the Phase 1 site has the potential to result in significant impacts to nonrenewable paleontological resources, requiring mitigation.

Phase 2: First Park South Perris Distribution Center. A literature review and a field survey of the Phase 2 site of the proposed project was conducted in June 2006. Based on the literature review, the western portion of the project site has a high paleontological sensitivity while the eastern portion of the project site has a high paleontological sensitivity below a depth of three feet.[1] In addition, during recent construction excavation, paleontological monitoring programs on projects to the southeast have produced Pleistocene vertebrate fossils. Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line would result in ground disturbance activities which may result in the discovery of buried or previously unidentified paleontological resources. Similar to Phase 1, the Phase 2 site is located in an area identified as having a "high sensitivity" for paleontological resources. The paleontological literature search indicated that there is potential for significant, nonrenewable resources that to encountered during on-site construction activities. Therefore, a PRIMP, including excavation monitoring by a qualified paleontologist, is recommended for earthmoving activities in Pleistocene sediments on the project site with potential to contain significant, nonrenewable paleontological resources. Since construction activities involving development of the Phase 2 site contain Pleistocene sediments, there is the potential for paleontological resources to be discovered. Therefore, mitigation is required.

Phase 3: First Park South 215 Distribution Center. An intensive pedestrian survey was conducted in August 2007, consisting of the paleontologist walking transects over the project area and inspecting ground surfaces for the presence of historic and prehistoric artifacts and features. No paleontological resource had been previously detected on site during past agricultural use of the site. In addition, there are no recorded paleontological resources located within a one-mile radius of the project areas as identified in the cultural resources assessment conducted for this project site.[2] However, the project site is identified as being within a high paleontological resource area. Riverside County lists that project site as having a High B paleontological sensitivity.[3] A High B paleontological sensitivity indicates that fossils are likely to be encountered at or below four feet below ground surface. Such paleontological resources may be impacted during excavation and construction activities. Therefore, construction of the proposed project has the potential to result in significant impacts to nonrenewable paleontological resources, requiring mitigation.

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1 *Paleontological Resources Assessment, Goetz Road Project,* LSA Associates, Inc. May 2009.
2 *Cultural Resources Assessment, Phase 1 Archaeological Assessment of First Park South 215,* URS, July 15, 2008.
3 *Cultural Resources Assessment, Phase 1 Archaeological Assessment of First Park South 215,* URS, July 15, 2008.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the three phases would not result in significant impacts to paleontological resource with implementation of the identified mitigation measures. The proposed project would also construct improvements to Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road and also install associated water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. The improvements to these roadways and associated infrastructure would be required to adhere to **Mitigation Measure 4.5.5.3A** through **4.5.5.3C,** which would reduce impacts associated with this issue to a less than significant level.

Mitigation Measures. The following mitigation measures have been identified to reduce potential impacts to paleontological resources that may be located within the project limits:

4.5.5.3A Prior to the issuance of grading permits, the project proponent shall submit to and receive approval from the City, a Paleontological Resource Impact Mitigation Program (PRIMP). The PRIMP shall include the provision of a trained paleontological monitor during on-site soil disturbance activities. The monitoring for paleontological resources shall be conducted on a half-time basis during the rough-grading phase of the project. In the event that paleontological resources are unearthed or discovered during excavation, **Mitigation Measure 4.5.5.3C** shall apply. Conversely, if no paleontological resources are unearthed or discovered on site during excavation, no additional mitigation is required.

4.5.5.3B The paleontological monitor shall be equipped to rapidly remove any large fossil specimens encountered during excavation. During monitoring, samples of soil shall be collected and processed to recover microvertebrate fossils. Processing shall include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains.

4.5.5.3C If paleontological resources are unearthed or discovered during excavation of the project site, the monitoring for paleontological resources shall be conducted on a full-time basis for the duration of the rough-grading of the project site. The following recovery processes shall apply:

- Upon encountering a large deposit of bone, salvage of all bone in the area shall be conducted with additional field staff and in accordance with modern paleontological techniques.
- All fossils collected during the project shall be prepared to a reasonable point of identification. Excess sediment or matrix shall be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of all material collected and identified shall be provided to the museum repository along with the specimens.
- A report documenting the results of the monitoring and salvage activities and the significance of the fossils shall be prepared.
- All fossils collected during this work, along with the itemized inventory of these specimens, shall be deposited in a museum repository (such as the Western Science Center ~~for Archaeology & Paleontology,~~ or the Riverside Metropolitan Museum~~, or the San Bernardino County Museum~~) for permanent curation and storage.

Level of Significance After Mitigation. Adherence to the identified mitigation measures would reduce potential impacts to paleontological resources to a less than significant level.

4.5.6 Cumulative Impacts

The cumulative area for cultural resources is the City of Perris. There is no existing evidence of pre-European contact or usage of the three project sites. Implementation of the proposed project would require measures to identify, recover, and/or record any cultural and/or paleontological resource that may occur within the project limits. Although unlikely to occur, potential impacts associated with human remains would be reduced to a less than significant level through adherence to existing State law. There are no projects that would, in combination with the proposed project, result in any significant cumulative impacts on historical, archaeological, or paleontological resources, or in impacts to human remains. Therefore, the proposed project would have no significant cumulative impacts associated with cultural resources.

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4.6 HAZARDS AND HAZARDOUS MATERIALS

This section describes and analyzes the potential impact to human health and the environment due to the exposure to hazardous materials or conditions that could be encountered as a result of the development and operation of the proposed project. Potential effects include those associated with the routine transport, use, or disposal of hazardous materials; reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; and safety hazards associated with the project location in an airport land use planning area. Potential impacts associated with air contaminants that could be emitted during operation of the project are addressed in Section 4.3 (Air Quality), while the potential hazardous material effects on groundwater are addressed in Section 4.7 (Hydrology and Water Quality). This section is based in part on the following reports, which are included as Appendix F of this EIR:

- *Phase I Environmental Site Assessment Concrete Casting Operation,* prepared for 2020 Goetz Road Perris, Riverside County, California (Terracon, Inc., May 25, 2006).
- *Phase I Environmental Site Assessment,* prepared for 215 Acres of Agricultural Land Northeast of Ellis Avenue and Redlands Avenue Perris, California 92570 (Advantage Environmental Consultants, LLC, October 2, 2007).
- *Phase I Environmental Site Assessment,* prepared for 205-Acre Tract Goetz Road and Mapes Road Perris, Riverside County, California (Terracon, Inc., May 22, 2007).
- *Environmental Site Assessment of the Property Located on the Southwest Corner of the Intersection of Mapes Road and Goetz Road Perris, Riverside County, California*, (Carlin Environmental Consulting, June 22, 2005).
- *Final Limited Site Investigation Report Concrete Casting Operation,* prepared for 2020 Goetz Road, Perris, Riverside County, California (Terracon, Inc., September 20, 2006).
- *Final Limited Site Investigation Report,* prepared for 205-Acre Tract Goetz Road and Mapes Road, Perris, Riverside County, California (Terracon, Inc., May 22, 2007).
- *Phase II Environmental Site Assessment, South 215 Property, Ellis Avenue and Redlands Avenue, Perris California 92570. (*Advantage Environmental Consultants, LLC, February 9, 2009).

Impacts related to impairment/interference with adopted emergency response plans or emergency evacuation plans and exposure of people or structures to risks involving wildland fires were determined to be less than significant in the Initial Study prepared for the proposed project and are not discussed in this section.

4.6.1 Existing Setting

4.6.1.1 Project Site History

The proposed project is composed of three non-contiguous sites located in the southern portion of the City of Perris as shown in Figure 3.1. The three sites vary in size and include 38-acre, 201-acre and a 215.7 acre site. All three sites are planned for industrial/warehouse distribution center uses. The sites are generally located southwest of Interstate 215 in the southern portion of the City of Perris. The three sites are: Phase 1 (Airport Distribution Center) located at the southwest corner of Goetz Road and Mountain Avenue, Phase 2 (South Perris Distribution Center) located at the southwest corner of Goetz Road and Mapes Road, and Phase 3 (South Perris 215 Distribution Center) located at the northeast corner of Redlands Avenue and Ellis Avenue. As indicated in the Environmental Site Assessment Reports for all three project sites, a review of historical aerial photos (1938 to 2004) reveals the sites have been historically used for agricultural purposes and portions of Phase 1 have been and are currently used for industrial uses.

The historical uses of Phase 1 include industrial and agricultural uses. The site is currently leased for industrial concrete casting operations. Based on historic aerial photographs and historic USGS maps, in 1938 and 1953, the site was undeveloped land, with a small reservoir in the northwest corner, and small structure on the east side; in 1967 and 1980 a small structure was present on the east side of the site; development near center of the site, but not as large as current development is visible in 1989 and 1994 photos of the site. The site is shown as developed with the current concrete casting facility in 2002.

Historic aerial photos of the Phase 2 site dated 1938 and were reviewed by Carlin Environmental Consulting. The results of the review indicated that the site had not been historically developed. The 1938 photograph shows the site is fallow, but that the boundary is heavily tilled. A dirt road runs across the site from the southwest corner to the northeast corner of the site. In the 1953 photograph, the entire site is tilled. The San Jacinto River is not channelized and the meander in the river near the southeast corner of the site is located farther north. Agricultural land is present to the north of the subject site at that time. In the 1967 photograph the entire site is tilled in north-south rows. It is unclear as to the crops that grown on the site if any. The area to the north appears to be used for agricultural purposes the subject site in the 1980 photograph appears to be vacant and untilled. An intermittent stream is present in the southwestern portion of the property. Agricultural land is still present to the north along with some residential and possibly some industrial properties. In the 1989, 1994, and 2002 photographs of the vicinity appear as they do today.

Advantage Environmental Consultants reviewed aerial photographs dated 1938, 1953, 1967, 1976, 1980, 1994 and 2002 as a part of the preparation of the Environmental Site Assessment for Phase 3. The site is vacant, undeveloped land in the 1938 photos. A north-south trending dirt trail crosses the eastern portion of the site. One structure is visible on an adjacent property to the southwest. Adjacent properties to the north are vacant or used for agricultural purposes. Adjacent properties to the east and west are vacant and undeveloped land. The San Jacinto River is visible along the eastern property boundary. Ellis Avenue and Redlands Avenue are visible as dirt roads adjacent to the south and west of the site. In 1953, the western portion of the site appears to be cleared of vegetation. What appears to be an airstrip is visible in the eastern portion of the site. An irrigation channel is visible along the eastern property boundary. Adjacent properties to the north and south appear similar to the 1938 photograph. Agricultural and commercial development is visible on nearby properties to the west of the site. The majority of the site appears similar to the 1953 photograph in the 1967 and 1976 photos. The airstrip is no longer visible in the eastern portion of the site. The irrigation channel formerly located along the eastern property boundary is no longer visible. State Route 395 (currently State Route 215) is visible adjacent to the eastern site boundary. The San Jacinto River appears realigned since the 1953 photograph. Commercial development is visible on nearby properties to the north. The western portion of the site appears to be used for agricultural purposes in 1980 and 1994 (likely dry farming). Several small structures (likely corrals) are visible in the northern portion of the site. Adjacent and nearby properties appear generally similar to the 1976 photograph. Additional structures are visible adjacent to the southwest corner of the site. An unlined drainage to the San Jacinto River approximates the northern and eastern property boundaries. The site appears similar to the 1994 photograph in the 2004 photos. Adjacent and nearby properties are developed similar to their current configurations.

4.6.1.2 Surrounding Area

As identified in Table 4.6.A, there are multiple school facilities in vicinity of each of the three project sites. The nearest school to the Phase 1 site is the Railway Elementary School/Rob Reiner Child Development Center which is approximately 0.3 mile west of the site. The nearest school to the Phase 2 site is also the Railway Elementary School/Rob Reiner Child Development Center, which is located approximately 0.15 mile west of the site at the northwest corner of “A” Street and Mapes Road. The nearest school to the Phase 3 site is The Academy community day school located approximately 0.15 mile to the west of the site.

Table 4.6.A: Schools In Vicinity of the Project Site

School	School Location	Distance From Site		
		Phase 1	Phase 2	Phase 3
Pinacate Middle School	1990 South "A" Street, Perris, CA 92570	0.35 mile NW of site	0.50 mile N of site	1.11 miles SW of site
Perris Lake High School (Continuation School)	418 West Ellis Avenue, Perris, CA 92570	1.13 miles NW of site	1.17 miles NW of site	1.60 miles W of site
The Academy community day school	515 East 7th Street, Perris, CA 92570	1.0 mile SW of site	1.5 miles SW of site	0.15 mile W of site
Perris Elementary School	500 South "A" Street, Perris, CA 92570	1.17 miles NW of site	1.60 miles N of site	1.0 mile NW of site
Railway Elementary School/Rob Reiner Child Development Center	555 Alpine Drive, Perris, CA 92570	0.30 mile SW of site	0.15 mile N of site	1.30 miles SW of site
Park Avenue Elementary School	445 Park Avenue, Perris, CA 92570	1.25 miles NW of site	1.66 miles NW of site	1.15 mile NW of site

All three sites are located near the Perris Valley Airport while Phase 1 is the only phase of the project that is actually located within an Airport Influence Area for the Perris Valley Airport per the City's General Plan. The Phase 1, Phase 2, and Phase 3 project sites are located approximately 8 miles south, 7 miles south, and 6.5 miles southeast of March Air Field, respectively. The March Air Field is a joint-use airport, used both for military and civilian purposes. March Inland Port (MIP)[1] is the civilian portion of the airport. The eastern portion of Phase 3 that is proposed to be used as a detention basin is located within the Airport Influence Area III of MIP.[2]

4.6.2 Existing Policies and Regulations

4.6.2.1 Federal Regulations

Comprehensive Environmental Response, Compensation, and Liability Act. Discovery of environmental health damage from disposal sites prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of the CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act. The Superfund Amendments and Reauthorization Act (SARA) pertain primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting, material handling, and transportation data for use as a basis for planning. Chemical inventory data are made available to the community at large under the "right-to-know" provision of the law. In addition, SARA also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory (TRI).

Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and

[1] March Inland Port was previously called March Air Reserve Base

[2] *March Air Reserve Base (MARB) Old Compatibility Plan.* Web site http://www.rcaluc.org/filemanager/plan/old/March%20Air%20Reserve%20Base%20(MARB).pdf date accessed February 20, 2008.

disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

Hazardous Materials Transportation Act. The Hazardous Materials Transportation Act is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, highways, in the sky, or in pipelines. It includes provisions for materials classification, packaging, marking, labeling, placarding, and shipping documentation.

4.6.2.2 State Regulations

California Code of Regulations. Most state and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the California Code of Regulations (CCR), Title 22, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, treatment, storage, and disposal facilities. Because California is a fully authorized state according to RCRA, most RCRA regulations (those contained in 40 Code of Federal Regulations [CFR] 260, et seq.) have been duplicated and integrated into Title 22. However, because the Department of Toxic Substance Control (DTSC) regulates hazardous waste more stringently than the U.S. EPA, the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than do the RCRA regulations in 40 CFR 260. To aid the regulated community, California compiled the hazardous materials, waste and toxics-related regulations contained in CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR, Title 26 “Toxics.” However, the California hazardous waste regulations are still commonly referred to as Title 22. For the purposes of clarity, because of the extensive reach of Title 22 and Title 26, many common household products sold in grocery stores and home improvement warehouses qualify as hazardous materials. These items include household cleaners, detergents, paint, motor oil, lubricants, glues, pesticides, etc. The term “hazardous materials” is also defined to include many on site materials as well, such as lubricants, fuel, etc. Thus, when this section of the EIR discusses the transport and storage of “hazardous materials,” it is referring to the potential transport of bulk products to the project locations and to the temporary storage of such materials at the project sites prior to re-package and transport to subsequent destinations.

Cortese List: Section 65962.5(a). Government Code section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Hazardous Waste and Substances Sites list (Cortese List). The Cortese List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Release sites include or hazardous materials release sites may include the following:

- All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
- All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.
- All information received by the Department of Toxic Substances Control pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.

- All sites listed pursuant to Section 25356 of the Health and Safety Code.
- All sites included in the Abandoned Site Assessment Program

The California Department of Toxic Substance Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

The California Hazardous Material Management Act. The Hazardous Materials Management Act (HMMA) requires that businesses handling or storing certain amounts of hazardous materials prepare a Hazardous Materials Business Emergency Plan (HMBEP), which includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program. An HMBEP is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. The intent of the HMBEP is to satisfy Federal and State Community Right-to-Know laws and to provide detailed information for use by emergency responders.

Per the California Health and Safety Code (HSC), Chapter 6.95, Section 25500–25532, an HMBEP must be submitted by any business that handles a hazardous material or a mixture containing a hazardous material in quantities equal to, or greater than:

- A total weight of 500 pounds or a total volume of 55 gallons;
- 200 cubic feet of a compressed gas at standard temperature and pressure; and/or
- A radioactive material handled in quantities for which an emergency plan is required pursuant to Parts 30, 40, or 70 of Chapter 10, Title 10, Code of Federal Regulations (CFR), or equal to or greater than the amounts specified above, whichever amount is less.

An HMBEP must be prepared prior to facility operation. Any business subject to HMBEP requirements shall submit an amendment of their HMBEP to the local implementing agency when there is:

- A 100 percent or more increase in the quantity of a previously disclosed hazardous material;
- Any handling of a previously undisclosed hazardous material subject to the inventory requirements;
- Change of business address;
- Change of ownership;
- Change of business name; and/or
- Change of contact information.

In addition, any business subject to HMBEP requirements is also required to certify the inventory of hazardous materials handled at the business every year. Businesses are also required to review their HMBEP at least once every three years to determine if a revision is necessary. Once the review has been conducted, the business must certify in writing to the local implementing agency that a review has been completed and necessary changes were made. For businesses within the City of Perris, HMBEPs are submitted to and approved by the County of Riverside Community Health Agency, Department of Environmental Health.

The California Hazardous Waste Control Law. The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. The HWCL requires a hazardous waste

generator, which stores or accumulates hazardous waste for periods greater than 90 days at an on-site facility or for periods greater than 144 hours at an off-site or transfer facility, which treats, or transports hazardous waste, to obtain a permit to conduct such activities. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the State of California. HWCL specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates the number of types of wastes and waste management activities that are not covered by federal law with RCRA.

State Aeronautics Act (Public Utilities Code Section 21670, et seq.). The Public Utilities Code establishes the requirement for the creation of airport land use commissions for every county in which there is located an airport that is served by a scheduled airline. Additionally, these sections of the Code mandate the preparation of Comprehensive Land Use Plans (CLUP) to provide for the orderly growth of each public airport and the area surrounding the airport. The purpose of CLUPs includes the protection of the general welfare of inhabitants within the vicinity of the airport and the general public.

California Emergency Services Act. Government Code 8550–8692 provides for the assignment of functions to be performed by various agencies during an emergency so that the most effective use may be made of all manpower, resources, and facilities for dealing with any emergency that may occur. The coordination of all emergency services is recognized by the state to mitigate the effects of natural, man-made, or war-caused emergencies which result in conditions of disaster or extreme peril to life, property, and the resources of the state, and generally, to protect the health and safety and preserve the lives and property of the people of the state.

State Fire Plan. The State Board of Forestry and the California Department of Forestry and Fire Protection have drafted a comprehensive update of the State Fire Plan for wildland fire protection in California. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis.

4.6.2.3 County of Riverside Regulations

Riverside County Department of Community Health. The Department of Environmental Health (DEH) of the Riverside County Community Health Agency is responsible for regulation the operations of businesses and institutions that handle hazardous materials or generate hazardous wastes in the City of Perris.[1] As part of the state-mandated Certified Unified Programs administered by the CalEPA, the DEH coordinates regulatory and enforcement of the following programs: Household Hazardous Waste, Hazardous Waste Minimization, Underground Storage Tanks (USTs), Hazardous Waste Generator Permits, and Hazardous Materials Handlers Program.

Riverside County Airport Land Use Plan. The Riverside County Airport Land Use Commission (ALUC) assists local agencies by ensuring the development of compatible land uses in the vicinity of existing airports. The ALUC adopted the Airport Land Use Plan (ALUP) for MIP on April 26, 1984. A

[1] *Section 6.7 Hazards and Hazardous Materials,* City of Perris, City of Perris General Plan 2030 Draft Environmental Impact Report, October 2004.

new ALUC is currently in the process of updating the 1984 ALUP for MIP;[1] however, this document is not available for public review at this time. The ALUP specifies land use restrictions for areas falling within an airport's Influence Area boundaries. As the project site is located within Influence Area III of MIP, the following policy applies.

Policy 3 Within Area III, avigation easements will be required for all land uses. The height of the avigation easements will be from runway ground elevation within Area I, the defined approach surfaces, and from 150 feet above runway ground level elevation throughout the remainder of Areas II and III.

2005 Air Installation Compatible Use Zone (AICUZ) Study. March Air Field is a joint-use airport, used for both military and civilian purposes. March Inland Port (MIP) is the civilian portion of the airport. The airport is owned and regulated by the military. Military installations prepare AICUZ studies to protect vicinity land uses from hazard and noise impacts associated with military airports. The Air Force Reserve (AFRES) completed a new AICUZ for March Air Field in 2005. The AICUZ delineates the clear zones and accident potential zones for the joint use airfield, as well as the noise contours based upon the project flight operations and use of the aviation field. The noise contours include both military and civilian use, as projected in the Federal Aviation Administration (FAA) conformity determination.

4.6.2.4 City of Perris General Plan Policies

The Safety Element and the Land Use Element of the General Plan define the following goals, policies, and implementation measures related to hazards that are relevant to the proposed project:

Safety Element

Goal I Reduced risk of damage to property or loss of life due to natural or man-made disasters.

Policy I.A Create or participate in Multi-Jurisdictional Hazard Plans.

Measure I.A.1 Identify all known hazards within the City in the Multi-Jurisdictional Hazard Plan.

Measure I.A.2 Prepare evacuation routes and disaster response plans for all known hazards within the City.

Measure I.A.3 Participate in ongoing disaster preparedness training programs in conjunction with other jurisdictions.

Policy I.D Consult the AICUZ Land Use Compatibility Guidelines and ALUP Airport Influence Area development restrictions when considering development project applications.

Land Use Element

Goal V Protection from natural or man-made disasters.

Policy V.A Restrict development in areas at risk of damage due to disasters.

Measure V.A.1 Consult hazards maps as part of the review process for all development applications.

[1] Riverside County Airport Land Use Commission New Compatibility Plans, http://www.rcaluc.org/plan_new.asp, website accessed July 17, 2008.

4.6.3 Methodology

Evaluation of hazards and hazardous material impacts associated with the proposed project included a focus on the use, generation, management, transport, and disposal of hazardous or potentially hazardous materials on the project site. Phase I Environmental Site Assessments were prepared for each of the three sites to document existing site conditions involving the presence or absence of hazardous materials that may have been deposited on site through previous land uses. For airport hazards, the County of Riverside ALUC MIP ALUP (1984) was consulted to determine if the proposed project would increase air hazards. In determining the level of significance, the analysis assumes that construction and operation of the proposed project would be in compliance with relevant local, state, and federal laws and regulations pertaining to the use, storage, and disposal of hazardous materials.

4.6.4 Thresholds of Significance

Based on Appendix G of the *CEQA Guidelines*, the proposed project would result in a significant adverse impact with regard to hazards if it were to:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation; and/or
- Result in the exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

As previously identified, impacts related to impairment/interference with adopted emergency response plans or emergency evacuation plans and exposure of people or structures to risks involving wildland fires were determined to be less than significant in the Initial Study prepared for the proposed project and are not discussed in this section.

4.6.5 No Impacts/Less Than Significant Impacts

A discussion of potential hazards related to design of the proposed at-grade rail crossings is provided in Section 4.11.5.2. The following hazard/hazardous materials issues were determined to have a less than significant impact:

4.6.5.1 Routine Transport, Use, or Disposal of Hazardous Materials and Reasonable Foreseeable Upset and Accident Conditions

Threshold	Would the proposed project create a significant hazard to the public through the routine transport, use, or disposal of hazardous materials? Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The proposed project envisions the construction of 7,399,291 square feet of industrial warehouse space housed within 9 concrete tilt-up buildings on approximately 454.7 acres, the potential extension of a rail spur, and various infrastructure improvements. Potentially hazardous materials such as petroleum products, pesticides, fertilizer, and other household hazardous products such as paint products, solvents, and cleaning products may be stored and transported in conjunction with on-site uses. The potential for other hazardous materials also exists as the exact tenants of the proposed distribution centers are unknown at this time. These hazardous materials are expected only to be stored and transported to and from the site. Manufacturing and other chemical processing are not expected to occur as a part of the distribution center uses of the three project sites. Exposure to hazardous materials during the operation of the proposed on-site uses may result from (1) the improper handling or use of hazardous substances; (2) transportation accident; or (3) an unforeseen event (e.g., fire, flood, or earthquake). The severity of any such exposure is dependent upon the type and amount of the hazardous material involved; the timing, location, and nature of the event; and the sensitivity of the individual or environment affected.

As described in Title 49 of the Code of Federal Regulations[1] and implemented by Title 13 of the CCR, the United States Department of Transportation (USDOT) Office of Hazardous Materials Safety has established strict regulations for the safe transportation of hazardous materials. It is possible that vendors may bring some hazardous materials to and from the project site. Appropriate documentation for all hazardous waste that is transported in connection with project-site activities would be provided as required for compliance with existing hazardous materials regulations. Hazardous wastes produced on site are subject to requirements associated with accumulation time limits, proper storage locations and containers, and proper labeling. Additionally, for removal of hazardous waste from the site, hazardous waste generators are required to use a certified hazardous waste transportation company, which must ship hazardous waste to a permitted facility for treatment, storage, recycling, or disposal. Compliance with applicable regulations would reduce impacts associated with the use, transport, storage, and sale of hazardous materials. For example, as discussed above, the California Hazardous Materials Management Act requires that businesses handling or storing certain amounts of hazardous materials prepare a Hazardous Materials Business Emergency Plan (HMBEP), which includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program.

As previously stated, both the Federal government and the State of California require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials, to submit an HMBEP to its local Certified Unified Program Agency (CUPA). The CUPA with responsibility for the City of Perris is the County of Riverside Community Health Agency, Department of Environmental Health.[2] The HMBEP must include an inventory of the hazardous materials used in the facility, and emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. The HMBEP must include the Material Safety Data Sheet for each hazardous and potentially hazardous substance used. The Material Safety Data

[1] *Code of Federal Regulations, Title 49—Transportation*, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, http://ecfr.gpoaccess.gov/cgi/t/text/textidx?sid=585c275ee19254ba07625d8c92fe925f&c=ecfr&tpl=/ecfrbrowse/Title49/49cfrv2_02.tpl, site accessed March 11, 2008.

[2] *CUPA Directory Search,* http://www.calepa.ca.gov/CUPA/Directory/default.aspx, website accessed February 26, 2009.

Sheets summarize the physical and chemical properties of the substances and their health impacts. The plan also requires immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information of all company emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

HMBEPs are designed to be used by responding agencies, such as the Perris Fire Department and the Riverside County Fire Department during a release to allow for a quick and accurate evaluation of each situation for an appropriate response. HMBEPs are also used during a fire to quickly assess the types of chemical hazards that fire-fighting personnel may have to deal with, and to make decisions as to whether or not the surrounding areas need to be evacuated. Compliance with existing law will ensure that no significant impacts pertaining to the creation of hazards affecting the public will occur. The handling of hazardous materials in accordance with the HMBEP as required by applicable local, state, and federal standards, ordinances, and regulations would ensure that impacts associated with environmental and health hazards related to an accidental release of hazardous materials are less than significant.

4.6.5.2 Existing or Proposed School

Threshold	Would the proposed project emit hazardous emissions or handle acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

As identified in Table 4.6.A, there are multiple school facilities in vicinity of each of the three project sites. The nearest school to the Phase 1 site is the Railway Elementary School/Rob Reiner Child Development Center which is approximately 0.3 mile west of the site. The nearest school to the Phase 2 site is also the Railway Elementary School/Rob Reiner Child Development Center which is located approximately 0.15 mile west of the site at the northwest corner of “A” Street and Mapes Road. The nearest school to the Phase 3 site is The Academy community day school located approximately 0.15 mile to the west of the site.

The amount and type of materials that would be used in construction (building and infrastructure) and stored in the distribution centers built on the project sites is unknown at this time. The emission of air pollutants is discussed in the Air Quality Section of the EIR. While the facilities themselves would not utilize materials that would be acutely hazardous, the possibility exists that hazardous materials would be stored or transported to and from the three project sites. Therefore for the purposes of this analysis, it is assumed that the project will handle or emit substances that may be acutely hazardous within 0.25 mile of an existing or proposed school. The handling of hazardous materials or emission of hazardous substances in accordance with the HMBEP as required by applicable local, state, and federal standards, ordinances, and regulations would ensure that impacts associated with environmental and health hazards related to an accidental release of hazardous materials or emissions of hazardous substance near existing or proposed schools are less than significant.

Though the project would not utilize acutely hazardous materials in its daily operation, due to aforementioned storage and transport of hazardous materials, the potential for an accidental release of hazardous materials into the environment is present at the proposed project sites as it is at any commercial, retail, or industrial site. Compliance with the identified state and federal transportation safety standards would govern the handling of hazardous materials during truck and freight transfer operations. These standards include procedures to contain, report, and remediate any accidental spill or release of hazardous materials. The handling of hazardous materials in accordance with all applicable local, state, and federal standards, ordinances, and regulations would ensure that impacts

associated with environmental and health hazards related to an accidental release of hazardous materials are less than significant.

4.6.5.3 Located on a List of Hazardous Materials Sites

Threshold	Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Phase 1: Airport Distribution Center. The Phase 1 was formerly owned by Mr. Art Lopez and leased to Pomeroy Corporation. Art Lo Corporation was formerly located at the site and conducted concrete casting operations similar to those that are taking place today. The site was originally developed by Mr. Lopez in 1985 for his concrete operations. An Environmental Site Assessment was conducted for the Phase 1 site of the proposed project (Airport Distribution Center) by Terracon, Inc. The Environmental Site Assessment records search found that Art Lo Corporation was identified on the HAZNET and CA WDS databases as a facility that treats and/or disposes of liquid or semisolid wastes from servicing, producing, manufacturing, or processing operations. The facility was further classified as a Category C facility for facilities having no waste treatment systems, or those who must comply through best management practices (i.e. facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or discharges having waste storage systems with land disposal such as dairy waste ponds). This site was not listed as having any hazardous materials releases and was not listed on the Cortese List. No violations were noted in the regulatory database for the site. Since the Phase 1 site is not listed on any list of hazardous materials sites as defined by Government Code Section 65962.5, impacts related to this issue would be less than significant and no mitigation is required.

Phase 2: First Park South Perris Distribution Center. An Environmental Site Assessment was completed for the Phase 2 site by Carlin Environmental Consultants (CEC) in June of 2005. CEC reviewed a record search performed by Environmental Data Resources that covered a 2-mile radius from the project. Based on the record search the Phase 2 site was not located on any list of hazardous materials sites. However, the Techalloy site located directly adjacent to the west of Phase 2 at 2500 South “A” Street was included on several federal and State Environmental Records lists.

The Techalloy site is listed on the Corracts database, which contains a list of handlers with RCRA Corrective Action activity. The available data shows that three groundwater contamination plumes are present at the Techalloy facility, a metals plume, a hydrocarbon plume and a nitrate plume. Records indicate that the groundwater in the area is approximately 20 feet deep. It appears that only the non-hazardous nitrate plume has affected the southwestern portion of the subject site. The other two plumes have migrated to the southeast away from their respective sources. The metals plume and the hydrocarbon plume are reported by the United States Environmental Protection Agency (U.S. EPA), to be under control at this site since 1999. The human health exposure and the migration of the groundwater contamination are reported by the U.S. EPA to be under control. A pump and treat groundwater remediation system gas has been installed and operated at this site since 1998. A groundwater monitoring plan is also being implemented.

Phase 3: First Park South 215 Distribution Center. The Phase 3 site was not listed in any of the searched regulatory databases. Advantage Environmental Services reviewed federal, state and local environmental databases for information pertaining to documented and/or suspected releases of regulated hazardous substances and/or petroleum products within specified search distances. A southern adjacent property (Dick Evans Transportation, Inc. at 336 Ellis Avenue), is listed on the Riverside County Department of Environmental Health, Hazardous Materials Management Division

PERMITS database. No violations are reported for this adjacent property and this property does not appear on any other regulatory databases that were searched. Based on the apparent lack of unauthorized releases and apparent compliance with waste disposal requirements, this adjacent property is not expected to have adversely affected the Phase 3 site.

On January 28, 2009, twenty soil borings were drilled at the Phase 3 site by Advantage Environmental Services representatives using a stainless-steel hand auger. Soil samples were taken from each of these borings at a depth of approximately 0.5 feet and 1.5 feet below the ground surface. Detectable levels of Organochlorine Pesticides (OCP) including Dichloro-Diphenyl-Dichloroethane (4,4'-DDD) and/or Dichloro-Diphenyl-Trichloroethane (4,4'-DDT) were found at the 0.5-foot samples at four of the borings. None of the levels of ~~the~~ these compounds exceeded their respective total threshold limit concentrations of California Human Health Screening Levels (CHHSLs) for pesticide concentrations in residential or commercial/industrial soils. Arsenic and lead were also detected in the soil samples taken from the Phase 3 site. Total lead was detected in 13 of the 20 borings at the 0.5 foot soil sample depths with concentrations below the total threshold limit concentration and California human health screening levels. Total arsenic exceeded total threshold limit concentration and California human health screening levels.

Commonly reported background concentrations of arsenic in California soils are above the CHHSLs for both residential and commercial/industrial settings. Background concentrations of arsenic found in California soils as reported by Bradford et al. (March 1996) ranged from 0.6 to 11.0 milligrams per kilogram (mg/kg) with an arithmetic mean of 3.54 mg/kg. The CHHSLs for residential and industrial settings for arsenic are 0.07 and 0.24 mg/kg, respectively. The EPA states that it does not typically require cleanup for arsenic below natural background levels and other regulatory agencies often consider the use of local or regional background concentrations as clean-up levels. The total arsenic levels in the 0.5-foot samples of the 20 soil borings ranged from 1.45 mg/kg (B18-0.5) to 5.20 mg/kg (B5-0.5) and are within the typical range of background arsenic levels referenced above.

Near surface soils at the site do not appear to be adversely impacted with OCPs, total lead, or total arsenic. The low levels of OCPs found in the soil borings do not represent a significant risk to human health or the environment.

As discussed previously in this section, none of the three project sites or areas of infrastructure improvements was listed on any list of hazardous materials sites as defined by Government Code Section 65962.5. Therefore, impacts related to this issue would be less than significant and no mitigation is required.

4.6.5.4 Within Two Miles of a Private Airport

Threshold	For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the proposed project area?

The project sites are not located within the vicinity of a private airstrip or heliport. Development of the proposed project uses would not result in a safety hazard to persons residing or working in the project area. Because there are no private airstrips in the vicinity of the project sites, no impact related to this issue would occur. No mitigation is required.

4.6.6 Significant Impacts

4.6.6.1 Within An Airport Land Use Plan or Within Two Miles of a Public Airport

Threshold	Would the project be located within an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, resulting in a safety hazard for people residing or working in the project area?

The nearest public use airport to the project sites is the Perris Valley Airport, located at 2091 Goetz Road and is approximately 0.25 mile east, 0.38 mile east, and 0.25 mile southwest from the Phase 1, Phase 2, and Phase 3 sites, respectively. Perris Valley Airport is on private property and is open to the public. This airport is utilized for skydiving and ballooning activities and has a single airport "Influence Area." Based on the City's General Plan, both Phase 2 and Phase 3 are located outside the Airport Influence Area for the Perris Valley Airport. However, in an abundance of caution, based on the Draft Perris Valley Airport Land Use Compatibility Plan, Phase 1 and Phase 3 are located within the Airport Compatibility Zones of the Perris Valley Airport. Phase 2 is not within the Airport Influence Area established for Perris Valley Airport.[1]

Another ~~A~~airport facility~~ies~~ within the vicinity of the project sites is~~nclude~~ the March Air Field, which is part of the March Air Reserve Base (MARB). The MARB encompasses approximately 6,500 acres of the Air Force Reserve's 452nd Air Mobility Wing, which provides host base support for numerous tenant active military units. It is also the home of 4th Air Force and multiple units of the California Air National Guard. When March Air Force Base (March AFB) was converted from an active duty base to a Reserve Base in 1996, the decision resulted in approximately 4,400 acres of property and facilities being declared surplus and available for disposal actions, as well as joint use of the airfield. With the realignment of March AFB, the March Air Reserve Base (MARB) Redevelopment Project Area was established. The MARB Redevelopment Project Area includes the entire 6,500-acre former active duty base area, and approximately 450 acres adjacent to the base in the industrial area of the City of Moreno Valley.

To implement the MARB Redevelopment Project Area and to facilitate the transition of a portion of the MARB from military to civilian uses, the March Joint Powers Authority, (March JPA) consisting of the County of Riverside and the Cities of Moreno Valley, Perris, and Riverside, was formed. The March JPA along with the U.S. Air Force pursued the establishment of March Air Field as a joint use airport.

The Air Force defines a "joint use airport" as one where the facilities which are owned and operated by the Air Force are made available for use by civil aviation. A joint use agreement between these parties was executed May 7, 1997, along with land leases for over 300 acres as the civilian airport name March Inland Port (MIP). Under the agreement, the civilian (March JPA) and the military (AFRC) entities share essential aviation facilities such as the control towers and runways, as well as maintenance of facilities, under this joint use arrangement. Under the provisions of the Joint Use Agreement, the MIP is the civilian facility that is managed and operated by the MIP Airport Authority (MIPAA). The MIP includes air cargo operations such as the March Global Port, a 350-acre commercial air cargo and distribution center.

The Department of the Defense (Air Force) completed an Air Installation Compatible Use Zone (AICUZ) study for MARB in 1998. The AICUZ study was designed and is intended to aid in the development of compatible land uses in non-government areas surrounding military airfields to protect public safety and health. The study established three zones based on potential crash patterns: a Clear Zone and two Accident Potential Zones (APZ). The Clear Zone reaches from along the extended runway centerline to a distance of 3,000 feet, APZ 1 extends from 3,000 feet to 8,000 feet, and APZ II extends from 8,000 feet to 15,000 feet. According to the AICUZ, outside of the Clear Zone

[1] *Exhibit S-19 Perris Valley Airport Influence Areas, Safety Element*, City of Perris General Plan 2030, October 2005.

and APZs "the risk of aircraft accidents is not significant enough to warrant special consideration in land use planning." The proposed project site is not located within a Clear Zone, APZ 1, or APZ 2 for MARB as designated by the Air Force 2005 AICUZ Study.[1] In addition to the AICUZ, Airport Influence Area boundaries around MARB have been adopted by County of Riverside Airport Land Use Commission (ALUC) in its Airport Land Use Plan (ALUP). A portion of the Phase 3 site of the proposed project is located within Influence Area III.

Phase 1: Airport Distribution Center. As previously identified, the Phase 1 site is located within the Influence Area established for Perris Valley Airport.[2] More specifically, the Phase 1 site is located within Airport Compatibility Zone D of the Draft 2009 Perris Valley Airport Land Use Compatibility Plan.[3] Countywide policy criteria for Zone D allows for an average intensity of 100 persons per acre and a maximum intensity of 300 persons within any single acre. As identified in the ALUC Staff Report, using the Building Code Method, it is anticipated that the proposed development for Phase 1 would have an average intensity of approximately 25.1 persons per average acre and a maximum intensity of 169 people per single acre. Therefore, the proposed development on Phase 1 would not exceed the allowable intensity for Airport Compatibility Zone D.[4] Since the Phase 1 site of the project is located within the Airport Influence Area of the Perris Valley Airport, the development of the proposed project could result in a safety hazard for people that would work in the area. This is a potentially significant impact requiring mitigation.

The Phase 1 site is approximately 8 miles south of the March Air Field and is not within any of the March Air Field influence areas. Therefore, development of the Phase 1 site would not result in public airport safety hazards for people working in the project area. No impacts associated with ~~this issue~~March Air Field would occur and no mitigation is required.

Phase 2: First Park South Perris Distribution Center. As identified in the City's General Plan, Phase 2 of the project is located outside of the Influence Area established for Perris Valley Airport.[5] Therefore, development of the Phase 2 site would not result in private airport safety hazards for people working in the project area. No impacts associated with Perris Valley Airport would occur and no mitigation is required.

The Phase 2 site is approximately 7 miles south of the March Air Field. Similar to what was identified for Phase 1, the Phase 2 site is not within any of the March Air Field influence areas. Therefore, development of the Phase 2 site would not result in public airport safety hazards for people working in the project area. No impacts associated with ~~this issue~~March Air Field would occur and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. As identified in the ALUC Review Staff Report, the Phase 3 is located partially within Airport Compatibility Zones D and E.[6] Approximately 32.51 acres would be within Airport Compatibility Zone D and 116.33 acres would be within Airport Compatibility Zone E.[7] Of the two airport compatibility zones, Zone D is the more restrictive. As

[1] *AICUZ Study 1998,* United States Air Force, March ARB, California.
[2] *Exhibit S-19 Perris Valley Airport Influence Areas, Safety Element*, City of Perris General Plan 2030, October 2005.
[3] *Case Number ZAP1002PV09 – First Industrial Realty Trust/FirstCal Industrial LLC/Fr. Cal. Ellis,* County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.
[4] *Case Number ZAP1002PV09 – First Industrial Realty Trust/FirstCal Industrial LLC/Fr. Cal. Ellis*, County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.
[5] *Exhibit S-19 Perris Valley Airport Influence Areas, Safety Element,* City of Perris General Plan 2030, October 2005.
[6] *Case Number ZAP1056MA09 – First Industrial Realty Trust/FirstCal Industrial LLC/FR.Cal.Ellis,* County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.
[7] *Case Number ZAP1056MA09 – First Industrial Realty Trust/FirstCal Industrial LLC/FR.Cal.Ellis,* County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.

currently proposed, Countywide policy criteria for Zone D allows for an average intensity of 100 persons per acre and a maximum intensity of 300 persons within any single acre. It is anticipated that Phase 3 would potentially accommodate 16.1 persons per average acre and up to 167 people in any given single acre. This would meet the Countywide basic compatibility criteria for Zones D and E. However, since Phase 3 is located within the Airport Influence Area of the Perris Valley Airport, the development of the proposed project could result in a safety hazard for people that would work in the area. This is a potentially significant impact requiring mitigation.

The Phase 3 site is approximately 6.5 miles southeast of the March Air Field. The eastern portion of the Phase 3 site is within Airport Influence Area III of the MIP; however, the 67.25 acres of Phase 3 that are within Airport Influence Area III of the MIP would be utilized as a detention basin and would not contain any buildings. As part of the standard process for development within airport Influence Areas for MARB, however, proposed projects are required to be reviewed by the ALUC for consistency with the RCALUP. As a standard condition imposed during ALUC reviews, development located within the boundaries of Influence Area III is required to provide avigation easements. The proposed project was reviewed by the Riverside County ALUC on May 14, 2009. The ALUC determined the proposed project was consistent with the ALUP, subject to conditions identified in the staff report (e.g., recordation of an avigation easement, lighting restrictions, prohibition on flashing lights or uses that would generate, smoke, water vapor, or electrical disturbance, or attract large concentrations of birds).

To ensure consistency with the ALUC recommendations is maintained, **Mitigation Measures 4.6.6.1A** through **4.6.6.1I** have been identified. Adherence to these measures would ensure the proposed project remains consistent with the General Plan and the ALUC recommendations.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the construction and operation of all three phases would not result in significant safety hazards for people working in the project area. In addition to the development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements are infrastructure features that would undergrounded and would not result in significant safety hazards for people working in the project area. The improvements are infrastructure features that would not be located in an area that would result in significant safety hazards for people working in the project area. Proposed infrastructure improvements would not result in a hazard related to proximity to a private airport as no structures are proposed as part of the improvements. Impacts resulting from infrastructure improvements are less than significant.

Mitigation Measures. The proposed project is consistent with and compatible with Perris Valley Airport and MARB flight operations. Adherence to conditions identified by the ALUC is required for this project, the incorporation of these requirements as **Mitigation Measures 4.6.6.1A** though **4.6.6.1I** ensures that standard requirements are included as part of the project's MMRP.

4.6.6.1A Prior to recordation of a final map, the issuance of building permits, or conveyance to an entity exempt from the Subdivision Map Act for Phase 3, whichever occurs first, the landowner of the project site shall convey an avigation easement to the MARB/MIP Airport or provide documentation to the City of Perris and the Airport Land Use Commission that such conveyance has previously been recorded.

4.6.6.1B Prior to the issuance of building permits for each phase, the project proponent shall provide evidence to the City through submittal of a lighting plan that any outdoor lighting shall be hooded or shielded to prevent either the spillage of lumens or reflection into the sky and that all outdoor lighting is downward facing.

4.6.6.1C Prior to the issuance of building permits for each phase, the project proponent shall provide evidence to the City through submittal and agreement of additional conditions of approval that the following uses shall be prohibited on site:

a. Any use which would direct a steady light or flashing light of red, white, green or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.

b. Any use which would cause sunlight to be reflected toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport.

c. Any use which would generate smoke or water vapor, or which would attract large concentrations of birds, or which may otherwise affect safe air navigation within the area.

d. Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

4.6.6.1D Prior to issuance of building permits for Phase 1, the applicant shall submit a Notice of Proposed Construction of Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) for each building with an elevation at top point exceeding 1,427 feet AMSL and shall have received a determination of "No Hazard to Air Navigation" from the FAA. Copies of the FAA determination shall be provided to the City of Perris Planning Department and the Riverside County Airport Land Use Commission.

4.6.6.1E Prior to issuance of building permits for Phase 3, the applicant shall submit a Notice of Proposed Construction of Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) for each building with an elevation at top point exceeding 1,424 feet AMSL and shall have received a determination of "No Hazard to Air Navigation" from the FAA. Copies of the FAA determination shall be provided to the City of Perris Planning Department and the Riverside County Airport Land Use Commission.

4.6.6.1F Prior to issuance of grading permits for each phase, the project proponent shall provide evidence to the City that the proposed on-site detention basins have been designed and engineered so as to provide for a maximum 48-hour detention period after the design storm and to remain totally dry between rainfalls. If this criterion cannot be met, then **Mitigation Measure 4.6.6.1G** shall apply. Conversely, if this criterion can be met, **Mitigation Measure 4.6.6.1G** shall not be applicable.

4.6.6.1G The project proponent, in consultation with the owner-operator of Perris Valley Airport, shall contract with a wildlife biologist qualified to conduct Wildlife Hazard Assessments for the preparation of a Wildlife Hazard Management Plan (WHMP). Mitigation measures identified in the WHMP shall be adhered to.

4.6.6.1H Prior to the issuance of occupancy permits for each phase, the project proponent shall provide evidence to the City that vegetation proposed for in and around the proposed detention/retention basins does not provide food or cover for bird species that would be incompatible with airport operations.

4.6.6.1I Prior to the transfer of any real property or the finalization of a lease agreement for property within each of the phases, the transferor (or leaser) shall provide to the transferee (or lessee), notification required by Condition 4 of the Riverside County Airport Land Use Commission's consistency determination dated May 14, 2009.

Level of Significance after Mitigation. Adherence to **Mitigation Measures 4.6.6.1A** though **4.6.6.1I** would ensure that impacts associated with airport hazards would be less than significant.

~~4.6.6.2 Within Two Miles of a Private Airport~~

~~Threshold For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the proposed project area?~~

~~The nearest private airport to the project sites is the Perris Valley Airport, located at 2091 Goetz Road and is approximately 0.25 mile east, 0.38 mile east, and 0.25 mile southwest from the Phase 1, Phase 2, and Phase 3 sites, respectively. Perris Valley Airport is on private property and is open to the public. This airport is utilized for skydiving and ballooning activities and has a single airport "Influence Area." Based on the City's General Plan, both Phase 2 and Phase 3 are located outside the Airport Influence Area for the Perris Valley Airport. However, in an abundance of caution, based on the Draft Perris Valley Airport Land Use Compatibility Plan, Phase 1 and Phase 3 are located within the Airport Compatibility Zones of the Perris Valley Airport. Phase 2 is not within the Airport Influence Area established for Perris Valley Airport.[1]~~

~~**Phase 1: Airport Distribution Center.** As previously identified, the Phase 1 site is located within the Influence Area established for Perris Valley Airport.[2] More specifically, the Phase 1 site is located within Airport Compatibility Zone D of the Draft 2009 Perris Valley Airport Land Use Compatibility Plan.[3] Countywide policy criteria for Zone D allows for an average intensity of 100 persons per acre and a maximum intensity of 300 persons within any single acre. As identified in the ALUC Staff Report, using the Building Code Method, it is anticipated that the proposed development for Phase 1 would have an average intensity of approximately 25.1 persons per average acre and a maximum intensity of 169 people per single acre. Therefore, the proposed development on Phase 1 would not exceed the allowable intensity for Airport Compatibility Zone D.[4] Since the Phase 1 site of the project is located within the Airport Influence Area of the Perris Valley Airport, the development of the proposed project could result in a safety hazard for people that would work in the area. This is a potentially significant impact requiring mitigation.~~

~~**Phase 2: First Park South Perris Distribution Center.** As identified in the City's General Plan, Phase 2 of the project is located outside of the Influence Area established for Perris Valley Airport.[5] Therefore, development of the Phase 2 site would not result in private airport safety hazards for people working in the project area. No impacts associated with this issue would occur and no mitigation is required.~~

~~**Phase 3: First Park South 215 Distribution Center.** As identified in the ALUC Review Staff Report, the Phase 3 is located partially within Airport Compatibility Zones D and E.[6] Approximately 32.51 acres would be within Airport Compatibility Zone D and 116.33 acres would be within Airport Compatibility Zone E.[7] Of the two airport compatibility zones, Zone D is the more restrictive. As~~

~~[1] *Exhibit S-19 Perris Valley Airport Influence Areas, Safety Element*, City of Perris General Plan 2030, October 2005.~~
~~[2] *Exhibit S-19 Perris Valley Airport Influence Areas, Safety Element*, City of Perris General Plan 2030, October 2005.~~
~~[3] *Case Number ZAP1002PV09 – First Industrial Realty Trust/FirstCal Industrial LLC/Fr. Cal. Ellis*, County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.~~
~~[4] *Case Number ZAP1002PV09 – First Industrial Realty Trust/FirstCal Industrial LLC/Fr. Cal. Ellis*, County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.~~
~~[5] *Exhibit S-19 Perris Valley Airport Influence Areas, Safety Element*, City of Perris General Plan 2030, October 2005.~~
~~[6] *Case Number ZAP1056MA09 – First Industrial Realty Trust/FirstCal Industrial LLC/FR.Cal.Ellis,* County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.~~
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~~currently proposed, Countywide policy criteria for Zone D allows for an average intensity of 100 persons per acre and a maximum intensity of 300 persons within any single acre. It is anticipated that Phase 3 would potentially accommodate 16.1 persons per average acre and up to 167 people in any given single acre. This would meet the countywide basic compatibility criteria for Zones D and E. However, since Phase 3 is located within the Airport Influence Area of the Perris Valley Airport, the development of the proposed project could result in a safety hazard for people that would work in the area. This is a potentially significant impact requiring mitigation.~~

~~**All Phases and Infrastructure.** The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the construction and operation of all three phases would not result in significant safety hazards for people working in the project area. In addition to the development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements are infrastructure features that would undergrounded and would not result in significant safety hazards for people working in the project area. The improvements are infrastructure features that would not be located in an area that would result in significant safety hazards for people working in the project area. Proposed infrastructure improvements would not result in a hazard related to proximity to a private airport as no structures are proposed as part of the improvements. Impacts resulting from infrastructure improvements are less than significant.~~

~~**Mitigation Measures.** Previously identified **Mitigation Measures 4.6.6.1A** though **4.6.6.1I** will minimize the potential risk of aircraft accidents beyond the runway environment and ensure that standard requirements are included as part of the project's Mitigation Monitoring and Reporting Program (MMRP).~~

~~**Level of Significance after Mitigation.** Adherence to **Mitigation Measures 4.6.6.1A** though **4.6.6.1I** would ensure that impacts associated with private airport hazards would be less than significant.~~

4.6.7 Cumulative Impacts

The cumulative impact analysis considers development of the proposed project in conjunction with other development in the City. Significant cumulative impacts associated with the routine transport, use, and disposal of hazardous materials would occur as the proposed project would increase the number of truck traffic in the area as well as the amount of trucks transporting hazardous materials. The proposed project in combination with other projects of a similar nature has the potential to create a significant cumulative impact related to this issue. Often, these risks are site-specific and localized and therefore limited to the project site. However, since the number of trucks containing hazardous materials on the road in a given area at any given time is impossible to estimate and since accidental spills and leaks are unplanned occurrences, it is impossible to predict the occurrence of such events. It is reasonable to assume however that with an increase in vehicles transporting hazardous materials the potential for accidents would be increased.

As anticipated in the City's General Plan, demographic increases, and the availability of vacant property in the City would lead to the new industrial development in the City and surrounding area. While the project-specific hazardous material impacts of individual development projects will be addressed separately in future CEQA documents, anticipated future development will contribute, through increases in population and the number of outlets that transport, or dispose of hazardous materials, to a cumulative increase in risk for hazardous material incidents. Although each project has unique hazardous materials considerations, it is anticipated that future cumulative projects would comply with the local, state, and federal regulations and requirements as these are required for all

development projects. As a result, cumulative impacts associated with hazardous materials would be less than significant.

Cumulative aircraft hazard impacts consist of future development within the boundaries of the AICUZ and ALUP accident potential zones. The risk to each future project is based on the specific accident potential zone. The risks associated with development in these accident potential zones can only be reduced through conformance with land use guidelines and policies identified by the AICUZ and ALUP. However, because the surrounding Cities of Perris, Moreno Valley, and Riverside as well as the County of Riverside have implemented comprehensive land use plans that incorporate AICUZ and ALUP recommendations, it is anticipated that cumulative development within the accident potential zones would not create a significant and cumulative impact associated with aircraft accident hazards.

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4.7 HYDROLOGY AND WATER QUALITY

This section describes the hydrologic conditions on and adjacent to the project site and evaluates potential impacts to surface and groundwater resources associated with the proposed project. The analysis contained in this section is based on the following technical studies prepared for the proposed project:

- *Preliminary Hydrology Report for Airport Distribution Center,* Albert A. Webb Associates, October 23, 2008 (Appendix G-1 of this EIR).
- *Preliminary Hydrology Report for First Park South I-215,* Albert A. Webb Associates, October 21, 2008 (Appendix G-2 of this EIR).
- *Preliminary Hydrology Report for South Perris Distribution Center,* Albert A. Webb Associates, October 7, 2008 (Appendix G-3 of this EIR).
- *Preliminary Water Quality Management Plan for Airport Distribution Center,* Albert A. Webb Associates, June 2008 (Appendix H-1 of this EIR).
- *Preliminary Water Quality Management Plan for First Park South I-215*, Albert A. Webb Associates, February 2, 2009 (Appendix H-2 of this EIR).
- *Preliminary Water Quality Management Plan for South Perris Distribution Center ,* Albert A. Webb Associates, February 2, 2009 (Appendix H-3 of this EIR).

In addition to these project specific technical studies, the analysis contained in this section is also based on the following reference documents:

- 2006 Riverside County Water Quality Management Plan for Urban Runoff.
- Stormwater Best Management Practices Handbook for New Development and Redevelopment, California Stormwater Quality Association [CASQA], January 2003.

The Initial Study prepared for the proposed project made a determination of no impacts related to the placement of housing within a 100-year flood hazard area; therefore, the topic is not discussed in this section.

4.7.1 Existing Setting

The project sites are approximately 454.7 acres total in size composed of three separate sites generally located to the southwest of the Interstate 215 in the southern portion of the City of Perris. The three sites vary in size and include 38-acre, 201-acre, and 215.7-acre sites. All three sites are planned for industrial uses and are generally flat. The project area is located in the Peninsular Ranges Geomorphic Province of southern California, which extends southeastward from the San Bernardino and San Gabriel Mountains to the tip of the Baja California peninsula and is composed of alluvial deposits resulting from the erosion of nearby granitic mountain ranges. The Phase 1 site is currently developed with a pre-cast concrete bridge fabrication facility while the Phase 2 and Phase 3 sites are fallow agricultural fields.

4.7.1.1 Drainage

All three project sites eventually drain Reach 3 of the San Jacinto River. Flows are then conveyed through the San Jacinto River, Canyon Lake, again to the San Jacinto River (Reach 1), and ultimately to Lake Elsinore. In the event Lake Elsinore is at or beyond capacity, flows would continue through Temescal Creek, the Santa Ana River (Reaches 1–3) and then to the Pacific Ocean.

Phase 1: Airport Distribution Center. As illustrated in Figure 4.7.1, existing flows generated on the 38-acre Phase 1 site currently drain as sheet flow in a northern and southern direction toward Mountain Avenue and Artlo Avenue, respectively, and eventually discharge to Goetz Road and into the San Jacinto River (Reach 3). Off-site flows coming onto the Phase 1 site currently drain from approximately 24 acres west of the Phase 1 site between Mountain Avenue and Artlo Avenue. These flows currently enter the Phase 1 site via sheet flow at the western boundary.

Phase 2: First Park South Perris Distribution Center. As illustrated in Figure 4.7.2, existing flows generated on the 201-acre Phase 2 site currently drain in a northwest to southeast direction toward the San Jacinto River (Reach 3). Off-site flows coming onto the Phase 2 site currently drain from four separate watersheds approximately 1,353.74 acres in size following a northwest to southeast pattern across the site. Flows leaving the Phase 2 site drain onto the adjacent property to the south before reaching the San Jacinto River.

Phase 3: First Park South 215 Distribution Center. As illustrated in Figure 4.7.3, existing flows generated on the 215.7-acre Phase 3 site currently drain in a northwest to southeast direction toward the San Jacinto River (Reach 3). No off-site flows are known to enter the Phase 3 site.

4.7.1.2 Water Quality

The three project sites are within Region 8 (Santa Ana Region) of the California Regional Water Quality Control Board (RWQCB). Region 8 encompasses the watersheds of the Santa Ana and San Jacinto Rivers. The 24-mile long San Jacinto River flows into southern Perris from the San Jacinto Mountains, across the San Jacinto Valley, through the City of Perris, to Railroad Canyon Reservoir, and finally to its terminus in Lake Elsinore, southwest of Perris. Table 4.7.A identifies receiving waters that receive urban stormwater runoff from the project sites.

Table 4.7.A: Receiving Waters From the Project Site

Receiving Water	303(d) List Impairments	Designated Beneficial Use	RARE Use* Designation
All Phases			
San Jacinto River Reach 3 (Hydrologic Unit 802.11)	None	AGR, GWR, REC1, REC2, WARM, WILD	No
Canyon Lake (Hydrologic Unit 802.11 and 802.12)	Nutrients, Pathogens	MUN, AGR, GWR, REC1, REC2, WARM, WILD	No
San Jacinto River Reach 1 (Hydrologic Unit 802.31 and 802.32)	None	MUN, AGR, GWR, REC1, REC2, WARM, WILD	No
Lake Elsinore (Hydrologic Unit 802.31)	Nutrients, Organic Enrichment/Low Dissolved Oxygen, PCBs (polychlorinated biphenyls), Unknown Toxicity	REC1, REC2, WARM, WILD	No

* Rare, Threatened or Endangered Species (RARE) waters support habitats necessary for the survival and successful maintenance of plant or animal species designated under State or Federal law as rare, threatened, or endangered.

Source: *Airport Distribution Center Preliminary Water Quality Management Plan*, Albert A. Webb Associates, June 2008; South Perris Distribution Center Preliminary Water Quality Management Plan, Albert A. Webb Associates, February 2, 2009; First Park South 215 Preliminary Water Quality Management Plan, Albert A. Webb Associates, February 2, 2009.

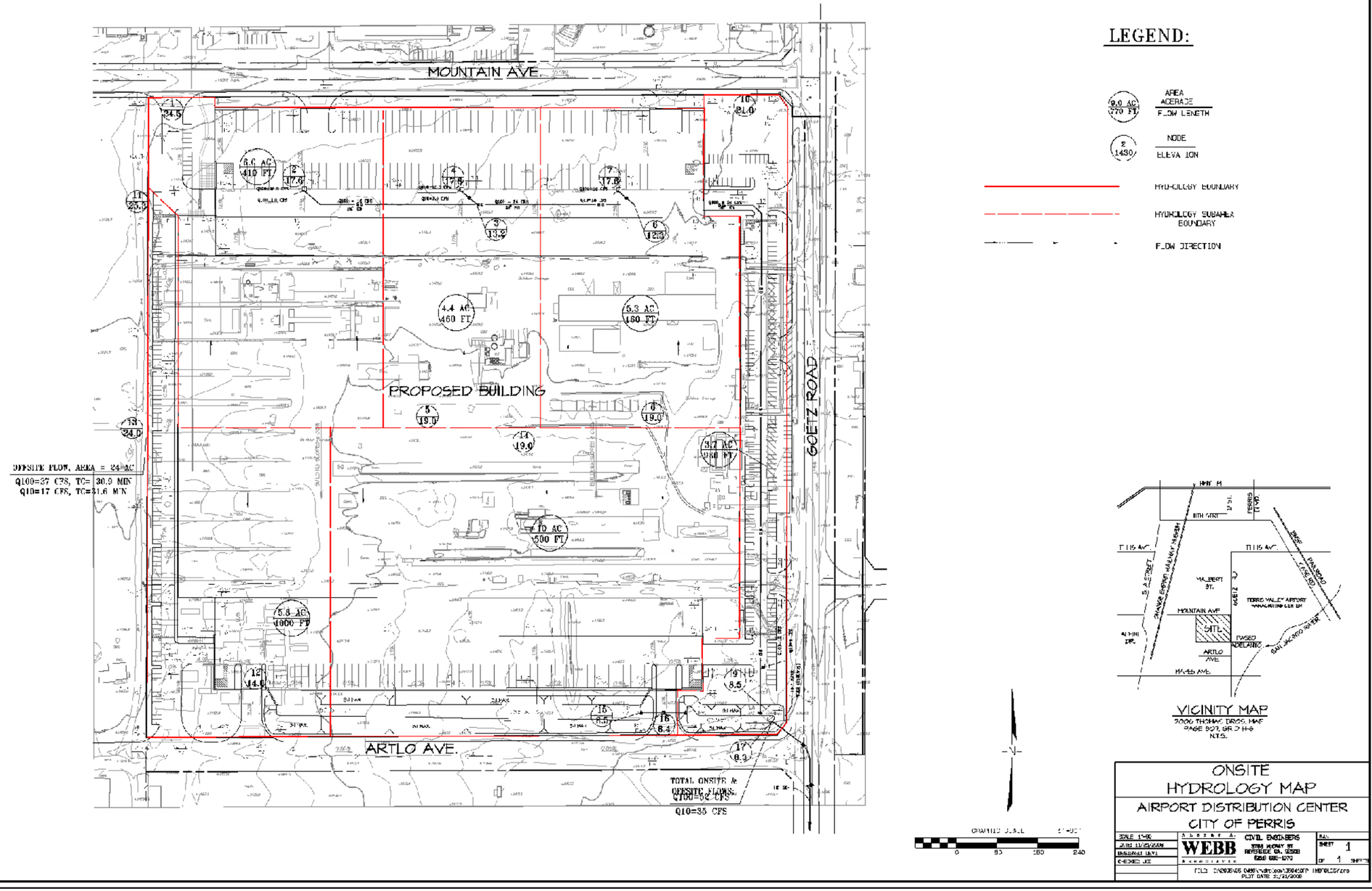

FIGURE 4.7.1

LSA

SOURCE: Albert A. Webb Associates (2008)

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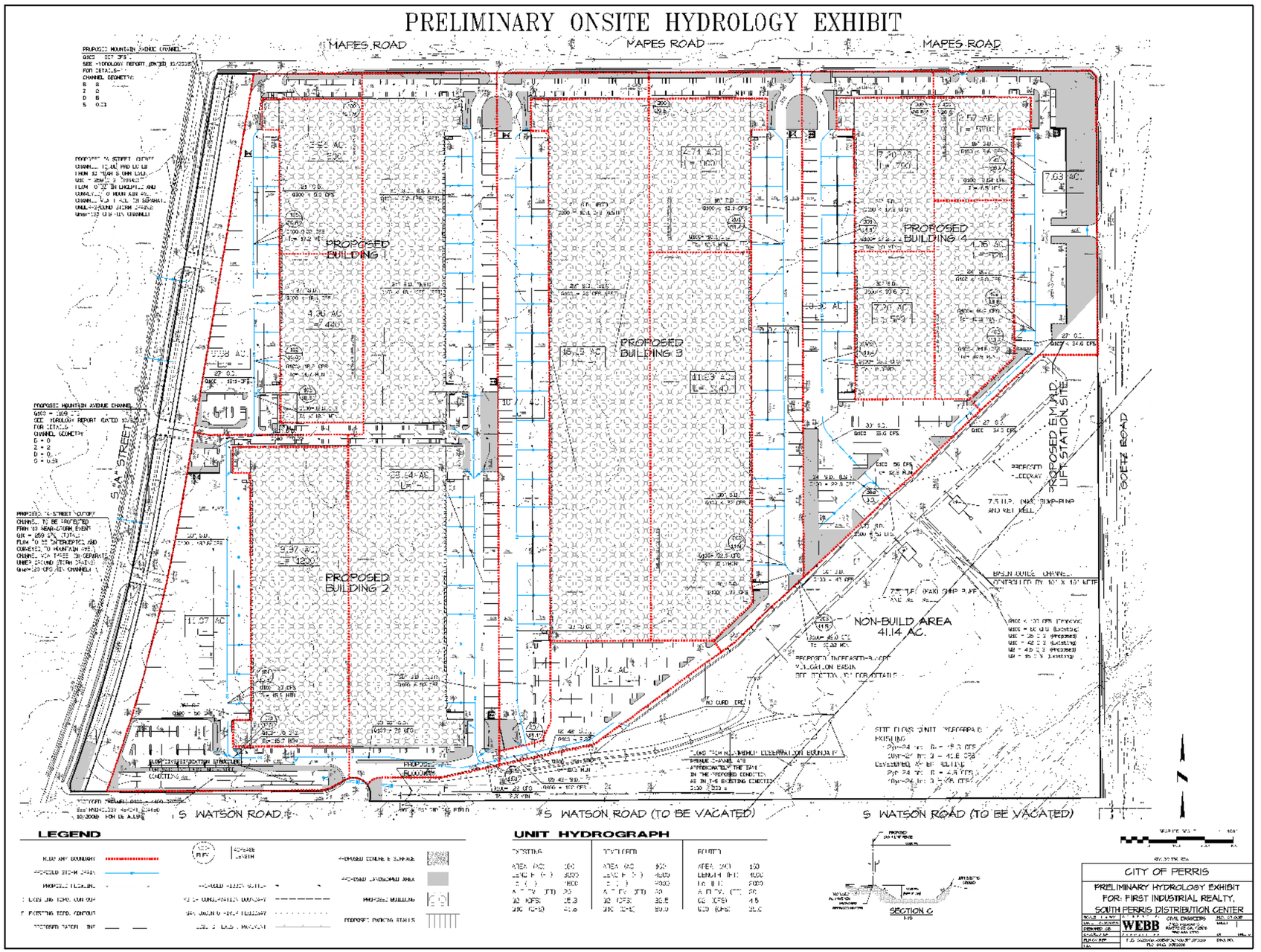

FIGURE 4.7.2

LSA

SOURCE: Albert A. Webb Associates (2008)

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Phase 2 South Perris Distribution Center
Pre-Project Drainage

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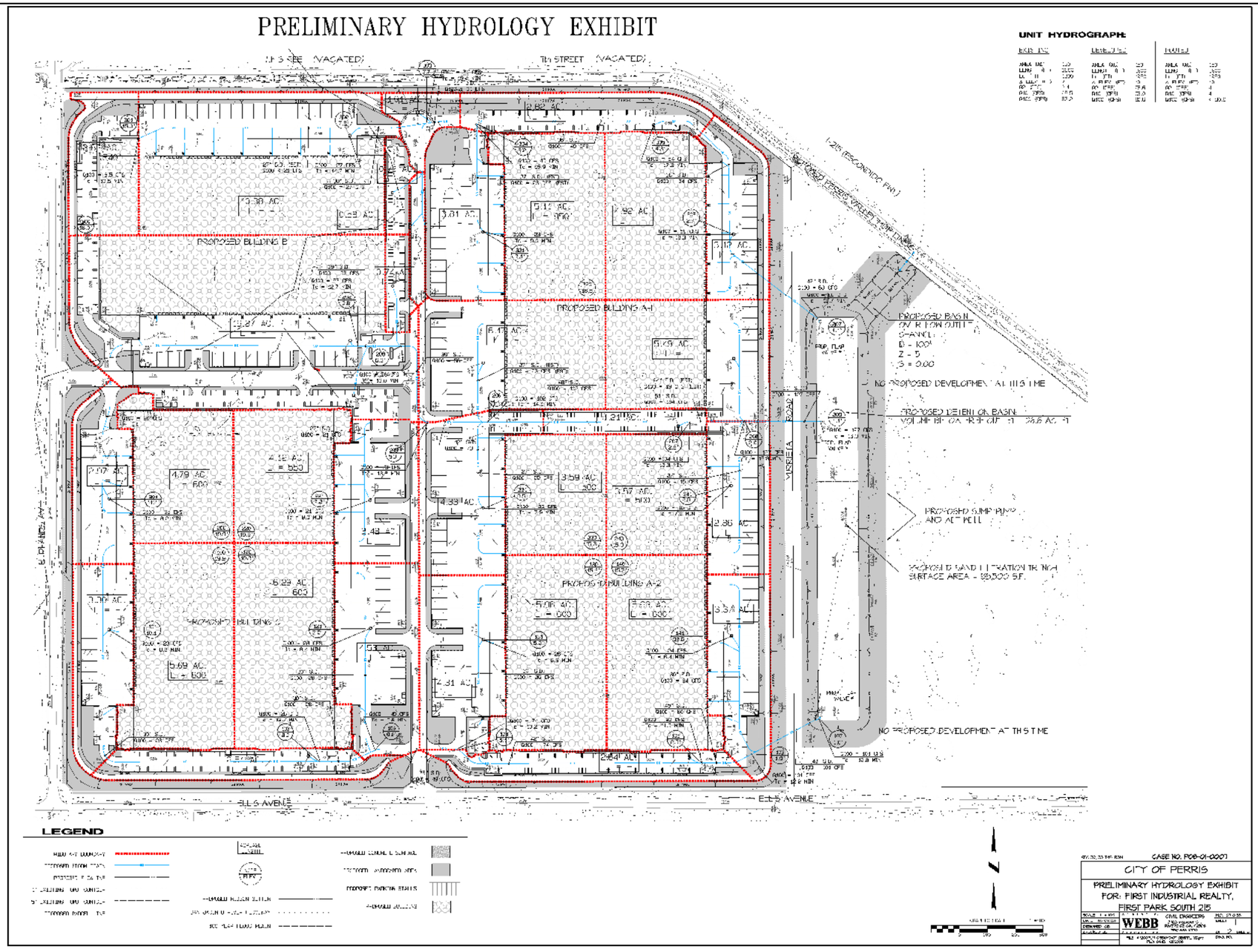

LSA

FIGURE 4.7.3

South Perris Industrial
Environmental Impact Report

Phase 3 First Park South I-215 Distribution Center
Pre-Project Drainage

SOURCE: Albert A. Webb Associates (2008)

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According to the Santa Ana Water Quality Control Plan, water quality in the project area is continuously altered by a number of factors including but not limited to consumptive use, importation of water high in dissolved solids, runoff from urban and agricultural areas, and the recycling of water within the basin. In general, water quality in the Santa Ana Region becomes progressively poorer as water moves along hydraulic flow-paths. The highest quality water is typically associated with tributaries flowing from surrounding mountains and groundwater recharged by these streams. As indicated in the Preliminary Water Quality Management Plans (WQMP)[1] prepared for the proposed project and in Table 4.7.A, two of the four bodies of water that storm discharges from the project sites may potentially pass through are included in the most recent list of Clean Water Act Section 303(d) list of impaired water bodies. Canyon Lake is listed for pathogens and nutrients while Lake Elsinore is listed for nutrients, organic enrichment/low dissolved oxygen, polychlorinated biphenyls (PCBs), and unknown toxicity.

As indicated in Table 4.7.A, each of the receiving waters has multiple designated beneficial uses. These designations provide a description of how the water is used and what beneficial purposes it serves. Table 4.7.B provides a description of each of these water uses.

Table 4.7.B: Beneficial Uses

Designated Beneficial Use	Description of Beneficial Use
Agricultural Supply (AGR)	Waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation.
Groundwater Recharge (GWR)	Waters used for natural or artificial recharge of groundwater for purposed of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
Municipal and Domestic Supply (MUN)	Waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Water Contact Recreation (REC-1)	Waters used for recreational activities involving body contact with water where ingestion of water is reasonably possible. Uses include, but are not limited to, swimming, water-skiing, whitewater activities, fishing, and use of natural hot springs.
Non-contact Water Recreation (REC-2)	Waters used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. Uses include, but are not limited to, picnicking, sunbathing, hiking, camping, boating, hunting, sightseeing, and aesthetic enjoyment.
Warm Freshwater Habitat (WARM)	Waters that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.
Wildlife Habitat (WILD)	Water that support wildlife habitats including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.

Source: Water Quality Control Plan for the Santa Ana River Basin, 1995.

4.7.1.3 Water Source

Water resources in the City and throughout Riverside County are sustained by substantial groundwater basins, which are used as reservoirs to store water during wet years. These underground reservoirs are tapped throughout the year according to the demand for water. Groundwater conditions in these basins are influenced by natural hydrologic conditions such as percolation of precipitation, groundwater seepage, and ephemeral stream flow within the watershed areas.

[1] *Airport Distribution Center Preliminary Water Quality Management Plan*, Albert A. Webb Associates, June 2008; *South Perris Distribution Center Preliminary Water Quality Management Plan*, Albert A. Webb Associates, February 2, 2009; *First Park South 215 Preliminary Water Quality Management Plan,* Albert A. Webb Associates, February 2, 2009.

4.7.1.4 Water Supply

The project site is located within the service boundary of the Eastern Municipal Water District (EMWD), which serves the eastern portion of the watershed in Riverside County. The EMWD has a 555-square mile service area that provides water for a population of about 630,000. Without easy access to an ocean outfall for effluent, EMWD has developed into one of the State's largest reclaimed water providers, having a combined capacity from its five sewage treatment plants of more than 43 million gallons per day (mg/d). Reclaimed water has become extremely important in managing local water resources and helps to extend the economic viability of agriculture, the region's largest industry. In recent years, reclaimed water has become increasingly accepted for irrigation and landscaping. EMWD utilizes an aggressive program of developing local groundwater resources, including desalination, water harvesting, and additional storage of surplus imported and reclaimed water.

4.7.2 Existing Policies and Regulations

In the past, the effort to control the discharge of stormwater focused on quantity (e.g., flood control) and to a limited extent on quality of stormwater. In recent years, awareness of the need to improve water quality has increased. With this awareness, federal, state, and local programs have been established to pursue the ultimate goal of reducing pollutants contained in stormwater discharges to waterways. The emphasis of these programs is to promote the concept and the practice of preventing pollution at the source, before it can cause environmental harm.

4.7.2.1 Federal Regulations

Clean Water Act. The Federal Clean Water Act (CWA) was amended in 1972 to prevent discharge of pollutants to Waters of the United States from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. In November 1990, the U.S. Environmental Protection Agency (EPA) published final regulations that establish application requirements for stormwater permits. The regulations require an NPDES permit for stormwater associated with construction and industrial activity, which discharges either directly to surface waters or indirectly through separate municipal storm drains. Pollution control is achieved by establishing engineering measures, such as detention basins and sediment traps, during both the construction period and the operational phases of the project.

Pursuant to requirements of the State Water Resources Control Board and the NPDES, General Permit No. CAS5000002 applies to all construction activities Statewide. Construction activity includes clearing, grading, or excavation that results in the disturbance of at least one acre of total land area, or activity which is part of a larger common plan of development of one acre or greater. The Santa Ana RWQCB regulates hydromodification[1] as well as surface and groundwater quality through adoption of water quality plans and standards, and issuance of water quality permits and waivers. The NPDES permit deals with both the construction phase and operational phase of development projects. For the construction phase of a project, the NPDES permit identifies the preparation of a Storm Water Pollution Prevention Plan (SWPPP). The purpose of an SWPPP is to identify and implement Best Management Practices (BMPs) to reduce impacts to surface water from contaminated stormwater discharges. The Phase 2 site will be required to comply with the CWA and NPDES by obtaining permits from the RWQCB to ensure post-construction drainage flows are no greater than pre-project flows and downstream water quality is not worsened and by obtaining a Section 404 permit from the U.S. Army Corps of Engineers (ACOE).

[1] Hydromodification is the alteration of the hydrologic characteristics of coastal and non-coastal waters, which, in turn, could cause degradation of water resources.

National Flood Insurance Program. The National Flood Insurance Program (NFIP) is a relatively recent federal program. The federal government has been actively involved in flood control since 1927 following major floods along the Mississippi River. Beginning with the Flood Control Act of 1936, Congress assigned the ACOE the responsibility for flood control engineering works and later for floodplain information services. Flood control was provided through the construction of dams and reservoirs. Despite these programs and rapidly rising federal expenditures for flood control, flood losses continued to rise. In 1968, Congress passed the National Flood Insurance Act, which created the NFIP. The Flood Disaster Protection Act of 1973, which amended the 1968 Act, required the purchase of flood insurance by property owners who were located in special flood hazard areas and were being assisted by federal programs, or by federally supervised, regulated, or insured agencies or institutions.

National Flood Insurance Program Reform Act of 1994. In 1994, the National Flood Insurance Program Reform Act went through its first major revision since its inception. Included in this revision were provisions that if a lender were to escrow an account and if the structure were in the floodplain, then the lender *must* escrow for flood insurance. The revised legislation also included increased flood insurance limits and the elimination of the 1962 buy-out program. However, the legislation did initiate the Hazard Mitigation Fund as part of the flood insurance policy. Also included in this legislation was the increase from a 5-day to a 30-day waiting period for a new policy to become effective. It also prohibits the waiver of flood insurance purchase requirements as a condition of receiving federal disaster assistance. If the flood insurance policy were not maintained, in the event of another disaster, no disaster assistance would be made available for that structure.

Executive Order 11988, Floodplain Management. Executive Order 11988 requires the ACOE to provide leadership and to take action to:

- Reduce the hazards and risk associated with floods;
- Minimize the impact of floods on human health, safety, and welfare; and
- Restore and preserve the natural and beneficial values of the current floodplain.

To comply with Executive Order 11988, the policy of the ACOE is to develop projects that, to the extent possible, avoid or minimize adverse effects associated with use of the floodplain and that avoid development (or the inducement of development) in an existing floodplain unless there is no practicable alternative.

4.7.2.2 State Regulations

The California Water Code is the principal state law regulating water quality in California. The Health and Safety Code, Fish and Game Code, Harbors and Navigation Code, and the Food and Agriculture Code all contain water quality provisions that require compliance.

The California Water Code contains provisions regulating water and its use. This portion of the California Water Code, Division 7 (Porter-Cologne Act), establishes a program to protect water quality and beneficial uses of the state water resources and includes groundwater and surface water. The State Water Resources Control Board is the principal state agency responsible for control of water quality. It establishes waste discharge requirements, water quality control planning and monitoring, enforcement of discharge permits, and ground and surface water quality objectives. It also prevents waste and unreasonable use of water, and adjudicates water rights.

The Health and Safety Code, Fish and Game Code, Harbors and Navigation Code, and the Food and Agriculture Code all contain provisions concerning water quality. The Health and Safety Code

provides for protection of ground and surface waters from hazardous waste and other toxic substances. The Harbors and Navigation Code provides regulations designed to prevent the unauthorized discharge of waste from vessels into surface waters. The Fish and Game Code has provisions to prevent unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life. The Food and Agriculture Code provides for the protection of groundwater that may be used for drinking water supplies.

The California Code of Regulations also contains administrative procedures for the state and RWQCBs in Title 23; and for water quality for domestic uses, wastewater reclamation, and hazardous waste management in Title 22. The California Department of Fish and Game (CDFG), through provisions of the California Fish and Game Code (§1601 through §1603), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. The presence of a channel bed and banks, and at least an intermittent flow of water define streams (and rivers). The CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFG. The Phase 2 site will be required to obtain a Section 1601 or 1603 streambed alteration agreement from the CDFG.

Cobey-Alquist Flood Plain Management Act (California Water Code Section). This Act states that a large portion of land resources of the State of California is subject to recurrent flooding. The public interest necessitates sound development of land use, as land is a limited, valuable, and irreplaceable resource, and the floodplains of the State are a land resource to be developed in a manner that, in conjunction with economically justified structural measures for flood control, would result in prevention of loss of life and of economic loss caused by excessive flooding. The primary responsibility for planning, adoption, and enforcement of land use regulations to accomplish floodplain management rests with local levels of government. It is policy of the State of California to encourage local government to plan land use regulations to accomplish floodplain management and to provide state assistance and guidance.

4.7.2.3 Local Regulations

Riverside County Water Quality Management Plan Guidance Document. This document is intended to provide guidelines for project-specific post-construction Best Management Practices (BMPs) and for regional and sub-regional Source Control BMPs and Structural BMPs to address management of Urban Runoff quantity and quality to protect Receiving Waters. It identifies the BMPs, including design criteria for Treatment Control BMPs that may be applicable when considering any map or permit for which discretionary approval is sought.

New Development and Significant Redevelopment projects submitted since December 31, 2004, are required to submit a project-specific WQMP prior to the first discretionary project approval or permit. Project applicants may be required to submit a preliminary project-specific WQMP for discretionary project approval (land use entitlement). Project applicants shall be required to submit for review and approval a final project-specific WQMP that is in substantial conformance with the preliminary project-specific WQMP prior to the issuance of any building or grading permit.

City of Perris Municipal Code. The Municipal Code identifies policies related to flooding standards and stormwater runoff management. The specific policies of the Municipal Code that are relevant to the proposed project are as follows:

Chapter 14.22 Stormwater/Urban Runoff Management and Discharge Control, 14.22.020 Purpose and Intent. The purpose of this chapter is to ensure the environmental protection and public health, safety, and general welfare of city residents by:

A. Prohibiting non-stormwater discharges into the stormwater conveyance system;

B. Eliminating discharges into the stormwater conveyance system from spills, dumping, or disposal of materials other than stormwater or permitted or exempted discharges;

C. Reducing pollutants in stormwater discharges, including those pollutants taken up by stormwater as it flows over urban areas (urban runoff), to the maximum extent practicable; and

D. Reducing pollutants in stormwater discharges to achieve applicable water quality objectives for receiving waters within the city and Santa Ana River Watershed.

The intent of this chapter is to protect and enhance the water quality of the City of Perris water courses, water bodies, groundwater, wetlands, and regional receiving waters in a manner pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. Section 1342), and California Regional Water Quality Control Board NPDES Permit No. CAS 618033, Order No. R8-2002-0011, and any amendment, revision or re-issuance thereof (Ord. 1194 § 3(part), 2006).

Chapter 15.09 Flood Management, 15.09.090 Standards of Construction. In all areas of special flood hazards the following standards are required:

A. Anchoring.

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

2. All manufactured homes shall meet the anchoring standards of Section 15.09.120.

B. Construction Materials and Methods.

1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

3. All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

4. Require within Zones AH or AO, adequate drainage paths around structures or slopes to guide floodwaters around and away from proposed structures.

C. Elevation and Floodproofing.

1. Residential construction, new or substantial improvement, shall have the lowest floor, including basement:

a. In an AO Zone, elevated above the highest adjacent grade to a height equal to or exceeding the depth number specified in feet on the FIRM, or elevated at least two feet above the highest adjacent grade if no depth number is specified.

b. In an A Zone, elevated to or above the base flood elevation, as determined by this community.

c. In all other Zones, elevated to or above the base flood elevation. Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.

2. Nonresidential construction shall either be elevated to conform with Section 15.09.090 or together with attendant utility and sanitary facilities:
    a. Be flood proofed below the elevation recommended under Section 15.09.090 so that the structure is watertight with walls substantially impermeable to the passage of water;
    b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
    c. Be certified by a registered professional engineer or architect that the standards of this section are satisfied. Such certification shall be provided to the floodplain administrator.
3. All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must exceed the following minimum criteria:
    a. Be certified by a registered professional engineer or architect; or
    b. Be certified to comply with a local flood-proofing standard approved by the Federal Insurance Administration, Federal Emergency Management Agency, or
    c. Have a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater.
4. Manufactured homes shall also meet the standards in 15.09.120 (Ord. 981 § 2(part), 1994).

4.7.2.4 City of Perris General Plan Policies

Conservation Element

Measure II.A.3 For those public and private projects that are also subject to federal or state approval with respect to impacts to Waters of the U.S. and or streambeds, require evidence of completion of the applicable federal permit process prior to the issuance of a grading permit.

Goal V An adequate water supply to support existing and future land uses, anticipated in the Land Use Element.

Policy V.A Coordinate land-planning efforts with local water purveyors.

Measure V.A.1 Work with Eastern Municipal Water District to ensure that development does not outpace projections consistent with the Water District Urban Water Management Plan.

Measure V.A.2 Require use of new technologies and water conserving plant materials for landscaping.

Measure V.A.3 Participate with the Eastern Municipal Water District to develop and implement water conservation programs and to encourage use of water conserving technologies.

Goal VI Achieve regional water quality objectives and protect the beneficial uses of the region's surface and groundwater.

Policy VI.A Comply with requirements of the National Pollutant Discharge Elimination System (NPDES).

Measure VI.A.1 Adopt a Stormwater Ordinance per Santa Ana Regional Drainage Area Management Plan (DAMP) requirements for stormwater management and discharge control.

Measure VI.A.2 Evaluate the Planning Department's CEQA implementation procedures to ensure adequate consideration of water quality impacts and mitigation measures as part of Initial Studies/Mitigated Negative Declarations and Environmental Impact Reports.

Measure VI.A.3 Prior to issuance of any grading permit involving a disturbance of one or more acres of land, require proof of a RWQCB San Jacinto Watershed Construction Activities Permit and a Storm Water Pollution Prevention Plan.

Measure VI.A.4 Review water quality impacts during the project review and approval phases to ensure appropriate BMPs are incorporated into the project design and long-term operations.

Measure VI.A.5 In accordance with the Riverside County NPDES, enact a Water Quality Management Plan to review and regulate new development approvals.

Measure VI.A.6 Continue to fulfill the City's obligation as Co-permittee under the MS4 NPDES permit for Riverside County.

4.7.3 Methodology

Evaluation of hydrology and water quality impacts associated with the proposed project includes the following:

- Determine the construction phase water quality impacts based on NPDES standards;
- Determine the operational water quality impacts based on NPDES standards;
- Determine the operational impacts on drainage patterns and drainage capacity; and
- Determine the impacts on local groundwater table levels.

Construction and routine operation impacts were evaluated by estimating compliance with local and State stormwater quality regulations requiring implementation of effective BMPs as indicated in the Preliminary WQMP conducted for each of the phases of the proposed project (Appendix H of this EIR). Drainage pattern and capacity impacts were evaluated by calculating existing and proposed flow condition rates through Civil Design Computer Software, which incorporates the Riverside County Flood Control Water Conservation District requirements. The peak 100-year storm runoff was used to preliminarily size storm drain pipes as indicated in the Preliminary Hydrology Report conducted for each of the phases of this project (Appendix G of this EIR).

Pollutants of Concern and Assessment Methodology. The pollutants of concern for the water quality analysis have been chosen based upon the previously described regulations and the pollutants identified by regulatory agencies that potentially could be generated by the proposed project. The anticipated and potential pollutants in stormwater or urban runoff for various land uses are reflected in Table 4.7.C.

The following pollutants were chosen as pollutants of concern for evaluating water quality impacts of the proposed project based on three jointly applied criteria: (1) pollutants that have impaired urban surface receiving waters in other areas; (2) prevalence in urban runoff; and (3) regulatory requirements and guidance, including the California Toxics Rule (CTR) and Municipal Separate Storm Sewer Systems (MS4) permit. Table 4.7.D describes these pollutants of concern (sediments,

nutrients, heavy metals, organic compounds, trash and debris, oxygen-demanding substances, oil and grease, and pathogens) and their general impact on water quality and aquatic habitat.

Treatment Control BMPs and Assessment Methodology. The treatment control BMPs for the water quality analysis have been chosen based upon the previously described regulations and the pollutants identified by regulatory agencies that potentially would be generated by the proposed project. The anticipated and potential efficiency of these BMPs in regard to specific pollutants in urban runoff are reflected in Table 4.7.E. The following treatment control BMPs were chosen for the purpose of evaluating water quality impacts based on the following criteria: (1) effectiveness of removing specific pollutants that have impaired urban surface receiving waters in other areas; (2) prevalence of the pollutant in urban runoff; and (3) regulatory requirements and guidance, including the CTR and MS4 permit.

In some cases, other volume-based BMPs, proprietary BMPs, or combinations of BMPs may be appropriate for a development. Such BMPs or combinations of BMPs may be employed on a site-specific basis as approved by the City of Perris. The appropriate BMP(s) for a project should be determined based on the size of the project area and the types of pollutants that would be found in the development runoff. Table 4.7.F describes these BMPs (biofilters, water quality inlets, detention basins, and infiltration basins) and their general characteristics.

4.7.4 Thresholds of Significance

The following thresholds of significance regarding potential impacts to hydrology and water quality are based on Appendix G of the *CEQA Guidelines* (2008). A project would have a significant impact on surface hydrology, water quality and/or groundwater if it would:

- Result in violations of any water quality standards or waste discharge requirements of the City of Perris or the Regional Water Quality Control Board;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation on site or off site,
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff which would result in on-site or off-site flooding;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or
- Expose people or structures to inundation by seiche, tsunami, or mudflow.

Table 4.7.C: Anticipated and Potential Pollutants Generated by Land Use Type

Priority Project Categories	General Pollutant Categories								
	Sediment/ Turbidity	Nutrients	Organic Compounds	Trash & Debris	Oxygen-Demanding Substances	Bacteria & Viruses	Oil & Grease	Pesticides	Metals
Commercial/Industrial Development	P[1]	P[1]	P[5]	P	P[1]	P[3]	P	P[1]	P
Parking Lots	P[1]	P[1]	P[4]	P	P[1]	P[6]	P	P[1]	P
Streets, Highways and Freeways	P	P[1]	P[4]	P	P[1]	P[6]	P	P[1]	P

P = Potential N= Not Expected

[1] A potential pollutant if landscaping or open area exists on the project site.

[2] A potential pollutant if the project includes uncovered parking areas.

[3] A potential pollutant if land use involves animal waste.

[4] Specifically, petroleum hydrocarbons.

[5] Specifically, solvents.

[6] Bacterial indicators are routinely detected in pavement runoff.

Source: *Riverside County Water Quality Management Plan Guidance for Urban Runoff* (2006).

Table 4.7.D: Pollutants and General Water Quality Impacts

Pollutant	Water Quality Impact
Sediments	Excessive sediment can be detrimental to aquatic life by interfering with photosynthesis, respiration, growth, and reproduction.
Nutrients	Elevated nutrient levels in surface waters cause algal blooms, excessive vegetative growth, and dissolved oxygen levels, which is detrimental to aquatic life.
Heavy Metals	Bio-available forms of trace metals are toxic to aquatic life, potential of groundwater contamination, bio-accumulation in aquatic life, affect beneficial uses of a water body.
Organic Compounds	May contain levels that are harmful or hazardous to aquatic life.
Trash and Debris	Detrimental effect on recreational value of a water body and aquatic habitat; interferes with aquatic life respiration and can be harmful or hazardous to aquatic animals that mistakenly ingest floating debris.
Oxygen-Demanding Substances	Reduces a water body's capacity to support aquatic life. Can result in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.
Oil and Grease	Can accumulate in aquatic life from contaminated water, sediments, and food and are toxic at low concentrations. Can persist in sediments for long periods of time and result in adverse impacts on the diversity and abundance of existing bio-communities and can affect the aesthetic value of a water body.
Pathogens (Bacteria, Viruses, and Protozoa)	May result in water body impairments, can exceed public health standards for water contact recreation, creating a harmful environment. Can alter the aquatic habitat and create a harmful environment for aquatic life.
Pesticides	Elevated levels can indirectly or directly constitute a hazard to life or health. During cleaning activities, these compounds can be washed off into storm drains creating runoff containing toxic levels of the pesticides active component. Dirt, grease, and grime may adsorb concentrations that are harmful or hazardous to aquatic life.

Table 4.7.E: Treatment Control BMP Selection Matrix

Pollutant of Concern	Treatment Control BMP Selection Categories							
	Biofilters	Detention Basins[1]	Infiltration Basins or Porous Pavement[2]	Wet Ponds or Wetlands	Sand Filter or Filtration	Water Quality Inlets	Hydrodynamic Separator Systems[3]	Manufactured Proprietary Devices
Sediment/Turbidity	H/M	M	H/M	H/M	H/M	L	H/M (L for turbidity)	U
Nutrients	L	M	H/M	H/M	L/M	L	L	U
Organic Compounds	U	U	U	U	H/M	L	L	U
Trash & Debris	L	M	U	U	H/M	M	H/M	U
Oxygen-Demanding Substances	L	M	H/M	H/M	H/M	L	L	U
Bacteria & Viruses	U	U	H/M	U	H/M	L	L	U
Oils & Grease	H/M	M	U	U	H/M	M	L/M	U
Pesticides (non-soil bound)	U	U	U	U	U	L	L	U
Metals	H/M	M	H	H	H	L	L	U

L = Low Removal Efficiency M = Medium Removal Efficiency H/M = High or Medium Removal Efficiency U = Unknown Removal Efficiency

Notes: [1] Includes grass swales, grass strips, wetland vegetation swales, and bioretention.
[2] Includes extended/dry detention basins with grass lining and extended/dry detention basins with impervious lining.
[3] Includes infiltration basins, infiltration trenches, and porous pavements.

Source: *Riverside County Water Quality Management Plan Guidance for Urban Runoff* (2006).

Table 4.7.F: BMP Characteristics

BMP	General Characteristics
Biofilters	Pollutants are removed by filtering and through settling of sediment and other solid particles as the design flow passes through (not over) the vegetation. Overall the effectiveness of grass swales is limited and they are recommended in combination with other BMPs.
Water Quality Inlet	Pollutants are removed through sedimentation and separation as the design flow passes through one or more chambers. Generally used for pretreatment before discharging into another type of BMP.
Extended Detention Basin	Basin sized to detain and slowly release the design volume of urban runoff, allowing particles and associated pollutants to settle out. Maintenance efforts would need to be directed toward vegetation management, vector control, and removal of debris accumulations.
Infiltration Basins	Basin sized to detain and infiltrate runoff, allowing particles and associated pollutants to settle out. Maintenance efforts would be directed toward vegetation management, vector control, and removal of debris accumulations. This BMP may require groundwater monitoring.
Hydrodynamic Separator System	Device treats stormwater by creating a whirlpool of water within a concrete chamber in which solids fall to the bottom of the chamber while buoyant debris, oil, and grease rise to the surface, allowing water to pass through a flow control opening.

As previously stated, impacts related to the placement of housing within a 100-year flood hazard area was determined to have no impacts in the Initial Study prepared for the proposed project. Therefore, this issue is not discussed in this EIR section.

4.7.5 No Impacts/Less Than Significant Impacts

The following potential impacts were determined to be less than significant. In each of the following issues, either no impact would occur (therefore, no mitigation would be required) or adherence to established regulations, standards and policies would reduce potential impacts to a less than significant level.

4.7.5.1 Levee or Dam Failure Flooding-Related Impacts

Threshold	Would the project expose people or structure to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Portions of the City are susceptible to flood inundation associated dam failure. The project area is within the potential dam inundation plain of four reservoirs: Pigeon Pass Reservoir to the north in the City of Moreno Valley, Lake Perris to the immediate northeast of the City, the Little Lake Reservoir to the east of Hemet, and Diamond Valley Lake in Hemet.

The California Division of Safety of Dams completed an improvement project for the Pigeon Pass Dam, which included the placement of a chimney drain in a trench in the downstream slope to act as a crack stopper in the event of a seismic event.[1] In July 2005, the California Department of Water Resources (DWR) identified potential seismic safety problems with Perris Dam that could result in significant damage and uncontrolled water releases in the event of a major earthquake. While there is no imminent threat to public safety, the State has reduced the lake's water level to ensure maximum protection for communities downstream while Perris Dam is repaired. Following an independent expert analysis, the DWR is currently moving ahead with plans to repair Perris Dam. Construction activity is currently underway along the southeastern span of Perris Dam as the DWR conducts a test program to obtain additional geotechnical information about the Perris Dam and foundation in advance of future seismic retrofitting. The DWR released the Draft EIR for the Perris Dam Remediation Program on January 11, 2010. The ~~finalized~~ repair plan includes upgrading the dam by replacing the foundation materials and reinforcing it with a stability berm placed on top of the improved foundation. Repairs are estimated to begin 2010 and to be completed by fall 2014.[2]

Phase 1: Airport Distribution Center. The Phase 1 site is approximately 38 acres in size and is located west of Goetz Road between Mountain Avenue and Artlo Avenue. As identified in the Safety Element of the City's General Plan, the Phase 1 site is located within the dam inundation area.[3] Although the Phase 1 site is within the dam inundation zone, occurrence of flooding from the four reservoirs in the City is extremely remote as Pigeon Pass Reservoir, Perris Dam, Little Lake Reservoir, and Diamond Valley Lake have been engineered and constructed with the knowledge that the area is seismically active. As previously stated, the DWR has identified potential seismic safety problems with the Perris Dam. However, the Perris Dam Remediation Program, which addresses these potential seismic safety problems, is currently going through the CEQA public review period. Completion of the Perris Dam remediation design is expected in late 2010 with construction estimated

[1] *County of Riverside Flood Hazards*, Riverside County Integrated Plan, August 1, 2000, http://www.rcip.org/Documents/general_plan/appendix_h/pdf/03_06_05.pdf, web site accessed February 21, 2008.

[2] *Lake Perris Dam Project*, Department of Water Resources, http://www.water.ca.gov/lakeperris/ ~~http://perrisdam.water.ca.gov/~~, web site accessed ~~February 21, 2008~~, February 23, 2010.

[3] *Exhibit S-15: Dam Inundation Map,* City of Perris General Plan Safety Element, City of Perris, October 2005.

to begin in 2011. Dam remediation completion is expected by 2013 and all projects concerning the Perris Dam Remediation Program are anticipated to be completed by 2014.[1] Due to the unlikely possibility of dam failure, potential for flooding resulting from the failure of a dam is low. Therefore, dam inundation impacts associated with the construction and operation of Phase 1 are less than significant and no mitigation would be required.

Phase 2: First Park South Perris Distribution Center. The Phase 2 site is approximately 201 acres in size and is located south of Mapes Street between "A" Street and Goetz Road. As identified in the Safety Element of the City's General Plan, the Phase 2 site is located within the dam inundation area.[2] Similar to what was identified for Phase 1, occurrence of flooding from the four reservoirs in the City is extremely remote as Pigeon Pass Reservoir, Perris Dam, Little Lake Reservoir, and Diamond Valley Lake have been engineered and constructed with the knowledge that the area is seismically active. As previously stated, the DWR has identified potential seismic safety problems with the Perris Dam. However, the Perris Dam Remediation Program, which addresses these potential seismic safety problems, is currently going through the CEQA public review period. Completion of the Perris Dam remediation design is expected in late 2010 with construction estimated to begin in 2011. Dam remediation completion is expected by 2013 and all projects concerning the Perris Dam Remediation Program are anticipated to be completed by 2014.[3] Due to the unlikely possibility of dam failure, potential for flooding resulting from the failure of a dam is low.

As previously stated, Phase 2 currently has off site areas to the northwest draining across the Phase 2 site. Three sources of off site flows present potential flood hazards to the Phase 2 site. Table 4.7.G identifies the location of each source of off site flows as well as the existing and proposed infrastructure that would handle off site flows from each of these sources.

Table 4.7.G: Phase 2 Off-Site Watershed Area Interception Profiles

Watershed Area	Area (acres)	Location and Description	Interception Facility
1	394	Located directly west of the Phase 2 site. Large flows can overtop the existing berm along "A" Street.	Proposed Mountain Avenue Channel
2	616	Located northwest of the Phase 2 site. Flows are currently routed to a small basin approximately 300 feet west of "A" Street and north of Mapes Road. Large flows will fill basin, over top Mapes Road, and inundate the intersection of Mapes Road and "A" Street.	Proposed Mountain Avenue Channel
3	280	Located northwest of the Phase 2 site and drains in an easterly direction. Due to topographic mapping uncertainty, it is possible that reach Mapes Road.	Mapes Road

Source: *Preliminary Hydrology Report for South Perris Distribution Center*, Albert A. Webb Associates, October 2008.

As identified in Table 4.7.G, off-site flows from Watershed Area 1 and Watershed Area 2 would be intercepted by the Mountain Avenue Channel. The Mountain Avenue Channel is proposed to be installed on the east side of "A" Street and would consist of a rip-rap lined channel. The outlet of the Mountain Avenue Channel is proposed to discharge as sheet-flow on underground portions of the Phase 2 site. The flows intercepted by raised inlets on the west side of "A" Street from Watershed Area 2 would enter the Mountain Avenue Channel via underground piping. Flows from Watershed Area 1 that overtop the existing berm along "A" Street would also be intercepted by the Mountain

[1] *Lake Perris Dam Project*, Department of Water Resources, http://www.water.ca.gov/lakeperris/, web site accessed February 23, 2010.
[2] *Exhibit S-15: Dam Inundation Map,* City of Perris General Plan Safety Element, City of Perris, October 2005.
[3] *Lake Perris Dam Project*, Department of Water Resources, http://www.water.ca.gov/lakeperris/, web site accessed February 23, 2010.

Avenue Channel. Flows from Watershed Area 3 have the potential to reach Mapes Road. If this occurs, Mapes Road serves as an additional interceptor that would convey flows eastward to the San Jacinto River. Since existing and proposed interception features would adequately intercept anticipated flows from off site areas, impacts associated with this issue are less than significant and no mitigation is required.

Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line is considered to be the installation of additional infrastructure which does not include the development of additional buildings in the area. In addition, the exposure of people working on the rail line to potential dam inundation already exists as the rail line is currently operated by some form of train. As identified previously, the potential for dam failure and dam inundation is very unlikely due to existing reservoir design. Therefore, dam inundation impacts associated with the construction and operation of Phase 2 are less than significant and no mitigation would be required.

Phase 3: First Park South 215 Distribution Center. The Phase 3 site is approximately 215.7 acres in size and is located adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. As identified in the Safety Element of the City's General Plan, the Phase 3 site is located within the dam inundation area.[1] As previously identified for Phase 1 and Phase 2, occurrence of flooding from the four reservoirs in the City is extremely remote as Pigeon Pass Reservoir, Perris Dam, Little Lake Reservoir, and Diamond Valley Lake have been engineered and constructed with the knowledge that the area is seismically active. As stated for Phase 1 and Phase 2, the DWR has identified potential seismic safety problems with the Perris Dam. However, the Perris Dam Remediation Program, which addresses these potential seismic safety problems, is currently going through the CEQA public review period. Completion of the Perris Dam remediation design is expected in late 2010 with construction estimated to begin in 2011. Dam remediation completion is expected by 2013 and all projects concerning the Perris Dam Remediation Program are anticipated to be completed by 2014.[2] Due to the unlikely possibility of dam failure, potential for flooding resulting from the failure of a dam is low. Therefore, dam inundation impacts associated with the construction and operation of Phase 3 are less than significant and no mitigation would be required.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the construction and operation of the three phases would not result in significant dam inundation impacts. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. Since roadways are infrastructure features, such improvements would increase dam inundation exposure to people or buildings no more than any other roadway in the City located within the dam inundation area. The proposed project would also install associated water, recycled water, brine line and sewer infrastructure for the three sites. Similar to the roadway improvements, these infrastructure improvements would not result in a higher dam inundation exposure potential for people or buildings. Therefore, dam inundation impacts associated with the proposed project are less than significant and no mitigation is required.

[1] *Exhibit S-15: Dam Inundation Map,* City of Perris General Plan Safety Element, City of Perris, October 2005.
[2] *Lake Perris Dam Project*, Department of Water Resources, http://www.water.ca.gov/lakeperris/, web site accessed February 23, 2010.

4.7.5.2 Seismic-Related Impacts

Threshold	Would the project expose people or structure to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

A tsunami is a series of waves generated in a body of water by a pulsating or abrupt disturbance that vertically displaces water. Seiches are oscillations in enclosed bodies of water that are caused by a number of factors, most often wind or seismic activity. Lakes in seismically active areas such as Lake Perris are at risk from seiches. A mudslide (also known as a mudflow) occurs when there is fast-moving water and a great volume of sediment and debris that surges down a slope, stream, canyon, arroyo, or gulch. Mudslides are similar to flash floods and can occur suddenly without time for adequate warning. Mudflows can ruin substantial improvements with the force of the flow itself and the burying or erosion of improvements by mud and debris.

Phase 1: Airport Distribution Center. The Airport Distribution Center would be located on an approximately 38-acre site west of Goetz Road between Mountain Avenue and Artlo Avenue. Inundation of Airport Distribution Center by a tsunami is highly unlikely as the Phase 1 site is located approximately 33.4 miles from the Pacific Ocean. Although not located adjacent to the Pacific Ocean, the Phase 1 site is located approximately 5.7 miles southwest from Lake Perris. Since Lake Perris is an enclosed body of water, Lake Perris could be subject to a seiche during a seismic event. However, the probability that a seiche event would impact the Phase 1 site is highly unlikely as water levels in the lake would not be high enough to overtop the Perris Dam in the event of a seiche.[1] In the remote instance that Perris Dam is overtopped due to a seiche event, any discharges would go directly into the Perris Dam flood control system before reaching the Phase 1 site. It is also anticipated that the design of the Perris Dam considers seiche phenomena due to the region's high seismicity. Given these factors, impacts associated with seiche events are less than significant for the Phase 1 site. Phase 1 is located in a gently sloping area where landslides and mudslides would not occur. Since the Phase 1 site is not located in an area identified by the City as having slope instability,[2] a less than significant impact associated with mudslides would occur. No mitigation would be required.

Phase 2: First Park South Perris Distribution Center. The Phase 2 site is approximately 201 acres in size and is located south of Mapes Street between "A" Street and Goetz Road. Inundation of the First Park South Perris Distribution Center by a tsunami is highly unlikely as the Phase 2 site is located approximately 32.4 miles from the Pacific Ocean. Although not located adjacent to the Pacific Ocean, the Phase 2 site is located approximately 6.1 miles southwest from Lake Perris. As identified for Phase 1, the probability that a seiche event would impact the Phase 2 site is highly unlikely as water levels in Lake Perris would not be high enough to overtop the Perris Dam in the event of a seiche.[3] It is also anticipated that the design of the Perris Dam considers seiche phenomena due to the region's high seismicity. Given these factors, impacts associated with seiche events are less than significant for the Phase 2 site. Similar to Phase 1, the Phase 2 site is located on the Perris Valley floor where landslides and mudslides would not occur. Since the Phase 2 site is not located in an area identified by the City as having slope instability,[4] a less than significant impact associated with mudslides would occur. No mitigation would be required.

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1 The existing earthen wall is approximately 128 feet high with the highest elevation at 1,628 feet. Normal operating water levels for Lake Perris are at 1,588 feet (leaving 40 feet of excess height between the water level and the top of the dam). Restricted operating water levels for Lake Perris are at 1,563 feet (leaving 65 feet of excess height between the water level and the top of the dam).

2 Exhibit S-4: Slope Instability, City of Perris General Plan Safety Element, October 25, 2005.

3 The existing earthen wall is approximately 128 feet high with the highest elevation at 1,628 feet. Normal operating water levels for Lake Perris are at 1,588 feet (leaving 40 feet of excess height between the water level and the top of the dam). Restricted operating water levels for Lake Perris are at 1,563 feet (leaving 65 feet of excess height between the water level and the top of the dam).

4 Exhibit S-4: Slope Instability, City of Perris General Plan Safety Element, October 25, 2005.

As previously identified, development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line is considered to be the installation of additional infrastructure which does not include the development of additional buildings in the area. Since the extension of the rail line occurs in the same area of the City as Phase 2, it is reasonable to assume that the potential for seiches, tsunamis, and mudflows would be similar. Therefore, impacts associated with this issue would be less than significant and no mitigation would be required.

Phase 3: First Park South 215 Distribution Center. Phase 3 of the proposed project would be located on an approximately 215.7 acre site adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. Inundation of the Phase 3 site by a tsunami is highly unlikely as Phase 3 is located approximately 34.3 miles from the Pacific Ocean. Similar to the Phase 1 and Phase 2 sites, although not located adjacent to the Pacific Ocean, the Phase 3 site is located approximately 4.4 miles southwest from Lake Perris. As identified for Phase 1 and Phase 2, the probability that a seiche event would impact the Phase 3 site is highly unlikely as water levels in the lake would not be high enough to overtop the Perris Dam in the event of a seiche.[1] Therefore, impacts associated with seiche events are less than significant for the Phase 3 site. Similar to Phase 1 and Phase 2, Phase 3 is located in a gently sloping area where landslides and mudslides would not occur. Since the Phase 3 site is not located in an area identified by the City as having slope instability,[2] a less than significant impact associated with mudslides would occur. No mitigation would be required.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the construction and operation of all three phases would not result in significant exposure to seiche, tsunami, or mudslide events. In addition to the development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements are infrastructure features that would not be located in an area where a high potential for seiche, tsunami, or mudslide events would occur. Similarly, the proposed project would also install associated water, recycled water, brine line, and sewer infrastructure for the three sites in areas where seiche, tsunami, or mudslide events would not occur. Therefore, seiche, tsunami, and mudslide impacts associated with the proposed project would be less than significant and no mitigation would be required.

4.7.5.3 Groundwater

Threshold	Would the proposed project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?

The availability of groundwater and issues involving the adequacy of recharge capability are regional in nature. The Groundwater Management Act[3] (AB 3030) provides a systematic procedure for an existing local agency to develop a groundwater management plan. AB 3030 allows a local agency whose service includes a groundwater basin that is not already subject to groundwater management pursuant to law or court order to adopt and implement a groundwater management plan and includes

[1] The existing earthen wall is approximately 128 feet high with the highest elevation at 1,628 feet. Normal operating water levels for Lake Perris are at 1,588 feet (leaving 40 feet of excess height between the water level and the top of the dam). Restricted operating water levels for Lake Perris are at 1,563 feet (leaving 65 feet of excess height between the water level and the top of the dam).

[2] Exhibit S-4: Slope Instability, City of Perris General Plan Safety Element, October 25, 2005.

[3] Sections 10750–10756 of the California Water Code.

plans to mitigate overdraft conditions, control brackish water, and to monitor and replenish groundwater. Potable water to the three project sites would be provided by the EMWD. Water sources for the EMWD include imported water purchased from the Metropolitan Water District (Metropolitan), groundwater sources, and recycled water from the EMWD's five regional water reclamation facilities. Approximately 70 to 75 percent of the EMWD's water is imported from Metropolitan, with the remaining 25 to 30 percent supplied by groundwater wells.[1] Groundwater supplies are drawn from EMWD wells located in the Hemet, San Jacinto, Moreno Valley, Perris Valley, and Murrieta areas.

The EMWD adopted the West San Jacinto Groundwater Basin Management Plan (Plan) in June 1995. The Plan intended to protect the vested interests of existing groundwater producers while providing a planning framework for new water supply projects for the benefit of groundwater producers and the public within the 256-square mile Management Plan area. This area encompasses more than 164,200 acres and includes the groundwater management zones, as well as essentially non-water bearing areas such as the Lakeview Mountains, the Bernasconi Hills around Lake Perris, the Double Butte area near Winchester, and areas in the extreme northern, western, and southern portions of the EMWD.[2]

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. Based on the Water Supply Assessment (WSA) prepared for the Phase 1 site, water demand for the proposed on-site uses would total 72,060 gallons per day (gpd) or 80.72 acre-feet per year (af/yr).[3] As identified in the WSA, the Phase 1 site would obtain water service from the EMWD. It is anticipated that Phase 1 would primarily utilize imported water purchase from Metropolitan. This imported water would be supplemented by local groundwater sources. As previously stated, the implementation of the existing Hemet/San Jacinto Water Management Plan would ensure that local groundwater resources are conserved and groundwater overdraft does not occur. Because this plan is in place, it is reasonable to conclude that Phase 1 would not substantially deplete groundwater supplies in the area.

The development of Phase 1 would reduce the amount of pervious surfaces that could facilitate percolation on site. However, the Phase 1 site would not interfere with groundwater recharge as the Phase 1 site is not identified as a groundwater recharge area. The Phase 1 site would consist of other project design features such as drainage swales and infiltration trenches that would be designed to offset the conversion of pervious surfaces to imperious surfaces. Because project design features would be sized to accommodate increased flows on-site, it is anticipated that the amount of water percolated on site would be similar to existing conditions. Therefore, Phase 1 would not interfere with groundwater recharge activities. Impacts associated with this issue are less than significant and no mitigation measure is required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on an approximately 201-gross-acre site located south of Mapes Street between "A" Street and Goetz Road. Based on the WSA prepared for the Phase 2 site, water demand for the proposed on-site uses would total 140,700 gpd or 157.8 af/yr.[4] Similar to what was identified for Phase 1, Phase 2 site would obtain water service from the EMWD and would primarily utilize imported water purchase from Metropolitan. This imported water would be supplemented by local

[1] EMWD History and Mission, http://www.emwd.org/emwd/history_water.html, Eastern Municipal Water District, website accessed November 6, 2008.
[2] *West San Jacinto Groundwater Basin Management Plan* 2006 Annual Report, Eastern Municipal Water District, June 2007.
[3] *Water Supply Assessment for the Airport Distribution Center,* EMWD, September 19, 2007.
[4] *Water Supply Assessment for the First Park South Perris Distribution Center, EMWD*, August 20, 2008.

groundwater sources. Implementation of the existing Hemet/San Jacinto Water Management Plan would ensure that local groundwater resources are conserved and groundwater overdraft does not occur.

The development of Phase 2 would reduce the amount of pervious surfaces that could facilitate percolation on site. However, similar to Phase 1, Phase 2 would not interfere with groundwater recharge as the Phase 2 site is not identified as a groundwater recharge area. Phase 2 would also incorporate project design features such as drainage swales and infiltration trenches that would be designed to offset the conversion of pervious surfaces to imperious surfaces. Because project design features would be sized to accommodate increased flows on-site, it is anticipated that the amount of water percolated on site would be similar to existing conditions. Therefore, Phase 2 would not interfere with groundwater recharge activities. Impacts associated with this issue are less than significant and no mitigation measure is required. Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line would not result in a depletion of ground water supplies as the operation of rail lines do not require substantial, if any, amounts of potable water. Therefore, impacts associated with this issue would be less than significant and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. The First Park South 215 Distribution Center includes development of approximately 3,166,857 square feet of industrial warehouse space in four buildings on an approximately 215.7-acre site. The Phase 3 site is located adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. Based on the WSA prepared for the Phase 1 site, water demand for the proposed on-site uses would total 151,200 gpd or 169.3 af/yr.[1] Similar to what was identified for Phase 1 and Phase 2, Phase 3 would also obtain water service from the EMWD and primarily utilize imported water purchase from Metropolitan. This imported water would be supplemented by local groundwater sources. As previously stated, the implementation of the existing Hemet/San Jacinto Water Management Plan would ensure that local groundwater resources are conserved and groundwater overdraft does not occur. Because this plan is in place, it is reasonable to conclude that operation of Phase 3 would not substantially deplete groundwater supplies in the area.

The development of Phase 3 would also reduce the amount of pervious surfaces that could facilitate percolation on site. However, as identified for Phase 1 and Phase 2, Phase 3 would incorporate project design features such as drainage swales and infiltration trenches that would be designed to offset the conversion of pervious surfaces to imperious surfaces. Because project design features would be sized to accommodate increased flows on-site, it is anticipated that the amount of water percolated on site would be similar to existing conditions. Therefore, Phase 3 would not interfere with groundwater recharge activities. Impacts associated with this issue are less than significant and no mitigation measure is required.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. When combined, the potable water demand that would be required for all three phases would total 363,960 gpd or 407.82 af/yr. As indicated in the previous analysis, the three phases would not result in significant impacts to groundwater supplies as existing management plans are in place to safeguard existing groundwater levels and supplies. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements to these roadways would not deplete existing groundwater supplies or impact existing groundwater levels as the improvements would occur along existing roadways. Similarly, the proposed project

[1] *Water Supply Assessment for the Tentative Parcel Map 35877, First Park South 215,* EMWD, August 20, 2008.

would also install associated water, recycled water, brine line and sewer infrastructure for the three sites. These infrastructure improvements are conveyance features and would not require groundwater to operate. Therefore, impacts associated with this issue are less than significant and no mitigation is required.

4.7.5.4 Drainage Pattern and Capacity-Related Impacts

Threshold	Would the proposed project substantially alter the existing local drainage patterns of the site and substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation, or flooding on site or off site? Would the proposed project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The backbone of the City's storm drainage system is the 250-foot wide earthen Perris Valley Storm Channel (PVSC). The PVSC is the primary collector of stormwater in the northern part of Perris. The storm channel was built and is currently owned and maintained by Riverside County Flood Control and Water Conservation District (RCFCWCD). All existing City storm drains flow laterally into the PVSC from the east and west and transport the flows through Perris Valley and to the San Jacinto River. The 24-mile long San Jacinto River enters southern Perris from the east, at approximately the intersection of I-215 and Ellis Avenue, and runs approximately six miles, to the extreme southwesterly boundary of the City. As requested in the Notice of Preparation Response letters from the Riverside County Flood Control District, Sunwest River Investment, and Ida Mae Minnich, this section discusses the potential diversion and concentration stormwater flows as well as the project's potential to increase stormwater runoff and erosion downstream.

The proposed project includes the development of over 7 million square feet of warehouse distribution center floor space on 454.7 acres. It is anticipated that the development of these distribution centers would include the construction of buildings, parking areas, sidewalks, roads and other infrastructure such as water, recycled water, brine line, and sewer infrastructure features. Because the development of the distribution centers would introduce a greater percentage of impervious surfaces, the post-development flow volumes that would be generated on site are anticipated to be substantially higher than the pre-development flows.

Conditions resulting from this change would include increased runoff volumes and velocity; reduced infiltration; increased flow frequency, duration, and peak; shorter time to reach peak flow; and degradation in water quality. The majority of the project sites currently have a low runoff coefficient, meaning that runoff during storms represents a relatively small portion of the total rainfall. The majority of the precipitation, particularly in smaller storms, infiltrates into the subsurface. The development of the project sites with impervious surfaces (such as roadways, parking lots, and buildings) would result in a condition in which nearly all rainfall becomes runoff. A significant impact would occur in the event that post-development stormwater flows are greater than pre-development stormwater flows leaving the site.

Phase 1: Airport Distribution Center. As previously stated, existing flows generated on the 38-acre Phase 1 site currently drain as sheet flow in a northern and southern direction toward Mountain Avenue and Artlo Avenue, respectively, and eventually discharge to Goetz Road and into the San Jacinto River (Reach 3). Off-site flows coming onto the Phase 1 site currently drain from approximately 24 acres west of the Phase 1 site between Mountain Avenue and Artlo Avenue. These flows currently enter the Phase 1 site via sheetflow at the western boundary. With the development of Phase 1, the drainage pattern on the Phase1 site would be slightly modified. As illustrated in Figure

4.7.4, post-development conditions have the Phase 1 site divided into 6 sub-areas. Table 4.7.H provides a description of each sub-area and drainage pattern within each sub-area.

Table 4.7.H: Phase 1 Post-Development Sub-Area Profiles

Sub-Area	Area (acres)	Description
A	6.0	Encompasses the northwestern corner of the project site including a portion of the proposed building and a portion of the northern truck parking and docking area. Drains to a west-to-east trending gutter in the middle of the northern truck drive aisle.
B	4.4	Encompasses the central northern portion of the proposed building and a portion of the northern truck parking and docking area. Drains to a west-to-east trending gutter in the middle of the northern truck drive aisle.
C	5.3	Encompasses the northeastern corner of the proposed building and northern truck parking and docking area. Drains to a west-to-east trending gutter in the middle of the northern truck drive aisle.
D	5.8	Encompasses the southwestern corner of the project site and includes the southwestern portion of the building, the western employee parking area, and the southwestern corner of the southern truck parking and docking area. Drains to a west-to-east trending infiltration trench located on the southern most project boundary.
E	10.0	Encompasses the central southern portion of the proposed building and southern truck parking and docking area. Drains to a west-to-east trending infiltration trench located on the southern most project boundary.
F	3.7	Encompasses the eastern side and southeastern corner of the project site. Includes the eastern employee parking area. Drains to a west-to-east trending infiltration trench located on the southern most project boundary.

Source: *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.

As indicated in Figure 4.7.4, flows from the building would be routed in a southern direction to the proposed infiltration trench located on the southern most boundary of the project site. Flows generated within the northern parking lot and trucking docks would be routed to an on-site west to east trending gutter located in the middle of the truck drive aisles. These flows would then be routed to the proposed infiltration trench on the southern most project boundary. Since drainage patterns would not be significantly modified from existing drainage patterns, impacts are less than significant for Phase 1 and no mitigation is required.

As previously stated, the development of Phase 1 would result in the conversion of permeable surfaces to impermeable surfaces. A comparison of pre-development and post development pervious and impervious surfaces for the Phase 1 site have been provided in Table 4.7.I.

Table 4.7.I: Phase 1 Pre-Development and Post-Development Pervious Conditions

Site Condition	Pervious surfaces (acres)	Impervious surfaces (acres)	Percentage Pervious	Percentage Impervious
Pre-Development	14.0	24.0	36.8	63.2
Post-Development	3.8	34.2	10.0	90.0

Source: *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.

As identified in Table 4.7.I, the amount of impervious surfaces would increase from 63.2 percent at pre-development conditions to 90.0 percent at post-development conditions. This increase in impervious surfaces is anticipated to generate additional stormwater flow. A preliminary hydrology report identifying pre-development and post-development flows was conducted for Phase 1.[1]

[1] *Preliminary Hydrology Report for Airport Distribution Center*, Albert A. Webb Associates, June 2008.

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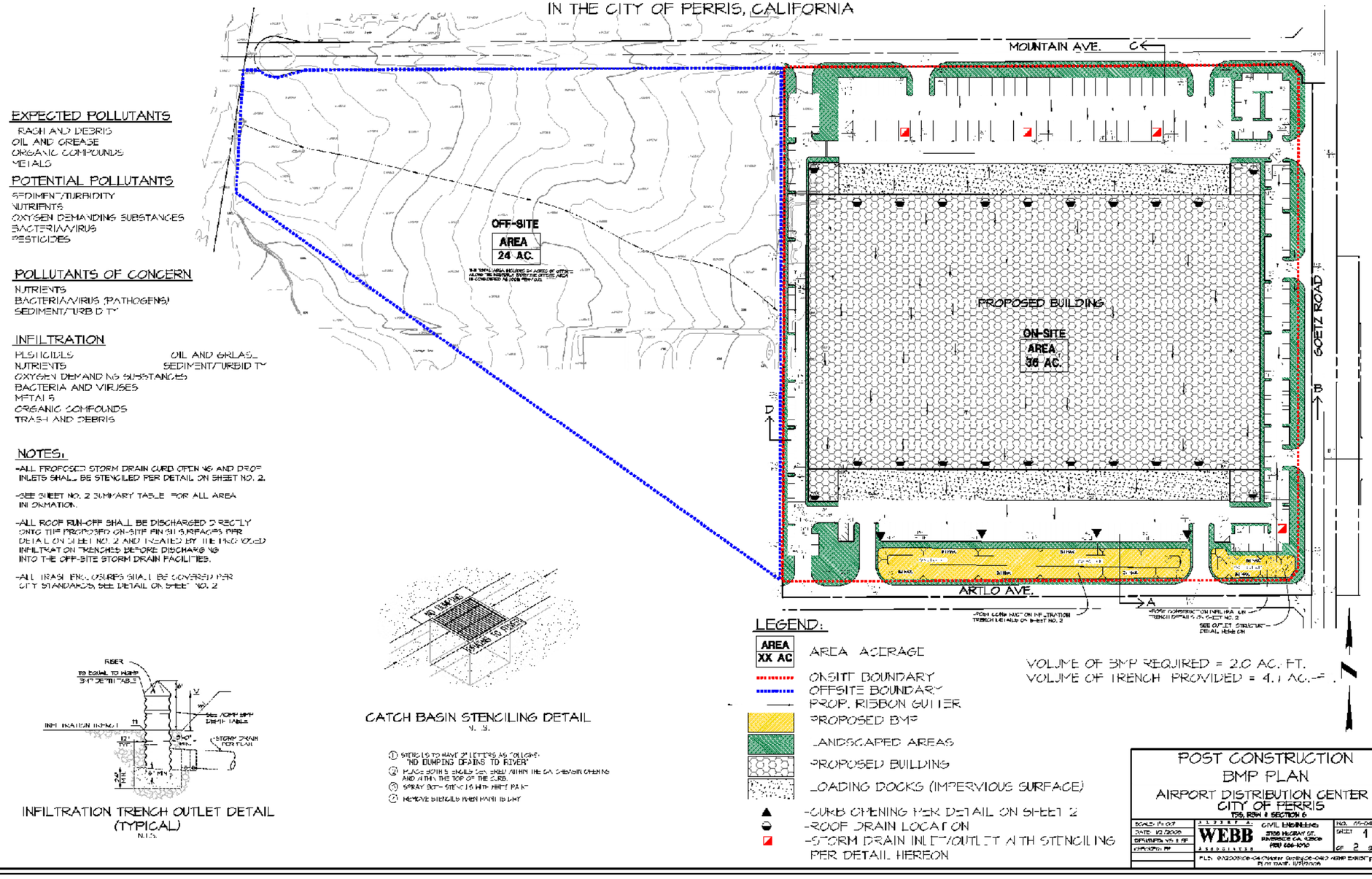
POST CONSTRUCTION BMP PLAN FOR:

AIRPORT DISTRIBUTION CENTER

IN THE CITY OF PERRIS, CALIFORNIA



EXPECTED POLLUTANTS

TRASH AND DEBRIS
OIL AND GREASE
ORGANIC COMPOUNDS
METALS

POTENTIAL POLLUTANTS

SEDIMENT/TURBIDITY
NUTRIENTS
OXYGEN DEMANDING SUBSTANCES
BACTERIA/VIRUS
PESTICIDES

POLLUTANTS OF CONCERN

NUTRIENTS
BACTERIA/VIRUS (PATHOGENS)
SEDIMENT/TURBIDITY

INFILTRATION

PESTICIDES — OIL AND GREASE
NUTRIENTS — SEDIMENT/TURBIDITY
OXYGEN DEMANDING SUBSTANCES
BACTERIA AND VIRUSES
METALS
ORGANIC COMPOUNDS
TRASH AND DEBRIS

NOTES:

-ALL PROPOSED STORM DRAIN CURB OPENING AND DROP INLETS SHALL BE STENCILED PER DETAIL ON SHEET NO. 2.

-SEE SHEET NO. 2 SUMMARY TABLE FOR ALL AREA INFORMATION.

-ALL ROOF RUN-OFF SHALL BE DISCHARGED DIRECTLY ONTO THE PROPOSED ON-SITE PERVIOUS SURFACES PER DETAIL ON SHEET NO. 2 AND TREATED BY THE PROPOSED INFILTRATION TRENCHES BEFORE DISCHARGING INTO THE OFF-SITE STORM DRAIN FACILITIES.

-ALL TRASH ENCLOSURES SHALL BE COVERED PER CITY STANDARDS, SEE DETAIL ON SHEET NO. 2

INFILTRATION TRENCH OUTLET DETAIL (TYPICAL)
N.T.S.

CATCH BASIN STENCILING DETAIL
N. T. S.

① STENCIL TO HAVE 3" LETTERS AS FOLLOWS: "NO DUMPING DRAINS TO RIVER"
② PLACE BOTH STENCILS SQUARELY WITHIN THE CATCHBASIN OPENING AND WITHIN THE TOP OF THE CURB.
③ SPRAY BOTH STENCILS WITH WHITE PAINT
④ REMOVE STENCILS WHEN PAINT IS DRY

LEGEND:

AREA XX AC — AREA ACERAGE
ONSITE BOUNDARY
OFFSITE BOUNDARY
PROP. RIBBON GUTTER
PROPOSED BMP
LANDSCAPED AREAS
PROPOSED BUILDING
LOADING DOCKS (IMPERVIOUS SURFACE)
▲ -CURB OPENING PER DETAIL ON SHEET 2
◒ -ROOF DRAIN LOCATION
◪ -STORM DRAIN INLET/OUTLET WITH STENCILING PER DETAIL HEREON

VOLUME OF BMP REQUIRED = 2.0 AC. FT.
VOLUME OF TRENCH PROVIDED = 4.1 AC.-FT.

POST CONSTRUCTION BMP PLAN
AIRPORT DISTRIBUTION CENTER
CITY OF PERRIS
T5S, R3W & SECTION 6

SCALE: 1"=60'
DATE: 10/2008
DESIGNED: MS & RF
DRAWN: RF
CHECKED: RF

WEBB — CIVIL ENGINEERING — 3788 MCCRAY ST. RIVERSIDE CA. 92506 (951) 686-1070

NO. 05-0487
SHEET 1 OF 2 SHEETS

PLOT DATE: 11/19/2008

FIGURE 4.7.4

LSA

SOURCE: Albert A. Webb Associates (2008)
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Table 4.7.J identifies the changes in the amount of storm runoff that would result from the development of Phase 1 site.

Table 4.7.J: Phase 1 Runoff Flow Comparison

Storm Event	Flow Discharge (cubic foot per second)		
	Pre- development	Post- development	Change in flow
2-year/24-hour	5.8	7.0	+ 1.2
10-year/24-hour	11.0	8.5	- 2.5
100-year/24-hour	23.0	14.5	- 8.5

Source: *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.

As indicated in Table 4.7.J, post development flows are greater than pre-development flows for the 2 year/24 hour scenario. To reduce the flows to below or equal to pre-development conditions, the anticipated on-site flows for the 2 year/24 hour scenario must be routed to the water quality features such as vegetated swales and culverts to reduce flows leaving the site to pre-development flow rates. The proposed post-development design features would have a total capacity of 4.7 acre feet (ac-ft), which would provide additional capacity above the required 2.0 ac-ft minimum.[1] While the resultant increase in impervious surfaces would contribute to a greater volume and higher velocities of storm flow, Phase 1's drainage system would accept and accommodate runoff that would result from project construction at or better than historic, or pre-development, conditions. Therefore, the post-development flows generated on the Phase 1 site would not exceed the capacity of the planned stormwater drainage systems. Impacts associated with this issue are less than significant for the Phase 1 site and no mitigation is required.

For additional analysis regarding anticipated construction and operational pollutants, please refer to Section 4.7.6.1 (Construction-Related Water Quality Impacts) and Section 4.7.6.2 (Operational-Related Water Quality Impacts). As previously identified, flows from the Phase 1 site eventually drain to Canyon Lake and Lake Elsinore via the San Jacinto River. Canyon Lake is listed for pathogens and nutrients while Lake Elsinore is listed for nutrients, organic enrichment/low dissolved oxygen, polychlorinated biphenyls (PCBs), and unknown toxicity. As identified in the WQMP prepared for the Phase 1 site, the pollutants of concern for this phase include unknown toxicity, organic enrichment/low dissolved oxygen, nutrients, PCBs, and pathogens (bacteria/viruses).[2] Proposed BMPs for the Phase 1 site consist of landscaped buffers and infiltration trenches. The Phase 1 WQMP identifies that the proposed BMPs have a high to medium treatment efficiency for nutrients and oxygen demanding substances, a high treatment efficiency for metals, and an unknown treatment efficiency for pathogens (bacteria/viruses). It is anticipated that since the proposed BMPs have a medium to high treatment efficiency rate for the identified pollutants of concern, the Phase 1 site would not contribute substantial amounts of pollutants to existing stormwater flows. Therefore, impacts associated with this issue are less than significant and no mitigation is required.

Phase 2: First Park South Perris Distribution Center. As previously stated, existing flows generated on the 201-acre Phase 2 site currently drain in a northwest to southeast direction toward the San Jacinto River (Reach 3). Off-site flows coming onto the Phase 2 site currently drain from four separate watersheds approximately 1,353.74 acres in size following a northwest to southeast pattern across the site. Flows leaving the Phase 2 site currently drain onto the adjacent property to the south before reaching the San Jacinto River. With the development of Phase 2, the drainage pattern on the Phase 2 site would be modified. Post-development conditions have the Phase 2 site divided into 19 sub-areas. Table 4.7.K provides a description of each sub-area and drainage pattern within each sub-area.

[1] *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.
[2] *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.

Table 4.7.K: Phase 2 Post-Development Sub-Area Profiles

Sub-Area	Area (acres)	Description
A	3.91	Northwestern corner of Building 1. Flows are routed to the west to storm drains in truck drive aisles.
B	4.06	Southwestern corner of Building 1. Flows are routed to the west to storm drains in truck drive aisles.
C	6.68	Comprises of the northwestern portion of the employee parking areas and the truck docks and truck parking areas for Building 1. Flows are routed to storm drains in truck drive aisles.
D	29.14	Encompasses the east portions of Buildings 1 and 2, the northeastern portion of employee parking lots for Building 1, the truck docks and truck parking areas for Buildings 1 and 2, and the southeastern portion of employee parking lots for Building 2. Flows are routed to the east to storm drains in truck drive aisles.
E	8.87	West portion of Building 2. Flows are routed to the west to storm drains in truck drive aisles.
F	11.07	Encompasses the truck docks and truck parking areas for Building 2 as well as the southwestern employee parking lots for Building 2. Flows are routed to storm drains in truck drive aisles.
G	10.77	Encompasses the western truck parking area and truck docks for Building 3, the northwestern portion of employee parking area on the north side of Building 3, and the southwestern portion of employee parking area on the south side of Building 3. Flows are routed to storm drains in truck drive aisles.
H	16.15	Western portion of Building 3. Flows are routed west to storm drains in truck drive aisles.
I	11.23	Southeast portion of Building 3. Flows are routed east to storm drains in truck drive aisles.
J	4.71	Encompasses the northeast portion of Building 3. Flows are routed east to storm drains in truck drive aisles.
K	3.74	Encompasses employee parking area on the south side of Building 3. Flows routed to storm drains to the southwest.
L	8.84	Encompasses the eastern truck docks and truck parking areas for Building 3 and the northeastern portion of the employee parking area on the north side of Building 3. Flows are route east to storm drains in truck drive aisles.
M	10.30	Encompasses the western truck docks and truck parking areas for Building 4, the northwestern portion of the employee parking area on the north side of Building 4, and the employee parking area on the south side of Building 4. Flows routed to the west to storm drains in truck drive aisles.
N	7.20	Northwestern portion of Building 4. Flows are routed to the west to storm drains in truck drive aisles.
O	7.20	Southwestern portion of Building 4. Flows are routed to the west to storm drains in truck drive aisles.
P	2.57	Northeastern portion of Building 4. Flows are routed to the east to storm drains in truck drive aisles.
Q	4.36	Encompasses the southeastern portion of Building 4. Flows are routed to the east to storm drains in truck drive aisles.
R	7.63	Encompasses the eastern truck docks and truck parking area for Building 4 and the northeastern employee parking area. Flows are routed to the east to storm drains in truck drive aisles.
S	41.14	Consists of the non-build area. Includes the proposed sand filtration trench and basin outlet channel. Flows routed to sand filtration trench are routed to proposed Eastern Municipal Water District lift station site. Overflow into the basin outlet channel continues to San Jacinto River.

Source: *Preliminary Water Quality Management Plan for South Perris Distribution Center*, Albert A. Webb Associates, February 2009.

As indicated in Figure 4.7.5, off site tributary flows coming from the west and northwest of the Phase 2 site would be intercepted in various channels. Flows originating off site from the west would be intercepted near the right-of-way for "A" Street by raised inlets via storm drain pipe. The proposed Mountain Avenue Channel is anticipated to capture off site flows originating flows from the west and northwest. Flows generated on site would be routed through a series of gutters, swales, and underground piping. On site flows would ultimately be conveyed to a detention basin and sand filtration trench. Flows treated in the proposed sand filtration trench would be discharge by two sump pumps onto vacant land to the south where flows will travel until reaching Reach 3 of the San Jacinto River. Since drainage patterns would not be substantially modified from existing drainage patterns, impacts are less than significant for Phase 2 and no mitigation is required.

As previously stated, the development of Phase 2 would result in the conversion of permeable surfaces to impermeable surfaces. A comparison of pre-development and post development pervious and impervious surfaces for the Phase 2 site have been provided in Table 4.7.L.

Table 4.7.L: Phase 2 Pre-Development and Post-Development Pervious Conditions

Site Condition	Pervious surfaces (acres)	Impervious surfaces (acres)	Percentage Pervious	Percentage Impervious
Pre-Development	201.0	0.0	100.0	0.0
Post-Development	41.4	159.6	20.5	79.5

Source: *Preliminary Water Quality Management Plan for South Perris Distribution Center*, Albert A. Webb Associates, February 2009.

As identified in Table 4.7.L, the amount of impervious surfaces would increase from 0.0 percent at pre-development conditions to 79.5 percent at post-development conditions. This increase in impervious surfaces is anticipated to generate additional stormwater flow. A preliminary hydrology report identifying pre-development and post-development flows was conducted for Phase 2.[1] Table 4.7.M identifies the changes in the amount of storm runoff that would result from the development of Phase 2 site.

Table 4.7.M: Phase 2 Runoff Flow Comparison

Storm Event	Flow Discharge (cubic foot per second)		
	Pre- development	Post- development	Change in flow
2-year/24-hour	15.3	32.5	+ 17.2
10-year/24-hour	41.8	60.0	+ 18.2

Source: *Preliminary Water Quality Management Plan for South Perris Distribution Center*, Albert A. Webb Associates, February 2009.

As indicated in Table 4.7.M, post development flows are greater than pre-development flows for the analyzed storm events. To reduce the flows to below or equal to pre-development conditions, the anticipated on-site flows must be routed to the water quality features such as vegetated swales and culverts to reduce flows leaving the site to pre-development flow rates. Runoff from the Phase 2 site would be routed to and treated by the proposed sand filtration trench. Due to the continued concern of West Nile Virus and other vector borne diseases, the proposed sand filtration trench would incorporate perforated pipe in its design to allow filtration to occur rapidly thereby reducing the concern for standing water to accumulate. To ensure that water routed to the sand filtration trench does not pool for an extended period of time, two sump pumps would be able to de-water the trench. Table 4.7.N compares the flow discharge during post-development conditions with and without the routing the stormwater by the two sump pumps.

[1] *Preliminary Hydrology Report for South Perris Distribution Center*, Albert A. Webb Associates, October 2008.

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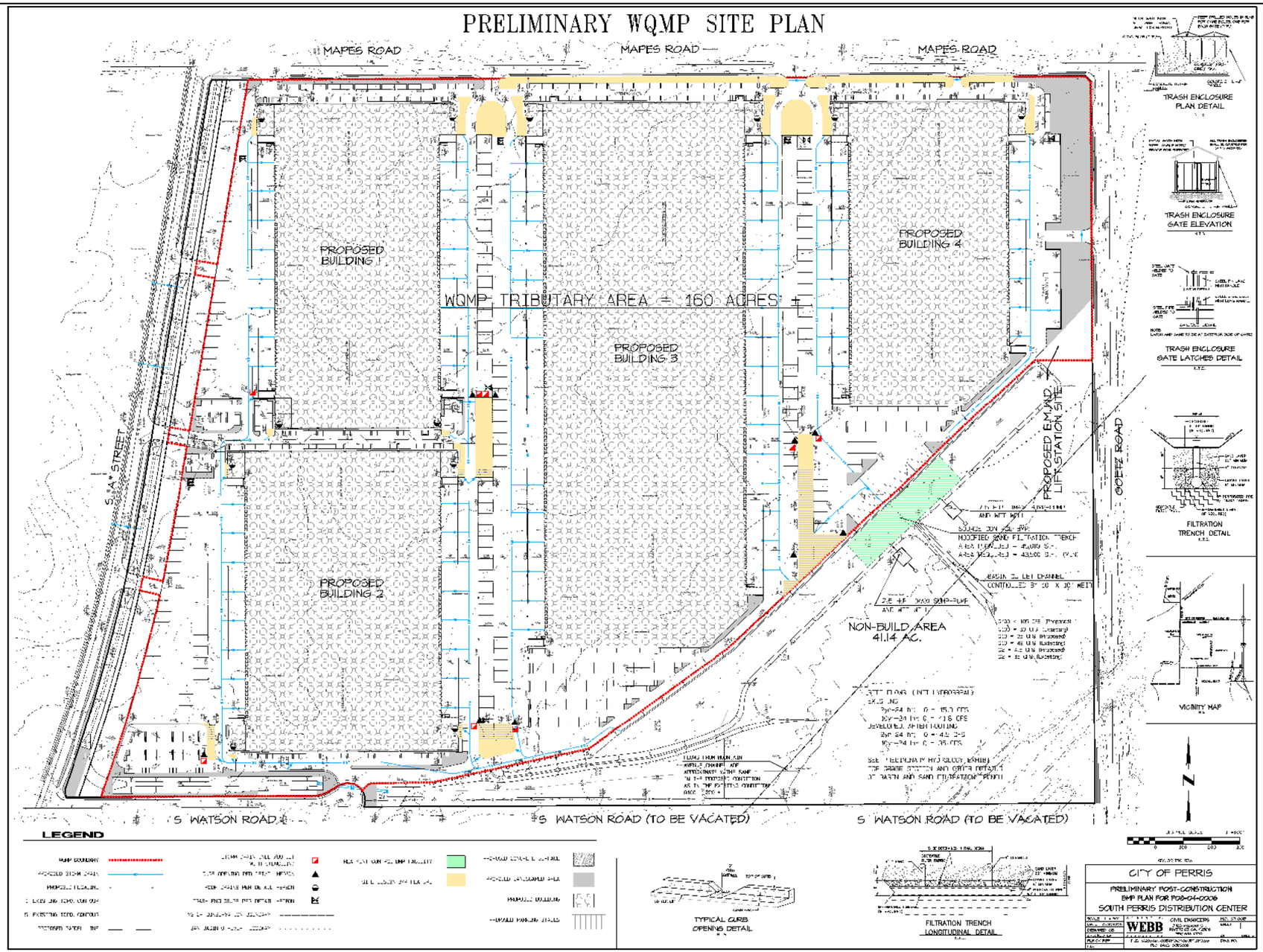

FIGURE 4.7.5

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SOURCE: Albert A. Webb Associates (2008)

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Table 4.7.N: Phase 2 Runoff Post-Development Flow Comparison

Storm Event	Flow Discharge (cubic foot per second)		
	Post Development Without Routing	Post- development With Routing	Less Than Pre-development conditions?
2-year/24-hour	32.5	4.5	Yes
10-year/24-hour	60.0	35	Yes

Source: *Preliminary Water Quality Management Plan for South Perris Distribution Center*, Albert A. Webb Associates, February 2009.

While the resultant increase in impervious surfaces would contribute to a greater volume and higher velocities of storm flow, Phase 2's drainage system would accept and accommodate runoff that would result from project construction at or better than historic, or pre-development, conditions with the exception of the 2-year/24-hour and 10-year/24-hour storm events. Although post-development flows associated with the 2-year/24-hour and 10-year/24-hour storm events would exceed pre-development conditions, it is anticipated that such flows would not result in significant negative impacts to downstream property owners or to stream habitat.

As previously stated, stormwater flows generated on the Phase 2 site would eventually be routed to Reach 3 of the San Jacinto River where such flows would either percolate or ultimately flow through Railroad Canyon. The WQMP for the Phase 2 project site identifies Reach 3 of the San Jacinto River as a low-energy river system. In a low-energy river system, small flows, such as the flows proposed to be discharged from the Phase 2 site during the 2-year/24-hour and 10-year/24-hour storm events, would not result in significant stream bank damage or head-cutting. Preliminary flow quantification along Reach 3 of the San Jacinto River identifies that existing regional flows are several times larger than the project flows that would be routed to Reach 3. In addition, the banks of the San Jacinto River though Railroad Canyon consist of dense rock formations that are not susceptible to significant erosion, particularly erosion stemming from low flows. Combined with an extremely shallow flowline slope (i.e., a nearly level floodplain), low flows, such as the flows coming from the Phase 2 project site, would be unlikely to develop long-term erosive capability in Reach 3 of the San Jacinto River.

It is also anticipated that the slower discharge of the increased runoff would increase the opportunity for low-flow infiltration of stormwater runoff along the stream alignment thereby aiding in the restoration of regional water tables. Such low flows would be more conducive to stream habitat, and would not pose risks to channel banks or to downstream property owners. Therefore, impacts associated with this issue are less than significant for the Phase 2 site and no mitigation is required. Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. However, since extension of the rail occurs on an existing rail line, the rail component is not expected to generate additional runoff and would not exceed the capacity of the planned stormwater drainage systems. Impacts associated with this issue are less than significant and no mitigation is required.

For additional analysis regarding anticipated construction and operational pollutants, please refer to Section 4.7.6.1 (Construction-Related Water Quality Impacts) and Section 4.7.6.2 (Operational-Related Water Quality Impacts). As previously identified, flows from the Phase 2 site eventually drain to Canyon Lake and Lake Elsinore via the San Jacinto River. Canyon Lake is listed for pathogens and nutrients while Lake Elsinore is listed for nutrients, organic enrichment/low dissolved oxygen, PCBs, and unknown toxicity. As identified in the WQMP prepared for the Phase 2 site, the pollutants of concern for this phase include unknown toxicity, organic enrichment/low dissolved oxygen, nutrients, PCBs, and pathogens (bacteria/viruses).[1] Proposed BMPs for the Phase 2 site consist of

[1] *Preliminary Water Quality Management Plan for South Perris Distribution Center*, Albert A. Webb Associates, February 2, 2009.

landscaped buffers and sand filters. The Phase 2 WQMP identifies that the proposed BMPs have a medium to high level of effectiveness for the identified pollutants of concern. Therefore, the Phase 2 site would not contribute substantial amounts of pollutants to existing stormwater flows. Impacts associated with this issue are less than significant and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. Existing flows generated on the 215.7-acre Phase 3 site currently drain in a northwest to southeast direction toward the San Jacinto River (Reach 3). No off-site flows are known to enter the Phase 3 site. With the development of Phase 1, the drainage pattern on the Phase 3 site would be slightly modified. As illustrated in Figure 4.7.6, post-development conditions have the Phase 3 site divided into 33 sub-areas. As indicated in Figure 4.7.6, flows from Building B would be routed north and south to proposed storm drains located in the truck drive aisles. Flows generated from Buildings A-1, A-2, and C would be routed east and west to proposed storm drains located in the truck drive aisles of each respective building. Similarly, flows generated in the truck dock areas, truck parking areas, and employee parking areas would be routed to storm drains located in the truck drive aisles. All flows generated on site would be routed to a detention basin/sand filtration trench located to the east end of the development outside of the proposed levee. Flap-valves would be implemented to protect the site from reverse flows possible during flooding events. Since drainage patterns would not be substantially modified from existing drainage patterns, impacts are less than significant for Phase 3 and no mitigation is required.

As previously stated, the development of Phase 3 would result in the conversion of permeable surfaces to impermeable surfaces. A comparison of pre-development and post development pervious and impervious surfaces for the Phase 3 site have been provided in Table 4.7.O.

Table 4.7.O: Phase 3 Pre-Development and Post-Development Pervious Conditions

Site Condition	Pervious surfaces (acres)	Impervious surfaces (acres)	Percentage Pervious	Percentage Impervious
Pre-Development	215.7	0.0	100.0	0.0
Post-Development	77.27	138.43	35.8	64.1

Source: *Preliminary Water Quality Management Plan for First Park South 215*, Albert A. Webb Associates, February 2009.

As identified in Table 4.7.O, the amount of impervious surfaces would increase from 0.0 percent at pre-development conditions to 64.1 percent at post-development conditions. This increase in impervious surfaces is anticipated to generate additional stormwater flow. Table 4.7.P identifies the changes in the amount of storm runoff that would result from the development of Phase 3 site.

Table 4.7.P: Phase 3 Runoff Flow Comparison

Storm Event	Flow Discharge (cubic foot per second)		
	Pre- development	Post- development	Change in flow
2-year/24-hour	3.1	26.6	+ 23.5
10-year/24-hour	25.5	53.0	+ 27.5
100-year/24-hour	63.2	90.6	+ 27.4

Source: *Preliminary Water Quality Management Plan for First Park South 215*, Albert A. Webb Associates, February 2009.

As indicated in Table 4.7.P, post development flows are greater than pre-development flows for the analyzed storm events. To reduce the flows to below or equal to pre-development conditions, the anticipated on-site flows must be routed to the water quality features such as vegetated swales and culverts to reduce flows leaving the site to pre-development flow rates. Runoff from the Phase 3 site would be routed to and treated by the proposed detention basin/sand filtration trench on the eastern side of the site. To ensure that water routed to the detention basin/sand filtration trench does not pool

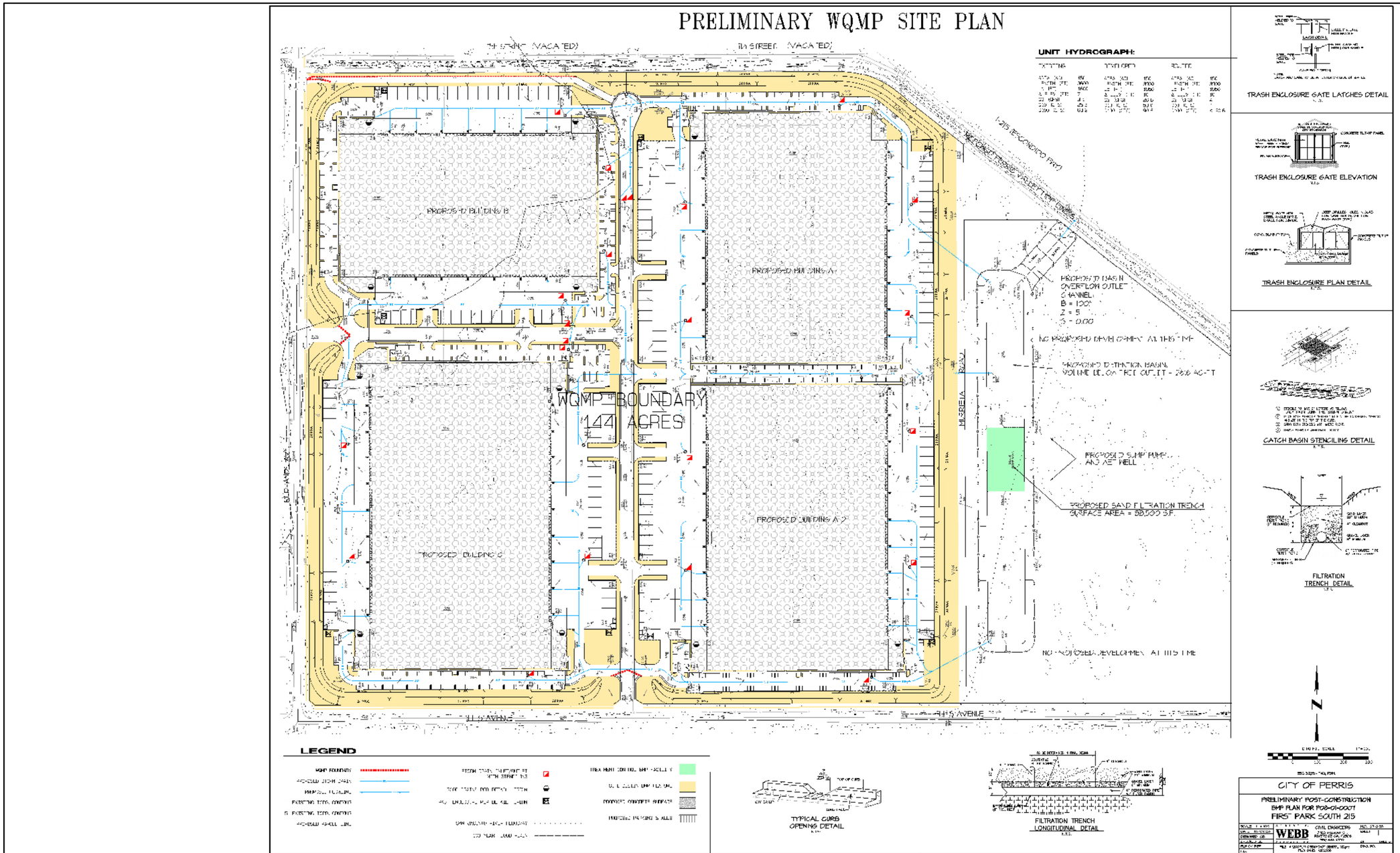

FIGURE 4.7.6

South Perris Industrial
Environmental Impact Report

Phase 3 First Park South I-215 Distribution Center
Post-Project Drainage

SOURCE: Albert A. Webb Associates (2008)

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for an extended period of time, two sump pumps would be able to de-water the basin. Water discharged by sump-pump would eventually flow to Reach 3 of the San Jacinto River, which is currently not a publicly-owned, operated and maintained MS4 facility. Table 4.7.Q compares the flow discharge during post-development conditions with and without the routing the stormwater by the two sump pumps.

Table 4.7.Q: Phase 3 Runoff Post-Development Flow Comparison

Storm Event	Flow Discharge (cubic foot per second)		
	Post Development Without Routing	Post- development With Routing	Less Than Pre-development conditions?
2-year/24-hour	26.6	4	No
10-year/24-hour	53.0	4	Yes
100-year/24-hour	90.6	4	Yes

Source: *Preliminary Water Quality Management Plan for First Park South 215*, Albert A. Webb Associates, February 2009.

While the resultant increase in impervious surfaces would contribute to a greater volume and higher velocities of storm flow, Phase 3's drainage system would accept and accommodate runoff that would result from project construction at or better than historic, or pre-development, conditions with the exception of the 2-year/24-hour storm event. Post-development flows generated on the Phase 3 site would not exceed the capacity of the planned stormwater drainage systems, with the exception of the 2-year/24-hour storm event. Although post-development flows associated with the 2-year/24-hour event would exceed pre-development conditions, it is anticipated that such flows would not result in significant negative impacts to downstream property owners or to stream habitat.

As previously stated, stormwater flows generated on the Phase 3 site would eventually be routed to Reach 3 of the San Jacinto River where such flows would either percolate or ultimately flow through Railroad Canyon. The WQMP for the Phase 3 project site identifies Reach 3 of the San Jacinto River as a low-energy river system. In a low energy river system, small flows, such as the flows proposed to be discharged from the basin during the 2-year/24-hour storm event, would not result in significant stream bank damage or head-cutting. Preliminary flow quantification along Reach 3 of the San Jacinto River identify that existing regional flows are several times larger than the project flows that would be routed to Reach 3. In addition, the banks of the San Jacinto River though Railroad Canyon consist of dense rock formations that are not susceptible to significant erosion, particularly erosion stemming from low flows. Combined with an extremely shallow flowline slope (i.e., a nearly level floodplain), low flows, such as the flows coming from the project site, would be unlikely to develop long-term erosive capability in Reach 3 of the San Jacinto River.

It is also anticipated that the slower discharge of the increased runoff would increase the opportunity for low-flow infiltration of stormwater runoff along the stream alignment thereby aiding in the restoration of regional water tables. Such low flows would be more conducive to stream habitat, and would not pose risks to channel banks or to downstream property owners. Therefore, impacts associated with this issue are less than significant for the Phase 3 site and no mitigation is required.

For additional analysis regarding anticipated construction and operational pollutants, please refer to Section 4.7.6.1 (Construction-Related Water Quality Impacts) and Section 4.7.6.2 (Operational-Related Water Quality Impacts). As previously identified, flows from the Phase 3 site eventually drain to Canyon Lake and Lake Elsinore via the San Jacinto River. Canyon Lake is listed for pathogens and nutrients while Lake Elsinore is listed for nutrients, organic enrichment/low dissolved oxygen, PCBs, and unknown toxicity. As identified in the WQMP prepared for the Phase 3 site, the pollutants of concern for this phase include unknown toxicity, organic enrichment/low dissolved oxygen, nutrients, PCBs, and pathogens (bacteria/viruses).[1] Proposed BMPs for the Phase 3 site consist of

[1] *Preliminary Water Quality Management Plan for First Park South 215*, Albert A. Webb Associates, February 2, 2009.

landscaped buffers and detention basins/sand infiltration trench. The Phase 3 WQMP identifies that the proposed BMPs have a medium to high level of effectiveness for the identified pollutants of concern. Therefore, the Phase 3 site would not contribute substantial amounts of pollutants to existing stormwater flows. Impacts associated with this issue are less than significant and no mitigation is required.

All Phases and Infrastructure. As previously identified, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the three phases would not result in significant impacts to drainage patterns or drainage capacity. In addition to the development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements to these roadways would not result in significant drainage pattern or capacity impacts as these improvements would occur along existing roadways. Similarly, the proposed project would also install associated water, recycled water, brine line, and sewer infrastructure for the three sites. These infrastructure improvements would not have a significant impact on drainage patterns or capacity impacts as such improvements are anticipated to be located in existing roadways. Therefore, the proposed project would have a less than significant level on drainage patterns and drainage capacity. No mitigation would be required.

4.7.6 Significant Impacts

4.7.6.1 Construction-Related Water Quality Impacts

Threshold	Would the proposed project violate any water quality standards or waste discharge requirements during construction phases of the project in form of increased soil erosion, sedimentation, or stormwater discharges?

The construction and grading phases of each of the project sites would require temporary disturbance of surface soils and removal of vegetative cover which could potentially result in erosion and sedimentation on site. Erosion and sedimentation are major visible water quality impacts attributable to construction activities. Stockpiles and excavated areas on each of the project sites would be susceptible to high rates of erosion from wind and rain and, if not managed properly, could result in increased sedimentation in local drainage ways.

By volume, sediment is the principal component in most construction-related storm runoff. However, delivery, handling, and storage of construction materials and wastes, as well as use of construction equipment on site during the construction phase of the project would also introduce a risk for stormwater contamination that could impact water quality. Spills and leaks could occur from the use of heavy construction equipment and machinery or could originate from construction staging areas. Once released, substances such as fuels, oils, paints, and solvents would be transported to nearby surface waterways and/or to groundwater in stormwater runoff, wash water, and dust control water, potentially reducing the quality of the receiving waters. The anticipated and potential pollutants in stormwater or urban runoff for various land uses are reflected in previously referenced Table 4.7.C.

Short-term stormwater pollutant discharges from each of the project sites would be mitigated through compliance with the applicable NPDES permitting process, resulting in a less than significant impact. The NPDES permit program was established under Section 402 of the Clean Water Act, which prohibits the unauthorized discharge of pollutants, including municipal, commercial, and industrial wastewater discharges, from a point source to U.S. waters. Permittees must verify compliance with permit requirements by monitoring their effluent, maintaining records, and filing periodic reports. An NPDES permit would generally specify an acceptable level of a pollutant or pollutant parameter in a discharge (for example, a certain level of bacteria). The permittee may choose which technologies to use to achieve that level.

The implementation of NPDES permits ensures that a state's mandatory standards for clean water and the federal minimums are met. Coverage with the permit would prevent sedimentation and soil erosion through implementation of a Storm Water Pollution Prevention Plan (SWPPP) and periodic inspections by RWQCB staff. An SWPPP is a written document that describes the construction operator's activities to comply with the requirements in the NPDES permit. Required elements of an SWPPP include (1) site description addressing the elements and characteristics specific to the project site; (2) descriptions of BMPs for erosion and sediment controls; (3) BMPs for construction waste handling and disposal; (4) implementation of approved local plans; and (5) proposed post-construction controls, including a description of local post-construction erosion and sediment control requirements. The SWPPP is intended to facilitate a process whereby the operator evaluates potential pollutant sources at the site and selects and implements BMPs designed to prevent or control the discharge of pollutants in stormwater runoff.

Phase 1: Airport Distribution Center. Development of the Airport Distribution Center on 38 acres is in excess of one acre. Therefore, Phase 1 would be required to obtain coverage under an NPDES General Construction permit, which includes the preparation of an SWPPP for construction discharges. During the construction period, the Phase 1 site would use a series of BMPs to reduce erosion and sedimentation. These measures may include the use of gravel bags, silt fences, hay bales, check dams, hydroseed, and soil binders. The construction contractor would be required to operate and maintain these controls throughout the duration of on-site construction activities. In addition, the construction contractor would be required to maintain an inspection log and have the log on site to be reviewed by the City and representatives of the RWQCB.

Phase 2: First Park South Perris Distribution Center. Construction of Phase 2 on the 201-acre site would result in ground disturbance that is greater than one acre in size. Since the development of Phase 2 is in excess of one acre, the project proponent for Phase 2 would be required to obtain coverage under an NPDES General Construction permit, which includes the preparation of an SWPPP for construction discharges. Similar to what was identified for Phase 1, the Phase 2 construction site would use a series of BMPs to reduce erosion and sedimentation. The construction contractor would be required to operate and maintain these controls throughout the duration of on-site construction activities. Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line would result in ground disturbance activities which may result erosion and sedimentation impacts. However, adherence to **Mitigation Measures 4.7.6.1A** though **4.7.6.1C** would reduce impacts associated with this issue to a less than significant level.

Phase 3: First Park South 215 Distribution Center. Development of the First Park South 215 Distribution Center on 215.7 acres is in excess of one acre. Therefore, Phase 3 would be required to obtain coverage under an NPDES General Construction permit, which includes the preparation of an SWPPP for construction discharges. As identified for Phase 1 and Phase 2, during the construction period, the Phase 3 site would use a series of BMPs to reduce erosion and sedimentation. These measures may include the use of gravel bags, silt fences, hay bales, check dams, hydroseed, and soil binders. The construction contractor would be required to operate and maintain these controls throughout the duration of on-site construction activities.

All Phases and Infrastructure. As previously identified, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the three phases would not result in significant impacts to water quality during the construction phase with adherence to NPDES requirements. In addition to the

development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements to these roadways would be required to adhere to **Mitigation Measures 4.7.6.1A** though **4.7.6.1C,** which would reduce impacts associated with this issue to a less than significant level. Similarly, the proposed project would also install associated water, recycled water, brine line, and sewer infrastructure for the three sites. These infrastructure improvements would have ground disturbing activities that may result in erosion and sedimentation if not properly constructed. However, through adherence to **Mitigation Measures 4.7.6.1A** though **4.7.6.1C**, impacts associated with the installation of infrastructure would be reduced to a less than significant level.

Mitigation Measures. Although adherence to NPDES requirements is required of all development within the City, the incorporation of these requirements as **Mitigation Measures 4.7.6.1A** through **4.7.6.1C** is designed to track both standard requirements and mitigation measures as part of the project's Mitigation Monitoring and Reporting Plan or Program (MMRP).

4.7.6.1A Prior to the first issuance of a grading permit by the City for each phase of the proposed project, the project applicant shall file a Notice of Intent (NOI) with the Santa Ana Regional Water Quality Control Board to be covered under the State National Pollutant Discharge Elimination System (NPDES) General Construction Permit for discharge of stormwater associated with construction activities.

4.7.6.1B Prior to the first issuance of a grading permit by the City for each phase of the project, the project applicant shall submit to and receive approval from the City of Perris a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall include a surface water control plan and erosion control plan citing specific measures to control on-site and off-site erosion during the entire grading and construction period. In addition, the SWPPP shall emphasize structural and nonstructural best management practices (BMPs) to control sediment and non-visible discharges from the site. Some of the BMPs to be implemented may include (but shall not be limited to) the following:

- Sediment discharges from the site may be controlled by the following: sandbags, silt fences, straw wattles and temporary debris basins (if deemed necessary), and other discharge control devices. The construction and condition of the BMPs would be periodically inspected during construction, and repairs would be made when necessary as required by the SWPPP.
- All materials that have the potential to contribute non-visible pollutants to stormwater must not be placed in drainage ways and must be contained, elevated, and placed in temporary storage containment areas.
- All loose piles of soil, silt, clay, sand, debris, and other earthen material shall be protected in a reasonable manner to eliminate any discharge from the site. Stockpiles would be surrounded by silt fences and covered with plastic tarps.
- The SWPPP would include inspection forms for routine monitoring of the site during the construction phase to ensure NPDES compliance.
- Additional BMPs and erosion control measures would be documented in the SWPPP and utilized if necessary.
- The SWPPP would be kept on site for the entire duration of project construction and will also be available to the local RWQCB for inspection at any time.

In the event that it is not feasible to implement the above BMPs, the City of Perris can make a determination that other BMPs would provide equivalent or superior treatment either on site or off site.

4.7.6.1C The Construction Contractor shall be responsible for performing and documenting the application of BMPs identified in the SWPPP. Weekly inspections shall be performed on sediment control measures called for in the SWPPP. Monthly reports shall be maintained by the Contractor and available for City inspection. In addition, the Contractor would also be required to maintain an inspection log and have the log on site available for review by the City of Perris and the representatives of the Regional Water Quality Control Board.

Level of Significance after Mitigation. While on-site grading activities and the development of the proposed on-site uses would increase the potential for the erosion of soils, adherence to the BMPs mandated by **Mitigation Measures 4.7.6.1A** though **4.7.6.1C** would reduce impacts associated with short-term (construction) stormwater discharges during project construction to a less than significant level.

4.7.6.2 Operational-Related Water Quality Impacts

Threshold	Would the proposed project violate any water quality standards or waste discharge requirements during the operational phases of the project in the form of increased soil erosion, sedimentation, or urban runoff?

During the operational phase of the proposed project, the major source of pollution in stormwater runoff would be contaminants that have accumulated on the land surface over which runoff passes. Upon development of the proposed on-site uses, storm runoff from the roadways, parking lots, and commercial and residential buildings can carry, and be tainted by, a variety of pollutants such as sediment, petroleum products, commonly utilized construction materials, landscaping chemicals, and (to a lesser extent) trace metals such as zinc, copper, lead, cadmium, and iron, which may lead to the degradation of stormwater in downstream channels. Runoff from landscaped areas could contain elevated levels of phosphorous, nitrogen, and suspended solids. Oil and other hydrocarbons from vehicles are also expected in stormwater runoff.

Since 2004, post-construction impacts associated with urban runoff have been addressed through adherence to the Riverside County Water Quality Management Plan (WQMP) Guidance document, which was prepared by Riverside County's Storm Water Clean Water Protection Program. New development projects submitted for approval after December 2004 are required to submit a project-specific WQMP prior to the first discretionary project approval or permit.[1] The primary objective of the WQMP, by addressing site design, source control, and treatment control BMPs applied on a project-specific and/or sub-regional or regional basis, is to ensure that the land use approval and permitting process of each City minimizes the cumulative regional impact of urban runoff. The WQMP would be required to be incorporated by reference or attached to the project's SWPPP as the Post-Construction Management Plan. The WQMP includes site design features to achieve the following:

- Minimize urban runoff;
- Minimize the impervious "footprint" of the proposed uses;
- Conserve natural areas; and
- Minimize directed connected impervious areas.

[1] *Riverside County Water Quality Management Plan for Urban Runoff, Santa Ana River Region, Santa Margarita Region,* Riverside County Storm Water Clean Water Protection Program, July 2006.

Phase 1: Airport Distribution Center. As identified in the WQMP prepared for the Phase 1[1] site, urban runoff would be minimized on the project site through the use of landscape buffers surrounding the project site. The curbs that segregate the parking areas from the gutters have breaks in the curb to allow the runoff generated on site to enter the infiltration trenches. The soil below the infiltration trenches would be excavated and replaced with an aggregate material that promotes infiltration. In addition, the storm drain pipes running through the infiltration trench will be perforated to allow further infiltration of stormwater runoff. After the stormwater runoff has been treated by the proposed infiltration trench, underground piping would be utilized to covey the treated stormwater to off-site storm drain facilities. Through the use of landscape buffers and infiltration trenches, the Phase 1 site would minimize urban runoff, minimize the impervious footprint of proposed uses, conserve natural areas, and minimize directed connected impervious areas. With adherence to **Mitigation Measure 4.7.6.2A**, potential water quality impacts resulting from operation of Phase 1 would be reduced to a less than significant level.

Phase 2: First Park South Perris Distribution Center. To achieve the stated goals, the WQMP prepared for Phase 2[2] has identified BMPs to be implemented throughout the project site. This approach includes the incorporation of landscape buffers and vegetation strips through the project that would capture and retain stormwater and dry weather flows. Runoff generated on site would be routed through breaks in the curbs to these vegetation swale features with filtration capacities. After runoff has been treated by the proposed vegetated bio-swales, underground piping would be utilized to convey the water to off-site MS4 facilities. BMPs identified in the WQMP include (but are not limited to):

- Maximized use of permeable areas by reducing the size of parking lots, drive aisles, and parking stalls to the smallest area practicable, while maintaining a consumer-friendly shopping complex consistent with local, state, and federal regulations.
- Incorporation of landscaped buffers areas between sidewalks and streets.
- The incorporation of vegetated swales and landscaped buffer strips throughout the site.
- The incorporation of landscaping into design of on-site drainage.
- Proper design and maintenance of landscape irrigation systems.
- Implementation of on-site street sweeping and litter control programs.
- Implementation of an inspection and maintenance program for on-site drainage facilities.
- Implementation of an educational program for property owners, operators, tenants, and employees.

Phase 2 of the proposed project would incorporate on-site water quality features that would meet the City's and the County's water quality requirements. With adherence to **Mitigation Measure 4.7.6.2A**, potential water quality impacts resulting from the operation of Phase 2 would be reduced to a less than significant level. Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line may result in the operational water quality impacts. However, adherence to **Mitigation Measure 4.7.6.2A** would reduce impacts associated with this issue. Therefore, impacts associated with this issue would be less than significant.

[1] *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.
[2] *Preliminary Water Quality Management Plan for South Perris Distribution Center*, Albert A. Webb Associates, February 2, 2009.

Phase 3: First Park South 215 Distribution Center. Similar to what was identified for Phase 1 and Phase 2, the WQMP prepared for Phase 3[1] has identified BMPs to be implemented throughout the project site. Like Phase 1 and Phase 2, BMPs include the incorporation of landscape buffers and vegetation strips through the project that would capture and retain stormwater and dry weather flows. Runoff generated on site would be routed through breaks in the curbs to these vegetation swale features with filtration capacities. After runoff has been treated by the proposed vegetated bio-swales, underground piping would be utilized to convey the treated stormwater flows off-site onto vacant land and eventually flowing to Reach 3 of the San Jacinto River. As identified for Phase 1 and Phase 2, Phase 3 of the proposed project would incorporate on-site water quality features that would meet the City's and the County's water quality requirements. With adherence to **Mitigation Measure 4.7.6.2A**, potential water quality impacts resulting from the operation of Phase 3 would be reduced to a less than significant level.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the three phases would not result in significant operational water quality impacts with implementation of the identified mitigation measures. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements to these roadways would be required to adhere to **Mitigation Measure 4.7.6.2A** which would reduce impacts associated with this issue to a less than significant level. Similarly, the proposed project would also install associated water, recycled water, brine line, and sewer infrastructure for the three sites. Unlike roadway improvements, infrastructure improvements would not have operational water quality impacts as such infrastructure is typically located underground. As identified, all components of the proposed project would not result in significant operational water quality impacts with adherence to the identified mitigation measures. Therefore, the proposed project would have a less than significant impact on operational water quality.

Mitigation Measure. Although adherence to WQMP requirements is required of all development within the City, the incorporation of these requirements as **Mitigation Measure 4.7.6.2A** is designed to track both standard requirements and mitigation measures as part of the project's MMRP.

4.7.6.2A Prior to the first issuance of a permit by the City (which includes the issuance of grading permits and building permits) for each phase, the project applicant shall be required to finalize the preliminary WQMP prepared for the project and receive approval from the City of Perris of the project-specific Final Water Quality Management Plan (WQMP) for each component of the proposed project. The Final WQMP shall specifically identify pollution prevention, source control, treatment control measures, and other BMPs that shall be used on site to control predictable pollutant runoff in order to reduce impacts to water quality.

Level of Significance after Mitigation. Because adherence to the requirements identified in the WQMP would be required by the City during the operational phase of the project, potential water quality impacts resulting from stormwater and urban runoff would be reduced to a less than significant level.

[1] *Preliminary Water Quality Management Plan for First Park South 215*, Albert A. Webb Associates, February 2, 2009.

4.7.6.3 100-Year Flooding Hazard-Related Impacts

Threshold	Would the proposed project place within a 100-year flood hazard area structures that would impeded or redirect flood flows?

Most of the annual rainfall in the region occurs in the winter. Flooding in the City of Perris could result from intense storms resulting in rapid runoff or through the failure of dams. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) identify areas subject to flooding during the 100-year and 500-year storm.[1] As requested by Riverside County Flood Control in its August 7, 2008, response to letter to the Notice of Preparation for this EIR, impacts related to the floodway and floodplain are discussed in this section along with the project's need for a Letter of Map Revision.

Phase 1: Airport Distribution Center. Portions of the Phase 1 site are within a 100-year flood hazard area and would place structures within such an area that would potentially impede or redirect flood flows. However, the City requires all development projects within flood areas to adhere to standards of construction specifically designed to reduce impacts associated with flooding events as indicated in Section 15.09 (Floodplain Management) of the City's Municipal Code. Such standards include the use of materials resistant to flood damage, the placement of drainage paths around structures to guide floodwaters around and away from proposed structures, and the placement of the lowest floor of any structure at or above the base flood elevation. Adherence to **Mitigation Measure 4.7.6.3A** would reduce flooding impacts associated with Phase 1 to a less than significant impact.

Phase 2: First Park South Perris Distribution Center. The Phase 2 site is located adjacent to the San Jacinto River flowline and associated conservation area. Due to the proximity of the San Jacinto River, portions of the site are not suited for development due to encroachment beyond the limits of the San Jacinto River Floodway. In addition, as identified in the preliminary hydrology report, the Phase 2 site is mapped as being inundated during a 100-year flood event by FEMA.[2] Since the Phase 2 site is within the 100-year floodplain, development of the Phase 2 site would result in the placement of structures on site that would have a potential to impede or redirect flood flows.

However, the proposed project design includes placement of fill material to raise the ground surface elevation of the building footprint to above the 100-year flood zone, which would ultimately be documented in a Conditional Letter of Map Revision - Fill (CLOMR-F). The CLOMR-F would document the property as being removed from the 100-year flood zone map. The grading details specifying fill material placement is part of the CLOMR-F application process. The amount of fill (fill material and building pad) would add approximately 660,000 cubic yards of fill material to the floodplain. The origin of fill is not known at this time, however, it is anticipated that the fill material would be imported from an off-site location. Based on preliminary conceptual site plans, Phase 2 buildings and improvements are not within the San Jacinto River channel and would not affect current river flow. However, because the project site is within the 100-year floodplain, the project applicant is still required to obtain an approved CLOMR-F, which requires additional analysis of hydromodification impacts.

Application for a CLOMR-F from FEMA would require documentation of fill material placement, elevation changes, and removal of a portion of a property from the likelihood of inundation during a flood event. Elevation of a portion of the project site above the 100-year flood zone would effectively remove potential impacts to the proposed project in regards to storm event flood hazards. Documentation

[1] The term "100-year" is a measure of the size of the flood, not how often it occurs. The "100-year flood" is a flooding event that has a one percent chance of occurring in any given year.

[2] *Preliminary Hydrology Report for South Perris Distribution Center,* Albert A. Webb Associates, October 2008.

submitted to the City and FEMA as well as FEMA approval of the CLOMR-F would ensure that flood-related impacts have been mitigated to a less than significant level for the Phase 2 site.

Development of Phase 2 may also include the extension of the existing rail line to the west of the project to provide rail service to the site. The extension of the existing rail line is considered to be an infrastructure improvement and would not result in the placement of structures within a flood plain. In addition, the extension of the existing rail line would not impede or redirect flood flows. Therefore, flooding impacts associated the rail component of Phase 2 would be less than significant and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. As identified in the Preliminary Hydrology Report, the Phase 3 site is entirely within the 100-year floodplain as mapped by FEMA[1] and is located adjacent to the San Jacinto River. In order for realistic development of the Phase 3 site to occur, a perimeter levee must be placed around the site to protect the Phase 3 site from large storm events. The placement of proposed levee would alter the existing 100-year floodplain. Similar to what was identified by Phase 2 of the project, Phase 3 would also require a CLOMR-F. Application for a CLOMR-F from FEMA would require documentation of proposed levee material placement, elevation changes, and removal of a portion of a property from the likelihood of inundation during a flood event. The placement of a perimeter levee would effectively remove potential impacts to the proposed project in regards to storm event flood hazards. Documentation submitted to the City and FEMA as well as FEMA approval of the CLOMR-F would ensure that flood-related impacts have been mitigated to a less than significant level for the Phase 3 site.

In the event that a regional flood occurs and the detention basin/sand infiltration trench is inundated, the proposed on site drainage system would develop a back water condition. Under these circumstances, site drainage would be impeded and low points within the perimeter levee would become inundated by runoff. Volume estimates indicate that the dock high building finished floors are well above the depth of water created by the back-water conditions and that the buildings are not at significant risk of damage caused by flooding. The areas that would be impacted by such an event are illustrated in Figure 4.7.7. As the water surface outside the levee recedes, flap-values for each of the onsite drainage systems will open, allowing pipes to convey flows from the project site. The free outlet of the basin is elevated one foot lower than the onsite low point – thereby ensuring that the site would be completely de-watered once the regional flood receded. Therefore, impacts associated with this issue are less than significant.

All Phases and Infrastructure. The total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the three phases would not result in significant impacts associated with impeding or redirecting flood flows with implementation of the identified mitigation measures. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. Since these roadway improvements would not impede or redirect flood flows in the project area, a less than significant impact would occur and no mitigation is required. Similarly, the proposed project would also install associated water, recycled water, brine line, and sewer infrastructure for the three sites. These infrastructure improvements would not impede or redirect flood flows in the area. Therefore, impacts associated with flood flows would be less than significant.

Mitigation Measures. The following measures have been identified to mitigate water quality impacts related to storm event flooding.

[1] *Preliminary Hydrology Report for First Park South 215,* Albert A. Webb Associates, October 2008.

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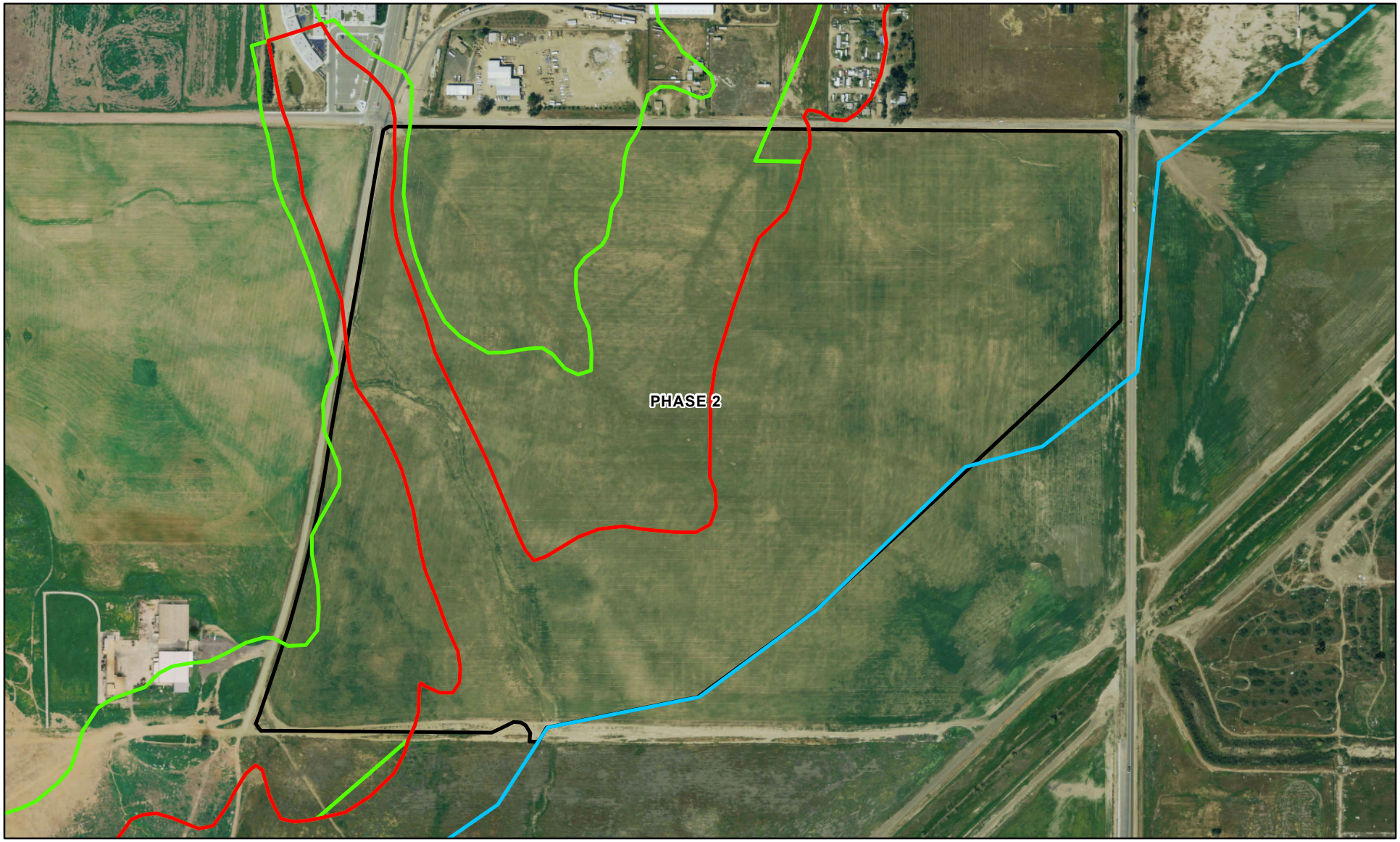

LSA

FIGURE 4.7.7

An Area Inundated by 100-year Flooding
An Area Inundated by 500-year Flooding
Revised Floodway

N

0 300 600

FEET

South Perris Industrial
Environmental Impact Report

Phase 2 First Park South Perris Distribution Center
Post-Project Potential Flooding

SOURCE: FEMA (2008); Albert A. Webb Associates (2008).

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4.7.6.3A Prior to issuance of grading permits for each phase of the project, the project proponent shall submit evidence to the City that all requirements identified in Chapter 15.09 (Floodplain Management) of the City's Municipal Code have been fulfilled to the City floodplain administrator's satisfaction.

4.7.6.3B Prior to the issuance of grading permits for Phase 2 and Phase 3, the project applicant shall submit to the City supporting evidence of compliance with FEMA CLOMR-F specifications and requirements including the discussion and analysis of fill material placement, elevation changes, and hydro-modification impacts.

Level of Significance after Mitigation. Although adherence to requirements identified by City's Municipal Code is required for all development projects in the City, the incorporation of these requirements as **Mitigation Measure 4.7.6.3A** is designed to track both standard requirements and mitigation measures as part of the project's MMRP. Adherence to **Mitigation Measure 4.7.6.3B**, which requires obtaining a CLOMR-F to officially designate the property outside of the flood zone, would reduce the potential flood impacts related to the implementation of Phase 2 and Phase 3 of the proposed project. The project applicant would be required to provide analysis to the City and FEMA regarding the placement of fill material, the placement of the levee, and elevation changes with respect to hydro-modification impacts to Phase 2 and Phase 3. Because this analysis is required before the approval of a CLOMR-F is received, it is anticipated that impacts relating to flooding and hydromodification will be reduced to a less than significant level.

4.7.7 Cumulative Impacts

Cumulatively, development within the watershed would result in an increase in impervious surfaces in addition to changes in land use and associated pollutant runoff characteristics. Increased impervious surfaces are likely to alter existing hydrology and increase potential pollutant loads. However, all development and future development in the City and throughout the Santa Ana RWQCB must obtain coverage under the NPDES permit program. Although continued growth is anticipated to occur in the City and surrounding areas, new development and significant redevelopment would have to minimize their individual impacts to water quality and pollutant transport through implementation of BMPs. Because these requirements would be imposed on all other developments, it is anticipated that each development would be required to mitigate its own specific impact on water quality and drainage. Therefore, if all other developments are required to mitigate for impacts to water quality, a less than significant cumulative impact to water quality would occur.

The cumulative area for groundwater would be the Perris North Management Zone as water for the project site and other cumulative development projects in the area would utilize groundwater from this particular management zone. Cumulatively, development within the Perris North Management Zone of the West San Jacinto Groundwater Management Plan (Plan) area would result in an increase in demand on water sources, which includes groundwater supplies. However, because the majority of the projects within the Perris North Management Zone obtain water service from EMWD, it is anticipated that the area relies on imported water purchased from Metropolitan with supplements from local groundwater sources. As stated in Section 4.12 (Utilities and Service Systems), there has been a shift in the water demand patterns in the last 15 years, as a residential market has replaced an agricultural market. Metropolitan has stated that with the addition of all water supplies existing and planned, it would have the ability to meet all of its member agencies' projected supplemental demand through 2030 even under a repeat of a worst drought scenario and with a reduction in deliveries from the SWP as imported sources of water will be supplemented by an increase in desalination of brackish groundwater, recycled water use, and water use efficiency. Based on this assertion, the EMWD has stated it is able to meet an increased demand for water over the next 20 years, even during drought conditions. This is based on continued commitment to conservation programs, additional water recycling, and continued development of local water resources.

Because all development is required to obtain proof that water service is available for the development, it is reasonable to conclude that EMWD ensures that there is adequate water to serve the proposed project without a reduction of groundwater levels due to the adjudication of the groundwater basin. Because these requirements are imposed on all other developments, it is anticipated that each development would be required to mitigate its own specific impact on groundwater levels. Therefore, if all other development is required to mitigate for impacts to groundwater levels, a less than significant cumulative impact to groundwater levels would occur.

4.8 LAND USE AND PLANNING

Analysis carried out for this section of the EIR addresses the consistency of the proposed project with the goals and policies of the City of Perris General Plan, applicable community plans, redevelopment plans, Zoning Code, and compatibility within local and regional plans. This section also identifies and evaluates the compatibility of the proposed project with existing land uses and the potential land use impacts that may result during or subsequent to development of the proposed on-site uses.

The analysis contained in this section is based on the following technical studies prepared for the proposed project:

- Western Riverside County Multiple Species Habitat Conservation Plan Compliance Report, Proposed South Perris Industrial, Perris, California, URS Corporation, October 14, 2008 (EIR Appendix D-5).

In addition, the analysis contained in this section is based on the following reference documents:

- City of Perris General Plan, City of Perris;
- Compass Growth Vision 2004, Southern California Association of Governments, June 2004;
- County of Riverside, Drainage Area Management Plan- Santa Ana & Santa Margarita Regions. July 2005.
- Final 2008 Regional Transportation Plan: Making the Connections, Southern California Association of Governments, adopted May 2008;
- Final 2005 Urban Water Management Plan, Eastern Municipal Water District, approved December 21, 2005
- Final 2007 Air Quality Management Plan, South Coast Air Quality Management District, June 1, 2007;
- Final 2008 Regional Comprehensive Plan, Southern California Association of Governments, released February 9, 2009;
- Inland Empire Profile 2008, Inland Empire Quarterly Report, Vol. 21, No. 1, January 2009, John E. Husing, Ph.D.;
- Land Use Element Perris General Plan, City of Perris, adopted April 26, 2005;
- Municipal Code, City of Perris, codified through Ordinance 1251, passed September 30, 2008;
- Riverside County Airport Land Use Compatibility Plan, Volume 1, Riverside County Airport Land Use Commission, October 14, 2004;
- Riverside County Airport Land Use Plan, Riverside County Airport Land Use Commission, adopted April 26, 1984;
- Water Quality Control Plan Santa Ana River Basin (8), California Regional Water Quality Control Board, approved January 24, 1995; and
- Western Riverside County Multiple Species Habitat Conservation Plan, Volume I, Part I, Dudek & Associates, June 17, 2003.

4.8.1 Existing Setting

4.8.1.1 General Plan and Zoning Designations

The proposed project sites are located within the City's Planning Area 8,[1] an area bounded by Interstate 215 (I-215) to the northeast, portions of 4th Street, Redlands Avenue, and Ellis Avenue to the north, the Orange Empire Railway Museum Railway to the west, the San Jacinto River to the southeast, and Watson Road to the south. The Perris Valley Airport is located in the project vicinity east of Phase 1 and south of Phase 3. The Phase 1, Phase 2, and Phase 3 project sites are located approximately 8 miles south, 7 miles south, and 6.5 miles southeast of March Air Field, respectively. Table 4.8.A identifies on-site and adjacent General Plan and zoning designations. The on-site and adjacent General Plan and zoning designations are illustrated in previously referenced Figure 3.2.

Table 4.8.A: On-Site and Adjacent Land Use Designations

Location	Existing Land Use	General Plan	Zoning
On-site			
Phase 1	Industrial	General Industrial	General Industrial (GI)
Phase 2	Undeveloped	General Industrial	General Industrial (GI)
Phase 3	Undeveloped	Specific Plan (SP)	SP-Industrial; Community Commercial (CC)
North			
Phase 1	Industrial	General Industrial	General Industrial (GI)
Phase 2	Industrial	General Industrial	General Industrial (GI)
Phase 3	Commercial; Undeveloped	Commercial	Community Commercial (CC)
South			
Phase 1	Industrial	General Industrial	General Industrial (GI)
Phase 2	Undeveloped	General Industrial; Residential	General Industrial (GI); R-6000
Phase 3	Industrial; Undeveloped	General Industrial	Light Industrial (LI)
East			
Phase 1	Industrial; Public	General Industrial; Public	Light Industrial (LI)
Phase 2	Undeveloped	General Industrial; Specific Plan (SP)	General Industrial (GI)
Phase 3	I-215; Undeveloped	Specific Plan (SP)	Community Commercial (CC); Professional Office (PO)
West			
Phase 1	Industrial; Undeveloped	General Industrial	General Industrial (GI)
Phase 2	Residential; Undeveloped	Residential	R-10,000
Phase 3	Industrial; Public	General Industrial; Public	Public/Semi-Public Facilities/Utilities; Light Industrial (LI)

Source: City of Perris General Plan Land Use Map, approved April 26, 2005

The northern portion of the Phase 1 site of the proposed project is currently undeveloped vacant land. The southern portion of the Phase 1 site of the proposed project is currently developed with a pre-cast concrete bridge fabrication operation. This existing use will be removed as part of the proposed

[1] *Land Use Element Perris General Plan,* City of Perris, adopted April 26, 2005.

project. The Phase 1 site is approximately 38 acres and is designated General Industrial in the City's General Plan with an underlying General Industrial (GI) zoning designation. The Phase 2 site is approximately 201 acres of currently undeveloped vacant land and is designated General Industrial in the City's General Plan with an underlying GI zoning designation.

The Phase 3 site is approximately 215.7 acres of undeveloped land and is designated Specific Plan (New Perris Specific Plan) in the City's General Plan with an underlying SP-Industrial and SP-Commercial (approximately 8 acres) zoning designation. Phase 3 of the proposed project would require adoption of a General Plan Amendment (GPA) in order to change the existing SP designation to a General Industrial designation for the entire Phase 3 site. Development proposed within Phase 3 would also require implementation of a Zone Change from SP-Commercial to General Industrial for the existing 8-acre commercial portion of the site as the conceptual development plans envisions the exclusive development of industrial uses.

4.8.1.2 Adjacent and On-site Land Use

The Phase 1 site currently houses a pre-cast concrete bridge fabrication operation which will be removed prior to the construction of any structures envisioned under Phase 1 of the proposed project. Phases 2 and 3 of the proposed project are currently undeveloped; however, agricultural activity historically has occurred within the areas of Phases 2 and 3. Existing land uses north of Phases 1 and 2 of the proposed project include a variety of industrial uses. There are also non-conforming residential uses north of Phase 2. Existing land uses north of Phase 3 include industrial uses and undeveloped land. Commercial uses are also located to the northwest of Phase 3. Existing land uses south of Phase 1 include vacant undeveloped land and one industrial use (boat manufacturing business). South of Phase 2, existing land uses consist of vacant undeveloped land and the San Jacinto River. South of Phase 3, existing land uses consist of both industrial uses and vacant undeveloped land. Further southeast of Phase 3 is the Perris Valley Airport. East of Phase 1, existing land uses consist of the Perris Valley Airport and vacant undeveloped land to the southeast. Vacant undeveloped land is located east of Phase 2 and the San Jacinto River. I-215, the San Jacinto River, and vacant undeveloped land are located east of Phase 3. Undeveloped land located east of Phase 2 is part of the Green River Specific Plan and undeveloped land located east of Phase 3 is part of the New Perris Specific Plan. The San Jacinto River also exists to the east of Phase 2 and Phase 3. Existing land uses west of Phase 1 consists of the Orange Empire Railway Museum storage yard and vacant undeveloped land. Existing land uses west of Phase 2 consist of vacant undeveloped land and the Techalloy Welding Products Company (Central Wire). West of Phase 3, existing land uses consist of industrial (truck storage), public/semi-public uses (Sheriff/Coroner facility and The Academy community day school. Previously referenced Table 4.8.A and Figure 3.3 identify on-site and adjacent land uses.

4.8.2 Existing Policies and Regulations

4.8.2.1 Federal Regulations

2005 Air Installation Compatible Use Zone (AICUZ) Study. March Air Field is a joint-use airport, used for both military and civilian purposes. March Inland Port (MIP) is the civilian portion of the airport. The airport is owned and regulated by the military. Military installations prepare AICUZ studies to protect vicinity land uses from hazard and noise impacts associated with military airports. The Air Force Reserve (AFRES) completed a new AICUZ for March Air Field in 2005. The AICUZ delineates the clear zones and accident potential zones for the joint use airfield, as well as the noise contours based upon the project flight operations and use of the aviation field. The noise contours include both military and civilian use, as projected in the Federal Aviation Administration (FAA) conformity determination.

4.8.2.2 State Regulations

State Aeronautics Act (Public Utilities Code Section 21659). This section of the Public Utilities Code prohibits the construction or alteration of any structure and does not permit any vegetation or structure to grow in excess of the height which exceeds the obstruction standards set forth in the regulations of the FAA relating to objects affecting navigable airspace contained in Title 14 of the Code of Federal Regulations, Part 77, Subpart C, unless a permit allowing the construction, alteration, or growth is issued by the department. The permit is not required if the FAA has determined that the construction, alteration, or growth does not constitute a hazard to air navigation or would not create an unsafe condition for air navigation. Prohibitions do not apply to a pole, pole line, distribution or transmission tower, or tower line or substation of a public utility.

State Aeronautics Act (Public Utilities Code Section 21670, et seq.). This section of the Public Utilities Code establishes the requirement for the creation of airport land use commissions for every county in which there is an airport which is served by a scheduled airline. Additionally, these Sections of the Code mandate the preparation of Comprehensive Land Use Plans (CLUP) to provide for the orderly growth of each public airport and the area surrounding the airport. The intent of LUPs is the protection of the general welfare of inhabitants within the vicinity of the airport and the general public.

4.8.2.3 Local Regulations

Riverside County Airport Land Use Plan (adopted April 26, 1984). The Riverside County Airport Land Use Plan is the most recently adopted Airport Land Use Plan (ALUP) for the MIP. There is no adopted Land Use Compatibility Plan for Perris Valley Airport. A portion of the Phase 3 site is located within MIP's Airport Influence Area III. Since the ALUP permits the development of industrial uses in and MIP's Influence Area III, the following policies apply:

Policy 3 Within [Airport Influence] Area III, avigation easements will be required for all land uses. The height of the avigation easements will be from runway ground elevation within Area I, the defined approach surfaces, and from 150 feet above runway ground level elevation throughout the remainder of Areas II and III.

Riverside County Airport Land Use Compatibility Plan, Volume 1. The Riverside County Airport Land Use Commission (ALUC) is currently in the process of preparing an updated Riverside County Airport Land Use Plan. While no airport-specific information for Perris Valley Airport or MIP has been approved for the plan, Volume I (Policy Document) for the updated plan was adopted by the Riverside County ALUC on October 14, 2004. This document contains countywide policies to ensure compatibility between airport and other uses. Policies contained in this document relevant to the proposed project include the following:

Policy 1.1.2 ***County of Riverside and Affected Cities in the County:*** The county and cities:

(a) Shall each apply when modifying their respective general plans and zoning ordinances to be consistent with the Commission's Compatibility Plans.

(b) Shall consider when making other planning decisions regarding the proposed development of lands impacted by airport operations.

(c) Shall use as the basis for referring specified land use proposals to the Riverside County ALUC for review.

Policy 1.5.1 ***Actions Which Always Require ALUC Review****:* As required by state law, the following types of actions shall be referred to the Airport Land Use Commission for

determination of consistency with the Commission's *Plan* prior to their approval by the local jurisdiction:

(a) The adoption or approval of any amendment to a general or specific plan affecting the property within an airport influence area (Public Utilities Code Section 21676(b)).

Policy 1.5.2 ***Other Land Use Actions Subject to ALUC Review:*** In addition to the adoption, modification, or approval of a General Plan, Specific Plan, Airport Master Plan, or Zoning Ordinance, for which ALUC review is mandatory, other types of land use actions are subject to review under the following circumstances:

(a) Until such time as (1) the Commission finds that a local agency's general plan or specific plan is consistent with the *Airport Land Use Compatibility Plan*; or (2) the local agency has overruled the Commission's determination of inconsistency. State law provides that the ALUC may require the local agency to refer all actions, regulations, and permits involving land within an airport influence area to the Commission for review (Public Utilities Code Section 21676.5(a)). Only those actions that the ALUC elects not to review are exempt from this requirement. Commission policy is that only the *major land use actions* listed in Policy 1.5.3 shall be submitted for review.

(b) After a local agency has revised its general plan or specific plan (see Section 3.2) or has overruled the Commission, the Commission no longer has authority under state law to require that all actions, regulations, and permits be referred for review. However, the Commission and the local agency can agree that the Commission should continue to review individual projects in an advisory capacity.

(1) The Commission requests local agencies to continue to submit *major land use actions* as listed in Policy 1.5.3. ALUC review of these types of projects can serve to enhance their compatibility with airport activity.

(2) Review of these actions is requested only if a review has not previously been conducted as part of a general plan, specific plan, or zoning ordinance action or if sufficient project-level detail to enable a full assessment of compatibility was not available at the time of a previous review.

(3) Because the ALUC acts in an advisory capacity when reviewing projects under these circumstances, local jurisdictions are not required to adhere to the overruling process if they elect to approve a project without incorporating design changes or conditions suggested by the commission.

(c) Proposed redevelopment of a property for which the existing use is consistent with the general plan and/or specific plan, but nonconforming with the compatibility criteria set forth in this plan, shall be subject to ALUC review. This policy is intended to address circumstances that arise when a general or specific plan land use designation does not conform to ALUC compatibility criteria, but is deemed consistent with the compatibility plan because the designation reflects an existing land use. Proposed redevelopment of such lands voids the consistency status and is to be treated as new development subject to ALUC review even if the proposed use is consistent with the local general plan or specific plan. (Also see Policies 3.3.2 and 3.3.3.)

(d) Proposed land use actions covered by Paragraphs (a), (b), and (c) above shall initially be reviewed by the ALUC Executive Director. If the Executive Director determines that significant compatibility issues are evident, the proposal shall be forwarded to the Commission for review and decision. The Commission authorizes the Executive Director to approve proposed actions having no apparent compatibility issues of significance.

Policy 1.5.3 ***Major Land Use Actions:*** The scope or character of certain *major land use actions*, as listed below, is such that their compatibility with airport activity is a potential concern. Even though these actions may be basically consistent with the local general plan or specific plan, sufficient detail may not be known to enable a full airport compatibility evaluation at the time that the general plan or specific plan is reviewed. To enable better assessment of compliance with the compatibility criteria set forth herein, ALUC review of these actions may be warranted. The circumstances under which ALUC review of these actions is to be conducted are indicated in Policy 1.5.2 above.

(a) Actions affecting land uses within any compatibility zone.

(3) Proposed development agreements or amendments to such agreements.

(5) Any discretionary development proposal for projects having a building floor area of 20,000 square feet or greater unless only ministerial approval (e.g., a building permit) is required.

(6) Major capital improvements (e.g., water, sewer, or roads) which would promote urban uses in undeveloped or agricultural areas to the extent that such uses are not reflected in a previously reviewed general plan or specific plan.

(d) Any other proposed land use action, as determined by the local planning agency, involving a question of compatibility with airport activities.

4.8.2.4 City of Perris General Plan Policies

The Land Use Element and Safety Element of the General Plan define goals and policies related to land use. The specific goals and policies of the Land Use Element and Safety Element relevant to the proposed project include the following:

Land Use Element (adopted April 26, 2005)

Policy II.A Require new development to pay its full, fair-share of infrastructure costs

Implementation Measures

II.A.2 Revise the Zoning Ordinance to require that development application submittals include master plans for backbone infrastructure substantially consistent with the provisions of “Infrastructure Concept Plans” in the *Land Use Element.*

II.A.3 Revise the capital facilities fee program so that all infrastructure construction and improvements identified as attributable to new development are fully funded.

II.A.4 Revise the Zoning Ordinance to include the Ramona Expressway, Oleander Road, Ethanac Road Overlays and incorporate Infrastructure Concept Plan requirements.

II.A.5 Revise the Zoning Ordinance to include the MSHCP Reserve Area and Criteria Areas.

Policy II.B Require new development to include school facilities or pay school impact fees, where appropriate.

Implementation Measures

II.B.1 Circulate all development plans to local school districts to assess need to include potential future school sites.

Policy III.A Accommodate diversity in the local economy.

Implementation Measures

III.A.1 Rezone properties to be consistent with the *Land Use Plan Map.*

III.A.2 Revise the Zoning Ordinance to include appropriate properties within *Special Study Areas* and identify milestones for changing their land use designations to provide a balance among *Community Commercial, Business Park, and Light Industrial* properties.

III.A.3 Include funding in municipal budgets necessary to implement sustained, methodical code enforcement in "Planning Area 1: North Commercial/Industrial" as a means to promoting private investment.

III.A.4 Prepare a City marketing brochure to supplement broker and property owner offerings to businesses considering locating in Perris.

III.A.5 Conduct a Comprehensive Fiscal Analysis for possible annexation of Sphere of Influence properties on the westerly edge of Interstate 215 as a means to affect property upgrades in the area.

Policy IV.A The General Plan and the Zoning Code shall be revised and updated to maintain consistency with each other, and with regional plans

Implementation Measures

IV.A.1 Change the Zoning Code and Zoning Map to ensure consistency with the Land Use Plan.

Policy V.A Restrict development in areas at risk of damage due to disasters.

Implementation Measures

V.A.1 Consult hazards maps as part of the review process for all development application.

Safety Element (adopted October 25, 2005)

Policy I.D: Aircraft Consult the Airport Installation Compatible Use Zone (AICUZ) Land Use Compatibility Guidelines and ALUP Airport Influence Area development restrictions when considering development project applications.

4.8.3 Methodology

The focus of the land use analysis is on land use impacts that would result from implementation of the proposed project. Land use conflicts are identified and evaluated based on existing land uses, land uses proposed as part of the project, land use designations, and standards and policies related to land use. Land use compatibility is based on the intensity and patterns of land use to determine whether the project would result in incompatible uses or nuisance impacts to sensitive receptors (e.g., residences, medical facilities, or schools).

An evaluation of the potential land use impacts associated with implementation of the proposed project is based on review of the Perris General Plan and associated Final EIR, Municipal Code, Zoning Code, SCAG Regional Comprehensive Plan, SCAG Regional Transportation Plan, SCAG Compass Growth Vision, South Coast Air Quality Management District Air Quality Management Plan, Santa Ana Water Quality Control Plan, Riverside County Drainage Area Management Plan, and the Eastern Municipal Water District Urban Water Management Plan. Compatibility of the proposed project with the Western Riverside County Multiple Species Habitat Conservation Plan is discussed in Section 4.4 Biological Resources.

Potential land use conflicts or incompatibility (specifically during construction activities) are usually the result of the other environmental effects, such as the generation of noise or air quality pollutants resulting from grading activities. Specific impacts and consistency issues associated with population and housing, transportation and circulation, noise, air quality, agriculture resources, hazards and hazardous materials, hydrology and water quality, biological resources, cultural and paleontological resources, aesthetics and visual resources, and/or utilities and service systems are addressed in each EIR section. Refer to Sections 4.1 through 4.12 of this EIR for detailed analyses of other relevant environmental effects as they relate to particular issue areas.

4.8.4 Thresholds of Significance

Appendix G of the *CEQA Guidelines* recognizes the following significance thresholds related to land use. Based on these significance thresholds, potential impacts to land use could be considered significant if the proposed project would result in the following:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan, Specific Plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.8.5 Less than Significant Impacts

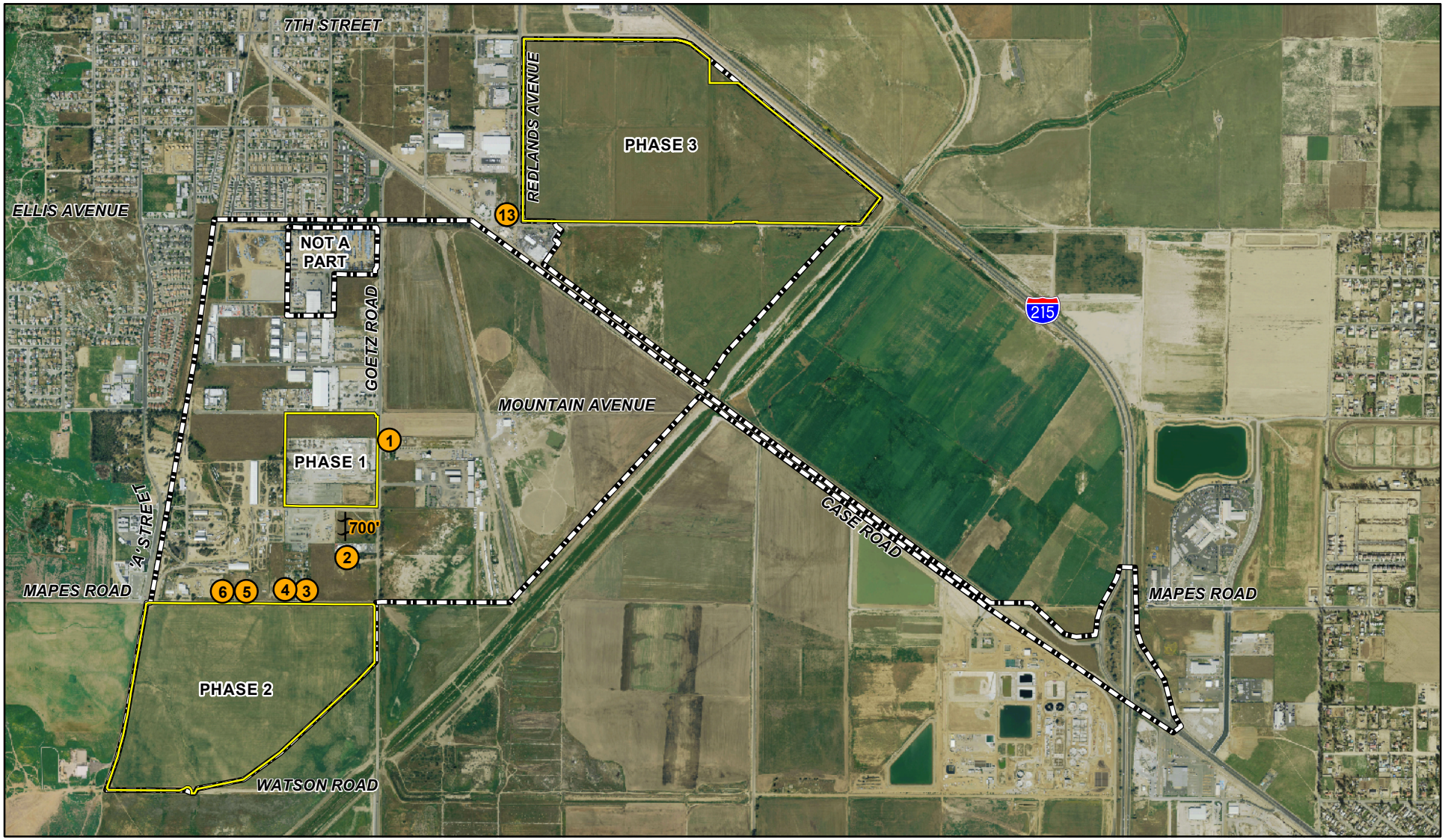
The following potential impacts were determined to be less than significant. In each of the following issues, either no impact would occur (therefore, no mitigation would be required) or adherence to established regulations, standards, and policies would reduce potential impacts to a less than significant level.

4.8.5.1 Physically Divide an Established Community

Threshold	Would the proposed project physically divide an established community?

All three phases of the proposed project are located within Planning Area 8 as identified in the City's General Plan. The majority of land within Planning Area 8 is planned for industrial uses. A pre-cast concrete bridge fabrication operation currently exists on the Phase 1 site. This existing use will be removed prior to the construction of any structures at the Phase 1 site associated with the proposed project and replaced with 783,700 square feet of industrial uses. The Phase 2 and Phase 3 sites are currently undeveloped land and have been used in the past for agricultural activities. However, recent agricultural activity has not occurred on the Phase 2 and 3 sites. Based on the City's General Plan Land Use Map,[1] the nearest residential land uses within the City are located to the west, south, and east of the proposed project sites. To the west, the nearest existing residential use is located adjacent to the Phase 3 site. The residential use located in this area is non-conforming and does not constitute an established community. To the north, the nearest residential use is located adjacent to the Phase 2 site of the proposed project. However, the residential uses located in this area are also non-conforming uses and do not constitute an established community. To the south, the nearest existing residential use is located approximately 700 feet south of Phase 1 of the proposed project. A residential use is also located adjacent and east of the Phase 1 site. The residential use located in this area is non-conforming and does not constitute an established community. Figure 4.8.1 illustrates the location of the nearby residences within the Study Area.

[1] *City of Perris General Plan Land Use Map,* City of Perris, approved April 26, 2005.



LSA

PROJECT SITES
PROJECT AREA
SENSITIVE RECEPTORS

N

0 1,000 2,000
FEET

SOURCE:AirPhotoUSA, 2008; Thomas Bros., 2007.

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FIGURE 4.8.1

South Perris Industrial
Environmental Impact Report

Existing Nearby Residential Uses
Within the Study Area

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Based on recent aerial photography (AirPhotoUSA, 2007), the majority of the properties in the proposed project vicinity are undeveloped. There are pockets of commercial, light industrial/manufacturing, and industrial uses surrounding the project sites. There is one area of residential uses adjacent to the proposed project site north of Phase 2. As previously described, these residential uses are non-conforming uses and are planned for General Industrial land uses in the City's General Plan. A mix of mostly undeveloped land with pockets of non-conforming residential uses, commercial, light industrial/manufacturing, and industrial uses do not constitute an established community. Because the existing residential uses surrounding the proposed project sites are separated from the site by existing development, undeveloped land, and the San Jacinto River, implementation of the proposed project would not physically divide an established community. The proposed infrastructure improvements of the proposed project include the potential rail line extension for the Phase 2 site; associated roadway improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road; and the installation of water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. As previously described, the collection of land uses in the project vicinity does not constitute an established community. Therefore, while the physical construction of barriers would occur, the division of an established community would not occur because the collection of sporadic single-family residential units within the project vicinity is not part of an established community. No impact would occur and no mitigation is required.

4.8.5.2 Conflict with Applicable Land Use Plans, Policies, or Regulations

Threshold	Would the proposed project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

Section 15125 (d) of the *CEQA Guidelines* requires EIRs to "discuss any inconsistencies between the proposed project and applicable general plans and regional plans." The objective of such a discussion is to find ways to modify the project, if warranted, to reduce any identified inconsistencies with relevant plans and policies. Pursuant to CEQA Section 15125 (d), this EIR section includes an evaluation of the consistency of the proposed project with pertinent goals and policies of relevant adopted local and regional plans. Because certain plans are more specifically tailored to other issue areas, such as air quality, transportation, biology, hazards, water quality, and water supply, the local and regional plans identified below are addressed in detail in other sections of this EIR.

Regional Plans

South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan. The California Air Resources Board (CARB) coordinates and oversees both State and federal air quality control programs. The CARB's primary functions include establishing and updating the California ambient air quality standards, monitoring existing air quality, controlling emissions from mobile sources, and developing the State Implementation Plan (SIP). The SIP is the state's overall air quality control strategy for both mobile and stationary sources. Control programs for these sources are carried out at the regional or county level.

As identified in Section 4.3 (Air Quality) of this EIR, the project site is located within the SCAQMD. The SCAQMD encompasses Orange County and the non-desert portions of Los Angeles County, Riverside County, and San Bernardino County and is responsible for air pollution control programs and regulations within the air basin. The current regional air quality plan is the 2007 Air Quality Management Plan (AQMP) adopted by the SCAQMD on June 1, 2007. The 2007 AQMP employs the most up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources. The 2007 AQMP also updates the attainment demonstration for the

standards for ozone and PM_{10}, and proposes attainment demonstration with a more focused control of sulfur oxides, directly-emitted $PM_{2.5}$, nitrogen oxides, and volatile organic compounds by 2015.

Section 4.3 (Air Quality) of the EIR examines the proposed project's consistency with the adopted AQMP. The proposed project envisions the development of industrial uses in three phases on approximately 454.7 acres. The development scenario proposed is within the scope of what would be allowed under the current General Plan land use designation (General Industrial and Specific Plan) and is consistent with the uses permitted under the proposed General Industrial zoning designation. As previously identified, the proposed Phase 3 site is partially designated Specific Plan-Industrial in the City's General Plan. Based on this designation, the project site could be developed with general industrial or light industrial uses. The underlying zoning of the New Perris Specific Plan west of I-215 is SP-Industrial and SP-Commercial. The proposed project is a permitted use on a majority of the 215.7 acre Phase 3 site. An 8-acre portion of the site located at the southeast corner of 7th Street and Redlands Avenue is designated SP-Commercial. Phase 3 of the proposed project would require adoption of a General Plan Amendment (GPA) in order to change the existing SP designation applicable to part of the site to a General Industrial designation for the entire Phase 3 site. Development proposed within Phase 3 would also require implementation of a zone change from SP-Commercial to General Industrial for the existing 8-acre commercial portion of the site as the conceptual development plans envisions the exclusive development of industrial uses. Upon adoption of the GPA and Zone Change, the proposed project would be consistent with the City's General Plan and the zone change will render the zone consistent with the General Plan.

The proposed project will accommodate growth projected to occur in the project area. Emissions projections used to establish SCAQMD attainment objectives reflect adopted regional and local land use plans. Because the uses proposed by the proposed project would be consistent with the City's General Plan, the proposed project is also considered to be consistent with the AQMP. This is so because when the SCAQMD formulates attainment objectives and the growth projections on which those attainment objectives are based, the SCAQMD utilizes local agencies' General Plans as the basis for developing the SCAQMD's growth objectives. Thus, to the extent the proposed project is consistent with the proposed uses permitted by the City's General Plan, the proposed project is consistent with the SCAQMD's AQMP and the attainment objectives and growth projections contained therein. Therefore, the emissions associated with the proposed project are expected to be within the amounts already accounted for in the SCAQMD AQMP. Therefore, the project is consistent with the AQMP.

Southern California Association of Governments (SCAG), Regional Comprehensive Plan (RCP), Regional Transportation Plan (RTP), and Compass Growth Vision (Compass). The SCAG (the designated metropolitan planning organization [MPO] for the Counties of Ventura, Orange, San Bernardino, Riverside, Imperial, and Los Angeles) is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality. With its members and other regional planning entities, SCAG has prepared the 2008 Regional Comprehensive Plan (RCP) to serve as a framework to guide decision-making with respect to the growth and changes that can be anticipated in the region. The RCP is a major advisory plan prepared by the SCAG that addresses important regional issues like housing, traffic/transportation, water, and air quality. The RCP serves as an advisory document to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance.

The RCP identifies voluntary best practices to approach growth and infrastructure challenges in an integrated and comprehensive way. It also includes goals and outcomes to measure progress toward a more sustainable region. The RCP includes nine chapters, each based on specific areas of planning or resource management. Each of the nine chapters contains goals, policies, implementation, and strategies to achieve the SCAG's overall goals of improving the standard of

living for all; improving the quality of life for all; and enhancing equity and access to government. Local governments are required to use the RCP as the basis for their own plans and are required to discuss the consistency of projects of "regional significance" with the RCP.

Regional Comprehensive Plan. The RCP's overall goal is to reinvigorate the region's economy, avoid social and economic inequities and the geographical dislocation of communities, and to maintain the region's quality of life. The document is described as a regional policy framework for future land use decisions in the SCAG area that respects the need for strong local control, but that also recognizes the importance of regional comprehensive planning for issues of regional significance. The RCP is laid out much like a General Plan and organizes recommended policies into nine chapters. The highlight of each chapter is the regional strategy that addresses the RCP's vision for that resource area. As such, each chapter includes three levels of recommendations for the region:

- **Goals.** Each goal will help define how sustainability is defined for that resource area.
- **Outcomes.** These focus on quantitative targets that define progress toward meeting the RCP's Goals. Where possible, they are clearly defined (e.g., a 20% reduction in greenhouse gas emissions from 2007 levels), capable of being monitored with existing or reasonably foreseeable resources, and have a strong link to sustainability goals.
- **Action Plan.** This critical part of the RCP lays out a comprehensive implementation strategy that recommends how the region can systematically move to meet the RCP's quantitative Outcomes and achieve its Goals, Guiding Principles, and Vision. Each Action Plan contains:
    - **Constrained Policies.** This includes a series of recommended near-term, feasible policies that stakeholders should consider for implementation. For example, the RCP calls on the SCAG to adopt policies that reflect its role as a planning agency, council of governments, and metropolitan planning organization. The RCP also recommends voluntary policies for consideration by local governments and other key stakeholders.
    - **Strategic Initiatives.** This encompasses longer-term strategies that require significant effort to implement but are necessary to achieve the RCP's desired Goals and Outcomes. For example, identifying technological breakthroughs that can reduce air pollution from the transportation sector requires both commitment and time. Most of these initiatives are not constrained and will require political will, enabling legislation, new funding sources, and other key developments to become a reality. In most cases, this tier of strategies is the key to achieving the region's sustainability Goals and Outcomes.

Other policies contained within the 2008 RCP were either not applicable to the proposed project or are directed at the SCAG and actions that the SCAG would undertake at the regional level that would not pertain directly to the proposed project. Policies within the 2008 RCP that are applicable to the proposed project were identified and are discussed below.

Land Use and Housing Chapter

Goal *Focusing growth in existing and emerging centers and along major transportation corridors.*

Consistent. The proposed project site is currently underdeveloped and consists of undeveloped and developed land. Regional access to the City and project area is provided from I-215, which runs north-south. In addition, Case Road, which traverses through the project site's study area, is a fully-paved road with existing water and sewage facilities. The development of the proposed project would occur in an area where commercial, residential, and industrial development already exists, is under construction, or has been previously approved. The existing roadway system and infrastructure surrounding the project site will be utilized to the maximum extent possible. As required, the proposed

project will install improvements and/or pay necessary fees to facilitate the continuation of satisfactory operation. The proposed project is consistent with this SCAG policy in that it exists along a major transportation corridor of the City and will be connecting to the existing utilities underlying Case Road.

Goal *Targeting growth in housing, employment and commercial development within walking distance of existing and planned transit stations.*

Consistent. The proposed project would comply with all City development policies, standards, and programs pertaining to supporting alternative modes of transportation included in the General Plan Circulation Element. In addition, the proposed project is located within an urbanizing area of the City. As provided in the inventory of cumulative projects (Table 2.A and Figure 2.1), the approved and planned development in the project area includes residential, commercial, and industrial uses. As such, the project site is in an area which is developing with projects that have already been approved and constructed, or in the various stages of the planning process. Because the project site is located adjacent to existing RTA Routes 19, 22, 27, 30, 74, and 208[1] and because the project has identified six potential future bus stops, the proposed project would be accessible to existing transit systems. Future bus stops will be located per RTA recommendations along the perimeters of the three phases of the project site. As the project site is located in an area where commercial, residential, and industrial uses are planned or approved, and because the project site is readily accessible from I-215 and from existing RTA bus routes, the proposed project would be consistent with this SCAG Policy.

Goal *Injecting new life into underused areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots.*

Consistent. The proposed project site is currently underdeveloped and consists of undeveloped and developed land. The proposed project would introduce new commercial uses on vacant lots.

Outcome *Significantly increase the number and percentage of new housing units and jobs created within the Compass Blueprint 2% Strategy Opportunity Areas by 2012 and improve the regional jobs-housing balance. (Tracking the number of new units will measure the region's progress in accommodating forecast growth. The percentage of housing and jobs developed within the Opportunity Areas will indicate the locational efficiency of growth.)*

Consistent. Construction activities resulting from the proposed project's implementation would be short-term and temporary in nature. Construction personnel are anticipated to come from within the area and would not generate a permanent increase in population levels or result in a decrease in available housing.

Direct population increases are generally associated with residential developments and as there are no residential uses proposed for the project, there would be no direct increase in population. As most of the new employment opportunities are anticipated to be filled by existing local area residents, a large influx of new residents to the City would not occur. Development of the proposed on-site uses would increase the number of jobs in the City by approximately 2,960 positions.[2] The SCAG regional forecasts indicate an increase in employment in the City of Perris from approximately 14,750 jobs in 2005 to 18,045 jobs in 2010. A similar job trend forecast is predicted for western Riverside County from approximately 484,985 jobs in 2005 to 588,523 jobs in 2010.[3] Compared to the broader western Riverside County area, the City is "jobs poor." A City or sub-region with a jobs-to-housing ratio lower than the overall standard would be considered a "jobs poor" area, indicating that many of the

[1] RTA Routes 19, 22, 27, 30, and 208 stop at the intersection of 4th Street and Wilkerson Avenue. In addition, Route 30 also has a bust stop along Perris Boulevard north of Ellis Avenue. Route 74 has a bus stop at the intersection of Perris Boulevard and 4th Street, Riverside Transit Agency web site, http://www.riversidetransit.com/maps/030.htm, site accessed July 14, 2008.

[2] 1 employee per 2,500 square feet, 7,399,291 sf ÷ 2,500 sf = 2,960 employees; Based on *Inland Empire Distribution Center Operations Profile*, WCL Consulting, June 10, 2008. 2,500 square feet per employee is an average of the Inland Empire rates.

[3] Riverside County Projections- 2006 (RCP06) by WRCOG Jurisdiction, Western Riverside Council of Governments, http://www.wrcog.cog.ca.us/downloads/wrcogsubregforecast.pdf, date accessed March 13, 2008.

residents must commute to places of employment outside the sub-area. The 2010 projected jobs-to-housing ratios for the City, sub-region, and region are 1.14, 1.18, and 1.43, respectively. The 2030 future jobs-to-housing ratios for the City, sub-region, and region are 1.03, 1.20, and 1.37, respectively. These ratios indicate that both Western Riverside County and the City of Perris are "jobs poor" because the jobs-to-housing ratios are below the ratio for the Southern California region (as defined by SCAG).

The current SCAG figures not withstanding, the "jobs poor" designation of both Perris and Riverside County is further underscored by the current recessionary forces which are impacting the overall U.S. Economy. Since November, 2007, it is estimated that the entire Inland Empire has incurred a net loss of 33,700 jobs and that the region's current unemployment rate of 9.5 percent is the highest among the nation's 49 metro areas with a population of more than one million persons.[1] In addition to validating the fact that the project will not add to impacts associated with population and housing growth, these statistics emphasize the positive effect the project will produce in implementing the City's General Plan Goal III (Perris General Plan Land Use Element, Page 91) pertinent to fiscal viability and jobs creation through land use.

It is anticipated that any new employment opportunities created by the proposed development would be filled by persons already residing in the local area. The industrial project would serve the existing and continuing growth in the southern portion of the City and would not result in any direct increase to the population or households not previously anticipated in the City of Perris. As such, the proposed project would be within the SCAG and Western Riverside Council of Governments (WRCOG) growth projection forecasts and would be consistent with this SCAG policy.

Outcome *Reduce total regional vehicle miles traveled (VMT) to 1990 levels by 2020. (The Land Use and Housing Action Plan can be expected to result in a 10 percent reduction in VMT in 2035 when compared to current trends. VMT serves as a proxy for jobs/housing balance, urban design, transit accessibility, and other urban form issues. VMT per household will decrease with Compass Blueprint implementation.)*

Consistent. As previously identified, the proposed project would comply with all City development policies, standards, and programs pertaining to supporting alternative modes of transportation included in the General Plan Circulation Element. In addition, the proposed project would result in the development of employment opportunities in fairly close proximity to existing residential development. The type of uses proposed and their proximity to each other allow for increased pedestrian and bicycle activity, limiting the need for vehicle travel. Riverside Transit Authority (RTA) Routes 19, 22, 27, 30, 74, and 208 operate in the project area.[2] Route 19 operates primarily along Perris Boulevard, with a bus stop in downtown Perris at 4th Street and Wilkerson Avenue (the nearest bus stop to the proposed project), traveling north into the City of Moreno Valley. This route terminates at the Moreno Valley Mall. Route 22 operates from the City of Lake Elsinore, through the City of Perris, Riverside County, and the City of Riverside. A bus stop is located in the project vicinity at 4th Street and Wilkerson Avenue. This route terminates in downtown Riverside. Route 27 operates from the Riverside County unincorporated community of Valley Vista, west through the City of Hemet, the unincorporated communities of Romoland and Sun City in Riverside County, north through the City of Perris, west through the unincorporated community of Woodcrest Riverside County, and the City of Riverside. A bus stop is located at the intersection of 4th Street and Wilkerson Avenue. This route terminates at the Galleria at Tyler in the City of Riverside. Route 30 operates exclusively in the City of Perris primarily in the downtown area and adjacent areas to the east and north. Two bus stops are located in the project vicinity at the intersection of 4th Street and Wilkerson Avenue and along Perris Boulevard north of Ellis Avenue. Route 74 operates from the City of Perris, south toward the Riverside County unincorporated communities of Sun City and Menifee, east toward the City of Hemet and north into the City of San Jacinto. A bus stop is located in the project vicinity at the intersection of Perris Boulevard and 4th Street. Route 208 operates along Interstate 215 starting in the

1 Inland Empire Profile 2008, Inland Empire Quarterly Report, Vol. 21, No. 1, January 2009, John E. Husing, Ph.D.
2 Route Schedules, Riverside Transit Agency, http://www.riversidetransit.com/bus_info/schedules.htm, website accessed July 14, 2008.

City of Temecula and ending at Downtown Riverside. A bus stop is located in the project vicinity at the intersection of 4th Street and Wilkerson Avenue. Through consultation with the RTA, the project applicant will coordinate and facilitate the use of public transit to access the project site. The provision of additional employment options in proximity to existing residential development would reduce vehicle miles traveled; therefore, the proposed project is consistent with this policy.

Policy LU-6.2 *Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program.*

Consistent. Table 4.1.O of the Air Quality Section summarizes the extent to which the project would comply with the strategies to help California reach the emission reduction targets. Therefore, the proposed project is consistent with this SCAG policy.

Open Space and Habitat Chapter

Policy OSC-8 *Local governments should encourage patterns of urban development and land use, which reduce costs on infrastructure and make better use of existing facilities.*

Consistent. The proposed project will be developed in areas that are presently served by various existing water, sewer, storm drainage, electrical, natural gas, and transportation services. During the construction of the project and as needed throughout the process, necessary utility and roadway improvements will be installed or extended to the project site from adjacent existing facilities. The utility and roadway improvements will facilitate future growth in the surrounding area. The supply of electricity and natural gas is demand-responsive and the project proponent would be required to meet the service requirements of these utility providers. By maximizing the use of existing facilities, the costs of expanding infrastructure would be minimized. Because the proposed project would be located in close proximity to existing industrial, commercial and residential structures requiring a similar type of infrastructure, it is consistent with this growth management policy.

Policy OSC-12 *Developers and local governments should promote water-efficient land use and development.*

Consistent. As identified in Section 4.12 of this EIR, pursuant to Assembly Bill 325 (AB 325), the City of Perris implements landscape and irrigation design standards (Chapter 19.70.020 of the City's Municipal Code), which establishes water conservation requirements for new or rehabilitated landscapes.[1] The proposed project is subject to this ordinance and will be required to implement water-efficient landscaping design (i.e., drought-tolerant landscaping) within the project site. Therefore, the proposed project would be consistent with this SCAG policy.

Water Chapter

Policy WA-11 *Developers and local governments should encourage urban development and land uses to make greater use of existing and upgraded facilities prior to incurring new infrastructure costs.*

Consistent. Existing industrial development is located in the immediate vicinity of the project site where infrastructure for water, sewer, storm drainage, electrical, natural gas, and transportation facilities currently exist. During the construction of the project and as needed throughout the process, necessary utility and roadway improvements will be installed or extended to the project site from adjacent existing facilities. The utility and roadway improvements will facilitate future growth in the surrounding area. The availability of this infrastructure would reduce the cost to public agencies that would provide services to the project area. The proposed project would be developed in an area

[1] *Chapter 19.70.020 City of Perris Municipal Code,* City of Perris, current through Ordinance 1241, passed March 25, 2008.

where such infrastructure is accessible. Furthermore, the project applicant would pay all applicable development fees for the necessary infrastructure and public service improvements, including those associated with water, sewer, drainage, roadways, fire, and police; therefore, the proposed project is consistent with this policy.

Policy WA-12 *Developers and local governments should reduce exterior uses of water in public areas, and should promote reduced use in private homes and businesses by shifting to drought-tolerant native landscape plants (xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.*

Consistent. As identified in earlier in this section, pursuant to Assembly Bill 325 (AB 325), the City of Perris implements landscape and irrigation design standards (Chapter 19.70.020 of the City's Municipal Code), which establishes water conservation requirements for new or rehabilitated landscapes.[1] The proposed project is subject to this ordinance and will be required to implement water-efficient landscaping design (i.e., drought-tolerant landscaping) within the project site. Therefore, the proposed project would be consistent with this SCAG policy.

Energy Chapter

Policy EN-9 *Local governments should include energy analyses in environmental documentation and general plans with the goal of conserving energy through the wise and efficient use of energy. For any identified energy impacts, appropriate mitigation measures should be developed and monitored. The SCAG recommends the use of Appendix F, Energy Conservation, of the California Environmental Quality Act.*

Consistent. An analysis of energy use has been provided in Section 4.3 (Air Quality) of this EIR. The analysis includes strategies that have the goal of conserving energy and efficient energy usage. Therefore, the proposed project is consistent with this policy.

Policy EN-10 *Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. Energy-saving measures that should be explored for new and remodeled buildings include:*

- *Using energy-efficient materials in building design, construction, rehabilitation, and retrofit.*
- *Encouraging new development to exceed Title 24 energy efficiency requirements.*
- *Developing Cool Communities measures including tree planting and light-colored roofs. These measures focus on reducing ambient heat, which reduces energy consumption related to air conditioning and other cooling equipment.*
- *Utilizing efficient commercial/residential space and water heaters. This could include the advertisement of existing and/or development of additional incentives for energy-efficient appliance purchases to reduce excess energy use and save money. Federal tax incentives are provided online at http://www.energystar.gov/index.cfm?c=Products.pr_tax_credits.*
- *Encouraging landscaping that requires no additional irrigation; utilizing native, drought-tolerant plants can reduce water usage up to 60 percent compared to traditional lawns.*

[1] *Chapter 19.70.020 City of Perris Municipal Code,* City of Perris, current through Ordinance 1241, passed March 25, 2008.

- *Encouraging combined heating and cooling (CHC), also known as cogeneration, in all buildings.*
- *Encouraging neighborhood energy systems, which allow communities to generate their own electricity.*
- *Orienting streets and buildings for best solar access.*
- *Encouraging buildings to obtain at least 20 percent of their electric load from renewable energy.*

Consistent. The strategies listed in Section 4.3 of this EIR are considered to be greenhouse gas emission reduction strategies, which include green building measures. These strategies are either part of the project, required mitigation measures, or requirements under local or State ordinances. Since the project would implement these strategies into project design and operation, the project would be consistent with this SCAG policy.

Solid Waste Chapter

Policy SW-14 *Developers and local governments should integrate green building measures into project design and zoning including, but not limited to, those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. Construction reduction measures to be explored for new and remodeled buildings include:*

- *Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities.*
- *An ordinance that requires the inclusion of a waste management plan that promotes maximum C&D diversion.*
- *Source reduction through (1) use of building materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed building materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings).*
- *Reuse of existing building structure and shell in renovation projects.*

Building lifetime waste reduction measures that should be explored for new and remodeled buildings include:

- *Development of indoor recycling program and space;*
- *Design for deconstruction; and*
- *Design for flexibility through use of moveable walls, raised floors, modular furniture, moveable task lighting, and other reusable components.*

Consistent. The strategies listed in Section 4.3 of this EIR are considered to be greenhouse gas emission reduction strategies, which include green building measures. These strategies are either part of the project, required mitigation measures, or requirements under local or State ordinances. With implementation of these strategies/measures, the project would be consistent with this SCAG policy.

Policy SW-19 *Developers and local governments should facilitate the creation of synergistic linkages between community businesses and the development of eco-industrial parks and materials exchange centers where one entity's waste stream becomes another*

entity's raw material by making priority funding available for projects that involve co-location of facilities.

Consistent. The proposed project would be sited near existing EMWD's facilities such as the 300-acre Perris Valley Regional Water Reclamation Facility (PVRWRF). The PVRWRF treats domestic, commercial, and industrial wastewater. The PVRWRF facility located west of I-215 and south of Case Road receives sewage from a 120-square mile area encompassing Perris, Sun City, Homeland, Romoland, and portions of Moreno Valley. Reclaimed water from the PVRWRF is used to irrigate agriculture lands and municipal recreation areas. Since the proposed project will be installing sewer and reclaimed water lines, the operation of the proposed project would facilitate the creation of synergistic relationships between community businesses and public treatment infrastructure. Therefore, the proposed project is consistent with this SCAG policy.

Transportation Chapter

Goal *A more efficient transportation system that reduces and better manages vehicle activity.*

Consistent. The proposed project would result in the development of employment opportunities in close proximity to housing. In addition, the project proposes sidewalks and landscaping treatments to provide for pedestrian access throughout the project site. The type of uses proposed and their proximity to each other allow for increased pedestrian and bicycle activity, limiting the need for vehicle travel. Therefore, this project is consistent with this transportation goal.

Security and Emergency Preparedness Chapter

Goal *Ensure transportation safety, security, and reliability for all people and goods in the region.*

Consistent. The proposed project is consistent with this goal in that the proposed project would be required to adhere to the City of Perris' General Plan. The General Plan contains goals and policies which aim to provide adequate and reliable transportation facilities. The goals and policies identified in the City's General Plan resemble those of the RCP that address mobility, traffic safety, environmental concerns, and land use consistency as the major traffic study factors to identify existing traffic conditions and to assess the future effects on area traffic patterns/flow. Since the proposed project is consistent with the General Plan, the proposed project is consistent with this policy.

Economy Chapter

Goal *Enable business to be profitable and competitive (locally, regionally, nationally, and internationally).*

Consistent. The proposed project would add to the City's portfolio of industrial services. Through the addition of the proposed project, the City would also expand its economic competitiveness with other areas in the region. Therefore, the proposed project is consistent with this policy.

Goal *Promote sustained economic health through diversifying the region's economy, strengthening local self-reliance and expanding competitiveness.*

Consistent. As previously stated, the proposed project would add to the City's portfolio of industrial services, which would enable the City to be more self-reliant through the provision of goods and services to residents within the City. Through the addition of the proposed project, the City would also expand its economic competitiveness with other areas in the region. Therefore, the proposed project is consistent with this policy.

Goal *Ensure a healthy, flourishing economy that provides sufficient employment opportunities to decrease poverty and meet the basic needs of all the people who participate in our economy by promoting education and workforce training policies that give residents an opportunity to compete for the full range of jobs available with good wages and benefits.*

Consistent. The proposed project is a warehousing project which would provide additional employment opportunities in the community. In addition, the proposed project would meet the basic needs of those who participate in the economy through the use of training in the workforce. Therefore, the proposed project is consistent with this policy.

Outcome *Increase job growth to add three million jobs to the regional economy by 2035.*

Consistent. The proposed project would result in additional jobs in the City, which would contribute to job growth in the regional economy. Therefore, the proposed project is consistent with this policy.

Outcome *Increase the region's economic vitality and attractiveness by focusing housing and job additions in urban centers, employment centers, and transportation corridors, such that there will be a minimum of 35 percent of the region's household growth and 32 percent of employment growth in these areas from their levels in 2005 by 2035.*

Consistent. As previously identified, development of the proposed on-site uses would increase the number of jobs in the City by approximately 2,960 positions.[1] The SCAG regional forecasts indicate an increase in employment in the City of Perris from approximately 14,750 jobs in 2005 to 18,045 jobs in 2010. A similar job trend forecast is predicted for western Riverside County from approximately 484,985 jobs in 2005 to 588,523 jobs in 2010.[2] Compared to the broader western Riverside County area, the City is "jobs poor." A city or sub-region with a jobs-to-housing ratio lower than the overall standard would be considered a "jobs poor" area, indicating that many of the residents must commute to places of employment outside the sub-area. Since the proposed project would add jobs to a "jobs poor" region, the proposed project would increase the region's economic vitality and attractiveness by job additions in urban centers and along transportation corridors. Therefore, the proposed project is consistent with this SCAG policy.

Regional Transportation Plan (RTP). The 2008 RTP adopted by the SCAG in May 2008 contains a set of existing socioeconomic projections used as the basis for the SCAG's transportation planning efforts. They include projections of population, housing, and employment at the regional, county, sub-regional, jurisdictional, Census tract, and transportation analysis zone levels. The RTP includes policies and regulations set forth to ensure development within the SCAG regional area is within planned and forecast socioeconomic projections. Goals established within the RTP include the following:

- Maximize mobility and accessibility for all people and goods in the region (discussed in Section 4.11: Traffic and Circulation);
- Ensure travel safety and reliability for all people and goods in the region (discussed in Section 4.11: Traffic and Circulation);
- Preserve and ensure a sustainable regional transportation system (discussed in Section 4.11: Traffic and Circulation);
- Maximize the productivity of our transportation system (discussed in Section 4.11: Traffic and Circulation);

[1] 1 employee per 2,500 square feet, 7,399,291 sf ÷ 2,500 sf = 2,960 employees; Based on *Inland Empire Distribution Center Operations Profile*, WCL Consulting, June 10, 2008. 2,500 square feet per employee is an average of the Inland Empire rates.

[2] Riverside County Projections- 2006 (RCP06) by WRCOG Jurisdiction, Western Riverside Council of Governments, http://www.wrcog.cog.ca.us/downloads/wrcogsubregforecast.pdf, date accessed March 13, 2008.

- Protect the environment, improve air quality, and promote energy efficiency (discussed in Section 4.3: Air Quality);
- Encourage land use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures (discussed in Section 4.11: Traffic and Transportation); and
- Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies (discussed in Section 4.11: Traffic and Transportation).

The proposed project is consistent with the RTP such that the proposed project would be required to adhere to the City of Perris's General Plan. The General Plan contains goals and policies that aim to minimize traffic congestion, provide adequate transportation facilities, and require development to pay its share of costs. The goals and policies identified in the City's General Plan resemble those of the RTP that address mobility, traffic safety, environmental concerns, and land use consistency as the major traffic study factors to identify existing traffic conditions and to assess the future effects on area traffic patterns/flow. Furthermore, the project shall be consistent with the General Plan and, since the General Plan shall be consistent with the RTP, it is reasonable to infer that the project is consistent with policies set forth in the RTP.

Compass Growth Vision. The Compass Growth Vision plan provides a framework for local and regional decision-making regarding growth, transportation, land use, and economic development. The framework includes principles and a specific set of strategies intended to achieve and improve a quality of life that promotes and sustains for future generations the region's mobility, livability, and prosperity. The main objective of the Compass Growth Vision is to manage the forecast growth while improving future living conditions for all people within the SCAG area, including live, work, and play activities. The following discussion includes the principles within the Compass Growth Vision plan and their association to the proposed project.

- ***Principle 1:*** Improve mobility for all residents.
- ***Principle 2:*** Foster livability in all communities.
- ***Principle 3:*** Enable prosperity for all people.
- ***Principle 4:*** Promote sustainability for future generations.

The proposed project is consistent with the four principles identified above. The nature of the proposed project allows the transport of commodities from a single area rather than multiple areas, minimizing vehicle trip generation. The proposed project supports the prosperity for all people by providing employment opportunities close to existing housing within the City of Perris. The proposed project is located in an area that is already developed with urban uses and where existing infrastructure (freeway, sewer, electrical, water, etc.) is accessible. During the construction of the project and as needed throughout the process, necessary utility and roadway improvements will be installed or extended to the project site from adjacent existing facilities. The utility and roadway improvements will facilitate future growth in the surrounding area. The development of the proposed project is consistent with the land use vision for the site and will augment existing services available in the City and region.

Local Plans

City of Perris General Plan. By law, all activities undertaken by a planning agency must be consistent with the goals and policies of the agency's general plan. The *City of Perris General Plan Land Use Element*, as adopted originally in 1991 and as revised through April 2005, plays a central

planning role in correlating all City land use issues, goals, and objectives into one set of development policies. The *Land Use Element* includes a *Land Use Map* and an associated set of land use designations, goals, policies, and guidelines. Currently adopted *Land Use Map* designations for the existing project site have been previously discussed in Sections 4.8.1.1 and 4.8.1.2.

Implementation of the proposed project would result in the development of nine industrial buildings totaling 7,399,291 square feet of industrial uses. However, only buildings within Phases 1 and 2, totaling approximately 4,232,434 square feet, would be consistent with uses permitted in the current General Industrial General Plan land use designation. Because an 8-acre portion of the Phase 3 site is currently designated and zoned for commercial uses, development within the 8-acre commercial portion of Phase 3 would not be consistent with the existing General Plan land use designation or zoning. Therefore, implementation of the proposed project would require a General Plan Amendment to change the proposed project's Phase 3 site from Specific Plan to General Industrial and would require a Zone Change to change the Phase 3 site's zoning designation from Community Commercial to General Industrial. Such an amendment to the General Plan and Zone Change would enable consistency between the proposed project and uses permitted in the General Industrial General Plan land use designation.

Implementation of the proposed project without approval of the General Plan Amendment would result in General Plan land use inconsistencies between existing and proposed land uses in the southern portion of the proposed project site and would result in a significant land use impact. The approval of the General Plan Amendment itself would not have environmental impacts on the project site or surrounding area because the General Plan Amendment is an administrative action that does not involve any physical action on the project site or surrounding area. Because the General Plan Amendment would enable the proposed project to be consistent with the land use designations in the General Plan, impacts related to this issue are considered to be less than significant and no mitigation is required.

The utility and infrastructure improvements of the proposed project would not be in conflict with the City's General Plan. The circulation improvements would be implemented to eliminate project truck traffic on Ethanac Road and 4th Street, accommodate project circulation needs, and provide a circulation benefit to other development. The possible extension of the drill track (terminating within the Orange Empire Railway Museum property adjacent and north of Mapes Road) to accommodate direct rail cargo operations to the site would extend from an existing rail line. Because the extension would occur along the same alignment, it is not anticipated that the extension would conflict with the City's General Plan.

Within Planning Area 8 (where the proposed project sites are located) a consistency determination of the proposed project to the development threshold established for General Industrial uses is based upon the maximum permissible industrial building intensity FAR of 0.75:1.

Phases 1 and 2 propose development of approximately 4,232,434 square feet of general industrial uses. Based on a maximum permissible industrial building intensity of 0.75:1 FAR, Phases 1 and 2 of the proposed project are permitted to develop up to approximately 7,808,130 square feet of General Industrial uses on the proposed 239 acres. The total development envisioned under Phases 1 and 2 of the proposed project is below the additional 7,425,130 square feet (7,808,130 square feet – Year 2002 existing 383,000 square feet) of General Industrial uses permitted to be developed on Phases 1 and 2 within Planning Area 8. As previously described, 8 acres of Phase 3 of the proposed project would require a GPA and Zone Change to change the designation from Specific Plan to General Industrial and zoning from Community Commercial to General Industrial. Phase 3 of the proposed project envisions the development of approximately 3,166,857 square feet of general industrial uses. Upon adoption of the GPA and Zone Change, and based on a maximum permissible industrial building intensity of 0.75:1 FAR, Phase 3 of the proposed project is permitted to develop up to 9,395,892 square feet of General Industrial uses on the proposed 215.7 acres. The total development envisioned under Phase 3 of the proposed project is below the additional 9,012,892 square feet

(9,395,892 square feet – Year 2002 existing 383,000 square feet) of General Industrial uses permitted to be developed on Phase 3 within Planning Area 8. Because the proposed project would be consistent with the uses permitted under the General Industrial designation, and because the level of development is within the development threshold established for General Industrial uses in Planning Area 8, no inconsistency with the General Plan would occur. In the absence of a General Plan inconsistency, no impact would occur; therefore, no mitigation is required.

As previously identified, implementation of the project also includes a Zone Change of a portion of Phase 3 of the site from the existing Specific Plan – Community Commercial to the General Industrial zoning. While a zone change is required for Phase 3 of the project site, such a change would allow the project site to achieve the goal of General Plan/Zoning consistency, allowing the development of industrial uses throughout the site that are consistent with the General Plan. Therefore, no significant impact associated with zoning consistency will occur.

To determine more specifically how the proposed project and its related growth effects relate to adopted General Plan goals and policies, each environmental analysis section of this EIR (Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Hazards, Hydrology/Water Quality, Land Use, Noise, Public Services and Facilities, Transportation, and Utilities and Service Systems) includes a subsection that describes those applicable General Plan policies adopted for the purpose of avoiding or mitigating a pertinent environmental effect. Additionally, Table 4.8.B lists the City of Perris General Plan policies that are applicable to the proposed project and details the project's consistency with each of these policies.

As shown, the proposed project would be consistent with each of the applicable policies of the City's General Plan. Therefore, no impacts associated with this issue would occur and no mitigation is required.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Circulation	
Goal I. A comprehensive transportation system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and address future growth and development in the City.	**Consistent:** The project will include roadway infrastructure improvements that provide a circulation benefit to other development within the project area as well as to accommodate project circulation needs. This concept originated from direction provided by the City to reduce the quantity of project trucks using Ethanac Road and 4th Street and their interchanges with I-215. As a result of discussions between the project applicant and City staff, the proposed project incorporates roadway improvements to eliminate project truck traffic on Ethanac Road and 4th Street. The general locations of the roadway infrastructure improvements are shown in Figure 3.4. In addition to the traffic improvements required to serve the project and vicinity, utilities will be undergrounded as a part of the traffic improvements. Traffic improvements are discussed in detail in Section 4.11.
Policy I.A Design and develop the transportation system to respond to concentrations of population and employment activities, as designated by the Land Use Element and in accordance with the designated Transportation System, Exhibit 4.2 Future Roadway Network.	**Consistent:** The traffic analysis prepared for the proposed project was used to determine the level of improvements that are required to be constructed to maintain the required levels of service and to implement the City's General Plan for the Future Roadway Network. The project includes the improvements recommended by traffic impact analysis as mitigation measures and will construct the General Planned roadways that are project adjacent as required.
Policy I.B Support development of a variety of transportation options for major employment and activity centers including direct access to commuter facilities, primary arterial highways, bikeways, park-n-ride facilities, and pedestrian facilities.	**Consistent**: Roadway improvements included in the project will be constructed according to the standards of the City of Perris. Roadways adjacent to each of the Phases will include sidewalks and bike lanes as required by the General Plan. The project is located near large transportation corridors and Interstate 215 which provide the potential for service to park and ride facilities.
Goal II. A well planned, designed, constructed and maintained street and highway system that facilitates the movement of vehicles and provides safe and convenient access to surrounding developments.	**Consistent:** The proposed project will pay traffic mitigation fees that will fund additional traffic improvements on General Plan roadways in the project area as well as go toward the maintenance of roadway infrastructure in the project area.
Policy II.A Maintain the following target Levels of Service: • LOS D along all City-maintained roads (including intersections) and LOS D along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 freeway ramps.	**Consistent:** The project maintains the City's target level of service by using them as the threshold for determining the significance of traffic impacts and by requiring mitigation measures that will ensure that any impacts are mitigated to a level that is within the stated levels of service.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Policy II.B Maintain the existing transportation network while providing for future expansion and improvement based on travel demand, and the development of alternative travel modes.	**Consistent:** The project maintains the existing roadway network and provides roadway improvements based on the demand determined by the traffic impact analysis prepared for the project.
Goal III. To financially support a transportation system that is adequately maintained.	**Consistent:** Please see the responses for Circulation Goals I and II.
Policy III.A Implement a transportation system that accommodates and is integrated with new and existing development and is consistent with financing capabilities.	**Consistent:** The project incorporates a transportation system that builds upon and improves the existing roadway of the area to support existing development and the proposed project. In addition the project will either fund or construct portions of to the area transportation system beyond the immediate project area that serve will serve future development and be regionally beneficial.
Goal IV. Safe and convenient pedestrian access and non-motorized facilities between residential neighborhoods, parks, open space, and schools that service those neighborhoods.	**Consistent:** The proposed industrial warehouse project will include sidewalks as a part of all roadway improvements constructed adjacent to each phase. These sidewalks will help to complete pedestrian pathways along roadways that currently do not have sidewalks or curb and gutter.
Goal V. Efficient goods movement.	**Consistent:** All three of the project sites are located within 2 miles of I-215 and would have near direct access to I-215, which would allow easy access for in and outbound trucks. The project also provides rail access to the South Perris Distribution Center (Phase 2). The use of this rail spur would remove a significant number of trucks from roadways in the project area and I-215. Additionally, all three of the project sites are located within 8 miles of March Inland Port, which is used primarily for the distribution of goods.
Policy V.A Provide for safe movement of goods along the street and highway system.	**Consistent:** All roadway construction and improvements will be done according to the standards and requirements set forth by the City of Perris and in coordination with the City Engineer to ensure that roadways are safe and efficient.
Goal VI. An efficient and convenient aviation system to accommodate the traveling needs of the people and move selected goods quickly in the highly competitive international marketplace.	**Consistent:** As stated in the response to Circulation Goal III, All phases of the project are located within 8 miles of the March Inland Port (MIP), which allows simple distribution of goods by truck to the MIP to be delivered to an international market.
Goal VII. A transportation system that maintains a high level of environmental quality.	**Consistent:** The project incorporates mitigation measures that will improve the flow of traffic in the project area by limiting delay times at intersections and improving the overall flow of traffic. In addition, the project will incorporate a rail spur to Phase 2. The use of rail service will allow the reduction of truck traffic on local roads in addition to a reduction in emissions associated with truck traffic.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Policy VII.A Implement the Transportation System in a manner consistent with Federal, State, and local environmental quality standards and regulations.	**Consistent:** The EIR has been prepared in accordance with the State CEQA Guidelines. Through the required public review of the EIR, local, state and federal agencies will have the opportunity to comment on the project and its consistency with the applicable standards and regulations. By considering the comments of these agencies in the EIR and throughout the development process, the project will maintain consistency.
Goal VIII. Enhanced traffic flow, reduced travel delay, reduced reliance on single-occupant vehicles, and improved safety along the City and State roadway system.	**Consistent:** The project design incorporates improvements to local roadways based on the projection of future traffic impacts. These improvements as well as the required mitigation measures that will provide funding any necessary improvements to local roadways will ensure that traffic delays are minimized and safety is increased.
Conservation	
Goal I: Agricultural Resources. Orderly conversion of agricultural lands.	**Consistent:** As the City of Perris undergoes its transition into an urban area, conversion of agricultural lands has been identified as a goal of both the current (2005) and past (1991) General Plans. Neither Plan established agricultural land use designations. The Phase 1 and Phase 2 sites of the proposed project are designated "General Industrial" in the City of Perris General Plan and zoned "General Industrial." The Phase 3 site of the proposed project is designated "Specific Plan-Industrial" in the City's General Plan and zoned "General Industrial." The proposed project implements the City General Plan's intent for the orderly conversion of the project sites to non agricultural use.
Goal II: Biological Resources. Preservation of areas with significant biotic communities.	**Consistent:** No significant biological communities are located within the project's disturbance area. The project incorporates mitigation measures that will ensure that any potential impact to biotic communities that may occur during the project's construction and operation would be reduced to a less than significant level.
Policy II.A Comply with state and federal regulations to ensure protection and preservation of significant biological resources.	**Consistent:** During the preparation of the proposed project biological surveys were prepared to determine the presence of protected biological resources or protected habitat areas. Mitigation measures have been provided in the Biological Resources Section of the EIR to ensure that these areas are protected and preserved where necessary.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Goal III: Biological Resources. Implementation of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).	**Consistent:** During the project planning and EIR preparation phases of the project, biological resource surveys were conducted in accordance with the MSHCP and the project's consistency with the MSHCP was reviewed. The project does not propose to alter land use in any way that would adversely affect Cores, Linkages, or Reserve Assembly within the Mead Valley Plan Area. Additionally, with implementation of the stated mitigation measures, the project would further implement and be consistent with applicable MSHCP provisions.
Policy III.A Review all public and private development and construction projects and any other land use plans or activities within the MSHCP area, in accordance with the conservation criteria procedures and mitigation requirements set forth in the MSHCP.	**Consistent:** As part of the preparation of the biological resource surveys for the project an MSHCP consistency analysis was conducted for the project. Copies the MSHCP analysis report were submitted to the City for review and the results of this analysis have been included within the Biological Resources Section of the EIR.
Goal IV: Cultural Resources. Protection of historical, archaeological, and paleontological sites.	**Consistent:** During the preparation and planning of the project, cultural resources surveys were conducted. Mitigation measures as specified in these studies have been incorporated in to the EIR to ensure that any significant historical, archaeological, or paleontological sites are protected.
Policy IV.A Comply with state and federal regulations and ensure preservation of the significant historical, archaeological and paleontological resources.	**Consistent:** Cultural and Paleontological resource surveys were conducted for the proposed project to identify significant resources within the project area. Mitigation measures have been include in the Cultural Resources section of the EIR that ensure that any significant resource would be handled in accordance with local State and Federal regulations.
Goal V: Water Supply. An adequate water supply to support existing and future land uses, anticipated in the Land Use Element.	**Consistent:** As discussed in Section 4.12.5.4, and analyzed in the Water Supply Assessments prepared for the proposed project, adequate water supply exists to supply the project and the future development in the project area.
Policy V.A Coordinate land-planning efforts with local water purveyors.	**Consistent:** A Water Supply Assessment consistent with SB601 was prepared by the local water purveyor (EMWD) for the project to ensure that suitable water supply was available for the proposed project.
Goal VI: Water Quality. Achieve regional water quality objectives and protect the beneficial uses of the region's surface and groundwater.	**Consistent:** As discussed in Section 4.7, a preliminary Water Quality Management Plan (WQMP) has been prepared for the proposed project that includes Best Management Practices (BMPs) to manage post development water quality to protect regional water quality. In addition, the project applicant shall submit to and receive approval from the City of Perris a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall include a surface water control plan and erosion control plan citing specific measures to control on-site and off-site erosion during the entire grading and construction period.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Policy VI.A Comply with requirements of the National Pollutant Discharge Elimination System (NPDES).	**Consistent:** Although adherence to NPDES requirements is required of all development within the City, Mitigation Measures 4.7.6.1A through 4.7.6.1C have been included in the EIR to track both standard requirements and mitigation measures as part of the project's Mitigation Monitoring and Reporting Plan or Program (MMRP). These mitigation measures include requirements for the preparation and filing of a Notice of Intent with the RWQCB; the approval of a SWPPP prior to issuance of grading permits; and the requirement of weekly BMP inspection and maintenance.
Goal VII: Land Forms. Protection of significant landforms.	**Consistent:** There are no significant landforms on the Phase 1 site. The San Jacinto River is located on the eastern side of Phase 2 and Phase 3. Phase 2 will avoid development within the San Jacinto River. Figures 3.3B and 3.3D show the project's avoidance of the River areas. No other significant landforms are present within the project area.
Land Use	
Goal II. New development consistent with infrastructure capacity and municipal services capabilities.	**Consistent:** The project includes the design and the construction of infrastructure that is regionally beneficial. This infrastructure will help to provide more than adequate municipal services to the project, the existing development surrounding the project, and future area development.
Goal III. Commerce and industry to provide jobs for residents at all economic levels.	**Consistent:** The proposed project will provide over 7 million square feet of industrial space and is expected to employ 2,960 people. (1 employee per 2,500 square feet, 7,399,291 square feet ÷ 2,500 square feet = 2,960 employees.)
Goal IV. Consistency among all planning documents.	**Consistent:** Currently, Phase 1 and Phase 2 are designated for Industrial use by both the General Plan and the City's Zoning Code. Phase 3 is currently designated Specific Plan in the City's General Plan and Industrial Commercial in the Zoning Code. The implementation of the project will create consistency among the City planning documents by changing the Phase 3 site's General Plan designation and zoning to Industrial.
Policy IV.A The General Plan and the Zoning Code shall be revised and updated to maintain consistency with each other, and with regional plans.	**Consistent:** Currently the General Plan and Zoning are consistent for Site 1 and Site 2. A Specific Plan Amendment and General Plan Amendment have been filed with the City to change land use from Specific Plan to General Industrial and associated amendments to the New Perris Specific Plan to maintain consistency.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Goal V. Protection from natural or man-made disasters.	**Consistent:** Portions of the Phase 2 and Phase 3 sites are located within the 100-year floodplain. Mitigation measures are incorporated into the project that state that prior to the issuance of grading permits for Phase 2 and Phase 3, the project applicant shall submit to the City supporting evidence of compliance with FEMA CLOMR-F specifications and requirements including the discussion and analysis of fill material placement, elevation changes, and hydro-modification impacts. Compliance with this mitigation measure will ensure that impacts from flooding related impacts are less than significant.
Policy V.A Restrict development in areas at risk of damage due to disasters.	**Consistent:** Portions of the properties to be developed are within the 100 year flood zone. Development within these areas has either been permanently avoided or restricted until improvements can be made as a part of the project that will lift the affected areas out of the flood zone.
Noise	
Goal I: Land Use Siting. Future land uses compatible with projected noise environments.	**Consistent:** The proposed industrial warehouse project will be constructed in a primarily industrial area. Although there are a few scattered residences in the area these areas are designated for industrial or similar uses in the future and are expected to transition over time into this type of use. The project would be built in an environment consistent with what is projected by the General Plan and the existing conditions.
Goal II: Existing Sensitive Receptors. Roadway improvements compatible with existing noise-sensitive land uses.	**Consistent:** Roadway improvements and the traffic associated with project would not have a significant impact on the nearby sensitive receptors.
Policy II.A Appropriate measures shall be taken in the design phase of future roadway widening projects to minimize impacts on existing sensitive noise receptors.	**Consistent:** Sensitive uses within the project area are specifically addresses during the analysis of noise generated by future roadways associates with the proposed project. Where impacts to sensitive uses are anticipated, mitigation measures have been proposed that will be included in the design and construction of the project as appropriate.
Goal III: Train Noise. Future land uses compatible with noise from rail traffic.	**Consistent:** To protect future and existing adjacent development, the project proponent will develop a Quiet Zone along the proposed 11th Street and Mapes Road at-grade crossings.
Policy III.A Mitigate existing and future noise impacts resulting from train movement.	**Consistent:** Phase 2 of the project does include a rail spur that will provide the movement of goods to and from the site. Mitigation measures have been included to ensure that impacts associated with the rail noise remain less than significant.
Goal IV: Air Traffic Noise. Future land uses compatible with noise from air traffic.	**Consistent:** The level of noise that would be experienced at the at all of the project sites due to airport noise would be below the acceptable threshold of noise according to the City Municipal Code and General Plan.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Goal V: Stationary Source Noise. Future non-residential land uses compatible with noise sensitive land uses.	**Consistent:** The proposed project would not result in any significant stationary noise impacts. All potentially significant noise impacts are mitigated to a level that is less than significant.
Policy V.A. New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.	**Consistent:** The proposed project is a large scale industrial warehouse development that may include development within 160 feet of sensitive uses. During the preparation of the EIR for the project a Noise Impact Analysis was prepared to determine the potential for impacts on adjacent uses. In areas where impacts are present, mitigation measures are required that will reduce noise to a level that is considered acceptable or less than significant.
Open Space	
Goal I. Recreational opportunities available to all members of the community.	**Inconsistent:** This goal does not apply to the project. The proposed project provides industrial warehouse uses; there are no residential or recreational components.
Goal II. Establish comprehensive trail system for pedestrian, bicycle and equestrian use.	**Consistent:** The proposed project is not located along a trail system that is indicated on the City of Perris General Plan and the project does not include a trail system. However, the project will improve several roadways to their ultimate width in accordance with the General Plan. In cases where these roads include sidewalks and bike lanes, the project will either construct or contribute funding toward their construction.
Goal III. Conserve and protect significant land forms.	**Consistent:** There are no significant landforms on the Phase 1 site. The San Jacinto River is located on the eastern side of Phase 2 and Phase 3. Phase 2 will avoid development within the San Jacinto River. Figures 3.3B and 3.3D show the project's avoidance of the River areas. No other significant landforms are present within the project area.
Safety	
Goal I. Reduced risk of damage to property or loss of life due to natural or man-made disasters.	**Consistent:** Portions of the Phase 2 and Phase 3 sites are located within the 100-year floodplain. Mitigation measures are incorporated into the project that state that prior to the issuance of grading permits for Phase 2 and Phase 3, the project applicant shall submit to the City supporting evidence of compliance with FEMA CLOMR-F specifications and requirements including the discussion and analysis of fill material placement, elevation changes, and hydro-modification impacts. Compliance with this mitigation measure will ensure that impacts from flooding-related impacts are less than significant.
Policy I.B: Flooding The City of Perris shall restrict future development in areas of high flood hazard until it can be shown that risk is or can be Mitigated.	**Consistent:** Portions of the properties to be developed are within the 100 year flood zone. Development within these areas has either been permanently avoided or restricted until improvements can be made as a part of the project that will lift the affected areas out of the flood zone.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Policy I.D Consult the AICUZ Land Use Compatibility Guidelines and ALUP Airport Influence Area development restrictions when considering development project applications.	**Consistent:** The City has required that the project applicant submit plans to the Airport Land Use Committee for review to ensure that the project is consistent with the Airport Influence Area associated with the two nearby airports. No restrictions have been placed on the project as a result of this review.
Goal II. Improved response times for emergency service providers (police, fire, medical services).	**Consistent:** The development of the proposed industrial uses would not cause fire staffing, facilities, or equipment to operate at a deficient level of service. Additionally, because the proposed project would be required to pay development impact fees to fund future fire facilities and services, impacts associated with fire protection services and facilities are less than significant.
Policy II.A The City shall require roadway improvements to expedite quick and safe travel by emergency responders	**Consistent:** All roadway improvements will be constructed in accordance with City standards. This will ensure that access is provided that is suitable for the quick and safe travel for emergency responders.
Policy II.B Provide adequate emergency facilities to serve existing and future residents.	**Consistent:** The proposed project will be conditioned to pay its fair share of development impact fees toward the development of emergency facilities.
Goal III. A citizenry that is well-informed about disaster preparedness and response.	**Inconsistent:** The stated goal does not apply to the proposed project.
Sustainability	
Goal I. Create a vision for energy and resource conservation and the use of green building design of the City, which provides for protection of the environment, improving quality of life, and promoting sustainability.	**Consistent:** The project applicant has included design features that are consistent with the achievement of an LEED Silver rating. The project applicant will pursue LEED certification (including the completion of necessary applications through the United States Green Building Council [USGBCO] and payment of pertinent application and processing fees) in an effort to obtain an LEED Silver rating. The applicant has also contracted with an LEED Accredited Professional to oversee efforts to obtain certification.
Policy I.A Adopt and maintain development regulations that encourage water and resource conservation.	**Consistent:** As a part of the projects design features included to achieve LEED certification, the following water resource conservation measures are included in the project. Limiting disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, and managing stormwater runoff; Reducing the potable water consumption for irrigation by 50 percent; and Maximizing water efficiency within the project resulting in a 30 percent reduction of water use, excluding irrigation, than the baseline after meeting Energy Policy Act of 1992 guidelines for fixture performance.

Table 4.8.B: General Plan Goal Consistency

General Plan Goal	Consistency Analysis
Policy I.B Adopt and maintain development regulations that encourage recycling and reduced waste generation by construction projects.	**Consistent:** As a part of the projects design features included to achieve LEED certification, the following waste reduction and recycling measures are included in the project. Using recycle content building material with at least 20 percent of total value of materials in the project; and Recycling and/or salvaging 75 percent of non-hazardous construction and demolition waste, and developing and implementing a construction waste management plan.
Policy I.C Adopt and maintain development regulations which encourage increased energy efficiency in buildings, and the design of durable buildings that are efficient and economical to own and operate. Encourage green building development by establishing density bonuses, expedited permitting, and possible tax deduction incentives to be made available for developers who meet LEED building standards for new and refurbished developments (U.S. Green Building Council's Leadership in Energy and Environmental Design green building programs).	**Consistent:** The project applicant has included design features which are consistent with the achievement of a LEED Silver rating. The project applicant will pursue LEED certification (including the completion of necessary applications through the United States Green Building Council (USGBCO) and payment of pertinent application and processing fees) in an effort to obtain a LEED Silver rating. The applicant has also contracted with a LEED Accredited Professional to oversee efforts to obtain certification.
Goal II. Encourage project designs that support the use of alternative transportation facilities.	**Consistent:** The proposed Phase 2 industrial warehouse facilities will feature rail access that will allow the movement of goods from the warehouse by train to locations around the country. The use of rail service by the project eliminates a significant number of truck trips and pollution associated with the transport of goods by truck.
Goal III. Encourage improved energy performance standards above and beyond the California Title 24 requirements.	**Consistent:** The proposed project incorporates improved energy efficiency into its design that will allow it to exceed title 24 requirements by at least 30 percent.
Goal IV. The City shall lead the development community by example in green building, and energy and resource conservation practices.	**Consistent:** The project implements the City General Plan and incorporates the environmental goals of the City. By developing LEED Silver industrial warehouse facilities the project contributes to the City's goal of being a leader and providing an example of sustainable development.

City of Perris Municipal Code. Implementation of the proposed project would require a Zone Change, which would result in a change of the existing Specific Plan – Community Commercial zoning designation to General Industrial (GI) for the 8-acre portion of the 215.7–acre Phase 3 site. The purpose of the GI zoning designation is to provide for the development of general industrial uses which may support a wide range of manufacturing and non-manufacturing uses, from warehousing and distribution facilities to industrial activities.

The project proposes the development of warehouse uses and would result in an inconsistency with the existing commercial zoning on the 8-acre portion of the Phase 3 site. However, the approval of the Zone Change itself would not have environmental impacts on the project site or surrounding area as the zone change deals with zoning requirements and not the physical construction/operation of the project site. With implementation of the Zone Change, the proposed project would be consistent with zoning requirements identified by the City.

Santa Ana Water Quality Control Plan (Basin Plan). The Santa Ana Basin Plan, which is implemented by the Santa Ana Regional Water Quality Control Board (SARWQCB), specifically (1) designates beneficial uses for surface and ground waters, (2) sets qualitative and quantitative objectives that must be attained and maintained at that level in order to protect the designated beneficial uses and conform to the State's anti-degradation policy, and (3) describes implementation policies and programs to protect all waters in the region. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria are used to establish a standard. Stormwater runoff from the proposed South Perris Industrial project will eventually make its way to the San Jacinto River. Because the proposed project is required to comply with all applicable water quality standards and requirements established by the SARWQCB, and is therefore in compliance with the NPDES permitting system, the proposed project would be consistent with the Basin Plan.

Riverside County Drainage Area Management Plan (DAMP). Like the Basin Plan, the Drainage Area Management Plan deals primarily with the Santa Ana Region. The DAMP describes a wide range of continuing and enhanced Best Management Practices (BMPs) and control techniques for development projects within a municipality and are being implemented during the five-year terms of the third-term MS4 permits. In essence, the DAMP describes the overall Urban Runoff management strategies planned by the Permittees in the Santa Ana Region. The proposed project is required to comply with all applicable drainage standards and requirements designed to protect water resources and enhance water quality and would therefore, be consistent with the DAMP.

Eastern Municipal Water District Urban Water Management Plan (EMWD UWMP). The UWMP is required of every urban water supplier in order to be in compliance with the Urban Water Management Plan Act. The UWMP includes assessment of current and project water supplies, evaluation of water demand, customer types, and reliability of water supplies, description of conservation measures, a response plan for water shortage, and a comparison of demand and supply projections. The proposed project is required to comply with all applicable standards and requirements designed to conserve water supplies and insure water source reliability for future years prior to the approval of the project. As such, the proposed project would be consistent with the EMWD UWMP.

March Air Reserve Base Airport Land Use Compatibility Plan. The March Air Reserve Base (MARB) is located in the County of Riverside, north of the City of Perris. The Phase 1, Phase 2, and Phase 3 project sites are located approximately 8 miles south, 7 miles south, and 6.5 miles southeast of March Air Field, respectively. The March Air Field is a joint-use airport, used both for military and

civilian purposes. March Inland Port (MIP)[1] is the civilian portion of the airport. As illustrated in Figure 4.8.2, the eastern portion of the Phase 3 site is located within the Airport Influence Area III of MIP.[2] The uses proposed under the proposed project are consistent with the permitted uses within the March Air Reserve Base Airport Installation Compatibility Use Zone (AICUZ) document.[3] Therefore, the proposed project is consistent with the March Air Reserve Base Airport Land Use Compatibility Plan. As previously described, the proposed project includes a General Plan Amendment and will be reviewed by the Riverside County ALUC.

Draft 2009 Perris Valley Airport Land Use Compatibility Plan. As indicated in Section 4.6 Hazards, the nearest private airport to the project sites is the Perris Valley Airport, located at 2091 Goetz Road and is approximately 0.25 mile east, 0.38 mile east, and 0.25 mile southwest from the Phase 1, Phase 2, and Phase 3 sites, respectively. Perris Valley Airport is on private property and is open to the public. The Draft 2009 Perris Valley Airport Land Use Compatibility Plan is a draft document. It is not a final or an approved document and therefore should not be relied upon as such changes to the document may not apply to the project. However, in the event that the Draft 2009 Perris Valley Airport Land Use Compatibility Plan is approved, the proposed project would be consistent with it.

More specifically, the Phase 1 site is located within Airport Compatibility Zone D of the Draft 2009 Perris Valley Airport Land Use Compatibility Plan.[4] Countywide policy criteria for Zone D allows for an average intensity of 100 persons per acre and a maximum intensity of 300 persons within any single acre. As identified in the ALUC Staff Report, using the Building Code Method, it is anticipated that the proposed development for Phase 1 would have an average intensity of approximately 25.1 persons per average acre and a maximum intensity of 169 people per single acre. Therefore, the proposed development on Phase 1 would not exceed the allowable intensity for Airport Compatibility Zone D.[5]

Airport Compatibility Zone D also requires that 10 percent of land area within projects ten acres or larger in size be set aside as open land that could potentially serve as emergency landing areas. This criterion would require 3.85 acres of open land on this site. As currently designed, Phase 1 has approximately 2 acres designated for retention basins. In addition, the project will have a trailer parking area of approximately 2 acres on the northern boundary. These two areas combined would meet the open land requirement. However, the trailer parking areas would be occupied by vehicles much of the time.

Of the Phase 3 site, approximately 32.51 acres are within Airport Compatibility Zone D and 116.33 acres would be within Airport Compatibility Zone E. As previously stated, of the two airport compatibility zones, Zone D is the more restrictive. As currently proposed, Countywide policy criteria for Zone D allows for an average intensity of 100 persons per acre and a maximum intensity of 300 person within any single acre. It is anticipated that Phase 3 would potentially accommodate 16.1 persons per average acre and up to 167 people in any given single acre. This would meet the Countywide basic compatibility criteria for Zones D and E and would therefore be consistent with the Draft Plan. Based on the preliminary ALUC review, the project is consistent with the Draft Perris Valley Airport Land Use Compatibility Plan.

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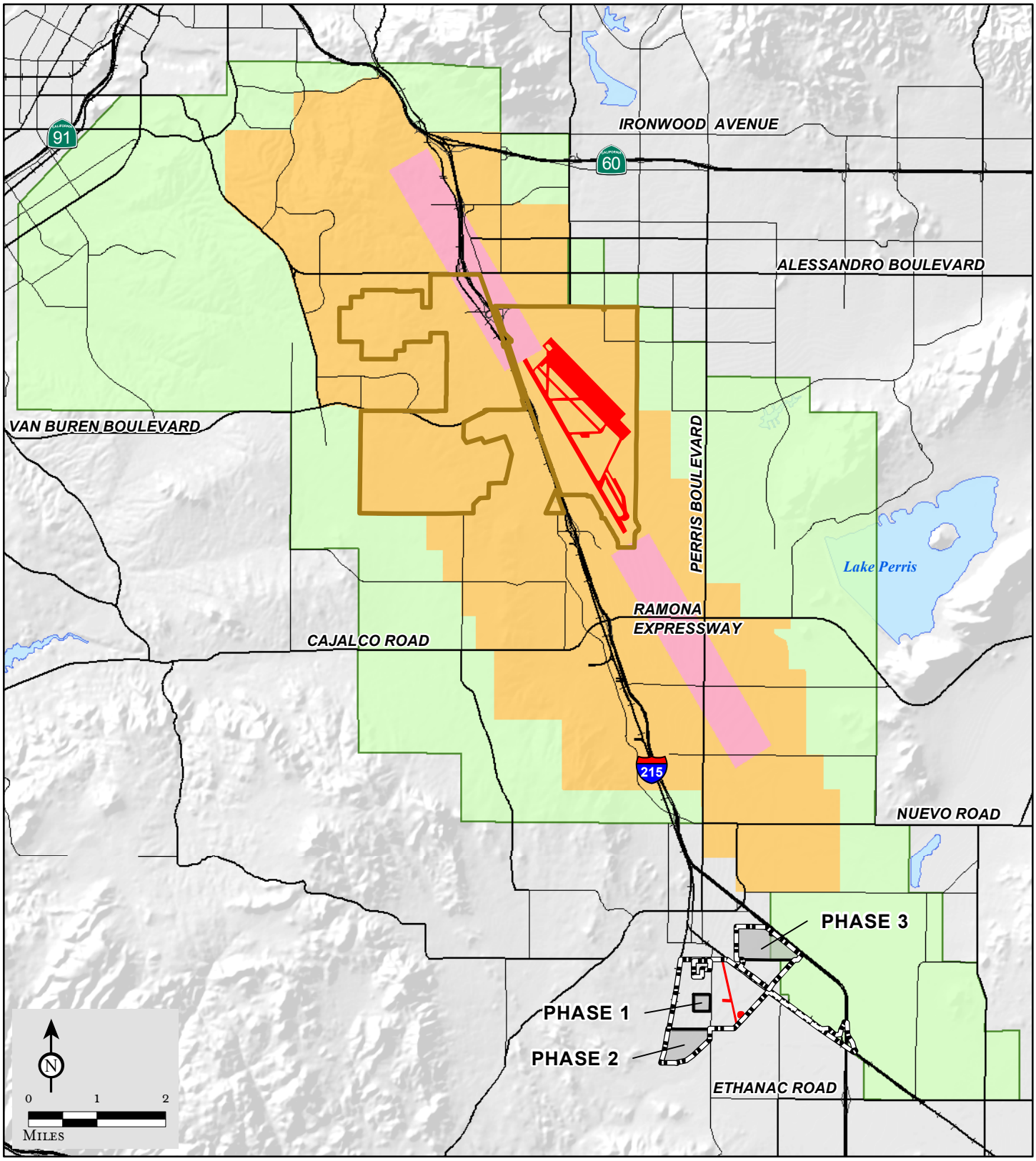
1 March Inland Port was previously called March Air Reserve Base

2 *March Air Reserve Base (MARB) Old Compatibility Plan.* Web site http://www.rcaluc.org/filemanager/plan/old//March%20Air%20Reserve%20Base%20(MARB).pdf date accessed February 20, 2008.

3 *Case Number ZAP1056MA09 – First Industrial Realty Trust/FirstCal Industrial LLC/FR.Cal.Ellis,* County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.

4 *Case Number ZAP1002PV09 – First Industrial Realty Trust/FirstCal Industrial LLC/Fr. Cal. Ellis*, County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.

5 *Case Number ZAP1002PV09 – First Industrial Realty Trust/FirstCal Industrial LLC/Fr. Cal. Ellis*, County of Riverside Airport Land Use Commission Staff Report, May 14, 2009.



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PROJECT AREA
PROJECT SITES
RUNWAY
MARCH AIR RESERVE BASE INFLUENCE AREAS
AREA 1
AREA 2
AREA 3

FIGURE 4.8.2

South Perris Industrial Environmental Impact Report

March Air Reserve Base Influence Areas

SOURCE: USGS DEM; Thomas Bros, 2008; County of Riverside

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Other Local Plans. In addition to the City of Perris General Plan, other adopted local plans control land use and protect the environment in the proposed expanded project area, including the City of Perris Zoning Code. Pursuant to California Government Code Section 65454, each of these specific plans by law must be consistent with the City's General Plan. In turn, as previously indicated, all activities undertaken by a planning agency must be consistent with the General Plan. Therefore, these plans in combination with the City's General Plan, would govern all development actions set forth in or facilitated by the proposed project's construction.

4.8.5.3 Conflict with Any Applicable Habitat or Natural Community Conservation Plan

Threshold	Would the proposed project conflict with any applicable habitat conservation plan or natural community conservation plan?

Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The project site is located within the MSHCP area, Mead Valley Plan Area.[1] The MSHCP is a comprehensive, multi-jurisdictional effort that includes Riverside County and fourteen cities to provide a regional approach to conservation planning. Small portions of the project sites are within MSHCP Criteria Cells 3173, 3276, 3470, 3378, and 3277. The project sites are not within any MSHCP defined habitat linkages.[2] Furthermore, the project sites are not located within an MSHCP mammal or amphibian survey area, or a riparian, wetland, or vernal pool habitat/species survey area.[3]

Because the project sites are partially within MSHCP criteria cells and are considered to be covered activities, the project is subject to provisions of the MSHCP. In particular, the project proponent will be required to provide payment of mitigation fees and adhere to the Best Management Practices found in Appendix C of the MSHCP. Pursuant to agreements with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), the payment of the mitigation fees and compliance provisions of the MSHCP provides full mitigation under the California Environmental Quality Act (CEQA), the Federal Endangered Species Act (FESA), and the California Endangered Species Act (CESA) for impacts to the species and habitats covered by the MSHCP. Since the City has adopted the MSHCP and its requirements and provisions, and since the project is within Perris, the proposed project would be required to adhere to applicable MSHCP requirements and fees. Therefore, the proposed project would not conflict with any applicable habitat conservation plan and no significant impact associated with this issue would occur. No mitigation would be required.

4.8.6 Significant Impacts

No significant land use and planning impacts were identified for the proposed project and therefore no mitigation is required.

4.8.7 Cumulative Impacts

As discussed in this section, the proposed project would not result in a significant impact on land use and planning. While implementation of the proposed project represents establishment of new land uses within the currently undeveloped project site for Phases 2 and 3, the character and overall intensity of the proposed development is consistent with and comparable to existing land uses within the City and in the project vicinity. Furthermore, as indicated by the land use consistency analysis, the proposed project would not conflict with any plan, policy, or regulation adopted for the purpose of

[1] *Western Riverside County Multiple Species Habitat Conservation Plan Compliance Report, Proposed South Perris Industrial, Perris, California*, URS Corporation, October 14, 2008.
[2] http://www.rctlma.org/gis/rciprepgen.html, site accessed December 4, 2007.
[3] http://www.rctlma.org/gis/rciprepgen.html, site accessed December 4, 2007.

avoiding or mitigating an environmental effect. Because each cumulative project would be required to identify and mitigate any inconsistencies among the various land use plans, it can be anticipated that, on a cumulative level, these cumulative projects would have a less than significant impact. Additionally, the extension of roadway infrastructure and utilities to this area will facilitate anticipated growth in the area. Therefore, there are no other developments in the project vicinity that would in combination with the proposed project create a cumulative impact by dividing an established community, conflicting with applicable land use plans, policies, or regulations, or conflicting with an approved habitat conservation plan.

4.9 NOISE

This analysis is intended to satisfy the City's requirements for a project-specific noise impact analysis by examining the short-term and long-term noise impacts of the proposed project on sensitive uses adjacent to the proposed project site and by evaluating the effectiveness of mitigation measures incorporated as part of the project design. This includes the potential for the proposed project to result in impacts associated with a substantial temporary and/or permanent increase in ambient noise levels in the vicinity of the project area; exposure of people to excessive noise levels, groundborne vibration, or groundborne noise levels. The analysis contained in this section is based on the following technical studies prepared for the proposed project:

- *Acoustical Impact Analysis,* URS Corporation, May 26, 2009 (Appendix I of this EIR).
- *Traffic Impact Analysis, South Perris Industrial Distribution Center,* Urban Crossroads, April 17, 2009 (Appendix J of this EIR).

In addition to these project specific technical studies, the analysis contained in this section is also based on the following reference documents:

- *Airport Influence Area Map,* Riverside County Airports – March Air Reserve Base, County of Riverside, December 29, 2004.
- *California Noise Insulation Standards,* California Code of Regulations, Title 24, Part 2, §3501.
- *Chapter 16.22 Construction Located Near Arterials, Railroads, and Airports,* City of Perris Municipal Code, current through Ordinance 1251, passed September 30, 2008.
- *Highway Traffic Noise Prediction Model (FHWA-RD-77-108)*, Federal Highway Administration (FHWA).
- *Noise Element*, City of Perris General Plan, City of Perris, August 30, 2005.
- *Railroad-Highway Grade Crossing Handbook,* U.S. Department of Transportation, Federal Highway Administration, 2nd edition, August 2007.
- *Safety Element*, City of Perris General Plan, City of Perris, October 25, 2005.
- *Section 7.34.060 Noise Control*, City of Perris Municipal Code, current through Ordinance 1251, passed September 30, 2008.
- *State of California General Plan Guidelines*, Governor's Office of Planning and Research, October 2003, pages 249 and 250.
- *State of California Vehicular Code,* § 23130, § 23130.5, § 27150, and § 38275.
- *Transit Noise and Vibration Impact Assessment Manual (FTA-VA-90-1003-06)*, Federal Transit Administration (FTA), May 2006.

4.9.1 Existing Setting

4.9.1.1 Background

Characteristics of Sound. Noise is usually defined as unwanted sound; it consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect our ability to hear. The analysis of a project's noise impact defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound. There are many ways to rate sound for various time periods. An appropriate rating of ambient noise[1] affecting humans accounts for the annoying effects of sound by penalizing noises that occur during quiet periods of time, such as late night/early morning, through weighted averaging metric. Single-event or peak noises are measured by a simple peak noise measurement. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a five dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same. Table 4.9.A defines noise measurements that are typically used in noise analyses.

Table 4.9.A: Noise Measurement Definitions

Unit of Measurement		Description
dB	Decibel	Units for measuring the volume of sound, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. For example, 10 decibels are 10 times more intense than one decibel and 20 decibels are 100 times more intense. A 10-decibel increase in sound level is perceived by the human ear as a doubling of the loudness of the sound.
dBA	A-Weighted Decibel	A sound pressure level that has been weighted to quantitatively reduce the effect of the high and low frequency noise. It was designed to approximate the response of the human ear to sound.
CNEL	Community Noise Equivalent Level	The CNEL value represents noise as measured by an A-weighted sound level. The metric includes a 4.8-decibel penalty during relaxation hours (7 p.m. to 10 p.m.) and a 10-decibel penalty for sleeping hours (10 p.m. to 7 a.m.). CNEL is similar to L_{dn} (which does not include the evening penalty).
L_{dn}	Day-Night Average Noise	The 24-hour average sound level, expressed in a single decibel rating, for the period from midnight to midnight obtained after the addition of a 10.0-decibel penalty to sound levels for the periods between 10 p.m. and 7 a.m.
L_{eq}	Equivalent Noise Level	Total sound energy of time-varying noise over a sample period.
L_{01}, L_{10}, L_{25}, L_{50}, L_{90}	Percentile Noise Exceedance Levels	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1 percent, 10 percent, 25 percent, 50 percent, and 90 percent of a stated time period.
L_{max}	Maximum Noise Level	L_{max} is the highest exponential time-averaged sound level that occurs during a stated time period. It reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

[1] Ambient noise is the totality of noise in a given place and time; usually a composite of sounds from varying sources at varying distances. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Definition of Noise. Increases in noise can be described in three categories:

- Audible (3.0 dB or greater);
- Potentially audible (between 1.0 and 3.0 dB); and
- Inaudible (less than 1.0 dB).

Audible noises are increases in noise levels noticeable to humans and generally refer to a change of 3.0 dB or greater, because this level has been found to be barely perceptible in exterior environments. Potentially audible refers to a change in the noise level between 1.0 and 3.0 dB, which is noticeable only in laboratory environments. Changes in noise levels of less than 1.0 dB are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant. Therefore, a 3.0 dBA increase in long-term noise levels above existing ambient noise levels is used as a threshold of significant change in this noise analysis.

Fundamentals of Groundborne Vibration. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernable. However, without the effects associated with the shaking of a building, there is less adverse reaction. Building vibration may be perceived by the occupants as motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. Building damage is not a factor for normal projects, with the occasional exception of blasting and pile driving during construction or mining. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by up to 10 decibels. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to within about 100 feet of the vibration source, although there are examples of groundborne vibration causing interference out to distances greater than 200 feet, as described in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment (FTA, May 2006). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible.

Factors that influence groundborne vibration and noise include the following:

- Vibration Source: vehicle suspension, wheel types and condition, track/roadway surface, track support system, speed, transit structure, and depth of vibration source.
- Vibration Path: soil type, rock layers, soil layering, depth to water table, and frost depth.
- Vibration Receiver: foundation type, building construction, and acoustical absorption.

Among the factors listed above, there are significant differences in the vibration characteristics when the source is underground versus at ground surface. In addition, soil conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Vibration propagation is more efficient in stiff clay soils than in loose sandy soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in groundborne vibration problems at a great distance from the track. Factors such as layering of the soil and depth to water table can have significant effects on the propagation of groundborne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils.

4.9.1.2 Sensitive Land Uses in the Project Vicinity

Certain land uses are considered more sensitive to noise than others. Examples include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The following provides a description of the sensitive land uses for each project phase.

Phase 1. As illustrated in Figure 4.9.1, there are two sensitive receptors within the vicinity of the Phase 1 site. The first sensitive receptor is an existing single-family residence located at 2081 Goetz Road, east of the Phase 1 site. This residence is located approximately 100 feet east of the Phase 1 site boundaries, 250 feet east of the Phase 1 site screening walls, and is on the opposite site of Goetz Road.

The second sensitive receptor is an existing single-family residence located at 2314 Goetz Road, south of the Phase 1 site. The existing residence is located approximately 650 feet south of the proposed screen wall to be located along the south side of the truck and trailer parking area and is 725 feet from Phase 1 site boundaries.

Phase 2. As identified in Figure 4.9.1, there are multiple sensitive receptors within the vicinity of the Phase 2 site. There are two groups of residential dwellings (Group A and Group B) located to the north of the project site across from, and adjacent to, Mapes Road. Group A consists of three trailers which are located on lots adjacent to 170 Mapes Road. These trailers are approximately 120 feet north of the northernmost Phase 2 site boundary, 350 feet from the nearest truck dock, and are part of a 30-unit mobile home park.

Group B consists of two single-family residences located along Mapes Road. The first of these residences is located at 310 Mapes Road, approximately 80 feet from the Phase 2 site boundary and approximately 345 feet from the truck court. The second residence is located at 280 Mapes Road, approximately 90 feet north of the Phase 2 site boundary and approximately 355 feet from the truck court. These two homes will be exposed to on-site noise levels from truck activities which will occur between Buildings 1 and 3.

There are additional sensitive receptors that would be potentially affected by the addition of the rail service for the Phase 2 site. These sensitive receptors are currently located along the existing rail right-of-way between Nuevo Road to the north and Mapes Road to the south and are identified in Table 4.9.B and illustrated in Figure 4.9.1.

Phase 3. As identified in Figure 4.9.1, there are two sensitive receptors in the vicinity of the Phase 3 site. A single-family residence located at 340 Ellis Avenue is approximately 140 feet west of the Phase 3 site boundary and 430 feet west of the truck dock. In addition, The Academy community day school is located along Ellis Avenue approximately 100 feet west of the Phase 3 boundary and 300 feet west of the truck dock.

Existing Noise Environment. Table 4.9.C identifies the existing (2008) traffic noise levels adjacent to roadway segments in the project vicinity. Traffic on Interstate 215 and Goetz Road is the major source contributing to area ambient noise levels. Occasional aircraft overflight noise from the March Inland Port and natural sounds such as wind and birds also contribute to the ambient noise in the project vicinity. The project site is also subject to noise generated by activities at the Perris Valley Airport and Skydiving Center.

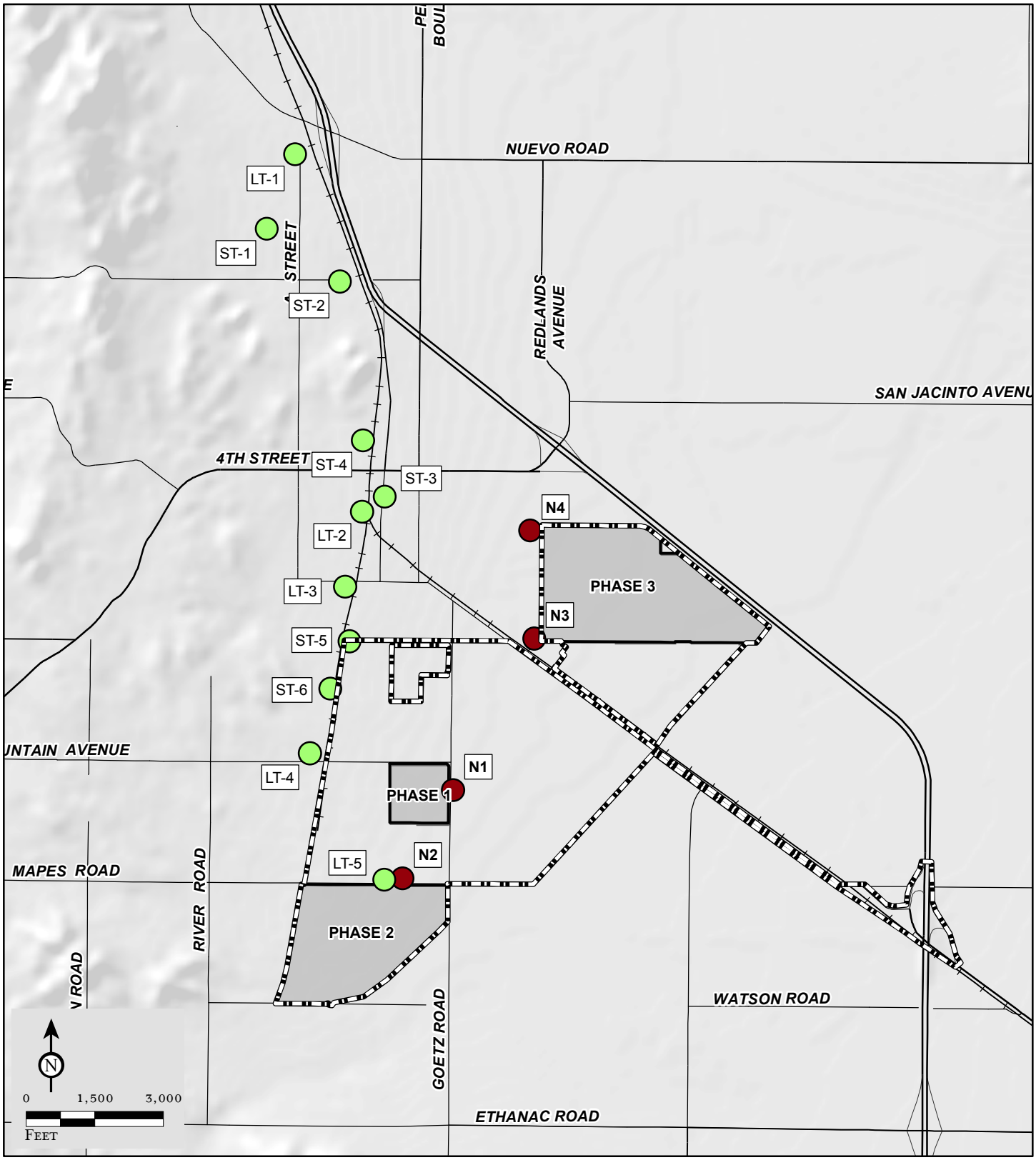

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FIGURE 4.9.1

PROJECT AREA
PROJECT SITES
SENSITIVE LAND USES
NOISE SENSITIVE RECEPTOR

South Perris Industrial
Environmental Impact Report

Noise Sensitive Receptors

SOURCE: USGS DEM; Thomas Bros, 2007

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Table 4.9.B: Noise-sensitive Receptors Monitoring Sites and Noise Levels

ID	Monitoring Address	Measured Noise Level (dBA)	
		Leq[1]	CNEL[2]
LT-1	24480 Nuevo Road	54.1	67.0
LT-2	619 "C" Street	43.6	62.7
LT-3	1127 Palisades Street	43.8	58.4
LT-4	1975 Teak Street	42.3	59.7
LT-5	310 Mapes Road	49.9	65.4
LT-6	2081Goetz Road	50.3	63.5
LT-7	325 Ellis Avenue	51.9	65.0
ST-1	"A" Street and Serrana Road	57.3	67.7
ST-2	East end of Mertz Road at Metz Park	52.0	60.9
ST-3	549 "D" Street and I-215 Freeway On-ramp	61.3	69.3
ST-4	214 "C" Street	60.0	68.3
ST-5	Ellis Street east of BNSF Railroad Tracks	44.9	52.5
ST-6	301 Red Spruce Place	42.2	52.8
ST-7	170 Mapes Road	58.9	68.5
ST-8	3314 Goetz Road	59.4	67.0

[1] Equivalent Noise Level is the quietest hour during the hours of greatest noise sensitivity (10 p.m. to 7 a.m.).
[2] Community Noise Equivalent Level. The CNEL value represents noise as measured by an A-weighted sound level. The metric includes a 4.8-decibel penalty during relaxation hours (7 p.m. to 10 p.m.) and a 10-decibel penalty for sleeping hours (10 p.m. to 7 a.m.). Calculated from hourly or periodic L_{eq} levels.
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

Table 4.9.C: Existing (2008) Traffic Noise Levels 50 Feet From Centerline

Roadway Segment	ADT	dB CNEL
4th Street		
West of "D" Street	19,300	69.5
"D" Street to Perris Boulevard	19,300	69.5
Perris Boulevard to Redlands Avenue	18,500	69.3
West of Redlands Avenue	5,800	64.3
East of Redlands Avenue	8,100	65.8
11th Street		
West of Perris Boulevard	7,200	65.2
Case Road		
Perris Boulevard to Goetz Road	8,900	66.2
Goetz Road to Ellis Avenue	7,400	65.4
Ellis Avenue to Murrieta Road	6,500	64.8
Murrieta Road to Bonnie Drive	4,700	63.4
East of Bonnie Drive	1,500	58.4
Ellis Avenue		
West of Goetz Road	1,200	58.6
Goetz Road to Case Road	0	0.0
Case Road to Redlands Avenue	2,600	62.0
East of Redlands Avenue	0	0.0

Table 4.9.C: Existing (2008) Traffic Noise Levels 50 Feet From Centerline

Roadway Segment	ADT	dB CNEL
Mountain Avenue		
West of Goetz Road	100	46.7
Mapes Road		
West of "A" Street	600	54.4
"A" Street to Goetz Road	2,500	60.6
East of Goetz Road	2,500	60.6
Watson Road		
West of "A" Street	200	49.7
East of "A" Street	0	0.0
Ethanac Road		
West of Goetz Road	700	55.1
Goetz Road to Murrieta Road	7,600	65.5
Murrieta Road to I-215	10,100	66.7
East of I-215	10,300	66.8
Bonnie Drive		
South of Case Road	300	51.4
North of Case Road	4,600	63.3
Under I-215	18,300	69.3
Perris Boulevard		
North of 4th Street	11,400	67.2
4th Street to 11th Street	9,300	66.4
South of 11th Street	2,000	59.7
Redlands Avenue		
North of I-215	12,900	66.5
I-215 to 4th Street	15,400	67.3
North of 4th Street	7,400	64.1
4th Street to 7th Street	6,800	63.7
7th Street to Ellis Street	3,200	60.4
"A" Street		
North of Mapes Street	2,300	60.3
Mapes Street to Watson Avenue	200	49.7
Goetz Road		
Case Road to Ellis Avenue	5,700	64.2
Ellis Avenue to Mountain Avenue	6,400	64.7
Mountain Avenue to Artlo Avenue	5,400	64.0
Artlo Avenue to Mapes Road	5,400	64.0
Mapes Road to San Jacinto River	7,300	65.3
San Jacinto River to Ethanac Road	7,300	65.3
South of Ethanac Road	7,300	65.3
Murrieta Road		
South of Case Road	2,100	59.9
North of Ethanac Road	2,600	60.8
South of Ethanac Road	7,300	65.3

Table 4.9.C: Existing (2008) Traffic Noise Levels 50 Feet From Centerline

Roadway Segment	ADT	dB CNEL
I-215 Freeway		
North of Redlands Avenue	88,100	80.3
South Off-Ramp to 4th Street	3,800	66.6
North On-Ramp to I-215	2,900	65.5
North Off-Ramp to Redlands Avenue	6,400	68.9
South of Redlands Avenue	95,900	80.7
South Off-Ramp to Bonnie Drive	11,100	71.3
South of BNSF Railroad	82,000	80.0
South Off-Ramp to Ethanac Road	3,900	66.8
South On-Ramp to I-215	4,800	67.7
South of Ethanac Road	84,000	80.1
SR-74		
East of I-215	25,000	70.6

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

4.9.2 Existing Policies and Regulations

The applicable noise standards governing the project site are the criteria in the City of Perris General Plan Noise Element and Municipal Code (Noise Ordinance). Standards identified in the *California Noise Insulation Standards*[1] and the *State of California Vehicular Code*[2] are included below. The following sections list the General Plan policies and State standards relevant to noise for the proposed project.

4.9.2.1 City of Perris Municipal Code

Section 7.34.060 of the City of Perris Municipal Code limits the hours of construction to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. No construction activities are permitted outside of these hours and on Sundays and legal holidays, except for Columbus Day and Washington's Birthday. Construction activity shall not exceed 80 dBA L_{max} in residential zones in the City.

City of Perris Noise Element. Noise from transportation-related sources is addressed in the Noise Element of the City of Perris General Plan. The Noise Element makes reference to the State of California Title 24 exterior and interior noise guidelines and standards with respect to noise-sensitive land uses. The standards state that attached residential land uses located within the 60 dB CNEL contour adjacent to roads, railroads, rapid transit lines, airports or industrial areas shall require an acoustical analysis showing that these multi-family units have been designed to limit interior noise levels with doors and windows closed to 45 CNEL in any habitable room. Title 21 of the California Code of Regulations (Subchapter 6, Article 2, Section 5014) also specifies that acoustical analyses shall be required for all new residential structures located near airports, where noise levels exceed 60 dB CNEL, showing that the proposed design will achieve noise levels in all habitable rooms of not more than 45 dB CNEL. Perris enforces the provisions of the State Noise Insulation Standards (Title 24) which specifies that the combined indoor noise exposure level for multi-family living spaces shall

[1] California Code of Regulations, Title 24, Part 2, §3501, *California Noise Insulation Standards.*
[2] Governor's Office of Planning and Research, *State of California General Plan Guidelines*, October 2003, pages 249 and 250.

not exceed 45 dBA CNEL. This standard must be implemented whenever the exterior noise exposure level exceeds 60 dBA CNEL. The 60 dBA CNEL threshold applies only to new residential developments.

The Noise Element for the City of Perris includes the following policy:

> *Policy V.A: New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.*
>
> *Implementation Measure V.A.1: An acoustical impact analysis shall be prepared for new industrial and large scale commercial facilities to be constructed within 160 feet of the property line of any existing noise-sensitive land use. This analysis shall document the nature of the commercial or industrial facility as well as all interior or exterior facility operations that would generate exterior noise. The analysis shall document the placement of any existing or proposed noise-sensitive land uses situated within the 160-foot distance. The analysis shall determine the potential noise levels that could be received at these sensitive land uses and specify specific measures to be employed by the large scale commercial or industrial facility to ensure that these levels do not exceed 60 dBA CNEL at the property line of the adjoining sensitive land use.*

Noise from fixed sources is addressed within Title 7 Health and Welfare, Chapter 7.34 – Noise Control of the City of Perris Municipal Code. Chapter 7.34.040 Sound amplification, states the following:

> *No person shall amplify sound using sound amplifying equipment contrary to any of the following:*
>
> *A. The only amplified sound permitted shall be either music or the human voice, or both.*
>
> *B. The volume of amplified sound shall not exceed the noise levels set forth in this subsection when measured outdoors at or beyond the property line of the property from which the sound emanates.*

Time Period	***Maximum Noise Level***
10:01 p.m. to 7:00 a.m.	*60 dBA*
7:01 a.m. to 10:00 p.m.	*80 dBA*

> *(Ord. 1082 § 2(part), 2000).*
>
> *7.34.050 General prohibition.*
>
> *A. It is unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in Section 7.34.040 shall apply to this section.*
>
> *7.34.060 Construction noise.*
>
> *It is unlawful for any person between the hours of seven p.m. of any day and seven a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive*

noise. Construction activity shall not exceed eighty dBA in residential zones in the city. (Ord. 1082 § 2(part), 2000).

The City of Perris Noise Ordinance also states:

16.22.020 Definitions.

J. "Noise-sensitive land uses" include, but are not limited to: residences, schools, libraries, hospitals, churches, offices, hotels, motels, and outdoor recreational areas. Noise-sensitivity factors include interference with speech communication, subjective judgment of noise acceptability and relative noisiness, priced for freedom from noise intrusion, and sleep interference criteria.

Since the State of California and the City of Perris both show in their noise and land use compatibility matrix that an exterior noise exposure level below 65 dB CNEL is considered to be normally or conditionally acceptable for residential land uses, then that standard will be applied to this analysis for all off-site transportation-related noise level impacts.

The Noise Element lists the noise standard for fixed noise sources at 60 dBA CNEL at the nearest noise-sensitive land use. The Noise Ordinance lists the noise standard for fixed noise sources at 60 dBA L_{max} during nighttime hours (10:01 p.m. to 7:00 a.m.) and 80 L_{max} during daytime hours (7:01 a.m. to 10:00 p.m.). Given that the 60 dBA L_{max} nighttime noise standard is the stricter standard of the two, the 60 dBA L_{max} standard will be applied to all on-site noise sources for this analysis.

In summary, the noise standards for each noise generating impact contained in this EIR are listed in Table 4.9.D.

Table 4.9.D: Noise Standard Summary

Off-Site Roadway Noise	65 dBA CNEL for roadway segments with fronting residential and school uses
	75 dBA CNEL for roadway segments with fronting industrial, office, or commercial uses
On-Site Truck Noise	60 dBA L_{max}
On-Site Noise/Other Sources	60 dBA L_{max}
Train Noise	FTA Noise Standards (Section 5.4.3)
Construction Noise	80 dBA L_{max} with Time Restrictions

The Noise Element also identifies that the Federal government regulates railroad operations in the area. Train noise is preempted from direct local control by the Federal Noise Control Act. The EPA is charged with regulating railroad noise under the Noise Control Act through the Code of Federal Regulations, Title 40, Chapter 1, Part 201. While these regulations remain in force, the EPA Office of Noise Abatement and Control was closed in 1982, leaving enforcement of the EPA regulations to the Federal Railroad Administration (FRA). Representative of the EPA, however, have indicated that states and localities may, at their option, enforce the Federal regulation. The FRA adopted the EPA railroad noise standards as its noise regulations for the purpose of enforcement. These are identified in Table 4.9.E.

Table 4.9.E: Summary of EPA/FRA Railroad Noise Standards

Operating Conditions	Measured Distance (Feet)	Standard (dBA)
Non-Switcher Locomotives[1] built on or before 12/31/79		
Stationary[4]	100	73
Idle Stationary[5]	100	93
Non-Idle Moving[6]	100	95

Table 4.9.E: Summary of EPA/FRA Railroad Noise Standards

Operating Conditions	Measured Distance (Feet)	Standard (dBA)
Switcher Locomotives[2] plus Non-Switcher Locomotives built after 12/31/79		
Stationary	100	70
Idle Stationary	100	87
Non-Idle Moving	100	90
Rail Cars[3]		
Speed less than 45 mph	100	88
Speed greater than 45 mph	100	93
Coupling	50	92

1 Non-Switcher Locomotives – A road engine that is used in long-haul railcar movement.
2 Switcher Locomotives – A smaller engine that is used in shuttling railcars.
3 Railcar – The car(s) pulled by a train engine.
4 Stationary – Sitting at idle and measured 100 feet from the center line of the track where the train is idling.
5 Idle Stationary – Sitting at idle.
6 Non-Idle Moving – Moving along the rails.
Source: City of Perris General Plan Noise Element, 2005.

City of Perris General Plan Policies. The *City of Perris General Plan*[1] defines goals, policies, and implementation measures related to noise conditions in the City. The specific policies, related to noise that are relevant to the proposed project are as follows:

Policy II.A Appropriate measures shall be taken in the design phase of future roadway widening projects to minimize impacts on existing sensitive noise receptors.

Implementation Measures

II.A.1 In the design of future roadway widening projects adjacent to existing sensitive land uses, first priority will be given to widening on the opposite side of the street where no sensitive land uses occur.

II.A.2 Use of quieter roadway surface materials, incorporation of solid noise barriers between the sensitive land use and the roadway will be implemented where feasible, to reduce exterior noise levels within adjacent sensitive land uses to a maximum of 60 dBA CNEL.

II.A.3 Where construction of a solid barrier is economically or practically infeasible e.g. along front yards where driveways would prohibit continuation of the wall, retrofitting of homes with noise attenuation features will be implemented to reduce interior noise to 45 dBA CNEL.

II.A.4 Reduction of posted speed limits will be implemented, wherever it can be accomplished without increasing traffic congestion.

II.A.5 Work proactively with Caltrans to facilitate construction of sound barriers and/or retrofit existing noise impacted structures with noise attenuation features, along those segments of I-215 that abut existing noise impacted land uses.

Policy III.A Mitigate existing and future noise impacts resulting from train movement.

Goal IV – Air Traffic Noise Future land uses compatible with noise from air traffic

Implementation Measures

IV.A.2 All new development proposals in the noise contour areas of 60 dBA and above will be evaluated with respect to the State Noise/Land Use Compatibility Criteria.

1 *City of Perris General Plan*, City of Perris, August 30, 2005.

Goal V – Stationary Source Noise Future non-residential land uses compatible with noise-sensitive land uses

Policy V.A. New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.

Implementation Measures

V.A.1 An acoustical impact analysis shall be prepared for new industrial and large scale commercial facilities to be constructed within 160 feet of the property line of any existing noise-sensitive land use. This analysis shall document the nature of the commercial or industrial facility as well as all interior or exterior facility operations that would generate exterior noise. The analysis shall document the placement of any existing or proposed noise-sensitive land uses situated within the 160-foot distance. The analysis shall determine the potential noise levels that could be received at these sensitive land uses and specify specific measures to be employed by the large scale commercial or industrial facility to ensure that these levels do not exceed 60 dBA CNEL at the property line of the adjoining sensitive land use. No development permits or approval of land use applications shall be issued until the acoustic analysis is received and approved by the City Staff.

4.9.2.2 State of California Vehicular Code

Recent studies have shown that the most objectionable feature of traffic noise is the sound produced by vehicles equipped with illegal or faulty exhaust systems. In addition, such vehicles are often operated in a manner that causes tire squeal and excessively loud exhaust noise. A number of California State vehicle noise regulations can be enforced by local authorities as well as the California Highway Patrol. These include § 23130, § 23130.5, § 27150, and § 38275 of the California Vehicle Code, as well as excessive speed laws, which may be applied to curtail traffic noise:

- § 23130 and § 23130.5 establish maximum noise emission limits for the operation of all motor vehicles at any time under any conditions of grade, load, acceleration, or deceleration.
- § 27150 requires motor vehicles to be equipped with an adequate muffler to prevent excessive noise.
- § 38275 requires off-highway motor vehicles to be equipped with an adequate muffler to prevent excessive noise.

The California Highway Patrol and the Department of Health Services (through local health departments) are available to aid local authorities in code enforcement and training pursuant to proper vehicle sound level measurements.

4.9.3 Methodology

Evaluation of noise impacts associated with the proposed project includes the following:

- Determination of the short-term construction noise impacts on off-site noise-sensitive uses;
- Determination of the long-term noise impacts, including vehicular traffic and stationary noise sources, on on-site and off-site noise-sensitive uses; and
- Determination of the required mitigation measures to reduce long-term noise impacts from all sources.

The proposed project includes the construction and operation of a 7,399,291-square foot industrial project constructed in three phases. The noise analysis considers the noise effects of the industrial

development on the existing residential development (sensitive receptors) in the vicinity of the proposed project site.

Future noise impacts resulting from vehicular traffic on roadways were modeled using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) which includes the California specific vehicle noise curves (CALVENO). The model is used to calculate an energy average noise level for the different classes of vehicles (automobiles, medium truck, heavy trucks) using the roadways. The model also incorporates the total number of vehicles using the road each day, the vehicle speed, and the percentage of vehicles on the road during the three time periods of the day used to calculate CNEL, in order to calculate the total noise exposure for the roadway for a given case. Site-specific information is entered, such as distances from the roadway to a noise barrier or to the receiver, along with the elevations and heights of the roadway, noise barrier and receiver.

The noise exposure levels and vibration impact evaluation for train related activity is based on the methods detailed in the FTA's *Transit Noise and Vibration Impact Assessment* manual (FTA-VA-90-1003-06, May 2006). This policy document outlines different levels of detail for impact analysis for both noise and vibration: a screening procedure, a general impact assessment, and a detailed analysis. As indicated in the Noise Study prepared for the proposed project, it was determined that the General Impact Assessment method is most appropriate for the current analysis.

In the FTA's *Transit Noise and Vibration Impact Assessment* manual, noise impact criteria for construction and operation of passenger rail facilities are based on the change in outdoor noise exposure using a sliding scale with three receptor categories and three degrees of impact. These criteria apply to various surface transportation modes, including heavy rail. The criteria respond to heightened community annoyance caused by late-night or early morning service and they respond to varying sensitivity of communities to noise from projects during different ambient noise conditions.

For operational rail noise, the FTA's three receptor land use categories are:

- **Noise Category 1:** Tracts of land where quiet is an essential element in their intended purpose, such as outdoor amphitheaters, concert pavilions and National Historic Landmarks with significant outdoor use.
- **Noise Category 2:** Residences and buildings where people normally sleep, including homes, hospitals, and hotels.
- **Noise Category 3:** Institutional land use (schools, places of worship, libraries) with use typically during the daytime and evening. Other uses in this category can include medical offices, conference rooms, recording studios, concert halls, cemeteries, monuments, museums, historical sites, parks, and recreational facilities.

Figure 4.9.2 provides the criteria for FTA's three degrees of impact: No Impact, Impact, and Severe Impact. The latter degree complies with the National Environmental Policy Act (NEPA) definition of "significant adverse impact or effect." As illustrated in Figure 4.9.2, the criterion for each degree of impact is on a sliding scale dependent on the existing noise exposure and the increase in noise exposure due to the project.

The criteria for environmental impact from groundborne vibration associated with rail operations are based on the maximum root-mean-square (rms) vibration levels for repeated events of the same source. The criteria for acceptable groundborne vibration are expressed in terms of rms velocity levels in decibels and the criteria for acceptable groundborne noise are expressed in terms of A-weighted sound levels. The vibration impact limits are specified for the three land-use categories defined below:

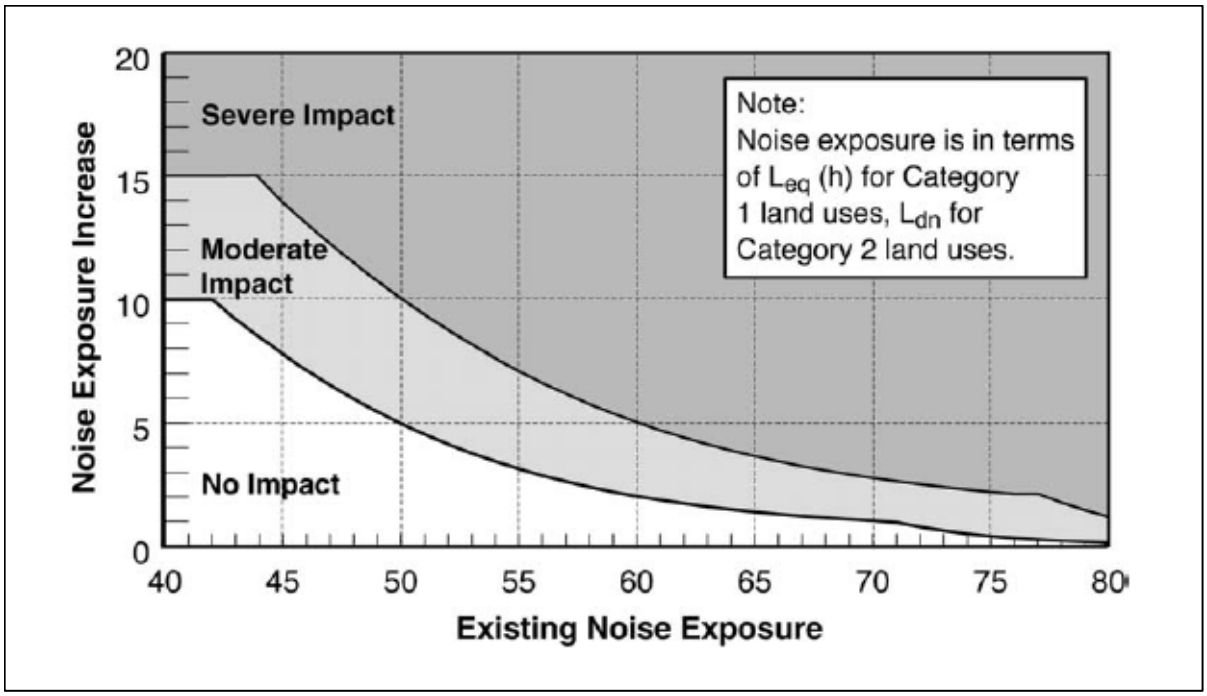

Figure 4.9.2: FTA Noise Impact Criteria

- **Vibration Category 1 (High Sensitivity):** Included in Category 1 are buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance. Typical land uses covered by Category 1 are: special vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. The degree of sensitivity to vibration will depend on the specific equipment that will be affected by the vibration. Equipment such as electron microscopes and high resolution lithographic equipment can be very sensitive to vibration, and even normal optical microscopes will sometimes be difficult to use when vibration is well below the human annoyance level. Manufacturing of computer chips is an example of a vibration-sensitive process. Note that this category does not include most computer installations or telephone switching equipment. It is rare for computer or other electronic equipment to be particularly sensitive to vibration. It is believed that there are no high sensitivity land uses within the vicinity of the existing railroad right-of-way.
- **Vibration Category 2 (Residential):** This category covers all residential land uses and any buildings where people sleep, such as single family homes, condominiums and apartment buildings, hotels and hospitals. No differentiation is made between different types of residential areas. Existing residential land uses are limited to existing single family homes along the project right-of-way between South Boulevard to the north, and Mapes Road to the south.
- **Vibration Category 3 (Institutional):** Vibration Category 3 includes schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. Although it is generally appropriate to include office buildings in this category, it is not appropriate to include all buildings that have any office space. For example, most industrial buildings have office space, but it is not intended that buildings primarily for industrial use be included in this category. It is believed that there are no institutional land uses along the project right-of-way between 7th Street to the north and Mapes Road to the south.

As identified in Table 4.9.F, the criteria account for variation in project types as well as the frequency of events, which differ widely among transit projects. Most experience with the community response to groundborne vibration from rail transit systems is that the sensitivity to vibration levels increases with the frequency of events. This is accounted for in the criteria by distinguishing between projects

with varying numbers of events, where Frequent Events are defined as more than 70 events per day, Occasional Events range between 30 and 70 events per day, and Infrequent Events are fewer than 30 events per day.

Table 4.9.F: FTA Vibration Impact Criteria Thresholds

Vibration Category	Groundborne Vibration (GBV) (VdB re: 1 micro-inch/sec)			Groundborne Noise (GBN) (dB re: 20 micro-Pascals)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events	Occasional Events	Infrequent Events
Category 1	65 VdB[4]	65 VdB[4]	65 VdB[4]	NA[4]	NA[4]	NA[4]
Category 2	72 VdB	75 VdB	80 VdB	35 VdB	38 VdB	43 VdB
Category 3	75 VdB	78 VdB	83 VdB	40 VdB	43 VdB	48 VdB

Notes: Vibration-sensitive equipment is generally not sensitive to groundborne noise.

1 "Frequent Events" is defined as more than 70 events of the same source per day. Most rapid transit projects fall into this category.

2 "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

3 "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

4 This criterion limit is based upon levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

For the South Perris Distribution Center project, it is assumed that normal operations for the proposed freight operations will not exceed 2 events per day; therefore, the impact threshold for "infrequent events" has been utilized for the impact assessment.

In addition, there are a number of design and operational factors that can influence transit system vibration levels at nearby receiver locations. Below is a summary of several factors that are known to have, or are suspected of having, a significant influence on the levels of groundborne vibration and noise. As indicated, the physical parameters of the transit facility, the geology, and the receiving building all influence the vibration levels. The important physical parameters can be divided into the following four categories:

- **Operational and Vehicle Factors:** This category includes all of the parameters that relate to the vehicle and operation of the trains. Factors such as speed, stiffness of primary suspensions on the vehicle, wheel condition (including flat or worn wheels) will affect groundborne vibration levels.
- **Roadbed:** The type and condition of the rails, the type of roadbed, the rail support system, and the mass and stiffness of the supporting structure will all have an influence on the level of groundborne vibration. Jointed rail, worn rail, and wheel impacts at special track work can all cause substantial increases in groundborne vibration. A rail system guideway will be either subway, at-grade, or elevated. It is rare for groundborne vibration to be a problem with elevated railways except when guideway supports are located within 50 feet of buildings. For railroads at-grade, directly radiated noise is usually the dominant problem, although vibration can be a problem at close proximities.
- **Geology:** Soil and subsurface conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Experience with groundborne vibration is that vibration propagation is more efficient in stiff clay soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in groundborne vibration problems at large distances from the track. Factors such as layering of the soil and depth to water table can have significant effects on the propagation of groundborne vibration.

- **Receiving Building:** The receiving building is a key component in the evaluation of groundborne vibration since groundborne vibration problems occur almost exclusively inside buildings. The train vibration may be perceptible to people who are outdoors, but it is very rare for outdoor vibration to cause complaints. The vibration levels inside a building are dependent on the vibration energy that reaches the building foundation, the coupling of the building foundation to the soil, and the propagation of the vibration through the building. The general guideline is that the heavier a building is, the lower the response will be to the incident vibration energy.

Future vibration levels and potential vibration impacts are determined according to the FTA General Vibration Assessment procedure. The general level of assessment, as described in Chapter 10 of the FTA Transit Noise and Vibration Impact Assessment Manual, uses generalized data to develop a curve of vibration level as a function of distance from the track. The vibration levels at specific buildings are estimated by reading values from the curve and applying adjustments to account for factors such as track support system, vehicle speed, type of building, and track and wheel condition. The general level deals only with the overall vibration velocity level. It does not consider the frequency spectrum of the vibration.

Guideline vibration damage criteria are provided in Table 4.9.G for various structural categories. These limits should be viewed as criteria that should be used during the environmental impact assessment phase to identify problem locations that must be addressed during final design.

Table 4.9.G: Construction Vibration Damage Criteria Thresholds

Building Category	Type of Building	Vibration Level (in/sec)	Approximate Lv[1]
Category I	Reinforced-concrete, steel, or timber (no plaster)	0.5	102
Category II	Engineered concrete and masonry buildings	0.3	98
Category III	Non-engineered timber and masonry buildings	0.2	94
Category IV	Buildings extremely susceptible to vibration damage	0.12	90

[1] RMS velocity in decibels (VdB) re 1 micro-inch/second.
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

4.9.4 Thresholds of Significance

A project would have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or if it would conflict with adopted environmental plans and goals of the community in which it is located.

The applicable noise standards governing the project site are the criteria that are contained within the Noise Element of the *City of Perris General Plan* and the *Perris Municipal Code*. For this project, a noise impact is considered significant if the project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the *City of Perris General Plan*, *Perris Municipal Code*, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial temporary, periodic, and/or permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; and/or

- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

Since the State of California and the City of Perris both show in their noise and land use compatibility matrix that an exterior noise exposure level below 65 dB CNEL is considered to be normally or conditionally acceptable for residential land uses, then that standard will be applied to this analysis for all off-site transportation noise level impacts.

The Noise Element of the City of Perris General Plan identifies that stationary noise sources shall not exceed 60 dBA CNEL at the nearest noise-sensitive land use. In addition, the City's Noise Ordinance identifies the noise standard for fixed noise sources at 60 dBA L_{max} during nighttime hours and 80 dBA L_{max} during daytime hours. As the proposed project is anticipated to operate 24 hours a day, the more restrictive noise ordinance level of 60 dBA L_{max} will be applied to the on-site noise level portion of the analysis. Previously identified Table 4.9.D provides a summary of the noise standards for each type of noise source.

As stated previously, the level at which changes in community noise levels become discernable is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people. For the purpose of this EIR, the project creates a significant noise impact if the project-related noise increase at an existing sensitive receptor is greater than 3 dBA and the resulting noise level is greater that the standards cited above or if the project-related increase in noise is greater than 5 dBA and the resulting noise levels area within the applicable land use compatibility standards for the sensitive use.

4.9.5 No Impact/Less than Significant Impacts

The following impacts were identified as having a less than significant impact or no impact on the environment with implementation of the proposed project.

4.9.5.1 Public Airport Noise Impacts

Threshold	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, results in exposure of people residing or working in the project area to excessive noise levels.

The Phase 1, Phase 2, and Phase 3 project sites are located approximately 8 miles south, 7 miles south, and 6.5 miles southeast of March Air Field, respectively. The March Air Field is a joint-use airport, used both for military and civilian purposes. March Inland Port (MIP)[1] is the civilian portion of the airport. This facility is anticipated to play an increasingly important role in the transportation of goods and cargo for the Southern California region. Existing flight patterns affect a large portion of the City of Perris, along a path that bisects the City in a northwest/southeast alignment. Aircraft operations from the airport currently contribute intermittent single-event noise in the City.

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. Phase 1 of the proposed project is located approximately 8.0 miles south of the March Inland Port. Based on the Airport Influence Area Map (previously referenced Figure 4.6.1), Phase 1 is not within the airport influence area. In addition, the Phase 1 site is not located within the noise contours delineated for the MIP.[2] Since Phase 1 is not located within the noise contours delineated for this public airport, development and operation of Phase 1 would not result in the exposure of people working in the

[1] March Inland Port was previously called March Air Reserve Base.
[2] *Exhibit N-3: Noise Contours and Accident Potential Zones for March Inland Port,* City of Perris General Plan Noise Element, City of Perris, August 2005.

project area to excessive noise levels. Therefore, no impacts associated with this issue would occur and no mitigation is required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on an approximately 201 gross acre site. The site is located south of Mapes Street between "A" Street and Goetz Road. Phase 2 of the proposed project is located approximately 7 miles south of the March Inland Port. Based on the Airport Influence Area Map, Phase 2 is outside the airport influence area for the MIP.[1] Similar to Phase 1, the Phase 2 site is not located within the noise contours delineated for the MIP.[2] Since Phase 2 is not located within the noise contours delineated for this public airport, development and operation of Phase 2, which may include the extension of the existing rail line to the west, would not result in the exposure of people working in the project area to excessive noise levels. Therefore, no impacts associated with this issue would occur and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. The First Park South 215 Distribution Center includes development of approximately 3,166,857 square feet of industrial warehouse space in 4 buildings on an approximately 215.7 gross acre site. The location of the Phase 3 site is adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. Phase 3 of the proposed project is located approximately 6.5 miles south of the MIP. Based on the Airport Influence Area Map, the western half of Phase 3 is outside the airport influence area for the March Inland Port while the eastern half of Phase 3 is within Safety Zone Area 3.[3] However, similar to Phase 1 and Phase 2, the Phase 3 site is not located within the noise contours delineated for the MIP.[4] Since Phase 3 is not located within the noise contours delineated for this public airport, development and operation of Phase 3 would not result in the exposure of people working in the project area to excessive noise levels. Therefore, no impacts associated with this issue would occur and no mitigation is required.

All Phases and Infrastructure. The total project area, defined for the purposes of this EIR as the three development sites plus the area incorporating the proposed infrastructure improvements, encompasses an area bounded by Ellis Avenue and 7th Street to the north, Watson Street and Mapes Road to the south, I-215 and the San Jacinto River to the east, and "A" Street and Redlands Avenue to the west. As previously stated, Phase 1, Phase 2, and Phase 3 of the proposed project would not expose people working in the project area to excessive noise levels as these sites are not located within the noise contours delineated for the MIP.[5] The proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road in addition to the installation of associated water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. The roadways and areas in which the infrastructure features would be placed are not identified within the noise contours delineated for the MIP. Therefore, improvements made to these roadways and the installation of water, recycled water, drainage, brine line, and sewer lines within the project area would not result in the exposure of people working in these roadways to excessive noise levels. Impacts would be less than significant and no mitigation is required.

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1 *Airport Influence Area Map,* Riverside County Airports – March Air Reserve Base, County of Riverside, December 29, 2004.

2 *Exhibit N-3: Noise Contours and Accident Potential Zones for March Inland Port,* City of Perris General Plan Noise Element, City of Perris, August 2005.

3 *Airport Influence Area Map,* Riverside County Airports – March Air Reserve Base, County of Riverside, December 29, 2004.

4 *Exhibit N-3: Noise Contours and Accident Potential Zones for March Inland Port,* City of Perris General Plan Noise Element, City of Perris, August 2005.

5 *Exhibit N-3: Noise Contours and Accident Potential Zones for March Inland Port,* City of Perris General Plan Noise Element, City of Perris, August 2005.

4.9.5.2 Private Airport Noise Impacts

Threshold	For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

There is one private airport facility in vicinity of the project area, the Perris Valley Airport. The privately-operated Perris Valley Airport is utilized for skydiving and ballooning activities and has a single airport "Influence Area." Aircraft flying out from this airport typically consists of 20 seat passenger planes equipped with jet engines and propellers. Aircraft operations from the airport currently contribute intermittent single-event noise in the City. The City identifies the Perris Valley Airport and Skydiving Center as a significant noise generator within the City.[1]

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. The nearest private airport to the Phase 1 site is the Perris Valley Airport, located approximately 0.25 mile east of the project site. As identified in the City's General Plan, the Phase 1 site is located within the Influence Area established for Perris Valley Airport.[2] Noise levels experienced on adjacent properties to the Perris Valley Airport, such as the Phase 1 site, range from 35.5 dBA to 76.3 dBA.[3] As identified in the City's General Plan, a noise level ranging from 50 to 75 db is considered normally acceptable while a noise level ranging from 70 to 80 db is considered conditionally acceptable for industrial, manufacturing, utilities, and agricultural uses.[4] Because the level of noise that would be experienced at the Phase 1 site would be below the threshold of noise that is acceptable, impacts associated with this issue would be less than significant. No mitigation is required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on an approximately 201 gross acre site. The site is located south of Mapes Street between "A" Street and Goetz Road. Phase 2 of the proposed project includes the potential for the extension of an existing rail line west of the site resulting in rail service to the site. The nearest private airport for Phase 2 is the Perris Valley Airport, located approximately 0.38 mile east of the project site. As identified for Phase 1, noise levels experienced on adjacent properties to the Perris Valley Airport range from 35.5 dBA to 76.3 dBA.[5] As identified in the City's General Plan, a noise level ranging from 50 to 75 db is considered normally acceptable while a noise level ranging from 70 to 80 db is considered conditionally acceptable for industrial, manufacturing, utilities, and agricultural uses.[6] It is anticipated that the level of noise that would be experienced at the Phase 2 site would be below the threshold of noise that is acceptable. Impacts associated with this issue would be less than significant. No mitigation is required.

Phase 3: First Park South 215 Distribution Center. The First Park South 215 Distribution Center includes development of approximately 3,166,857 square feet of industrial warehouse space in 4 buildings on an approximately 215.7 gross acre site. The location of the Phase 3 site is adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. The nearest private airport for Phase 3 is the Perris Valley Airport, located approximately 0.25 mile southwest of the project site. Similar to what was identified for Phase 1 and Phase 2, noise levels experienced on adjacent properties to the Perris Valley Airport range from 35.5

1 City of Perris General Plan Noise Element, City of Perris, August 2005.
2 *Exhibit S-19: Perris Valley Airport Influence Areas,* City of Perris General Plan Safety Element, City of Perris, October 2005.
3 *Table N-2: Citywide Noise Level Measurements,* City of Perris General Plan Noise Element, August 2005.
4 *Exhibit N-1: Land Use/Noise Compatibility Guidelines,* City of Perris General Plan Noise Element, August 2005.
5 *Table N-2: Citywide Noise Level Measurements,* City of Perris General Plan Noise Element, August 2005.
6 *Exhibit N-1: Land Use/Noise Compatibility Guidelines,* City of Perris General Plan Noise Element, August 2005.

dBA to 76.3 dBA.[1] As identified in the City's General Plan, a noise level ranging from 50 to 75 db is considered normally acceptable while a noise level ranging from 70 to 80 db is considered conditionally acceptable for industrial, manufacturing, utilities, and agricultural uses.[2] It is anticipated that the level of noise that would be experienced at the Phase 3 site would be below the threshold of noise that is acceptable. Impacts associated with this issue would be less than significant. No mitigation is required.

All Phases and Infrastructure. As previously stated, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. The project area is bounded by Ellis Avenue and 7th Street to the north, Watson Street and Mapes Road to the south, I-215 and the San Jacinto River to the east, and "A" Street and Redlands Avenue to the west. As indicated in the previous analysis, the three phases would not expose people working on these sites to excessive noise levels. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. Similarly, the proposed project would also install associated water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. These roadway and infrastructure improvements would not result in prolonged exposure to excessive noise levels associated with the Perris Valley Airport. Additionally, the noise that would be experienced during the installation of these infrastructure features would likely be higher than what the Perris Valley Airport would generate simply because of the proximity to which the workers are to the infrastructure noise. Therefore, improvements made to these roadways and the installation of infrastructure features within the project area would not result in the exposure of people working in these roadways to excessive noise levels during or after construction. Impacts would be less than significant and no mitigation is required.

4.9.5.3 Groundborne Vibration Impacts

Threshold:	Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Vibration refers to groundborne noise and perceptible motion. Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernable but without the accompanying effects (e.g., shaking of a building). Groundborne vibration is measured in terms of the velocity of the vibration oscillations. The degree of annoyance is dependent upon type of land use, individual sensitivity to vibration, and the frequency of the vibration events. Problems with groundborne vibration and noise are usually localized to areas within about 100 feet from the vibration source, although there are examples of groundborne vibration causing interference out to distances greater than 200 feet.

Phase 1: Airport Distribution Center. Roadways in the Phase 1 site area are either paved or would be paved and would not result in traffic driving over rough roads. Construction activities for the Phase 1 site do not include blasting or pile driving. The primary vibratory source during the construction of the proposed project would be large bulldozers. Based on published data, typical bulldozer activities generate an approximate vibration level of 0.089 in/sec at a distance of 25 feet. With the nearest residence approximately 250 feet away from the project boundary, it is anticipated that the vibration level would be below 0.1 in/sec. As identified in Table 4.9.G, the 0.1 in/sec that would be generated during the construction phase would be below the lowest vibration level thresholds that would cause vibration damage in buildings. Therefore, although heavy-duty earthmoving equipment would be used

[1] *Table N-2: Citywide Noise Level Measurements,* City of Perris General Plan Noise Element, August 2005.
[2] *Exhibit N-1: Land Use/Noise Compatibility Guidelines,* City of Perris General Plan Noise Element, August 2005.

during the construction phase of the project, the level of vibration would not be excessive or permanent, nor would it exceed the level at which building damage typically occurs. Impacts from construction-related groundborne vibration would be less than significant and no mitigation is required.

The Phase 1 site is adjacent to the Orange Empire Railway Museum to the east. The Orange Empire Railway Museum currently operates a Museum Railway where visitors can ride on historic trains and trolleys. On a typical weekend, two city streetcars are running on the half-mile Loop Line and another train is operating on the 1.5 mile mainline track on the museum grounds.[1] The train tracks on the museum grounds are approximately 417 feet from the eastern most boundary of the Phase 1 site. As indicated in Figure 4.9.3 (Generalized Ground Surface Vibration Curves), the vibration that would be experienced at the Phase 1 site would be approximately between 60 and 65 VdB. As identified in Table 4.9.F, the level of vibration would be below the any of the FTA vibration impact criteria thresholds. Therefore, because of the relatively low amount of train traffic experienced at the Orange Empire Railway Museum and because of the distance between the Phase 1 site and nearest train tracks (417 feet), impacts associated with train groundborne vibration for Phase 1 would be less than significant and no mitigation is required.

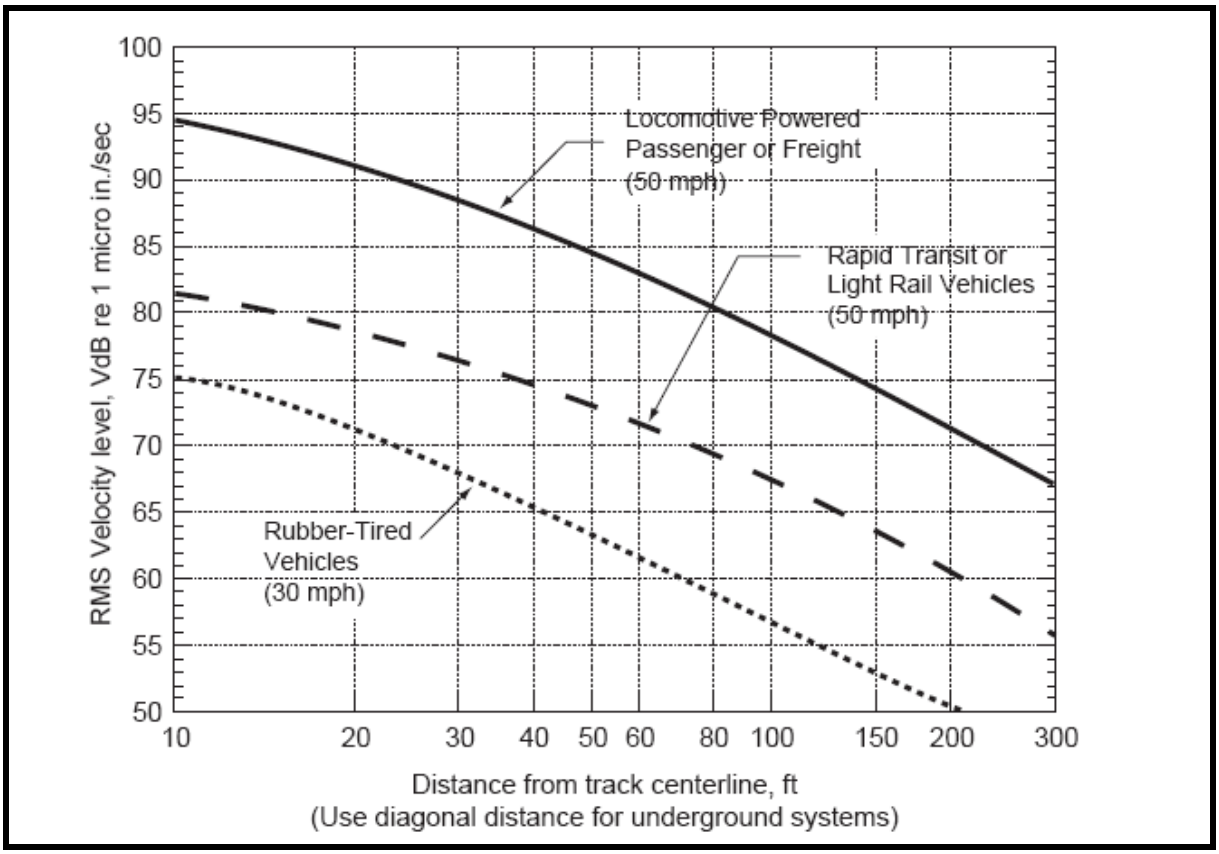


Figure 4.9.3: Generalized Ground Surface Vibration Curve. Source: Acoustical Impact Analysis South Perris Industrial, City of Perris. URS Corporation, May 2009 (Appendix I).

Phase 2: First Park South Perris Distribution Center. As identified for Phase 1, roadways adjacent to the Phase 2 site area are either paved or would be paved and would not result in traffic driving over rough roads. Construction activities for the Phase 2 site do not include blasting or pile driving and the

[1] *Orange Empire Railway Museum,* http://www.oerm.org/pages/demorail.html, website accessed November 17,2008.

primary vibratory source during the construction of Phase 2 would be large bulldozers. Based on published data, typical bulldozer activities generate an approximate vibration level of 0.089 in/sec at a distance of 25 feet. With the nearest residences approximately 50 feet away from the project boundary, it is anticipated that the vibration level would be 0.0445 in/sec. As identified in Table 4.9.G, the 0.0445 in/sec that would be generated during the construction phase would be below the lowest vibration level thresholds that would cause vibration damage in buildings. Therefore, although heavy-duty earthmoving equipment would be used during the construction phase of the project, the level of vibration would not be excessive or permanent, nor would it exceed the level at which building damage typically occurs. Impacts from construction-related groundborne vibration for Phase 2 would be less than significant and no mitigation is required.

Phase 2 also includes the possibility for rail service to the Phase 2 site. The switcher service currently uses the existing rail line along Case Road to serve customers to the south of the project site. Switcher service to the Phase 2 site would utilize the existing rail line which forks just south of 7th Street. Rail service to the Phase 2 site would occur on days when the rail line is scheduled to operate, which is currently three days a week: Tuesday, Thursday, and Saturday. There will be two trips through South Perris per day, one trip south to the distribution center and one trip back. The expected schedule calls for the freight train to be at the South Perris Distribution Center between the hours of 7:00 a.m. and 7:00 p.m., with deliveries currently expected to take place on Tuesday, Thursday, and Saturday. The freight trains will operate on the existing dedicated rail system which has a maximum speed limit of 10 miles per hour. The length of the train passing through South Perris will be 1,200 feet including the locomotive.

As previously identified in the Methodology section, Phase 2 of the proposed project would have freight operations which would not exceed two events per day. Based on previously identified Table 4.9.F, the freight operations associated with Phase 2 are considered to be infrequent events as infrequent events are considered to be less than 30 rail events per day. Therefore, the vibration thresholds for infrequent events were utilized. As identified in the Noise Study conducted for the proposed project, the vibration sensitive receptors along the project right-of-way are the single family homes located on both sides of the existing railroad line between South Boulevard to the north and Mapes Road to the south. The sensitive receptors closest to the existing rail line are the single family residences that back up to the right of way between 11th Street and Ellis Avenue. The rear yards of these single family residences are located approximately 50 feet from the centerline of the track. Table 4.9.H provides the anticipated vibration levels at the nearest sensitive receptor to the Phase 2 rail line.

Table 4.9.H: Applied Adjustment Factors for General Ground Vibration Curves

Source or Adjustment Factor	Source Level/Project Specific Adjustment to Curve (VdB)
Locomotive Powered Freight Train at 50 feet	84
Speed Adjustment (50 mph to 10 mph)[1]	-14
Track Conditions[2]	+5
Total:	**75**
Threshold:[3]	**80**
Exceeds Threshold?	**No**

1 Assumed maximum vehicle speed of 10 mph, adjustment is 20*Log (speed/$speed_{ref}$).
2 Assumed rail system consists of a jointed rail
3 Threshold based on FTA Vibration Criteria Thresholds (Table 4.9.F)
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

As previously identified in Table 4.9.F, the FTA vibration criteria for residential land uses subject to infrequent rail events is 80 VdB. As indicated in Table 4.9.H, it is anticipated that vibration level at the nearest residential dwelling is 75 VdB. The vibration level that would be experienced at the nearest

residential dwelling is below the 80 VdB threshold. Therefore, impacts associated with rail vibration would be less than significant and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. Similar to what was identified for Phase 1 and Phase 2, roadways adjacent to the Phase 3 site area are either paved or would be paved and would not result in traffic driving over rough roads. Construction activities for the Phase 3 site do not include blasting or pile driving and the primary vibratory source during the construction of Phase 3 would be large bulldozers. As previously identified, typical bulldozer activities generate an approximate vibration level of 0.089 in/sec at a distance of 25 feet. With the nearest residences approximately 100 feet away from the project boundary, it is anticipated that the vibration level would be below 0.1 in/sec. As identified in previously identified Table 4.9.G, vibration level that would be generated during the construction phase would be below the lowest vibration level thresholds that would cause vibration damage in buildings. Therefore, although heavy-duty earthmoving equipment would be used during the construction phase of the project, the level of vibration would not be excessive or permanent, nor would it exceed the level at which building damage typically occurs. Impacts from construction-related groundborne vibration for Phase 3 would be less than significant and no mitigation is required.

The nearest train tracks are located approximately 360 feet from southwestern corner of Phase 3 site. As indicated in Figure 4.9.3 (Generalized Ground Surface Vibration Curves), the vibration that would be experienced at the Phase 3 site would be approximately between 60 and 65 VdB. As identified in previously identified Table 4.9.F, the level of vibration would be below the any of the FTA vibration impact criteria thresholds. Therefore, because of the distance between the Phase 3 site and nearest train tracks (360 feet), impacts associated with train groundborne vibration for Phase 3 would be less than significant and no mitigation is required.

All Phases and Infrastructure. As previously stated, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. It is anticipated that any groundborne vibration associated with the installation of infrastructure would not be greater than identified for each of the three phases. Therefore, as indicated in the previous analysis, the three phases would not expose people working on these sites to excessive noise levels. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, “A” Street, Mapes Road, and Case Road. The improvements to these roadways would prevent vibration from occurring. Similarly, the proposed project would also install associated water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. These infrastructure improvements would not be impacted by groundborne noise levels as such infrastructure would be designed and installed below the ground where construction or train related vibration would not have a significant impact. Therefore, impacts associated with this issue would be less than significant and no mitigation is required.

The Academy community day school is located approximately 1,000 feet east of the railroad tracks. With the addition of project rail activity associated with the Phase 2 site, vibration levels at The Academy community day school would be reduced by distance to below 30 VdB. This level of vibration would not be perceptible to an average person at the school. Therefore, impacts associated with project contributions towards vibration impacts are less than significant and no mitigation is required.

4.9.5.4 Opening Year Long-Term Traffic Noise Impacts

Threshold	Would the project result in a substantial temporary, periodic, and/or permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Opening Year with and without project scenarios average daily traffic (ADT) volumes on roadway segments in the project vicinity were used to conduct the traffic noise modeling. The existing ADT volumes in the area were taken from the *Traffic Study* prepared for the proposed project.[1] As identified in the Methodology portion of this section, the threshold for off-site traffic noise is 65 dBA CNEL for sensitive receptors.

Phase 1: Airport Distribution Center. Operation of Phase 1 would generate traffic along roadways in the Phase 1 site vicinity. Table 4.9.I identifies opening year roadway traffic noise levels with and without Phase 1.

Table 4.9.I: Phase 1 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 1
	Without Phase 1	With Phase 1	
4th Street			
West of "D" Street	71.0	71.0	0.0
"D" Street to Perris Boulevard	71.0	71.0	0.0
Perris Boulevard to Redlands Avenue	72.0	72.0	0.0
West of Redlands Avenue	66.6	67.5	0.9
East of Redlands Avenue	68.9	68.9	0.0
11th Street			
West of Perris Boulevard	66.6	66.6	0.0
Case Road			
Perris Boulevard to Goetz Road	70.9	71.0	0.1
Goetz Road to Ellis Avenue	69.1	69.2	0.1
Ellis Avenue to Murrieta Road	69.1	69.2	0.1
Murrieta Road to Bonnie Drive	68.7	68.8	0.1
East of Bonnie Drive	67.2	67.2	0.0
Ellis Avenue			
West of Goetz Road	62.5	62.5	0.0
Case Road to Redlands Avenue	60.1	60.1	0.0
Goetz Road to Case Road	63.5	63.5	0.0
East of Redlands Avenue	*New Road*	*New Road*	0.0
Mountain Avenue			
West of Goetz Road	44.0	52.5	**8.5**
Mapes Road			
West of "A" Street	60.0	60.0	0.0
East of "A" Street	64.1	66.3	**2.2**
West of Goetz Road	64.1	64.1	0.0

[1] *Traffic Impact Analysis, South Perris Industrial Distribution Center,* Urban Crossroads, October 2008.

Table 4.9.I: Phase 1 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 1
	Without Phase 1	With Phase 1	
Watson Road			
East of "A" Street	0.0	0.0	0.0
West of "A" Street	47.0	47.0	0.0
Ethanac Road			
West of Goetz Road	67.7	67.7	0.0
Goetz Road to Murrieta Road	73.5	73.5	0.0
Murrieta Road to I-215	73.8	73.8	0.0
East of I-215	71.4	71.4	0.0
Bonnie Drive			
South of Case Road	52.7	52.7	0.0
North of Case Road	67.9	68.0	0.1
Under I-215	71.1	71.1	0.0
Perris Boulevard			
North of 4th Street	70.2	70.3	0.1
4th Street to 11th Street	70.7	70.8	0.1
South of 11th Street	63.1	63.1	0.0
Redlands Avenue			
North of I-215	72.4	72.4	0.0
I-215 to 4th Street	71.7	71.7	0.0
North of 4th Street	67.5	67.5	0.0
4th Street to 7th Street	65.0	65.0	0.0
7th Street to Ellis Street	64.7	64.7	0.0
"A" Street			
North of Mapes Street	62.2	62.2	0.0
Mapes Street to Watson Avenue	47.0	47.0	0.0
Goetz Road			
Case Road to Ellis Avenue	69.9	70.1	0.2
Ellis Avenue to Mountain Avenue	70.2	70.4	0.2
Mountain Avenue to Artlo Avenue	70.2	70.3	0.1
Artlo Avenue to Mapes Road	69.9	70.0	0.1
Mapes Road to San Jacinto River	70.8	70.9	0.1
San Jacinto River to Ethanac Road	71.7	71.8	0.1
South of Ethanac Road	71.0	71.0	0.0
Murrieta Road			
South of Case Road	62.7	62.7	0.0
North of Ethanac Road	58.4	58.4	0.0
South of Ethanac Road	69.4	69.4	0.0
I-215			
North of Redlands Avenue	82.0	82.0	0.0
South Off-Ramp to 4th Street	71.3	71.3	0.0
North On-Ramp to I-215	70.8	70.8	0.0
North Off-Ramp to Redlands Avenue	72.5	72.5	0.0

Table 4.9.I: Phase 1 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 1
	Without Phase 1	With Phase 1	
South of Redlands Avenue	82.4	82.4	0.0
South Off-Ramp to Bonnie Drive	73.1	73.7	0.6
South of BNSF Railroad	81.8	81.8	0.0
South Off-Ramp to Ethanac Road	71.3	71.3	0.0
South On-Ramp to I-215	72.9	72.9	0.0
South of Ethanac Road	82.1	82.1	0.0
SR-74			
East of I-215	72.0	72.0	0.0

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

As identified in Table 4.9.I, implementation of Phase 1 of the proposed project would result in relatively minor changes in traffic noise levels. The largest project-related increase in traffic noise would be along Mountain Avenue west of Goetz Road. This segment would experience an 8.5 dBA increase over the baseline (without the project) scenario in opening year. However, the existing land uses along the Mountain Avenue between Goetz Road and "A" Street consist of existing industrial uses and vacant land zoned for industrial uses. Therefore, noise impacts at the roadway segments where an increase of more than 3.0 dBA (at which a change in noise is audible) would occur are considered less than significant because there are no sensitive receptors located along this roadway segment.

All other roadway segments would have an increase in noise of less than 3.0 dBA, which would not be perceptible to the human ear in an outdoor environment. However, some of these roadway segments already exceed the acceptable noise levels for sensitive land uses such as residences, schools, and neighborhood parks. As previously identified in Table 4.9.I, certain roadway segments would experience a noise level increase of less than 3.0 dBA, but are currently experiencing a noise level greater than 65 dBA CNEL. All roadways that currently experience noise levels greater than 65 dBA CNEL (with exception of Mapes Road) are adjacent to vacant land, commercial, and industrial uses. Noise levels for these uses are acceptable at 75 dBA CNEL. Since the resultant increases in noise along these roadways would not exceed the acceptable noise level for commercial and industrial uses, no mitigation measures related to traffic noise would be required for off-site areas for these roadway segments.

As previously identified in Table 4.9.I, there will be an increase in traffic related noise on Mapes Road, east of "A" Street and west of Goetz Road. There are two groups of existing residential uses along Mapes Road that would be impacted by the operation of the proposed project. The first group of dwellings, located at 310 Mapes Road would experience an increase of noise from 64.1 dBA CNEL to 65.9 dBA CNEL. The second group of dwellings, located west of Goetz Road north of the project, would experience an increase of noise from 64.1 dBA CNEL to 66.3 dBA CNEL. The future noise exposure levels due to the project would exceed the exterior noise standard of 65 dBA CNEL for residential uses. However, the increase in project-related noise is less than 3 dBA. Therefore, impacts to the six residential dwellings adjacent to the north side of Mapes Road between "A" Street and Goetz Road would be less than significant.

Phase 2: First Park South Perris Distribution Center. Operation of Phase 2 would generate traffic along roadways in the surrounding area. Table 4.9.J identifies opening year roadway traffic noise levels with and without Phase 2 traffic only.

Table 4.9.J: Phase 2 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 2
	Without Phase 2	With Phase 2	
4th Street			
West of "D" Street	71.0	71.0	0.0
"D" Street to Perris Boulevard	71.0	71.0	0.0
Perris Boulevard to Redlands Avenue	72.0	72.1	0.1
West of Redlands Avenue	66.6	67.5	0.9
East of Redlands Avenue	68.9	68.9	0.0
11th Street			
West of Perris Boulevard	66.6	66.6	0.0
Case Road			
Perris Boulevard to Goetz Road	70.9	70.9	0.0
Goetz Road to Ellis Avenue	69.1	69.4	0.3
Ellis Avenue to Murrieta Road	69.1	69.4	0.3
Murrieta Road to Bonnie Drive	68.7	69.1	0.4
East of Bonnie Drive	67.2	67.2	0.0
Ellis Avenue			
West of Goetz Road	62.5	62.5	0.0
Case Road to Redlands Avenue	60.1	60.1	0.0
Goetz Road to Case Road	63.5	63.5	0.0
East of Redlands Avenue	*New Road*	*New Road*	0.0
Mountain Avenue			
West of Goetz Road	44.0	44.0	0.0
Mapes Road			
West of "A" Street	60.0	60.3	0.3
East of "A" Street	66.3	66.3	0.0
West of Goetz Road	64.1	66.3	2.2
Watson Road			
East of "A" Street	0.0	50.0	**50.0**
West of "A" Street	47.0	47.0	0.0
Ethanac Road			
West of Goetz Road	67.7	67.7	0.0
Goetz Road to Murrieta Road	73.5	73.7	0.2
Murrieta Road to I-215	73.8	73.9	0.1
East of I-215	71.4	71.5	0.1
Bonnie Drive			
South of Case Road	52.7	52.7	0.0
North of Case Road	67.9	68.2	0.3
Under I-215	71.1	71.2	0.1
Perris Boulevard			
North of 4th Street	70.2	70.2	0.0
4th Street to 11th Street	70.7	71.0	0.3

Table 4.9.J: Phase 2 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 2
	Without Phase 2	With Phase 2	
South of 11th Street	63.1	63.1	0.0
Redlands Avenue			
North of I-215	72.4	72.4	0.0
I-215 to 4th Street	71.7	71.8	0.1
North of 4th Street	67.5	67.5	0.0
4th Street to 7th Street	65.0	65.0	0.0
7th Street to Ellis Street	64.7	64.7	0.0
"A" Street			
North of Mapes Street	62.2	62.2	0.0
Mapes Street to Watson Avenue	47.0	57.8	**10.8**
Goetz Road			
Case Road to Ellis Avenue	69.9	70.7	0.8
Ellis Avenue to Mountain Avenue	70.2	70.9	0.7
Mountain Avenue to Artlo Avenue	70.2	70.9	0.7
Artlo Avenue to Mapes Road	69.9	70.7	0.8
Mapes Road to San Jacinto River	70.8	71.3	0.5
San Jacinto River to Ethanac Road	71.7	72.1	0.4
South of Ethanac Road	71.0	71.0	0.0
Murrieta Road			
South of Case Road	62.7	62.7	0.0
North of Ethanac Road	58.4	58.4	0.0
South of Ethanac Road	69.4	69.4	0.0
I-215 Freeway			
North of Redlands Avenue	82.0	82.1	0.1
South Off-Ramp to 4th Street	71.3	71.5	0.2
North On-Ramp to I-215	70.8	71.1	0.3
North Off-Ramp to Redlands Avenue	72.5	72.5	0.0
South of Redlands Avenue	82.4	82.4	0.0
South Off-Ramp to Bonnie Drive	73.1	73.8	0.7
South of BNSF Railroad	81.8	81.8	0.0
South Off-Ramp to Ethanac Road	71.3	71.3	0.0
South On-Ramp to I-215	72.9	73.1	0.2
South of Ethanac Road	82.1	82.2	0.1
SR-74			
East of I-215	72.0	72.0	0.0

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

Implementation of Phase 2 of the proposed project would result in relatively minor changes in traffic noise levels. As indicated in previously identified Table 4.9.J, the largest project-related increase in traffic noise would be along Watson Road east of "A" Street. This segment would experience a 50 dBA increase over the baseline (without the project) scenario in opening year. However, it should be

noted that there currently is no paved road on Watson Road east of "A" Street. With development of the proposed project, Watson Avenue east of "A" Street would be an improved paved road which would accommodate traffic from Phase 2 and the surrounding area. As previously stated, roadway segments where an increase of more than 3.0 dBA would occur are considered significant but because there are no sensitive receptors located along this segment of Watson Road the impact is less than significant.

The second largest project-related increase in traffic noise would be along "A" Street between Mapes Street and Watson Avenue. This segment would experience a 10.8 dBA increase over the baseline (without the project) scenario in the opening year. However, no noise-sensitive uses exist or are planned in the vicinity of this roadway segment. The surrounding land uses consist of the existing industrial uses and vacant land zoned for industrial uses. There are no noise-sensitive uses along "A" Street between Mapes Street and Watson Avenue.

All other roadway segments would have an increase in noise of less than 3.0 dBA, which would not be perceptible to the human ear in an outdoor environment. Similar to Phase 1, certain roadway segments would experience a noise level increase of less than 3.0 dBA, but are currently experiencing a noise level greater than 65 dBA CNEL. All roadways that currently experience noise levels greater than 65 dBA CNEL are adjacent to vacant land, commercial, and industrial uses. Noise levels for these uses are acceptable at 75 dBA CNEL. Since the resultant increases in noise along these roadways would not exceed the acceptable noise level for commercial and industrial uses, no mitigation measures related to traffic noise would be required for off-site areas for these roadway segments.

No mitigation measures related to Phase 2 roadway traffic noise would be required for off-site areas.

Phase 3: First Park South 215 Distribution Center. Operation of Phase 3 would generate traffic along roadways in the surrounding area. Table 4.9.K identifies opening year roadway traffic noise levels with and without Phase 3 traffic only.

Table 4.9.K: Phase 3 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 3
	Without Phase 3	With Phase 3	
4th Street			
West of "D" Street	71.0	71.0	0.0
"D" Street to Perris Boulevard	71.0	71.0	0.0
Perris Boulevard to Redlands Avenue	72.0	72.0	0.0
West of Redlands Avenue	66.6	67.5	0.9
East of Redlands Avenue	68.9	69.0	0.1
11th Street			
West of Perris Boulevard	66.6	66.6	0.0
Case Road			
Perris Boulevard to Goetz Road	70.9	70.9	0.0
Goetz Road to Ellis Avenue	69.1	69.2	0.1
Ellis Avenue to Murrieta Road	69.1	69.8	0.7
Murrieta Road to Bonnie Drive	68.7	69.4	0.7
East of Bonnie Drive	67.2	67.2	0.0
Ellis Avenue			
West of Goetz Road	62.5	62.5	0.0
Case Road to Redlands Avenue	60.1	62.4	2.3

Table 4.9.K: Phase 3 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 3
	Without Phase 3	With Phase 3	
Goetz Road to Case Road	63.5	63.5	0.0
East of Redlands Avenue	*New Road*	60.8	**60.8**
Mountain Avenue			
West of Goetz Road	44.0	44.0	0.0
Mapes Road			
West of "A" Street	60.0	60.0	0.0
East of "A" Street	66.3	66.3	0.0
West of Goetz Road	64.1	64.1	0.0
Watson Road			
East of "A" Street	0.0	0.0	0.0
West of "A" Street	47.0	47.0	0.0
Ethanac Road			
West of Goetz Road	67.7	67.7	0.0
Goetz Road to Murrieta Road	73.5	73.5	0.0
Murrieta Road to I-215	73.8	73.8	0.0
East of I-215	71.4	71.4	0.0
Bonnie Drive			
South of Case Road	52.7	52.7	0.0
North of Case Road	67.9	68.6	0.7
Under I-215	71.1	71.3	0.2
Perris Boulevard			
North of 4th Street	70.2	70.2	0.0
4th Street to 11th Street	70.7	70.7	0.0
South of 11th Street	63.1	63.1	0.0
Redlands Avenue			
North of I-215	72.4	72.4	0.0
I-215 to 4th Street	71.7	71.8	0.1
North of 4th Street	67.5	68.1	0.6
4th Street to 7th Street	65.0	66.0	1.0
7th Street to Ellis Street	64.7	65.0	0.3
"A" Street			
North of Mapes Street	62.2	62.2	0.0
Mapes Street to Watson Avenue	47.0	47.0	0.0
Goetz Road			
Case Road to Ellis Avenue	69.9	70.0	0.1
Ellis Avenue to Mountain Avenue	70.2	70.3	0.1
Mountain Avenue to Artlo Avenue	70.2	70.3	0.1
Artlo Avenue to Mapes Road	69.9	70.0	0.1
Mapes Road to San Jacinto River	70.8	70.8	0.0
San Jacinto River to Ethanac Road	71.7	71.7	0.0
South of Ethanac Road	71.0	71.0	0.0
Murrieta Road			
South of Case Road	62.7	62.8	0.1

Table 4.9.K: Phase 3 Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Phase 3
	Without Phase 3	With Phase 3	
North of Ethanac Road	58.4	58.5	0.1
South of Ethanac Road	69.4	69.4	0.0
I-215 Freeway			
North of Redlands Avenue	82.0	82.1	0.1
South Off-Ramp to 4th Street	71.3	71.6	0.3
North On-Ramp to I-215	70.8	71.1	0.3
North Off-Ramp to Redlands Avenue	72.5	72.6	0.1
South of Redlands Avenue	82.4	82.4	0.0
South Off-Ramp to Bonnie Drive	73.1	73.8	0.7
South of BNSF Railroad	81.8	81.9	0.1
South Off-Ramp to Ethanac Road	71.3	71.3	0.0
South On-Ramp to I-215	72.9	72.9	0.0
South of Ethanac Road	82.1	82.2	0.1
SR-74			
East of I-215	72.0	72.0	0.0

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

As identified in Table 4.9.K, implementation of Phase 3 of the proposed project would result in relatively minor changes in traffic noise levels. The largest project-related increase in traffic noise would be along Ellis Avenue east of Redlands Avenue. This segment would experience a 60.8 dBA increase over the baseline (without the project) scenario in opening year. However, it should be noted that Ellis Avenue east of Redlands Avenue is currently an unimproved dirt road which does not receive traffic. With development of the proposed project, Ellis Avenue east of Redlands Avenue would be an improved paved road which would accommodate traffic from Phase 3 and the surrounding area. There is an existing single family residence located to the northwest corner of Redlands Avenue and Ellis Avenue. The ambient noise level measured at this noise-sensitive land use in this area was 65 dB CNEL. The existing ambient noise in the area surrounding the existing single family residence is greater than the amount of traffic noise that would be generated on the Ellis Avenue segment east of Redlands Avenue. Although there would be a 60.8 dBA increase along this roadway segment, existing ambient noise conditions would be greater than this increase. Therefore, the noise would not impact the existing single family residence.

All other roadway segments would have an increase in noise of less than 3.0 dBA, which would not be perceptible to the human ear in an outdoor environment. Similar to Phases 1 and 2, certain roadway segments would experience a noise level increase of less than 3.0 dBA, but are currently experiencing a noise level greater than 65 dBA CNEL. During the operation of Phase 3, Ellis Avenue between Case Road and Redlands Avenue would experience an increase of 2.3 dBA (from an existing noise level of 60.1 dBA CNEL to a noise level of 62.4 dBA CNEL). There is an existing single-family residence located along this section of roadway. However, as previously identified, the ambient noise level measured at this noise-sensitive land use was 65 dB CNEL. Therefore, even with the increase in noise levels along this roadway segment, the noise would not impact the existing single-family residence.

As identified in Table 4.9.K, the segment of Redlands Avenue between 4th Street and 7th Street would experience an increase in noise level from 65 dBA CNEL to 66.1 dBA CNEL at a distance of 50 feet. However, despite this increase in noise, there are no exterior noise-sensitive land uses along either

side of this roadway segment. Therefore, there will be no traffic related noise impacts along this segment of Redlands Avenue.

Another segment of Redlands Avenue between 4th and 7th Streets is also anticipated to experience an increase in traffic noise level from 65.0 dBA CNEL to 66.0 dBA CNEL. As indicated in the Noise Study prepared for this project, the one single-family residence located on the northeast corner of Ellis Avenue and Redlands Avenue is currently exposed to a level of 65 dBA CNEL. Given that this increase is less than 3 dBA, the impact to the single-family residence located on the northeast corner of Ellis Avenue and Redlands Avenue would be less than significant.

All remaining roadways that currently experience noise levels greater than 65 dBA CNEL are adjacent to vacant land and commercial and industrial uses. Noise levels for these uses are acceptable at 75 dBA CNEL. Since the resultant increases in noise along these roadways would not exceed the acceptable noise level for commercial and industrial uses, no mitigation measures related to traffic noise would be required for off-site areas for these roadway segments.

All Phases and Infrastructure: Operation of all three phases would generate traffic along roadways in the surrounding area during opening year. Table 4.9.L identifies opening year roadway traffic noise levels with and without all three phases.

Table 4.9.L: All Phases Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Project
	Without Project	With Project	
4th Street			
West of "D" Street	71.0	71.0	0.0
"D" Street to Perris Boulevard	71.0	71.0	0.0
Perris Boulevard to Redlands Avenue	72.0	72.2	0.2
West of Redlands Avenue	66.6	66.7	0.1
East of Redlands Avenue	68.9	68.9	0.0
11th Street			
West of Perris Boulevard	66.6	66.7	0.1
Case Road			
Perris Boulevard to Goetz Road	70.9	71.1	0.2
Goetz Road to Ellis Avenue	69.1	69.7	0.6
Ellis Avenue to Murrieta Road	69.1	70.2	1.1
Murrieta Road to Bonnie Drive	68.7	69.8	1.1
East of Bonnie Drive	67.2	67.2	0.0
Ellis Avenue			
West of Goetz Road	62.5	62.5	0.0
Case Road to Redlands Avenue	63.5	65.8	2.3
Goetz Road to Case Road	60.1	60.1	0.0
East of Redlands Avenue	*New Road*	60.8	**60.8**
Mountain Avenue			
West of Goetz Road	44.0	52.4	**8.4**
Mapes Road			
West of "A" Street	60.0	60.3	0.3
East of "A" Street	64.1	65.9	1.8

Table 4.9.L: All Phases Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Project
	Without Project	With Project	
West of Goetz Road	64.1	66.3	2.2
Watson Road			
East of "A" Street	0.0	50.0	**50.00**
West of "A" Street	47.0	47.0	0.0
Ethanac Road			
West of Goetz Road	67.7	67.7	0.0
Goetz Road to Murrieta Road	73.5	73.7	0.2
Murrieta Road to I-215	73.8	74.0	0.2
East of I-215	71.4	71.5	0.1
Bonnie Drive			
South of Case Road	52.7	52.7	0.0
North of Case Road	67.9	68.9	1.0
Under I-215	71.1	71.4	0.3
Perris Boulevard			
North of 4th Street	70.2	70.3	0.1
4th Street to 11th Street	70.7	71.1	0.4
South of 11th Street	63.1	63.1	0.0
Redlands Avenue			
North of I-215	72.4	72.5	0.1
I-215 to 4th Street	71.7	71.9	0.2
North of 4th Street	67.5	68.0	0.5
4th Street to 7th Street	65.0	66.1	1.1
7th Street to Ellis Street	64.7	65.8	1.1
"A" Street			
North of Mapes Street	62.2	62.2	0.0
Mapes Street to Watson Avenue	47.0	57.8	**10.8**
Goetz Road			
Case Road to Ellis Avenue	69.9	70.9	1.0
Ellis Avenue to Mountain Avenue	70.2	71.1	0.9
Mountain Avenue to Artlo Avenue	70.2	71.1	0.9
Artlo Avenue to Mapes Road	69.9	70.8	0.9
Mapes Road to San Jacinto River	70.8	71.4	0.6
San Jacinto River to Ethanac Road	71.7	72.2	0.5
South of Ethanac Road	71.0	71.1	0.1
Murrieta Road			
South of Case Road	62.7	62.8	0.1
North of Ethanac Road	63.2	63.3	0.1
South of Ethanac Road	69.4	69.5	0.1
I-215 Freeway			
North of Redlands Avenue	82.0	82.2	0.2
South Off-Ramp to 4th Street	71.3	71.8	0.5

Table 4.9.L: All Phases Opening Year Traffic Noise Levels (dBA)

Roadway Segment	CNEL at 50 feet from Centerline		Increase in Noise Levels Attributable to Project
	Without Project	With Project	
North On-Ramp to I-215	70.8	71.4	0.6
North Off-Ramp to Redlands Avenue	72.5	72.6	0.1
South of Redlands Avenue	82.4	82.4	0.0
South Off-Ramp to Bonnie Drive	73.1	73.6	0.5
South of BNSF Railroad	81.8	82.9	1.2
South Off-Ramp to Ethanac Road	71.3	71.3	0.0
South On-Ramp to I-215	72.9	73.1	0.2
South of Ethanac Road	82.1	82.2	0.1
SR-74			
East of I-215	72.0	71.5	-0.5

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

As identified in Table 4.9.L, increases in noise levels associated with the operation of all three phases would range from 0 dBA to 60.8 dBA. Increases in noise levels of less than 3 dBA would be less than significant. Table 4.9.M identifies which roadway segments would experience an increase in noise levels above the 3 dBA threshold, which is the point at which an increase in noise would be audible.

Table 4.9.M: All Phases Substantial Opening Year Traffic Noise Levels (dBA)

Roadway Segment	Increase in Noise Levels Attributable to Project	Impact Discussed – Level of Significance
Ellis Avenue, east of Redlands Avenue	60.8	Phase 3 – less than significant
Mountain Avenue, west of Goetz Road	8.4	Phase 1 – less than significant
Watson Road, east of "A" Street	50.00	Phase 2 – less than significant
"A" Street between Mapes Street and Watson Avenue	10.8	Phase 2 – less than significant

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

Each of the roadway segments identified in Table 4.9.M is addressed individually relative to the applicable threshold of significance in order to determine the significance of project area wide impacts along each of these roadways.

Ellis Avenue. Ellis Avenue east of Redlands Avenue does not currently exist. There will be project-related traffic additions on this roadway segment as part of the project. The project-related noise level along this section of road will be 60.8 dBA CNEL. The increase is substantial relative to the no project case; however, the total noise level is not significant. There are no existing sensitive land uses along the planned roadway segment and the future uses that are planned here are commercial and industrial. Therefore, there will be a less than significant impact to this new portion of Ellis Avenue.

Mountain Avenue. There will be a project-related traffic noise level increase of 8.4 dB along Mountain Avenue west of Goetz Road. This increase exceeds the 3 dBA increase threshold of significance and would normally be considered to be an impact. The total with project noise is

expected to be 52.4 dB CNEL at a distance of 50 feet. However, there are no existing sensitive land uses along Mountain Avenue; only industrial and commercial uses. Therefore, there would be a less than significant impact along this roadway segment.

Watson Road. Watson Road East of "A" Street does not currently exist. There will be project-related traffic additions on this roadway segment as part of the project. The project-related noise level along this section of road will be 50 dBA CNEL. The increase is substantial relative to the no project case; however, the total noise level is not significant. There are no existing sensitive land uses along the planned roadway segment and the future uses that are planned here are commercial and industrial. Therefore, there will be a less than significant impact to this new portion of Watson Road.

"A" Street. Between Mapes Road and Watson Road, the increase in project-related traffic noise will be 10.8 dB CNEL, which is a substantial increase in noise. The subject project will be located on the east side of "A" Street and the west side is zoned for commercial land use. Since there are no existing sensitive receptors along this portion of "A" Street, there will be a less than significant impact.

The noise levels discussed above would not change with operation of all three phases simultaneously. Based on the analysis conducted for each phase of the proposed project, traffic noise impacts associated with these roadway segments would be less than significant. The installation of roadway and utility infrastructure (water, recycled water, drainage, brine line and sewer lines) is not anticipated to generate roadway traffic noise impacts as these features do not generate noise while in operation. Therefore, no mitigation measures related to the proposed project's opening year traffic noise would be required for off-site areas.

4.9.5.5 Future Year Long-Term Traffic Noise Impacts

Threshold	Would the project result in a substantial temporary, periodic, and/or permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The traffic noise modeling used average daily traffic (ADT) volumes on roadway segments in the project vicinity for General Plan build out with and without project scenarios (which include the operation of all three sites concurrently). The existing ADT volumes in the area were taken from the *Traffic Study* prepared for the proposed project.[1] Since the future year (2030) anticipates that all three phases are operating, all phases are discussed as a whole rather than by phase in this analysis.

All Phases and Infrastructure. Operation of all three phases would generate traffic along roadways in the surrounding area during future year (2030). Increases in noise levels associated with future year (2030) traffic conditions on area roadways range from 0 dBA to 50.0 dBA. As identified in the Table 4.9.N, the greatest increase in noise levels would be along Watson Road east of "A" Street and Mountain Avenue west of Goetz Road.[2] An increase of up to 50.0 dBA is predicted for Watson Road east of "A" Street while an increase of up to 8.5 dBA is predicted for Mountain Avenue west of Goetz Road.

[1] *Traffic Impact Analysis, South Perris Industrial Distribution Center,* Urban Crossroads, October 2008.
[2] *Table 10, Area-Wide Noise Levels at 50 feet from Centerline -2030, Acoustical Impact Analysis South Perris Industrial,* URS Corporation, December 2008. (Appendix H of EIR).

Table 4.9.N: All Phases Future Year (2030) Noise Levels (dBA)

Roadway Segment	Existing	CNEL at 50 feet from Centerline		Cumulative Increase in Noise Levels	Project Increase in Noise Levels
		2030 Without Project	2030 With Project		
4th Street					
West of "D" Street	69.5	71.2	71.2	1.7	0.0
"D" Street to Perris Boulevard	69.5	71.2	71.2	1.7	0.0
Perris Boulevard to Redlands Avenue	69.3	72.3	72.4	**3.1**	0.1
West of Redlands Avenue	64.3	72.3	72.4	**8.1**	0.1
East of Redlands Avenue	65.8	61.9	61.9	-3.9	0.0
11th Street					
West of Perris Boulevard	65.2	66.8	66.9	1.7	0.1
Case Road					
Perris Boulevard to Goetz Road	66.2	71.0	71.3	**5.1**	0.3
Goetz Road to Ellis Avenue	65.4	71.3	71.3	**5.9**	0.0
Ellis Avenue to Murrieta Road	64.8	71.4	71.5	**6.7**	0.1
Murrieta Road to Bonnie Drive	63.4	70.0	70.0	**6.6**	0.0
East of Bonnie Drive	58.4	67.4	67.4	**9.0**	0.0
Ellis Avenue					
West of Goetz Road	58.6	73.9	74.0	**15.4**	0.1
Case Road to Redlands Avenue	0.0	71.8	72.3	**72.3**	0.5
Goetz Road to Case Road	62.0	73.2	73.5	**11.5**	0.3
East of Redlands Avenue	0.0	70.6	71.3	**71.3**	0.7
Mountain Avenue					
West of Goetz Road	46.7	44.0	52.4	**5.7**	**8.4**
Mapes Road					
West of "A" Street	54.4	60.6	61.4	**7.0**	0.8
East of "A" Street	60.6	65.3	65.8	**5.2**	0.5
West of Goetz Road	60.6	65.3	66.7	**6.1**	1.4
Watson Road					
East of "A" Street	0.0	0.0	50.0	**5.0**	**50.0**
West of "A" Street	49.7	60.9	61.0	**11.3**	0.1
Ethanac Road					
West of Goetz Road	55.1	74.6	74.6	**19.5**	0.0
Goetz Road to Murrieta Road	65.5	74.9	75.0	**9.5**	0.1
Murrieta Road to I-215	66.7	75.3	75.4	**8.7**	0.1
East of I-215	66.8	76.6	76.7	**9.9**	0.0
Bonnie Drive					
South of Case Road	51.4	52.7	52.7	1.3	0.0
North of Case Road	63.3	69.9	69.9	**6.6**	0.0
Under I-215	69.3	72.6	72.6	**3.3**	0.0
Perris Boulevard					
North of 4th Street	67.2	71.6	71.7	**4.5**	0.1
4th Street to 11th Street	66.4	71.8	72.0	**5.6**	0.2

Table 4.9.N: All Phases Future Year (2030) Noise Levels (dBA)

Roadway Segment	Existing	CNEL at 50 feet from Centerline		Cumulative Increase in Noise Levels	Project Increase in Noise Levels
		2030 Without Project	2030 With Project		
South of 11th Street	59.7	69.0	69.0	**9.3**	0.0
Redlands Avenue					
North of I-215	66.5	73.0	73.1	**6.6**	0.1
I-215 to 4th Street	67.3	72.1	72.2	**4.9**	0.1
North of 4th Street	64.1	71.2	71.4	**7.3**	0.2
4th Street to 7th Street	63.7	69.5	69.7	**6.0**	0.2
7th Street to Ellis Street	60.4	68.3	70.3	**9.9**	2.0
"A" Street					
North of Mapes Street	60.3	62.2	62.4	2.1	0.2
Mapes Street to Watson Avenue	49.7	61.1	62.5	**12.8**	1.4
Goetz Road					
Case Road to Ellis Avenue	64.2	70.9	71.1	**6.9**	0.2
Ellis Avenue to Mountain Avenue	64.7	73.0	73.5	**8.8**	0.5
Mountain Avenue to Artlo Avenue	64.0	73.0	73.5	**9.5**	0.5
Artlo Avenue to Mapes Road	64.0	73.1	73.5	**9.5**	0.4
Mapes Road to San Jacinto River	65.3	73.6	73.9	**8.6**	0.3
San Jacinto River to Ethanac Road	65.3	73.9	74.2	**8.9**	0.3
South of Ethanac Road	65.3	73.9	74.0	**8.7**	0.1
Murrieta Road					
South of Case Road	59.9	69.4	69.5	**9.6**	0.1
North of Ethanac Road	60.8	69.6	69.7	**8.9**	0.1
South of Ethanac Road	65.3	70.8	70.8	**5.5**	0.0
SR-74					
East of I-215	70.6	72.3	72.3	1.7	0.0

ADT = Average Daily Trips
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

The following analysis discusses the roadway segments that would experience an increase in noise levels above the 3 dBA threshold in year 2030 with the project and whether the increase in noise is significant.

Mountain Avenue. There will be a project-related traffic noise level increase of 8.5 dB along Mountain Avenue west of Goetz Road. This increase exceeds the 3 dBA increase threshold of significance and would normally be considered to be an impact. The total with project noise is expected to be 52.4 dB CNEL at a distance of 50 feet. However, there are no existing sensitive land uses along Mountain Avenue; only industrial and commercial uses. Therefore, there would be a less than significant impact along this roadway segment.

Watson Road. Watson Road East of "A" Street does not currently exist. There will be project-related traffic additions on this roadway segment as part of the project. The project-related noise level along this section of road will be 50 dBA CNEL. The increase is substantial relative to the no project case;

however, the total noise level is not significant. There are no existing sensitive land uses along the planned roadway segment and the future uses that are planned here are commercial and industrial. Therefore, there will be a less than significant impact to this new portion of Watson Road.

Comparison of the Future (2030) Plus Project noise levels with the Future (2030) No Project noise levels show there are fewer project-related impacts as compared to the 2013 case. The one single-family home on Ellis Avenue at Redlands Avenue and the six single-family residences on Mapes Road between "A" Street and Goetz Road will be exposed to future traffic noise levels in excess of 65 dBA CNEL due to projected future growth in and around the area of the project even without the project. There are no new impacts to noise sensitive receivers associated with the future (2030) with project case.

In addition, and importantly, it should be noted that virtually the entire area surrounding and adjacent to the proposed project locations has been previously designated and zoned by the City for future commercial and industrial use. This means that the residential dwelling units located adjacent to roadways in the study area are legally nonconforming land uses. The cumulative impact analysis conducted for potential noise impacts analyzed a 2030 development scenario (as set forth above). Analyzing a twenty-year long-term time horizon is a standard methodology for determining future year cumulative impacts. However, given the global worldwide recession, and given the fact that the growth in inland empire warehouse development has slowed tremendously in the past year, it is unlikely that the area surrounding the proposed project sites will be fully built out by 2030. In addition, because the various residences along the roadways in the study area are legally nonconforming uses it is highly unlikely that these residences will exist in the area at the 2030 or at a later timeline. Thus, in light of these factors, it is highly unlikely that any of the currently existing residential uses will coexist as legally nonconforming uses by the time the south Perris area fully develops as envisioned in the City's General Plan.

All of the increases in noise due to the project are in areas zoned for either commercial or industrial land uses. Since these land uses have no exterior noise standard, there will be no project-related area wide noise impacts in these areas.

4.9.5.6 Short-Term Construction Noise Impacts

Threshold:	Would the project result in a substantial temporary, periodic, and/or permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Short-term noise would occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. In addition, noise generated during excavation, grading, and building erection on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment, and consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site, and therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Construction of the proposed project is expected to require the use of scrapers, bulldozers, and water and pickup trucks. Assuming that each piece of construction equipment operates at some distance

from the other equipment, the worst-case composite noise level during this phase of construction would be 91 dBA L_{max} at a distance of 50 feet from the active construction area.

Phase 1: Airport Distribution Center. Construction of the Airport Distribution Center would require the excavation, grading, and building erection of approximately 783,700 square feet of industrial warehouse space on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. The nearest sensitive receptors to the Phase 1 site is a single-family residence located east of Goetz Road, approximately 250 feet from the eastern most boundary of the Phase 1 site. This residence may be subject to short-term, intermittent, maximum noise reaching 77 dBA L_{max}, generated by construction activities on the project site.[1] However, as indicated in the Noise Study conducted for the proposed project, no significant construction noise impacts would occur if construction of the Phase 1 site would occur within the permitted hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday.[2] Compliance with the construction hours specified in the City's Municipal Code would result in construction noise impacts that are less than significant.

Phase 2: First Park South Perris Distribution Center. Construction of the First Park South Perris Distribution Center would require the excavation, grading, and building erection of approximately 3,448,734 square feet of industrial warehouse space on approximately 201 gross acres located south of Mapes Street between "A" Street and Goetz Road. In addition to these construction activities, Phase 2 would require the importation of approximately 660,000 cubic yards of fill material to bring the site out of the floodplain. The nearest sensitive receptor to the Phase 2 project site boundary are existing residences located north of Mapes Road, approximately 50 feet from the northern most boundary of the Phase 2 site. These residences may be subject to short-term, intermittent, maximum noise reaching 91 dBA L_{max}, generated by construction activities on the project site.[3] However, as identified for the Phase 1 site, no significant construction noise impacts would occur if construction of the Phase 2 site would occur within the permitted hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. Compliance with the construction hours specified in the City's Municipal Code would result in construction noise impacts that are less than significant.

Phase 2 of the proposed project would also have the potential for rail service to the Phase 2 site. It is anticipated that the existing rail line spur would be utilized and no new rail facilities would be built. Therefore, no construction activities would be associated with the rail service component for the Phase 2 site. No impacts associated with construction noise would occur with the rail service proposed for the Phase 2 site. No mitigation is required.

Phase 3: First Park South 215 Distribution Center. Construction of the First Park South 215 Distribution Center would require the excavation, grading, and building erection of approximately 3,166,857 square feet of industrial warehouse space on approximately 215.7 gross acres located at the northeast corner of Redlands Avenue and Ellis Avenue. The nearest sensitive receptor to the Phase 3 project site boundary is an existing residence located at the northwestern corner of South Redlands Avenue and Ellis Avenue, approximately 100 feet from the western most boundary of the Phase 3 site. This residence may be subject to short-term, intermittent, maximum noise reaching 85 dBA L_{max}, generated by construction activities on the project site.[4] However, as identified for the Phase 1 and Phase 2 sites, no significant construction noise impacts would occur if construction of the Phase 3 site would occur within the permitted hours of 7:00 a.m. to 7:00 p.m. Monday through

[1] Construction activities typically generate a noise level of approximately 91 dBA L_{max} at 50 feet. Accounting for distance divergence (log [250 ft ÷ 50 ft] = 0.698; 0.698 × 20 = 13.9), 91 dBA L_{max} – 14 dBA L_{max} = 77 dBA L_{max}.

[2] *Acoustical Impact Analysis, South Perris Industrial,* URS Corporation, December 12, 2008.

[3] Construction activities typically generate a noise level of approximately 91 dBA L_{max} at 50 feet. Accounting for distance divergence (log [50 ft ÷ 50 ft] = 0.0; 0.0 × 20 = 0.0), 91 dBA L_{max} – 0 dBA L_{max} = 91 dBA L_{max}.

[4] Construction activities typically generate a noise level of approximately 91 dBA L_{max} at 50 feet. Accounting for distance divergence (log [100 ft ÷ 50 ft] = 0.301; 0.301 × 20 = 6.02), 91 dBA L_{max} – 6 dBA L_{max} = 85 dBA L_{max}.

Saturday. Compliance with the construction hours specified in the City's Municipal Code would result in construction noise impacts that are less than significant.

All Phases and Infrastructure: As previously stated, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, construction noise that would be attributable to the construction of the three phases would not be significant as long as construction activities occur within the City's designated construction time of 7:00 a.m. to 7:00 p.m. Monday through Saturday. In addition to the development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The proposed project would also install associated water, recycled water, drainage, brine line and sewer infrastructure for the three sites. The installation and construction of these infrastructure improvements would not generate significant construction noise impacts as long as such construction occurs within the City's designated construction time, which is between the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. Therefore, impacts associated with this issue would be less than significant and no mitigation is required.

4.9.6 Significant Impacts

4.9.6.1 Long-Term Operational Noise Impacts

Threshold:	Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the *City of Perris General Plan, Perris Municipal Code*, or applicable standards of other agencies?

Potential long-term stationary noise impacts would primarily be associated with operations at the proposed warehouse distribution uses. The proposed on-site warehouse uses would generate noise from truck delivery, loading/unloading activities at the loading areas, and other noise-producing activities within the parking lot. These activities are potential point sources of noise that could affect noise-sensitive receptors adjacent to the loading areas and parking lots. As noise spreads from a source, it loses energy; therefore, the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dBA reduction in the noise level for each doubling of distance from a single-point source of noise, such as an idling truck, to the noise-sensitive receptor of concern.

As identified in the Methodology portion of this section, the threshold for on-site traffic noise (e.g. truck delivery, loading, and unloading) is 80 dBA L_{max} during the day, 60 dBA L_{max} during the night, and 60 dBA CNEL at the property line of a sensitive receptor.

Phase 1: Airport Distribution Center. As illustrated in previously referenced Figure 3.3A, truck trailer parking, loading and unloading areas for the Phase 1 site are located on the north and south of the building and include 60 dock doors on each side of the building. Parking for passenger vehicles is located along the east and west frontage of the site. Based on the preliminary site plan, the nearest sensitive receptor to the Phase 1 site is a single-family residence located east of Goetz Road, approximately 250 feet from the eastern most boundary of the Phase 1 site.

2081 Goetz Road. Delivery trucks for the proposed on-site warehouse uses would result in a maximum noise similar to noise readings from loading and unloading activities for other light industrial projects. Based on the analysis contained in the Noise Study, the unmitigated maximum noise exposure level (dBA L_{max}) projected at the nearest sensitive receptor located at 2081 Goetz Road is

anticipated to be as high as 64 dBA L_{max}.[1] This is above the 60 dBA L_{max} threshold identified by the City. This is a significant impact requiring mitigation.

Each of these diesel trucks would idle no more than 5 minutes during each loading/unloading operation per the requirement of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB) on truck idling. It is therefore assumed as a worst case scenario that each of the truck will idle 5 minutes at its maximum noise level. With these truck trips distributed evenly throughout the day over a 24-hour period, those that occur during the evening hours (7:00 p.m. to 10:00 p.m.) and nighttime hours (10:00 p.m. to 7:00 a.m. the next day) would be weighted more heavily due to the more sensitive hours in those time periods. Table 4.9.N list the 24-hour weighted CNEL for these truck trips at the residence at 2081 Goetz Road.

Table 4.9.O: Phase 1 – Truck Noise at 2081 Goetz Road

Class	Community Noise Equivalent Level, dBA
Light Trucks	47.7
Medium Trucks	49.7
Heavy Trucks	60.2
Combined Truck Noise	**60.8**
City Standard	60

Table 4.9.O shows that the projected truck idling noise would potentially exceed the City's 60 dBA CNEL exterior noise standard at 2081 Goetz Road from the proposed industrial land uses. Noise mitigation measures will be required to protect the existing residence to the east of the project site.

Other on-site operations, including parking lot activities, trash compactors, and rooftop mechanical ventilation equipment, would also contribute to the on-site operational noise.

Typical activities within a parking lot include the noise from moving vehicles, engine start-ups, door and trunk slams, and conversation. Noise levels of this type generally produce maximum noise levels of less that 60 dBA L_{max} at a distance of 50 feet. Given that the residence at 2081 Goetz Road is located at least 260 feet from the project parking lots, the projected noise level at this residence from activities within the parking lots is expected to be less than 46 dBA L_{max}, which is lower than the 60 dBA L_{max} noise standard. Given that most of the parking lot activities are intermittent and last only seconds, and their noise levels would be 14 dBA lower than that of the truck loading/unloading noise, they would not accumulate or contribute significantly to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from parking lot related activities.

There would be one trash compactor for each proposed building. Since Phase 1 development has only one building proposed, there will be one trash compactor located near the southwest corner of the project site. Trash compactors are typically electrically powered pneumatic devices which compact the inserted waste into a bin that can be replaced when the bin becomes full. Each compactor will be operated for up to 1 hour maximum per day. The noise level of nominal commercial grade trash compactors has been measured at a maximum level of 75 dBA at a distance of 25 feet. In order for the noise level emanating from the trash compact to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 140 feet from the nearest noise sensitive receiver. At the Phase 1 site of the project, the trash compactor will be located at least 1,500 feet (-36 dBA compared to the noise level measured at 25 feet) from the residence at 2081 Goetz Road, and the proposed building will provide shielding (-20 dBA) from the noise emanating from the compactor. The projected noise level from the trash compactor will be reduced to 19 dBA L_{max} or lower, less than 60 dBA L_{max} at the noise sensitive receiver location. Since the trash compactor will be operated for up to

[1] *Acoustical Impact Analysis South Perris Industrial,* URS Corporation, December 12, 2008.

1 hour per day and its associated noise level would be more than 40 dBA lower than that of the truck loading/unloading noise, there will be a less than significant impact from trash compactor noise.

Air conditioning units are typically electrically powered devices that are located on the roof of a given building. The unit dissipates the heat from the mechanical ventilation system to the outside of the building. There will be one 5-ton package unit for each of the offices at the four corners of the proposed building. All HVAC units will be shielded by a minimum 5-foot tall parapet wall. The noise level of the proposed Carrier heating and air conditioning units has been measured at a maximum level of 71 dBA at a distance of 5 feet. In order to for the noise level emanating from the air conditioning units to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 18 feet from the nearest noise sensitive receiver. At the Phase 1 site of the project, the air conditioning units will be located at 360 feet (-37 dBA compared to the noise level measured at 5 feet), 840 feet (-44 dBA), 1,300 feet (-48 dBA), and 1,500 feet (-50 dBA), respectively, from the nearest noise sensitive receiver, and the proposed parapet wall and the building itself will provide shielding (5 to 10 dBA noise reduction) from the noise emanating from the air conditioning units. The projected combined noise level from the rooftop air conditioning units will be approximately 30 dBA L_{max} and less than 60 dBA L_{max} at the noise sensitive receiver. Although these air conditioning units would be operated up to 5 hours a day, their combined noise level would be 30 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from air conditioning unit noise.

There will be 17 exhaust fans, each with 2 horsepower (hp), distributed evenly across the warehouse space on the roof of the proposed building. The exhaust fans would run 24 hours a day. These exhaust fans would be operated at a maximum 1,760 revolutions per minute (rpm) and are estimated to generate 69 dBA at 3 feet. All exhaust fans will be shielded by a minimum 5-foot tall parapet wall. Combining noise reduction by the distance divergence and building/parapet wall shielding, the 17 exhaust fans on the roof would result in 26 dBA L_{max} at this residence. The projected combined noise level from the rooftop exhaust fans will be less than 60 dBA L_{max} at the noise sensitive receiver location. Although these exhaust fans would be operated 24 hours a day, their combined noise level would be 34 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from the rooftop exhaust fan noise.

As disclosed above, the on-site truck loading/unloading activities are the dominant on site noise generator. Noise from parking lot activities and mechanical equipment would have no to minimal effect on the composite noise level of 60.8 dBA CNEL calculated at 2081 Goetz Road from the on-site truck loading/unloading activities.

3314 Goetz Road. There is another existing single-family residence located directly south of the Phase I site, adjacent to Goetz Road, address 3314 Goetz Road. Refer to Figure 4.9.1 for the location of this residence.

The 3314 Goetz Road residence is located approximately 650 feet south of the proposed screen wall to be located along the south side of the truck and trailer parking area. The southern building face will be located 180 feet north of the proposed screen wall. A noise model was developed to calculate the projected noise from the truck operations expected to occur on this side of the proposed building. The model takes into account the different types of trucks, the distribution of trucks by time of day, and the location of the trucks relative to the south screen wall and existing residential structure. This noise model was used to calculate the L_{max} level at the property line of the residential development to the south of the project. As a worst case assumption, the trucks and trailers were modeled as being evenly spaced with the first trailer located at the loading dock nearest the east end of the parking area. The unmitigated L_{max} noise levels for the three types of trucks was calculated to be 46 dBA, 48

dBA, and 56 dBA L_{max} for the light, medium, and heavy trucks, respectively. The 56 dBA L_{max} level is below the nighttime maximum noise standard of 60 dBA L_{max} for a residential land uses.

It is assumed as a worst-case scenario that each of the truck will idle 5 minutes at its maximum noise level. Table 4.9.P list the 24-hour weighted CNEL for these truck trips at the residence at 3314 Goetz Road.

Table 4.9.P: Phase 1 – Truck Noise at 3314 Goetz Road

Class	Community Noise Equivalent Level, dBA
Light Trucks	39.7
Medium Trucks	41.7
Heavy Trucks	52.2
Combined Truck Noise	52.8
City Standard	60

Table 4.9.P shows that the projected truck idling noise would not exceed the City's 60 dBA CNEL exterior noise standard for residential uses at 3341 Goetz Road from commercial and industrial land uses. No noise mitigation measures will be required to protect the existing residence to the south of the project site.

As indicated previously, other on-site operations, including parking lot activities, trash compactors, and rooftop mechanical ventilation equipment, would also contribute to the on-site operational noise.

As indicated previously, parking lots generally produce maximum noise levels of less that 60 dBA L_{max} at a distance of 50 feet. Given that the residence at 3314 Goetz Road is located at least 660 feet from the project parking lots, the projected noise level at this residence from activities within the parking lots is expected to be less than 38 dBA, which is lower than the 60 dBA L_{max} noise standard. Given that most of the parking lot activities are intermittent and last only seconds, and their noise levels would be 22 dBA lower than that of the truck loading/unloading noise, they would not accumulate or contribute significantly to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from parking lot related activities.

As indicated previously, there would be one trash compactor for each proposed building. Since Phase 1 development has only one building proposed, there will be one trash compactor located near the southwest corner of the project site. In order for the noise level emanating from the trash compact to be less than the 60 dBA L_{max} noise standard, the unit will need to be located at least 140 feet from the nearest noise sensitive receiver. At the Phase 1 site of the project, the trash compactor will be located at least 1,300 feet (-34 dBA compared to the noise level measured at 25 feet) from the residence at 3314 Goetz Road, and the proposed building will provide shielding (-20 dBA) from the noise emanating from the compactor. The projected noise level from the trash compactor will be reduced to 21 dBA L_{max} or lower, less than 60 dBA L_{max} at the noise sensitive receiver location. Since the trash compactor will be operated for up to 1 hour per day, and its associated noise level would be more than 39 dBA lower than that of the truck loading/unloading noise, there will be a less than significant impact from trash compactor noise.

As indicated previously, there will be one 5-ton HVAC package unit for each of the offices at the four corners of the proposed building. All HVAC units will be shielded by a minimum 5-foot tall parapet wall. The noise level of the proposed Carrier heating and air conditioning units has been measured at a maximum level of 71 dBA at a distance of 5 feet. In order to for the noise level emanating from the air conditioning units to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 18 feet from the nearest noise sensitive receiver. At the Phase 1 site of the project, the air conditioning units will be located at 600 feet (-42 dBA compared to the noise level measured at 5 feet), 1,200 feet (-48 dBA), 1,320 feet (-48 dBA), and 1,620 feet (-50 dBA), respectively, from this

noise sensitive receiver, and the proposed parapet wall and the building itself will provide shielding (5 dBA noise reduction) from the noise emanating from the air conditioning units. The projected combined noise level from the rooftop air conditioning units will be approximately 26 dBA L_{max} and less than 60 dBA L_{max} at this noise sensitive receiver location. Although these air conditioning units would be operated up to 5 hours a day, their combined noise level would be 34 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from air conditioning unit noise.

As indicated previously, there will be 17 exhaust fans, each with 2 horsepower (hp), distributed evenly across the warehouse space on the roof of the proposed building. Combining noise reduction by the distance divergence and building/parapet wall shielding, the 17 exhaust fans on the roof would result in 30 dBA L_{max} at this residence. The projected combined noise level from the rooftop exhaust fans will be less than 60 dBA L_{max} at the noise sensitive receiver location. Although these exhaust fans would be operated 24 hours a day, their combined noise level would be 30 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from the rooftop exhaust fan noise.

As disclosed above, the on-site truck loading/unloading activities are the dominant on-site noise generator. Noise from parking lot activities and mechanical equipment would have no to minimal effect on the composite noise level of 52.8 dBA CNEL calculated at 3314 Goetz Road from the on-site truck loading/unloading activities.

Phase 2: First Park South Perris Distribution Center. As illustrated in previously referenced Figure 3.3B, truck trailer parking, loading and unloading areas for all Phase 2 buildings are located on the east and west sides of the buildings. Parking for passenger vehicles on the Phase 2 site is located along the north and south sides for all buildings. Based on the preliminary site plan, the nearest sensitive receptor to the Phase 2 site are the single-family residences located north of Mapes Road, approximately 50 feet from the northern most boundary of the Phase 2 site, approximately 70 feet from the nearest parking lots, approximately 134 from the nearest building, and approximately 250 feet from the nearest trucking dock.

Site 1 (280 and 310 Mapes Road) and Site 2 (170 Mapes Road). Delivery trucks for the proposed on-site warehouse uses would result in a maximum noise similar to noise readings from loading and unloading activities for other light industrial projects. As previously stated, the truck parking areas are proposed between Building 1 and Building 3 as well as between Building 3 and Building 4. Therefore, most of the noise from the trucks movements would be localized down the center of these parking areas. Based on the analysis contained in the Noise Study, the unmitigated maximum noise exposure level (dBA L_{max}) projected at the nearest sensitive receptor is anticipated to be 62 dBA L_{max}.[1] This is above the 60 dBA L_{max} threshold identified by the City. This is a significant impact requiring mitigation.

It is assumed as a worst case scenario that each of the truck will idle 5 minutes at its maximum noise level. Table 4.9.Q list the 24-hour weighted CNEL for these truck trips at the residences at Site 1 (280 and 310 Mapes Road).

Table 4.9.Q: Phase 2 – Truck Noise at Site 1 (280 and 310 Mapes Road)

Class	Community Noise Equivalent Level, dBA
Light Trucks	52.4
Medium Trucks	54.4

[1] *Acoustical Impact Analysis South Perris Industrial,* URS Corporation, December 12, 2008.

Table 4.9.Q: Phase 2 – Truck Noise at Site 1 (280 and 310 Mapes Road)

Class	Community Noise Equivalent Level, dBA
Heavy Trucks	63.9
Combined Truck Noise	64.6
City Standard	60

Table 4.9.Q shows that the projected truck idling noise would potentially exceed the City's 60 dBA CNEL exterior noise standard for residential uses at Site 1 (280 and 310 Mapes Road) from the proposed industrial land uses. Noise mitigation measures will be required to protect the existing residences to the north of the project site.

The projected unmitigated L_{max} level projected from on-site truck movements between Buildings 3 and 4 at residential receptor Site 2 is expected to be 53 dBA, 55 dBA, and 62 dBA L_{max} for the light, medium, and heavy trucks, respectively. The 62 dBA L_{max} levels at both receptor sites exceeds the 60 dBA L_{max} noise standard for a residential land uses. Subsequently, noise mitigation measures should be included to protect the existing residential land uses to the north of the project site.

Table 4.9.R lists the 24-hour weighted CNEL for these truck trips at the residences at Site 2 (170 Mapes Road).

Table 4.9.R: Phase 2 – Truck Noise at Site 2 (170 Mapes Road)

Class	Community Noise Equivalent Level, dBA
Light Trucks	50.8
Medium Trucks	52.8
Heavy Trucks	61.9
Combined Truck Noise	62.7
City Standard	60

Table 4.9.R shows that the projected truck idling noise would potentially exceed the City's 60 dBA CNEL exterior noise standard for residential uses at Site 2 (170 Mapes Road) from the proposed industrial land uses. Noise mitigation measures will be required to protect the existing residences to the north of the project site.

As indicated previously for Phase 1, other on-site operations, including parking lot activities, trash compactors, and rooftop mechanical ventilation equipment, would also contribute to the on-site operational noise at the Phase 2 site.

As indicated previously, parking lots generally produce maximum noise levels of less that 60 dBA L_{max} at a distance of 50 feet. Given that the residence at Site 1 (280 and 310 Mapes Road) and Site 2 (170 Mapes Road) are located at least 100 feet from the project parking lots, the projected noise level at these residence from activities within the parking lots is expected to be less than 54 dBA, which is lower than the 60 dBA L_{max} noise standard. Given that most of the parking lot activities are intermittent and last only seconds, and their noise levels would be 6 dBA lower than that of the truck loading/unloading noise, they would not accumulate or contribute significantly to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from parking lot related activities.

As indicated previously, there would be one trash compactor for each proposed building. Since Phase 2 development has only four buildings proposed, there will be four trash compactors located near the southwest corner of each building. In order for the noise level emanating from the trash compact to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 140 feet from the

nearest noise sensitive receiver. At the Phase 2 site of the project, the trash compactors will be located at least 1,500 feet (-35 dBA compared to the noise level measured at 25 feet) from the residences at Site 1 and Site 2, and the proposed building will provide shielding (-20 dBA) from the noise emanating from the compactor. The projected noise level from the trash compactor will be reduced to 35 dBA L_{max} or lower, less than 60 dBA Lmax at the noise sensitive receiver location. Since the trash compactor will be operated for up to 1 hour per day, and its associated noise level would be more than 25 dBA lower than that of the truck loading/unloading noise, there will be a less than significant impact from trash compactor noise.

There will be one 2.5-ton HVAC package unit for each of the offices at the proposed buildings. All HVAC units will be shielded by a minimum 5-foot tall parapet wall. The noise level of the proposed Carrier heating and air conditioning units has been measured at a maximum level of 69 dBA at a distance of 5 feet. In order to for the noise level emanating from the air conditioning units to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 14 feet from the nearest noise sensitive receiver. At the Phase 2 site, the air conditioning units will be located at 480 feet (-40 dBA compared to the noise level measured at 5 feet) at Site 1 and Site 2, and the proposed parapet wall and the building itself will provide shielding (5 to 20 dBA noise reduction) from the noise emanating from the air conditioning units. The projected combined noise level from the rooftop air conditioning units will be approximately 30 dBA L_{max} and less than 60 dBA L_{max} at this noise sensitive receiver location. Although these air conditioning units would be operated up to 5 hours a day or more, their combined noise level would be 30 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from air conditioning unit noise.

There will be 16 exhaust fans on Building 1, 17 exhaust fans on Building 2, 30 exhaust fans on Building 3, and 14 exhaust fans on Building 4. Each of these exhaust fans will have 2 horsepower (hp) motors, distributed evenly across the warehouse space on the roof of the proposed buildings. The exhaust fans would run 24 hours a day. These exhaust fans would be operated at a maximum 1,760 revolutions per minute (rpm) and are estimated to generate 69 dBA at 3 feet. All exhaust fans will be shielded by a minimum 5-foot tall parapet wall. Combining noise reduction by the distance divergence and building/parapet wall shielding, the exhaust fans on the roof of these four buildings would result in 31 dBA L_{max} at these nearest residences at Site 1 and Site 2. The projected combined noise level from the rooftop exhaust fans will be less than 60 dBA L_{max} at the noise sensitive receiver locations. Although these exhaust fans would be operated 24 hours a day, their combined noise level would be 29 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from the rooftop exhaust fan noise.

As disclosed above, the on-site truck loading/unloading activities are the dominant on site noise generator. Noise from parking lot activities and mechanical equipment would have no to minimal effect on the composite noise level of 64.6 dBA CNEL calculated at Site 1 (280 and 310 Mapes Road) and 62.7 dBA CNEL at Site 2 (170 Mapes Road) from the on-site truck loading/unloading activities.

Phase 3: First Park South 215 Distribution Center. As illustrated in previously referenced Figure 3.3.C, truck trailer parking, loading and unloading areas for Buildings A-1, A-2 and C are located on the east and west sides of the buildings. For Building B, truck trailer parking, loading, and unloading areas are located on the north and south sides of the building. Parking for passenger vehicles on the Phase 2 site is located along the north side of Building A-1, the south side of Building A-2, the north and south sides of Building C, and the east and west sides of Building B.

340 Ellis Avenue and The Academy Community Day School. Based on the preliminary site plan, the nearest sensitive receptors to the Phase 3 site is an existing single-family residence. The single-family residence is located at the northwestern corner of South Redlands Avenue and Ellis Avenue,

approximately 100 feet from the western most boundary of the Phase 3 site, approximately 140 feet from the nearest parking lot, approximately 175 feet to the nearest building, and approximately 420 feet from the nearest truck dock. In addition, The Academy community day school is located west of Redlands Avenue, just south of 7th Street, approximately 100 feet west of the Phase 3 boundary and 400 feet west of the truck dock.

Delivery trucks for the proposed on-site warehouse uses would result in a maximum noise similar to noise readings from loading and unloading activities for other light industrial projects. Based on the analysis contained in the Noise Study, the unmitigated maximum noise exposure level (dBA L_{max}) projected at the nearest sensitive receptor is anticipated to be as high as 67 dBA L_{max}.[1] This is above the 60 dBA L_{max} threshold identified by the City.

The type and number of trucks expected to operate on the west side of Building B are presented in Table 4.9.S. The numbers listed in the table represent half of the total volume of trucks expected to access Building B. The hours of operation for the facility were not immediately available; therefore, as a worst case scenario, it was assumed that the facility would operate around the clock with a uniform number of trucks entering and leaving the facility each hour of the day.

Table 4.9.S: Phase 3 – Truck Type Breakdown Building B

Class	Day	Truck Mix Evening	Night
Light Trucks	9	2	7
Medium Trucks	9	2	7
Heavy Trucks	16	4	12
Total	34	9	26

The projected unmitigated L_{max} noise levels for the three types of trucks was calculated to be 58 dBA, 60 dBA, and 67 dBA L_{max} for the light, medium, and heavy trucks, respectively. The 67 dBA L_{max} level exceeds the nighttime maximum noise standard for residential land uses. This is a significant impact requiring mitigation to protect the existing residential land use to the west of the project site.

The type and number of trucks expected to operate at Building C are presented in Table 4.9.T.

Table 4.9.T: Phase 3 – Truck Type Breakdown Building C

Class	Day	Truck Mix Evening	Night
Light Trucks	6	2	8
Medium Trucks	6	2	8
Heavy Trucks	12	3	15
Total	24	7	31

The projected unmitigated L_{max} noise levels for the three types of trucks was calculated to be 51 dBA, 53 dBA, and 61 dBA L_{max} for the light, medium, and heavy trucks, respectively. The 61 dBA L_{max} level exceeds the nighttime maximum noise standard for residential land uses. Noise mitigation measures will be included below to protect the existing noise-sensitive school use to the west of the project site.

It is assumed as a worst case scenario that each of the truck will idle 5 minutes at its maximum noise level. Table 4.9.T list the 24-hour weighted CNEL for these truck trips at the residences at 340 Ellis Avenue.

[1] *Acoustical Impact Analysis South Perris Industrial,* URS Corporation, December 12, 2008.

Table 4.9.U: Phase 3 – Truck Noise at 340 Ellis Avenue

Class	Community Noise Equivalent Level, dBA
Light Trucks	52.6
Medium Trucks	54.6
Heavy Trucks	64.1
Combined Truck Noise	64.8
City Standard	60.0

Table 4.9.U shows that the projected truck idling noise would potentially exceed the City's 60 dBA CNEL exterior noise standard for residential uses at 340 Ellis Avenue from the proposed industrial land uses. Noise mitigation measures will be required to protect the existing residences to the west of the project site.

Table 4.9.V list the 24-hour weighted CNEL for these truck trips at The Academy community day school.

Table 4.9.V: Phase 3 – Truck Noise at The Academy Community Day School

Class	Community Noise Equivalent Level, dBA
Light Trucks	44.2
Medium Trucks	46.2
Heavy Trucks	56.7
Combined Truck Noise	57.3
City Standard	60

Table 4.9.V shows that the projected truck idling noise would not exceed the City's 60 dBA CNEL exterior noise standard for noise sensitive uses at The Academy community day school from commercial and industrial land uses. No noise mitigation measures will be required to protect the existing school to the west of the project site.

As indicated previously for Phases 1 and 2, other on-site operations, including parking lot activities, trash compactors, and rooftop mechanical ventilation equipment, would also contribute to the on-site operational noise at the Phase 3 site.

As indicated previously, parking lots generally produce maximum noise levels of less that 60 dBA L_{max} at a distance of 50 feet. Given that the residence at 340 Ellis Avenue and The Academy community day school are located at least 100 feet from the project parking lots, the projected noise level at these locations from activities within the parking lots is expected to be less than 54 dBA, which is lower than the 60 dBA L_{max} noise standard. Given that most of the parking lot activities are intermittent and last only seconds, and their noise levels would be 6 dBA lower than that of the truck loading/unloading noise and would add one dBA to the ambient noise dominated by the truck loading/unloading noise, they would not accumulate or contribute significantly to the ambient noise condition. Therefore, there will be a less than significant impact from parking lot related activities.

As indicated previously, there would be one trash compactor for each proposed building. Since Phase 3 development has four buildings proposed, there will be four trash compactors located near the northeast or southeast corner of each building. In order for the noise level emanating from the trash compact to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 140 feet from the nearest noise sensitive receiver. At the Phase 3 site of the project, the trash compactors will be located at least 1,650 feet (-36 dBA compared to the noise level measured at 25 feet) from the residence at 340 Ellis Avenue and The Academy community day school, and the proposed building will provide shielding (-15 to -20 dBA) from the noise emanating from the compactor. The projected noise level from the trash compactor will be reduced to 28 dBA L_{max} or lower, less than 60 dBA L_{max} at the noise sensitive receiver

location. Since the trash compactor will be operated for up to 1 hour per day, and its associated noise level would be more than 32 dBA lower than that of the truck loading/unloading noise, there will be a less than significant impact from trash compactor noise.

There will be two 5-ton package unit for the one office proposed at Building A-1 and Building A-2, and one 5-ton package unit for each of the two offices at the proposed Building B and one 5-ton package unit for each of the three offices at Building C. All HVAC units will be shielded by a minimum 5-foot tall parapet wall. The noise level of the proposed Carrier heating and air conditioning units has been measured at a maximum level of 71 dBA at a distance of 5 feet. In order to for the noise level emanating from the air conditioning units to be less than the 60 dBA L_{max} noise standard, the units will need to be located at least 18 feet from the nearest noise sensitive receiver. At the Phase 3 site, the air conditioning units will be located at 1,350 feet (-49 dBA compared to the noise level measured at 5 feet) at 340 Ellis Avenue and The Academy community day school, and the proposed parapet wall and the building itself will provide shielding (5 dBA noise reduction) from the noise emanating from the air conditioning units. The projected combined noise level from the rooftop air conditioning units will be lower than 23 dBA L_{max} and less than 60 dBA L_{max} at this noise sensitive receiver location. Although these air conditioning units would be operated up to 5 hours a day or more, their combined noise level would be 37 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from air conditioning unit noise.

There will be 16 exhaust fans on Building A-1, 18 exhaust fans on Building A-2, 13 exhaust fans on Building B, and 20 exhaust fans on Building C. Each of these exhaust fans will have 2 horsepower (hp) motors, distributed evenly across the warehouse space on the roof of the proposed buildings. The exhaust fans would run 24 hours a day. These exhaust fans would be operated at a maximum 1,760 revolutions per minute (rpm), and are estimated to generate 69 dBA at 3 feet. All exhaust fans will be shielded by a minimum 5-foot tall parapet wall. Combining noise reduction by the distance divergence and building/parapet wall shielding, the exhaust fans on the roof of these four buildings would result in 27 dBA L_{max} at these nearest receptors at 340 Ellis Avenue and The Academy community day school. The projected combined noise level from the rooftop exhaust fans will be less than 60 dBA L_{max} at the noise sensitive receiver locations. Although these exhaust fans would be operated 24 hours a day, their combined noise level would be 33 dBA lower than that of the truck loading/unloading noise and would not contribute measurably to the ambient noise dominated by the truck loading/unloading noise. Therefore, there will be a less than significant impact from the rooftop exhaust fan noise.

As disclosed above, the on-site truck loading/unloading activities are the dominant on site noise generator. Noise from parking lot activities and mechanical equipment would increase the estimated composite noise levels by one dBA, resulting in 65.8 dBA CNEL calculated at 340 Ellis Avenue and 58.3 dBA CNEL at The Academy community day school.

All Phases and Infrastructure. As previously stated, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. Stationary noise sources on each of the sites would generate noise below the City's standard of 60 dBA L_{max}. As identified previously, each of the three phases would expose the nearest sensitive receptors to noise levels greater than the City's maximum noise exposure level of 60 dBA L_{max} during truck delivery, loading, and unloading. However, implementation of **Mitigation Measures 4.9.6.1A** through **4.9.6.1D** would reduce impacts associated with this issue to a less than significant level. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The proposed project would also install associated water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. The operation of these infrastructure features would not generate long-term traffic. Therefore, impacts associated with this issue would be less than significant.

Mitigation Measures. Operation of the proposed project would result in noise levels at the closest sensitive receptors exceeding the maximum exterior and therefore the maximum interior noise level allowed. The following mitigation measure would reduce interior noise level impacts associated with the proposed project:

4.9.6.1A Prior to the issuance of ~~certificates of~~ occupancy permits for Phase 1, the project proponent shall provide evidence to the City that an 8 foot high noise barrier shall be constructed along the east end of the loading dock and trailer parking area of the Phase 1 building and along the west and north sides of the trailer parking area on the west side of Building B.

4.9.6.1B Prior to the issuance of ~~certificates of~~ occupancy permits for Phase 2, the project proponent shall provide evidence to the City that an 8 foot high noise barrier shall be constructed along the northern end of the dock and trailer parking area beginning from the eastern face of Building 1 across to the western face of Building 3 and across the northern end of the dock and trailer parking area beginning from the eastern face of Building 3 across to the western face of Building 4.

4.9.6.1C Prior to the issuance of ~~certificates of~~ occupancy permits for Phase 3, the project proponent shall provide evidence to the City that a 12-foot high noise barrier shall be constructed on the Phase 3 site. The west portion of the noise barrier shall extend at a minimum, half the distance of the western trailer parking area for Building C. The southern portion of the noise barrier shall extend across the entire width of the trailer parking dock area to connect with the west face of Building C. In addition, an 8-foot high noise barrier shall be constructed on the Phase 3 site along the west and north sides of the trailer parking area on the west side of Building B.

4.9.6.1D Prior to the issuance of ~~certificates of~~ occupancy permits for any phasing, the project proponent shall provide evidence to the City that the noise barriers have a surface density of at least 3.5 pounds per square foot and have no openings or gaps. The noise barriers shall be constructed using an earthen berm, a free standing wall, or a combination of these two methods. The free standing wall shall be constructed from ~~cinder~~ decorative block ~~or any masonry~~ material. The access gates shall be solid barriers, as opposed to wrought iron fences, and must have a surface density of at least 3.5 pounds per square foot and have no openings or gaps. The access gates can be constructed using 13 gauge sheet steel, 3/8" glass, 5/8" Plexiglas, 1¼" plywood, or a combination of these materials.

Level of Significance after Mitigation. As identified in Table 4.9.W, adherence to **Mitigation Measures 4.9.6.1A** through **4.9.6.1D** would reduce impacts to the nearest sensitive receptor to below the City's threshold of 60 dBA L_{max} and 65 dBA CNEL.

Table 4.9.W: Maximum Noise Levels at Nearest Sensitive Receptor after Mitigation (dBA L_{max}/CNEL)

Nearest Sensitive Receptors	Noise Levels at Sensitive Receptors		Exceed Noise Standard?[1]
	Without Mitigation	With Mitigation	
Phase 1	64/60.8	58/55	No
Phase 2	62/64.6	57/59.6	No
Phase 3	67/65.8	58/56.8	No

[1] City of Perris has a threshold of 60 dBA L_{max} and 60 CNEL. 57/62 = L_{max}/CNEL
Source: LSA Associates, Inc. January 2009.

Adherence to the identified mitigation measures would reduce impacts associated with this issue to a less than significant level.

4.9.6.2 Long-Term Rail Noise Impacts

Threshold:	Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the *City of Perris General Plan, Perris Municipal Code*, or applicable standards of other agencies?

There is an existing railroad line which runs parallel to the I-215 from Moreno Valley south through the City of Perris. This rail line splits south of the old Perris Train Depot located at 7th Street. One line continues south passing by the Orange Empire Railway Museum and terminates on the south side of Mapes Road. The other line heads southeast to service the communities of Hemet and San Jacinto. These rail tracks are owned and operated by the Burlington Santa Fe Railway company. There currently is no existing freight traffic along the line to the Orange Empire Railway Museum as the line is only used when the museum offers trolley rides. There is a potential for a portion of the project area to accommodate rail service. Because there are sensitive receptors in the immediate vicinity of the project and roadways surrounding the project site, the sensitive receptors impacted by the potential rail service must also be analyzed.

Phase 1: Airport Distribution Center. The Airport Distribution Center does not include a rail component; therefore, no impacts associated with long-term rail noise would occur with implementation of Phase 1. No mitigation is required.

Phase 2: First Park South Perris Distribution Center. The ultimate design of Phase 2 may include an extension of the drill track to accommodate direct rail cargo operations to the Phase 2 site. One component of Phase 2 is to upgrade the grade crossing at Mapes Road and extend new rail along the west side of Buildings 1 and 2 to allow the project site to be accessed by freight railroad services. Based on preliminary project information, the train engines that would service the Phase 2 site would be diesel-electric locomotives approximately 1,200 feet in length. It is anticipated that rail service can be provided every day that the train is scheduled to operate and will only serve the Phase 2 site if there is a shipment to deliver or a car to pull. It is also anticipated that there will be two trips per day; one trip south to the distribution center and one trip back. The expected schedule for the freight train at the Phase 2 site is between the hours of 7:00 a.m. and 7:00 p.m. with deliveries expected to occur on Tuesday, Thursday, and Saturday. It is anticipated that the trains bound for the Phase 2 site would only be hauled to MARB by BNSF. The timing of train arrivals and departures on the segment south of the MARB drop off would be handled by the project applicant.

The freight train would operate on the existing dedicated rail system which has a maximum speed limit of 10 miles per hour (mph). The length of the train passing through the area will be determined by traffic that is destined to, and pulled from the Phase 2 site. As identified in the Noise Study conducted for the proposed project, during day peak hour operations, a freight train is expected to generate approximately 63.6 dBA L_{eq} at a distance of 50 feet. This results in an overall noise exposure level of 61.6 dBA L_{dn} when operating at grade. As previously illustrated in Figure 4.9.1, there are several noise-sensitive land uses that currently exist along the proposed rail line. The following discussion provides noise analysis on those sensitive land uses along the proposed rail line.

Rail Noise Between Nuevo Road and 7th Street. As identified in the Noise Study, all of the existing noise-sensitive land uses located between Nuevo Road and 7th Street are currently exposed to noise from existing railroad operations. According to the FTA protocol, given that these locations already experience noise from railroad operations, the potential impact is determined relative to the change in noise level due to the increase in railroad operations. For these areas, the addition of the proposed rail line would result in an increase in train traffic of up to 18 cars three days a week. As indicated in Table 4.9.X, the noise levels generated by the increase in train cars on the rail line were compared to the existing train noise levels at these sensitive sites.

Table 4.9.X: Rail Line Noise Levels North of 7th Street

ID	Location	Railroad Noise (dBA CNEL)		Increase Due to Project (dBA CNEL)
		Without Project	With Project	
LT-1	24480 Nuevo Road	50.0	50.1	0.1
LT-2	619 "C" Street	61.3	61.4	0.1
ST-1	"A" Street & Serrana Road	43.8	43.9	0.1
ST-2	East end of Mertz Road at Metz Park	48.0	48.1	0.1
ST-3	549 "D" Street & I-215 Freeway On-ramp	55.4	55.4	0.0
ST-4	214 "C" Street	53.6	53.7	0.1

CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

The addition of 18 train cars on the rail line would increase the noise level from the railroad operations by 0.1 dBA CNEL. As identified in the Noise Study conducted for the proposed project, a noise level increase of this magnitude is insignificant.

However, as part of the Disclosure Statement issued to all buyers of the homes within Tentative Tract 31201 (the homes to the west of the rail line depicted in Figure 3.1 of this EIR and on Figure 15 in the Acoustical Imapct Analysis contained in Appendix I to this EIR) were approved by the City with the express acknowledgment that rail noise impacts would exist due to the rail line. Specifically, the Conditions of Approval that were placed on of the Tentative Map by the City included the following:

29. Disclosure Statement — Railroad Right of Way. Developer shall record a disclosure on each lot and provide a disclosure to the purchaser of each lot that the project is subject to noise impacts on an intermittent basis by the passage of trains (electrically and diesel-powered) associated with the Orange Empire Railway Museum on weekends and as associated with special events. The Orange Empire Railway Museum has a long term lease through the Riverside County Transportation Commission.

A. Railway Noise Easement. The applicant shall grant to the City of Perris, the Orange Empire Railway Museum and to the Riverside County Transportation Commission a railway noise easement in the form and manner approved by the City Attorney and shall cause such easement to be duly recorded in the office of the County Recorder. The applicant shall provide full disclosure of the Railway Noise Easement and Notice of Railroad in the Vicinity prior to the sale of individual properties within the project.

B. Notice of Railroad in the Vicinity. A Notice of Railroad in the Vicinity and an aerial photograph identifying the location of railroad in proximity to the project site shall be displayed and distributed in model homes at the project site. The following statement is required for distribution to the public:

"NOTICE OF RAILROAD IN VICINITY
This property is located in the vicinity of a railroad, and as such, prospective homeowners and tenants within this development will be subject to the noise, annoyance or inconvenience associated with proximity to railroad operations (including noise, vibration, or odors). Individual sensitivities can vary from person to person. You are urged to consider the railroad impacts associated with the property prior to completing your purchase and determine whether they are acceptable to you."

C. Upgraded Sound Insulation. In addition to any required noise attenuation measures, the applicant shall offer an optional sound insulation package (e.g., upgraded doors, windows, insulation, baffles, etc.) for homebuyers who have considered potential noise impacts from the adjacent railroad and potential traffic, and wish to purchase additional sound attenuation

materials. The upgraded sound insulation package is voluntary and any costs shall be borne by the purchaser. Each optional measure shall be in addition to any sound mitigation measures otherwise required to meet City of Perris standards for residential land use.

As identified in Table 4.9.X, all of the existing noise-sensitive land uses located between Nuevo Road and 7th Street would not be impacted by the increase in the noise associated with increases in train activity along the proposed rail line. Therefore impacts to existing noise-sensitive land uses between Nuevo Road and 7th Street would be less than significant.

Rail Noise Between 7th Street and Mapes Road. The sensitive receptors located between 7th Street and Mapes Road do not currently experience noise from existing freight railroad operations. According to the FTA protocol, since these receivers do not currently experience noise from existing railroad operations on this line, the potential impact is determined relative to the measured existing ambient noise level. The noise from project-related railroad operations (1 engine and 18 cars) was calculated at each of the representative receivers located south of 7th Street. A description of each sensitive receptor is provided in Table 4.9.Y.

Table 4.9.Y: Description of Sensitive Receptors Between 7th Street and Mapes Road

ID	Monitoring Address	Monitoring Location	Sensitive Receptor Represents
LT-3	1127 Palisades Street	Southwest corner of the project right-of-way and 11th Street	Homes along both sides of the project right-of-way between South Street to the north and Short Street to the south.
LT-4	1975 Teak Street	Southeast corner of Teak Street, just east of "A" Street	Homes along the west side of the project right-of-way from Aspen Lane to Mapes Road on the south.
LT-5	310 Mapes Road	On Mapes Road, east of the project right-of-way.	Single-Family Residence.
ST-5	Ellis Street east of BNSF Railroad Tracks	West end of Ellis Avenue, east of the project right-of-way.	Homes along both sides of the project right-of-way from Short Street to the north and Red Maple Place to the south.
ST-6	301 Red Spruce Place	Southern corner of Red Spruce Place and "B" Street.	Along both sides of the project right-of-way from Red Maple Place to the north through Aspen Lane to the south.

Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

As identified in Table 4.9.Z, the total noise levels were compared to the existing ambient level and the impacts relative to the FTA protocol were determined for each sensitive receptor along the project right-of-way south of 7th Street.

Table 4.9.Z: Rail Line Noise Levels Between 7th Street and Mapes Road

ID	Railroad Noise (dBA CNEL)		Increase Due to Project (dBA CNEL)	FTA Impact
	Without Project	With Project		
LT-3	58.4	59.9	1.5	None
LT-4	59.7	59.9	0.2	None
LT-5	65.4	65.4	0.0	None
ST-5	52.5	56.3	3.8	None
ST-6	52.8	53.9	1.1	None

CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

As identified in Table 4.9.Z, sensitive receptors would experience an increase of 0.0 to 3.8 dBA with the addition of the rail component. In addition, many of the existing homes adjacent to the railroad

right-of-way have existing noise barriers which will provide some noise reduction for rail-related noise. The types and heights of the existing barriers at each of the representative receptor sites were determined during the noise measurement survey. The effectiveness of the existing noise barriers were calculated and compared to the noise mitigation required in that area. As identified in Table 4.9.AA, the heights of the existing noise barriers would further reduce the noise expected from the proposed railroad operations. Therefore, homes along these portions of the project would not be subject to noise impacts from the proposed railroad operations.

Table 4.9.AA: Existing Noise Barriers Reduction Effectiveness (dBA CNEL)

ID	Type of Noise Barrier	Increase in Rail Noise Due to Project	Noise Reduction Provided by Existing Noise Barrier
LT-3	6' high block wall	1.5	5.6
LT-4	4' high block wall on 2' high berm	0.2	—
LT-5	Chain link fence	0.0	—
ST-5	6' high block wall on 2' berm	3.8	10.4
ST-6	5.5' high wood slat fence	1.1	0

CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

Railroad Grade Crossings. Development of the rail component for Phase 2 would also result in the regular activation of the safety features at the grade crossings currently located along the project right-of-way. The railroad crossings located between 11th Street to the north and Mapes Road to the south are not currently activated since there are no freight operations along this section of the project right-of-way. When operations associated with the project approach pass through these grade crossings, the noise-sensitive land uses adjacent to these crossings would be exposed to noise from safety equipment as well as noise from the passing freight train itself. The three primary sources of noise associated with railroad grade crossing would include noise from the passing freight engines and cars, noise from the bells at the crossing gates, and noise from the horn on the lead locomotive. The noise levels that are anticipated to occur from each of these sources at the 11th Street crossing are identified in Table 4.9.BB.

Table 4.9.BB: 11th Street Rail Grade Crossing Noise Levels (dBA)

Noise Source (at 50 Feet)	Single Event Level (SEL)	Hourly L_{eq}[1]	L_{max}	CNEL[2]
Train Engines	92	63.4	88	61.4
Train Cars	82	50.0	80	48.0
Train Horn	113	74.4	110	73.6
Warning Devices	93	57.4	93	56.6
Total[3]	**114.5**	**74.8**	**110.0**	**73.9**

[1] Project includes noise from one event during the hour.
[2] Project includes noise from two events during two different hours during the day
[3] The total noise level identified is based on a logarithmic equation and is not additive in nature
CNEL = Community Noise Equivalent Level
Note: The noise threshold for railroads is governed by EPA and FRA and is based on a sliding scale.
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

The noise level at the crossings would be dominated by the sound of the locomotive horn as it passes through the grade crossing. As identified in Table 4.9.Y, the maximum noise level anticipated from the train horn at the 11th Street grade crossing is 110 dBA at a distance of 50 feet. For noise-sensitive land uses near this grade crossing, this would result in a significant level of short duration noise. The nearest homes on the north side of the grade crossing at 11th Street are located approximately 56 feet from the tracks. Train horn noise levels at this distance can easily exceed 100 dBA.

Rail operations are considered part of the interstate commerce, and train noise is exempt from local noise standards or requirements because of the obvious safety benefits from train whistles at grade crossing. Nonetheless, this is a significant impact requiring mitigation.

The grade crossing at Mapes Road is anticipated to see more activity than any other intersection along the project right-of-way. The South Perris Distribution Center is proposed to be located on the south side of Mapes Road where there is planned to be a four-track switching area for goods going to and from the distribution center. As identified in the Noise Study conducted for the proposed project, the switching activities at this location are expected to last up to an hour in duration. The local freight is currently planned to conduct the switching activities at this location between the hours of 7 a.m. and 7 p.m. The nearest noise-sensitive receptor is a single family residence located at 310 Mapes Road, approximately 1,120 feet east of the grade crossing at Mapes Road. The noise levels from the engines, cars, horns, and crossing bells at the nearest sensitive receptor to the Mapes Road grade crossing are provided in Table 4.9.CC.

As identified in Table 4.9.CC, overall noise exposure level for one continuous hour of switching operations at the Mapes Road crossing would result in a noise exposure level of 57.0 dBA CNEL at the nearest sensitive receptor. The ambient noise level measured at 310 Mapes Road was 65.4 dBA CNEL, while the quietest ambient hourly L_{eq} measured at this location during the daytime hours was 54.3 dBA L_{eq}. The operations proposed at the Mapes Road crossing would be heard at the nearest sensitive receptor to the project grade crossing, however the overall noise exposure level from the switching activities is expected to be about 8 dB less than the existing ambient at that location.

Table 4.9.CC: Mapes Road Rail Grade Crossing Noise Levels (dBA)

Noise Source (at 1,120 Feet)	Single Event Level (SEL)	Hourly L_{eq}[1]	L_{max}	CNEL[2]
Train Engines	79.0	44.2	61	40.4
Train Cars	74.2	46.4	46	42.6
Train Horn	71.4	50.6	83	56.4
Warning Devices	82.0	46.4	73	45.4
Total[3]	**84.4**	**53.6**	**83**	**57.0**

[1] Project includes noise from one event during the hour.
[2] Project includes noise from two events during two different hours during the day
[3] The total noise level identified is based on a logarmitive equation and is not additive in nature
CNEL = Community Noise Equivalent Level
Source: *Acoustical Impact Analysis South Perris Industrial,* City of Perris. URS Corporation, May 2009 (Appendix I).

Emergency equipment, such as locomotive horns, are designed to be very loud as they are used for public safety. Since locomotive design and safety is governed by Federal regulation, train horns are generally not subject to local noise control regulations. The only way to mitigate noise from railroad locomotive horns would be to develop a Quiet Zone along this portion of the project right-of-way.

The Federal Railroad Administration (FRA) has developed a set of procedures through the Final Rule (49 CFR Parts 222 and 229) which outline the two types of safety improvement options for upgrading a quiet zone to meet FRA safety standards. These include the implementation of Supplemental Safety Measures (SSMs) and Alternative Safety Measures (ASMs), which if installed allows for the establishment of a whistle-free zone. The SSMs are designed to reduce the risk of train/vehicle or train/pedestrian accidents at the specific grade crossing with the absence of the train horns. Supplemental Safety Measures (SSMs) include the following:

- Four-Quadrant Gate Systems;
- Medians or Channelization Devices;
- One-Way Streets with Gates; and
- Permanent Closure.

Alternative Safety Measures (ASMs) include the following:

- Modified SSMs (e.g., Non-Complying Medians and Three-Quadrant Gates);
- Engineered ASMs (i.e., Geometric Improvements); and
- Non-Engineered ASMs (e.g., Programmed Enforcement, Photo Enforcement, and Education).

Federal regulations called the Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings, 49 CFR 222 ("Horn Rule"), require that trains sound their horns as a warning to highway users at public highway-rail crossings. California Public Utilities Code Section 7604 requires that trains sound their horns at all private and pedestrian crossings as well. The Horn Rule allows localities to establish "quiet zones", which prohibits the routine sounding of horns at quiet zone designated rail crossings. In order to establish a quiet zone, the crossing must have the following characteristics:

- **Minimum Length** of at least one-half mile along the railroad track (except where a new quiet zone is added to an existing quiet zone).
- **Active grade crossing warning devices** that include both flashing lights and gates that control traffic over the crossing. In addition, the crossing must be equipped with constant warning time devices (regulating when the gate arms drop), if reasonably practical, and power-out indicators.
- **Advance Warning Signs** that advise the motorist that train horns are not sounded at the crossing.

In order to establish a quiet zone, the City must first provide a written Notice of Intent to the FRA, California Public Utilities Commission, and the railroad carrier operating over the affected right-of-way. The Notice of Intent has a 60-day comment period. If there is a private and/or pedestrian grade crossing in the proposed quiet zone, a diagnostic team (composed of representatives of the affected railroad carrier, the FRA and the California Public Utilities Commission) must evaluate whether or not the quiet zone meets the above stated criteria. After expiration of the 60-day comment period (or after completion of diagnostic team recommendations, if any) the City must provide a Notice of Quiet Zone Establishment with a minimum 21-day notice period. The quiet zone is established upon expiration of the 21-day notice period. Thereafter, the routine sounding of horns at the quiet zone crossing is prohibited.

As identified in Noise Study conducted for the proposed project, it is recommended that, when the crossing signals are upgraded for the project to allow the use of freight operations through the rail crossings at 11th Street and at Mapes Road, the upgrades include the SSMs, which would allow for the establishment of a whistle-free zone. The addition of SSMs would include the installation of measures such as crossing gates on the existing side of the tracks for each side of the street and the construction of curbs down the center of the street which prohibits vehicles from one side to pass on the opposite side of the street. A specific analysis of both crossings would need to be made to determine the risk factors of the specific crossing relative to the National Risk Index. Once this analysis is complete, specific SSMs can be recommended which will sufficiently reduce the risk factor to acceptable levels to allow for a quiet zone.

Phase 3: First Park South 215 Distribution Center. The First Park South 215 Distribution Center does not include a rail component; therefore, no impacts associated with long-term rail noise would occur with implementation of Phase 3. No mitigation is required.

All Phases and Infrastructure. As previously stated, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated

in the previous analysis, although the three phases would expose the nearest sensitive receptors to rail noise levels, these rail noise levels would not be greater than the City's exterior noise standard of 60 dBA L_{max} with the exception use of locomotive horns at the Mapes Road rail grade crossing. In addition to the development of these three sites with warehouse distribution uses, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The proposed project would also install associated water, recycled water, drainage, brine line, and sewer infrastructure for the three sites. The operation of these infrastructure features would not be impacted by rail noise as these are infrastructure features.

Mitigation Measures. Operation of the proposed project's rail component would result in noise levels at the closest sensitive receptors exceeding the maximum exterior and the maximum interior noise levels allowed. As identified in the City's General Plan EIR, the City aims to reduce exterior and interior noise levels to no more than 65 dBA CNEL and 45 dBA CNEL for sensitive land uses.

4.9.6.2A Prior to the issuance ~~of certificates~~ of occupancy permits for Phase 2, the project proponent shall coordinate with the City in the formation of a Quiet Zone along the proposed 11th Street and Mapes Road at-grade crossings. The project proponent and the City shall engage in the process of creating a Quiet Zone which includes but is not limited to the following actions:

- Provision of a written Notice of Intent to Establish a Quiet Zone to the Federal Railroad Administration, California Public Utilities Commission, and the railroad carrier operating over the impacted right-of-way; and
- Provision of evidence to the Federal Railroad Administration and the California Public Utilities Commission that the at-grade crossings meet all safety criteria for establishing a quiet zone.

Level of Significance after Mitigation. Adherence to **Mitigation Measure 4.9.6.2A** would reduce impacts associated with this issue to a less than significant level.

4.9.7 Cumulative Impacts

The cumulative area for noise impacts is the City of Perris. Cumulative projects are identified in Section 2.0, Table 2.A and Figure 2.1. Implementation of the proposed project would result in the introduction of new noise sources and levels. Construction crew commutes and the transport of construction equipment, materials, and fill to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Secondary sources of noise would include noise generated during excavation, grading, and building erection on the project site. The net increase in project site noise levels generated by these activities and other sources has been quantitatively estimated and compared to the applicable noise standards and thresholds of significance. Although it is not possible to predict if contiguous properties may be constructed at the same time and create cumulative noise impacts that would be greater than if developed at separate times, it is unlikely that adjacent properties will be developed at the same time as the proposed project. However, in the unlikely event that adjacent properties are developed at the same time as the proposed project, implementation of the stated mitigation measures would render the cumulative impacts of the proposed project to less than significant levels. The noise analysis contained in this section also provides an assessment of on-site operational noise level impacts onto adjacent sensitive uses, both existing and future. Additionally, on-site operational noises are individual noise occurrences and are not additive in nature.

Cumulative traffic volumes were developed from the addition of traffic generated by approved and pending projects to opening year with project traffic volumes. Cumulative noise impacts associated

with roadway noise have been addressed based on the cumulative traffic volumes. The increases over existing year (2008) traffic volumes are attributable to cumulative development projects in the project vicinity and region. Previously referenced Table 4.9.L provides a comparison of existing year (2008) noise levels, future year (2030) without project noise levels, and future year with project noise levels and if a cumulatively significant impact or project-specific impact occurs.

The project calls for improvements to several of the roadways around the project area in order to accommodate the projected increase in project traffic volumes. The future cumulative condition (2030) includes the same roadway improvements included in the 2013 scenario along with the addition of a proposed interchange at Ellis Avenue and I-215. All of the areas around the project sites are zoned as either commercial or industrial land uses, and there are no new noise-sensitive land uses proposed to be constructed within the area of analysis. However, several of the roadway segments analyzed are fronted by school uses, legally nonconforming residential uses, and/or are residentially zoned. These roadway segments are analyzed against the 3 dBA threshold for determining significant impacts. The following analysis discusses the roadway segments where cumulative traffic additions create a change in noise levels of 3 dBA CNEL or more and assesses whether the project's contribution is cumulatively significant based on the thresholds defined previously.

4.9.7.1 4th Street

Fourth Street from Perris Boulevard to Redlands Avenue would experience a cumulative increase in noise levels of 3.1 dBA and a resulting 2030 with project noise level of 72.4 dBA CNEL. Since the cumulative increase is substantial relative to existing conditions and the 2030 with project noise level exceeds the City's exterior noise standard of 65 dBA CNEL, the cumulative impact would be significant. However, the project's contribution to the cumulative noise level of 0.1 dBA is less than the significance threshold. Consequently, the contribution of project noise to the cumulative noise impact on 4th Street would not be considerable.

4.9.7.2 Case Road

The roadway segments analyzed on Case Road (from Perris Boulevard to east of Bonnie Drive) would experience a cumulative increase in noise ranging from 5.1 to 9.0 dBA and resulting 2030 with project noise levels ranging from 67.4 to 71.1 dBA CNEL. Since the cumulative increase is substantial relative to existing conditions and the 2030 with project noise levels exceed the City's exterior noise standard of 65 dBA CNEL, the cumulative impact would be significant. However, the project's contribution to the cumulative noise levels ranging from 0.0 to 0.3 dBA is less than the significance threshold. Consequently, the contribution of project noise to the cumulative noise impact on Case Road would not be considerable.

4.9.7.3 Ellis Avenue

The roadway segments analyzed on Ellis Avenue (from west of Goetz Road to east of Redlands Avenue) would experience a cumulative increase in noise ranging from 71.3 to 11.5 dBA and resulting 2030 with project noise levels ranging from 71.3 to 74.0 dBA CNEL. Since the cumulative increase is substantial relative to existing conditions and the 2030 with project noise levels exceed the City's exterior noise standard of 65 dBA CNEL, the cumulative impact would be significant. However, the project's contribution to the cumulative noise levels ranging from 0.1 to 0.7 dBA is less than the significance threshold. Consequently, the contribution of project noise to the cumulative noise impact on Ellis Avenue would not be considerable.

4.9.7.4 Mountain Avenue

Mountain Avenue west of Goetz Road would experience a project-specific increase in noise level of 8.4 dBA. Other related projects would not affect noise levels along this roadway segment. However, there are no existing sensitive land uses along Mountain Avenue; only industrial and commercial uses. Therefore, there would be a less than significant project-specific impact along this roadway segment and no cumulative impact.

4.9.7.5 Mapes Road

The roadway segments analyzed on Mapes Road (from west of "A" Street to west of Goetz Road) would experience a cumulative increase in noise ranging from 5.2 to 7.0 dBA and resulting 2030 with project noise levels ranging from 61.4 to 66.7 dBA CNEL. Although the cumulative increase is substantial relative to existing conditions, there are no existing sensitive land uses along Mapes Road; only industrial and commercial uses. Consequently, the cumulative noise impact on Ellis Avenue is considered to be less than significant.

4.9.7.6 Watson Road

Watson Road east of "A" Street does not currently exist. This segment of roadway would experience a project increase in noise levels of 50.0 dBA and a resulting 2030 with project noise level of 50.0 dBA CNEL. Watson Road west of "A" Street would experience a cumulative increase in noise of 11.3 dBA CNEL. These increases would normally be considered an impact. However, there are no existing sensitive land uses along these segments of Watson Road and the future uses that are planned here are industrial. Therefore, the project and cumulative increase in noise levels on Watson Avenue are considered to be less than significant.

4.9.7.7 Ethanac Road

The roadway segments analyzed on Ethanac Road (from west of Goetz Road to east of I-215) would experience a cumulative increase in noise ranging from 8.7 to 19.5 dBA and resulting 2030 with project noise levels ranging from 74.6 to 76.7 dBA CNEL. ~~Although,~~ Since the cumulative increase is substantial relative to existing conditions and there are existing sensitive land uses along these segments of Ethanac Road, ~~there are no existing sensitive land uses along these segments of Ethanac Road.~~ ~~Consequently~~, the cumulative noise impact ~~on Ethanac Road~~ is considered to be ~~less than~~ significant. However, the project would not contribute to any measurable increase to the noise levels west of Goetz Road and east of I-215 and the project's 0.1 dBA contribution to the other two roadway segments is less than the significance threshold and would be imperceptible. Consequently, the contribution of the project to the cumulative impact would not be considerable.

4.9.7.8 Bonnie Drive

Bonnie Drive north of Case Road and under I-215 would experience a cumulative increase in noise levels ranging from 3.3 to 6.6 dBA and resulting 2030 with project noise levels of 69.9 to 72.6 dBA CNEL. Although the cumulative increase is substantial relative to existing conditions, the proposed project does not contribute measurably to the cumulative increase in noise levels. Consequently, the project would not contribute to a cumulative noise impact on Bonnie Drive.

4.9.7.9 Perris Boulevard

The roadway segments analyzed on Perris Boulevard (from north of 4th Street to south of 11th Street) would experience a cumulative increase in noise ranging from 4.5 to 9.3 dBA and resulting 2030 with project noise levels ranging from 69.0 to 72.0 dBA CNEL. Since the cumulative increase is substantial

relative to existing conditions and the 2030 with project noise levels exceed the City's exterior noise standard of 65 dBA CNEL, the cumulative impact would be significant. However, the project's contribution to the cumulative noise levels ranging from 0.0 to 0.2 dBA is less than the significance threshold. Consequently, the contribution of project noise to the cumulative noise impact on Perris Boulevard would not be considerable.

4.9.7.10 Redlands Avenue

The roadway segments analyzed on Redlands Avenue (from north of I-215 to Ellis Street) would experience a cumulative increase in noise ranging from 4.9 to 9.9 dBA and resulting 2030 with project noise levels ranging from 69.7 to 73.1 dBA CNEL. Since the cumulative increase is substantial relative to existing conditions and the 2030 with project noise levels exceed the City's exterior noise standard of 65 dBA CNEL, the cumulative impact would be significant. However, the project's contribution to the cumulative noise levels ranging from 0.1 to 2.0 dBA is less than the significance threshold. Consequently, the contribution of project noise to the cumulative noise impact on Redlands Avenue would not be considerable.

4.9.7.11 "A" Street

"A" Street from Mapes Street to Watson Avenue would experience a cumulative increase in noise level of 12.8 dBA and a resulting 2030 with project noise level of 62.5 dBA CNEL. Although the cumulative increase is substantial relative to existing conditions, there are no existing sensitive land uses along this segment of "A" Street. Consequently, the cumulative noise impact on "A" Street is considered to be less than significant.

4.9.7.12 Goetz Road

The roadway segments analyzed on Goetz Road (from Case Road to south of Ethanac Road) would experience a cumulative increase in noise ranging from 6.9 to 9.5 dBA and resulting 2030 with project noise levels ranging from 71.1 to 74.2 dBA CNEL. Since the cumulative increase is substantial relative to existing conditions and the 2030 with project noise levels exceed the City's exterior noise standard of 65 dBA CNEL, the cumulative impact would be significant. However, the project's contribution to the cumulative noise levels ranging from 0.1 to 0.5 dBA is less than the significance threshold. Consequently, the contribution of project noise to the cumulative noise impact on Goetz Road would not be considerable.

4.9.7.13 Murrieta Road

The roadway segments analyzed on Murrieta Road (from south of Case Road to south of Ethanac Road) would experience a cumulative increase in noise ranging from 5.5 to 9.6 dBA and resulting 2030 with project noise levels ranging from 69.5 to 70.8 dBA CNEL. ~~Although t~~The cumulative increase is substantial relative to existing conditions and there are existing sensitive land uses located along Murrieta Road south of Ethanac Road. ~~there are no existing sensitive land uses along this segment of Murrieta Road.~~ However, the proposed project would not contribute a measurable amount to the increase in noise south of Ethanac Road. Consequently, the cumulative noise impact on Murrieta Road is considered to be less than significant.

4.9.7.14 Summary

As stated earlier, the baseline condition represents a noise environment that, in light of approved and continuing development in the project area, is not likely to be replicated. Comparing existing and future cumulative noise levels that would occur with the project, cumulative development would cause significant cumulative noise impacts along several roadway segments. However, the contribution of

the proposed project to the cumulative noise impacts would not be considerable (i.e., they would be less than 3.0 dBA CNEL and the increase would be significant whether or not the proposed project is approved). In addition, it should be remembered that virtually the entire area surrounding and adjacent to the proposed project locations has been previously designated and zoned by the City for future commercial and industrial use. This means that most of the residential dwelling units located adjacent to roadways in the study area are legally nonconforming land uses. The cumulative impact analysis conducted for potential noise impacts analyzed a 2030 development scenario (as set forth above). Analyzing a 20-year long-term time horizon is a standard methodology for determining future year cumulative impacts. However, given the global worldwide recession, and given the fact that the growth in Inland Empire warehouse development has slowed tremendously in the past year, it is unlikely that the area surrounding the proposed project sites will be fully built out by 2030. In addition, because the various residences along the roadways in the study area are non-conforming uses it is highly unlikely that these residences will exist in the area at the 2030 or at a later timeline. Thus, in light of these factors, it is highly unlikely that any of the currently existing residential uses will coexist as non-conforming uses by the time the south Perris area fully develops as envisioned in the City's General Plan.

4.10 PUBLIC SERVICES AND FACILITIES

This EIR discussion includes an evaluation of police and fire services. The analysis considers the existing public services and facilities in the project vicinity and evaluates the impacts to service providers that would result from the construction and operation of the proposed on-site uses. The analysis contained in this section is based on the following reference documents:

- City of Perris General Plan 2030 Draft EIR, City of Perris, October 2004; and
- Safety Element, City of Perris General Plan, City of Perris, adopted October 25, 2005.

Impacts related to parks, schools, and other public facilities were determined to be less than significant in the Initial Study prepared for the proposed project and are not discussed in this section.

4.10.1 Police Protection

4.10.1.1 Existing Setting

Since April of 1996, police services in the City have been provided under contract by the Riverside County Sheriff's Department (RCSD) acting as the Perris Police Department. Police operations are provided from the Perris Station located at 137 N. Perris Boulevard, approximately 1.5 miles north of the Phase 1 site, 2.0 miles north of the Phase 2 site, and 0.75 mile northwest of the Phase 3 site. In addition to the City of Perris, this station serves the City of Canyon Lake and the unincorporated communities of Glen Valley, Mead Valley, Woodcrest, Romoland, and Sun City.[1] The Perris Police Station currently supports 165 sworn officers. Current staffing includes 1 Captain, 5 Lieutenants, 17 Sergeants, 12 Investigators, 11 Corporals, and 119 deputies. All 165 of the sworn deputies are assigned to serve the City of Perris under terms of the contract between the City and the RCSD. While no specific special services are provided from the Perris Station, the RCSD provides Special Enforcement Bureau (similar to SWAT), Hazardous Device Team (HDT), Hostage Negotiation Team (HNT), Central Homicide Unit (CHU), canine support, investigative forensics support, and a number of other services to all stations as needed.

The RCSD provides law enforcement services to homes and businesses within the City. The need for the public services and associated facilities are measured by service area population, or the number of residents and workers within the City's service area. Service population reasonably predicts the need for police facilities. The RCSD and Perris Police Department use a standard of 1.2 officers per 1,000 residents.[2] As population increases and as vacant properties are developed with commercial, industrial, and residential uses, the demand on law enforcement personnel and facilities would increase. In addition to population, other factors such as the number and/or type of business, and type of clientele are taken into consideration when assessing the need for additional law enforcement personnel or facilities. The current officer per resident ratio is 2.56 officers per 1,000 residents,[3] which is below the RCSD standard of 1.2 officers per 1,000 residents. In the City, the need for additional police stations and facilities is determined on an as-needed basis.

The proposed project sites fall within beat PE35, which for purposes for tallying crime statistics is identified as Reporting District PE916D. Within Reporting District PE916D, 128 violent crimes and 424 property crimes were reported during 2008. Violent crimes are further broken down as follows: murder/manslaughter (1), forcible rape (3), robbery (34), aggravated assault (90). Property crimes are further broken down as follows: burglaries (126), larceny theft (167), motor vehicle theft (77), motor

[1] Riverside County Sheriff's Department. Sheriff's Stations and Contract Cities Perris Station. http://www.riversidesheriff.org/department/sta-agcy.htm. Site accessed September 29, 2008.

[2] E-mail correspondence from Terry Wood, City of Perris Police Station, dated February 13, 2008.

[3] Perris Population = 63,440 in 2010 according to SCAG. 63,440 × 1.2 officers = 76,128 ÷ 1,000 people = 76.128 officers needed per entire population. 163 total officers available = 2.56 officers per 1,000 residents.

vehicle burglary (54), and arson (0).[1] Year 2008 crime statistics were based on a population of 53,605, a 5.7 increase in population over year 2007.

Police response times vary by time of day and priority of the call. Response time refers to the time required for a patrol unit to arrive at the scene of a call for service. Response types are categorized into four categories as follows: Priority 1 – "In-progress," life-threatening incidents; Priority 2 – Slightly less severe in nature; Priority 3 – Routine in nature; and Priority 4 – Past incidents that may be handled by telephone or a delayed response. Within the City as a whole, the response times for Priority 1 crimes and Priority 3 crimes averaged 4.04 and 11.8 minutes, respectively in 2008.[2]

4.10.1.2 Existing Policies and Regulations

The following are policies found within the City's General Plan that pertain to police services and are applicable to the proposed project.

Land Use Element

Goal II New development consistent with infrastructure capacity and municipal service capabilities.

Policy II.A Require new development to pay its full, fair share of infrastructure costs.

Measure II.A.3 Revise the capital facilities fee program so that all infrastructure construction and improvements, including public safety facilities attributable to new development, are identified and fully funded.

Safety Element

Goal II Improved response times for emergency service providers (police, fire, and medical services).

Policy II.B Provide adequate emergency facilities to serve existing and future residents.

Measure II.B.1 Adopt capital facilities fees to fund improvements in public safety facilities and equipment.

Measure II.B.2 Adopt the capital facilities fee program so that all infrastructure improvements identified as attributable to new development are fully funded.

Measure II.B.3 Identify sources of funding for additional facilities to serve existing development.

4.10.1.3 Methodology

Evaluation of impacts associated with the proposed project on police services includes the following:

- Determine the existing police response time for the City based on RCSD goals;
- Determine the length of time for police services to arrive at the project site based on average travel time;
- Compare existing police response time and potential police response time; and
- Determine funding mechanism for future police services, staff, and facilities.

[1] E-mail correspondence from Captain James McElvain, PhD, Riverside County Sheriff's Department, dated January 5, 2009.

[2] E-mail correspondence from Captain James McElvain, PhD, Riverside County Sheriff's Department, dated January 5, 2009.

Police service funding impacts were evaluated by identifying compliance with local and RCSD goals and policies. Response time impacts were evaluated by comparing existing and anticipated average responses through RCSD response time goals.

4.10.1.4 Thresholds of Significance

Based on Appendix G of the *CEQA Guidelines,* police protection impacts would be considered significant if the following condition resulted from the construction or operation of the proposed project:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.

4.10.1.5 Less Than Significant Impacts

Impacts to police protection services were determined to be less than significant through adherence to established regulations, standards, and policies.

4.10.1.5.1 Police Services

Threshold	Would the proposed project result in substantial adverse physical impacts associated with the provision of new or physically altered law enforcement facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police services?

The development and operation of 7,399,291 square feet of warehouse uses would increase demand for police protection services. Initially, crimes of grand theft and malicious mischief during construction would be the potential major crime issue. However, it is anticipated that private security would be utilized during the construction process, similar to other private security services that are utilized for other construction projects in the City. Typical operational police protection services involved with industrial uses include after hours patrol. Potential impacts would take the form of a need for expanded police protection services routinely associated with industrial growth. Although the proposed industrial uses would generate new employment opportunities for approximately 2,960 people, the new jobs that would be created by the proposed project would not induce substantial population growth because most of the new jobs would likely be filled by residents of the City and surrounding area.

The City and RCSD have established a target response goal of 4.31 minutes for major crimes in progress, 9.21 minutes for minor crimes in progress, and 12.51 minutes for past crimes. Because police response is based on the severity or nature of the call itself, response times may range from as short as 4.31 minutes and as long 12.51 minutes. The City monitors staffing levels to ensure that adequate police protection continues to be provided as individual development projects are proposed and on an annual basis as part of the City Council's budgeting process. Therefore, the proposed project would not result in a significant reduction in police response times due to the continual monitoring of police staffing levels by the City.

Funding for new police facilities commensurate with the increased demand for services in the City of Perris would be provided from capital improvement fees levied on new development. Both the City and the RCSD collect fees to offset impacts associated with new development. These development

impact fees (DIFs) are one-time charges applied to new development and are imposed to raise revenue for the construction or expansion of capital facilities located out of the project boundaries of a new development that benefit the area. DIFs enable the City or agency to collect fair-share fees from new development projects to fund new infrastructure and services. Countywide, developers are required to pay a mitigation fees for industrial development. In the City, developers are also required to pay development fees per square foot of development to offset impacts associated with increased demand on law enforcement services. DIFs are collected for specific infrastructure needs and are deposited into different accounts representing these requirements.

The proposed project would be designed and operated per applicable standards required by the City and RCSD for new development in regards to public safety. In addition, the project would be required to pay development fees used to fund capital costs associated with constructing new public safety structures and purchasing equipment for new public safety structures. Accordingly, impacts associated with police services for the proposed project would be less than significant and no mitigation is required.

4.10.1.6 Significant Impacts

All potential impacts of the proposed project to police protection services have been determined to be less than significant. No significant impacts would occur; therefore, no mitigation is required.

4.10.2 Fire Protection

4.10.2.1 Existing Setting

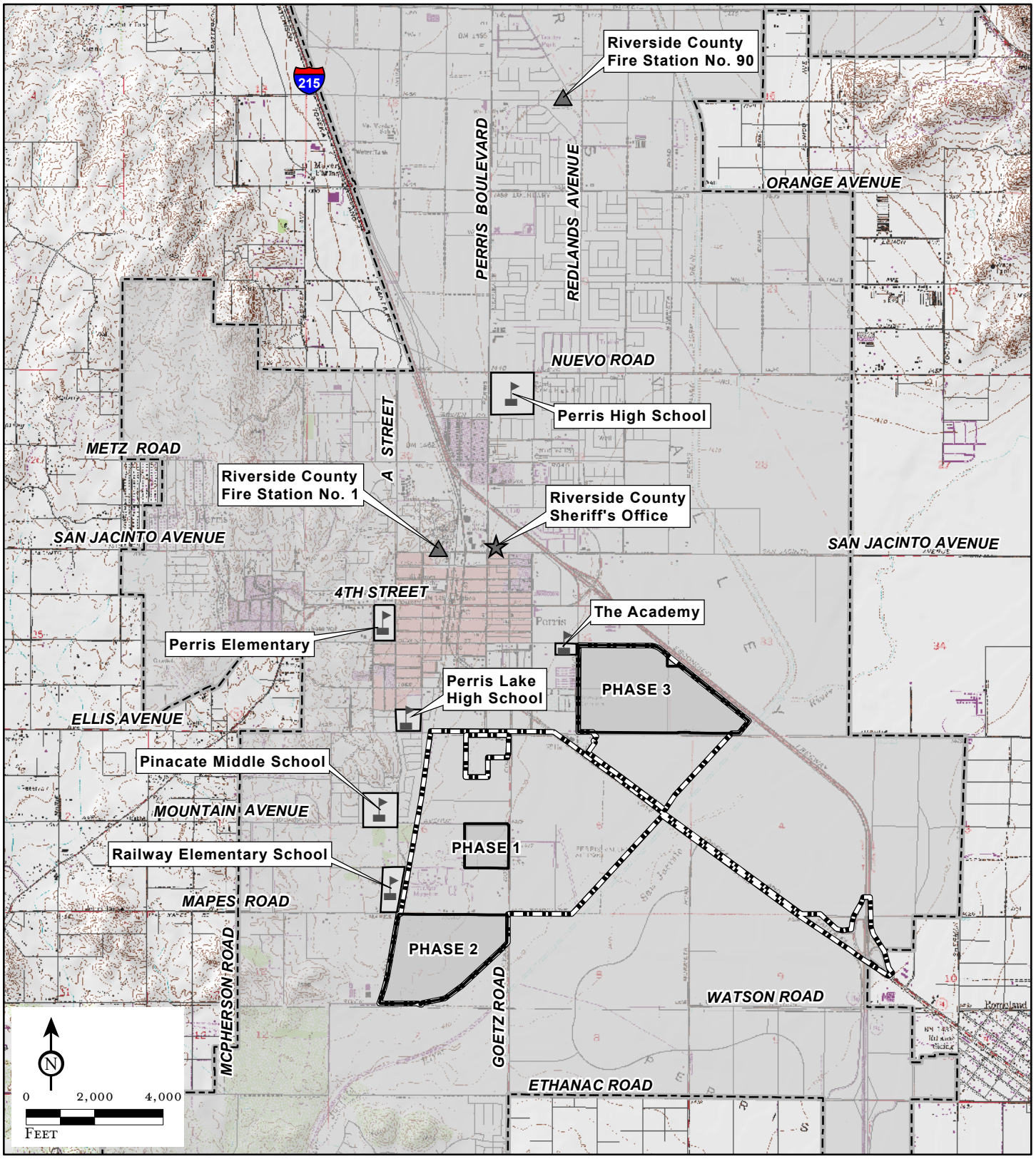
The Phase 1 site is currently occupied by a concrete bridge manufacturing operation and is currently provided fire protection services. The California Department of Forestry and Fire Protection (CDF), under contract with and operating as the Riverside County Fire Department (RCFD) Southwest Division, provides fire prevention, suppression, and paramedic services within the City limits. The Southwest Division comprises four battalions, which cover the southwestern portion of the County from the San Diego County line on the south, on the north to the southern edge of the City of Moreno Valley, and east to the western portion of the Hemet Valley. Battalion One, which serves the City of Perris includes the stations listed in Table 4.10.A.

Table 4.10.A: Battalion One Fire Stations

Station No.	Address
Station 1	210 W. San Jacinto Avenue
Station 3	30515 East 10th Street
Station 9	21565 Steele Peak Road
Station 54	25730 Sultanas Road
Station 90	333 Placentia Avenue

Source: Riverside County Fire Department Southwest Division, http://www.rvcfire.org/opencms/facilities/FireStations/SouthWestDiv/, Website accessed September 30, 2008.

Station No. 1, as illustrated in Figure 4.10.1, is located approximately 0.9 mile northwest of the Phase 3 project site and provides primary coverage to the City and is the closest station to the three proposed project sites. Fire Station No. 1 employs six full-time personnel and is equipped with one paramedic fire engine, and two brush fire engines. During the fire season, which varies from year to year, but has been approximated between the months of April through November, staffing at Station No.1 is increased by an additional 4 full-time personnel and the addition of two Type III (brush) engines.



LSA

FIGURE 4.10.1

PROJECT AREA
PROJECT SITES
PERRIS CITY LIMITS
RIVERSIDE COUNTY FIRE STATION
RIVERSIDE COUNTY SHERIFF STATION
SCHOOL

Note: locations approximate

South Perris Industrial
Environmental Impact Report

Existing Public Facilities

SOURCE: USGS 7.5' Quads: Perris (1979), Steele Peak (1973), Lake Elsinore (1988), Romoland (1979)CA; County of Riverside, 2007

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Additional fire protection would be provided by Station 90, which primarily serves the northern portion of the City of Perris. Station 90 is located approximately 3.0 miles to the north of the proposed project site and is equipped with one paramedic fire engine and one ladder truck, and is fully staffed with seven personnel.[1] All fire personnel are qualified as emergency medical technicians (EMTs).

As of November 9, 2008, the RCFD had responded to a total 98,350 incidents (fires, medical aids, hazardous materials/fire menace standby, and public service assistance), an increase of 0.11 percent[2] over the previous year. During the latest reporting period, Station No. 1 responded to 3,265 emergency calls and Station No. 90 responded to a total of 2,250 calls. For Station No.1, the majority of the calls (2,441 or 74.8%) were for medical aid. Fire response totaled 381 calls (11.7 %), while 257 traffic collisions calls totaled 7.9 percent of the responses. A total of 5 hazardous materials calls totaled 0.2 percent of the responses, while 181 of calls, (technical rescues, ringing alarms, public service assists, fire service assists, fire menace standbys and cover assignments), equaled approximately 5.5 percent of the responses. For Station No. 90, the majority of the calls (1,787 or 79.4%) were for medical aid. Fire response totaled 240 calls (10.7%), while 159 traffic collisions calls totaled 7.1 percent of the responses. A total of 3 hazardous materials calls totaled 0.1 percent of the responses, while 61 of calls, (technical rescues, ringing alarms, public service assists, fire service assists, fire menace standby's and cover assignments), equaled approximately 2.7 percent of the responses. In most areas of the City, the RCFD has an average response time of 4 to 6 minutes.[3] Currently, two of the project sites are undeveloped and do not generate the need for fire protection services.

4.10.2.2 Existing Policies and Regulations

The following are policies within the City's General Plan that pertain to fire services and are applicable to the proposed project.

Land Use Element

Goal II New development consistent with infrastructure capacity and municipal service capabilities.

Policy II.A Require new development to pay its full, fair share of infrastructure costs.

Measure II.A.3 Revise the capital facilities fee program so that all infrastructure construction and improvements, including fire protection facilities attributable to new development, are identified and fully funded.

Safety Element

Policy I.C: Fire Reduce the risk of damage from fires.

Measure I.C.1 Maintain fuel modification standards to ensure proper clearance of brush around homes and businesses abutting undeveloped areas.

Measure I.C.2 Adopt landscaping standards to include a fire-resistant plant palette, where appropriate.

Measure I.C.3 Enforce current California Building Code standards to exclude the use of materials that pose a fire risk such as untreated wood roofing materials.

Measure I.C.4 Maintain weed abatement Code Enforcement efforts.

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1 E-mail correspondence from Dave Rodriguez, Captain, Fire Assistant Engineer (FAE), Perris Station No. 90, dated February 2, 2008.

2 Riverside County Fire Department, http://www.rvcfire.org/opencms/, accessed November 12, 2008.

3 E-mail correspondence from Calista Maloney, Business Systems Analyst III, Riverside County Fire Department, dated January 7, 2009.

Measure I.C.5 Maintain appropriate setback requirements in the Zoning Code for new development or redevelopment to prevent spread of fire.

Goal II Improved response times for emergency service providers (police, fire, medical services).

Policy II.A The City shall require roadway improvements to expedite quick and safe travel by emergency responders.

Policy II.B Provide adequate emergency facilities to serve existing and future residents.

Measure II.A.1 Find alternative traffic-calming strategies to speed bumps that will not interfere with emergency responders.

Measure II.A.2 Create additional interchanges on I-215.

Measure II.A.3 Revise the Zoning Ordinance to require that development application submittals include master plans for backbone infrastructure substantially consistent with the provisions of "Infrastructure Concept Plans" in the Land Use Element.

Measure II.A.4 Require that access roads be completed prior to development in outlying areas.

Measure II.B.1 Adopt capital facilities fees to fund improvements in public safety facilities and equipment.

Measure II.B.2 Revise the capital facilities fee program so that all infrastructure construction and improvements identified as attributable to new development are fully funded.

Measure II.B.3 Identify sources of funding for additional infrastructure to serve existing development.

4.10.2.3 Methodology

Evaluation of fire service impacts associated with the proposed project includes the following:

- Determine the existing fire response time for the City based on RCFD goals;
- Determine the length of time for fire services to arrive at the project site based on average travel time;
- Compare existing fire response time and potential fire response time; and
- Determine funding mechanism for future fire services and facilities.

Fire service funding impacts were evaluated by estimating compliance with local and RCFD goals and policies as indicated in the adopted Riverside County Fire Protection Master Plan. Response time impacts were evaluated by comparing existing and anticipated average responses with RCFD response time goals.

4.10.2.4 Threshold of Significance

Based on Appendix G of the *CEQA Guidelines*, impacts to fire protection services would be considered significant if the following condition resulted from the construction or operation of the proposed project:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.

4.10.2.5 No Impact/Less Than Significant Impacts

Impacts to fire protection services were determined to be reduced to a less than significant level through adherence to established regulations, standards, and policies.

4.10.2.5.1 Fire Protection Services

Threshold	Would the proposed project result in substantial adverse physical impacts associated with the provision of new or physically altered fire fighting facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire services?

As previously identified, two of the project sites are undeveloped and do not generate the need for fire protection services. The Phase 1 site is currently occupied by a concrete bridge manufacturing operation and is currently provided fire protection services. The development and operation of the proposed project would increase the demand for fire protection, prevention, and emergency medical services. Time is the critical component in fire/medical emergencies. Reductions in the emergency response time or the distance between fire/medical facilities and the site of an emergency would result in improved service, and saved lives and property.

The proposed project includes 7,399,291 square feet of warehouse uses. Based on the adopted Riverside County Fire Protection Master Plan, the Category 1–Heavy Urban specifies that a full alarm assignment be operating on the ground within ten minutes and the fire station be located within 1.5 miles. Fire Station 1, the primary coverage station of the City and the station that would serve the project sites is located approximately 0.9 mile away from the Phase 3 site, within the 1.5-mile objective. Therefore, it is reasonable to assume that response times would meet the Heavy Urban Land Use protection goal of 4–5 minutes response time. Phase 1 and Phase 2 are both located within 2.0 miles of Fire Station 1. Based on the assumption that doubling the distance from the fire station would double the response time, Phase 1 and Phase 2 would be located in areas that would still allow a 10-minute response time but would be out of the 1.5-mile radius specified.

Construction materials for the proposed warehouse buildings would likely be reinforced concrete and steel as is typically used in tilt-up construction. During the project construction, buildings would be empty and the fuel loads within the buildings would be minimal to non-existent. Due to the lack of combustible material used in the construction of the buildings and the lack of flammable materials stored at the project site within the buildings, the potential for fires to occur that would require a fire protection response would be low. Additionally, all on-site construction as well as the use and storage of construction materials is required to conform to fire prevention/protection standards established by the RCFD and/or the City, or State. Therefore, during construction of the proposed project, impacts related to the provision of fire protection service and the need for additional facilities would be less than significant.

Current staffing and facilities are considered to provide an adequate level of service to the City at three fire personnel per responding fire unit.[1] The Riverside County Fire Protection Master Plan indicates that one new fire station and/or engine company is recommended for every 3.5 million square feet of industrial use. The proposed project would result in the development of 7,399,291 square feet of warehouse distribution uses. Therefore, as suggested in the RCFD comment letter on the Notice of Preparation, the proposed project may result in the need for an additional fire station or appropriate fire company. In its review of new development plans, the RCFD evaluates project plans on its ability to provide proper fire protection to the development. Additionally, the proposed project would be required to pay service and development fees to the RCFD. Such fees would be used to fund capital costs associated with acquiring land for new fire stations, constructing new fire stations,

[1] Mail correspondence from Jason Neuman, Captain, Strategic Planning Division, dated July 22, 2008.

purchasing fire equipment for new fire stations, and providing for additional staff as needed and as identified in the Riverside County Board of Supervisors.

Additionally, the proposed project would be designed, constructed, and operated per applicable fire prevention/protection standards established by the RCFD and/or the City, or State. Such requirements may include (but shall not be limited to) provisions for smoke alarms; sprinklers; building and emergency access; adequate emergency notification; and hydrant sizing, pressure, and siting. The development of the proposed industrial uses would not cause fire staffing, facilities, or equipment to operate at a deficient level of service. Additionally, because the proposed project would be required to pay development impact fees to fund future fire facilities and services, impacts associated with fire protection services and facilities are less than significant and no mitigation is required.

4.10.2.6 Significant Impacts

All potential impacts of the proposed project to fire protection services have been determined to be less than significant. No significant impacts would occur.

4.10.3 Cumulative Impacts

The cumulative areas for police and fire protection services are the service areas for the RCSD and RCFD. The need for the public services and associated facilities is measured by service area population, or the number of residents and workers within the City's service area. Service population, as well as the type and density of development, determines the need for new or expanded police and services. Utilizing statistical information, local planning policies, and by interacting with other agencies, fire and police service providers can delineate past patterns, emerging trends, and future issues of concern. Once identified, service providers can redeploy resources to meet future needs.

As additional development occurs in the City of Perris and region, there may be an overall increase in the demand for law enforcement and fire protection services, including personnel, equipment, and/or facilities. Increases in demand are routinely assessed by these agencies as part of the annual monitoring and budgeting process. New development within the service areas of the RCSD and RCFD would be required to adhere to conditions established by fire and police service providers, and pay the applicable fees to ensure adequate staffing and equipment levels. Therefore, the cumulative impact on police and fire services in the City would be less than significant.

4.11 TRAFFIC AND CIRCULATION

The traffic analysis examines existing 2008 traffic conditions without the project as well as 2008 conditions including the development of each of the project sites individually. The project opening year 2012 are analyzed without the project and with the development of Phases 1 and 2 only. The year 2013 condition is analyzed without the project and with the development of all three sites. A long range forecast has also been included of the General Plan build out year 2030. In addition to the operational traffic impacts, this section also analyzes the traffic impacts associated with the import of 660,000 cubic yards of soil to the Phase 2 site. This section will evaluate the potential short-term traffic impacts resulting from the pick up and delivery of the soil.

The analysis contained in this section is based on the following technical study prepared for the proposed project:

- *Traffic Impact Analysis, South Perris Industrial Distribution Center,* Urban Crossroads, April 17, 2009 (Appendix J-1 of this EIR).
- At-Grade Railroad-Highway Crossing Analysis, Urban Crossroads, November 19, 2008 (Appendix J-2 of this EIR).
- First Industrial South Perris Site – Soil Import Analysis, Urban Crossroads, March 19, 2009. (Appendix J-3 of this EIR).

In addition to this technical study, the analysis contained in this section is also based on the following reference documents:

- Perris General Plan Circulation Element, adopted June 14, 2005.
- General Orders 26-D, 72-B, 75-D, 88-B, 118, California Public Utilities Commission.
- Project Study Report, I-215 from San Diego County Line to I-215 Separation, RCTC, December 2006.
- Project Study Report, I-215 from I-15 to I-215 Separation on Nuevo Road, RCTC, December 2006.

4.11.1 Existing Setting

The Traffic Impact Analysis (TIA) for the proposed project has been prepared according to a scoping agreement with the City of Perris and analyzes a.m. and p.m. peak hour conditions due to the operational nature of the project. Based on the scoping agreement, this analysis includes 42 intersections and all 19 project driveways. Figure 4.11.1 illustrates the location of analysis intersections for existing (2008), 2012 and 2013 conditions. Figure 4.11.2 illustrates the location of the analysis intersections for 2030 conditions.

Some of the study area intersections being analyzed either do not exist or are not fully constructed at the present time. Existing conditions for these locations represent pre-construction conditions. The study area includes the following intersections:

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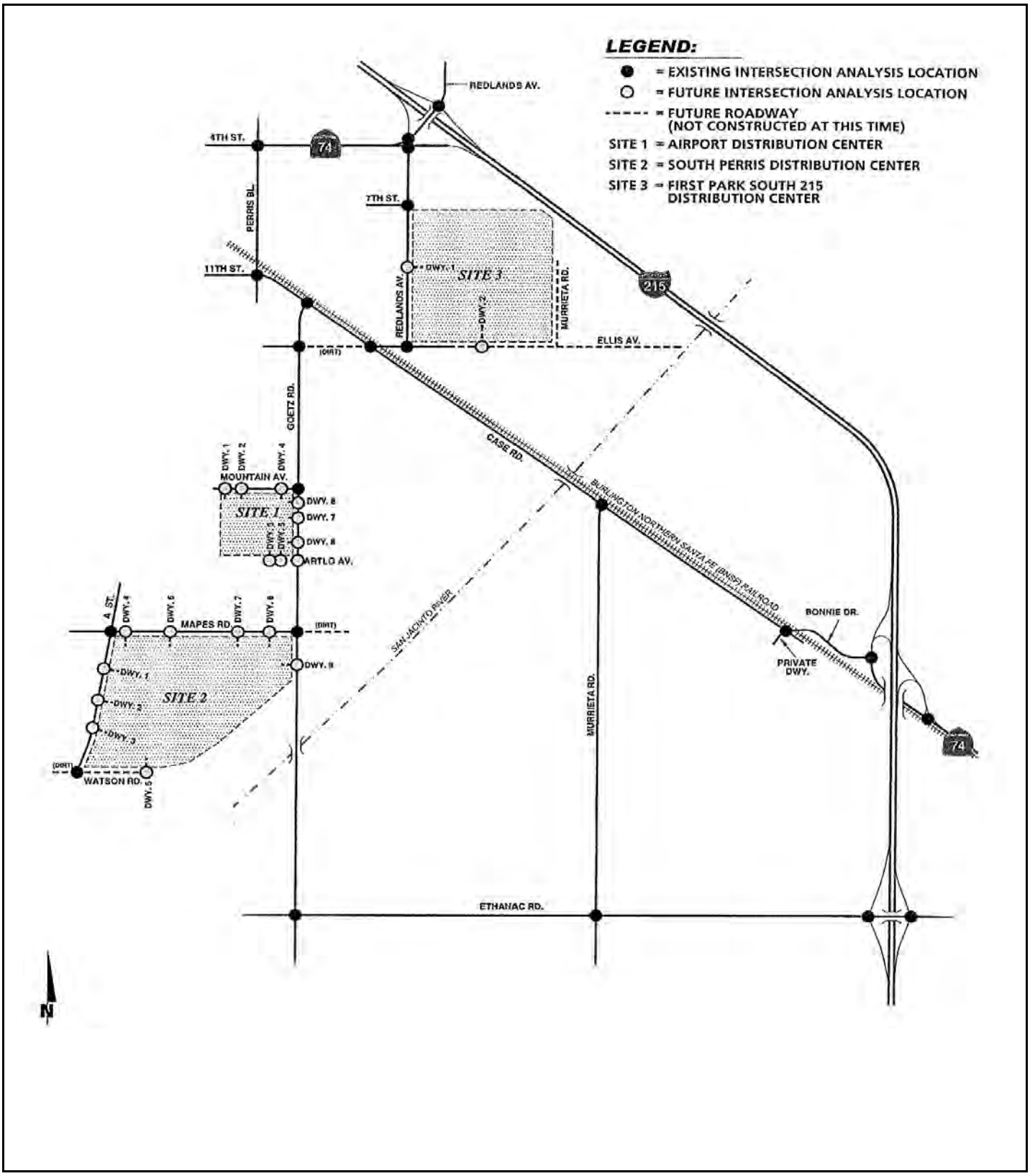

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FIGURE 4.11.1

South Perris Industrial
Environmental Impact Report
Study Intersections for Existing (2008), 2012 and 2013 Conditions

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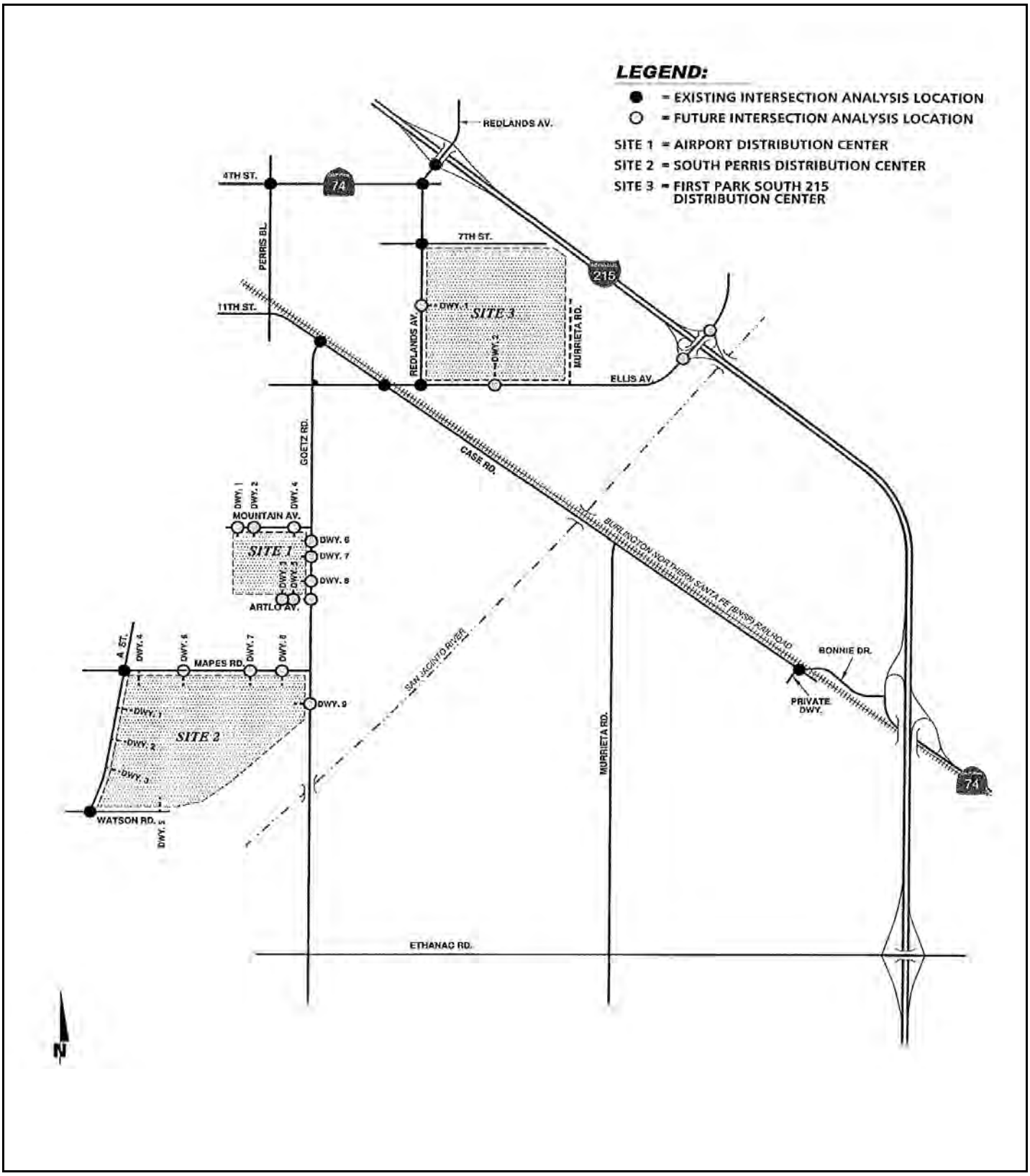

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FIGURE 4.11.2

South Perris Industrial
Environmental Impact Report
Study Intersections for 2030 Conditions

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A Street (NS) at:

- Mapes Road (EW)
- Driveway 1 (EW)
- Driveway 2 (EW)
- Driveway 3 (EW)
- Watson Road (EW)

Driveway 4 (NS) at:

- Mapes Road (EW)

Driveway 5 (NS) at:

- Watson Raod (EW)

Driveway 6 (NS) at:

- Mapes Road (EW)

Driveway 7 (NS) at:

- Mapes Road (EW)

Driveway 8 (NS) at:

- Mapes Road (EW)

Perris Boulevard (NS) at:

- 4th Street (SR-74 (EW)
- 11th Street/Case Road (EW)

Goetz Road (NS) at:

- Case Road (EW)
- Ellis Avenue (EW)
- Mountain Avenue (EW)

Driveway 2 (NS) at:

- Mountain Avenue (EW)

Driveway 3 (NS) at:

- Artlo Avenue (EW)

Driveway 4 (NS) at:

- Mountain Avenue (EW)

Driveway 5 (NS) at:

- Artlo Avenue (EW)

Goetz Road (NS) at:

- Mountain Avenue (EW)
- Driveway 6 (EW)
- Driveway 7 (EW)
- Driveway 8 (EW)
- Artlo Avenue (EW)
- Mapes Road (EW)
- Driveway 9 (EW)
- Ethanac Road (EW)

Case Road (NS) at:

- Ellis Avenue (EW)

I-215 Southbound Ramps (NS) at:

- Redlands Avenue

Redlands Avenue (NS) at:

- 4th Street (EW)
- 7th Street (EW)
- Driveway 1 (EW)
- Ellis Avenue (EW)

Driveway 2 (NS) at:

- Ellis Avenue (EW)

Redlands Avenue (NS):

- I-215 Northbound Ramps (EW)

Murrieta Road (NS) at:

- Case Road (EW)
- Ethanac Road (EW)

Case Road (NS) at:

- Bonnie Drive/Mapes Road (EW)

I-215 Southbound Ramps (NS) at:

- Bonnie Drive (EW)
- Ethanac Road (EW)

I-215 Northbound Ramps (NS) at:

- SR-74 (EW)
- Ethanac Road (EW)

The study area is generally bounded by 4th Street/SR-74 to the north, Ethanac Road to the south, "A" Street to the west and the I-215 Freeway to the east. The study area limits were set based upon a threshold of 50 PM peak hour project trips. Therefore, the study area includes any intersection of Collector or higher classification street with another Collector roadway or higher classification street, at which the proposed project will add 50 or more peak hour trips.

4.11.1.1 Traffic Level of Service Definitions

Level of service (LOS) will be referred to frequently in this analysis. Roadway operations and the relationship between capacity and traffic volumes are generally expressed in LOS, which are defined using the letter grades A through F (Table 4.11.A). These levels reflect the reality that conditions rapidly deteriorate as traffic approaches the absolute capacity of a thoroughfare. LOS criteria for signalized and unsignalized intersections are identified in Table 4.11.B. LOS criteria for freeway segments is expressed in terms of density (passenger cars/mile/lane), as shown in Table 4.11.C. LOS criteria for roadway segments is based on daily traffic volumes as shown in Table 4.11.D.

Table 4.11.A: Traffic Level of Service (LOS) Definitions

Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Source: *Highway Capacity Manual, Special Report 209,* Transportation Research Board, Washington, D.C., 2000.

Table 4.11.B: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: *Highway Capacity Manual,* Transportation Research Board, Washington, DC, 2000.

Table 4.11.C: Level of Service Criteria for Freeway Segments

Level of Service	Density Range (passenger cars/mile/lane)
A	≤ 11.0
B	> 11.0 and ≤ 18.0
C	> 18.0 and ≤ 26.0
D	> 26.0 and ≤ 35.0
E	> 35.0 and ≤ 45.0
F	> 45.0

Source: *Highway Capacity Manual,* Transportation Research Board, Washington, DC, 2000.

Table 4.11.D: City of Perris Level of Service Criteria for Roadway Segments

Roadway Classification	Number of Lanes	Level of Service[1]				
		A	B	C	D	E
Collector	2	7,800	9,100	10,400	11,700	13,000
Major Collector	2	10,800	12,600	14,400	16,200	18,000
Secondary Arterial	4	21,540	25,130	28,700	32,300	35,900
Arterial	6	32,340	37,730	43,100	48,500	53,900
Expressway	6	36,780	42,910	49,000	55,200	61,300
Expressway	8	49,020	57,190	65,400	73,500	81,700

Roadway capacities have been extracted from Table CE-9 of the City of Perris General Plan Circulation Element. All capacity exhibits are based on optimum conditions and are intended as guidelines for planning purposes only. Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual level of Service Tables. The City of Perris Level of Service performance standard is LOS D on City roadways with the exception of SR-74, where the local road performance standard is LOS E.

4.11.1.2 Level of Service Standard

The definition of an intersection deficiency has been obtained from the City of Perris General Plan Circulation Element. The City of Perris General Plan defines a performance standard of LOS D for City roads (including intersections). An exception to the local performance standard is LOS E at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 freeway ramps.

LOS E may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area may facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations. However, none of the proposed project sites are located within the Downtown Specific Plan Area.

For State-controlled freeways and intersections between local roadways and freeway ramps, as stated in the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies (December 2002), Caltrans recommends a performance standard of LOS C approaching D. In other words, in many instances Caltrans utilizes LOS D as its performance standard. However, it should be noted that Caltrans acknowledges that maintaining these standards may not always be feasible and recommends the lead agency consult with Caltrans to determine the appropriate target level of service for the particular state facility at issue. In many instances, for example, Caltrans expressly acknowledges that the long-term LOS for many State highway facilities (even factoring in expected long-term improvements and widening planned for those highway facilities) will be E or F during the peak hours. Caltrans also acknowledges that if an existing facility is operating at less than the appropriate target LOS, that the existing LOS should be the performance standard to the extent feasible.

Due to various external factors (statewide population trends, limits on the extent Caltrans will exercise eminent domain to further expand certain facilities, shortfalls in funding, etc.) Caltrans is not able to consistently ensure, and in fact does not intend to ensure that new facilities meet the ideal standards for freeway mainline segments (i.e., LOS C approaching D). Instead, Caltrans recognizes that these facilities often and will operate at LOS E or worse. Therefore, for purposes of the freeway mainline segment analysis contained in this EIR, LOS E or better is considered the target significance threshold. It should be noted that due to these same constraints discussed above, Caltrans facilities are usually designed to operate at LOS E or F in the 30-year design horizon year.

It should be noted that although the City of Perris allows LOS E operations at freeway ramps, any facility maintained by Caltrans is constrained by the Caltrans LOS C approaching D standard. As such, intersections along State Route 74 and on and off ramps with the I-215 Freeway have been improved to the LOS D standard for the purposes of this analysis.

Roadway segment operations have been evaluated using the City of Perris Roadway Capacity and Level of Service guidelines provided in the City of Perris General Plan Circulation Element. Per the City of Perris General Plan, the performance standard for roadway segments within the study area is LOS D with the exception of SR-74, which allows an LOS E performance standard. The daily roadway segment capacities for each of the General Plan roadway classifications are summarized above in Table 4.11.D. Although these values are suitable for planning purposes, they are not precise measures of capacity. The ultimate capacity of a roadway is based upon a number of factors. These factors include the relationships between peak hour and daily traffic volumes, the roadway design features (access spacing, intersection geometries, etc.), and the proportions and amounts of traffic turning at key intersections (along with the amount of traffic crossing the roadway or turning onto or off of the roadway at intersecting roadways). As such, roadway widening has not been recommended in this analysis if intersections on either side of the segment operate at acceptable levels of service during the peak hours with intersection improvements that do not require roadway widening along the full length of the segment.

In summary, the level of service performance standards used in this EIR are as follows:

- Freeway mainline lanes – LOS E.
- Intersections of any arterials and expressways with SR-74, the Ramona-Cajalco Expressway and the I-215 Freeway ramps - LOS E.
- Other roadway segments, intersections, and at-grade crossings – LOS D.

4.11.1.3 Baseline

The project is proposed for three non-contiguous sites located within the southwest portion of the City of Perris. The three sites are generally located east of Interstate 215, south of State Route 74 and north of Ethanac Road. The Airport Distribution Center (Phase 1) is located on the southwest corner of Goetz Road and Mountain Avenue; The South Perris Distribution Center (Phase 2) is located on the southwest corner of Goetz and Mapes Road; and First Park South 215 (Phase 3) is located on the northwest corner of Redlands Avenue and Ellis Avenue. The existing street network (number of through lanes and intersection controls) is illustrated in Figure 4.11.3. LOS and volumes are discussed below for the existing (2008) without project condition (or baseline) against which project impacts are evaluated.

Existing (2008) Setting Baseline Without the Project. Existing traffic operations have been evaluated for study area intersections. The analysis was performed for the a.m. and p.m. peak hour, as approved in the scoping agreement for the project. Existing traffic volumes at study area intersections are based on peak hour intersection turn movement counts. An intersection level of service analysis was conducted for existing conditions to determine current circulation system performance. The existing conditions levels of service for the study area intersections are summarized in Table 4.11.E, which indicates all intersections are currently operating at satisfactory levels of service during the a.m. and p.m. peak hour with the exception of the following intersections:

- Perris Boulevard (NS) at:
  - 4th Street/SR 74 (EW).
- I-215 Southbound Ramps (NS) at:
  - Redlands Avenue (NS).
- I-215 Southbound (NS) at:
  - Bonnie Drive/SR-74 (EW).

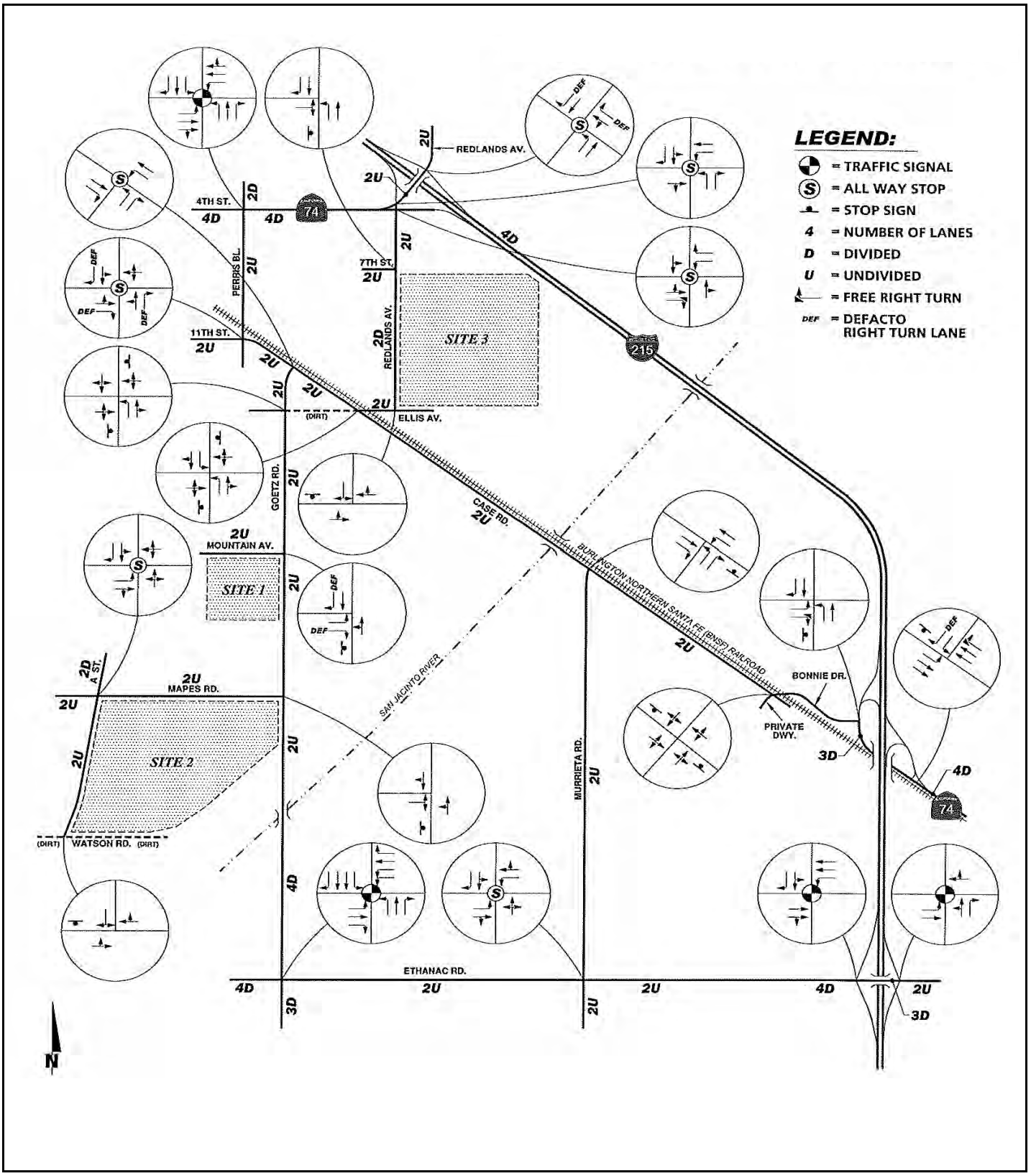

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FIGURE 4.11.3

South Perris Industrial
Environmental Impact Report
Existing Number of Through Lanes and Intersection Control

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Table 4.11.E: 2008 Existing Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	8.6	8.2	A	A
Watson Road (EW)	CSS	8.6	8.6	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	98.8	91.8	F	F
11th Street/Case Road (EW)	AWS	24.7	16.0	C	C
Goetz Road (NS) at:					
Case Road (EW)	AWS	11.6	11.1	B	B
Ellis Avenue (EW)	CSS	9.5	9.9	A	A
Mountain Avenue (EW)	CSS	11.5	14.5	B	B
Mapes Road (EW)	CSS	10.7	11.3	B	B
Ethanac Road (EW)	TS	34.8	35.0	C	D
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	15.6	14.1	C	B
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	26.7	44.7	D	E
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	19.6	22.8	C	C
Redlands Avenue (NS) at:					
7th Street (EW)	CSS	11.4	11.9	B	B
Ellis Avenue (EW)	CSS	8.9	9.0	A	A
Redlands Avenue (NS) at:					
I-215 Northbound Ramps (EW)	AWS	28.3	26.0	D	D
Murrieta Road (NS) at:					
Case Road (EW)	CSS	16.1	13.3	C	B
Ethanac Road (EW)	AWS	29.1	15.3	D	C
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	10.8	13.2	B	B
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	78.6	—	F	F
Ethanac Road (EW)	TS	18.9	22.4	B	C
I-215 Northbound Ramps (NS) at:					
Ethanac Road (EW)	TS	28.8	27.9	C	C

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All-Way Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 4-1 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

A roadway segment volume to capacity ratio (V/C ratio) analysis was conducted for existing conditions to determine current roadway system performance. The roadway segment V/C ratios are summarized in Table 4.11.F, which indicates all roadway segments are currently operating with a satisfactory V/C ratio with the exception of the following roadway segment:

- Redlands Avenue from north of the I-215 Northbound Ramps to the I-215 Southbound ramps.

Table 4.11.F: 2008 Existing Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	2,300	0.14
	Mapes Road to Watson Road	2U	11,700	200	0.02
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	11,400	0.70
	4th Street (SR-74) to 11th Street	2U	11,700	9,300	0.79
	South of 11th Street	2U	11,700	2,000	0.17
Goetz Road	Case Road to Ellis Avenue	2U	11,700	5,700	0.49
	Ellis Avenue to Mountain Avenue	2U	11,700	6,400	0.55
	Mountain Avenue to Mapes Road	2U	11,700	5,400	0.46
	South of Mapes Road	2U	11,700	7,300	0.62
	North of Ethanac Road	4D	32,300	7,300	0.23
	South of Ethanac Road	3D	23,300	7,300	0.31
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	12,900	1.10
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	15,400	1.32
	I-215 SB Ramps to 4th Street	2U	11,700	7,400	0.63
	4th Street to 7th Street	2U	11,700	6,800	0.58
	7th Street to Ellis Avenue	2D	16,200	3,200	0.20
Murrieta Road	South of Case Road	2U	11,700	2,100	0.18
	North of Ethanac Road	2U	11,700	2,600	0.22
	South of Ethanac Road	2U	11,700	7,300	0.62
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	19,300	0.54
	Perris Boulevard to Redlands Avenue	4D	35,900	18,500	0.52
	East of Redlands Avenue	2U	13,000	8,100	0.62
7th Street	West of Redlands Avenue	2U	11,700	2,000	0.17
11th Street/Case Road	West of Perris Boulevard	2U	11,700	7,200	0.62
	Perris Boulevard to Goetz Road	2U	11,700	8,900	0.76
	Goetz Road to Ellis Avenue	2U	11,700	7,400	0.63
	Ellis Avenue to Murrieta Road	2U	11,700	6,500	0.56
	Murrieta Road to Bonnie Drive	2U	11,700	4,700	0.40
	South of Bonnie Drive	2U	11,700	1,500	0.13
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	4,600	0.39
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	18,300	0.71
	East of I-215 NB Ramps	4D	35,900	25,000	0.70
Ellis Avenue	West of Goetz Road	2U	11,700	1,200	0.10
	Case Road to Redlands Avenue	2U	11,700	2,600	0.22
Mountain Avenue	West of Goetz Road	2U	11,700	100	0.01

Table 4.11.F: 2008 Existing Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
Mapes Road	West of "A" Street	2U	11,700	600	0.05
	"A" Street to Goetz Road	2U	11,700	2,500	0.21
Watson Road	West of "A" Street	2U	11,700	200	0.02
Ethanac Road	West of Goetz Road	4D	32,300	700	0.02
	Goetz Road to Murrieta Road	2U	11,700	7,600	0.65
	East of Murrieta Road	2U	11,700	10,100	0.86
	West of I-215 SB Ramps	4D	32,300	10,100	0.31
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	11,200	0.48
	East of I-215 NB Ramps	2U	11,700	10,300	0.88

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

A freeway mainline analysis was conducted for existing conditions to determine current I-215 freeway performance. The existing freeway levels of service are summarized in Table 4.11.G, which indicates all roadway segments are currently operating with a satisfactory level of service.

Table 4.11.G: 2008 Existing Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	3,223	3,966	7%	7%	2	25.7	35.3	C	E
Redlands Avenue / SR-74	3,454	4,166	7%	6%	2	28.2	38.7	D	E
SR-74 / Ethanac Road	3,280	3,428	7%	8%	2	26.3	28.0	D	D
South of Ethanac Road	3,515	3,498	7%	7%	2	28.9	28.7	D	D
I-215 Northbound									
North of Redlands Avenue	4,057	3,673	6%	6%	2	36.6	30.6	E	D
Redlands Avenue / SR-74	4,109	3,966	6%	6%	2	37.6	35.0	E	D
SR-74 / Ethanac Road	3,459	3,542	8%	7%	2	28.4	29.2	D	D
South of Ethanac Road	3,567	3,637	7%	7%	2	29.5	30.4	D	D

The existing levels of service for the study area railroad grade-crossings are summarized in Table 4.11.H. Based on these data, all study area at-grade crossings are projected to operate with at LOS A, within the LOS D performance standard.

4.11.H: 2008 with Complete Project (Phases 1, 2 and 3 Combined) At-Grade Crossing Analysis

Cross-Street Name	Westbound 95th Percentile Queue (feet)		Eastbound 95th Percentile Queue (feet)		Average Stopped Delay (seconds)		Level of Service	
	AM	PM	AM	PM	AM	PM	AM	PM
San Jacinto Street	47	58	50	42	2.2	2.2	A	A
4th Street	68	77	77	81	4.8	4.8	A	A
7th Street	12	11	13	13	0.7	0.7	A	A

4.11.2 Existing Policies and Regulations

4.11.2.1 City of Perris General Plan Policies

The following excerpted goals and policies from the *City of Perris General Plan*[1] pertain to transportation and circulation and are applicable to the proposed project.

Circulation Element

Goal I A comprehensive transportation system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and address future growth and development in the City.

Policy I.A Design and develop the transportation system to respond to concentrations of population and employment activities, as designated by the Land Use Element and in accordance with the designated Transportation System, Exhibit 4.2 Future Roadway Network.

Policy I.B Support development of a variety of transportation options for major employment and activity centers including direct access to commuter facilities, primary arterial highways, bikeways, park-n-ride facilities, and pedestrian facilities.

Measure I.B.I Require on-site improvements that accommodate public transit vehicles (i.e., bus pullouts and transit stops and cueing lanes, bus turnarounds and other improvements) at major trip attractions (i.e., community centers, tourist and employment centers, etc.).

Policy I.D Encourage and support the development of projects that facilitate and enhance the use of alternative modes of transportation.

Goal II A well planned, designed, constructed, and maintained street and highway system that facilitates the movement of vehicles and provides safe and convenient access to surrounding developments.

Policy II.A Maintain the following target Levels of Service:

- LOS D along all City-maintained roads (including intersections) and LOS D along I-215 and SR-74 (including intersections with local streets and roads). An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway, or at I-215 freeway ramps.

Measure II.A.I Utilize existing infrastructure (lanes, median islands, turn lanes, available right-of-way) and rights-of-way to the maximum extent practicable.

Policy II.B Maintain the existing transportation network while providing for future expansion and improvement based on travel demand, and the development of alternative travel modes.

Measure II.B.I Develop Standard Specification for the City of Perris that include the following:

- Design guidelines that define the minimum design and technical criteria for the analysis and design of roadway facilities. Such design guidelines shall identify intersection improvements consistent with the lane geometrics referenced in Table CE-7.
- Limiting access points and intersection of streets and highways based upon the road's General Plan classification and function to reduce motorist conflict

[1] *City of Perris General Plan Circulation Element*, June 2005.

and enhance continual traffic flow. Access points must be located a sufficient distance from major intersections and from access points on adjoining parcels to allow for safe, efficient operation.

- Roadway pavement cross-section to accommodate large trucks where extensive truck travel involving regional movement of bulk goods is anticipated.

Measure II.B.2 Allow roundabouts or other innovative design solutions when a thorough traffic impact assessment has been conducted demonstrating that such an intersection design alternative would manage traffic flow and improve safety.

Measure II.B.3 Restrict on-street parking to reduce traffic congestion and improve safety in appropriate locations such as expressways and arterials, and require all new development to provide adequate off-street parking based on expected parking needs.

Goal III To financially support a transportation system that is adequately maintained.

Policy III.A Implement a transportation system that accommodates and is integrated with new and existing development and is consistent with financing capabilities.

Measure III.A.I Distribute the costs of transportation system improvements for new development equitably among beneficiaries through the City's Traffic Impact Fee Program.

Measure III.A.2 Use redevelopment agreements, revenue sharing agreements, tax allocation agreements and the CEQA process as tools to ensure that new development pays a fair share of costs to provide local and regional improvements and to mitigate cumulative traffic impacts.

Measure III.A.4 Require developers to be primarily responsible for the improvements of streets and highways to developing commercial, industrial, and residential areas. These may include road construction or widening, installation of turning lanes and traffic signals, and the improvement of any drainage facility or other auxiliary facility necessary for the safe and efficient movement of traffic or the protection of road facilities.

Goal V Efficient goods movement.

Policy V.A Provide for safe movement of goods along the street and highway system.

Measure V.A.3 Monitor commercial truck movements and operations in the City and establish new truck routes away from noise-sensitive areas where feasible.

Measure V.A.4 All freeway ramp terminus intersections are under the jurisdiction of Caltrans. Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and truck through-traffic to designated routes; and distribute maps of approved truck routes to City traffic officers.

Measure V.A.8 Provide adequate off-street loading areas for all commercial and manufacturing land uses.

Goal VIII A transportation system that maintains a high level of environmental quality.

Policy VII.A Implement the Transportation System in a manner consistent with Federal, State, and local environmental quality standards and regulations.

Measure VII.A.2 Require noise mitigation measures (e.g., wall treatments, landscape berms, and/or building and window enhancements) along freeways, expressways, and four-lane highways in order to protect adjacent noise-sensitive land uses from traffic-generated noise impacts consistent with requirements of Title 24 of the California Codes and Regulations.

Goal VIII	Enhanced traffic flow, reduced travel delay, reduced reliance on single-occupant vehicles, and improved safety along the City and State roadway system.
Policy VIII.B	Identify Transportation Systems Management (TSM) strategies that will assist in mitigating traffic impacts and that will maintain the desired level of service along the street and highway system.
Measure VIII.D.I	Implement the City's Transportation Control Measure (TCM) Ordinance to comply with Federal, State, regional, and local requirements.
Measure VIII.D.3	Construct traffic signals at intersection where signal warrants have been met.
Measure VIII.D.4	To optimize traffic operation, maintain spacing and operation of traffic signals as a coordinated system.

4.11.3 Methodology

This section analyzes 2008 existing traffic conditions, 2008 existing plus project traffic conditions, and opening years 2012 and 2013. The 2008 existing plus project condition has been divided into three sections analyzing the sites individually as well and combined. The Airport Distribution Center (Phase 1) and South Perris Distribution Center (Phase 2) are anticipated to be completed and occupied by 2012. First Park South 215 (Phase 3) is expected to be built and occupied by 2013. The analysis for the project's opening years has been divided to account for the phasing.

Caltrans has proposed constructing a new freeway interchange at I-215/Ellis Avenue-Evans Road, which, if constructed, would be complete under year 2030 conditions. The new interchange is part of the County's Transportation Uniform Mitigation Fee (TUMF) network, and is being funded through collection of development fees. Conceptual plans for the interchange were obtained from Caltrans. It should be noted that the interchange designs are conceptual as they have not been specifically analyzed in any recent interchange Project Study Report (PSR). As the interchange is still in the conceptual phase, Caltrans and other parties commenting on the Notice of Preparation have requested that the year 2030 analysis include two scenarios, one without and one with the proposed interchange, and that mitigations be recommended for both conditions. Given these uncertainties, this EIR has analyzed both of these 2030 scenarios.

The forecast years as well as each development scenario analyzed are included in the Table 4.11.I.

Table 4.11.I: Analysis Scenarios

Forecast year	Scenarios analyzed
2008	Existing, Existing + Phase 1, Existing + Phase 2, Existing + Phase 3, Existing + all 3 Phases combined
2012	2012 without the project 2012 with Phase 1 and 2
2013	2013 without project 2013 + all 3 Phases combined
2030	2030 without the project, with the proposed I-215/Ellis Avenue Interchange 2030 with the project, with the proposed I-215/Ellis Avenue Interchange 2030 without the project, without the proposed I-215/Ellis Avenue Interchange 2030 with the project, without the proposed I-215/Ellis Avenue interchange

Both Caltrans and the City of Perris requires the *Highway Capacity Manual 2000* (HCM) methodology be utilized to evaluate operations for both signalized and unsignalized, stop-controlled intersections

(Transportation Research Board Special Report 209). The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

Numerous methods to estimate delay at railroad-highway crossings have been tested, but there is no universally accepted procedure. Many methods are based on simplifying assumptions that often times break down under congested conditions. One approach that has general acceptance is the signalized intersection analysis methodology from the Highway Capacity Manual (HCM) (chapt. 16). [2] By selecting the appropriate cycle length and setting the blocked crossing time, a railroad-highway crossing can be conceptualized as a two-phase signalized intersection. The analysis methodology used to evaluate vehicular traffic delays and queuing at the study area crossings has been taken from the US-36 Environmental Impact Statement and Basic Engineering: Methodology of Grade Crossing Evaluation, published by the Transportation Research Board, National Research Council, Washington D.C., in 1987.[3] See Volume 2030/2007 pp. 76-84. Additional methodology information related to gate down time was obtained from the Transportation Research Record (TRR) 1754, Paper No. 01-3051, Methodology for Evaluating Highway-Railway Grade Separations, Washington D.C., 2001, pp. 77-80 A summary of the methodology as it has been applied to this study can be found in the at-grade crossing analysis included as Appendix J-1 of this EIR.

4.11.3.1 Project Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. Determining the traffic generation for a specific project is based upon forecasting the amount of traffic that is expected to be produced by the specific land use being proposed. Traffic engineers utilize different yet similar methodologies to anticipate trip generations. Many times, average trip generation rates as published by the Institute of Transportation Engineers (ITE) are used to forecast trip rates. In some circumstances, however, use of the ITE trip rates are not deemed to be the most accurate methodology of forecasting trip generation because more precise data is available. Because trip generation rates applicable to warehouse facilities storing and transporting international goods imported into the country from the Ports of Los Angeles and Long Beach is unique to southern California, both the City of Perris and Caltrans deemed it appropriate to utilize more recent and pertinent data to forecast trip generation for the proposed project. One such study that was considered was the City of Fontana Truck Trip Generation Study commissioned in August 2003 (Fontana Study). Another such study is the updated 2007 National Association of Industrial and Office Properties (NAIOP) trip generation study. Because the NAIOP study is the most current, and because the NAIOP study included data collected from 13 locations within Riverside County (the location of the proposed project), the NAIOP Study was deemed to be the most accurate benchmark on which to base trip generation for the project. Both the City and Caltrans approved the use of the NAIOP rates for this traffic analysis.

Per discussions with City of Perris staff and consistent with standard engineering practice, the Passenger Car Equivalents (PCEs) NAIOP rates have been utilized due to the expected heavy truck usage. Passenger car equivalents allow the typical “real-world” mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. PCE factors are applied to heavy trucks (large two-axles, three-axles, 4+-axles).

Construction. Heavy vehicles, such as those that will be used to transport soil to the Phase 2 site, are larger, occupy more space, and experience inferior performance when compared with passenger cars. With this in mind, a conservative PCE factor of 2.5 has been used for trucks that will be hauling import soils. Simply stated, each soil import haul truck accounts for approximately 2.5 passenger car equivalents or PCEs. These factors were developed to account for the effects of heavy vehicles when

traffic is operating at free-flow conditions. However, the effect of heavy vehicles during congestion is substantially greater than that during free flow conditions. This is mainly due to the fact that the acceleration and deceleration cycles, a situation that is normally experienced during congestion or stop-and-go conditions, impose an extra limitation on the performance of heavy vehicles.

The traffic generation for the import activity that will take place for Phase 2 is based on the number of working days to complete the import, the number trucks to be used per working day, and the number of employees estimated to be working at the project site. As previously established, the project will import 660,000 cubic yards (cy) over 432 working days. It is further estimated that approximately 1,528 cy of import will be moved each working day (i.e., 660,000 cy ÷ 432 days = 1,528 cy per day). To determine the minimum number of truck loads per day needed to move 1,528 cy of soil, the total amount of daily import is divided by the haul truck capacity (i.e., 1,528 cy ÷ 14 cy = 109 loads), which equals approximately 109 one-way truck loads per day or 218 roundtrips per day. Both daily and a.m. peak hour trip generation for the proposed project are shown in Table 4.11.J. Soil import activities are assumed to occur each working day from 7:00 a.m. to 3:30 p.m. with a 30-minute break for lunch.

Table 4.11.J: Trip Generation Summary

Project	AM Peak Hour			Daily
	In	Out	Total	
Initial Truck trips	14	14	28	218
Net Truck Trips (PCE = 2.5)	35	35	78	545
Employees (Passenger Cars)	6	2	8	24
TOTAL (PCE)	**41**	**37**	**78**	**569**

Operational. As shown on Table 4.11.K and consistent with the NAIOP Truck Trip Generation Study, for the operational phases of the project, the vehicle-mix percentages published in the City of Fontana Truck Trip Generation for Heavy Warehouse uses has been utilized for the purposes of this analysis.

Table 4.11.K: Trip Generation Rates (for Heavy Warehouse Uses)

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Inbound/Outbound Splits	54%	46%	100%	41%	59%	100%	100%
Passenger Cars (79.57%)	0.043	0.037	0.080	0.036	0.052	0.088	1.281
2-Axle Trucks (3.46%)	0.002	0.002	0.004	0.002	0.002	0.004	0.056
3-Axle Trucks (4.64%)	0.003	0.002	0.005	0.002	0.003	0.005	0.075
4-Axle Trucks (12.33%)	0.007	0.006	0.013	0.006	0.008	0.014	0.199
Passenger Car Equivalents (PCE) Rates	**0.055**	**0.047**	**0.102**	**0.046**	**0.065**	**0.111**	**1.611**

The NAIOP trip generation rates for the anticipated on-site uses have been used to calculate the trip generation for the proposed project. These daily and hourly trip counts take into account only the trips generated by the project. The peak hours is the critical time period for evaluating traffic impacts of a project because the estimated number of project trips is at its highest and ambient or background traffic volumes are at their highest. Therefore, application of trip generation rates for the am and pm peak hours results in a "worst-case" analysis of traffic conditions. As detailed in Table 4.11.L, the proposed development is projected to generate 11,915 daily trips, including 750 trips during the a.m. peak hour and 813 during the p.m. peak hour.

4.11.L: Project Trip Generation Summary

Land Use	Quantity	Units	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Airport Distribution Center (Phase 1 – 2012)									
High Cube Warehouse	783,700	TSF							
Passenger Cars			34	29	63	28	40	68	1,004
Truck Trips									
2-axle			2	1	3	1	2	3	44
3-axle			2	2	4	2	2	4	59
4+-axle			6	5	11	4	6	10	156
Net Truck Trips (PCE)			10	8	18	7	10	17	259
Subtotal Phase 1 (PCE)			**44**	**37**	**81**	**35**	**50**	**85**	**1,263**
South Perris Distribution Center (Phase 2-2012)									
High Cube Warehouse	3,448,734	TSF							
Passenger Cars			148	126	274	124	178	302	4,418
Truck Trips									
2-axle			7	6	13	5	8	13	192
3-axle			9	7	16	7	10	17	258
4+-axle			24	21	45	19	28	47	685
Net Truck Trips (PCE)			40	34	74	31	46	77	1,135
Subtotal Phase 2 (PCE)			**188**	**160**	**348**	**155**	**224**	**379**	**5,553**
First Park South 215 (Phase 3 -2013)									
High Cube Warehouse	3,166,857	TSF							
Passenger Cars			148	126	274	124	178	302	4,418
Truck Trips									
2-axle			7	6	13	5	7	12	176
3-axle			8	7	15	7	10	17	237
4+-axle			22	19	41	18	25	43	629
Net Truck Trips (PCE)			37	32	69	30	42	72	1,049
Subtotal Phase 3 (PCE)			**173**	**148**	**321**	**144**	**206**	**349**	**5,099**
2012 Grand Total (PCE)			**232**	**197**	**429**	**190**	**274**	**464**	**6,816**
2013 Grand Total (PCE)			**405**	**345**	**750**	**334**	**480**	**813**	**11,915**

Rail service to the site will be provided by Burlington Northern Santa Fe Railway (BNSF) freight train MBARJAC1, which would originate in Barstow and deliver freight for customers along the San Jacinto Branch Line to March Field Mile Post 11. Switcher crews would then switch out cars destined for customers to be served along the San Jacinto Branch Line. A future extension of an existing rail spur on the San Jacinto Branch Line that serves the Orange Empire Railway Museum will be used to provide rail service to the project. The existing tracks on the east side of "A" Street will be extended to the south of Mapes Road to connect the project site to the San Jacinto Branch Line. The extension of the rail spur to the project will necessitate a new at-grade railroad-highway crossing at Mapes Road.

Based on current operational estimates, train service to the site would likely occur three times per week (Tuesday, Thursday and Saturday). For purposes of this analysis, the site is assumed to add a maximum of 18 cars to the existing train serving customers along the San Jacinto Branch Line south of Perris

Station. Train service to the Phase 2 site would occur anytime between the hours of 7:00 a.m. and 7:00 p.m. To ensure conservative worst-case conditions were evaluated, assessment of at-grade railroad-highway crossings focused on peak hour traffic conditions.

4.11.3.2 Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, employment and recreational opportunities and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses, highways within the community and existing traffic volumes.

Construction. Trip distribution patterns for the soil import for Phase 2 were estimated based on both the soil pick up and the Phase 2 drop-off locations. The traffic distribution of two-way truck trips is depicted in Figure 4.11.4. Haul trucks will pick up soil from the source site (generally located south of Ethanac Road between Murrieta Road and the I-215 Freeway) and head west on Ethanac Road to Goetz Road, then north on Goetz Road to Mapes Road, and west on Mapes Road to the Phase 2 site's entry access east of "A" Street. Trucks will dump soil at the Phase 2 site, exit, and then return empty to the source site to repeat the process.

The County of Riverside traffic study guidelines indicate that any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed project is anticipated to add 50 or more peak hour trips should be analyzed. The City of Perris also uses this criterion when establishing a project study area. Table 4.11.M summarizes the project traffic contribution to the intersections likely to be impacted by haul truck trips. As indicated in Table 4.11.M, the export site entrance along Ethanac Road (estimated location), Murrieta Road at Ethanac Road, Goetz Road at Ethanac Road, and Goetz Road at Mapes Road will each experience more than 50 PCE trips during the a.m. peak hour. Therefore, based on the soil import-related traffic, it can be determined that further analysis at these intersections is required..

Table 4.11.M: Riverside County Test of Measurable Impact

Intersection	Project Traffic Volumes	Measurable Impact? (More than 50 trips)
Goetz Road (NS) at:		
Mapes Road (EW)	78	Yes
Ethanac Road (EW)	70	Yes
Murrieta Road (NS) at:		
Ethanac Road (EW)	70	Yes
Project Driveway (NS) at:		
Ethanac Road (EW)	70	Yes

Operational. Trip distribution for the operational portion of the study has been based upon opening years 2012, 2013 and General Plan build out conditions and highway facilities that are either in place or will be contemplated in the future.

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distribution, proposed arterial highway, and local street systems.

4.11.3.3 Method of Traffic Projection

To assess 2012 and 2013 with project traffic conditions, project traffic is combined with existing traffic, area-wide growth and traffic from other planned or approved development. The study years analyzed in this report are opening year (2012) and project build-out year (2013). As recommended by City staff, the year 2012 without and with project traffic (Phase 1 and Phase 2) as well as 2013 without and with project (Phase 1, Phase 2 and Phase 3) traffic volumes have been calculated based on a 3 percent annual growth rate applied to existing traffic volumes.

The cumulative developments analyzed in the 2012 and 2013 traffic conditions were provided by the City of Perris Planning Department. Figure 2.1 identifies the location of projects included in the cumulative traffic discussion. Table 4.11.N identifies land use and trip generation of the surrounding developments concurrently being processed within a 3 mile radius of the project. Because some of the developments contained within the cumulative analysis may not be constructed at the time horizon anticipated, or at all due to economic conditions, the cumulative impact analysis contained within the TIA is inherently conservative and would tend to overstate cumulative impacts.

4.11.N: Cumulative Project Trip Generation Summary

TAZ	Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak hour			Daily
					In	Out	Total	In	Out	Total	
1	TR 33199	SFDR	27	DU	5	15	20	17	10	27	258
	TR 30973	SFDR	36	DU	7	20	27	23	13	36	345
	TR 31407	SFDR	243	DU	46	136	182	156	90	245	2,326
	TR 33193	SFDR	24	DU	5	13	18	15	9	24	230
	TR 34756	SFDR	27	DU	5	15	20	17	10	27	258
	TR 31225	SFDR	57	DU	11	32	43	36	21	58	545
	TR 33200	SFDR	100	DU	19	56	75	64	37	101	957
	TR 34456	SFDR	115	DU	22	64	86	74	43	116	1,101
	TR 34719	SFDR	54	DU	10	30	41	35	20	55	517
	TR 33882	SFDR	54	DU	10	30	40	35	20	55	517
	Subtotal TAZ 1				**140**	**413**	**552**	**472**	**273**	**744**	**7,053**
2	Harvest Landing SP[5]	TOTAL			1,432	936	2,368	1,208	1,586	2,794	28,412
	DPR 08-05-0007	Commercial Retail	68.499	TSF	76	49	125	234	253	488	5,311
	Subtotal TAZ 2				**1,508**	**985**	**2,493**	**1,442**	**1,839**	**3,282**	**33,723**
3	TR 34287	Condo/ Townhomes	52	DU	4	19	23	18	9	27	305
	TR 31651	SFDR	60	DU	11	34	45	38	22	61	574
	TR 34429	SFDR	53	DU	10	30	40	34	20	54	507
	DPR 06-0378	Senior Adult Housing-Attached	429	DU	17	17	34	30	17	47	1,493
	ZC 07-08-0024	Condo/ Townhomes	294	DU	21	109	129	103	50	153	1,723
	Subtotal TAZ 3				**63**	**208**	**271**	**223**	**118**	**341**	**4,602**
4	Park West SP[3]	SFDR	521	DU	99	292	391	333	193	526	4,986
		Elementary School	750	STU	173	143	315	23	45	68	968
		Neighborhood Park	5	AC	1	1	1	1	1	2	25
		Park West SP Subtotal			272	435	707	357	239	596	5,979
	TR 34267	SFDR	60	DU	11	34	45	38	22	61	574
	Subtotal TAZ 4				**284**	**469**	**752**	**396**	**261**	**657**	**6,553**

4.11.N: Cumulative Project Trip Generation Summary

TAZ	Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak hour			Daily
					In	Out	Total	In	Out	Total	
5	The Venue[4]	TOTAL			705	564	1,269	1,369	1,371	2,741	30,764
	TR 34078	SFDR	72	DU	14	40	54	46	27	73	689
	Retail on San Jacinto	Commercial Retail	217.8	TSF	152	98	250	503	545	1,048	11,265
		Internal Capture (5%)			-8	-5	-13	-25	-27	-52	-563
		Interaction with The Venue (10%)			-15	-10	-25	-50	-54	-105	-1,126
		SUBTOTAL			130	83	213	428	463	890	9,575
	Retail on San Jacinto	Fast Food w/ Drive-Thru	4.5	TSF	122	117	239	81	75	156	2,233
		Pharmacy w/ Drive-Thru	14.0	TSF	21	16	37	59	62	121	1,234
		Specialty Retail	31.5	TSF	23	15	38	37	48	85	1,396
		Pass-by (30% Fast Food & 10% Pharmacy)			-39	-37	-75	-30	-29	-59	-793
		SUBTOTAL			127	111	239	147	156	303	4,070
	Subtotal TAZ 5				**975**	**799**	**1,775**	**1,990**	**2,016**	**4,007**	**45,098**
6	TR 32779	Condo/ Townhomes	38	DU	3	14	17	13	6	20	223
	DPR 06-0323	Gen. Light Industrial	18.685	TSF	15	2	17	2	16	18	130
	DPR 07-09-0003	Gen. Light Industrial	58.487	TSF	47	6	54	7	50	57	408
	Subtotal TAZ 6				**65**	**23**	**88**	**23**	**73**	**95**	**761**
7	DPR 07-0045	Senior Adult Housing-Attached	84	DU	3	3	7	6	3	9	292
		Commercial Retail	8.518	TSF	22	14	36	59	64	123	1,370
	Subtotal TAZ 7				**25**	**17**	**42**	**65**	**67**	**132**	**1,662**
8	TR 33549	SFDR	127	DU	**24**	**71**	**95**	**81**	**47**	**128**	**1,215**
9	South Perris Metrolink Station	Light Rail Transit Station	680	SP	**585**	**143**	**728**	**490**	**354**	**843**	**1,707**
10	TR 32032	SFDR	118	DU	22	66	89	76	44	119	1,129
	TR 32769	SFDR	23	DU	4	13	17	15	9	23	220
	TR 33274	SFDR	28	DU	5	16	21	18	10	28	268
	Subtotal TAZ 10				**32**	**95**	**127**	**108**	**63**	**171**	**1,617**
11	TR 32525	SFDR	174	DU	33	97	131	111	64	176	1,665
	TR 32549	SFDR	39	DU	7	22	29	25	14	39	373
	TR 33050	SFDR	19	DU	4	11	14	12	7	19	182
	Subtotal TAZ 11				**44**	**130**	**174**	**148**	**86**	**234**	**2,220**
12	TR 33973	SFDR	388	DU	74	217	291	248	144	392	3,713
	TR 33900	SFDR	198	DU	38	111	149	127	73	200	1,895
	TR 31304	SFDR	125	DU	24	70	94	80	46	126	1,196
	Subtotal TAZ 12				**135**	**398**	**533**	**455**	**263**	**718**	**6,804**
13	TR 33042	SFDR	51	DU	10	29	38	33	19	52	488
	Riverwoods SP[6]	TOTAL			265	487	752	504	339	843	7,203
	Subtotal TAZ 13				**275**	**516**	**790**	**537**	**358**	**895**	**7,691**
14	TR 31564	SFDR	69	DU	13	39	52	44	26	70	660
	TR 31926	SFDR	358	DU	68	200	269	229	132	362	3,426
	Subtotal TAZ 14				**81**	**239**	**320**	**273**	**158**	**431**	**4,086**

4.11.N: Cumulative Project Trip Generation Summary

TAZ	Name	Land Use[1]	Quantity	Units[2]	AM Peak Hour			PM Peak hour			Daily
					In	Out	Total	In	Out	Total	
15	TR 30662	SFDR	45	DU	9	25	34	29	17	45	431
		Elementary School	950	STU	219	181	399	57	76	133	1,226
		Golf Course	18	holes	32	8	40	22	28	49	643
	Subtotal TAZ 15				**259**	**214**	**473**	**108**	**120**	**228**	**2,299**
16	PDO 07-12-0008	Condo/ Townhomes	400	DU	28	148	176	140	68	208	2,344
		Commercial	60.000	TSF	70	45	115	214	232	446	4,873
	Subtotal TAZ 16				**98**	**193**	**291**	**354**	**300**	**654**	**7,217**
17	DPR 06-0337	Commercial Retail	507.500	TSF	**254**	**162**	**416**	**878**	**949**	**1,827**	**19,518**
18	DPR 04-0621 (Perris Crossing)	Fast Food w/ Drive-Thru	7.200	TSF	195	187	382	130	120	249	3,572
		Fast Food w/o Drive-Thru	4.100	TSF	108	72	180	55	53	107	2,936
		Fast Food w/o Drive-Thru	5.000	TSF	132	88	219	67	64	131	3,580
		Office	24.200	TSF	53	7	60	18	88	106	447
		Specialty Retail	26.825	TSF	19	13	32	32	41	73	1,189
		Commercial Retail	209.500	TSF	149	94	243	490	530	1,020	10,982
	Subtotal TAZ 18				**656**	**461**	**1,117**	**791**	**895**	**1,686**	**22,706**
19	Green Valley SP[6]	SFDR	976	DU	185	547	732	625	361	986	9,340
		Condos / Townhomes	1,472	DU	103	545	648	515	250	765	8,626
		Apartments	926	DU	93	380	472	370	204	574	6,223
		Community Center	131.769	TSF	130	83	213	63	153	216	3,015
		Commercial Retail	303.831	TSF	185	118	304	626	678	1,303	13,985
	Subtotal TAZ 19				**697**	**1,672**	**2,369**	**2,199**	**1,645**	**3,845**	**41,189**
20	DPR 05-0335	Business Park (Mixed-Use)	387.993	TSF	**466**	**89**	**555**	**116**	**384**	**501**	**4,951**
TOTAL					**6,665**	**7,297**	**13,961**	**11,150**	**10,269**	**21,420**	**222,673**

[1] SFDR = Single Family Detached Residential
[2] DU = Dwelling Units
TSF = Thousand Square Feet
VFP = Vehicle Fueling Positions
SP = Spaces (Parking)
[3] Source: Park West Specific Plan TIA, Urban Crossroads, Inc., October 17, 2005. (Includes first phase of development only for Interim Year)
[4] Source: The Venue at Perris TIA, Urban Crossroads, Inc., June 2, 2008 (Revised).
[5] Source: Harvest Landing Specific Plan TIA, Urban Crossroads, Inc., May 24, 2007 (Revised).
[6] Source: Riverwoods Specific Plan TIA, Urban Crossroads, Inc., January 9, 2007.

At the direction of City of Perris staff, the Long Range (2030) volumes have been derived from the sub-regional travel demand model currently being used for long-range planning in the County of Riverside. This model is commonly referred to as the Western Riverside Sub-Area Applications traffic model (WRSATM). Long-Range (2030) forecasts for without and with the Evans Road/I-215 Interchange have been developed from the WRSATM using accepted procedures for model forecasting, refinement, and smoothing.

The traffic forecasts reflect the area-wide growth anticipated between existing conditions and Long-Range (2030) conditions. The Long Range (2030) peak hour forecasts were refined using the long-range forecast, along with existing peak hour traffic count data collected at each analysis location. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Long range peak hour forecast. The traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking was performed. Lastly, Long Range (2030 turning volumes were compared to 2013 with project volumes in order to ensure proper growth as a part of the refinement process.

The initial estimate of the future Long Range (2030) peak hour turning movements has been reviewed for reasonableness. Where necessary, the initial raw model estimates were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Pursuant to Caltrans request, Long Range (2030) conditions have been analyzed with and without the I-215 Freeway/Ellis Avenue/Evans Road interchange.

The freeway system in the project study area has been broken into segments defined by freeway-to-arterial interchange locations. This resulted in four (4) existing segments and five (5) future segments (with the addition of the proposed Ellis/Evans interchange) evaluated for both passenger car and truck components. Each freeway mainline segment evaluation has been based upon directional traffic volumes during both the a.m. and p.m. peak hours. The I-215 Freeway segments from north of the Redlands Avenue/SR-74 interchange to south of the Ethanac Road interchange were evaluated for both existing (2008) and future conditions.

The peak hour volumes were determined as a percentage of the daily traffic. Average daily traffic volumes on I-215 range between 82,000 and 95,900 vehicles per day within the study area. The existing percent of total directional peak hour vehicles that are heavy trucks ranges from 5.62 percent to 7.86 percent across the four (4) existing segments. The truck traffic is higher on the I-215 Freeway toward the south heading to and from Temecula/Murrieta. The regional component of heavy truck traffic is expected to increase annually at a rate of approximately 3 percent per year, based on historic data. Additional truck traffic volumes on the I-215 are related to suburban growth within the area. Lastly, it is important to note that the reported volumes represent total traffic (i.e., truck traffic is accounted for as a percentage of the total traffic). The truck traffic percentage varies by segment, direction and by peak hour.

Project traffic is anticipated to have a nominal traffic impact on I-215. The background growth on I-215 consists of substantial increases associated with the anticipated suburban growth within the surrounding area. The anticipated growth in the area would require I-215 Freeway interchange improvements at Redlands Avenue/4th Street/SR-74, SR-74/Bonnie Drive/Matthews Road and Ethanac Road. An interchange at Ellis Avenue/Evans Road is also anticipated under long-range conditions. The nominal decrease in project traffic on I-215 between interim year (2013) conditions and long-range (2030) conditions is due to the proposed Ellis Avenue/Evans Road interchange, which has been assumed for the purposes of this analysis. It is anticipated that truck traffic generated by the project as well as employee traffic previously utilizing Redlands Avenue and SR-74/Bonnie Drive would access I-215 via the Ellis Avenue/Evans Road interchange once constructed.

Caltrans has proposed constructing a new freeway interchange at I-215/Ellis Avenue-Evans Road, which, if constructed, would be complete under year 2030 conditions. The new interchange is part of the County's Transportation Uniform Mitigation Fee (TUMF) network, and is being funded through collection of these fees. As mentioned earlier, the interchange is still in the conceptual phase and Caltrans has, therefore, requested that the year 2030 analysis include two scenarios, one without and one with the proposed interchange. Given these uncertainties, this EIR has analyzed both of these 2030 scenarios.

Estimated directional peak hour volumes on each segment have been refined by calculating the peak-to-daily ratios and checking for reasonableness. The average daily traffic (ADT) volume growth trends from 2006 to long-range (2030) conditions (with the I-215/Ellis/Evans interchange) in the study area for each segment are were calculated, along with peak-to-daily relationships. As shown, the peak-to-daily percentages range from 6.7 percent to 9.1 percent in the vicinity of the project during the a.m. and p.m. peak hours, respectively.

The freeway segments were evaluated based upon existing (2008), existing (2008) plus project, interim year (2012 and 2013) and long-range (2030) traffic conditions (both with and without the I-215/Ellis/Evans interchange). To estimate regional or ambient growth, an annual growth rate of 3 percent per year has been applied to both passenger cars and truck traffic consistent with the methodology outlined for the peak hour intersection volumes. Project traffic and cumulative development traffic have also been manually added to the existing volumes with regional or ambient growth. Thus, as stated previously, the cumulative analysis contained in this traffic impact analysis would likely overstate as opposed to understate traffic impacts. Lastly, the mainline volumes on I-215 have been flow conserved with the ramp volumes through the study area.

4.11.3.4 Future Year Baseline

LOS and volumes are discussed below for conditions (or baselines) against which future year project impacts are compared:

- 2012 Without Project;
- 2013 Without Project;
- 2030 Without Project, With the Proposed Ellis Avenue Interchange; and
- 2030 Without Project, Without the Proposed Ellis Avenue Interchange.

Year 2012 Baseline without the Project. Phases 1 and 2 of the project are planned to be built and occupied by the year 2012. The preferred interchange design at SR-74/Redlands Avenue/I-215 Freeway improvements have been assumed complete for the purposes of this analysis, as the Riverside County Transportation Commission (RCTC) anticipates an opening year of 2011 for the reconstructed interchange. The year 2012 without-project levels of service for the study area intersections are summarized in Table 4.11.O. Based on these data, the following study area intersections are projected to operate at unacceptable levels of service in 2012 during either the a.m. or the p.m. peak hour with existing roadway geometry.

- Perris Boulevard (NS) at:
  - 11th Street/ Case Road(EW)
- Goetz Road (NS) at:
  - Case Road (EW)
  - Ellis Avenue (EW)
  - Mountain Avenue (EW)
  - Mapes Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Ellis Avenue (EW)
- Redlands Avenue (NS) at:
  - Case Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Bonnie Drive/Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Ethanac Road (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)
  - Ethanac Road

Table 4.11.O: 2012 Without Project Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	11.3	14.0	B	B
Watson Road (EW)	CSS	8.3	8.6	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
11th Street/Case Road (EW)	AWS	—	—	F	F
Goetz Road (NS) at:					
Case Road (EW)	AWS	42.7	66.1	E	F
Ellis Avenue (EW)	CSS	48.6	—	E	F
Mountain Avenue (EW)	CSS	25.6	53.0	D	F
Mapes Road (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	93.3	83.5	F	F
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	41.1	—	E	F
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
7th Street (EW)	CSS	12.5	15.9	B	C
Ellis Avenue (EW)	CSS	9.0	9.2	A	A
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
Murrieta Road (NS) at:					
Case Road (EW)	CSS	49.6	—	E	F
Ethanac Road (EW)	AWS	—	—	F	F
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	63.1	—	F	F
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All-Way Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31.

The year 2012 without-project levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.P. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios in 2012 with existing roadway geometry.

- Perris Boulevard from north of 4th Street/SR-74 to 11th Street.
- Goetz Road from Case Road to just north of Mapes Road.
- Redlands Avenue from north of the I-215 Northbound Ramps to 4th Street/SR-74.
- Murrieta Road, south of Ethanac Road.
- 11th Street/Case Road between Perris Boulevard and Bonnie Drive.
- Bonnie Drive between Case Road and the I-215 Southbound Ramps/SR-74.
- SR-74 between the I-215 Southbound and I-215 Northbound ramps.
- Ethanac Road from Goetz Road to east of the I-215 Northbound ramps.

4.11.P: 2012 Without Project Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	6,589	0.41
	Mapes Road to Watson Road	2U	11,700	225	0.02
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	22,431	1.38
	4th Street (SR-74) to 11th Street	2U	11,700	24,967	2.13
	South of 11th Street	2U	11,700	4,351	0.37
Goetz Road	Case Road to Ellis Avenue	2U	11,700	16,015	1.37
	Ellis Avenue to Mountain Avenue	2U	11,700	17,003	1.45
	South of Mountain Avenue	2U	11,700	17,003	1.45
	North of Mapes Road	2U	11,700	15,878	1.36
	South of Mapes Road	4D	32,300	19,816	0.61
	North of Ethanac Road	4D	32,300	24,116	0.75
	South of Ethanac Road	3D	23,300	20,416	0.88
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	50,319	4.30
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	42,033	3.59
	I-215 SB Ramps to 4th Street	2U	11,700	15,929	1.36
	4th Street to 7th Street	2U	11,700	8,953	0.77
	7th Street to Ellis Avenue	2U	11,700	8,353	0.71
Murrieta Road	South of Case Road	2U	11,700	3,964	0.34
	North of Ethanac Road	2U	11,700	4,426	0.38
	South of Ethanac Road	2U	11,700	18,816	1.61
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	26,222	0.73
	Perris Boulevard to Redlands Avenue	4D	35,900	33,222	0.93
	East of Redlands Avenue	2U	13,000	9,617	0.74
7th Street	West of Redlands Avenue	2U	11,700	2,851	0.24
11th Street/Case Road	West of Perris Boulevard	2U	11,700	9,704	0.83
	Perris Boulevard to Goetz Road	2U	11,700	20,017	1.71
	Goetz Road to Ellis Avenue	2U	11,700	13,429	1.15
	Ellis Avenue to Murrieta Road	2U	11,700	13,416	1.15
	Murrieta Road to Bonnie Drive	2U	11,700	12,190	1.04
	South of Bonnie Drive	2U	11,700	8,588	0.73

4.11.P: 2012 Without Project Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	13,377	1.14
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	27,497	1.06
	East of I-215 NB Ramps	4D	35,900	33,638	0.94
Ellis Avenue	West of Goetz Road	2U	11,700	2,851	0.24
	Goetz Road to Case Road	2U	11,700	1,700	0.15
	Case Road to Redlands Avenue	2U	11,700	3,626	0.31
Mountain Avenue	West of Goetz Road	2U	11,700	113	0.01
Mapes Road	West of "A" Street	2U	11,700	2,875	0.25
	"A" Street to Goetz Road	2U	11,700	7,514	0.64
Watson Road	West of "A" Street	2U	11,700	225	0.02
Ethanac Road	West of Goetz Road	4D	32,300	12,488	0.39
	Goetz Road to Murrieta Road	2U	11,700	48,654	4.16
	East of Murrieta Road	2U	11,700	51,768	4.42
	West of I-215 SB Ramps	4D	32,300	51,768	1.60
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	43,006	1.85
	East of I-215 NB Ramps	2U	11,700	32,393	2.77

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2012 without-project levels of service for the study area freeway segments are summarized in Table 4.11.Q. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

4.11.Q: 2012 Without Project Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	4,069	5,587	6%	5%	2	36.8	>45.0	E	F
Redlands Avenue / SR-74	4,447	5,841	6%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,158	5,001	6%	6%	2	38.5	>45.0	E	F
South of Ethanac Road	4,833	5,202	6%	5%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	5,089	5,181	6%	5%	2	>45.0	>45.0	F	F
Redlands Avenue / SR-74	5,207	5,634	6%	4%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,555	5,131	7%	6%	2	>45.0	>45.0	F	F
South of Ethanac Road	4,668	5,636	6%	5%	2	>45.0	>45.0	F	F

Year 2013 Baseline without the Project. Phases 1, 2 and 3 of the project are planned to be built and occupied by the year 2013. The year 2013 without-project levels of service for the study area intersections are summarized in Table 4.11.R. Based on these data, there are no new study area

intersections that are projected to operate at unacceptable levels of service in 2013. The intersections listed previously as functioning at an unacceptable level of service for 2012 would continue to fail in 2013 during either the a.m. or the p.m. peak hour with existing roadway geometry.

4.11.R: 2013 Without Project Peak Hour Intersection Level of Service

Intersection	Traffic Control[3]	Delay[2] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	11.4	14.2	B	B
Watson Road (EW)	CSS	8.3	8.6	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
11th Street/Case Road (EW)	AWS	—	—	F	F
Goetz Road (NS) at:					
Case Road (EW)	AWS	45.1	—	E	F
Ellis Avenue (EW)	CSS	54.1	—	F	F
Mountain Avenue (EW)	CSS	26.1	54.1	D	F
Mapes Road (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	97.5	85.3	F	F
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	45.1	—	E	F
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
7th Street (EW)	CSS	12.7	16.3	B	C
Ellis Avenue (EW)	CSS	9.0	9.2	A	A
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
Murrieta Road (NS) at:					
Case Road (EW)	CSS	54.6	—	F	F
Ethanac Road (EW)	AWS	—	—	F	F
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Center, City of Perris, Riverside County, California, Table 6-14 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

Year 2013 without project roadway segment daily V/C ratios are provided on Table 4.11.S. The daily volume roadway segment analysis indicates that there are no additional study area roadway segments anticipated to operate with unacceptable V/C ratios in comparison to 2012 without project conditions.

4.11.S: 2013 Without Project Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	6,666	0.41
	Mapes Road to Watson Road	2U	11,700	232	0.02
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	22,816	1.41
	4th Street (SR-74) to 11th Street	2U	11,700	25,281	2.16
	South of 11th Street	2U	11,700	4,419	0.38
Goetz Road	Case Road to Ellis Avenue	2U	11,700	16,208	1.39
	Ellis Avenue to Mountain Avenue	2U	11,700	17,219	1.47
	South of Mountain Avenue	2U	11,700	17,219	1.47
	North of Mapes Road	2U	11,700	16,060	1.37
	South of Mapes Road	4D	32,300	20,063	0.62
	North of Ethanac Road	4D	32,300	24,363	0.75
	South of Ethanac Road	3D	23,300	20,663	0.89
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	50,755	4.34
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	42,553	3.64
	I-215 SB Ramps to 4th Street	2U	11,700	16,179	1.38
	4th Street to 7th Street	2U	11,700	9,183	0.78
	7th Street to Ellis Avenue	2U	11,700	8,583	0.73
Murrieta Road	South of Case Road	2U	11,700	4,034	0.34
	North of Ethanac Road	2U	11,700	4,514	0.39
	South of Ethanac Road	2U	11,700	19,063	1.63
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	26,874	0.75
	Perris Boulevard to Redlands Avenue	4D	35,900	33,847	0.94
	East of Redlands Avenue	2U	13,000	9,890	0.76
7th Street	West of Redlands Avenue	2U	11,700	2,919	0.25
11th Street/Case Road	West of Perris Boulevard	2U	11,700	9,947	0.85
	Perris Boulevard to Goetz Road	2U	11,700	20,318	1.74
	Goetz Road to Ellis Avenue	2U	11,700	13,679	1.17
	Ellis Avenue to Murrieta Road	2U	11,700	13,635	1.17
	Murrieta Road to Bonnie Drive	2U	11,700	12,349	1.06
	South of Bonnie Drive	2U	11,700	8,639	0.74
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	13,533	1.16
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	28,115	1.09
	East of I-215 NB Ramps	4D	35,900	34,482	0.96
Ellis Avenue	West of Goetz Road	2U	11,700	2,891	0.25
	Goetz Road to Case Road	2U	11,700	1,700	0.15
	Case Road to Redlands Avenue	2U	11,700	3,714	0.32
Mountain Avenue	West of Goetz Road	2U	11,700	116	0.01

4.11.S: 2013 Without Project Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
Mapes Road	West of "A" Street	2U	11,700	2,896	0.25
	"A" Street to Goetz Road	2U	11,700	7,598	0.65
Watson Road	West of "A" Street	2U	11,700	232	0.02
Ethanac Road	West of Goetz Road	4D	32,300	12,511	0.39
	Goetz Road to Murrieta Road	2U	11,700	48,910	4.18
	East of Murrieta Road	2U	11,700	52,109	4.45
	West of I-215 SB Ramps	4D	32,300	52,109	1.61
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	43,384	1.86
	East of I-215 NB Ramps	2U	11,700	32,741	2.80

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2013 without project levels of service for the study area freeway segments are summarized in Table 4.11.T. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

Table 4.11.T: 2013 Without Project Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	4,170	5,712	6%	5%	2	38.8	>45.0	E	F
Redlands Avenue / SR-74	4,556	5,972	6%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,260	5,108	7%	6%	2	41.2	>45.0	E	F
South of Ethanac Road	4,943	5,311	6%	5%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	5,217	5,298	6%	5%	2	>45.0	>45.0	F	F
Redlands Avenue / SR-74	5,337	5,760	6%	4%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,663	5,242	7%	6%	2	>45.0	>45.0	F	F
South of Ethanac Road	4,779	5,750	6%	5%	2	>45.0	>45.0	F	F

The year 2013 without project levels of service for the study area at-grade railroad crossings are summarized in Table 4.11.U. Based on these data, all study area at-grade crossings are projected to operate at LOS A during both the a.m. and p.m. peak hours, within the LOS D performance standard.

4.11.U: 2013 Without Project At-Grade Crossing Analysis

Cross-Street Name	Westbound 95th Percentile Queue (feet)		Eastbound 95th Percentile Queue (feet)		Average Stopped Delay (seconds)		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
San Jacinto Street	81	112	88	80	5.5	5.6	A	A
4th Street	85	112	105	113	5.7	5.7	A	A
7th Street	20	21	23	25	5.2	5.2	A	A

Year 2030 Without the Project, With the I-215/Ellis/Evans Interchange. The year 2030 without-project, with interchange levels of service for the study area intersections are summarized in Table 4.11.V. Based on the data, the Redlands Avenue/7th Street intersection and the Redlands Avenue/Ellis Avenue intersections are projected to operate at unacceptable levels of service in 2030 without the project and with the proposed interchange. These intersections are in addition to the locations projected to operate at unacceptable levels of service in 2013 with existing geometry. All intersections functioning at an unacceptable level of service for this scenario are listed below.

- Perris Boulevard (NS) at:
  - 11th Street/ Case Road (EW)
  - 7th Street (EW)
  - Ellis Avenue (EW)
  - Case Road (EW)
  - Ethanac Road (EW)
- Goetz Road (NS) at:
  - Case Road (EW)
  - Ellis Avenue (EW)
  - Mountain Avenue (EW)
  - Mapes Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Ellis Avenue (EW)
  - Bonnie Drive/Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Ethanac Road (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)
  - Ethanac Road
- Redlands Avenue (NS) at:

Table 4.11.V: 2030 Without Project, With Interchange Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	26.1	21.2	D	C
Watson Road (EW)	CSS	8.4	9.2	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
11th Street/Case Road (EW)	AWS	—	—	F	F
Goetz Road (NS) at:					
Case Road (EW)	AWS	34.2	—	D	F
Ellis Avenue (EW)	CSS	—	—	F	F
Mountain Avenue (EW)	CSS	—	—	F	F
Mapes Road (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	—	—	F	F
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F

Table 4.11.V: 2030 Without Project, With Interchange Peak Hour Level of Service

		Delay[1] (Seconds)		Level of Service	
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
7th Street (EW)	CSS	89.5	—	F	F
Ellis Avenue (EW)	CSS	—	—	F	F
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
Murrieta Road (NS) at:					
Case Road (EW)	CSS	—	—	F	F
Ethanac Road (EW)	AWS	—	—	F	F
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F

[1] Delay and level of service calculated using the SYNCHRO and HCS+ analysis software. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008, pg 180.

The year 2030 without-project, with interchange levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.W. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Perris Boulevard from north of 4th Street/SR-74 to south of 11th Street.
- Goetz Road from Case Road to south of Ethanac Road
- Redlands Avenue from north of the I-215 Northbound Ramps to Ellis Avenue.
- Murrieta Road from south of Case Road to south of Ethanac Road
- 11th Street/Case Road between Perris Boulevard and Bonnie Drive
- Bonnie Drive between Case Road and the I-215 Southbound Ramps/SR-74.
- SR-74 from the I-215 Southbound ramps to east of the I-215 Northbound ramps
- Ellis Avenue from west of Goetz Road to east of Redlands Avenue.
- Ethanac Road from west of Goetz Road to east of the I-215 Northbound ramps.

Table 4.11.W: Long Range (2030) Without Project With I-215/Ellis/Evans Interchange Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	6,700	0.41
	Mapes Road to Watson Road	2U	11,700	5,200	0.44
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	31,500	1.94
	4th Street (SR-74) to 11th Street	2U	11,700	32,900	2.81
	South of 11th Street	2U	11,700	17,000	1.45
Goetz Road	Case Road to Ellis Avenue	2U	11,700	20,100	1.72
	Ellis Avenue to Mountain Avenue	2U	11,700	33,000	2.82
	South of Mountain Avenue	2U	11,700	33,200	2.84
	North of Mapes Road	2U	11,700	33,300	2.85
	South of Mapes Road	4D	32,300	37,800	1.17
	North of Ethanac Road	4D	32,300	40,700	1.26
	South of Ethanac Road	3D	23,300	40,200	1.73
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	58,300	4.98
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	46,800	4.00
	I-215 SB Ramps to 4th Street	2U	11,700	42,300	3.62
	4th Street to 7th Street	2U	11,700	25,600	2.19
	7th Street to Ellis Avenue	2U	11,700	19,600	1.68
Murrieta Road	South of Case Road	2U	11,700	18,800	1.61
	North of Ethanac Road	2U	11,700	19,800	1.69
	South of Ethanac Road	2U	11,700	25,900	2.21
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	28,400	0.79
	Perris Boulevard to Redlands Avenue	4D	35,900	36,900	1.03
	East of Redlands Avenue	2U	13,000	3,300	0.25
7th Street	West of Redlands Avenue	2U	11,700	3,100	0.26
11th Street/Case Road	West of Perris Boulevard	2U	11,700	10,300	0.88
	Perris Boulevard to Goetz Road	2U	11,700	20,700	1.77
	Goetz Road to Ellis Avenue	2U	11,700	22,000	1.88
	Ellis Avenue to Murrieta Road	2U	11,700	22,700	1.94
	Murrieta Road to Bonnie Drive	2U	11,700	16,500	1.41
	South of Bonnie Drive	2U	11,700	9,000	0.77
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	20,900	1.79
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	38,800	1.50
	East of I-215 NB Ramps	4D	35,900	36,800	1.03
Ellis Avenue	West of Goetz Road	2U	11,700	40,500	3.46
	Goetz Road to Case Road	2U	11,700	34,100	2.91
	Case Road to Redlands Avenue	2U	11,700	24,800	2.12
Mountain Avenue	West of Goetz Road	2U	11,700	19,000	1.62
Mapes Road	West of "A" Street	2U	11,700	29,000	2.48
	"A" Street to Goetz Road	2U	11,700	43,200	3.69
Watson Road	West of "A" Street	2U	11,700	59,200	5.06

Table 4.11.W: Long Range (2030) Without Project With I-215/Ellis/Evans Interchange Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
Ethanac Road	West of Goetz Road	2U	11,700	100	0.01
	Goetz Road to Murrieta Road	2U	11,700	3,300	0.28
	East of Murrieta Road	2U	11,700	9,800	0.84
	West of I-215 SB Ramps	2U	11,700	4,900	0.42
	I-215 SB Ramps to I-215 NB Ramps	4D	32,300	61,900	1.92
	East of I-215 NB Ramps	2U	11,700	66,600	5.69

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2030 without project with I-215/Ellis/Evans Interchange levels of service for the study area freeway segments are summarized in Table 4.11.X. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

4.11.X: 2030 Without Project With I-215/Ellis/Evans Interchange Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	6,287	7,809	7%	6%	2	>45.0	>45.0	F	F
Redlands Avenue/Ellis Avenue	6,239	7,812	7%	7%	2	>45.0	>45.0	F	F
Ellis Avenue / SR-74	7,555	9,088	6%	6%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	5,951	7,116	8%	7%	2	>45.0	>45.0	F	F
South of Ethanac Road	6,261	6,992	8%	7%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	6,438	7,834	8%	5%	2	>45.0	>45.0	F	F
Redlands Avenue/Ellis Avenue	6,049	7,998	8%	5%	2	>45.0	>45.0	F	F
Ellis Avenue / SR-74	7,199	8,994	7%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	6,569	7,404	8%	7%	2	>45.0	>45.0	F	F
South of Ethanac Road	5,955	8,014	8%	6%	2	>45.0	>45.0	F	F

The year 2030 without project levels of service for the study area at-grade railroad crossings are summarized in Table 4.11.Y. Based on these data, all study area at-grade crossings are projected to operate at LOS A during both the a.m. and p.m. peak hours, within the LOS D performance standard.

4.11.Y: 2030 Without Project At-Grade Crossing Analysis

Cross-Street Name	Westbound 95th Percentile Queue (feet)		Eastbound 95th Percentile Queue (feet)		Average Stopped Delay (seconds)		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
San Jacinto Street	45	62	47	41	5.6	5.7	A	A
4th Street	89	128	110	130	5.7	5.8	A	A
7th Street	21	23	24	26	5.2	5.2	A	A

Year 2030 Without the Project, Without the I-215 Ellis/Evans Interchange. The year 2030 without-project, without interchange levels of service for the study area intersections are summarized in Table 4.11.Z. Based on the data, the A Street/Mapes Road intersection is projected to operate at unacceptable level of service in 2030 without the project and without the proposed interchange. This intersection is in addition to the locations projected to operate at unacceptable levels of service in the 2030 without project, without intersection scenario with existing geometry. All intersections functioning at an unacceptable level of service for this scenario are listed below.

- Perris Boulevard (NS) at:
  - 11th Street/ Case Road(EW)
- Goetz Road (NS) at:
  - Case Road (EW)
  - Ellis Avenue (EW)
  - Mountain Avenue (EW)
  - Mapes Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Ellis Avenue (EW)
- "A" Street (NS) at:
  - Mapes Road (EW)
- Redlands Avenue (NS) at:
  - 7th Street (EW)
  - Ellis Avenue (EW)
  - Case Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Bonnie Drive/Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Ethanac Road (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)
  - Ethanac Road

Table 4.11.Z: 2030 Without Project, Without Interchange Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	35.6	57.6	E	F
Watson Road (EW)	CSS	8.4	9.8	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
11th Street/Case Road (EW)	AWS	—	—	F	F
Goetz Road (NS) at:					
Case Road (EW)	AWS	—	—	F	F
Ellis Avenue (EW)	CSS	—	—	F	F
Mountain Avenue (EW)	CSS	—	—	F	F
Mapes Road (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	—	—	F	F
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F

Table 4.11.Z: 2030 Without Project, Without Interchange Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
7th Street (EW)	CSS	—	—	F	F
Ellis Avenue (EW)	CSS	—	—	F	F
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
Murrieta Road (NS) at:					
Case Road (EW)	CSS	—	—	F	F
Ethanac Road (EW)	AWS	—	—	F	F
Case Road (NS)					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
Ethanac Road (EW)	TS	—	—	F	F

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2030 without project, without interchange levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.AA. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Perris Boulevard from north of 4th Street/SR-74 to south of 11th Street.
- Goetz Road from Case Road to south of Ethanac Road.
- Redlands Avenue from north of the I-215 Northbound Ramps to Ellis Avenue.
- Murrieta Road from south of Case Road to south of Ethanac Road.
- 4th Street from Perris Boulevard to Redlands Avenue.
- 11th Street/Case Road between Perris Boulevard and Bonnie Drive.
- Bonnie Drive between Case Road and the I-215 Southbound Ramps/SR-74.
- SR-74 from the I-215 Southbound ramps to east of the I-215 Northbound ramps.
- Ellis Avenue from west of Goetz Road to east of Redlands Avenue.
- Ethanac Road from west of Goetz Road to east of the I-215 Northbound ramps.

Table 4.11.AA: Long Range (2030) Without Project Without I-215/Ellis/Evans Interchange Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	6,700	0.41
	Mapes Road to Watson Road	2U	11,700	3,000	0.26
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	33,500	2.07
	4th Street (SR-74) to 11th Street	2U	11,700	27,600	2.36
	South of 11th Street	2U	11,700	19,000	1.62
Goetz Road	Case Road to Ellis Avenue	2U	11,700	27,400	2.34
	Ellis Avenue to Mountain Avenue	2U	11,700	32,000	2.74
	South of Mountain Avenue	2U	11,700	33,300	2.85
	North of Mapes Road	2U	11,700	33,300	2.85
	South of Mapes Road	4D	32,300	37,800	1.17
	North of Ethanac Road	4D	32,300	40,700	1.26
	South of Ethanac Road	3D	23,300	40,200	1.73
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	86,600	7.40
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	71,100	6.08
	I-215 SB Ramps to 4th Street	2U	11,700	61,600	5.26
	4th Street to 7th Street	2U	11,700	43,200	3.69
	7th Street to Ellis Avenue	2U	11,700	36,200	3.09
Murrieta Road	South of Case Road	2U	11,700	18,800	1.61
	North of Ethanac Road	2U	11,700	19,800	1.69
	South of Ethanac Road	2U	11,700	25,900	2.21
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	33,400	0.93
	Perris Boulevard to Redlands Avenue	4D	35,900	40,600	1.13
	East of Redlands Avenue	2U	13,000	4,500	0.35
7th Street	West of Redlands Avenue	2U	11,700	3,100	0.26
11th Street/Case Road	West of Perris Boulevard	2U	11,700	10,300	0.88
	Perris Boulevard to Goetz Road	2U	11,700	31,400	2.68
	Goetz Road to Ellis Avenue	2U	11,700	19,000	1.62
	Ellis Avenue to Murrieta Road	2U	11,700	21,400	1.83
	Murrieta Road to Bonnie Drive	2U	11,700	12,600	1.08
	South of Bonnie Drive	2U	11,700	8,600	0.74
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	20,000	1.71
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	40,900	1.58
	East of I-215 NB Ramps	4D	35,900	38,800	1.08
Ellis Avenue	West of Goetz Road	2U	11,700	41,500	3.55
	Goetz Road to Case Road	2U	11,700	29,300	2.50
	Case Road to Redlands Avenue	2U	11,700	24,700	2.11
Mountain Avenue	West of Goetz Road	2U	11,700	13,200	1.13
Mapes Road	West of "A" Street	2U	11,700	300	0.03
	"A" Street to Goetz Road	2U	11,700	3,800	0.32
Watson Road	West of "A" Street	2U	11,700	9,100	0.78

Table 4.11.AA: Long Range (2030) Without Project Without I-215/Ellis/Evans Interchange Roadway Volume/Capacity Analysis

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	2012 NP Volume	V/C
Ethanac Road	West of Goetz Road	2U	11,700	2,900	0.25
	Goetz Road to Murrieta Road	4D	32,300	61,900	1.92
	East of Murrieta Road	2U	11,700	66,600	5.69
	West of I-215 SB Ramps	2U	11,700	70,500	6.03
	I-215 SB Ramps to I-215 NB Ramps	4D	32,300	70,500	2.18
	East of I-215 NB Ramps	3D	23,300	86,400	3.71

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2030 without project without I-215/Ellis/Evans interchange levels of service for the study area freeway segments are summarized in Table 4.11.BB. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

Table 4.11.BB: 2030 Without Project Without I-215/Ellis/Evans Interchange Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	6,417	6,406	7%	8%	2	>45.0	>45.0	F	F
Redlands Avenue / SR-74	7,059	6,803	6%	7%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	5,619	4,902	8%	10%	2	>45.0	>45.0	F	F
South of Ethanac Road	5,947	4,772	8%	10%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	6,403	7,961	8%	5%	2	>45.0	>45.0	F	F
Redlands Avenue / SR-74	6,816	8,717	7%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	6,096	7,150	9%	7%	2	>45.0	>45.0	F	F
South of Ethanac Road	5,547	7,656	9%	7%	2	>45.0	>45.0	F	F

4.11.4 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the proposed project would create potentially significant traffic impacts if it:

- Caused an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

  (A significant traffic impact would occur if the project would cause a decrease from a standard LOS to a less than standard LOS at a study freeway mainline lane, freeway ramp/roadway intersection, or other roadway intersection based on a peak hour analysis or contributes traffic towards these facilities operating at less than standard LOS in the pre-project condition.)

  - Freeway mainline lanes LOS performance standard is LOS E.

  - o Intersections of arterials and expressways with SR-74, the Ramona-Cajalco Expressway and the I-215 Freeway ramps LOS performance standard is LOS E.
  - o Other roadway segments and intersections LOS performance standard is LOS D.
- Exceeded, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
- Substantially increased hazards due to a design feature (e.g., sharp curves, dangerous intersections, rail crossings) or incompatible uses (e.g., farm equipment).
- Resulted in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in increased safety risks.
- Conflicted with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).
- Resulted in inadequate emergency access.

4.11.5 Less Than Significant Impacts

Air traffic patterns, design hazard features, emergency access, parking capacity, and alternative transportation policies, plans, or programs are considered to have either no impact or less than significant impacts.

4.11.5.1 Air Traffic Patterns

Threshold	Would the proposed project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Perris Valley Airport is located near the center of the project area, adjacent to and east of the Phase 1 site. The Perris Valley Airport has a single "Airport Influence" zone. Only the Phase 1 site is located within the influence zone established for this air facility. The proposed project does not include any structure or feature that would alter air traffic pattern or the level of air traffic at the Perris Valley Airport. The Phase 1, Phase 2, and Phase 3 project sites are located approximately 8 miles south, 7 miles south, and 6.5 miles southeast of March Air Field, respectively. The March Air Field is a joint-use airport, used both for military and civilian purposes. March Inland Port (MIP)[1] is the civilian portion of the airport. The eastern portion of Phase 3 that is proposed to be used as a detention basin is located within the Airport Influence Area III of MIP.[2] The portion of the Phase 3 site that is within Airport Influence III of MIP would not include any structures or features that would alter air traffic pattern or the level of air traffic at the MIP; therefore, no significant air safety impact would occur. In the absence of a significant impact, no mitigation is required.

4.11.5.2 Design Hazard Features

Threshold	Would the proposed project substantially increase hazards due to a design feature or incompatible use?

The design of roadways must provide adequate sight distance and traffic control measures. This provision is normally realized through roadway design to facilitate roadway traffic flows. Roadway

[1] March Inland Port was previously called March Air Reserve Base
[2] *March Air Reserve Base (MARB) Old Compatibility Plan.* Web site http://www.rcaluc.org/filemanager/plan/old//March%20Air%20Reserve%20Base%20(MARB).pdf date accessed February 20, 2008.

improvements in and around the project site would be designed and constructed to satisfy all City and Caltrans requirements for street widths, corner radii, intersection control as well as incorporate design standards tailored specifically to project access requirements. Adherence to applicable City requirements would ensure the proposed project would not include any sharp curves or dangerous intersections.

Temporary impacts associated with the construction of infrastructure improvements included as a part this project may temporarily restrict vehicular traffic or cause temporary hazards. The construction of infrastructure would coincide with roadway improvements, which would include road or lane closures as well as the presence of construction workers and equipment on public roads. Construction operations would be required to implement adequate measures to facilitate the passage of people and vehicles through/around any required road or lane closures. Site-specific activities, such as temporary construction activities, are finalized on a project-by-project basis by the City and are required to ensure adequate traffic flow. At the time of approval of any site-specific plans required for the construction of infrastructure as a part of typical conditions of approval, the project would be required to implement measures that would maintain traffic flow and access.

As motor vehicle traffic at the San Jacinto Street crossing continues to increase over time and roadway widening ultimately occurs to accommodate the increase in traffic volumes, additional active warning devices such as automatic gates and flashing lights may be required. The at-grade railroad-highway crossings proposed at 11th Street, Ellis Avenue and Mapes Road are required to provide sufficient stopping and corner sight distance and traffic control devices and pavement striping consistent with the California Manual on Uniform Traffic Control Devices (CA MUTCD). The CA MUTCD establishes uniformity in all signs used in railroad-highway grade crossing traffic control systems, and dictates passive traffic control systems, consisting of signs and pavement markings identify and direct attention to the location of a railroad-highway grade crossing and advise motorists, bicyclists and pedestrians to take appropriate action. These improvements are consistent with those suggested by the PUC in its August 8, 2008, response letter to the NOP for this project. Railroad crossing standards detailed in the CA MUTCD applicable to the proposed project may include (but are not limited to):

- No sign or signal shall be located in the center of an undivided highway, except in a raised island. The sizes of grade crossing signs shall be consistent with those shown in Table 8B-1 of the California MUTCD.
- The railroad-highway grade crossing sign (R15-1), commonly referred to as the “crossbuck” sign, should be provided on each highway approach to every crossing, alone or in combination with other traffic control devices. A minimum of one crossbuck sign should be provided in each direction.
- Advance warning signs (W10-1, W10-2, W10-3 and W10-4) should be used on each highway in advance of every railroad-highway crossing in accordance with the provisions set in the California MUTCD.
- Pavement markings in advance of a crossing should consist of an “X”, the letters “RR”, a no-passing marking and certain transverse lines as shown in the California MUTCD on Figures 8B-6 (CA) and 8B-7 (CA). Identical (RXR) markings should be placed in each approach

Because of the large number of significant variables to be considered, no single standard system of traffic control device is universally applicable for all railroad highway grade crossings. Before any new railroad-highway grade crossing traffic control system is installed or before modifications are made to an existing system, approval must be granted by the California Public Utilities Commission (CPUC.)

The CPUC has established General Orders (GO) for all classes of utilities (include railroads). GOs applicable to the proposed project may include (but are not limited to):

- GO 26-D: This general order defines standards for clearances on railroads and street railroads as to side and overhead structures, parallel tracks and crossings
- G0 72-B: This general order governs construction and maintenance standards as well as standard types of pavement construction at railroad grade crossings
- GO 75-D: This general order governs standards for warning devices for at-grade railroad crossings
- GO 88-B: This general order identifies rules for alterations of railroad crossings
- GO 118: This general order governs the construction, reconstruction and maintenance of walkways and control, of vegetation adjacent to railroad tracks

The design and approval process for any new or improved rail crossing will occur separately from the City's EIR process. As the design and construction of any new or improved rail crossing will be required to adhere to applicable CA MUTSD standards and be reviewed and approved by the CPUC, it is reasonable to anticipate no railroad crossing hazard would result from the development or operation of the proposed uses. In the absence of a railroad design hazard, no impact would occur; therefore, no mitigation is required.

4.11.5.3 Emergency Access

Threshold	Would the proposed project result in inadequate emergency access?

Construction activities that may temporarily restrict vehicular traffic would be required to implement adequate measures to facilitate the passage of people and vehicles through/around any required road closures. Site-specific activities such as temporary construction activities are finalized on a project-by-project basis by the City and are required to insure adequate emergency access.

The roadway improvements that will take place as a part of this project will improve the traffic circulation in the area. This will improve the ability of emergency vehicles to access the project as well as the surrounding properties. Access to each of the project sites is designed to accommodate large trucks with trailers used for the distribution of goods to and from the warehouses. This would provide ample vehicular access for emergency vehicles. During the operational phase of the proposed project, on-site access would be required to comply with standards established by the City Public Works Department. The size and location of fire suppression facilities (e.g., hydrants) and fire access routes would be required to conform to Fire Department standards. As required of all development in the City, the operation of the proposed project would conform to applicable Uniform Fire Code standards. The submittal of such plans would be considered a condition of approval, which would be part of the permitting process initiated by the applicant and approved by the City in accordance with City standards. As with any development, access to and through the project would be required to comply with the required street widths, as determined in the California Building Code (CBC), Master Plan of Streets, and the Uniform Fire Code. Therefore, implementation of the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

4.11.5.4 Alternative Transportation Policies, Plans, or Programs

Threshold	Would the proposed project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The proposed project would result in the development of employment opportunities. In addition, the project will be conditioned to provide sidewalks and landscaping treatments to allow for pedestrian access throughout the site.

Riverside Transit Authority (RTA) Routes 19, 22, 27, 30, 74, and 208 operate in the project area. Route 19 operates along Perris Boulevard from the northern study area boundary to 4th Street/SR-74, Wilkerson Avenue and San Jacinto Avenue. Routes 27, 74 and 208 operate along the I-215 Freeway through the study area. Route 30 operates along Redlands Avenue at the northern study area boundary to 4th Street/SR-74, Perris Boulevard, along 11th Street/Case Road to Goetz Road and Ellis Avenue.

Metrolink currently has plans to extend its services 23 miles into Riverside County, specifically to the City of Perris. The Perris Valley Line (PVL) is anticipated to run on existing freight tracks located near the I-215 Freeway to serve major employers in Riverside County, such as the March Air Reserve Base and the University of California, Riverside. There are three proposed stations within the City of Perris along the 23 mile extension of the Metrolink 91 line: Ramona Station, Perris Station & Historic Perris Depot and the South Perris Station.

In response to a letter received from the Riverside Transit Agency (RTA), the developer has agreed to construct six bus turnouts along the Goetz Road, Mapes Road, Ellis Avenue, and Redlands Avenue project frontages. The bust turnouts will be incorporated into the design of the project and will be located as follows:

- Southbound Goetz Road, south of Mountain Avenue;
- Eastbound Mapes Road, east of the railroad tracks;
- Eastbound Mapes Road, prior to intersection with Goetz Road;
- Southbound Goetz Road, south of Mapes Road;
- Eastbound Ellis Avenue, approximately ¼ mile east of Redlands Avenue; and
- Northbound Redlands Avenue, north of Ellis Avenue.

The inclusion of bus turnouts along these project frontages and the provision of additional employment options in proximity to existing residential development will reduce vehicle miles traveled; therefore, the proposed project is consistent with City policies encouraging alternative transportation. In the absence of a significant impact related to this issue, no mitigation is required.

4.11.6 Significant Impacts

Threshold:	*Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).* (A significant traffic impact would occur if the project would cause a decrease from a standard LOS to a less than standard LOS at a study intersection based on a peak hour analysis.) • City of Perris LOS standard is LOS D; and • Caltrans LOS standard is LOS D. *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.*

Impact 4.11.6.1 Year 2009 through 2011 Soil Import Traffic Conditions: *One intersection is forecast to exceed the satisfactory level of service during the 2009 through 2011 soil import phase for the First Park South (Phase 2) site creating a significant impact.*

The import of soil to the Phase 2 site will occur over a period of approximately 20 months beginning September/October 2009 and completed no later than June 2011. It is assumed that over the 20 months of import activity an estimated 432 working days will occur. The number of working days has been estimated by taking the number of months multiplied by the average number of working days per month, or 20 months × 21.6 working days per month for a total 432 working days. Note the proposed number of working days may be adjusted based on the timing of the proposed project site grading activities.

As previously stated, for the purposes of the analysis of impacts associated with soil import to the proposed project, haul routes and truck routes have been estimated and may change as the project develops. Haul trucks would be required to comply with the operating procedures of the jurisdiction in which they are operating, including the City of Perris, City of Menifee, or County of Riverside, and obtain the necessary permits for operation within each specific jurisdiction.

Soil will be hauled from the export site to the project site via double-belly dump trucks, which are conservatively estimated to have a capacity of 14 cy. The proposed import activity is projected to generate approximately 569 PCE trip-ends per day with 78 PCE trips per hour during the a.m. peak hour. Import activity is assumed to occur each working day from 7:00 a.m. to 3:30 p.m. with a 30-minute break for lunch. Import activity is not anticipated to occur during the p.m. peak hours (i.e., 4:00 p.m. to 6:00 p.m.), so trip generation for this time period is not considered.

The import of 660,000 cy of soil is proposed to continue for approximately 20 months or 432 working days with completion expected to occur no later than June 2011. Year 2011 with Project traffic volumes were developed based upon the existing (2008) traffic volumes previously published in the South Perris Industrial Distribution Center Traffic Impact Analysis (Urban Crossroads, Inc., November 2008), traffic generated by the proposed project, and an ambient growth factor of 3 percent per year for three years for an estimated total of 9 percent ambient growth. Year 2011 with Project intersection levels of service are shown in Table 4.11CC. Table 4.11.CC shows HCM calculations based on the geometrics at the study area intersections, without and with improvements.

Table 4.11.CC: Intersection Analysis For Existing Plus Ambient Growth Plus Project (2011) Conditions

Intersection	Traffic Control	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Goetz Road (NS) at: Mapes Road (EW) without improvements	CSS	11.2	—	B	—
Ethanac Road (EW) without improvements	TS	35.0	—	D	—
Murrieta Road (NS) at: Ethanac Road (EW) without improvements	AWS	50.2	—	F	—
With Improvements	AWS	31.8	—	D	—
Project Driveway (NS) at: Ethanac Road (EW) without improvements	This intersection does not exist without improvements				
With Improvements	CSS	16.6	—	C	—

For Year 2011 with Project traffic conditions, all study area intersections operate at acceptable levels of service with the exception of the intersection of Murrieta Road at Ethanac Road, which is projected

to operate at LOS F during the a.m. peak hour, with existing geometry. This is a significant impact requiring mitigation.

Impact 4.11.6.2 Year 2008 With-Airport Distribution Center Only Conditions (Phase 1 Only): *Three intersections and two roadway segments are forecast to exceed the satisfactory levels of service in the 2008 with project conditions, creating a significant impact.*

The year 2008 with Airport Distribution Center (Phase 1 Only) levels of service for the study area intersections are summarized in Table 4.11.DD. The following three area intersections do not operate at a satisfactory level of service in the existing 2008 with Airport Distribution Center (Phase 1 Only) scenario.

- I-215 Southbound Ramps (NS) at:
  - Redlands Boulevard (EW)
- I-215 Southbound Ramps (NS) at:
  - Bonnie Drive (EW)
- Perris Boulevard (NS) at:
  - 4th Street/SR-74 (EW)

Table 4.11.DD: 2008 With Project (Phase 1 Only) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	8.6	8.2	A	A
Watson Road (EW)	CSS	8.6	8.6	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	97.9	91.6	F	F
-With Improvements	TS	35.5	37.2	D	D
11th Street/Case Road (EW)	AWS	29.0	17.6	D	C
Goetz Road (NS) at:					
Case Road (EW)	AWS	12.0	11.6	B	B
Ellis Avenue (EW)	CSS	9.7	10.1	A	B
Driveway 1 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.4	A	A
Driveway 2 (NS) at:					
Mountain Avenue (EW)	CSS	9.4	9.4	A	A
Driveway 3 (NS) at:					
Artlo Avenue (EW)	CSS	8.8	8.8	A	A
Driveway 4 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.6	A	A
Driveway 5 (NS) at:					
Artlo Avenue (EW)	CSS	9.5	9.5	A	A
Goetz Road (NS) at:					
Mountain Avenue (EW)	CSS	12.5	13.9	B	B
Driveway 6 (EW)	CSS	9.0	9.8	A	A
Driveway 7 (EW)	CSS	9.0	9.8	A	A
Driveway 8 (EW)	CSS	9.0	9.8	A	A
Artlo Avenue (EW)	CSS	12.3	12.1	B	B
Mapes Road (EW)	CSS	10.7	11.5	B	B
Ethanac Road (EW)	TS	34.8	35.2	C	D

Table 4.11.DD: 2008 With Project (Phase 1 Only) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	15.9	14.2	C	B
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	28.2	47.5	D	E
-With Improvements	TS	39.4	37.0	D	D
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	19.7	22.9	C	C
7th Street (EW)	CSS	11.4	11.9	B	B
Ellis Avenue (EW)	CSS	8.9	9.0	A	A
I-215 Northbound Ramps (EW)	AWS	29.2	26.6	D	D
Murrieta Road (NS) at:					
Case Road (EW)	CSS	16.7	13.5	C	B
Ethanac Road (EW)	AWS	30.7	15.8	D	C
Case Road (NS)					
Bonnie Drive/Mapes Road	CSS	11.0	13.5	B	B
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	91.7	—	F	F
-With Improvements	TS	22.7	30.4	C	C
Ethanac Road (EW)	TS	18.9	22.3	B	C
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	24.4	28.2	C	D
Ethanac Road (EW)	TS	28.9	28.0	C	C

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2008 with Airport Distribution Center (Phase 1 Only) levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.EE. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Redlands Avenue from north of the I-215 Northbound Ramps to the I-215 Southbound ramps.

4.11.EE: 2008 With Project (Phase 1 Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	2,300	0.14
	Mapes Road to Watson Road	2U	11,700	200	0.02
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	11,700	0.72
	4th Street (SR-74) to 11th Street	2U	11,700	9,900	0.85
	South of 11th Street	2U	11,700	2,000	0.17

4.11.EE: 2008 With Project (Phase 1 Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Goetz Road	Case Road to Ellis Avenue	2U	11,700	6,300	0.54
	Ellis Avenue to Mountain Avenue	2U	11,700	7,300	0.62
	Mountain Avenue to Driveway 6	2U	11,700	6,900	0.59
	Driveway 6 to Driveway 7	2U	11,700	6,900	0.59
	Driveway 7 to Driveway 8	2U	11,700	6,800	0.58
	Driveway 8 to Artlo Avenue	2U	11,700	6,800	0.58
	Artlo Avenue to Mapes Road	2U	11,700	5,800	0.50
	Mapes Road to Ethanac Road	4D	32,300	7,700	0.24
	South of Ethanac Road	3D	23,300	7,400	0.32
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	13,000	1.11
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	15,600	1.33
	I-215 SB Ramps to 4th Street	2U	11,700	7,400	0.63
	4th Street to 7th Street	2U	11,700	6,800	0.58
	7th Street to Ellis Avenue	2D	16,200	3,200	0.20
Murrieta Road	South of Case Road	2U	11,700	2,100	0.18
	North of Ethanac Road	2U	11,700	2,600	0.22
	South of Ethanac Road	2U	11,700	7,400	0.63
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	19,400	0.54
	Perris Boulevard to Redlands Avenue	4D	35,900	18,800	0.52
	East of Redlands Avenue	2U	13,000	8,100	0.62
7th Street	West of Redlands Avenue	2U	11,700	2,000	0.17
11th Street/Case Road	West of Perris Boulevard	2U	11,700	7,200	0.62
	Perris Boulevard to Goetz Road	2U	11,700	9,500	0.81
	Goetz Road to Ellis Avenue	2U	11,700	7,400	0.63
	Ellis Avenue to Murrieta Road	2U	11,700	6,800	0.58
	Murrieta Road to Bonnie Drive	2U	11,700	5,000	0.43
	South of Bonnie Drive	2U	11,700	1,500	0.13
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	4,900	0.42
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	18,400	0.71
	East of I-215 NB Ramps	4D	35,900	25,000	0.70
Ellis Avenue	West of Goetz Road	2U	11,700	1,200	0.10
	Case Road to Redlands Avenue	2U	11,700	2,600	0.22
Mountain Avenue	West of Driveway 1	2U	11,700	100	0.01
	Driveway 1 to Driveway 2	2U	11,700	500	0.04
	Driveway 2 to Driveway 3	2U	11,700	600	0.05
	Driveway 3 to Goetz Road	2U	11,700	700	0.06
Mapes Road	West of "A" Street	2U	11,700	600	0.05
	"A" Street to Goetz Road	2U	11,700	2,500	0.21
Watson Road	West of "A" Street	2U	11,700	200	0.02

4.11.EE: 2008 With Project (Phase 1 Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Ethanac Road	West of Goetz Road	4D	32,300	700	0.02
	Goetz Road to Murrieta Road	2U	11,700	7,900	0.68
	East of Murrieta Road	2U	11,700	10,400	0.89
	West of I-215 SB Ramps	4D	32,300	10,400	0.32
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	11,400	0.49
	East of I-215 NB Ramps	2U	11,700	10,400	0.89

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2008 with Project Airport Distribution Center (Phase 1 Only) levels of service for the study area freeway segments are summarized in Table 4.11.FF. Based on these data, all study area freeway segments are projected to operate with acceptable levels of service.

4.11.FF: 2008 With Project (Phase 1 Only) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	3,235	3,975	7%	7%	2	25.8	35.4	C	E
Redlands Avenue / SR-74	3,459	4,170	7%	6%	2	28.2	38.8	D	E
SR-74 / Ethanac Road	3,284	3,433	7%	8%	2	26.3	28.1	D	D
South of Ethanac Road	3,523	3,509	7%	7%	2	29.0	28.8	D	D
I-215 Northbound									
North of Redlands Avenue	4,067	3,686	6%	6%	2	36.8	30.8	E	D
Redlands Avenue / SR-74	4,113	3,971	6%	6%	2	37.7	35.1	E	E
SR-74 / Ethanac Road	3,464	3,546	8%	7%	2	28.5	29.2	D	D
South of Ethanac Road	3,577	3,645	7%	7%	2	29.6	30.5	D	D

Impact 4.11.6.3 Year 2008 With-South Perris Distribution Center Only Conditions (Phase 2 Only): *Six intersections are forecast to exceed the satisfactory levels of service in the 2008 with project conditions, creating a significant impact.*

The year 2008 with South Perris Distribution Center Only Conditions (Phase 2 Only) levels of service for the study area intersections are summarized in Table 4.11.GG. The following three area intersections do not operate at a satisfactory level of service in the year 2008 with South Perris Distribution Center Only Conditions (Phase 2 Only) scenario.

- I-215 Southbound Ramps (NS) at:
  - Redlands Boulevard (EW)
- Goetz Road (NS) at:
  - Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Bonnie Drive (EW)
- Murrieta Road (NS) at:
  - Ethanac Road (EW)
- Perris Boulevard (NS) at:
  - 4th Street/SR-74 (EW)
  - 11th Street (EW)

It should be noted that three of the locations listed above operate at unacceptable levels of service under existing 2008 conditions without Phase 2. However with the addition of the proposed project, levels of service are reduced at these intersections creating a significant impact requiring mitigation. In addition to these three intersections, the Perris Boulevard/11th Street, Murrieta Road/Ethanac Road, and Goetz Road/Mapes Road intersections would function at less than the performance standard, requiring mitigation.

Table 4.11.GG: 2008 With Project (Phase 2 Only) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	9.8	9.0	A	A
Driveway 1 (EW)	CSS	9.0	9.2	A	A
Driveway 2 (EW)	CSS	8.5	8.6	A	A
Driveway 3 (EW)	CSS	8.7	8.8	A	A
Watson Road (EW)	CSS	9.3	8.9	A	A
Driveway 4 (NS) at:					
Mapes Road (EW)	CSS	9.0	9.3	A	A
Driveway 5 (NS) at:					
Watson Road (EW)	CSS	8.3	8.4	A	A
Driveway 6 (NS) at:					
Mapes Road (EW)	CSS	9.7	10.1	A	B
Driveway 7 (NS) at:					
Mapes Road (EW)	CSS	9.9	10.6	A	B
Driveway 8 (NS) at:					
Mapes Road (ES)	CSS	9.5	10.0	A	B
Perris Boulevard (NS) at:					
4th Street (EW)	TS	96.6	91.8	F	F
-With Improvements	TS	35.5	52.5	D	D
11th Street/Case Road (EW)	AWS	43.8	23.3	E	C
-With Improvements	TS	11.4	10.1	B	B
Goetz Road (NS) at:					
Case Road (EW)	AWS	13.4	13.0	B	B
Ellis Avenue (EW)	CSS	10.3	10.7	B	B
Mountain Avenue (EW)	CSS	13.6	19.3	B	C
Mapes Road (EW)	CSS	30.0	49.9	D	E
-With Improvements	TS	22.6	29.0	C	C
Ethanac Road (EW)	TS	38.1	36.8	D	D
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	17.0	15.0	C	C
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	32.2	58.2	D	F
-With Improvements	TS	34.4	33.0	C	C
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	19.7	22.9	C	C

Table 4.11.GG: 2008 With Project (Phase 2 Only) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
7th Street (EW)	CSS	11.4	11.9	B	B
Ellis Avenue (EW)	CSS	8.9	9.0	A	A
I-215 Northbound Ramps (EW)	AWS	30.8	27.7	D	D
Murrieta Road (NS)					
Case Road (EW)	CSS	18.7	14.4	C	B
Ethanac Road (EW)	AWS	45.7	20.1	E	C
-With Improvements	TS	28.8	38.3	C	D
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	11.6	14.9	B	B
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
-With Improvements	TS	25.6	34.7	C	C
Ethanac Road (EW)	TS	18.7	21.2	B	C
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	26.6	31.1	D	D
Ethanac Road (EW)	TS	29.8	28.7	C	C

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 4-1 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2008 With Project South Perris Distribution Center (Phase 2 Only) levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.HH. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Redlands Avenue from north of the I-215 Northbound Ramps to the I-215 Southbound ramps.
- Ethanac Road east of Murrieta Road

Table 4.11.HH: 2008 With Project (Phase 2 Only) Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	2,300	0.14
	Mapes Road to Driveway 1	2U	11,700	2,400	0.21
	Driveway 1 to Driveway 2	2U	11,700	2,000	0.17
	Driveway 2 to Driveway 3	2U	11,700	1,100	0.09
	Driveway 3 to Watson Road	2U	11,700	600	0.05
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	11,600	0.72
	4th Street (SR-74) to 11th Street	2U	11,700	11,200	0.96
	South of 11th Street	2U	11,700	2,000	0.17

Table 4.11.HH: 2008 With Project (Phase 2 Only) Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Goetz Road	Case Road to Ellis Avenue	2U	11,700	7,700	0.66
	Ellis Avenue to Mountain Avenue	2U	11,700	9,500	0.81
	Mountain Avenue to Mapes Road	2U	11,700	8,500	0.73
	Mapes Road to Driveway 9	4D	32,300	9,500	0.29
	Driveway 9 to Ethanac Road	4D	32,300	9,500	0.29
	South of Ethanac Road	3D	23,300	7,500	0.32
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	13,100	1.12
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	16,200	1.38
	I-215 SB Ramps to 4th Street	2U	11,700	7,400	0.63
	4th Street to 7th Street	2U	11,700	6,800	0.58
	7th Street to Ellis Avenue	2D	16,200	3,200	0.20
Murrieta Road	South of Case Road	2U	11,700	2,100	0.18
	North of Ethanac Road	2U	11,700	2,600	0.22
	South of Ethanac Road	2U	11,700	7,500	0.64
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	19,500	0.54
	Perris Boulevard to Redlands Avenue	4D	35,900	19,900	0.55
	East of Redlands Avenue	2U	13,000	8,100	0.62
7th Street	West of Redlands Avenue	2U	11,700	2,000	0.17
11th Street/Case Road	West of Perris Boulevard	2U	11,700	7,300	0.62
	Perris Boulevard to Goetz Road	2U	11,700	9,100	0.78
	Goetz Road to Ellis Avenue	2U	11,700	7,400	0.63
	Ellis Avenue to Murrieta Road	2U	11,700	7,600	0.65
	Murrieta Road to Bonnie Drive	2U	11,700	5,800	0.50
	South of Bonnie Drive	2U	11,700	1,500	0.13
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	5,700	0.49
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	18,900	0.73
	East of I-215 NB Ramps	4D	35,900	25,000	0.70
Ellis Avenue	West of Goetz Road	2U	11,700	1,200	0.10
	Goetz Road to Case Road	2U	11,700	1,100	0.09
	Case Road to Redlands Avenue	2U	11,700	2,600	0.22
Mountain Avenue	West of Goetz Road	2U	11,700	100	0.01
Mapes Road	West of "A" Street	2U	11,700	800	0.07
	"A" Street to Driveway 4	2U	11,700	4,700	0.40
	Driveway 4 to Driveway 6	2U	11,700	4,700	0.40
	Driveway 6 to Driveway 7	2U	11,700	6,200	0.53
	Driveway 7 to Driveway 8	2U	11,700	7,300	0.62
	Driveway 8 to Goetz Road	2U	11,700	7,400	0.63
Watson Road	West of "A" Street	2U	11,700	200	0.02
	"A" Street to Driveway 5	2U	11,700	400	0.03

Table 4.11.HH: 2008 With Project (Phase 2 Only) Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Ethanac Road	West of Goetz Road	4D	32,300	700	0.02
	Goetz Road to Murrieta Road	2U	11,700	9,600	0.82
	East of Murrieta Road	2U	11,700	11,900	1.02
	West of I-215 SB Ramps	4D	32,300	11,900	0.37
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	12,300	0.53
	East of I-215 NB Ramps	2U	11,700	10,700	0.91

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2008 with Project South Perris Distribution Center (Phase 2 Only) levels of service for the study area freeway segments are summarized in Table 4.11.II. Based on these data, all study area freeway segments are projected to operate with acceptable levels of service.

Table 4.11.II: 2008 With Project (Phase 2 Only) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	3,283	4,015	8%	7%	2	26.5	36.2	D	E
Redlands Avenue / SR-74	3,474	4,182	7%	7%	2	28.2	39.5	D	E
SR-74 / Ethanac Road	3,297	3,451	8%	8%	2	26.6	28.3	D	D
South of Ethanac Road	3,570	3,574	8%	8%	2	29.7	29.8	D	D
I-215 Northbound									
North of Redlands Avenue	4,108	3,744	7%	7%	2	37.9	31.8	E	D
Redlands Avenue / SR-74	4,126	3,989	7%	6%	2	38.3	35.4	E	E
SR-74 / Ethanac Road	3,479	3,558	8%	8%	2	28.6	29.6	D	D
South of Ethanac Road	3,631	3,690	8%	8%	2	30.5	31.3	D	D

Impact 4.11.6.4 Year 2008 With-First Park South 215 Only Conditions (Phase 3 Only): *Four intersections and two roadway segments are forecast to exceed the satisfactory levels of service in the 2008 with project conditions, creating a significant impact.*

The year 2008 with First Park South (Phase 3 Only) levels of service for the study area intersections are summarized in Table 4.11.JJ. The following three area intersections do not operate at a satisfactory level of service in the year 2008 with First Park South (Phase 3 Only) scenario.

- I-215 Southbound Ramps (NS) at:
  - Redlands Boulevard (EW)
- I-215 Southbound Ramps (NS) at:
  - Bonnie Drive (EW)
- Perris Boulevard (NS) at:
  - 4th Street/SR-74 (EW)
- Redlands Avenue (NS) at:
  - 4th Street (EW)

It should be noted that three of the locations listed above operate at unacceptable levels of service under existing 2008 conditions without Phase 3.However with the addition of the proposed project

delay times are increased creating a significant impact requiring mitigation. In addition to these three intersections the Redlands/4th Street intersection would function at an unacceptable level of service requiring mitigation.

Table 4.11.JJ: 2008 With Project (Phase 3 Only) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	8.6	8.2	A	A
Watson Road (EW)	CSS	8.6	8.6	A	A
Perris Boulevard (NS) at:					
4th Street (EW)	TS	99.2	91.2	F	F
-With Improvements	TS	35.6	27.8	D	C
11th Street/Case Road (EW)	AWS	25.2	16.2	D	C
Goetz Road (NS) at:					
Case Road (EW)	AWS	11.7	11.3	B	B
Ellis Avenue (EW)	CSS	9.5	9.9	A	A
Mountain Avenue (EW)	CSS	11.6	14.7	B	B
Mapes Road (EW)	CSS	10.7	11.4	B	B
Ethanac Road (EW)	TS	34.7	34.8	C	D
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	33.8	27.8	C	B
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	34.6	56.8	D	F
-With Improvements	TS	40.4	36.0	D	D
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	31.2	36.7	D	E
-With Improvements	TS	50.1	50.1	D	D
7th Street (EW)	CSS	13.3	13.6	B	B
Driveway 1 (EW)	CSS	10.8	10.3	B	B
Ellis Avenue (EW)	CSS	9.5	9.9	A	A
I-215 Northbound Ramps (EW)	AWS	33.8	29.5	D	D
Driveway 2 (NS) at:					
Ellis Avenue (EW)	CSS	8.8	8.9	A	A
Murrieta Road (NS) at:					
Case Road (EW)	CSS	22.0	15.7	C	C
Ethanac Road (EW)	AWS	29.8	15.5	D	C
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	12.1	16.7	B	C
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
-With Improvements	TS	26.7	36.0	C	D
Ethanac Road (EW)	TS	18.9	22.4	B	C

Table 4.11.JJ: 2008 With Project (Phase 3 Only) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	27.1	31.9	D	D
Ethanac Road (EW)	TS	28.8	27.9	C	C

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 4-1 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2008 With First Park South (Phase 3 Only) levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.KK. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Redlands Avenue from north of the I-215 Northbound Ramps to the I-215 Southbound ramps.

4.11.KK: 2008 With Project (Phase 3 Site Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	2,300	0.14
	Mapes Road to Watson Road	2U	11,700	200	0.02
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	11,600	0.72
	4th Street (SR-74) to 11th Street	2U	11,700	9,300	0.79
	South of 11th Street	2U	11,700	2,000	0.17
Goetz Road	Case Road to Ellis Avenue	2U	11,700	5,700	0.49
	Ellis Avenue to Mountain Avenue	2U	11,700	6,600	0.56
	Mountain Avenue to Mapes Road	2U	11,700	5,600	0.48
	Mapes Road to Ethanac Road	4D	32,300	7,500	0.23
	South of Ethanac Road	3D	23,300	7,500	0.32
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	13,300	1.14
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	16,700	1.43
	I-215 SB Ramps to 4th Street	2U	11,700	9,600	0.82
	4th Street to 7th Street	2U	11,700	9,300	0.79
	7th Street to Driveway 1	2U	11,700	9,300	0.79
	Driveway 1 to Ellis Avenue	2D	16,200	3,700	0.23
Murrieta Road	South of Case Road	2U	11,700	2,200	0.19
	North of Ethanac Road	2U	11,700	2,700	0.23
	South of Ethanac Road	2U	11,700	7,400	0.63
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	19,400	0.54
	Perris Boulevard to Redlands Avenue	4D	35,900	18,800	0.52
	East of Redlands Avenue	2U	13,000	8,300	0.64
7th Street	West of Redlands Avenue	2U	11,700	2,000	0.17

4.11.KK: 2008 With Project (Phase 3 Site Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
11th Street/Case Road	West of Perris Boulevard	2U	11,700	7,300	0.62
	Perris Boulevard to Goetz Road	2U	11,700	9,000	0.77
	Goetz Road to Ellis Avenue	2U	11,700	7,500	0.64
	Ellis Avenue to Murrieta Road	2U	11,700	8,800	0.75
	Murrieta Road to Bonnie Drive	2U	11,700	6,900	0.59
	South of Bonnie Drive	2U	11,700	1,500	0.13
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	6,700	0.57
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	19,500	0.75
	East of I-215 NB Ramps	4D	35,900	25,300	0.70
Ellis Avenue	West of Goetz Road	2U	11,700	1,200	0.10
	Goetz Road to Case Road	2U	11,700	200	0.02
	Case Road to Redlands Avenue	2U	11,700	5,200	0.44
	Redlands Avenue to Driveway 2	2U	11,700	2,100	0.18
Mountain Avenue	West of Goetz Road	2U	11,700	100	0.01
Mapes Road	West of "A" Street	2U	11,700	600	0.05
	"A" Street to Goetz Road	2U	11,700	2,500	0.21
Watson Road	West of "A" Street	2U	11,700	200	0.02
Ethanac Road	West of Goetz Road	4D	32,300	700	0.02
	Goetz Road to Murrieta Road	2U	11,700	7,600	0.65
	East of Murrieta Road	2U	11,700	10,100	0.86
	West of I-215 SB Ramps	4D	32,300	10,100	0.31
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	11,200	0.48
	East of I-215 NB Ramps	2U	11,700	10,300	0.88

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2008 with First Park South (Phase 3 Only) levels of service for the study area freeway segments are summarized in Table 4.11.LL. Based on these data, all study area freeway segments are projected to operate with acceptable levels of service.

Table 4.11.LL: 2008 With Project (Phase 3 Only) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	3,289	4,021	8%	7%	2	26.5	36.3	D	E
Redlands Avenue / SR-74	3,484	4,197	7%	7%	2	28.5	39.8	D	E
SR-74 / Ethanac Road	3,331	3,498	8%	8%	2	27.0	28.9	D	D
South of Ethanac Road	3,566	3,568	8%	8%	2	29.7	29.7	D	D
I-215 Northbound									
North of Redlands Avenue	4,114	3,751	7%	6%	2	38.1	31.7	E	D
Redlands Avenue / SR-74	4,138	3,998	7%	6%	2	38.5	35.5	E	E

Table 4.11.LL: 2008 With Project (Phase 3 Only) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
SR-74 / Ethanac Road	3,518	3,591	8%	7%	2	29.1	29.8	D	D
South of Ethanac Road	3,626	3,686	8%	8%	2	30.5	31.3	D	D

Impact 4.11.6.5 Year 2008 with complete project (Phases 1, 2 and 3 combined): *Ten intersections and four roadway segments are forecast to exceed the satisfactory levels of service in the 2008 with project conditions, creating a significant impact.*

The year 2008 with complete project (Phases 1, 2 and 3 combined) levels of service for the study area intersections are summarized in Table 4.11.MM. The following ten area intersections do not operate at a satisfactory level of service in the existing 2008 plus complete project (Phases 1, 2, and 3) scenario.

- I-215 Southbound Ramps (NS) at:
  - Redlands Boulevard (EW)
- Redlands Avenue (NS) at:
  - 4th Street (EW)
  - I-215 Northbound Ramps
- I-215 Southbound Ramps (NS) at:
  - Bonnie Drive (EW)
- Goetz Road (NS) at:
  - Mapes Road
- Murrieta Road (NS) at:
  - Ethanac Road (EW)
- Perris Boulevard (NS) at:
  - 4th Street/SR-74 (EW)
  - 11th Street/Case Road
- Case Road (NS) at:
  - Ellis Avenue (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)

It should be noted that three of the locations listed above operate at unacceptable levels of service under existing 2008 conditions without Phase 3; however, with the addition of the proposed project, delay times are increased, creating a significant impact requiring mitigation. In addition to these three intersections the Redlands Avenue/4th Street, Redlands Avenue/I-215 Northbound Ramps, Goetz Road/Mapes Road, Murrieta Road/Ethanac Road, Perris Boulevard/11th Street, Case Road/Ellis Avenue, and the I-215 Northbound Ramps at SR-74 intersections would function at an unacceptable levels of service requiring mitigation.

Table 4.11.MM: 2008 with Project (All Phases) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	9.8	9.0	A	A
Driveway 1 (EW)	CSS	9.0	9.2	A	A
Driveway 2 (EW)	CSS	835	8.6	A	A
Driveway 3	CSS	8.7	8.8	A	A
Watson Road (EW)	CSS	8.8	8.9	A	A
Driveway 4 (NS) at:					
Mapes Road (EW)	CSS	9.0	9.3	A	A
Driveway 5 (NS) at:					
Watson Road (EW)	CSS	8.3	8.4	A	A
Driveway 6 (NS) at:					
Mapes Road (EW)	CSS	9.7	10.1	A	B

Table 4.11.MM: 2008 with Project (All Phases) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Driveway 7 (NS) at:					
Mapes Road (EW)	CSS	9.9	10.6	A	B
Driveway 8 (NS) at:					
Mapes Road (EW)	CSS	9.5	10.0	A	B
Perris Boulevard (NS) at:					
4th Street (EW)	TS	97.3	92.1	F	F
-With Improvements	TS	37.0	38.6	D	D
11th Street/Case Road (EW)	AWS	54.3	28.5	F	D
-With Improvements	TS	24.7	21.6	C	C
Goetz Road (NS) at:					
Case Road (EW)	AWS	14.3	13.9	B	B
Ellis Avenue (EW)	CSS	10.6	11.0	B	B
Mountain Avenue (EW)	CSS	15.5	18.8	C	C
Mapes Road (EW)	CSS	33.0	60.5	D	F
-With Improvements	TS	19.8	26.6	B	C
Ethanac Road (EW)	TS	37.8	36.9	D	D
Driveway 6 (EW)	CSS	9.6	10.5	A	B
Driveway 7 (EW)	CSS	9.6	10.5	A	B
Driveway 8 (EW)	CSS	9.6	10.5	A	B
Driveway 9 (EW)	CSS	9.8	11.5	A	B
Artlo Avenue (EW)	CSS	15.0	14.8	B	B
Driveway 1 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.4	A	A
Driveway 2 (NS) at:					
Mountain Avenue (EW)	CSS	9.4	9.4	A	A
Driveway 3 (NS) at:					
Artlo Avenue (EW)	CSS	8.8	8.8	A	A
Driveway 4 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.6	A	A
Driveway 5 (NS) at:					
Artlo Avenue (EW)	CSS	9.5	9.5	A	A
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	47.0	75.0	E	F
-With Improvements	TS	29.6	25.0	C	C
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	43.1	75.0	E	F
-With Improvements	TS	50.2	52.5	D	D
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	31.2	36.7	D	E
-With Improvements	TS	31.2	30.2	C	C
7th Street (EW)	CSS	13.3	13.6	B	B
Driveway 1 (EW)	CSS	10.8	10.3	B	B
Ellis Avenue (EW)	CSS	9.5	9.9	A	A
I-215 Northbound Ramps (EW)	AWS	37.7	32.9	E	D

Table 4.11.MM: 2008 with Project (All Phases) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
-With Improvements	TS	29.2	25.8	C	C
Driveway 2 (NS) at:					
Ellis Avenue (EW)	CSS	8.8	8.9	A	A
Murrieta Road (NS) at:					
Case Road (EW)	CSS	28.2	17.7	D	C
Ethanac Road (EW)	AWS	50.9	21.8	F	C
-With Improvements	TS	28.7	37.4	C	D
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	13.5	20.4	B	C
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	78.6	—	F	F
-With Improvements	TS	29.2	47.3	C	D
Ethanac Road (EW)	TS	18.6	21.3	B	C
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	31.5	38.4	D	E
-With Improvements	TS	12.3	8.7	B	A
Ethanac Road (EW)	TS	28.8	27.9	C	C

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 4-1 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2008 complete project (Phases 1, 2 and 3 combined) levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.NN. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Perris Boulevard from 4th Street (SR-74) to 11th Street;
- Redlands Avenue from north of the I-215 Northbound Ramps to the I-215 Southbound ramps; and
- Ethanac Road east of Murrieta Road.

Table 4.11.NN: 2008 with Project (All Phases) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	2,300	0.14
	Mapes Road to Driveway 1	2U	11,700	2,400	0.21
	Driveway 1 to Driveway 2	2U	11,700	2,000	0.17
	Driveway 2 to Driveway 3	2U	11,700	1,100	0.09
	Driveway 3 to Watson Road	2U	11,700	600	0.05
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	12,100	0.75
	4th Street (SR-74) to 11th Street	2U	11,700	11,800	1.01
	South of 11th Street	2U	11,700	2,000	0.17

Table 4.11.NN: 2008 with Project (All Phases) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Goetz Road	Case Road to Ellis Avenue	2U	11,700	8,300	0.71
	Ellis Avenue to Mountain Avenue	2U	11,700	10,600	0.91
	Mountain Avenue to Driveway 6	2U	11,700	10,200	0.87
	Driveway 6 to Driveway 7	2U	11,700	10,200	0.87
	Driveway 7 to Driveway 8	2U	11,700	10,100	0.86
	Driveway 8 to Artlo Avenue	2U	11,700	10,100	0.86
	Artlo Avenue to Mapes Road	2U	11,700	9,100	0.78
	Mapes Road to Driveway 9	4D	32,300	10,100	0.31
	Driveway 9 to Ethanac Road	4D	32,300	10,100	0.31
	South of Ethanac Road	3D	23,300	7,800	0.33
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	13,600	1.16
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	17,700	1.51
	I-215 SB Ramps to 4th Street	2U	11,700	9,600	0.82
	4th Street to 7th Street	2U	11,700	9,300	0.79
	7th Street to Driveway 1	2U	11,700	9,300	0.79
	Driveway 1 to Ellis Avenue	2D	16,200	3,700	0.23
Murrieta Road	South of Case Road	2U	11,700	2,200	0.19
	North of Ethanac Road	2U	11,700	2,700	0.23
	South of Ethanac Road	2U	11,700	7,700	0.66
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	19,700	0.55
	Perris Boulevard to Redlands Avenue	4D	35,900	20,500	0.57
	East of Redlands Avenue	2U	13,000	8,300	0.64
7th Street	West of Redlands Avenue	2U	11,700	2,000	0.17
11th Street/Case Road	West of Perris Boulevard	2U	11,700	7,400	0.63
	Perris Boulevard to Goetz Road	2U	11,700	9,800	0.84
	Goetz Road to Ellis Avenue	2U	11,700	7,500	0.64
	Ellis Avenue to Murrieta Road	2U	11,700	10,200	0.87
	Murrieta Road to Bonnie Drive	2U	11,700	8,300	0.71
	South of Bonnie Drive	2U	11,700	1,500	0.13
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	8,100	0.69
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	20,200	0.78
	East of I-215 NB Ramps	4D	35,900	25,300	0.70
Ellis Avenue	West of Goetz Road	2U	11,700	1,200	0.10
	Goetz Road to Case Road	2U	11,700	1,600	0.14
	Case Road to Redlands Avenue	2U	11,700	5,200	0.44
	Redlands Avenue to Driveway 2	2U	11,700	2,100	0.18
Mountain Avenue	West of Goetz Road	2U	11,700	100	0.01
	Goetz Road to Case Road	2U	11,700	500	0.04
	Case Road to Redlands Avenue	2U	11,700	600	0.05
	Redlands Avenue to Driveway 2	2U	11,700	700	0.06

Table 4.11.NN: 2008 with Project (All Phases) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Mapes Road	West of "A" Street	2U	11,700	800	0.07
	"A" Street to Driveway 4	2U	11,700	4,700	0.40
	Driveway 4 to Driveway 6	2U	11,700	4,700	0.40
	Driveway 6 to Driveway 7	2U	11,700	6,200	0.53
	Driveway 7 to Driveway 8	2U	11,700	7,300	0.62
	Driveway 8 to Goetz Road	2U	11,700	7,400	0.63
Watson Road	West of "A" Street	2U	11,700	200	0.02
	"A" Street to Driveway 5	2U	11,700	400	0.03
Ethanac Road	West of Goetz Road	4D	32,300	700	0.02
	Goetz Road to Murrieta Road	2U	11,700	9,900	0.85
	East of Murrieta Road	2U	11,700	12,200	1.04
	West of I-215 SB Ramps	4D	32,300	12,200	0.38
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	12,500	0.54
	East of I-215 NB Ramps	2U	11,700	10,800	0.92

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2008 with complete project (Phases 1, 2 and 3 combined) levels of service for the study area freeway segments are summarized in Table 4.11.OO. Based on these data, all study area freeway segments are projected to operate with acceptable levels of service.

4.11.OO: 2008 with Project (All Phases) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	3,361	4,079	8%	7%	2	27.3	37.4	D	E
Redlands Avenue / SR-74	3,509	4,217	8%	7%	2	29.0	40.2	D	E
SR-74 / Ethanac Road	3,352	3,526	8%	9%	2	27.2	29.4	D	D
South of Ethanac Road	3,629	3,655	8%	8%	2	30.5	30.9	D	D
I-215 Northbound									
North of Redlands Avenue	4,175	3,835	7%	7%	2	39.3	33.2	E	D
Redlands Avenue / SR-74	4,159	4,026	7%	7%	2	39.0	36.4	E	E
SR-74 / Ethanac Road	3,543	3,611	9%	8%	2	29.6	30.3	D	D
South of Ethanac Road	3,700	3,747	8%	8%	2	31.5	32.1	D	D

The year 2008 with complete project (Phases 1, 2 and 3 combined) levels of service for the study area railroad grade-crossings are summarized in Table 4.11.PP. Based on these data, all study area at-grade crossings are projected to operate at LOS A or B during the a.m. and p.m. peak hours, within the LOS D performance standard.

4.11.PP: 2008 with Project (All Phases) At-Grade Crossing Analysis

Cross-Street Name	Westbound 95th Percentile Queue (feet)		Eastbound 95th Percentile Queue (feet)		Average Stopped Delay (seconds)		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
San Jacinto Street	105	129	111	93	9.4	9.4	A	A
4th Street	129	146	148	152	15.7	15.8	B	B
7th Street	27	25	30	28	8.9	8.9	A	A
11th Street	89	108	90	86	9.8	9.7	A	A
Ellis Avenue	—	—	—	—	—	—	—	—
Mapes Road	70	52	56	62	9.5	9.4	A	A

Impact 4.11.6.6. Year 2012 With-Airport Distribution Center and South Perris Distribution Center Conditions (Phases 1 and 2 Only): *Sixteen intersections and 27 roadway segments are forecast to exceed satisfactory levels of service in the 2012 with project (Phase 1 and 2) conditions, creating a significant impact.*

The year 2012 with Airport Distribution Center and South Perris Distribution Center (Phases 1 and 2 only) levels of service for the study area intersections are summarized in Table 4.11.QQ. The following 16 area intersections do not operate at a satisfactory level of service.

- Perris Boulevard (NS) at:
  - 11th Street/Case Road (EW)
- Goetz Road (NS) at:
  - Case Road (EW)
  - Ellis Avenue (EW)
  - Mountain Avenue (EW)
  - Mapes Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Ellis Avenue (EW)
- Redlands Avenue (NS) at:
  - 4th Street (EW)
  - I-215 Northbound Ramps (EW)
- Murrieta Road (NS) at:
  - Case Road (EW)
  - Ethanac Road (EW)
- Case Road (EW) at:
  - Bonnie Drive/Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Ethanac Road (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)
  - Ethanac Road (EW)
- Goetz Road (NS) at:
  - Mountain Avenue (EW)

4.11.QQ: 2012 With Project (Phases 1 and 2 Only) Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	13.7	17.6	B	C
Driveway 1 (EW)	—	9.0	9.2	A	A
Driveway 2 (EW)	—	8.5	8.6	A	A

4.11.QQ: 2012 With Project (Phases 1 and 2 Only) Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Driveway 3 (EW)	—	8.7	8.8	A	A
Watson Road (EW)	CSS	8.6	8.8	A	A
Driveway 4 (NS) at:					
Mapes Road (EW)	CSS	10.4	11.1	B	B
Driveway 5 (NS) at:					
Watson Road (EW)	CSS	8.3	8.4	A	A
Driveway 6 (NS) at:					
Mapes Road (EW)	CSS	11.5	12.6	B	B
Driveway 7 (NS) at:					
Mapes Road (EW)	CSS	11.8	13.2	B	B
Driveway 8 (NS) at:					
Mapes Road (EW)	CSS	11.0	12.1	B	B
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
-With Improvements	TS	39.6	44.4	B	B
11th Street/Case Road (EW)	AWS	—	—	F	F
-With Improvements	TS	49.2	38.7	D	D
Goetz Road (NS) at:					
Case Road (EW)	AWS	68.0	—	F	F
-With Improvements	TS	33.7	37.4	C	D
Ellis Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	8.1	14.7	A	B
Driveway 1 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.4	A	A
Driveway 2 (NS) at:					
Mountain Avenue (EW)	CSS	9.4	9.4	A	A
Driveway 3 (NS) at:					
Artlo Avenue (EW)	CSS	8.8	8.8	A	A
Driveway 4 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.8	A	A
Driveway 5 (NS) at:					
Artlo Avenue (EW)	CSS	9.5	9.5	A	A
Goetz Road (NS) at:					
Mountain Avenue (EW)	CSS	43.9	85.9	E	F
-With Improvements	TS	6.1	6.1	A	A
Driveway 6 (EW)	CSS	11.8	17.4	B	C
Driveway 7 (EW)	CSS	11.7	17.3	B	C
Driveway 8 (EW)	CSS	11.7	17.3	B	C
Artlo Avenue	CSS	39.6	54.9	E	F
-With Improvements	TS	3.1	2.9	A	A
Mapes Road (EW)	CSS	—	—	F	F

4.11.QQ: 2012 With Project (Phases 1 and 2 Only) Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
-With Improvements	TS	26.6	31.3	C	C
Driveway 9 (EW)	CSS	12.4	21.4	B	C
Ethanac Road (EW)	TS	—	99.6	F	F
-With Improvements	TS	37.6	32.0	D	C
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	55.8	—	E	F
-With Improvements	TS	20.0	22.3	B	C
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F
-With Improvements	TS	17.3	28.5	B	C
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
-With Improvements	TS	24.9	20.8	C	C
7th Street (EW)	CSS	23.4	15.9	C	C
Ellis Avenue (EW)	CSS	9.0	9.1	A	A
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
-With Improvements	TS	25.6	34.3	C	C
Murrieta Road (NS) at:					
Case Road (EW)	CSS	69.9	—	F	F
-With Improvements	TS	26.6	27.1	C	C
Ethanac Road (EW)	AWS	—	—	F	F
-With Improvements	TS	32.9	51.2	C	D
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
-With Improvements	TS	52.5	37.3	D	D
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
-With Improvements	TS	20.3	43.7	C	D
Ethanac Road (EW)	TS	63.1	—	F	F
-With Improvements	TS	12.8	20.9	B	C
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
-With Improvements	TS	13.8	12.8	B	B
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	27.8	36.7	C	D

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2012 with Airport Distribution Center and South Perris Distribution Center (Phases 1 and 2 only) levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.RR. Based on these data, the following study area roadway segments are projected to operate with unacceptable daily V/C ratios:

- Perris Boulevard from north of 4th Street/SR-74 to 11th Street;
- Goetz Road from Case Road to just north of Mapes Road;
- Redlands Avenue from north of the I-215 Northbound ramps to 4th Street/SR-74;
- Murrieta Road, south of Ethanac Road;
- 11th Street/Case Road between Perris Boulevard and Bonnie Drive;
- Bonnie Drive between Case Road and the I-215 Southbound ramps/SR-74;
- SR-74 between the I-215 Southbound and I-215 Northbound ramps;
- Mapes Road between Driveway 7 and Goetz Road; and
- Ethanac Road from Goetz Road to east of the I-215 Northbound ramps.

Table 4.11.RR: 2012 With Project (Phases 1 and 2 Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	6,589	0.41
	Mapes Road to Driveway 1	2U	11,700	2,425	0.21
	Driveway 1 to Driveway 2	2U	11,700	2,025	0.17
	Driveway 2 to Driveway 3	2U	11,700	1,125	0.10
	Driveway 3 to Watson Road	2U	11,700	625	0.05
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	22,931	1.42
	4th Street (SR-74) to 11th Street	2U	11,700	27,467	2.35
	South of 11th Street	2U	11,700	4,351	0.37
Goetz Road	Case Road to Ellis Avenue	2U	11,700	18,615	1.59
	Ellis Avenue to Mountain Avenue	2U	11,700	21,003	1.80
	Mountain Avenue to Driveway 6	2U	11,700	20,603	1.76
	Driveway 6 to Driveway 7	2U	11,700	20,603	1.76
	Driveway 7 to Driveway 8	2U	11,700	20,503	1.75
	Driveway 8 to Artlo Avenue	2U	11,700	20,503	1.75
	Artlo Avenue to Mapes Road	2U	11,700	19,378	1.66
	Mapes Road to Driveway 9	4D	32,300	22,416	0.69
	Driveway 9 to Ethanac Road	4D	32,300	26,716	0.83
	South of Ethanac Road	3D	23,300	20,716	0.89
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	50,619	4.33
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	43,033	3.68
	I-215 SB Ramps to 4th Street	2U	11,700	15,929	1.36
	4th Street to 7th Street	2U	11,700	8,953	0.77
	7th Street to Ellis Avenue	2U	11,700	8,353	0.71

Table 4.11.RR: 2012 With Project (Phases 1 and 2 Only) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Murrieta Road	South of Case Road	2U	11,700	3,964	0.34
	North of Ethanac Road	2U	11,700	4,426	0.38
	South of Ethanac Road	2U	11,700	19,116	1.63
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	26,522	0.74
	Perris Boulevard to Redlands Avenue	4D	35,900	34,922	0.97
	East of Redlands Avenue	2U	13,000	9,617	0.74
7th Street	West of Redlands Avenue	2U	11,700	2,851	0.24
11th Street/Case Road	West of Perris Boulevard	2U	11,700	9,804	0.84
	Perris Boulevard to Goetz Road	2U	11,700	20,817	1.78
	Goetz Road to Ellis Avenue	2U	11,700	13,429	1.15
	Ellis Avenue to Murrieta Road	2U	11,700	14,816	1.27
	Murrieta Road to Bonnie Drive	2U	11,700	13,590	1.16
	South of Bonnie Drive	2U	11,700	8,588	0.73
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	14,777	1.26
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	28,197	1.09
	East of I-215 NB Ramps	4D	35,900	33,638	0.94
Ellis Avenue	West of Goetz Road	2U	11,700	2,851	0.24
	Goetz Road to Case Road	2U	11,700	3,100	0.26
	Case Road to Redlands Avenue	2U	11,700	3,626	0.31
Mountain Avenue	West of Driveway 1	2U	11,700	113	0.01
	Driveway 1 to Driveway 2	2U	11,700	513	0.04
	Driveway 2 to Driveway 3	2U	11,700	613	0.05
	Driveway 3 to Goetz Road	2U	11,700	713	0.06
Mapes Road	West of "A" Street	2U	11,700	3,075	0.26
	"A" Street to Driveway 4	2U	11,700	9,714	0.83
	Driveway 4 to Driveway 6	2U	11,700	9,714	0.83
	Driveway 6 to Driveway 7	2U	11,700	11,214	0.96
	Driveway 7 to Driveway 8	2U	11,700	12,314	1.05
	Driveway 8 to Goetz Road	2U	11,700	12,414	1.06
Watson Road	West of "A" Street	2U	11,700	225	0.02
	"A" Street to Driveway 5	2U	11,700	400	0.03
Ethanac Road	West of Goetz Road	4D	32,300	12,488	0.39
	Goetz Road to Murrieta Road	2U	11,700	50,954	4.36
	East of Murrieta Road	2U	11,700	53,868	4.60
	West of I-215 SB Ramps	4D	32,300	53,868	1.67
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	44,306	1.90
	East of I-215 NB Ramps	2U	11,700	32,893	2.81

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2012 with project levels of service for the study area freeway segments are summarized in Table 4.11.SS. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

Table 4.11.SS: 2012 With Project (Phases 1 and 2 Only) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	4,141	5,645	7%	6%	2	38.6	>45.0	E	F
Redlands Avenue / SR-74	4,472	5,861	6%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,179	5,029	7%	7%	2	39.4	>45.0	E	F
South of Ethanac Road	4,896	5,289	6%	6%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	5,150	5,265	6%	5%	2	>45.0	>45.0	F	F
Redlands Avenue / SR-74	5,228	5,662	6%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,580	5,151	7%	6%	2	>45.0	>45.0	F	F
South of Ethanac Road	4,742	5,697	7%	6%	2	>45.0	>45.0	F	F

Impact 4.11.6.7. Year 2013 With Complete Project Conditions (Phases 1, 2, and 3): *Sixteen intersections and 27 roadway segments are forecast to exceed satisfactory levels of service in the 2013 with project conditions, creating a significant impact.*

Interim year (2013) with project traffic conditions assumes the development of all three project sites (Airport Distribution Center, South Perris Distribution Center and First Park South 215). Intersection levels of service for the existing roadway network for 2013 with the proposed project are shown in Table 4.11.TT.

For 2013 with project traffic conditions, there are no study area intersections projected to operate at unacceptable levels of service during the peak hours, with existing geometry, in addition to those previously listed under 2012 with project traffic conditions.

Table 4.11.TT: 2013 With Project (All Phases) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	14.0	19.9	B	C
Driveway 1 (EW)	—	9.0	9.2	A	A
Driveway 2 (EW)	—	8.5	8.6	A	A
Driveway 3 (EW)	—	8.7	8.8	A	A
Watson Road (EW)	CSS	8.6	9.1	A	A
Driveway 4 (NS) at:					
Mapes Road (EW)	CSS	10.5	11.1	B	B
Driveway 5 (NS) at:					
Watson Road (EW)	CSS	8.3	8.4	A	A
Driveway 6 (NS) at:					
Mapes Road (EW)	CSS	11.6	12.6	B	B

Table 4.11.TT: 2013 With Project (All Phases) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Driveway 7 (NS) at:					
Mapes Road (EW)	CSS	11.9	13.2	B	B
Driveway 8 (NS) at:					
Mapes Road (EW)	CSS	11.1	12.2	B	B
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
-With Improvements	TS	40.0	45.0	D	D
11th Street/Case Road (EW)	AWS	—	—	F	F
-With Improvements	TS	48.3	36.3	D	D
Goetz Road (NS) at:					
Case Road (EW)	AWS	70.6	—	F	F
-With Improvements	TS	27.1	42.0	C	D
Ellis Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	12.0	18.9	B	B
Driveway 1 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.4	A	A
Driveway 2 (NS) at:					
Mountain Avenue (EW)	CSS	9.4	9.4	A	A
Driveway 3 (NS) at:					
Artlo Avenue (EW)	CSS	8.8	8.8	A	A
Driveway 4 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.8	A	A
Driveway 5 (NS) at:					
Artlo Avenue (EW)	CSS	9.5	9.5	A	A
Goetz Road (NS) at:					
Mountain Avenue (EW)	CSS	46.1	91.3	E	F
-With Improvements	TS	5.2	7.8	A	A
Driveway 6 (EW)	CSS	11.8	17.7	B	C
Driveway 7 (EW)	CSS	11.8	17.6	B	C
Driveway 8 (EW)	CSS	11.8	17.6	B	C
Artlo Avenue	CSS	41.0	57.8	E	F
-With Improvements	TS	4.0	3.6	A	A
Mapes Road (EW)	CSS	—	—	F	F
-With Improvements	TS	22.9	32.9	C	C
Driveway 9 (EW)	CSS	12.6	21.9	B	C
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	38.9	32.2	D	C
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	55.8	—	E	F
-With Improvements	TS	32.4	37.4	C	D

Table 4.11.TT: 2013 With Project (All Phases) Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F
-With Improvements	TS	17.9	31.5	B	C
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
-With Improvements	TS	25.7	24.2	C	C
7th Street (EW)	CSS	15.0	20.7	B	C
Driveway 1 (EW)	CSS	11.5	10.9	B	B
Ellis Avenue (EW)	CSS	9.6	10.0	A	B
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
-With Improvements	TS	27.1	38.6	C	D
Driveway 2 (NS) at:					
Ellis Avenue (EW)	CSS	8.8	8.9	A	A
Murrieta Road (NS) at:					
Case Road (EW)	CSS	69.9	—	F	F
-With Improvements	TS	24.4	23.7	C	C
Ethanac Road (EW)	AWS	—	—	F	F
-With Improvements	TS	21.8	38.1	C	D
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
-With Improvements	TS	42.5	35.0	D	C
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
-With Improvements	TS	39.3	54.6	D	D
Ethanac Road (EW)	TS	63.1	—	F	F
-With Improvements	TS	14.0	22.0	B	C
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
-With Improvements	TS	15.0	13.9	B	B
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	26.6	37.2	C	D

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

The year 2012 with Airport Distribution Center and South Perris Distribution Center (Phases 1 and 2 only) levels of service based on daily V/C ratios for the study area roadway segments are summarized in Table 4.11.UU. Based on these data, for 2013 with project traffic conditions, there are no study area intersections projected to operate at unacceptable levels of service during the peak hours in addition to those previously listed under 2012 with project traffic conditions.

Table 4.11.UU: 2013 With Project (All Phases) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	6,666	0.41
	Mapes Road to Driveway 1	2U	11,700	2,432	0.21
	Driveway 1 to Driveway 2	2U	11,700	2,032	0.17
	Driveway 2 to Driveway 3	2U	11,700	1,132	0.10
	Driveway 3 to Watson Road	2U	11,700	632	0.05
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	23,516	1.45
	4th Street (SR-74) to 11th Street	2U	11,700	27,781	2.37
	South of 11th Street	2U	11,700	4,419	0.38
Goetz Road	Case Road to Ellis Avenue	2U	11,700	18,808	1.61
	Ellis Avenue to Mountain Avenue	2U	11,700	21,419	1.83
	Mountain Avenue to Driveway 6	2U	11,700	21,019	1.80
	Driveway 6 to Driveway 7	2U	11,700	21,019	1.80
	Driveway 7 to Driveway 8	2U	11,700	20,919	1.79
	Driveway 8 to Artlo Avenue	2U	11,700	20,919	1.79
	Artlo Avenue to Mapes Road	2U	11,700	19,760	1.69
	Mapes Road to Driveway 9	4D	32,300	22,863	0.71
	Driveway 9 to Ethanac Road	4D	32,300	27,163	0.84
	South of Ethanac Road	3D	23,300	21,163	0.91
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	51,455	4.40
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	44,853	3.83
	I-215 SB Ramps to 4th Street	2U	11,700	18,379	1.57
	4th Street to 7th Street	2U	11,700	11,683	1.00
	7th Street to Driveway 1	2U	11,700	11,083	0.95
	Driveway 1 to Ellis Avenue	2D	16,200	4,910	0.30
Murrieta Road	South of Case Road	2U	11,700	4,134	0.35
	North of Ethanac Road	2U	11,700	4,614	0.39
	South of Ethanac Road	2U	11,700	19,463	1.66
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	27,274	0.76
	Perris Boulevard to Redlands Avenue	4D	35,900	35,847	1.00
	East of Redlands Avenue	2U	13,000	9,990	0.77
7th Street	West of Redlands Avenue	2U	11,700	2,919	0.25
11th Street/Case Road	West of Perris Boulevard	2U	11,700	10,147	0.87
	Perris Boulevard to Goetz Road	2U	11,700	21,218	1.81
	Goetz Road to Ellis Avenue	2U	11,700	13,779	1.18
	Ellis Avenue to Murrieta Road	2U	11,700	17,335	1.48
	Murrieta Road to Bonnie Drive	2U	11,700	15,949	1.36
	South of Bonnie Drive	2U	11,700	8,639	0.74
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	17,033	1.46
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	30,015	1.16
	East of I-215 NB Ramps	4D	35,900	34,782	0.97

Table 4.11.UU: 2013 With Project (All Phases) Roadway Segment Volume/Capacity

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Ellis Avenue	West of Goetz Road	2U	11,700	2,891	0.25
	Goetz Road to Case Road	2U	11,700	6,314	0.54
	Case Road to Redlands Avenue	2U	11,700	2,100	0.18
Mountain Avenue	West of Driveway 1	2U	11,700	116	0.01
	Driveway 1 to Driveway 2	2U	11,700	516	0.04
	Driveway 2 to Driveway 3	2U	11,700	616	0.05
	Driveway 3 to Goetz Road	2U	11,700	716	0.06
Mapes Road	West of "A" Street	2U	11,700	3,096	0.26
	"A" Street to Driveway 4	2U	11,700	9,798	0.84
	Driveway 4 to Driveway 6	2U	11,700	9,798	0.84
	Driveway 6 to Driveway 7	2U	11,700	11,298	0.97
	Driveway 7 to Driveway 8	2U	11,700	12,398	1.06
	Driveway 8 to Goetz Road	2U	11,700	12,498	1.07
Watson Road	West of "A" Street	2U	11,700	232	0.02
	"A" Street to Driveway 5	2U	11,700	400	0.03
Ethanac Road	West of Goetz Road	4D	32,300	12,511	0.39
	Goetz Road to Murrieta Road	2U	11,700	51,210	4.38
	East of Murrieta Road	2U	11,700	54,209	4.63
	West of I-215 SB Ramps	4D	32,300	54,209	1.68
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	44,684	1.92
	East of I-215 NB Ramps	2U	11,700	33,241	2.84

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2012 with project levels of service for the study area freeway segments are summarized in Table 4.11.VV. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

Table 4.11.VV: 2013 With Project (All Phases) Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	4,141	5,645	7%	6%	2	38.6	>45.0	E	F
Redlands Avenue / SR-74	4,472	5,861	6%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,179	5,029	7%	7%	2	39.4	>45.0	E	F
South of Ethanac Road	4,896	5,289	6%	6%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	5,150	5,265	6%	5%	2	>45.0	>45.0	F	F
Redlands Avenue / SR-74	5,228	5,662	6%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	4,580	5,151	7%	6%	2	>45.0	>45.0	F	F
South of Ethanac Road	4,742	5,697	7%	6%	2	>45.0	>45.0	F	F

The year 2013 with complete project (Phases 1, 2 and 3 combined) levels of service for the study area railroad at-grade crossings are summarized in Table 4.11.WW. Based on these data, all study area at-grade crossings are projected to operate at LOS A or B during the a.m. and p.m. peak hours, within the LOS D performance standard.

4.11.WW: 2013 with Project (All Phases) At-Grade Crossing Analysis

Cross-Street Name	Westbound 95th Percentile Queue (feet)		Eastbound 95th Percentile Queue (feet)		Average Stopped Delay (seconds)		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
San Jacinto Street	148	204	160	146	17.1	17.3	B	B
4th Street	156	206	192	207	17.5	17.7	B	B
7th Street	37	38	42	45	16.3	16.3	B	B
11th Street	150	183	164	151	10.1	10.1	B	B
Ellis Avenue	36	36	31	31	9.4	9.4	A	A
Mapes Road	175	170	136	205	10.2	10.4	B	B

Impact 4.11.6.8. Year 2030 With Project, With Evans Road/I-215 Interchange: *21 intersections and 43 roadway segments are forecast to exceed satisfactory levels of service in the 2030 with project with Evans Road/I-215 interchange conditions, creating a significant impact.*

The year 2030 with project with Evans Road/I-215 interchange levels of service for the study area intersections are summarized in Table 4.11.XX. The following 21 area intersections do not operate at a satisfactory level of service.

- "A" Street (NS) at:
  - 11th Street/Case Road (EW)
- Perris Boulevard (NS) at:
  - 11th Street/Case Road (EW)
- Goetz Road (NS) at:
  - Case Road (EW)
  - Ellis Avenue (EW)
  - Mountain Avenue (EW)
  - Mapes Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Ellis Avenue (EW)
- Redlands Avenue (NS) at:
  - 4th Street (EW)
  - 7th Street (EW)
  - Ellis Avenue (EW)
  - I-215 Northbound Ramps (EW)
- Murrieta Road (NS) at:
  - Case Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Bonnie Drive/Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Ethanac Road (EW)
  - Redlands Avenue (EW)
  - Bonnie Drive/SR-74 (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)
  - Ethanac Road (EW)

Table 4.11.XX: 2030 with Project (All Phases) with Evans Road/I-215 Interchange Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	45.9	35.1	E	E
-With Improvements	TS	21.0	25.0	C	C
Driveway 1 (EW)	CSS	9.8	9.8	A	A
Driveway 2 (EW)	CSS	9.2	9.1	A	A
Driveway 3 (EW)	CSS	9.7	9.5	A	A
Watson Road (EW)	CSS	9.1	9.6	A	A
Driveway 4 (NS) at:					
Mapes Road (EW)	CSS	11.8	10.1	B	B
Driveway 5 (NS) at:					
Watson Road (EW)	CSS	8.3	8.4	A	A
Driveway 6 (NS) at:					
Mapes Road (EW)	CSS	10.7	11.3	B	B
Driveway 7 (NS) at:					
Mapes Road (EW)	CSS	10.8	11.5	B	B
Driveway 8 (NS) at:					
Mapes Road (EW)	CSS	10.0	10.5	A	B
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
-With Improvements	TS	40.5	51.1	D	D
11th Street/Case Road (EW)	AWS	—	—	F	F
-With Improvements	TS	37.1	35.9	D	D
Goetz Road (NS) at:					
Case Road (EW)	AWS	35.9	—	E	F
-With Improvements	TS	15.5	18.2	B	B
Ellis Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	28.0	36.2	C	D
Driveway 1 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.4	A	A
Driveway 2 (NS) at:					
Mountain Avenue (EW)	CSS	9.4	9.5	A	A
Driveway 3 (NS) at:					
Artlo Avenue (EW)	CSS	8.8	8.8	A	A
Driveway 4 (NS) at:					
Mountain Avenue (EW)	CSS	8.5	8.7	A	A
Driveway 5 (NS) at:					
Artlo Avenue (EW)	CSS	9.5	9.5	A	A
Goetz Road (NS) at:					
Mountain Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	3.0	5.1	A	A
Driveway 6 (EW)	CSS	10.2	13.6	B	B
Driveway 7 (EW)	CSS	10.2	13.5	B	B

Table 4.11.XX: 2030 with Project (All Phases) with Evans Road/I-215 Interchange Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Driveway 8 (EW)	CSS	10.2	13.5	B	B
Artlo Avenue	CSS	37.6	—	F	F
-With Improvements	TS	2.3	2.8	A	A
Mapes Road (EW)	CSS	—	—	F	F
-With Improvements	TS	16.0	21.8	B	C
Driveway 9 (EW)	CSS	10.3	16.3	B	C
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	40.0	43.9	D	D
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	—	—	E	F
-With Improvements	TS	29.6	46.1	C	D
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F
-With Improvements	TS	19.8	33.3	B	C
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
-With Improvements	TS	33.3	51.4	C	D
7th Street (EW)	CSS	—[4]	—[4]	F	F
-With Improvements	TS	8.1	8.0	A	A
Driveway 1 (EW)	TS	5.8	6.6	A	A
Ellis Avenue (EW)	CSS	—[4]	—[4]	F	F
-With Improvements	TS	13.0	19.3	B	B
I-215 Northbound Ramps (EW)	AWS	—[4]	—[4]	F	F
-With Improvements	TS	19.1	13.6	B	B
Driveway 2 (NS) at:					
Ellis Avenue (EW)	CSS	10.5	9.6	B	A
Murrieta Road (NS) at:					
Case Road (EW)	CSS	—	—	F	F
-With Improvements	TS	22.4	22.3	C	C
Ethanac Road (EW)	AWS	—	—	F	F
-With Improvements	TS	36.2	41.7	C	D
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
-With Improvements	TS	19.1	28.0	B	C
I-215 Southbound Ramps (NS) at:					
Ellis Avenue (EW)	TS	11.4	11.3	B	B
Bonnie Drive (EW)	CSS	—	—	F	F
-With Improvements	TS	29.0	29.0	C	C
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	19.7	26.9	B	C
I-215 Northbound Ramps (NS) at:					
Ellis Avenue (EW)	TS	35.3	40.5	D	D
SR-74 (EW)	CSS	—	—	F	F

Table 4.11.XX: 2030 with Project (All Phases) with Evans Road/I-215 Interchange Peak Hour Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
-With Improvements	TS	14.2	26.2	B	C
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	21.4	27.4	C	C

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

Table 4.11.YY identifies the levels of service condition for the analyzed roadway segments in the year 2030 with project with Evans Road/I-215 interchange Condition. The following study area roadway segments do not operate with a satisfactory daily V/C ratio in the year 2030 With Project, With Evans Road/I-215 Interchange scenario:

- Perris Boulevard from north of 4th Street (SR-74) to south of 11th Street;
- Goetz Road from Case Road to south of Ethanac Road;
- Redlands Avenue from north of I-215 NB ramps to Ellis Avenue;
- Murrieta Road from south of Case Road to south of Ethanac Road;
- 4th Street (SR-74) from Perris Boulevard to Redlands Avenue;
- 11th Street/Case Road from Perris Boulevard to Bonnie Drive;
- Bonnie Drive from Case Road to I-215 SB Ramps;
- SR-74 from I-215 SB Ramps to east of I-215 NB Ramps;
- Ellis Avenue from west of Goetz Road to north of I-215 NB Ramps;
- Mapes Road from Driveway 6 to Goetz Road; and
- Ethanac Road from west of Goetz Road to east of I-215 NB Ramps.

Table 4.11.YY: 2030 With Project (All Phases) With Evans Road/I-215 Interchange Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	7,000	0.43
	Mapes Road to Driveway 1	2U	11,700	7,200	0.62
	Driveway 1 to Driveway 2	2U	11,700	6,800	0.58
	Driveway 2 to Driveway 3	2U	11,700	5,900	0.50
	Driveway 3 to Watson Road	2U	11,700	5,400	0.46
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	32,000	1.98
	4th Street (SR-74) to 11th Street	2U	11,700	34,000	2.91
	South of 11th Street	2U	11,700	17,000	1.45

Table 4.11.YY: 2030 With Project (All Phases) With Evans Road/I-215 Interchange Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Goetz Road	Case Road to Ellis Avenue	2U	11,700	19,800	1.69
	Ellis Avenue to Mountain Avenue	2U	11,700	37,000	3.16
	Mountain Avenue to Driveway 6	2U	11,700	37,000	3.16
	Driveway 6 to Driveway 7	2U	11,700	37,000	3.16
	Driveway 7 to Driveway 8	2U	11,700	36,900	3.15
	Driveway 8 to Artlo Avenue	2U	11,700	36,900	3.15
	Artlo Avenue to Mapes Road	2U	11,700	37,000	3.16
	Mapes Road to Driveway 9	4D	32,300	40,000	1.24
	Driveway 9 to Ethanac Road	4D	32,300	43,000	1.33
	South of Ethanac Road	3D	23,300	41,000	1.76
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	59,000	5.04
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	48,000	4.10
	I-215 SB Ramps to 4th Street	2U	11,700	44,000	3.76
	4th Street to 7th Street	2U	11,700	27,000	2.31
	7th Street to Ellis Avenue	2U	11,700	21,000	1.79
Murrieta Road	South of Case Road	2U	11,700	19,000	1.62
	North of Ethanac Road	2U	11,700	20,000	1.71
	South of Ethanac Road	2U	11,700	26,000	2.22
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	28,700	0.80
	Perris Boulevard to Redlands Avenue	4D	35,900	37,600	1.05
	East of Redlands Avenue	2U	13,000	3,300	0.25
7th Street	West of Redlands Avenue	2U	11,700	3,100	0.26
11th Street/Case Road	West of Perris Boulevard	2U	11,700	10,600	0.91
	Perris Boulevard to Goetz Road	2U	11,700	22,100	1.89
	Goetz Road to Ellis Avenue	2U	11,700	22,000	1.88
	Ellis Avenue to Murrieta Road	2U	11,700	23,000	1.97
	Murrieta Road to Bonnie Drive	2U	11,700	16,600	1.42
	South of Bonnie Drive	2U	11,700	9,000	0.77
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	21,000	1.79
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	39,000	1.51
	East of I-215 NB Ramps	4D	35,900	37,000	1.03
Ellis Avenue	West of Goetz Road	2U	11,700	41,000	3.50
	Goetz Road to Case Road	2U	11,700	38,600	3.30
	Case Road to Redlands Avenue	2U	11,700	28,000	2.39
	Redlands Avenue to Driveway 2	2U	11,700	22,000	1.88
	Driveway 2 to I-215 SB Ramps	2U	11,700	24,000	2.05
	West of I -215 SB Ramps	2U	11,700	34,000	2.91
	I-215 SB Ramps to I-215 NB Ramps	2U	11,700	46,000	3.93
	North of I-215 NB Ramps	2U	11,700	59,900	5.12

Table 4.11.YY: 2030 With Project (All Phases) With Evans Road/I-215 Interchange Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
Mountain Avenue	West of Driveway 1	2U	11,700	100	0.01
	Driveway 1 to Driveway 2	2U	11,700	500	0.04
	Driveway 2 to Driveway 3	2U	11,700	600	0.05
	Driveway 3 to Goetz Road	2U	11,700	700	0.06
Mapes Road	West of "A" Street	2U	11,700	4,000	0.34
	"A" Street to Driveway 4	2U	11,700	11,000	0.94
	Driveway 4 to Driveway 6	2U	11,700	11,000	0.94
	Driveway 6 to Driveway 7	2U	11,700	12,500	1.07
	Driveway 7 to Driveway 8	2U	11,700	13,600	1.16
	Driveway 8 to Goetz Road	2U	11,700	13,700	1.17
Watson Road	West of "A" Street	2U	11,700	5,000	0.43
	"A" Street to Driveway 5	2U	11,700	400	0.03
Ethanac Road	West of Goetz Road	4D	32,300	62,000	1.92
	Goetz Road to Murrieta Road	2U	11,700	68,000	5.81
	East of Murrieta Road	2U	11,700	74,000	6.32
	West of I-215 SB Ramps	4D	32,300	74,000	2.29
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	88,600	3.80
	East of I-215 NB Ramps	2U	11,700	91,800	7.85

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2030 with project with Evans Road/I-215 Interchange levels of service for the study area freeway segments are summarized in Table 4.11.ZZ. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

Table 4.11.ZZ: 2030 With Project (All Phases) With I-215/Ellis/Evans Interchange Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	6,387	7,891	8%	7%	2	>45.0	>45.0	F	F
Redlands Avenue/Ellis Avenue	6,305	7,865	8%	7%	2	>45.0	>45.0	F	F
Ellis Avenue / SR-74	7,627	9,186	6%	6%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	6,020	7,309	8%	8%	2	>45.0	>45.0	F	F
South of Ethanac Road	6,332	7,189	8%	7%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	6,523	7,951	8%	6%	2	>45.0	>45.0	F	F
Redlands Avenue/Ellis Avenue	6,104	8,073	9%	6%	2	>45.0	>45.0	F	F
Ellis Avenue / SR-74	7,282	9,061	7%	5%	2	>45.0	>45.0	F	F

Table 4.11.ZZ: 2030 With Project (All Phases) With I-215/Ellis/Evans Interchange Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
SR-74 / Ethanac Road	6,628	7,468	8%	7%	2	>45.0	>45.0	F	F
South of Ethanac Road	6,017	8,081	9%	7%	2	>45.0	>45.0	F	F

The year 2030 with complete project (Phases 1, 2 and 3 combined) levels of service for the study area railroad at-grade crossings are summarized in Table 4.11.AAA. Based on these data, all study area at-grade crossings are projected to operate at LOS A or B during the a.m. and p.m. peak hours, which is within the LOS D performance standard.

4.11.AAA: 2030 with Project (All Phases) At-Grade Crossing Analysis

Cross-Street Name	Westbound 95th Percentile Queue (feet)		Eastbound 95th Percentile Queue (feet)		Average Stopped Delay (seconds)		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM
San Jacinto Street	80	112	85	74	17.0	17.1	B	B
4th Street	163	236	202	237	17.6	18.0	B	B
7th Street	38	42	43	46	16.3	16.3	B	B
11th Street	156	215	171	158	10.1	10.3	B	B
Ellis Avenue	60	193	103	148	10.6	11.1	A	A
Mapes Road	93	68	73	108	10.2	10.2	B	B

Impact 4.11.6.9. Year 2030 With Project, Without Evans Road/I-215 Interchange: *21 intersections and 43 roadway segments are forecast to exceed satisfactory levels of service in the 2030 with project without Evans Road/I-215 interchange conditions, creating a significant impact.*

The year 2030 with project without Evans Road/I-215 interchange levels of service for the study area intersections are summarized in Table 4.11.BBB. The following 21 area intersections do not operate at a satisfactory level of service.

- "A" Street (NS) at:
  - 11th Street/Case Road (EW)
- Perris Boulevard (NS) at:
  - 11th Street/Case Road (EW)
- Goetz Road (NS) at:
  - Case Road (EW)
  - Ellis Avenue (EW)
  - Mountain Avenue (EW)
  - Mapes Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
- Murrieta Road (NS) at:
  - Case Road (EW)
  - Ethanac Road (EW)
- Case Road (NS) at:
  - Bonnie Drive/Mapes Road (EW)
- I-215 Southbound Ramps (NS) at:
  - Ethanac Road (EW)
  - Redlands Avenue (EW)
  - Bonnie Drive/SR-74 (EW)
- I-215 Northbound Ramps (NS) at:
  - SR-74 (EW)

- Ellis Avenue (EW)
- Ethanac Road (EW)

- Redlands Avenue (NS) at:
  - 4th Street (EW)
  - 7th Street (EW)
  - Ellis Avenue (EW)
  - I-215 Northbound Ramps (EW)

Table 4.11.BBB: 2030 with Project without Evans Road/I-215 Interchange Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
"A" Street (NS) at:					
Mapes Road (EW)	AWS	72.7	—	F	F
-With Improvements	TS	20.8	21.9	C	C
Driveway 1 (EW)	CSS	9.9	9.8	A	A
Driveway 2 (EW)	CSS	9.2	9.2	A	A
Driveway 3 (EW)	CSS	9.7	9.6	A	A
Watson Road (EW)	CSS	9.1	10.2	A	B
Driveway 4 (NS) at:					
Mapes Road (EW)	CSS	11.5	10.3	B	B
Driveway 5 (NS) at:					
Watson Road (EW)	CSS	8.3	8.4	A	A
Driveway 6 (NS) at:					
Mapes Road (EW)	CSS	10.4	11.6	B	B
Driveway 7 (NS) at:					
Mapes Road (EW)	CSS	10.4	11.9	B	B
Driveway 8 (NS) at:					
Mapes Road (EW)	CSS	9.8	10.8	A	B
Perris Boulevard (NS) at:					
4th Street (EW)	TS	—	—	F	F
-With Improvements	TS	40.3	51.1	D	D
11th Street/Case Road (EW)	AWS	—	—	F	F
-With Improvements	TS	34.6	38.7	C	D
Goetz Road (NS) at:					
Case Road (EW)	AWS	74.0	—	F	F
-With Improvements	TS	13.0	16.8	B	B
Ellis Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	29.9	39.7	C	D
Driveway 1 (NS) at:					
Mountain Avenue (EW)	CSS	8.4	8.4	A	A
Driveway 2 (NS) at:					
Mountain Avenue (EW)	CSS	9.4	9.5	A	A

Table 4.11.BBB: 2030 with Project without Evans Road/I-215 Interchange Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Driveway 3 (NS) at:					
Artlo Avenue (EW)	CSS	8.8	8.8	A	A
Driveway 4 (NS) at:					
Mountain Avenue (EW)	CSS	8.5	8.7	A	A
Driveway 5 (NS) at:					
Artlo Avenue (EW)	CSS	9.5	9.5	A	A
Goetz Road (NS) at:					
Mountain Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	2.2	3.2	A	A
Driveway 6 (EW)	CSS	11.4	18.4	B	C
Driveway 7 (EW)	CSS	11.4	18.4	B	C
Driveway 8 (EW)	CSS	11.4	18.3	B	C
Artlo Avenue	CSS	75.3	—	F	F
-With Improvements	TS	1.8	5.1	A	A
Mapes Road (EW)	CSS	—	—	F	F
-With Improvements	TS	14.8	32.2	B	C
Driveway 9 (EW)	CSS	11.4	25.9	B	D
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	39.4	46.5	D	D
Case Road (NS) at:					
Ellis Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	37.1	45.5	D	D
I-215 Southbound Ramps (NS) at:					
Redlands Avenue (EW)	AWS	—	—	F	F
-With Improvements	TS	24.6	36.5	C	D
Redlands Avenue (NS) at:					
4th Street (SR-74) (EW)	AWS	—	—	F	F
-With Improvements	TS	30.7	37.9	C	D
7th Street (EW)	CSS	—	—	F	F
-With Improvements	TS	11.3	9.5	B	A
Driveway 1 (EW)	TS	3.9	8.5	A	A
Ellis Avenue (EW)	CSS	—	—	F	F
-With Improvements	TS	12.2	24.3	B	C
I-215 Northbound Ramps (EW)	AWS	—	—	F	F
-With Improvements	TS	21.6	20.6	C	C
Driveway 2 (NS) at:					
Ellis Avenue (EW)	CSS	14.9	14.0	B	B
Murrieta Road (NS) at:					
Case Road (EW)	CSS	—	—	F	F
-With Improvements	TS	24.5	29.4	C	C

Table 4.11.BBB: 2030 with Project without Evans Road/I-215 Interchange Peak Hour Intersection Level of Service

Intersection	Traffic Control[2]	Delay[1] (Seconds)		Level of Service	
		AM	PM	AM	PM
Ethanac Road (EW)	AWS	—	—	F	F
-With Improvements	TS	25.5	37.2	C	D
Case Road (NS) at:					
Bonnie Drive/Mapes Road	CSS	—	—	F	F
-With Improvements	TS	26.4	31.7	C	C
I-215 Southbound Ramps (NS) at:					
Bonnie Drive (EW)	CSS	—	—	F	F
-With Improvements	TS	25.3	28.1	C	C
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	18.1	23.4	B	C
I-215 Northbound Ramps (NS) at:					
SR-74 (EW)	CSS	—	—	F	F
-With Improvements	TS	14.5	23.1	B	C
Ethanac Road (EW)	TS	—	—	F	F
-With Improvements	TS	9.8	16.7	A	B

[1] Delay and level of service calculated using the following analysis software: Traffix, Version 7.9 R1 (2008). Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross-street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

[2] TS = Traffic Signal; CSS = Cross Street Stop

Source: *Traffic Impact Analysis, South Perris Industrial Distribution Center, City of Perris, Riverside County, California, Table 6-10 Intersection Analysis for Existing Conditions,* Urban Crossroads, October 31, 2008.

Table 4.11.CCC identifies the levels of service condition for the analyzed roadway segments in the year 2030 with project without Evans Road/I-215 interchange Condition. The following study area roadway segments do not operate with a satisfactory daily V/C ratio in the year 2030 With Project, With Evans Road/I-215 Interchange scenario:

- Perris Boulevard from north of 4th Street (SR-74) to south of 11th Street;
- Goetz Road from Case Road to south of Ethanac Road;
- Redlands Avenue from north of I-215 NB ramps to Ellis Avenue;
- Murrieta Road from south of Case Road to south of Ethanac Road;
- 4th Street (SR-74) from Perris Boulevard to Redlands Avenue;
- 11th Street/Case Road from Perris Boulevard to Bonnie Drive;
- Bonnie Drive from Case Road to I-215 SB Ramps;
- SR-74 from I-215 SB Ramps to east of I-215 NB Ramps;
- Ellis Avenue from west of Goetz Road to north of I-215 NB Ramps;
- Mapes Road from Driveway 6 to Goetz Road; and
- Ethanac Road from west of Goetz Road to east of I-215 NB Ramps.

Table 4.11.CCC: 2030 With Project (All Phases), Without Evans Road/I-215 Interchange Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
"A" Street	North of Mapes Road	2D	16,200	7,000	0.43
	Mapes Road to Driveway 1	2U	11,700	5,000	0.43
	Driveway 1 to Driveway 2	2U	11,700	46,000	3.93
	Driveway 2 to Driveway 3	2U	11,700	37,000	3.16
	Driveway 3 to Watson Road	2U	11,700	3,300	0.28
Perris Boulevard	North of 4th Street (SR-74)	2D	16,200	34,000	2.10
	4th Street (SR-74) to 11th Street	2U	11,700	29,000	2.48
	South of 11th Street	2U	11,700	19,000	1.62
Goetz Road	Case Road to Ellis Avenue	2U	11,700	27,400	2.34
	Ellis Avenue to Mountain Avenue	2U	11,700	36,000	3.08
	Mountain Avenue to Driveway 6	2U	11,700	37,000	3.16
	Driveway 6 to Driveway 7	2U	11,700	37,000	3.16
	Driveway 7 to Driveway 8	2U	11,700	36,900	3.15
	Driveway 8 to Artlo Avenue	2U	11,700	36,900	3.15
	Artlo Avenue to Mapes Road	2U	11,700	37,000	3.16
	Mapes Road to Driveway 9	4D	32,300	40,000	1.24
	Driveway 9 to Ethanac Road	4D	32,300	43,000	1.33
	South of Ethanac Road	3D	23,300	41,000	1.76
Redlands Avenue	North of I-215 NB Ramps	2U	11,700	88,000	7.52
	I-215 NB Ramps to I-215 SB Ramps	2U	11,700	73,000	6.24
	I-215 SB Ramps to 4th Street	2U	11,700	64,000	5.47
	4th Street to 7th Street	2U	11,700	45,000	3.85
	7th Street to Driveway 1	2U	11,700	38,000	3.25
	Driveway 1 to Ellis Avenue	2D	16,200	36,000	2.22
Murrieta Road	South of Case Road	2U	11,700	19,000	1.62
	North of Ethanac Road	2U	11,700	20,000	1.71
	South of Ethanac Road	2U	11,700	26,000	2.22
4th Street (SR-74)	West of Perris Boulevard	4D	35,900	33,700	0.94
	Perris Boulevard to Redlands Avenue	4D	35,900	41,600	1.16
	East of Redlands Avenue	2U	13,000	4,500	0.35
7th Street	West of Redlands Avenue	2U	11,700	3,100	0.26
11th Street/Case Road	West of Perris Boulevard	2U	11,700	10,600	0.91
	Perris Boulevard to Goetz Road	2U	11,700	33,000	2.82
	Goetz Road to Ellis Avenue	2U	11,700	19,000	1.62
	Ellis Avenue to Murrieta Road	2U	11,700	26,000	2.22
	Murrieta Road to Bonnie Drive	2U	11,700	17,000	1.45
	South of Bonnie Drive	2U	11,700	9,000	0.77
Bonnie Drive	Case Road to I-215 SB Ramps	2U	11,700	24,000	2.05

Table 4.11.CCC: 2030 With Project (All Phases), Without Evans Road/I-215 Interchange Roadway Segment Level of Service

Roadway	Segment Limits	Roadway Section	LOS D Capacity[1]	Daily Volume	V/C
SR-74	I-215 SB Ramps to I-215 NB Ramps	3D	25,900	43,000	1.66
	East of I-215 NB Ramps	4D	35,900	40,000	1.11
Ellis Avenue	West of Goetz Road	2U	11,700	42,000	3.59
	Goetz Road to Case Road	2U	11,700	33,600	2.87
	Case Road to Redlands Avenue	2U	11,700	28,000	2.39
	Redlands Avenue to Driveway 2	2U	11,700	16,000	1.37
	East of Driveway 2	2U	11,700	13,200	1.13
Mountain Avenue	West of Driveway 1	2U	11,700	300	0.03
	Driveway 1 to Driveway 2	2U	11,700	700	0.06
	Driveway 2 to Driveway 3	2U	11,700	800	0.07
	Driveway 3 to Goetz Road	2U	11,700	900	0.08
Mapes Road	West of "A" Street	2U	11,700	4,500	0.38
	"A" Street to Driveway 4	2U	11,700	10,300	0.88
	Driveway 4 to Driveway 6	2U	11,700	10,300	0.88
	Driveway 6 to Driveway 7	2U	11,700	11,800	1.01
	Driveway 7 to Driveway 8	2U	11,700	12,900	1.10
	Driveway 8 to Goetz Road	2U	11,700	13,000	1.11
Watson Road	West of "A" Street	2U	11,700	3,700	0.32
	"A" Street to Driveway 5	2U	11,700	400	0.03
Ethanac Road	West of Goetz Road	4D	32,300	62,000	1.92
	Goetz Road to Murrieta Road	2U	11,700	68,000	5.81
	East of Murrieta Road	2U	11,700	72,000	6.15
	West of I-215 SB Ramps	4D	32,300	72,000	2.23
	I-215 SB Ramps to I-215 NB Ramps	3D	23,300	91,600	3.93
	East of I-215 NB Ramps	2U	11,700	97,800	8.36

[1] Per Table CE-2: Perris Roadway Capacity / Level of Service of the City of Perris General Plan Circulation Element. The City of Perris roadway standard capacity is LOS D, with the exception of SR-74 which allows LOS E capacity. As such, the volumes shown in the table are based upon LOS D capacity with the exception of segments along SR-74 which have been based upon LOS E capacity.

The year 2030 with project without Evans Road/I-215 Interchange levels of service for the study area freeway segments are summarized in Table 4.11.DDD. Based on these data, all study area freeway segments are projected to operate with unacceptable level of service during either the a.m. or the p.m. peak hour.

Table 4.11.DDD: 2030 With Project (All Phases) With I-215/Ellis/Evans Interchange Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
I-215 Southbound									
North of Redlands Avenue	6,517	6,488	8%	8%	2	>45.0	>45.0	F	F
Ellis Avenue / SR-74	7,125	6,885	7%	8%	2	>45.0	>45.0	F	F

Table 4.11.DDD: 2030 With Project (All Phases) With I-215/Ellis/Evans Interchange Freeway Mainline Analysis

Segment	Volume		Truck %		Lanes	Density (pc/mi/ln)		LOS	
	AM	PM	AM	PM		AM	PM	AM	PM
SR-74 / Ethanac Road	5,676	5,008	9%	11%	2	>45.0	>45.0	F	F
South of Ethanac Road	6,018	4,898	9%	11%	2	>45.0	>45.0	F	F
I-215 Northbound									
North of Redlands Avenue	6,488	8,078	8%	6%	2	>45.0	>45.0	F	F
Ellis Avenue / SR-74	6,871	8,792	8%	5%	2	>45.0	>45.0	F	F
SR-74 / Ethanac Road	6,157	7,199	9%	7%	2	>45.0	>45.0	F	F
South of Ethanac Road	5,625	7,719	9%	7%	2	>45.0	>45.0	F	F

4.11.7 Mitigation of Significant Impacts

As described in detail in section 4.11.1.2, the level of service performance standards used in this EIR are as follows:

- Freeway mainline lanes – LOS E.
- Intersections of any arterials and expressways with SR-74, the Ramona-Cajalco Expressway and the I-215 Freeway ramps - LOS E.
- Other roadway segments and intersections – LOS D.

Intersection and roadway improvements that were identified in the analysis as necessary to maintain or improve the operational level of service of the street system in the vicinity of the project sites are shown in Table 4.11.EEE. The table lists the incremental improvements that are required by the year 2013 and the total improvements required by the year 2030 to mitigate the project's impacts. It is anticipated that the improvements required to maintain or to improve the level of service operations of transportation facilities impacted by the project will be constructed through the City's two local transportation impact fee programs and the regional transportation improvement program. More specifically, the proposed project is subject to three off-site roadway improvement fee programs: the regional Transportation Uniform Mitigation Fee (TUMF); the City of Perris's Development Impact Fee (DIF); and the City's Local Fee Program.

4.11.7.1 The TUMF Program

The TUMF program is administered by Western Riverside Council of Governments (WRCOG) based upon a regional Nexus Study completed in early 2003 and recently updated in 2006 address major changes in right of way acquisition and improvement cost factors. TUMF identifies a network of backbone and local roadways that are needed to accommodate growth through 2030. This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program, and is imposed and implemented in every jurisdiction in Western Riverside County.

TUMF fees are imposed on new residential, industrial, and commercial development through application of the TUMF fee ordinance and fees are generally collected at the building permit stage.

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Table 4.11.EEE: Future Intersection and Roadway Improvements and Local Mitigation

Roadway	Segment Limits	Total Improvements Required by 2013	Total Improvements Required by 2030	TUMF Improvements	DIF Improvements	Local Mitigation (Improvements not covered by TUMF/DIF)	Project % for Local Mitigation
Intersections							
A Street (NS) & Mapes Road (EW)		None	Install signal, 1.NBL, 1.SBL, 1.EBT, 1.WBL, 1.WBT	N/A	1.EBT, 1.WBT	Install signal, 1.NBL, 1.SBL, 1.WBL	12.85%
A Street (NS) & Watson Road (EW)		None	None	N/A	N/A	None	N/A
Perris Boulevard (NS) & 4th Street (SR-74) (EW)		1.NBT, Overlap Phasing NBR, 1.SBT, 1.EBL, 1.WBL, 1.WBR	1.NBT, Overlap Phasing NBR, 1.SBT, 1.EBL, 1.WBL, 1.WBR plus 1.NBL, 1.NBT, 1.SBT, Overlap Phasing SBR, 1.EBR	1.NBT, 1.SBT	1.NBT, 1.SBT	Overlap Phasing NBR, 1.EBL, 1.WBL, 1.WBR plus 1.NBL, Overlap Phasing SBR, 1.EBR	3.17%
Perris Boulevard (NS) & Case Road (EW)		Install Signal, 1.NBL, 2.SBL, 1.EBL, Restripe to remove EBR, 1.WBL, 1.WBR	Install Signal, 1.NBL, 2.SBL, 1.EBL, Restripe to remove EBR, 1.WBL, 1.WBR plus 1.NBT, 1.SBT, 1EBT, 1.WBT, 1.WBFR	1.NBL, 2.SBL, 1.EBL, Restripe to remove EBR, 1.WBL, 1.WBR plus 1.WBFR	Install Signal, 1.NBT, 1.SBT, 1.EBT, 1.WBT	N/A	3.42%
Goetz Road (NS) & Case Road (EW)		Install Signal, 1.NBL	Install Signal, 1.NBL plus Overlap NBR, 1.EBT, Overlap EBR, 1.WBT	1.NBL plus Overlap NBR, Overlap EBR	Install Signal, 1.WBT, 1.EBT	N/A	6.52%
Goetz Road (NS) & Ellis Avenue (EW)		Install Signal, 1.SBL	Install Signal, 1.SBL plus 1.NBL, 2.NBT, 1.NBR, 2.SBT, 1.SBR, 1.EBL, 2.EBT, 2.EBR w/Overlap, 2.WBL, 2.WBT, 1.WBR	1.NBT, 1.SBT	Install Signal, 1.NBT, 1.SBT, 2.EBT, 2.WBT	1.SBL plus 1.NBL,1.NBR, 1.SBR, 1.EBL, 2.EBR w/Overlap, 1.WBL, 1.WBR	6.28%
Goetz Road (NS) & Mountain Avenue (EW)		Install Signal, 1.NBL	2.NBT, 2.SBT	N/A	2.NBT,2.SBT	None	12.07%
Goetz Road (NS) & Artlo Avenue (EW)		Install EB Stop, 1.NBL, Shared EBL/R	Install EB Stop, 1.NBL, Shared EBL/R plus 2.NBT, 2.SBT, 1.EBL, Restripe EBL/R to EBR	N/A	2.NBT,2.SBT	Install EB Stop, 1.NBL, Shared EBL/R plus 1.EBL, Restripe EBL/R to EBR	100.00%
Goetz Road (NS) & Mapes Road (EW)		Install Signal, 1.NBL, 1.EBL, 1.SBR, 1.EBR	Install Signal, 1.NBL, 1.EBL, 1.SBR, 1.EBR plus 2.NBT, 2.SBT	1.NBT, 1.SBT	Install Signal, 1.NBT. 1.SBT	1.NBL, 1.EBL, 1.SBR, 1.EBR	11.12%
Goetz Road (NS) & Ethanac Road (EW)		1.SBL, 1.EBT, 1.WBT, Overlap WBR	1.SBL, 1.EBT, 1.WBT, Overlap WBR plus 1.NBL, 2.NBT, Overlap NBR, 1.SBT, Overlap SBR, 1.EBL, 2.EBT, Overlap EBR, 2.WBT, 1.WBR w/overlap	1.NBT, Overlap NBR, Overlap SBR, 1.EBT, Overlap EBR, 1.WBT	1.NBT, 2.EBT, 2.WBT	1.SBL, plus 1.NBL, Overlap NBR, 1.SBT, 1.EBL, 1.WBR w/overlap	2.40%
Case Road (NS) & Ellis Avenue (EW)		Install Signal, 1.EBL, 1.WBL	Install Signal, 2.EBL, 1.WBL plus 1.NBL, 1.NBT, 1.NBR, 1.SBL, 1.SBT, 1.SBR, 2.EBT, 2.EBR w/overlap, 1.WBL, 2.WBT, 1.WBR w/overlap	N/A	Install Signal, 1.NBT, 1.SBT, 1.EBT, 1.WBT	1.EBL, 1.WBL plus 1.NBL, 1.NBR, 1.SBL, 1.SBR, 1.EBT, 2.EBR w/overlap, 1.WBL, 1.WBT, 1.WBR w/overlap	6.10%
I-215 SB Ramps (NS) & Redlands Avenue (EW)		Install Signal, 1.NBT, 2.NBR, 2.SBL, 2.SBT, 1.EBL, 1.WBL	Install Signal, 1.NBT, 2.NBR, 2.SBL, 2.SBT, 1.EBL, 1.WBL plus Restripe Shared L/R to LT	Major interchange improvements planned for construction by City/RCTC beginning 2010 with 2012 completion.	N/A	None	N/A
Redlands Avenue (NS) & 4th Street/SR-74 (EW)		Install Signal, 1.NBL, 1.NBT, 1.NBR, 1.SBL, 1.SBT, 2.SBR w/overlap, 2.EBL, 1.WBT	Install Signal, 1.NBL, 1.NBT, 1.NBR, 1.SBL, 1.SBT, 2.SBR w/overlap, 2.EBL, 1.WBT	Major interchange improvements planned for construction by City/RCTC beginning 2010 with 2012 completion.	N/A	None	N/A
Redlands Avenue (NS) & 7th Street (EW)		None	Install Signal, 1.NBT, 1.SBT, 1.EBL, Restripe EBL/R	N/A	1.NBT, 1.SBT	Install Signal, 1.EBL, Restripe EBL/R	6.39%
Redlands Avenue (NS) & Ellis Avenue (EW)		None	Install Signal, 2.SBL, Restripe SBLR to SBR w/overlap, 2.EBL, 2.EBT, 2.WBT, 1.WBR	N/A	Install Signal, 2.EBT, 2.WBT	2.SBL, Restripe SBLR to SBR w/overlap, 2.EBL, 1.WBR	7.10%

Table 4.11.EEE: Future Intersection and Roadway Improvements and Local Mitigation

Roadway	Segment Limits	Total Improvements Required by 2013	Total Improvements Required by 2030	TUMF Improvements	DIF Improvements	Local Mitigation (Improvements not covered by TUMF/DIF)	Project % for Local Mitigation
Redlands Avenue (NS) & I-215 NB Ramps (EW)		Install Signal, 1.NBL, 1.NBT, 1.SBT, 1.WBL	Install Signal, 1.NBL, 1.NBT, 1.SBT, 1.WBL plus Restrip WBL/R to WBL, 1.WBFR	Major interchange improvements planned for construction by City/RCTC beginning 2010 with 2012 completion.	N/A	None	N/A
Murrieta Road (NS) & Case Road (EW)		Install Signal	Install Signal, 1.NBL, 1.EBL, Overlap EBR, 1.WBL	N/A	Install Signal	1.NBL, 1.EBL, Overlap EBR, 1.WBL	1.19%
Murrieta Road (NS) & Ethanac Road (EW)		Install Signal, 2.NBL, 1.NBR, 1.SBR, 2.EBT, 1.EBR, 1.WBL, 1.WBT	Install Signal, 2.NBL, 1.NBR, 1.SBR, 1.EBT, 1.EBR, 1.WBL, 2.WBT plus 1.NBT, 1.SBL, 1.SBT, 1.EBL, 2.EBT, Overlap EBR, 2.WBT, 1.WBR w/overlap	1.EBT, 1.WBT	Install Signal, 1.NBT, 1.SBT, 2.EBT, 2.WBT	2.NBL, 1.NBR, 1.SBR, 1.EBR, 1.WBL, plus 1.SBL, 1.EBL, Overlap EBR, 1.WBR w/overlap	1.78%
Intersections							
Case Road (NS) & Bonnie Drive (EW)		Install Signal, 1.NBL, 1.NBR, 2.SBL, 1.EBL, 1.WBL, 1.WBR w/overlap	Install Signal, 1.NBL, 1.NBR, 2SBL, 1.EBL, 1.WBL, 1.WBR w/overlap plus 1.NBT, 1.SBT, 1.WBR w/overlap	N/A	1.NBT, 1.SBT	Install Signal, 1.NBL, 1.NBR, 2.SBL, 1.EBL, 1.WBL, 1.WBR w/overlap plus 1.WBR w/overlap	1.45%
Ellis Avenue (NS) & I-215 SB Ramps (EW)		Intersection Does Not Exist	New interchange with Signal, 3.NBT, 3.SBT, 1.EBL, 1.Shared L/R, 1.EBR	New interchange with Signal, 1.NBT, 1.SBT, 1.EBL, 1.Shared L/R, 1.EBR	2.NBT, 2SBT	New interchange with Signal, 3.NBT, 3.SBT, 1.EBL, 1.Shared L/R, 1.EBR	13.15%
I-215 SB Ramps (NS) & Bonnie Drive (EW)		Install Signal, 1.NBL, 1.SBT, Mod EBFR to Ded. RT	Install Signal, 1.NBL, 1.SBT, Mod EBFR to Ded. RT plus 2.NBT, 1.NBR, 2.SBL, 1.WBT, 3.WBL, 1.WBR	Install Signal, 1.NBL, 1.SBT, Mod EBFR to Ded. RT plus 1.NBT, 1.NBR, 1.SBL, 1.WBT, 1.WBL, 1.WBR	N/A	1.NBT, 1.SBL, 2.WBL	0.41%
I-215 SB Ramps (NS) & Ethanac Road (EW)		1.SBR, 1.EBT, 1.EBFR, 1.WBL, 1.WBT	1.SBR, 1.EBT, 1.WBL, 1.WBT plus 1.SBL, Restripe SBL/R to SBL, 1.EBT, Mod EBFR To Ded. RT, 1.WBT	1.SBR, 1.WBL, plus 1.SBL, Restripe SBL/R to SBL, Mod EBFR To Ded. RT	2.EBT, 2.WBT	None	1.38%
Ellis Avenue (NS) & I-215 NB Ramps (EW)		Intersection Does Not Exist	New interchange with Signal, 2.NBL, 3.NBT, 4.SBT,1.SBFR, 2.EBL,1.EBR	New interchange with Signal, 2.NBL, 1.NBT, 1.SBT,1.SBFR, 2.EBL,1.EBR	2.NBT, 2.SBT	1.SBT	3.96%
I-215 NB Ramps (NS) & SR-74 (EW)		Install Signal	Install Signal	Install Signal	N/A	None	0.70%
I-215 NB Ramps (NS) & Ethanac Road (EW)		1.NBL, 1.EBL, 2.EBT, 2.WBT, 1.WBR	1.NBL, 1.EBL, 2.EBT, 2.WBT, 1.WBR plus Restripe NBL/R to NBL, 1.NBR, 1.EBT, 1.WBT	1.NBL, 1.EBL, 1.WBR plus Restripe NBL/R to NBL, 1.NBR, 1.EBT, 1.WBT	2.EBT, 2.WBT	None	1.29%
Arterials							
"A" Street	North of Mapes Road	None	None				-
	Mapes Road to Watson Road	None	None				-
Perris Boulevard	North of 4th Street (SR-74)	Widen to 4-lanes	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	4th Street (SR-74) to 11th Street	Widen to 4-lanes	Add 2 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 2 to 4 lanes)		-
	South of 11th Street	None	Add 4 lanes			N/A	-
Goetz Road	Case Road to Ellis Avenue	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	Ellis Avenue to Mountain Avenue	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-

Table 4.11.EEE: Future Intersection and Roadway Improvements and Local Mitigation

Roadway	Segment Limits	Total Improvements Required by 2013	Total Improvements Required by 2030	TUMF Improvements	DIF Improvements	Local Mitigation (Improvements not covered by TUMF/DIF)	Project % for Local Mitigation
	South of Mountain Avenue	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	North of Mapes Road	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	South of Mapes Road	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	North of Ethanac Road	None	Add 2 lanes		Add 2 lanes (widen from 4 to 6 lanes)		-
	South of Ethanac Road	None	Add 3 lanes	Add 1 lane (widen from 3 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
Redlands Avenue	North of I-215 NB Ramps	Widen to 6-lanes	Add 4 lanes		Add 4 lanes (widen from 2 to 6 lanes)		-
	I-215 NB Ramps to I-215 SB Ramps	Widen to 6-lanes	Add 4 lanes		Add 4 lanes (widen from 2 to 6 lanes)		-
	I-215 SB Ramps to 4th Street	Widen to 6-lanes	Add 4 lanes		Add 4 lanes (widen from 2 to 6 lanes)		-
	4th Street to 7th Street	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
	7th Street to Ellis Avenue	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
Murrieta Road	South of Case Road	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
	North of Ethanac Road	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
	South of Ethanac Road	None	Add 2 lanes	Add 2 lanes (widen from 2 to 4 lanes)			-
4th Street (SR-74)	West of Perris Boulevard	None	None				-
	Perris Boulevard to Redlands Avenue	None	None				-
	East of Redlands Avenue	None	None				-
7th Street	West of Redlands Avenue	None	None				-
Arterials							
11th Street/Case Road	West of Perris Boulevard	None	None				-
	Perris Boulevard to Goetz Road	None	Add 2 lanes			Add 2 lanes (widen from 2 lanes to 4 lanes)	10.6%
	Goetz Road to Ellis Avenue	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
	Ellis Avenue to Murrieta Road	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
	Murrieta Road to Bonnie Drive	None	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
	South of Bonnie Drive	None	None				-
Bonnie Drive	Case Road to I-215 SB Ramps	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-

Table 4.11.EEE: Future Intersection and Roadway Improvements and Local Mitigation

Roadway	Segment Limits	Total Improvements Required by 2013	Total Improvements Required by 2030	TUMF Improvements	DIF Improvements	Local Mitigation (Improvements not covered by TUMF/DIF)	Project % for Local Mitigation
SR-74	I-215 SB Ramps to I-215 NB Ramps	None	Add 1 lane		Add 1 lane (widen from 3 lanes to four lanes)		-
	East of I-215 NB Ramps	None	None				-
Ellis Avenue	West of Goetz Road	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	Goetz Road to Case Road	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	Case Road to Redlands Avenue	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
	East of Redlands Avenue	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 2 lanes (widen from 4 to 6 lanes)		-
Mountain Avenue	West of Goetz Road	None	None				-
Mapes Road	West of "A" Street	None	None				-
	"A" Street to Goetz Road	Widen to 4-lanes	Add 2 lanes		Add 2 lanes (widen from 2 to 4 lanes)		-
Watson Road	West of "A" Street	None	None				-
Ethanac Road	West of Goetz Road	None	Add 4 lanes		Add 4 lanes (widen from 4 lanes to 8 lanes)		-
	Goetz Road to Murrieta Road	None	Add 6 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 4 lanes (widen from 4 lanes to 8 lanes)		-
	East of Murrieta Road	None	Add 6 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 4 lanes (widen from 4 lanes to 8 lanes)		-
	West of I-215 SB Ramps	None	Add 4 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 4 lanes (widen from 4 lanes to 8 lanes)		-
	I-215 SB Ramps to I-215 NB Ramps	None	Add 5 lanes	Add 1 lane (widen from 3 to 4 lanes)	Add 4 lanes (widen from 4 lanes to 8 lanes)		-
	East of I-215 NB Ramps	None	Add 6 lanes	Add 2 lanes (widen from 2 to 4 lanes)	Add 4 lanes (widen from 4 lanes to 8 lanes)		-

The current industrial TUMF rate of $1.84 per square foot will increase to a rate of $2.35 per square foot by July 1, 2010. In addition, an annual inflation adjustment is considered each year in January. In this way, TUMF fees are adjusted upwards on a regular basis to ensure that the development impact fees collected keep pace with construction and labor costs, etc.

After the TUMF fees are collected, they are placed in a separate interest bearing account pursuant to the requirements of Government Code sections 66000 et seq. The TUMF funds both local area projects and needed projects to improve the region's backbone arterial system. Local area projects receive about 48 percent of all funds. These local funds are programmed into five localized zones and fund the construction of localized projects that are proposed by the affected local jurisdictions within each zone. As set forth in Table 4.11.EEE, a number of the facilities forecast to be impacted by the proposed project are already programmed for improvements through the TUMF program. The project applicant will be subject to the TUMF fee program and will pay the requisite TUMF fees at the rates then in effect pursuant to the TUMF Ordinance.

The facilities planned through the TUMF program are constructed prior to the time at which the identified facility is expected to deteriorate to an inadequate level of service. WRCOG has a successful track record funding and overseeing the construction of improvements funded through the TUMF program. In total, the TUMF program is anticipated to generate nearly $5 billion in transportation projects for Western Riverside County. The project applicant's payment of TUMF fees will mitigate the impacts of the proposed project to TUMF-funded facilities.

4.11.7.2 The City of Perris Development Impact Fee Program

In 1991 the City of Perris created a Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. This DIF program has been successfully implemented by the City since 1991 and in 2006; the City updated the DIF program to add new roadway segments and intersections necessary to accommodate future growth and to ensure that the identified street improvements would operate at or above the City's LOS performance threshold. The City's DIF program includes facilities that are not part of or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

Similar to the TUMF Program, after the City's DIF fees are collected, they are placed in a separate interest bearing account pursuant to the requirements of Government Code sections 66000 et seq. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of for the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds. The City's DIF program establishes a timeline to fund the improvements as well as design improvements and for the City to hire a contractor to build the improvements.

The City has an established, proven track record with respect to implementing the City's DIF Program. Many of the roadway segments and intersections included within the study area for this Traffic Impact Analysis are at various stages of widening and improvement based on the City's collection of DIF fees. Under this Program, as a result of the City's continual monitoring of the local

circulation system, the City insures that DIF improvements are construction prior to when the level of service would otherwise fall below the City's established performance criteria.

As set forth in Table 4.11.EEE, a number of the facilities forecast to be impacted by the project are already planned for improvements through the City's DIF Program. The Project applicant will be subject to the City's DIF fee program, and will pay the requisite City DIF fees at the rates then in effect pursuant to the City's ordinance. The project applicant's payment of the requisite DIF fees at the rates then in effect pursuant to the DIF Program will mitigate its impacts to DIF-funded facilities.

4.11.7.3 The City's Local Fee Program

In addition to the TUMF Program and the City's DIF program, the City also oversees and manages a localized fee program that is applicable to roadway segments and intersection improvements that are not covered by either the TUMF program or the DIF program.

The project's proportional share responsibility for the cost of local mitigation improvements identified in Table 4.11.EEE in the year 2030 is calculated according to the following equation.

Project Fair Share % = Project Traffic ÷ (Total Traffic – Existing Traffic)

This equation has been adopted by the City of Perris and is utilized by Caltrans and other agencies throughout the state. It provides for a reasonably conservative estimate of the cost of local mitigation since it takes only future traffic into consideration.

The City's local fee program operates very similar to the TUMF and DIF programs. After the impact fees are collected based on project fair share calculations, they are placed in a separate interest-bearing account, pursuant to the requirements of Government Code Sections 66000, et seq. The timing to use the transportation funds is determined similarly to the City's local DIF program. The timing is established through periodic capital improvement programs which are overseen by City staff. Periodic traffic counts, review of traffic accidents, and review of traffic trends throughout the City are also performed by City staff and City consultants. The City uses this data to determine the timing for the improvements necessitated by the Local Fee Program. Improvements are identified within several year increments and reviewed periodically to determine if improvements should be shifted into another year based on traffic counts, accidents, and trends. The City uses this data to determine the timing for the improvements subject to the City's local fee program and to ensure that needed the improvements are constructed prior to that time at which the LOS is forecasted far below the performance levels established by the City. In this way, much like the TUMF and DIF programs, localized improvements are constructed before the LOS falls below the City's performance standards to ensure that significant impacts are avoided. The City has a successful proven track record with respect to implementing the local fee program. Many of the streets included within the study area for this report are at various stages of widening and improvement based on the City's collection and utilization of a combination of TUMF, DIF and local improvement fees.

The improvements listed in Table 4.11.EEE are comprised of lane additions, installation of signals and signal modifications. The identified improvements are covered either by the TUMF Program, the DIF Program or the City's Local Program. Thus, all of the identified improvements are covered by one of the three applicable mitigation programs. Lane additions are shown as the number of lanes required and the direction of travel, for example, 1EBT indicates one additional eastbound through lane. Depending on the width of the existing pavement and right-of-way, these improvements may involve only striping modifications or they may involve construction of additional pavement width.

4.11.7.4 Measure A Funds

In 1988, the voters of Riverside County approved Measure A, a half cent sales tax for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. Between 1989 and 2009, the Riverside County Transportation Commission has spent over One Billion Dollars raised by Measure A on identified roadway and transportation improvements. Funds are allocated to each of three districts: Western Riverside County, the Coachella Valley, and Palo Verde in proportion to the amount of sales tax generated within each jurisdiction. In 2002, Measure A was extended by Riverside County voters and will continue to fund numerous transportation improvements through the year 2039. Programs like Measure A have been adopted in both San Bernardino and Orange County.

While Measure A is a self-executing sales tax administered by the Riverside County Transportation Commission (as opposed to a fee mitigation program imposed upon individual products) Measure A bears discussion here because the funds raised through Measure A have funded in the past and will continue to fund (in addition to the three identified mitigation programs discussed above) new transportation facilities in Riverside County. The Riverside County Transportation Commission has successfully implemented numerous projects that have been funded by Measure A and Measure A will continue to fund additional projects in the future as set forth in the two exhibits attached to this report (2009—2039 Measure A Program Projects; 1989—2009 Measure A Projects).

4.11.7.5 Mitigation Measures

4.11.7.5A Prior to the issuance of a stockpile or grading permit for the importation of soil to the Phase 2 site the project applicant shall construct a 150-foot northbound right-turn pocket at the intersection of Murrieta Road at Ethanac Road.

4.11.7.5.B Prior to the issuance of a stockpile or grading permit for the importation of soil to the Phase 2 site the project applicant shall construct a 435-foot deceleration lane with a minimum width of 11 feet at the entry point of the of the Phase 2 site to allow for trucks entering the site to slow to a safe turning speed without obstructing eastbound traffic volumes during the morning peak hours.

4.11.7.5C Prior to the issuance of building permits, the project applicant shall participate in the City of Perris Local Mitigation Impact Fee Program and pay the project's fair share for local improvements as outlined in Table 4.11.EEE. The City shall ensure that the improvements outlined in Table 4.11.EEE will be constructed pursuant to the timeframe established in the City of Perris Local Mitigation Impact Fee Program for the identified local improvements, or earlier if necessary to avoid identified significant impacts.~~fee program at that point in time necessary to avoid identified significant impacts on traffic.~~

4.11.7.5D Prior to the issuance of building permits, the project applicant shall participate in the City of Perris' Development Impact Fee Program and pay the project's fair share for local improvements as outlined in Table 4.11.EEE. The City shall ensure that the improvements outlined in Table 4.11.EEE will be constructed pursuant to the timeframe established by the City of Perris Development Impact Fee Program, or earlier if necessary to avoid identified significant impacts.~~fee program at that point in time necessary to avoid identified significant impacts on traffic.~~

4.11.7.5E Prior to the issuance of building permits, the project applicant shall participate in the County of Riverside Transportation Uniform Mitigation Fee (TUMF) Program and pay the project's fair share for regional improvements. The City shall ensure that the improvements outlined in Table 4.11.EEE will be constructed pursuant to the timeframe established by the County of Riverside TUMF Program, or earlier if

necessary to avoid identified significant impacts.~~fee program at that point in time necessary to avoid identified significant impacts on traffic.~~

4.11.7.5F Prior to issuance ~~of certificates~~ of occupancy permits for the Airport Distribution Center (Phase 1), the project shall have constructed the improvements outlined below.

- Driveway 1 at Mountain Avenue: Install a cross-street stop on the northbound leg. Construct a northbound shared left-turn/right-turn lane and a westbound left-turn lane.
- Driveway 2 at Mountain Avenue: Install a cross-street stop on the northbound leg. Construct a northbound shared left-turn/right-turn lane and a westbound left-turn lane.
- Driveway 3 at Artlo Avenue: Install a cross-street stop on the southbound leg. Construct a southbound left-turn lane and a westbound right-turn lane.
- Driveway 4 at Mountain Avenue: Install a cross-street stop on the northbound leg. Construct a northbound shared left-turn/right-turn lane and a westbound left-turn lane.
- Driveway 5 at Artlo Avenue: Install a cross-street stop on the southbound leg. Construct a southbound shared left-turn/right-turn lane, an eastbound shared left-turn/through lane, and a westbound shared through/right-turn lane.
- Goetz Road at Mountain Avenue: Install a traffic signal (warranted under 2012 with project conditions). Construct a northbound left-turn lane.
- Goetz Road at Driveway 6: Install a cross-street stop on the eastbound leg. Construct an eastbound right-turn lane.
- Goetz Road at Driveway 7: Install a cross-street stop on the eastbound leg. Construct an eastbound right-turn lane.
- Goetz Road at Driveway 8: Install a cross-street stop on the eastbound leg. Construct an eastbound right-turn lane.
- Goetz Road at Artlo Avenue: Install a cross-street stop on the eastbound leg until a traffic signal is warranted. Construct a northbound left-turn lane, an eastbound left-turn lane, and an eastbound right-turn lane.
- Mountain Avenue will be constructed to its ultimate half-section width (60-foot right-of-way) as a local roadway from the western project boundary to Goetz Road in conjunction with development. This improvement is consistent with the City's General Plan Circulation Element.
- Goetz Road will be constructed to its ultimate half-section width (128-foot right-of-way) as an arterial roadway from Mountain Avenue to Artlo Avenue in conjunction with development. This improvement is consistent with the City's General Plan Circulation Element. A raised median should be constructed to restrict left-turn movements at the limited-access driveways (Driveways 6, 7 and 8), located south of the proposed signalized intersection of Goetz Road and Mountain Avenue.
- Artlo Avenue will be constructed to its ultimate half-section width (60-foot right-of-way) as a local roadway from the road's western terminus to Goetz Road in conjunction with development. This improvement is consistent with the City's General Plan Circulation Element

- Sight distance at each project access point should be reviewed with respect to standard Caltrans/City of Perris sight distance standards at the time of preparation of final grading, landscape and street improvement plans.
- Traffic signing and striping should be implemented in conjunction with detailed construction plans for the project site.

4.11.7.5G Prior to issuance ~~of certificates~~ of occupancy permits for the South Perris Distribution Center (Phase 2), the project shall have constructed the improvements outlined below to avoid identified significant impacts on traffic.

- "A" Street at Mapes Road: Install a traffic signal.
- "A" Street at Driveway 1: Install a cross-street stop on the westbound leg. Construct a southbound left-turn lane and a westbound shared left-right turn lane.
- "A" Street at Driveway 2: Install a cross-street stop on the westbound leg. Construct a southbound left-turn lane and a westbound shared left-turn/right-turn lane.
- "A" Street at Driveway 3: Install a cross-street stop on the westbound leg. Construct a southbound left-turn lane and a westbound shared left-turn/right-turn lane.
- Driveway 4 at Mapes Road: Install a cross-street stop on the northbound leg. Construct a northbound right-turn lane.
- Driveway 5 at Watson Road: Install a cross-street stop on the southbound leg. Construct a southbound right-turn lane and an eastbound left-turn lane.
- Driveway 6 at Mapes Road: Install a cross-street stop on the northbound leg. Construct a northbound shared left-turn/right-turn lane and a westbound left-turn lane.
- Driveway 7 at Mapes Road: Install a cross-street stop on the northbound leg. Construct a northbound shared left-turn/right-turn lane and a westbound left-turn lane.
- Driveway 8 at Mapes Road: Install a cross-street stop on the northbound leg. Construct a northbound right-turn lane.
- Goetz Road at Mapes Road: Install a traffic signal. Construct a northbound left-turn lane, a southbound right-turn lane, an eastbound left-turn lane, and a right-turn lane.
- Goetz Road at Mapes Road: Install a cross-street stop on the eastbound leg. Construct an eastbound right-turn lane.
- "A" Street will be constructed to its ultimate half-section width (78-foot right-of-way) as a major collector roadway from Mapes Road to Watson Road in conjunction with development. This improvement is consistent with the City's General Plan Circulation Element.
- Watson Street will be constructed to its ultimate full-section width (60-foot right-of-way) as a local road from "A" Street to the road's proposed eastern terminus in conjunction with development. This improvement is consistent with the City's General Plan Circulation Element.
- Mapes Road will be constructed to its ultimate half-section width (94-foot right-of-way) as a secondary arterial roadway from "A" Street to Goetz Road in

conjunction with development. This improvement is consistent with the City's General Plan Circulation Element.

- Goetz Road will be constructed to its ultimate half-section width (128-foot right-of-way) as an arterial roadway from Mapes Road the southern project boundary in conjunction with development. This improvement is consistent with the City's General Plan Circulation Element. A raised median should be constructed to restrict left turn movements at the limited access driveway (Driveway 9), located south of the proposed signalized intersection of Goetz Road and Mapes Road.
- Sight distance at each project access point should be reviewed with respect to standard Caltrans/City of Perris sight distance standards at the time of preparation of final grading, landscape and street improvement plans.
- Traffic signing and striping should be implemented in conjunction with detailed construction plans for the project site.

4.11.7.5H Prior to issuance ~~of certificates~~ of occupancy permits for the First Park South 215 (Phase 3), the project shall have constructed the improvements outlined below to avoid identified significant impacts on traffic.

- Redlands Avenue at Driveway 1: Install a traffic signal. Construct a southbound left-turn lane and a westbound shared left-turn/right-turn lane.
- Driveway 2 at Ellis Avenue: Install a cross-street stop on the southbound leg (traffic signal warranted under 2030 with project conditions). Construct a southbound right-turn lane and an eastbound left-turn lane.
- Ellis Avenue will be constructed to its ultimate half-section width (128-foot right-of-way) as an arterial roadway from Redlands Avenue to the eastern project boundary in conjunction with development.
- Redlands Avenue will be constructed to its ultimate full-section width (94-foot right-of-way) as a secondary arterial roadway from the northern project boundary (at 7th Street) to Ellis Avenue in conjunction with development.
- Sight distance at each project access point should be reviewed with respect to standard Caltrans/City of Perris sight distance standards at the time of preparation of final grading, landscape and street improvement plans.
- Traffic signing and striping should be implemented in conjunction with detailed construction plans for the project site.

4.11.7.5I Prior to the issuance of a stockpile or grading permit for the importation of soil to the Phase 2 site, the project applicant shall obtain haul/truck route permits from the applicable jurisdictions. These permits may include the following:

- The applicant shall pay the cost of random weight measurements for trucks hauling material from the site to ensure that the trucks are not violating weight restrictions. The applicant shall place an amount on deposit as determined by the permitting jurisdiction to fund such testing.
- Haul trucks shall be limited to maintain the level of service standards identified in the in the General Plan during the peak and off peak traffic periods.
- Limitation of haul or trucking hours, number of loads per day, and the posting of traffic control and traffic control personnel at impacted locations along the haul route.
- During construction activities, the traffic flow will be maintained at the highest level possible with the use of standard traffic control devices. Typical traffic

control measures may include, but are not limited to, warning signs, warning lights, and flaggers. Implementation of traffic control measures will provide guidance and navigational tools throughout the project area in order to maintain traffic flow and levels of safety during construction. All traffic control measures shall be subject to approval of the affected jurisdiction through an encroachment permit.

- Deflection testing/pavement evaluation of all streets on the proposed haul route at the applicant's expense prior to and after haul will be required on local streets and shall be responsible to repair the roads along the haul routes to their existing condition or better and prior to grant of a grading permit, shall post adequate security in an amount determined by the City Engineer to cover both short-term and project-length damage to the roads. A portion of the security, as determined by the City Engineer, shall be in the form of a cash deposit to provide repairs to short-term haul road damage during the hauling periods that the applicant does not effectively repair on its own under the conditions of the haul permit.
- The applicant or its contractor shall provide weigh tickets or other means acceptable to the City Engineer for all haul vehicles through the use of scales at the authorized site exit onto public streets. Alternatives that will guarantee trucks are hauling below maximum weight loads will be considered upon submittal to the City Engineer.
- Effective ongoing repairs during and after the hauling period may include filling pot holes, crack sealing, base repairs, seal coating, and overlays where warranted.
- All trucks shall be covered whether or not they are loaded.
- All trucks shall be washed at least weekly or as necessary to meet BMPs.
- Comply with all applicable BMPs.

4.11.7.6 Level of Significance after Mitigation

With the implementation of the above mitigation measures, all intersections and roadway segments would operate at the applicable performance standard or better during peak hours and therefore would be mitigated to a level that is less than significant.

Implementation of **Mitigation Measures 4.11.7.5A** through **4.11.7.5I~~H~~** will result in the payment of impact fees and the construction of on-site and off-site roadway and intersection improvements. It should be noted that the improvements identified in this project's TIA over and above those identified in **Mitigation Measures 4.11.7.5D** through **4.11.7.5I~~H~~** will be installed in the future when traffic volumes and associated levels of service reach those estimated in the TIA. The traffic analysis contained in this EIR and TIA will be used by the City to prepare subsequent environmental documents for each of these roadway improvements.

Year 2030 Impacts to I-215 Freeway Mainline. As set forth above, all of the intersections and roadway segments that will experience significant impacts in the year 2030 as a result of the implementation of the project will be mitigated to less than significant levels, with the exception of the following I-215 State mainline segments:

- Southbound, north of Redlands Avenue/SR-74.
- Southbound, between Redlands Avenue/SR-74 and Ellis Avenue/Evans Road (future interchange).

- Southbound, between Ellis Avenue/Evans Road (future interchange) and SR-74/Matthews Road.
- Southbound, between SR-74/Matthews Road and Ethanac Road.
- Southbound, south of Ethanac Road.
- Northbound, north of Redlands Avenue/SR-74.
- Northbound, between Redlands Avenue/SR-74 and Ellis Avenue/Evans Road (future interchange).
- Northbound, between Ellis Avenue/Evans Road (future interchange) and SR-74/Matthews Road.
- Northbound, between SR-74/Matthews Road and Ethanac Road.
- Northbound, south of Ethanac Road.

With respect to the cumulative impacts to the State facilities at the 2030 time horizon, no further mitigation measures or improvements are recommended at this time. Changes and/or expansions to the I-215 Freeway mainline are not within the jurisdiction of the City of Perris. Rather, those improvements are planned, funded, and constructed by the State through a complicated legislative and political process involving the State Legislature, the California Transportation Commission (CTC), the California Business, Transportation and Housing Agency (BT&H), and Caltrans.

In California, most of State Highway System Improvements are programs through two documents, the State Transportation Improvement Program (STIP) or the State Highway Operation and Protection Program (SHOPP). State and federal fuel taxes generate most of the funds used to pay for these improvements. Funds are expected to be available for transportation improvements are identified through a Fund Estimate prepared by Caltrans and adopted by the CTC. These funds, along with other fund sources, are deposited in the State Highway Account to be programmed and allocated to specific project improvements in both the STIP and SHOPP by the CTC.

The STIP is built from Regional Transportation Improvement Programs (RTIPs) proposed by Regional Transportation Planning Agencies (RTPA/MPOs) throughout California and the Interregional Transportation Improvement Program (ITIP) proposed by Caltrans. Of the funds made available by the CTC for the STIP, 25 percent is made available for Caltrans to propose expansion and capacity-enhancements on the statutorily designated interregional road system. Seventy-five percent of the funds are made available to the RTPA/MPOs to propose all types of improvements on all other State highway system roads, other non-State highway roads eligible to use federal funds, and on the Interregional Road System. Transportation funds generally come from a variety of sources including the National Highway System fund, State fuel taxes, federal fuel taxes, sales taxes on fuel, truck weight fees, roadway and bridge tolls, user fares, local sales tax measures, development fees, where applicable, bond revenues, and State and local general and matching funds.

Improvements to State highway systems are deemed to be matters of federal, State, regional, and local concern. On the federal level, the City, through its congressional delegation along with other City's in the western Riverside region, has aggressively sought federal monies for regional roadway improvements. On the local level, the City through its Circulation Element contained within its General Plan, maintains policies whereby the City commits to work closely with regional infrastructure planning entities and to continue to identify new circulation and roadway improvements.

The traffic impact analysis prepared for this project concludes that several segments of the I-215 Freeway would operate at LOS E or "F" even without the project at cumulative long-range (2030) conditions. The project's contributions to cumulative impacts under long-range (2030) conditions are relatively de minimis, involving only a small percentage of the forecast traffic occurring on the identified segments at long-range (2030) conditions. Currently, the Project Study Reports/Project Development Support in Riverside County on I-215 from San Diego County Line to I-215 Separation

and on I-215 from I-15 to I-215 Separation on Nuevo Road (prepared by RCTC in cooperation with Caltrans District 8, December 2006) has identified a third northbound and southbound mixed flow lane at long-range (2030) conditions. More specifically, Alternative 2 identifies the construction of a mixed flow lane on I-215 between the I-15/I-215 junction and Nuevo Road in both directions. Consistent with past practice, RCTC will construct these improvements through a mix of Measure A sales tax revenues, CMIA State bonds, and State and Federal earmarks. As set forth in Section 7 of this Report, many I-215 Freeway mainline segments within the study area are anticipated to operate LOS E or "F" during the peak hours under long-range (2030) conditions with and without project conditions. As also set forth above, Caltrans recognizes that many of its facilities will operate at LOS E and "F" even at the ultimate build out of the identified facility as is the case here in the context of the identified I-215 Freeway improvements under long-range (2030) conditions. Because the City has no control over State facilities, and because the State facilities funded and planned to be developed under long-range (2030) conditions are already anticipated to operate at LOS E and "F" even without the proposed project, there are no further mitigation measures that can be imposed upon the project to mitigate its small cumulative contribution to significant impacts to the identified segments of I-215 Freeway under long-range (2030) conditions. Caltrans has exclusive control over State highway improvements and State highway improvements are by and large a matter of State-wide control.

In addition, State highway funding is an extraordinarily complex State-wide and regional problem the cities have grappled with for decades. By definition, State highways are impacted by interstate, State-wide and regional traffic. To this end, in 2007, State Senator Alan Lowenthal (D, Long Beach) chair of the Senate Transportation Committee, held hearings on alternative funding mechanisms for State highway improvements, including legislation that would allow private companies to build and operate State highways. Several such proposals have been considered in connection with the SR-91 Riverside and the SR-125 in San Diego. The State Legislature, Caltrans, the Executive Branch and public-private partnerships are all engaged in multi-jurisdictional and creative solutions to feasibly alleviate congestion on the State's highways. Thus, for these reasons, there are no available and feasible mitigation measures available to mitigate the projects de minimis cumulative contribution to traffic on the I-215 Freeway under long-range (2030) conditions and the project's cumulative impact is considered to be significant and unavoidable.

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4.12 UTILITIES AND SERVICE SYSTEMS

This section analyzes the existing and planned water supply, wastewater facilities, and stormwater facilities (as they relate to water) for the project site and the surrounding Study Area, and evaluates the impacts to utility providers that could result from the construction and operation of the proposed on-site uses. The analysis contained in this section is based on the following technical studies prepared for the proposed project:

- *Water Supply Assessment* (WSA) *for the Airport Distribution Center,* Eastern Municipal Water District, September 19, 2007. (Appendix K-1 to this EIR)
- *Water Supply Assessment (WSA) for the First Park South Perris Distribution Center,* Eastern Municipal Water District, August 20, 2008. (Appendix K-2 to this EIR)
- *Water Supply Assessment (WSA) for Tentative Parcel Map 35877, First Park South 215,* Eastern Municipal Water District, August 20, 2008. (Appendix K-3 to this EIR)
- *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December 2008.(Appendix L to this EIR)

In addition to these project specific technical studies, the analysis contained in this section is also based on the following reference documents:

- *2005 Final Urban Water Management Plan*, Eastern Municipal Water District*,* approved by EMWD Board of Directors Resolution No. 4379, December 21, 2005.
- *A Guide to Preparing Water Budgets,* Eastern Municipal Water District, February 14, 2007.
- *City of Perris Municipal Code,* City of Perris.
- *Conservation Element*, City of Perris General Plan, City of Perris, approved July 12, 2005.
- *Guidelines for the Submittal of Onsite Recycled Water Irrigation Plans,* Eastern Municipal Water District, October 1, 2007.
- *Integrated Water Resources Plan Update,* The Metropolitan Water District of Southern California, July 2004.
- *Regional Urban Water Management Plan,* The Metropolitan Water District of Southern California, November 2005.
- *Sustainable Community Amendment,* City of Perris General Plan, City of Perris, adopted February 18, 2008.
- *West San Jacinto Groundwater Basin Management Plan 2007 Annual Report,* Eastern Municipal Management District, June 2008.

The WSAs were approved by the Eastern Municipal Water District Board of Directors on September 17, 2007 and August 20, 2008. Impacts related to solid waste were determined to be less than significant in the Initial Study prepared for the proposed project and are not discussed in this section.

4.12.1 Existing Setting

4.12.1.1 Background

Water Supply. The project Study Area is located within the service area of the Eastern Municipal Water District (EMWD),[1] which owns, operates, and maintains the water system within the limits of the City and would be the purveyor of water to the proposed project site. The EMWD's service area encompasses approximately 555 square miles. Water sources for the EMWD include imported water purchased from the Metropolitan Water District of Southern California (Metropolitan), groundwater sources, and recycled water from EMWD's five regional water reclamation facilities. Approximately 80 percent of EMWD's water is imported from Metropolitan, with the remaining 20 percent supplied by groundwater wells. Groundwater supplies are drawn from EMWD wells located in the Hemet, San Jacinto, Moreno Valley, Perris Valley, and Murrieta areas.

Water imported by EMWD is treated at two facilities owned and operated by Metropolitan: the Mills and Skinner Filtration Plants, which serve the northwest and southern areas of the EMWD service area, respectively. Treated water is supplied north of the EMWD service area by the Mills Water Treatment Facility and in the southeastern portion of the EMWD service area by the Lake Skinner Water Treatment Facility. The City is located within the area served by the Mills Filtration Plant, which has a treatment capacity of 155 million gallons per day (mgd) or 475.4 acre feet per day. EMWD also utilizes untreated water delivered by Metropolitan from the State Water Project (SWP) pipeline running through EMWD's jurisdiction. EMWD currently treats the raw water for potable use or uses it raw for agriculture and for recharge. Raw water is currently treated by the EMWD at water filtration plants in Perris and in Hemet. The Hemet microfiltration plant has a capacity to filter 8,800 acre-feet per year (AFY) and the Perris microfiltration plant has the capacity to filter 17,600 AFY.

EMWD constructed the Menifee Desalter and Perris Desalter facilities to recover high total dissolved solids (TDS) groundwater for potable use. In addition to being a source of water, the desalter facilities play a part in managing the groundwater subbasins by addressing the migration of brackish groundwater into areas of good quality groundwater. Additionally, EMWD is currently in the preliminary design phase for a third desalter facility, the Perris II Desalter. This additional facility will increase the production of desalinated water to approximately 12,000 AFY.

As previously stated, approximately 80 percent of EMWD's water is imported from Metropolitan, with the remaining 20 percent supplied by groundwater wells. Metropolitan relies on SWP water as part of its total water supplies to supply its member agencies. In May 2007, a federal court invalidated the Biological Opinion issued by the U.S. Fish and Wildlife Service for operations of the SWP and Central Valley Project (CVP) with regard to the Delta smelt (*Hypomesus transpacificus*), a federal- and state-listed threatened fish species that inhabits the estuaries of the Bay-Delta region. Prior to this court ruling, the federal wildlife agencies and state and federal project operators, voluntarily reinitiated consultation under the Endangered Species Act to address impacts from SWP and CVP operations. On May 31, 2007, the California Department of Water Resources (DWR) voluntarily shut down SWP pumps for 17 days in an effort to protect the Delta smelt.

On August 31, 2007, the courts curtailed water operations in the Delta. Based on estimates supplied by the State, Metropolitan stands to lose as much as 22 percent of its supplies from northern California. Actual curtailments will be based on fish, weather, and flow conditions in the Delta, and on how curtailments are divided between state and federal projects. In February 2008, the California Department of Fish and Game accepted the longfin smelt (*Spirinchus thaleichthys*) as a candidate species for listing under the California Endangered Species Act (CESA). The longfin could be impacted by water exports from the San Joaquin River Delta and regulations to protect the species

[1] *Eastern Municipal Water District Service Area and Incorporated Cities,* EMWD, http://www.emwd.org/water_service/water_districts.html, site accessed November 6, 2008.

may affect SWP deliveries from 0 to 400,000 AFY. These events highlight the challenges that the water suppliers throughout the state currently face regarding supplies from the Delta.

At present, several proceedings concerning Delta operations are ongoing to evaluate options to address the Delta smelt impacts and other environmental concerns. In addition to the reconsultation process and the interim remedies proceedings to address immediate environmental concerns, the Delta Vision process and the Bay-Delta Conservation Plan process are defining long-term solutions for the Delta. Metropolitan is actively engaged in all of these processes and, in May and September 2007, its Board adopted a framework and directions for key elements of a Delta Action Plan to address water supply risks in the Delta, both for the near and long-term. The near- and mid-term actions outlined in the Delta Action Plan are intended to reduce fishery and earthquake-related risks, such as aggressive real-time monitoring to avoid fishery impacts, ecosystem restoration, near- and mid-term physical modifications to Delta channels, local water supply projects, and emergency preparedness and response plans.

The Delta Vision process, established by Governor Schwarzenegger, is aimed at identifying long-term solutions to the conflicts in the Delta. In October 2008, the Delta Vision Blue Ribbon Task Force (Task Force) released its Strategic Plan to implement recommendations for a sustainable Delta as a healthy ecosystem and water supply source. The listed findings insisted on a comprehensive fix to stabilize the ecosystem of the estuary and to provide for a reliable long-term water supply including a 'dual conveyance' system and water use efficiency and conservation. In addition, state and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay-Delta Conservation Plan aimed at addressing ecosystem needs and securing long-term operating permits for the SWP.

In response to the recent developments in the Delta, Metropolitan is engaged in planning processes that will identify solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies. In the near term, Metropolitan will continue to rely on the plans and policies outlined in its Regional Urban Water Management Plan (RUWMP) and Integrated Resource Plan (IRP) to address water supply shortages and interruptions (including potential shut downs of SWP pumps) to meet water demands. An aggressive campaign for voluntary conservation and recycled water usage, curtailment of groundwater replenishment water and agricultural water delivery are some of the actions outlined in the RUWMP. Metropolitan is maximizing supplies from existing agreements for water supply from its Palo Verde Crop Management and Water Supply Program and working with the State of Arizona in withdrawing water previously stored in their groundwater basin. In addition, Metropolitan's IRP supply portfolio includes pursuing water transfers as needed, such as the purchase of 200,000 AF of previously stored SWP supplies in the San Bernardino groundwater basin.

Metropolitan currently does not have surplus water available, due in part to pumping restrictions imposed on the SWP in place to avoid and minimize impacts to federal- and state-protected fish species in the Delta. However, Metropolitan has agreed to supply EMWD with a firm supply of an average of 7,500 AFY of raw water to be used for recharge through 2035. This agreement is currently in the process of being formally approved by both agencies. EMWD has indicated that if due to restrictions or other constraints it is unable to increase the recharge and recovery program as proposed, the microfiltration plant in the City of Hemet would be expanded to replace the supply that would have been provided by the recharge and recovery. Imported sources of water will be supplemented by an increase in desalination of brackish groundwater, recycled water use, and water use efficiency. Metropolitan has analyzed the reliability of water delivery through the SWP and the Colorado River Aqueduct. Metropolitan's IRP and RUWMP concludes that with the storage and transfer programs developed by Metropolitan, there will be a reliable source of water to serve its member agencies' needs through 2030.

Water Infrastructure. Figure 4.12.1 illustrates the locations of existing potable water lines in the vicinity of the proposed project sites while Table 4.12.A provides the location and type of water infrastructure that currently exists in the vicinity of the proposed project sites.

Table 4.12.A: Existing Water Infrastructure

Phase	Type of Infrastructure	Location
Phase 1	12-inch potable water line	Goetz Road and Paseo Adelanto
Phase 2	12-inch potable water line	Mapes Road, South "A" Street, and Watson Road
Phase 2	16-inch potable water line	Goetz Road (south of Mapes Road)
Phase 3	8-inch potable water line	Redlands Avenue and 7th Street
Phase 3	12-inch potable water line	Ellis Avenue
Phase 3	33-inch potable water line	Murrieta Road (south of Ellis Avenue)
Phase 3	36-inch potable water line	Murrieta Road

Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area,* Albert A. Webb Associates, December 2008.

Wastewater Infrastructure. Generally, the City of Perris provides City-wide sewage collection services and the EMWD, a publicly-owned utility, provides sewage transport, treatment, and discharge services. The EMWD owns and maintains the sanitary sewer system serving the majority of the City of Perris and its sphere of influence. EMWD owns, operates, and maintains five regional water reclamation facilities including the 300-acre Perris Valley Regional Water Reclamation Facility (PVRWRF). The PVRWRF treats domestic, commercial, and industrial wastewater. The PVRWRF facility located west of I-215 and south of Case Road receives sewage from a 120-square mile area encompassing Perris, Sun City, Homeland, Romoland, and portions of Moreno Valley. Reclaimed water from the PVRWRF is used to irrigate agriculture lands and municipal recreation areas. Other consumers of reclaimed water include the San Jacinto Wildlife Area and industrial uses.

Current capacity at the PVRWRF facility is 18 mgd with an existing average inflow of approximately 13 mgd.[1] Under current conditions, the average daily surplus treatment capacity is approximately 5 mgd. EMWD is in the process of increasing the capacity at the PVRWRF to meet new demands. As outlined in EMWD's *Year 2025 Regional Water Reclamation Facilities Capital Improvement Plan* (RWRF-CIP), the first expansion of the PVRWRF would take the original facility's capacity from 11 mgd to a capacity of 22 mgd. As previously stated, the current capacity of the PVRWRF facility is 18 mgd. The expansion of PVRWRF to 22 mgd is expected to be completed in 2013. Ultimate expansion will take the facility to 30 mgd capacity and will begin in 2014 and be completed by 2018.[2] Discharges coming from the PVRWRF in compliance with conditions of permits granted by the RWQCB under the National Pollutant Discharge Elimination System (NPDES) Program ensure that the quantity and quality of receiving waters is maintained.

Figure 4.12.2 illustrates the location of existing sewer infrastructure in the vicinity of the proposed project sites while Table 4.12.B provides the location, type, and capacity of existing sewer infrastructure in the vicinity of the proposed project sites.

1 *LAFCO 2007-76-3 Sphere of Influence Amendments to Western Municipal Water District (Removal) and Eastern Municipal Water District (Addition) and Reorganization to Include Detachment from Western Municipal Water District and Concurrent Annexation to Eastern Municipal Water District (99th Fringe) Memo,* Local Agency Formation Commission, May 22, 2008.

2 *Final EMWD 2005 Urban Water Management Plan*, Eastern Municipal Water District, December 2005.

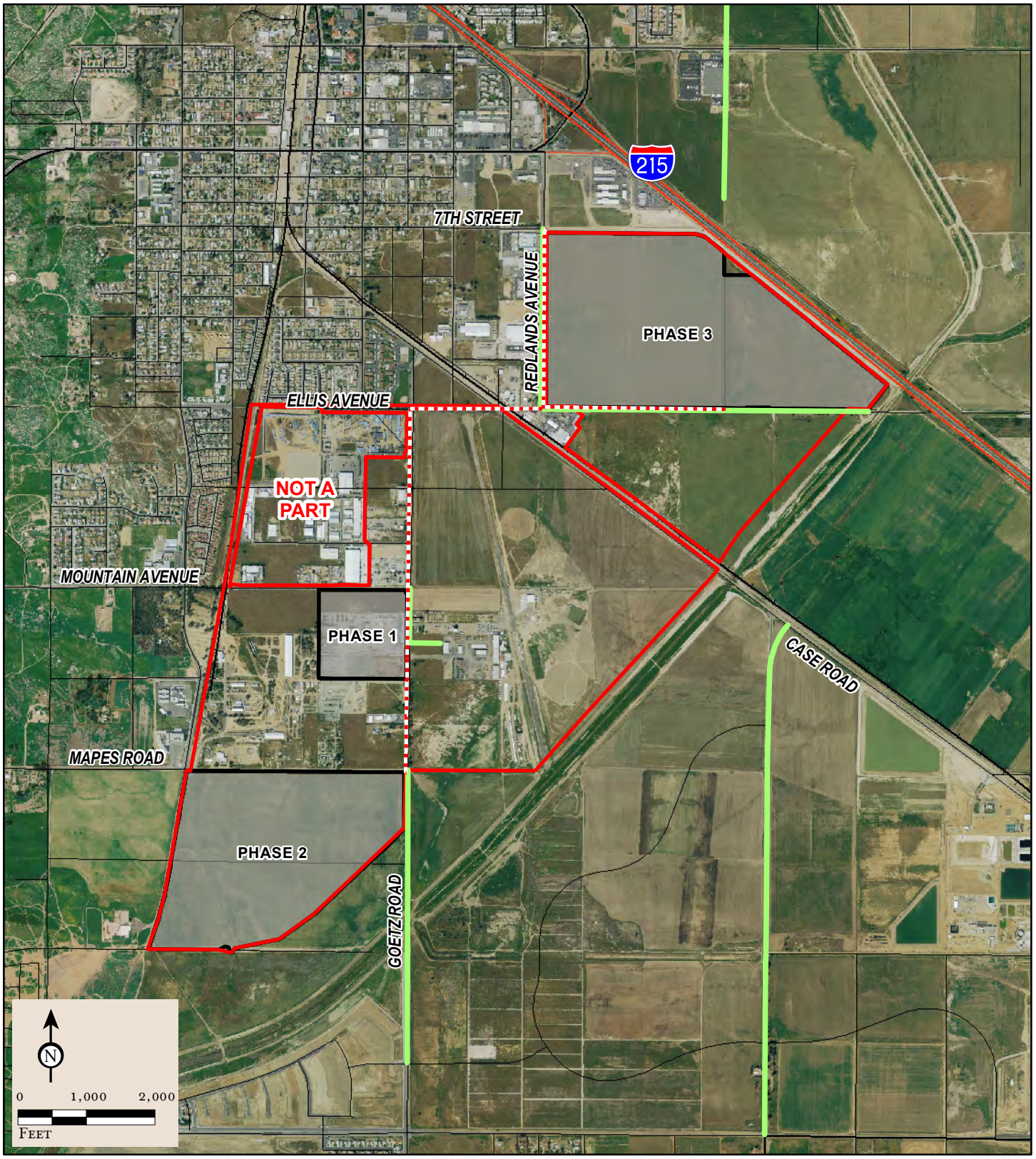

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FIGURE 4.12.1

PROJECT AREA
STUDY AREA
EXISTING WATER LINES
PROPOSED WATER LINES

South Perris Industrial
Environmental Impact Report

Existing and Proposed
Potable Water Infrastructure

SOURCE: AirPhotoUSA, 2008; Thomas Bros., 2007; Albert Webb Associates, 2008.

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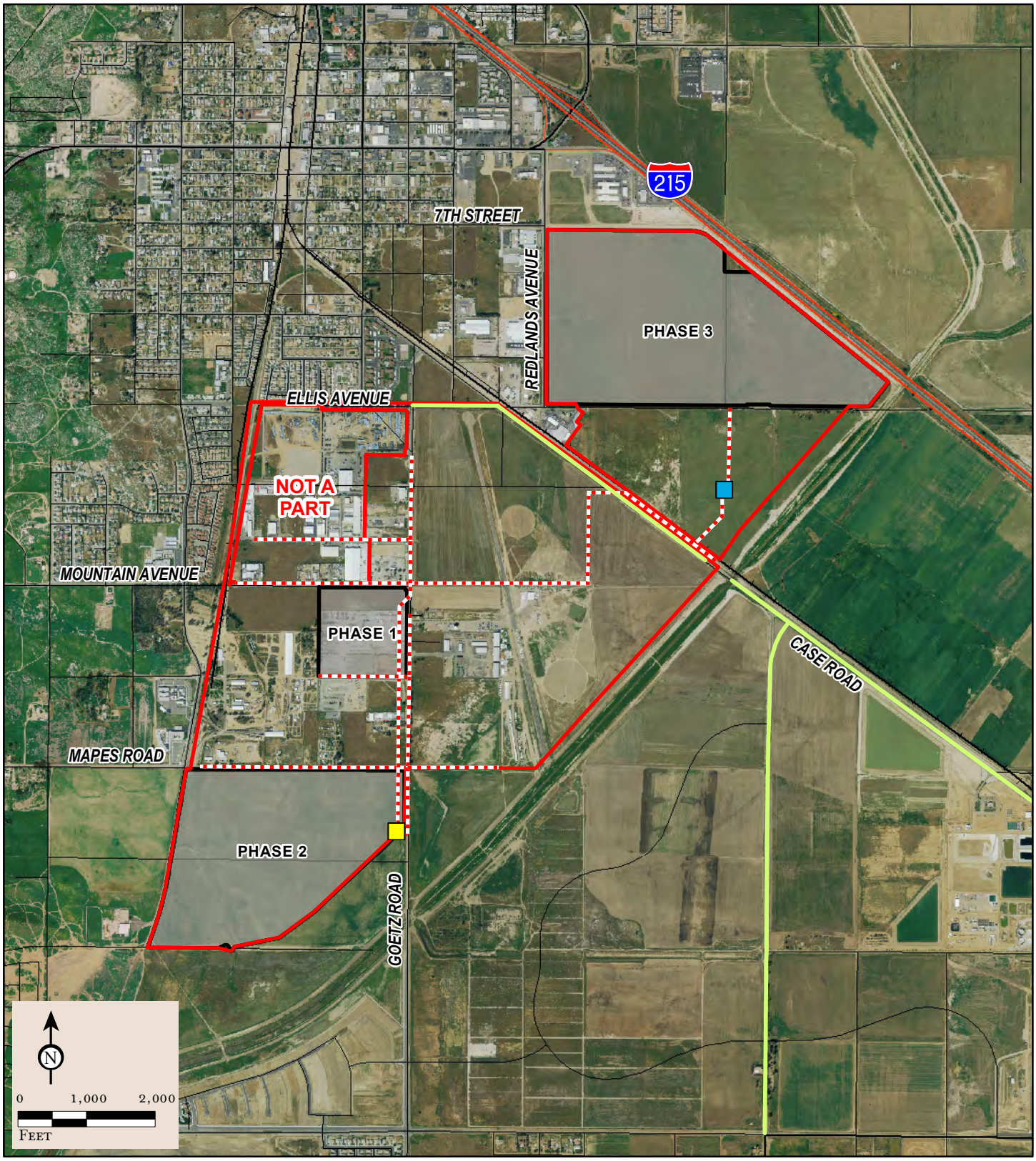

LSA

FIGURE 4.12.2

PROJECT AREA
STUDY AREA
EXISTING SEWER LINES
PROPOSED SEWER LINES

PROPOSED SEWER LIFT STATIONS

LIFT STATION #1
LIFT STATION #2

South Perris Industrial
Environmental Impact Report

SOURCE: AirPhotoUSA, 2008; Thomas Bros., 2007; Albert Webb Associates, 2008.

Existing and Proposed Sewer Infrastructure

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Table 4.12.B: Available Sewer Capacity of Existing Facilities

Street Name	Segment	Pipe Diameter (inches)	Calculated Peak Flow (cfs)	Existing Peak Flow[1] (cfs)	Available Capacity[2] (cfs)
Ellis Avenue	Between Goetz Road and Case Road	10	0.602	0.578	0.024
Case Road	Between Ellis Avenue and 450 feet west of the San Jacinto River	15	2.040	1.822	0.218
Case Road	South of the San Jacinto River	24	7.142[3]	1.822	5.320
Murrieta Road[4]	South of Case Road	15	—	—	—

Notes: [1] Based on information provided by EMWD
[2] Based on EMWD's Minimum Standards
[3] Based on existing slope of 0.0016
[4] The 15-inch force main has been abandoned
Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area, Table S5-1*, Albert A. Webb Associates, December, 2008.

Reclaimed Water. Reclaimed water from the EMWD facilities is currently used to irrigate agriculture lands and municipal recreation areas. Other consumers who currently use reclaimed water include the San Jacinto Wildlife Area, industrial uses, and aesthetic impoundment. Each of these groups has a different approach to reclaimed water. Municipal and industrial customers use potable water if reclaimed water is not available. Industrial enterprise and aesthetic impoundments have to use reclaimed water either because of cost or ordinance. As the demographics of the EMWD service area change, the demand for reclaimed water by agricultural customers would decrease.

Based on the most recently released report for the West San Jacinto Groundwater Basin, the amount of reclaimed water generated within the EMWD service area totaled 47,711 acre-feet with a total recycled water usage of 19,291 acre-feet.[1] Recycled water usage within the EMWD service area is anticipated to increase to 47,000 AFY by 2030. Due to an increase in treatment plant flow from population growth and after filling all recycled water storage ponds, EMWD has remaining surplus recycled water. Approximately 208 acre-feet of recycled water was delivered to the Elsinore Valley Municipal Water District under an existing sales agreement and approximately 16,261 acre-feet of recycled water was discharged into Temescal Creek at Wasson Canyon. The majority of the proposed project is currently located outside of EMWD's intended Recycled Water Service Area and there are currently no existing recycled water facilities in the project vicinity.

Drainage. The existing setting for drainage is discussed in Section 4.7 Hydrology and Water Quality.

Brine Line Infrastructure Features. There are currently no brine lines serving the study area.

4.12.2 Existing Policies and Regulations

Existing policies and regulations for water supply and wastewater services include the following:

- Federal Water Pollution Control Act;

[1] *Section 3.6 Recycled Water Monitoring, West San Jacinto Groundwater Basin Management Plan 2007 Annual Report,* Eastern Municipal Management District, June 2008.

- Water Conservation in Landscaping Act;
- Water Recycling in Landscaping Act;
- Sections 13550–13556 of the State Water Code;
- State Regional Water Quality Control Board;
- Urban Water Management Planning Act;
- Senate Bill 610;
- City of Perris General Plan; and
- City of Perris Municipal Code.

4.12.2.1 Federal Water Pollution Control Act

The Federal Water Pollution Control Act requires discharges (from point and non-point sources) into navigable water to meet stringent National Pollutant Discharge Elimination System (NPDES) permit standards. The U.S. Environmental Protection Agency (EPA) has published regulations establishing requirements for application of stormwater permits for specified categories of industries, municipalities, and certain construction activities. The regulations require that discharges of stormwater from construction activity of 1.0 acre or more must be regulated and covered by an NPDES permit. When a construction area exceeds 1.0 acre in size, the applicant must develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to control non-point pollution.

4.12.2.2 Water Conservation in Landscaping Act

To ensure adequate supplies are available for future uses, and to promote the conservation and efficient use of water, local agencies are required to adopt a water-efficient landscape ordinance. When such an ordinance has not been adopted, a finding as to why (based on the climatic, geologic, or topographical conditions) such an ordinance is not necessary must be adopted. In the absence of such, an ordinance drafted by the State of California applies within the affected jurisdiction. The City of Perris implements landscape and irrigation design standards (Chapter 19.70.020 of the City's Municipal Code), which establishes water conservation requirements for new or rehabilitated landscapes.[1]

4.12.2.3 Water Recycling in Landscaping Act

The Water Recycling in Landscaping Act requires that a water producer capable of providing recycled water that meets certain conditions notify local agencies eligible to receive the recycled water. It also requires necessary infrastructure be provided to support the delivery of recycled water. EMWD enforces Ordinance No. 68.2 *Amended Rules and Regulations Governing the Provision of Recycled Water System Facilities and Service,* to promote the conservation and reuse of water resources and to ensure maximum public benefit from the use of EMWD's recycled water supply by regulating its use in accordance with applicable federal, state, and local regulations. Upon the determination that EMWD is capable of providing recycled water services to the proposed site, the project applicant must submit an application form for EMWD to review. EMWD may prescribe requirements in writing to the applicant as to the off-site or on-site facilities necessary to be constructed, the manner of connection, the financial responsibility, and the use of the recycled water. Prior to receiving recycled water service, the proposed use shall be approved by the Department of Health Services. EMWD will inspect on-site recycled water facilities to ensure initial and future continued compliance with EMWD's regulations and other applicable requirements.

[1] *Chapter 19.70.020 City of Perris Municipal Code,* City of Perris, current through Ordinance 1241, passed March 25, 2008.

4.12.2.4 Sections 13550–13556 of the State Water Code

These sections of the State Water Code state that local, regional, or state agencies shall not use water from any source of quality for non-potable uses if suitable recycled water is available as provided in Section 13550 of the Water Code.

4.12.2.5 State Regional Water Quality Control Board

Operation of the PVRWRF is subject to regulations set forth by the California Department of Health Services (DHS) and State Water Resources Control Board (SWRCB). NPDES permits are required for operators of municipal separate storm sewer systems (MS4s), construction, projects, and industrial facilities who discharge to surface waters within the City.

4.12.2.6 Urban Water Management Planning Act

Since 1984, the Urban Water Management Planning Act, has required "urban water suppliers" to develop written "urban water management plans." While generally aimed at encouraging water suppliers to implement water conservation measures, it also created long-term planning obligations. In preparing urban water management plans, urban water suppliers must describe the following:

- Existing and planned water supply and demand;
- Water conservation measures and a schedule for implementing and evaluating such measures; and
- Water shortage contingency measures.

The Urban Water Management Planning Act requires that urban water suppliers use a 20-year planning horizon and update the data in the urban water plans every five years. In preparing their 20-year management plans, water suppliers must directly address the subject of future population growth. The suppliers must also identify sources of supply to meet demand. The plan must "identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier." In identifying these future water sources, the suppliers need not conduct environmental review.

4.12.2.7 Senate Bill 610: Water Supply Planning

Signed into law October 9, 2001, Senate Bill 610 (SB 610) resulted in amendments to Section 21151.9 of the Public Resources Code. Additionally, several sections of the Water Code were amended, one was repealed, while portions of one section were added and/or repealed. Revising provisions established by SB 901 and SB 610 requires that any city or county having determined that a project is subject to CEQA identify any public water systems that may supply water for the project and to request those public water systems to prepare a specified water supply assessment if the project exceeds the specified threshold for a water supply assessment. Such an assessment would include, among other information, the following:

- Identification of existing water entitlements, water rights, or water service contracts relevant to the water supply identified for a proposed project; and
- The amount of water received pursuant to such entitlements, rights, or contracts.

SB 610 requires the public water system, city, or county to submit plans for acquiring the required water supply for a proposed project if the water supply assessment concludes that water supplies are or will become insufficient. Any such water supply assessment and other information would be included in the environmental document prepared for the project pursuant to CEQA. Individually, the

water demand resulting from the operation of the each of the phases would utilize less water than that utilized by 500 residential dwellings, which is approximately 1.0 acre-feet per day (325,647 gallons) or 365.0 AFY (118,990,000 gallons).[1] However, when all three phases are combined, the water demand associated with the operation of all of these phases (407.82 AFY) would utilize more water than that utilized by 500 residential dwellings (365.0 AFY). Therefore, a water supply assessment was included to identify existing water entitlements, water rights, and/or water service contracts relevant to the water supply for the proposed project.

4.12.2.8 City of Perris General Plan

The following policies within the *Conservation Element* and *Sustainable Development Element* of the *City of Perris General Plan* pertain to water supply, wastewater, and stormwater services and are applicable to the proposed project.

Conservation Element

Policy V.A Coordinate land-planning efforts with local water purveyors.

Goal VI Achieve regional water quality objectives and protect the beneficial uses of the region's surface and groundwater.

Implementation Measures

V.A.1 Work with Eastern Municipal Water District to ensure that development does not outpace projections consistent with the Water Districts Urban Water Management Plan.

V.A.2 Require use of new technologies and water conserving plant materials for landscaping.

VI.A Comply with requirements of the National Pollutant Discharge Elimination System (NPDES).

VI.A.3 Participate with the Eastern Municipal Water District to develop and implement water conservation programs and to encourage use of water conserving technologies.

Sustainable Development Element

Policy I.A Adopt and maintain development regulations that encourage water and resource conservation.

Implementation Measures

I.A.1 Use indigenous and/or drought-resistant planting materials and efficient irrigation systems in residential projects as a means of reducing water demand, including smart irrigation systems.

I.A.2 Use indigenous and/or drought-resistant planting and efficient irrigation systems with smart controls in all new and refurbished commercial and industrial development projects. Also, restrict use of turf to 25% or less of the landscaped areas.

I.A.4 Use gray water, and water conserving appliances and fixtures within all new commercial and industrial developments.

I.A.5 Use permeable paving materials within developments to deter water runoff and promote natural filtering of precipitation and irrigation waters.

[1] 3.791 persons per Perris household (Department of Finance January 2008 Estimates) × 171.8 gallons per person/day (American Water Works Association Research Foundation Residential End Uses of Water study, 1999) = 651.3 gallons per household per day. 651.3 gallons per household per day × 500 households = 325,647 gallons/day (1.0 acre-foot/day) or 118,990,000 gallons/year (365.0 acre-feet/year).

I.A.7 Create and maintain reclaimed water systems to provide reclaimed water for irrigation of municipal and commercial landscaping.

I.A.8 Explore the use of private water well systems for all potable and/or landscaping water use for larger commercial and industrial projects.

4.12.2.9 City of Perris Municipal Code

Chapter 14.22 of the City's Municipal Code requires an industrial wastewater permit for industrial facilities and certain commercial facilities that plan to discharge wastewater to the City's sewage collection and treatment system. The purpose of the industrial wastewater permit program is to ensure the City's compliance with the NPDES program for all facilities discharging to waters of the U.S., including sewage treatment plants.

4.12.3 Methodology

The water supply analysis is based on evaluating the existing water supply available to the City, future water supply that is anticipated to be available to the City, and the identification of existing water demand and future demand with the development of the proposed project. The methodology of determining wastewater service impacts is based on evaluating the existing wastewater infrastructure and capacity available to the City, future wastewater demand and capacity that is anticipated to be available to the City, and the identification of existing wastewater demands and future wastewater demands with the development of the proposed project.

For recycled water demands, calculations were based on the EMWD's current Recycled Water Design Standards, *A Guide to Preparing Water Budgets,*[1] and City of Perris landscape zoning requirements. Five separate values were utilized to determine recycled water demand and design criteria as follows:

- **Annual Maximum Allowable Water Budget (AMAWB).** This represents the maximum recycled water to be used per landscape area and is provided by EMWD.
- **Maximum Annual Water Allowance (MAWA).** This is based on Riverside County Ordinance 859 for Landscape Water Use Calculations and is equivalent to the Annual Maximum Allowable Water Budget. This is included for comparison purposes.
- **Estimated Annual Water Use (EAWU).** This is intended to assist designers in estimating the water needs per landscape area. The EAWU is not to exceed the AMAWB.
- **Monthly Target Water Budget (MTWB).** This represents a percentage (Monthly Adjustment Factor) of the EAWU used each month and accounts for different water demands during winter and summer months.
- **Peak Flow.** Two separate peak flow numbers are utilized. The first is based on the MTWB for the month of July. The second is based on EMWD's planning approach and is obtained by multiplying the average day recycled water demand by a peaking factor of 2. Both peak flow values are based on a 9-hour per day irrigation window. The second peak flow is about 18 percent higher than that obtained through the MTWB and is provided for comparison purposes.

4.12.4 Thresholds of Significance

Based on Appendix G of the *CEQA Guidelines,* a project would have a significant impact on the provision of utilities or service systems if it would result in any of the following:

[1] *A Guide to Preparing Water Budgets,* EMWD, February 14, 2007.

- The project would exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or need new or expanded entitlements; and/or
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

For the purpose of this EIR, significant and unavoidable impacts would occur if the aforementioned conditions cannot be overcome by reasonable design, construction, and maintenance practices. As previously identified, impacts related to solid waste were determined to be less than significant in the Initial Study prepared for the proposed project and are not discussed in this section.

4.12.5 No Impact/Less than Significant Impacts

The following impacts were identified as having a less than significant impact or no impact on the environment with implementation of the proposed project.

4.12.5.1 Wastewater Treatment Requirements

Threshold	Would the proposed project exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board?

Local governments and water districts are responsible for complying with Federal regulations, both for wastewater plant operation and the collection systems (e.g., sanitary sewers) that convey wastewater to the wastewater treatment facility. Proper operation and maintenance is critical for sewage collection and treatment as impacts from these processes can degrade water resources and affect human health. For these reasons, publicly owned treatment works (POTWs) receive Waste Discharge Requirements (WDRs) to ensure that such wastewater facilities operate in compliance with water quality regulations set forth by the State. WDRs, issued by the State, establish effluent limits on the kinds and quantities of pollutants that POTWs can discharge. These permits also contain pollutant monitoring, recordkeeping, and reporting requirements. Each POTW that intends to discharge into the nation's waters must obtain a WDR prior to initiating its discharge.

The industrial uses of the proposed project would result in a connection to the existing sewer system that is ultimately routed to the PVRWRF. Since all wastewater generated in the City is treated by the PVRWRF, the wastewater that would be generated by the proposed industrial uses would be treated by the PVRWRF. Because the PVRWRF is considered to be a POTW, operational discharge flows treated at the PVRWRF would be required to comply with waste discharge requirements contained within the WDRs for the facility. Compliance with condition or permit requirements established by the City, and waste discharge requirements at the PVRWRF would ensure that discharges into the wastewater treatment facility system from the operation of the proposed project would not exceed applicable Santa Ana Regional Water Quality Control Board wastewater treatment requirements. Therefore, no significant impact related to this issue would occur and no mitigation would be required.

4.12.5.2 Construction or Expansion of Potable Water Treatment Facilities

Threshold	Would the proposed project require the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

The following discussion relates to potable water treatment facilities that may be required based on the potential increase in demand for potable water due to the proposed project.

Annually, a 5-year Capital Improvement Plan (CIP) is prepared by the EMWD. The EMWD's CIP outlines specific projects and their funding source. Each project is also submitted individually to the Board for authorization and approval. This allows the EMWD to accurately match needed facilities with development trends. Funding for the EMWD's microfiltration plants, distribution pipes, and the recharge and recovery program is listed in the most recent EMWD CIP.

As previously stated, the City is located within the area served by the Mills Filtration Plant, which has a treatment capacity of 155 mgd or 475.4 acre-feet per day. However, a portion of the Mills Filtration Plant is currently in the process of being retrofitted; the retrofit would be completed prior to 2009. These improvements would enable full use of the Mills Filtration Plant's entire 316 mgd design capacity. Based on the most recent and available data for the Mills Filtration Plant, the maximum demand for the plant is 147 mgd during the summer and a maximum demand of 77 mgd during the winter.[1] Therefore, surplus treatment capacity at this facility would currently total 8 and 78 mgd during the winter and summer (2007), respectively. When the retrofit associated with the Mills Filtration Plant is completed in 2009, surplus treatment capacity at this facility would total 169 and 239 mgd during the winter and summer respectively.

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. Of the 38 acres, 24 acres of the Phase 1 site is currently developed with a pre-cast concrete bridge fabrication facility. As previously illustrated in Figure 4.12.1, existing water infrastructure in the vicinity of the Phase 1 site includes existing 12-inch potable water lines underlying Goetz Road and Paseo Adelanto. With the development of the Phase 1 site, the existing 12-inch potable water lines underlying Goetz Road would be replaced with an 18-inch pipe.[2] The replacement of the existing 12-inch water line with an 18-inch water line would maintain adequate future fire flow requirements at the Phase 1 site. The water lines on the Phase 1 site and underlying Goetz Road and Ellis Avenue would be installed simultaneously with required roadway frontage improvements for the Phase 1 site. Therefore, the connection to the existing water delivery system would not result in substantial disturbance of existing roadways or water facilities.

As previously stated, the retrofit associated with the Mills Filtration Plant would be completed by 2009 before Phase 1 is operational. Since Phase 1 of the proposed project would not be operational until 2012, it is reasonable to compare Phase 1's water treatment demands against surplus treatment capacity of the Mills Filtration Plant that would result with the planned expansion in 2009. The additional water treatment demand of 0.0720 mgd resulting from the development of the Phase 1 site would be approximately 0.030 and 0.042 percent of the future summer and winter surplus treatment capacity of the Mills Filtration Plant. Because capacity exists at the Mills Filtration Plant for Phase 1 of the proposed project, no additional expansion of the Mills Filtration Plant would be required. Phase 1 of the proposed project would be conditioned to construct all associated water facilities needed to

[1] Based on 2007 average; e-mail correspondence with Edgar Fandialan, Senior Engineer Water Resource Management Group, Metropolitan Water District of Southern California, May 28, 2008.

[2] *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December, 2008.

distribute water throughout the development area. A plan of service for the Phase 1 site would be developed and finalized. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new water infrastructure and connections to existing water infrastructure would ensure that no significant impacts would result from the construction or operation of Phase 1. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on an approximately 201-acre site located south of Mapes Street between South "A" Street and Goetz Road. As previously illustrated in Figure 4.12.1, existing water infrastructure in the vicinity of the Phase 2 site includes an existing 16-inch potable water line underlying Goetz Road (south of Mapes Road), and existing 12-inch potable water lines underlying Mapes Road, South "A" Street, and Watson Road. On-site water delivery for the Phase 2 site would be provided by the existing 12-inch pipe for potable water, which is currently connected to the existing 16-inch potable water line underlying Goetz Road, south of Mapes Road. All water lines that would serve the Phase 2 site currently exist. Water infrastructure improvements to be constructed during Phase 1 would achieve adequate fire flow requirements for the Phase 2 site. No disturbance of existing roadways or water facilities would occur.

Similar to what was identified for Phase 1, the retrofit associated with the Mills Filtration Plant would be completed by 2009 before Phase 2 is operational. Since Phase 2 of the proposed project would not be operational until 2012, it is reasonable to compare Phase 2's water treatment demands against the surplus treatment capacity of the Mills Filtration Plant that would result with the planned expansion in 2009. The additional water treatment demand of 0.1407 mgd resulting from the development of the Phase 2 site would be approximately 0.058 and 0.083 percent of the future summer and winter surplus treatment capacity of the Mills Filtration Plant. Because capacity exists at the Mills Filtration Plant for Phase 2 of the proposed project, no additional expansion of the Mills Filtration Plant would be required. Similar to Phase 1, Phase 2 of the proposed project would be conditioned to construct all associated water facilities needed to distribute water throughout the development area. A plan of service for the Phase 2 site would be developed and finalized. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new water infrastructure and connections to existing water infrastructure would ensure that no significant impacts would result from the construction or operation of Phase 2. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

Phase 3: First Park South 215 Distribution Center. The Phase 3 site is adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. As previously identified in Figure 4.12.1, existing water infrastructure in the vicinity of the Phase 3 site consists of an 8-inch potable water line in Redlands Avenue and 7th Street, a 12-inch potable water line in Ellis Avenue, a 33-inch potable water line in Murrieta Road (south of Ellis Avenue), and a 36-inch potable water line in Murrieta Road. On-site water delivery for Phase 3 of the proposed project would consist of a proposed 18-inch potable water line that would be installed underlying Ellis Avenue (to be installed during Phase 1) and a proposed 12-inch potable water line that would replace the existing 8-inch water line underlying Redlands Avenue[1] to maintain adequate future fire flow requirements at the Phase 3 site The water line for the Phase 3 site underlying Redlands Avenue would be installed simultaneously with required roadway frontage improvements for the Phase 3 site. Therefore, the connection to the existing water delivery system would not result in substantial disturbance of existing roadways or water facilities.

[1] *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December 2008.

As identified for Phases 1 and 2, the retrofit associated with the Mills Filtration Plant would be completed by 2009. Since Phase 3 of the proposed project would not be operational until 2013, it is reasonable to compare the Phase 3 water treatment demands against the surplus treatment capacity of the Mills Filtration Plant that would result with the planned expansion in 2009. The additional water treatment demand of 0.1512 mgd resulting from the development of the Phase 3 site would be approximately 0.063 and 0.089 percent of the future summer and winter surplus treatment capacity of the Mills Filtration Plant. Because capacity exists at the Mills Filtration Plant for Phase 3 of the proposed project, no additional expansion of the Mills Filtration Plant would be required. Similar to Phases 1 and 2, Phase 3 of the proposed project would be conditioned to construct all associated water facilities needed to distribute water throughout the development area. A plan of service for the Phase 3 site would be developed and finalized. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new water infrastructure and connections to existing water infrastructure would ensure that no significant impacts would result from the construction or operation of Phase 3; therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

All Phases. As previously identified, all necessary water distribution facilities would be installed simultaneously with required roadway frontage improvements for the Phase 1 and Phase 3 sites. Therefore, the connection to the existing water delivery system would not result in substantial disturbance of existing roadways or water facilities. When combined, the potable water demand that would be required for all three phases would total 363,960 gpd or 0.36 mgd. The proposed project would be built in phases with Phases 1 and 2 being constructed and operational by 2012 and Phase 3 being constructed and operational by 2013. Therefore, the proposed project is anticipated to be fully operational by 2013. The additional water treatment demand of 0.36 mgd resulting from the operation of all three phases would be approximately 0.150 and 0.21 percent of the future summer and winter surplus treatment capacity of the Mills Filtration Plant. Because capacity exists at the Mills Filtration Plant for all phases of the proposed project, no additional expansion of the Mills Filtration Plant would be required. As previously identified, the proposed project would be conditioned to construct all associated water facilities needed to distribute water throughout the development area.

Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new water infrastructure and connections to existing water infrastructure would ensure that no significant impacts would result from the construction or operation of the proposed project. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

4.12.5.3 New or Expanded Wastewater Treatment Facilities

Threshold	Would the proposed project require the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

The following discussion relates to wastewater treatment facilities that may be required based on the potential increase in demand for wastewater treatment due to the proposed project.

Wastewater flows from the proposed project sites would be handled by the EMWD and would be conveyed to the PVRWRF located in the southwestern portion of the City. As previously identified, current capacity at this facility is 18 mgd with an existing average inflow of approximately 13 mgd.[1] Under current conditions, the average daily surplus treatment capacity is approximately 5 mgd.

[1] *LAFCO 2007-76-3 Sphere of Influence Amendments to Western Municipal Water District (Removal) and Eastern Municipal Water District (Addition) and Reorganization to Include Detachment from Western Municipal Water District and*

As identified in the *Water, Sewer, and Recycled Water Utility Report,*[1] average day and peak hour generation rates for the study area were calculated based on the EMWD's Design Standards.[2] Table 4.12.C provides the proposed sewer facilities for the study area based on demand at ultimate developed conditions.

Table 4.12.C: Proposed Sewer Facilities for the Study Area

Type of Sewer Infrastructure	Length/Quantity
8-inch pipeline	7,700 linear feet
10-inch pipeline	6,500 linear feet
12-inch pipeline	3,300 linear feet
15-inch pipeline	1,300 linear feet
18-inch pipeline	1,700 linear feet
21-inch pipeline	4,400 linear feet
8-inch force main	3,300 linear feet
Lift Stations	2*

Notes: *One at Goetz Road and one at Case Road
Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area,* Albert A. Webb Associates, December 2008.

Collectively, the sewer infrastructure identified in Table 4.12.C is the proposed Master Plan of Sewer Facilities for the study area. The proposed project applicant is responsible for the installation of certain segments of the Master Plan of Sewer Facilities which are described in detail in the following paragraphs. Previously referenced Figure 4.12.2 illustrates the proposed sewer facilities to be constructed with the proposed project.

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. Sewage infrastructure for Phase 1 of the proposed project would consist of 8-inch, 10-inch, 18-inch, and 21-inch pipes for sewer. Sewer improvements associated with the Phase 1 site are identified in Table 4.12.D.

Table 4.12.D: Proposed Sewer Infrastructure for Phase 1

Location	Type of Infrastructure	Length/Quantity
Mountain Avenue	8-inch sewer pipe	To be determined
Mountain Avenue	10-inch sewer pipe	1,300 linear feet
East of the Mountain Avenue/Goetz Road Intersection	18-inch sewer pipe	1,650 linear feet
East of Goetz Road	21-inch sewer pipe	To be determined
Case Road	21-inch sewer pipe	1,880 linear feet*

*1,800 linear feet would be used to connect to existing 24-inch gravity main.
Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December 2008.

Concurrent Annexation to Eastern Municipal Water District (99th Fringe) Memo, Local Agency Formation Commission, May 22, 2008.

1 *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December 2008.

2 *Sanitary Sewer System Planning and Design*, Principle Guidelines Criteria, Eastern Municipal Water District, September 1, 2006

Sewage lines for Phase 1 of the proposed project would ultimately connect to the existing 24-inch gravity main underlying Case Road. While there is available capacity to handle additional sewage flows resulting from the proposed project, the installation of necessary sewer facilities to connect to the existing facilities are required. Proposed sewer improvements would be installed simultaneously with required roadway frontage improvements for the Phase 1 site. For areas in which there are no existing roadways, short-term construction impacts would occur and are discussed in Section 4.3 (Air Quality). However, upon completion of construction sewer pipeline alignments would be restored to their pre-construction condition. Therefore, the installation of sewer facilities would not result in substantial disturbance of the environment.

Phase 1 of the project would include construction of a separate sewer line to deliver brine and suspended solids from the Phase 1 site. The brine line will follow the alignment of the Phase 1 sanitary sewer and will consist of an 8-inch force main. The Phase 1 brine line will be installed concurrent with Phase 1 sewer improvements; therefore, as concluded for the installation of sewer facilities, no substantial disturbance of the environment would occur.

The additional wastewater treatment demand of 0.015 mgd resulting from development of Phase 1 would not require the expansion of PVRWRF as capacity currently exists at PVRWRF to accommodate Phase 1 sewer flows. Phase 1 of the proposed project would be conditioned to construct all associated sewer infrastructure needed to capture sewage flows throughout the site. A plan of service for sewer infrastructure would be developed and finalized for the Phase 1 site. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new sewage infrastructure and connections to existing sewage infrastructure would ensure that no significant impacts would result from the construction or operation of Phase 1. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on an approximately 201-acre site. The site is located south of Mapes Street between "A" Street and Goetz Road. Sewage infrastructure for Phase 2 of the proposed project would consist of an 8-inch, a 10-inch, and 15-inch pipes for sewer. Due to the existing topography and inverted elevation in the vicinity of the Phase 2 site, a lift station (greater than 500 gallons per minute [gpm]) at Goetz Road is proposed to route flows north to Mountain Avenue. Sewer improvements associated with the Phase 2 site are identified in Table 4.12.E.

Table 4.12.E: Proposed Sewer Infrastructure for Phase 2

Location	Type of Infrastructure	Length/Quantity
Mapes Road	10-inch sewer pipe	1,300 linear feet
Goetz Road	15-inch sewer pipe	1,300 linear feet[1]
Goetz Road	Lift Station	One lift station[2]
Goetz Road	8-inch force main	3,300 linear feet

[1] 300 linear feet would be used to connect to Phase 1 sewer improvements.
[2] Lift Station must be greater than 5 gpm.
Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December 2008.

Sewage lines for Phase 2 of the proposed project would connect to Phase 1 sewer improvements and would ultimately connect to the existing 24-inch gravity main underlying Case Road. While there is available capacity to handle additional sewage flows resulting from the proposed project, the construction of necessary sewer facilities to connect to the existing facilities are required. Proposed sewer improvements would be installed simultaneously with required roadway frontage improvements

for the Phase 2 site. For areas in which there are no existing roadways, short-term construction impacts would occur and are discussed in Section 4.3 (Air Quality). However, upon completion of construction sewer pipeline alignments would be restored to their pre-construction condition. Therefore, the installation of sewer facilities would not result in substantial disturbance of the environment.

Phase 2 brine line facilities would include an 8-inch force main along the same alignment as the Phase 2 sanitary sewer. In addition, a 100 horse power pump station and 2 million gallon basin will be constructed on the Phase 2 South Perris Distribution Center site. The Phase 2 brine line will be installed concurrent with Phase 2 sewer improvements; therefore, as concluded for the installation of sewer facilities, no substantial disturbance of the environment would occur.

The additional wastewater treatment demand of 0.068 mgd resulting from the operation of Phase 2 would not require the expansion of PVRWRF as capacity currently exists at PVRWRF to accommodate Phase 2 sewer flows. Similar to what was identified for Phase 1, Phase 2 of the proposed project would be conditioned to construct all associated sewer infrastructure needed to capture sewage flows throughout the site. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new sewage infrastructure and connections to existing sewage infrastructure would ensure that no significant impacts would result from the construction or operation of Phase 2. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

Phase 3: First Park South 215 Distribution Center. The Phase 3 site is adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. Sewage infrastructure for Phase 3 of the proposed project would consist of 12-inch pipes for sewer. Due to the existing topography and inverted elevation in the vicinity of the Phase 3 site, a lift station (less than 500 gpm) north of Case Road is proposed to route flows south to the 24-inch gravity main underlying Case Road. Sewer improvements associated with the Phase 3 site are identified in Table 4.12.F.

Table 4.12.F: Proposed Sewer Infrastructure for Phase 3

Location	Type of Infrastructure	Length/Quantity
South of the Murrieta Road/Ellis Avenue Intersection	12-inch sewer pipe	1,600 linear feet
South of the Murrieta Road/Ellis Avenue Intersection	Lift Station	One lift station*
Southwest of Lift Station No.2	12-inch sewer pipe	1,000 linear feet

*Lift station much be less than 500 gpm
Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, Albert A. Webb Associates, December 2008.

Sewage lines for Phase 3 of the proposed project would connect to Phase 1 sewer improvements and would ultimately connect to the existing 24-inch gravity main underlying Case Road. While there is available capacity to handle additional sewage flows resulting from the proposed project, the construction of necessary sewer facilities to connect to the existing facilities are required. Proposed sewer improvements would be installed simultaneously with required roadway frontage improvements for the Phase 1 site. For areas in which there are no existing roadways, short-term construction impacts would occur and are discussed in Section 4.3 (Air Quality). However, upon completion of construction sewer pipeline alignments would be restored to their pre-construction condition. Therefore, the installation of sewer facilities would not result in substantial disturbance of the environment.

Phase 3 brine line facilities would include construction of a 6-inch force main along an identical alignment as Phase 3 sanitary sewer. Additionally, a 50 horse power pump station and 1.2 million

gallon basin will be constructed on the Phase 3 First Park South 215 site. The Phase 3 brine line will be installed concurrent with Phase 3 sewer improvements; therefore, as concluded for the installation of sewer facilities, no substantial disturbance of the environment would occur.

The additional wastewater treatment demand of 0.063 mgd resulting from development of Phase 3 would not require the expansion of PVRWRF as capacity currently exists at PVRWRF to accommodate Phase 3 sewer flows. Similar to what was identified for Phases 1 and 2, Phase 3 of the proposed project would be conditioned to construct all associated sewer infrastructure needed to capture sewage flows throughout the site. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new sewage infrastructure and connections to existing sewage infrastructure would ensure that no significant impacts would result from the construction or operation of Phase 3. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

All Phases. As previously identified, all necessary sewer facilities would be installed simultaneously with required roadway frontage improvements for all phases. For areas in which there are no existing roadways, the areas of disturbance would be restored to their pre-construction condition. Therefore, the installation of sewer facilities would not result in substantial disturbance of the environment.

When combined, the amount of wastewater generated by all three phases would total 147,985 gpd or 0.147 mgd. Because capacity exists at the PVRWRF for all phases of the proposed project, no additional expansion of the PVRWRF would be required. As previously identified, the proposed project would be conditioned to construct all associated sewer lines and infrastructure needed to serve the project sites. Adherence to standard requirements identified by EMWD and the City associated with the design and installation of new sewage infrastructure and connections to existing sewer infrastructure would ensure that no significant impacts would result from the construction or operation of the proposed project. Therefore, impacts related to this issue would be less than significant and no mitigation measures would be required.

4.12.5.4 Adequate Water Supply

Threshold	Would the proposed project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

There has been a shift in the water demand patterns in the last 15 years, as a residential market has replaced an agricultural market. Metropolitan, based on the IRP update and IRPSIM[1] model, has stated that with the addition of all water supplies existing and planned, it would have the ability to meet all of its member agencies' projected supplemental demand through 2030 even under a repeat of a worst drought scenario and with a reduction in deliveries from the SWP as imported sources of water will be supplemented by an increase in desalination of brackish groundwater, recycled water use, and water use efficiency. Based on this assertion, the EMWD has stated it is able to meet an increased demand for water over the next 20 years, even during drought conditions. This is based on continued commitment to conservation programs, additional water recycling, and continued development of local water resources.

To develop the projections used in the WSA, EMWD used a development-tracking database that assesses future water demands for specific projects. EMWD uses this database to help plan for future water supply and infrastructure needs by monitoring new projects through various stages of development. Changes in density and land use are also tracked in this database for planning

[1] IRPSIM is a sophisticated water supply and demand-balancing model that utilizes 77 sequential hydrologies to determine variations in supply and demand due to changes in weather conditions.

purposes. The supply for dry years is driven by demand. Demand increases slightly (less than 2%) during dry years, primarily due to the increased demand in winter for landscaping or agricultural water, and can be decreased up to 10 percent due to conservation as dry periods are extended. Neither groundwater production nor recycled water deliveries are expected to increase or decrease significantly during dry years. For water shortages and interruptions, the plans and policies outlined in the RUWMP will be implemented.

As identified in the *Water, Sewer, and Recycled Water Utility Report*[1], Maximum Day Demand (MDD) and Peak Hour Demand for the study area were calculated using EMWD's Design Standards[2]. Table 4.12.G identifies the water demand for the Study Area.

Table 4.12.G: Water Demand for the Study Area

Land Use Designation	Total Area (acres)	Total Usable Area[1] (acres)	Average Day Demand (gpm)	Maximum Day Demand (gpm)	Peak Hour Demand (cfs)
Light Industrial	655	557	773	1,160	3.445
General Industrial	243	207	287	431	1.280
Public	101	86	119	178	0.530
Specific Plan	33	28	39	58	0.173
Commercial	70	59	82	123	0.366
Total	**1,101**	**936**	**1,300**	**1,950**	**5.793**

gpm = gallons per minute
cfs = cubic feet per second
[1] = Total Usable Area is 85% of the Total Area. Total Usable Area assumes 15% discount for street rights-of-way, parking lots, and unused building space
Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area, Table S4-1,* Albert A. Webb Associates, December 2008.

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. Of the 38 acres, 24 acres of the Phase 1 site are currently developed with a pre-cast concrete bridge fabrication facility. Based on the WSA conducted for the Phase 1 site, water demand for the proposed on-site uses would total 72,060 gallons per day (gpd) or 80.72 acre-feet per year (AFY).[3] Based on the information contained in the WSA for the Phase 1 site and the assurance that MWD is engaged in a planning process that will ensure a reliable long-term water supply for its member agencies, EMWD has determined that it will be able to provide adequate water supply to meet the potable water demand for the project in addition to existing and future users. Impacts are less than significant and no mitigation is required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on an approximately 201-acre site. The site is located south of Mapes Street between "A" Street and Goetz Road. The Phase 2 project site is currently vacant but has been historically utilized for agricultural production. No structures or unique features are currently located within the project limits. Based on the WSA conducted for the Phase 2 site, water demand for the

1 *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area,* Albert A. Webb Associates, December 2008.
2 *Water System Planning and Design*, *Principle Guidelines Criteria*, Eastern Municipal Water District, July 2, 2007.
3 *Water Supply Assessment for the Airport Distribution Center,* Eastern Municipal Water District, September 19, 2007.

proposed on-site uses would total 140,700 gallons per day (gpd) or 157.8 acre-feet per year (AFY).[1] Based on the information contained in the WSA for the Phase 2 site and the assurance that MWD is engaged in a planning process that will ensure a reliable long-term water supply for its member agencies, EMWD has determined that it will be able to provide adequate water supply to meet the potable water demand for the project in addition to existing and future users. Impacts are less than significant and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. The location of the Phase 3 site is adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. The Phase 3 site has been historically utilized for agricultural production. Based on the WSA conducted for the Phase 3 site, water demand for the proposed on-site uses would total 151,200 gallons per day (gpd) or 169.3 acre-feet per year (AFY).[2] Based on the information contained in the WSA for the Phase 3 site and the assurance that MWD is engaged in a planning process that will ensure a reliable long-term water supply for its member agencies, EMWD has determined that it will be able to provide adequate water supply to meet the potable water demand for the project in addition to existing and future users. Impacts are less than significant and no mitigation is required.

All Phases. Based on information contained in Table 4.12.H, it was determined that existing facilities in the Study Area will not be able to meet future fire flow requirements at ultimate developed conditions. Therefore, approximately 9,800 linear feet of 18-inch pipeline and 2,650 linear feet of 12-inch pipeline will be required to provide adequate service for the calculated future demand of the Study Area. Table 4.12.H summarizes the proposed water facilities required for the proposed project.

Table 4.12.H: Proposed Water Facilities

Location	Facility Required	Notes
Ellis Avenue from Murrieta Road to Goetz Road	18-inch pipeline	New pipeline
Goetz Road from Ellis Avenue to Mapes Road	18-inch pipeline	Replace existing 12-inch pipeline
Redlands Avenue between Ellis Avenue and 7th Street	12-inch pipeline	Replace existing 8-inch pipeline

Source: *Water, Sewer, and Recycled Water Utility Report for South Perris Industrial Area*, *Table S4-3,* Albert A. Webb Associates, December 2008.

When combined, the potable water demand that would be required for all three phases would total 363,960 gpd or 407.82 AFY The proposed project would be built in phases with Phases 1 and 2 being constructed and operational by 2012 and Phase 3 being constructed and operational by 2013. Therefore, the proposed project is anticipated to be fully operational by 2013. Since EMWD determined that existing water supplies were available for each of the phases of the project, it is reasonable to conclude that when combined, the entire proposed project would have adequate water supply to keep it in operation. Since there is existing surplus water supply for the entire project, impacts associated with this issue are less than significant.

1 *Water Supply Assessment for the First Park South Perris Distribution Center,* Eastern Municipal Water District, August 20, 2008.

2 *Water Supply Assessment for the Tentative Parcel Map 35877, First Park South 215,* Eastern Municipal Water District, August 20, 2008.

4.12.5.5 Wastewater Treatment Capacity

Threshold	Would the proposed project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater flows from the proposed project would be handled by the EMWD and would be conveyed to the PVRWRF located in the southwestern portion of the City. Current capacity at this facility is 18 mgd with an existing average inflow of approximately 13 mgd.[1] Under current conditions, the average daily surplus treatment capacity is approximately 5 mgd. Generally, water use and wastewater flows are related in that wastewater is generated from indoor water uses.

Phase 1: Airport Distribution Center. The Airport Distribution Center includes development of approximately 783,700 square feet of industrial warehouse space in one building on an approximately 38-acre site located west of Goetz Road between Mountain Avenue and Artlo Avenue. Of the 38 acres, 24 acres of the Phase 1 site are currently developed with a pre-cast concrete bridge fabrication facility. Development of the Phase 1 site would result in the demolition of the existing pre-cast concrete bridge fabrication facility. For industrial warehouse uses, typical sewage generation factors are 20 gallons per day (gpd) for every 1,000 square feet of gross warehouse industrial uses.[2] Based on this generation factor, up to 15,674 gallons (0.015 mgd) of wastewater would be generated from the project site.[3] The additional wastewater treatment demand of 0.015 mgd resulting from development of Phase 1 totals approximately 0.30 percent of current year (2009) surplus treatment capacity. However, as previously identified, improvements planned for the PVRWRF facility would increase capacity at this facility from 18 mgd to 22 mgd by the year 2013 (Phase 1 is anticipated to be in operation by 2012). Ultimate expansion of this facility is expected to be 30 mgd and is scheduled for completion in 2018. Because the amount of wastewater generated would be within the existing surplus treatment capacity at the PVRWRF, there is adequate capacity to serve Phase 1 of the proposed project. Therefore, impacts associated with this issue are less than significant and no mitigation is required.

Phase 2: First Park South Perris Distribution Center. The First Park South Perris Distribution Center includes development of approximately 3,448,734 square feet of industrial warehouse space in four buildings on 164.41 acres. The site is located south of Mapes Street between "A" Street and Goetz Road. The Phase 2 project site is currently vacant but has been historically utilized for agricultural production. As previously stated, typical sewage generation factors for industrial warehouse uses are 20 gallons per day (gpd) for every 1,000 square feet of gross warehouse industrial uses.[4] Based on this generation factor, up to 68,974 gallons (0.068 mgd) of wastewater would be generated from the project site.[5] The additional wastewater treatment demand of 0.068 mgd resulting from development of the proposed project totals approximately 1.3 percent of current year (2008) surplus treatment capacity. As previously identified, improvements planned for the PVRWRF facility would increase capacity at this facility from 18 mgd to 22 mgd by the year 2013 (Phase 2 is anticipated to be in operation by 2012). Ultimate expansion of this facility is expected to be 30 mgd and is scheduled for completion in 2018. Because the amount of wastewater generated would be

1 *LAFCO 2007-76-3 Sphere of Influence Amendments to Western Municipal Water District (Removal) and Eastern Municipal Water District (Addition) and Reorganization to Include Detachment from Western Municipal Water District and Concurrent Annexation to Eastern Municipal Water District (99th Fringe) Memo,* Local Agency Formation Commission, May 22, 2008.

2 Exhibit M.2-12 Sewage Generation Rates, *Draft LA CEQA Thresholds Guide*, 2006.

3 20 gallons per 1,000 square feet of industrial use per day × 783,700 square feet = 15,674 gallons per day (0.048 acre-foot) or 0.015 million gallons per day (mgd).

4 Exhibit M.2-12 Sewage Generation Rates, *Draft LA CEQA Thresholds Guide*, 2006.

5 20 gallons per 1,000 square feet of industrial use per day × 3,448,734 square feet = 68,974 gallons per day (0.21 acre-foot) or 0.068 million gallons per day (mgd).

within the existing surplus treatment capacity at the PVRWRF, there is adequate wastewater treatment capacity to serve Phase 2 of the proposed project. Since adequate capacity exists for Phase 2, impacts associated with wastewater treatment capacity are less than significant and no mitigation is required.

Phase 3: First Park South 215 Distribution Center. Phase 3 of the proposed project would result in the construction of approximately 3,166,857 square feet of industrial warehouse space in four buildings on 219.35 acres. The Phase 3 site is adjacent to the Perris Valley Storm Drain Channel and San Jacinto River at the northeast corner of Redlands Avenue and Ellis Avenue. The Phase 3 site has been historically utilized for agricultural production. Typical sewage generation factors are 20 gallons per day (gpd) for every 1,000 square feet of gross warehouse industrial uses.[1] Based on this generation factor, up to 63,337 gallons (0.063 mgd) of wastewater would be generated from the project site.[2] The additional wastewater treatment demand of 0.063 mgd resulting from development of Phase 3 of the proposed project totals approximately 1.2 percent of current year (2009) surplus treatment capacity. As previously identified, improvements planned for the PVRWRF facility would increase capacity at this facility from 18 mgd to 22 mgd by the year 2013 (Phase 3 is anticipated to be in operation by 2013). Ultimate expansion of this facility is expected to be 30 mgd and is scheduled for completion in 2018. Because the amount of wastewater generated would be within the existing surplus treatment capacity at the PVRWRF, there is adequate wastewater treatment capacity to serve Phase 3 of the proposed project. Since adequate capacity exists for Phase 3, impacts associated with wastewater treatment capacity are less than significant and no mitigation is required.

All Phases. As previously stated, Phase 1 and Phase 2 of the proposed project would be operational in 2012. When combined, the wastewater generated from Phase 1 and 2 would total 84,648 gallons (0.084 mgd) per day. The additional wastewater treatment demand of 0.084 mgd resulting from the development of Phase 1 and Phase 2 would total approximately 2.5 percent of current year (2009) surplus treatment capacity. Improvements planned for the PVRWRF facility would increase at this facility from 18 mgd to 22 mgd by the year 2013. It is anticipated that when Phase 3 is completed, improvements to the PVRWRF would have already been completed. With all three phases in operation, the total amount of wastewater generated would be approximately 147,985 gallons (0.147 mgd) of wastewater. Utilizing the year (2008) wastewater treatment surplus capacity of 5.0 mgd, the additional wastewater treatment demand of 0.147 mgd that would be generated by the proposed project would represent 2.9 percent of the existing wastewater treatment surplus capacity. The improvements to the PVRWRF facility would further increase the existing wastewater treatment surplus capacity. Since there is existing surplus capacity for the entire project and because additional capacity would be added to the PVRWRF, impacts associated with this issue are less than significant. No mitigation measures are required.

4.12.6 Significant Impacts

4.12.6.1 Stormwater Drainage Requirements

Threshold	Would the proposed project result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As previously identified in Section 4.7 (Hydrology and Water Quality), the proposed project would route stormwater flows from the project sites through various stormwater drainage facilities into the Perris

[1] Exhibit M.2-12 Sewage Generation Rates, *Draft LA CEQA Thresholds Guide*, 2006.

[2] 20 gallons per 1,000 square feet of industrial use per day × 3,166,857 square feet = 63,337 gallons per day (0.19 acre-foot) or 0.063 million gallons per day (mgd).

Valley Storm Channel (PVSC) after on-site flows are routed through infiltration trenches composed of gravel and sand filters. The PVSC is the primary collector of stormwater in the Perris area.

Existing water flow moves in the southwestern direction across the study area. The direction of water flow would be maintained through stormwater drainage infrastructure such as stormwater pipes and open channels with all stormwater facilities ultimately discharging to the San Jacinto River.

Phase 1: Airport Distribution Center. Previously referenced Table 4.7.J (Hydrology and Water Quality) identifies changes in the volume of stormwater runoff that would result from the development of the proposed buildings and the installation of impermeable surfaces within the project limits without the development of the on-site infiltration trenches.

Of the three storm scenarios completed for Phase 1 (2-year/24-hour, 10-year/24-hour, and 100-year/24-hour), post-development flows are greater than pre-development flows for the 2-year/24-hour scenario only. To reduce the flows to below or equal to pre-development conditions, the anticipated on-site flows for the 2-year/24-hour scenario must be routed to the water quality features such as vegetated swales and culverts to reduce flows leaving the site to pre-development flow rates. The proposed post-development design features would have a total capacity of 4.7 acre-feet, which would provide additional capacity above the required 2.0 acre-feet minimum.[1] While the increase in impervious surfaces attributable to the proposed project would contribute to a greater volume and higher velocity of stormwater flows, the proposed project's drainage system (landscaped buffers and an infiltration trench) would accept and accommodate runoff that would result from project construction at or below pre-project conditions. Therefore, the post-development flows generated on the Phase 1 site would not exceed the capacity of the planned stormwater drainage systems. Impacts associated with this issue are less than significant for the Phase 1 site and no mitigation is required.

On-site drainage improvements for Phase 1 would be constructed and would be adequately sized to route stormwater flows generated on-site to appropriate off-site stormwater facilities such as underground pipes and channels. The site-specific drainage infrastructure features for Phase 1 of the proposed project would include construction of interim drainage facilities. Flows for Phase 1 would be routed through to interim stormwater infrastructure (e.g. underground piping and channels) proposed along Goetz Road between Mountain Avenue and Watson Road. Flows routed to the interim drainage along Goetz Road would ultimately be discharged into the San Jacinto River. Similar to what was identified for water and sewer infrastructure improvements, the implementation of the Phase 1 drainage improvements would not have a significant impact as the installation of these infrastructure features would occur concurrently with the associated roadway frontage improvements in the project study area.

Phase 2: First Park South Perris Distribution Center. Previously referenced Table 4.7.M (Hydrology and Water Quality) identifies changes in the volume of stormwater runoff that would result from the development of the proposed buildings and the installation of impermeable surfaces within the project limits without the development of the on-site infiltration trenches. Due to the installation of impervious surfaces on the project site, the post-development flows that would be generated on the project site are higher than the pre-development flows for the 2-year/24-hour and 10-year/24-hour scenarios. Without modifications to Phase 2 topography, in the 100-year/24-hour period, the Phase 2 site would be flooded. However, as identified in the Conditional Letter of Map Revision for a Floodplain and Floodway Revision (CLOMR) prepared for Phase 2, the peak discharges would be the same as in the original hydrologic study prepared for the area. To avoid a significant impact to the existing drainage capacity, the post-development flows coming from the proposed project site must

[1] *Preliminary Water Quality Management Plan for Airport Distribution Center*, Albert A. Webb Associates, June 2008.

not be greater than pre-development flows.[1] To reduce flows to below or equal to pre-development conditions, the on-site stormwater flows would be routed to the on-site detention basin[2] and infiltration trench before flows are routed off-site. Due to the continued concern of West Nile Virus and other vector-borne diseases, the proposed sand filtration trench would incorporate perforated pipe in its design to allow filtration to occur rapidly thereby reducing the concern for standing water to accumulate. To ensure that water routed to the sand filtration trench does not pool for an extended period of time, two sump pumps planned for the proposed project would de-water the trench. While the increase in impervious surfaces attributable to the proposed project would contribute to a greater volume and higher velocity of stormwater flows, the proposed project's drainage system (landscaped buffers, detention basin, and an infiltration trench) would accept and accommodate runoff that would result from project construction at pre-project conditions.

On-site drainage improvements for Phase 2 would be constructed and would be adequately sized to route stormwater flows generated on-site to appropriate off-site stormwater facilities such as underground pipes and channels. The site-specific drainage infrastructure features for Phase 2 of the proposed project would include construction of interim drainage facilities, as described for Phase 1. Similar to what was identified for water and sewer infrastructure improvements, the implementation of Phase 2 drainage improvements would not have a significant impact as the installation of these infrastructure features would occur concurrently with the associated roadway frontage improvements in the project study area.

Development of Phase 2 may also include the extension of the existing rail line to the west of the proposed project to provide rail service to the site. The extension of the existing rail line is considered to be the installation of additional infrastructure which does not include the development of additional buildings in the area. In addition, materials used for the bed of the extension of the rail line would consist of gravel material that would be permeable. Therefore, stormwater drainage impacts associated with the construction and operation of Phase 2 are less than significant and no mitigation would be required.

Phase 3: First Park South 215 Distribution Center. Previously referenced Table 4.7.P (Hydrology and Water Quality) identifies changes in the volume of stormwater runoff that would result from the development of the proposed buildings and the installation of impermeable surfaces within the project limits without the development of the on-site infiltration trenches. Due to the installation of impervious surfaces on the project site, the post-development flows that would be generated on the project site are higher than the pre-development flows for the 2-year/24-hour, 10-year/24-hour, and 100-year/24-hour scenarios. To avoid a significant impact to the existing drainage capacity, the post-development flows coming from the proposed project site must not be greater than pre-development flows.[3] To reduce flows to below or equal to pre-development conditions, the on-site stormwater flows would be routed to the on-site detention basin and infiltration trench before flows are routed off-site. While the increase in impervious surfaces attributable to the proposed project would contribute to a greater volume and higher velocity of stormwater flows, the proposed project's drainage system (landscaped buffers, detention basin, and an infiltration trench) would accept and accommodate runoff that would result from project construction at pre-project conditions, with the exception of the 2-year/24-hour scenario.

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1 As part of the MS4 Permit issuance requirements, projects must identify any Hydrologic Conditions of Concern and demonstrate that changes to hydrology are minimized to ensure that post-development runoff rates and velocities from a site do not adversely impact downstream erosion, sedimentation or stream habitat.

2 A detention basin is an area where excess stormwater is stored or held temporarily and then slowly drains when water levels in the receiving channel recede. In essence, the water in a detention basin is temporarily detained until additional room becomes available in the receiving channel.

3 As part of the MS4 Permit issuance requirements, projects must identify any Hydrologic Conditions of Concern and demonstrate that changes to hydrology are minimized to ensure that post-development runoff rates and velocities from a site do not adversely impact downstream erosion, sedimentation or stream habitat.

As discussed and identified in Section 4.7 (Hydrology and Water Quality) of this EIR, although post-development flows associated with the 2-year/24-hour event would exceed pre-development conditions, it is anticipated that such flows would not result in significant negative impacts to downstream property owners or to stream habitat through downstream erosion or sedimentation. As identified in the WQMP prepared for Phase 3, the stormwater drainage system would be designed so that post-development velocities are the same or less than pre-development velocities. Therefore, impacts associated with this issue are less than significant for the Phase 3 site and no mitigation is required. Phase 3 would not require interim drainage infrastructures features as all stormwater flows would be routed to the existing Perris Valley Line G (adjacent to the I-215).

All Phases. As previously identified, the total project area includes the three development sites plus the area incorporating the proposed infrastructure improvements. As indicated in the previous analysis, the three phases would not result in significant impacts to drainage patterns or drainage capacity. In addition to the development of these three sites, the proposed project would also construct improvements to Ethanac Road, 4th Street, Goetz Road, Ellis Avenue, Mountain Avenue, "A" Street, Mapes Road, and Case Road. The improvements to these roadways would not result in significant drainage pattern or drainage capacity impacts as these improvements would occur along existing roadways and would not increase roadway capacity (i.e., the construction of additional lanes) or realign existing roadways. Similarly, the proposed project would also install associated water and sewer infrastructure for the three sites. These water and sewer infrastructure improvements would not have a significant impact on drainage patterns or drainage capacity impacts as such improvements are anticipated to be located in existing roadways. Therefore, the proposed project would have a less than significant level on drainage patterns and drainage capacity. No mitigation would be required.

As previously identified, on-site drainage improvements for each of the three projects sites would be constructed. Site-specific drainage would be adequately sized to route stormwater flows generated on-site to appropriate off-site stormwater facilities such as underground pipes and channels. In addition to these site-specific drainage infrastructure features, the proposed project would also include construction of interim drainage for the Phase 1 and Phase 2 sites. Flows for Phases 1 and 2 would be routed through to interim stormwater infrastructure (e.g. underground piping and channels) proposed along Goetz Road between Mountain Avenue and Watson Road. Flows routed to the interim drainage along Goetz Road would ultimately be discharged into the San Jacinto River. Phase 3 would not require interim drainage as all stormwater flows would be routed to existing facilities adjacent to the I-215.

Similar to what was identified for water and sewer infrastructure improvements, the implementation of the proposed drainage improvements would not have a significant impact as the installation of these infrastructure features would occur concurrently with the associated roadway frontage improvements in the project study area.

As detailed in previously referenced Table 4.7.J, the project site would require a minimum storage volume of 13.6 acre-feet to adequately contain and store the greatest volume that would be generated during the 2-year, 5-year, 10-year, and 100-year storm events. The proposed project would allocate approximately 20.3 acre-feet of storage area on the project site (9.6 acre-feet of storage for Detention Basin 1 on the northern portion of the site and 10.7 acre-feet of storage area for Detention Basin 2 on the southern portion of the site). The proposed amount of storage area (20.3 acre-feet) is greater than the required amount of storage area identified in Table 4.7.J (13.6 acre-feet). Because there is an excess capacity of 6.7 acre-feet (20.3 acre-feet – 13.6 acre-feet = 6.7 acre-feet) of storage area available from the on-site detention basins, it is reasonable to conclude that the proposed project would have adequate drainage capacity that would result in post-development flows being reduced to pre-development flows before leaving the project site. To ensure the project would have adequate drainage capacity, the following mitigation measure has been identified.

Mitigation Measure. Mitigation Measure 4.12.6.1A would ensure that the proposed project would not result in stormwater drainage flows that would require the construction of new stormwater drainage facilities or expansion of existing stormwater drainage facilities.

4.12.6.1A Prior to the issuance of a grading permit, the project proponent shall submit a detailed grading and drainage plan, with supporting engineering calculations, to the City Engineer for review and approval. The plans shall incorporate relevant requirements identified by the City, and/or identified in the Uniform Building Code, and/or site-specific geotechnical investigations. The plans shall provide evidence that the storm drainage system would be adequate to convey water for the design storm event (as specified by the City) from the project site.

Level of Significance after Mitigation. Adherence to **Mitigation Measure 4.12.6.1A** would ensure potential impacts associated with stormwater drainage capacity remain at a less than significant level.

4.12.7 Cumulative Impacts

4.12.7.1 Water Supply

The cumulative area for water supply-related issues is the EMWD service area. Existing and future development within the EMWD's service area would demand additional quantities of water. The adopted UWMP (2005) projects population within the EMWD service area to increase to 943,567 persons by the year 2030. Increases in population, square footage, and intensity of uses would contribute to increases in the overall regional water demand. The anticipated conversion of water-intensive uses (i.e., agriculture) and the implementation of existing water conservation measures and recycling programs would reduce the need for increased water supply.

As previously identified, Metropolitan will continue to rely on the plans and policies outlined in its Regional Urban Water Management Plan (RUWMP) and Integrated Resource Plan (IRP) to address water supply shortages and interruptions (including potential shut downs of SWP pumps) to meet water demands. An aggressive campaign for voluntary conservation and recycled water usage, curtailment of groundwater replenishment water and agricultural water delivery are some of the actions outlined in the RUWMP. Metropolitan is maximizing supplies from existing agreements for water supply from its Palo Verde Crop Management and Water Supply Program and working with the State of Arizona in withdrawing water previously stored in their groundwater basin. In addition, Metropolitan's IRP supply portfolio includes pursuing water transfers as needed, such as the purchase of 200,000 acre-feet of previously stored SWP supplies in the San Bernardino groundwater basin.

Imported sources of water will be supplemented by an increase in desalination of brackish groundwater, recycled water use, and water use efficiency. Metropolitan has analyzed the reliability of water delivery through the SWP and the Colorado River Aqueduct. Metropolitan's IRP and RUWMP concludes that with the storage and transfer programs developed by Metropolitan, there will be a reliable source of water to serve its member agencies' needs through 2030. Because the EWMD would have water supplies for projected growth through 2030 in wet, dry, and multiple-dry years, cumulative impacts to water supply would be less than significant.

4.12.7.2 Wastewater

The cumulative area for wastewater-related issues is the PVRWRF service area. Cumulative population increases and development within the area serviced by the PVRWRF would increase the overall regional demand for wastewater treatment service. The current treatment capacity at the PVRWRF is 18 mgd. Improvements planned for this facility would increase capacity at this facility

from 18 mgd to 22 mgd by the year 2013. Ultimate expansion of this facility is expected to be 30 mgd. The PVRWRF is expected to have adequate capacity to service the City's wastewater needs through 2030. Because the PVRWRF would expand as growth occurred, cumulative development would not exceed the capacity of the wastewater treatment system.

Because the proposed project would not require the expansion of existing infrastructure, only connections to existing infrastructure, the contribution of the proposed project would not have a cumulatively significant impact on wastewater infrastructure. By adhering to the wastewater treatment requirements established by the Santa Ana RWQCB through the NPDES permit, wastewater from the project site that is processed through the PVRWRF would meet established standards. As the wastewater from all development within the service area of the PVRWRF would be similarly treated under the NPDES, no cumulatively significant exceedance of Santa Ana RWQCB wastewater treatment requirements would occur. The proposed project would not result in significant impacts to wastewater treatment or wastewater treatment facilities. Because the projected wastewater generation of industrial uses represents approximately 2.9 percent of the average wastewater surplus capacity, and because there are no projects that would, in combination with the proposed industrial uses, result in any significant impact related to wastewater treatment or cause significant environmental effects, no significant cumulative impacts associated with wastewater would occur.

4.12.7.3 Drainage

The cumulative area for drainage-related issues is the project study area. Cumulative population increases and development within the area would increase the amount of impervious surfaces and therefore the amount of stormwater runoff generated within the area. The City of Perris is in the process of preparing a Master Drainage Plan. The goal of the City's Master Drainage Plan (MDP) is to provide the project study area with a planned drainage system. The details of the MDP are unknown at this time. Therefore, like all other projects in the area, the proposed project can not rely on MDP improvements. All projects in the area are required to handle drainage without increasing downstream flows and velocities. Since all projects would similarly be required to control runoff and drainage features, the cumulative increase in development would not create a cumulatively significant increase in runoff. Cumulative development would not exceed the capacity of the planned drainage system. Because the proposed project would be required to have interim drainage infrastructure in place that would accommodate project related flows as would all cumulative developments in the area, the proposed project would not contribute to a cumulatively significant drainage impact.

5.0 OTHER CEQA TOPICS

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Table 5.A shows the significant unavoidable impacts anticipated to result from the proposed project, even with implementation of the project-specific mitigation measures identified in the Section 4.0 analysis.

Table 5.A: Significant Environmental Effects Which Cannot Be Avoided

Topic	Type of Impact	Impact
Air Quality	Construction Equipment Exhaust Emissions	Construction equipment emissions during proposed on-site grading and construction periods would exceed the SCAQMD daily thresholds for VOC, NO_X, and CO. Despite implementation of mitigation measures, project-related short-term construction emissions would remain significant and unavoidable for VOC, NO_X, and CO.
Air Quality	Construction Fugitive Dust Emissions	Fugitive dust emissions (PM_{10} and $PM_{2.5}$) during the grading periods would result in approximately 410.32 lbs/day and 119.60 lbs/day respectively, during the peak construction day and thus exceed the SCAQMD threshold of 150 pounds per day and 55 pounds per day during construction. With the implementation of standard regulations identified in SCAQMD Rule 403, fugitive dust emissions from construction activities are expected to be reduced by 50 percent or more. The proposed project will be required to comply with SCAQMD Rule 403 to control fugitive dust. With adherence to SCAQMD Rule 403 and implementation of mitigation measures, project-related fugitive dust emissions would be reduced; however, remain significant and unavoidable.
Air Quality	Localized Construction Emissions	Emissions of NO_x, PM_{10}, and $PM_{2.5}$ exceed the localized threshold that would occur for construction activity, while emissions of CO would not exceed the threshold. NO_x, PM_{10}, and $PM_{2.5}$ emissions are a significant impact requiring mitigation. Despite implementation of mitigation measures, estimated localized air emissions during construction of the project will remain significant and unavoidable for NO_X, PM_{10} and $PM_{2.5}$.
Air Quality	Operational Air Pollutant Emissions	Project-related emissions for CO, NO_X, VOC, PM_{10}, and $PM_{2.5}$ would exceed the SCAQMD daily emissions thresholds. Pollutant emissions of CO, NO_X, VOC, PM_{10}, and $PM_{2.5}$ that would exceed the SCAQMD thresholds may contribute to the maintenance of existing nonattainment status in the Basin. Although implementation of mitigation measures may reduce emissions associated with the proposed project, it is not possible to quantify the reduction in the amount of emissions that may occur. Estimated air emissions during operation of the project will remain significant and unavoidable for VOC, CO, NO_X, PM_{10}, and $PM_{2.5}$.
Air Quality	Localized Operational Emissions	Operational emission rates for NO_2 and CO are below the LST thresholds at 25 meters; however, operational emission rates for PM_{10} and $PM_{2.5}$ exceed the LST thresholds at 25 meters. The emissions of PM_{10} and $PM_{2.5}$ are a significant impact and require mitigation. Despite implementation of mitigation measures, estimated localized air emissions during operation of the project will remain significant and unavoidable for PM_{10} and $PM_{2.5}$.

Table 5.A: Significant Environmental Effects Which Cannot Be Avoided

Topic	Type of Impact	Impact
Air Quality	Cumulative Air Pollutant Emissions	Short-Term Air Quality Impacts: The cumulative area for air quality impacts is the South Coast Air Basin. The project would contribute criteria pollutants to the area during project construction. The South Coast Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, and ozone at the present time; therefore, the construction of the proposed project would exacerbate nonattainment of air quality standards within the South Coast Air Basin and contribute to short-term cumulatively significant air quality impacts. Global Climate Change: Although implementation of the detailed measures contained in this EIR may reduce the emission of greenhouse gases attributable to the project through vehicle emission reductions, vehicular trip reductions, HFC emission reductions, recycling programs, increases in building and appliance energy efficiencies, and decreased water use, it is not possible to specifically quantify the reduction in greenhouse gases that will result from implementation of the strategies and programs described above. Operational emissions of VOC, NO_X, and CO would continue to exceed the daily regional thresholds of significance recommended by the SCAQMD. Therefore, the City concludes that the project contribution to Statewide greenhouse gas impacts is cumulatively considerable.
Traffic	Long-Term Freeway Mainline Impacts	The traffic impact analysis prepared for this project concludes that several segments of the I-215 Freeway would operate at LOS E or F even without the project at cumulative long-range (2030) conditions. The project's contributions to cumulative impacts under long-range (2030) conditions are relatively de minimis, involving only a small percentage of the forecast traffic occurring on the identified segments at long-range (2030) conditions. Because the City of Perris has no control over State facilities, and because the State facilities funded and planned to be developed under long-range (2030) conditions are already anticipated to operate at LOS E and F even without the proposed project, there are no further mitigation measures that can be imposed upon the project to mitigate its small cumulative contribution to significant impacts to the identified segments of I-215 under long-range (2030) conditions. Impacts remain significant and unavoidable.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

The *CEQA Guidelines* mandate that the EIR must address any significant irreversible environmental changes which would be involved in the proposed action should it be implemented (*CEQA Guidelines*, §15126(c)). An impact would fall into this category if:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
- The project involves uses in which irreversible damage could result from any potential environmental incidents associated with the project; and/or
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether the proposed project may result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. The Phase 1 site of the proposed project is identified as

containing developed/disturbed vegetation (primarily consisting of ornamental landscaping). The Phase 2 and Phase 3 sites of the proposed project historically have been used for agricultural purposes such as dryland farming of grain and seed crops such as barley, cereal rye, oats, and wheat.[1] However, as identified within the City's General Plan, the City envisages land uses that would generate jobs and revenue while expanding the availability of goods and services and the proposed project would permanently alter the site by converting predominantly agricultural uses to urban uses. This is a significant irreversible environmental change that would occur as a result of project implementation. Because no significant mineral resources were identified within the project limits, no significant impacts related to these issues would result from development of the project site. Natural resources in the form of construction materials would be utilized in the construction of the proposed project and energy resources in the form of electricity and natural gas would be used during the long-term operation of the project; however, their use is not expected to negatively impact the availability of these resources as the project remains consistent with the City's General Plan land use designation indicating that growth has been anticipated by the City.

5.3 GROWTH INDUCEMENT

CEQA requires a discussion of ways in which the proposed project could be growth inducing. The *CEQA Guidelines* identify a project as growth inducing if it fosters economic or population growth, or the construction of additional housing either directly or indirectly in the surrounding environment (*CEQA Guidelines* Section 15126.2[d]). New employees from commercial or industrial development and new population from residential development represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

A project could indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors. Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment.

A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with the increase in project population and thus reducing or removing the barriers to growth. This occurs in suburban or rural areas where population growth results in increased demand for service and commodity markets responding to the new population. This type of growth is, however, a regional phenomenon resulting from introduction of a major employment center or regionally significant housing project. Additional commercial uses may be drawn to the area by the increased number of residents in the area as a result of the project; however, it is expected that any such development would occur consistent with planned growth identified in the General Plan.

The extent to which the new jobs created by a project are filled by existing residents is a factor that tends to reduce the growth inducing effect of a project. Construction of the proposed project will create short-term construction jobs. These short-term positions are anticipated to be filled by workers who, for the most part, reside in the project area; therefore, construction of the proposed project will not generate a permanent increase in population within the project area. Utilizing 1 employee per 2,500 square feet of warehousing space,[2] the proposed project is expected to employ 2,960 people.[3]

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1 Phase 1 Environmental Site Assessment 215 Acres of Agricultural Land, Advantage Environmental Consultants, LLC, October 3, 2007.

2 Inland Empire Distribution Center Operations Profile, WCL Consulting, June 10, 2008. 2,500 square feet per employee is an average of the Inland Empire rates.

3 1 employee per 2,500 square feet, 7,399,291 square feet ÷ 2,500 square feet = 2,960 employees.

The California Department of Finance (DOF) estimates the City's current (2008) population at 53,605 persons.[1] SCAG projections estimate the population of the City, western Riverside County (Western Riverside Council of Governments [WRCOG]), and southern California (Southern California Association of Governments [SCAG]) will continue to grow. SCAG projects the City's population will grow to 55,799 persons by the year 2010 and 84,881 persons by the year 2030 (Table 5.B).

Table 5.B: Population, Housing, and Employment Forecasts

	2010	2020	2030
Population			
City of Perris	55,799	71,468	84,881
WRCOG	1,735,426	2,096,544	2,414,256
SCAG	19,208,661	21,137,519	22,890,797
Housing Units			
City of Perris	15,834	20,601	24,615
WRCOG	589,689	726,846	841,388
SCAG	6,072,578	6,865,355	7,660,107
Employment			
City of Perris	18,045	20,315	25,370
WRCOG	588,523	797,626	1,005,923
SCAG	8,729,192	9,659,847	10,527,202

Source http://:www.scag.ca.gov/forecast/downloads/2004GF.xls, 2004, and
http://www.wrcog.cog.ca.us/downloads/wrcogsubregforecast.pdf date accessed March 13, 2008.

The jobs-to-housing ratio measures the extent to which job opportunities in a given geographic area are sufficient to meet the employment needs of area residents. This ratio identifies the number of jobs available in a given region compared to the number of housing units in the same region. For example, a region with a jobs-to-housing factor of 1.5 would indicate that 1.5 jobs exist for every housing unit within that region. The standard used for comparison is the jobs-to-housing ratio of the SCAG region, which is 1.34 jobs for every household. This standard is used because most residents of the region are employed somewhere in the SCAG region. A City or sub-region with a jobs-to-housing ratio lower than the overall standard would be considered a "jobs poor" area, indicating that many of the residents must commute to places of employment outside the sub-area. The current and potential jobs/housing ratios for the City, WRCOG, and SCAG are shown in Table 5.C.

Table 5.C: Projected Future Jobs/Housing Ratios

	2010 Jobs/Housing Ratio	2030 Jobs/Housing Ratio
City	1.14	1.03
Riverside County	1.18	1.20
SCAG	1.43	1.37

*Using Southern California Associated Governments' most recently adopted forecasts, the housing and employment estimates for 2010 are the closest to the current year for which the SCAG provides information; therefore, the 2010 estimates are used to calculate the jobs-to-housing ratio.

The 2010 projected jobs-to-housing ratios for the City, sub-region, and region are 1.14, 1.18, and 1.43, respectively. The 2030 future jobs-to-housing ratios for the City, sub-region, and region are 1.03, 1.20, and 1.37, respectively. These ratios indicate that both Western Riverside County and the

[1] State of California, Department of Finance, *E-4 Population Estimates for Cities, Counties and the State, 2001-2008, with 2000 Benchmark.* Sacramento, California, May 2008.

City of Perris are “jobs poor” because the jobs-to-housing ratios are below the Southern California region (as defined by SCAG). Given the fact that the City and the WRCOG are considered to be jobs-poor regions, it is expected that the short-term construction jobs and long-term jobs created by the proposed project will be filled by current local residents; therefore, there would be little migration to the area and, consequently, little effect on local population size. Because of the population of the City and the employment base, even if a large number of people were to relocate to the area because of employment opportunities created within the project area, no significant effect on the size of the local population would occur.

The project sites do not include a residential component. The proposed project sites are located within an area that is currently home to industrial uses and planned for industrial uses in accordance with the General Plan. Streets, water and sewer utilities, and municipal services would be expanded to serve the proposed project. The street, water, and sewer infrastructure improvements will benefit other development projects in the project area, and therefore, could potentially induce additional business and job growth. For example, growth inducement could occur when an impediment to growth, such as a lack of basic infrastructure or services, is removed by construction of infrastructure or services. However, because the project area is currently under-served in terms of street, water, and sewer infrastructure and/or service provisions, it can be argued that the construction of such facilities as part of the project would not be growth inducing. However, in an abundance of caution, the City has determined that the project is growth inducing because it would induce growth through construction of needed infrastructure and thus remove an impediment to growth within the project area.

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6.0 ALTERNATIVES

6.1 INTRODUCTION

An EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment. In compliance with *CEQA Guidelines* Section 15126.6(a), this ~~Draft~~ EIR must also describe "a range of reasonable alternatives to the project, or to the location of the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project." The EIR need not consider every conceivable alternative; rather it must consider a reasonable range of potentially feasible alternatives to the project, or to the location of the project, which would avoid or substantially lessen significant effects of the project, even if "these alternatives would impede to some degree the attainment of the project objectives, or would be more costly" (*CEQA Guidelines* Section 15126.6(b)). The discussion of project alternatives must "include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project." An EIR must evaluate a "No Project" alternative in order to allow decision-makers to compare the effect of approving the project to the effect of not approving the project.

The City, acting as the CEQA Lead Agency, is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. The range of alternatives addressed in an EIR is governed by a "rule of reason," which requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. Of the alternatives considered, the EIR need examine in detail only those the Lead Agency determines could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Per *CEQA Guidelines* Section 15364, "feasible" has been defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

6.1.1 Project Objectives

The purpose of the proposed project is to provide new facilities that specialize in warehouse distribution services. Upon development, the proposed project will achieve the following:

- Create employment-generating opportunities for the citizens of Perris and surrounding communities;
- Encourage industrial development as attractive and productive uses while minimizing conflicts with the surrounding existing uses;
- Encourage warehouse distribution services that take advantage of the area's close proximity to various freeways and transportation corridors;
- Provide the infrastructure improvements required to meet project needs in an efficient and cost-effective manner;
- Encourage new development consistent with the capacity and municipal service capabilities;
- Provide a high density, high-quality large-scale industrial development to provide jobs for residents at a variety of income levels;
- Facilitate the efficient and cost-effective movement of goods in and through the City, which, in turn, allows the City to compete economically on a domestic and international scale;
- Provide oversized street and highway improvements that facilitate the movement of goods and vehicles within and through the City;

- Provide industrial warehouse facilities that meet the substantial and unmet demands of businesses located in the City and County;
- Cluster industrial warehouse uses near efficient access points to the state highway system to reduce traffic congestion on surface streets and to reduce concomitant air pollutant emissions from vehicle sources;
- Implement the City's General Plan Industrial Land Use designations that are largely applicable to the sites;
- Accommodate new development that channels land uses in a phased, orderly manner and is coordinated with the provision of necessary infrastructure and public improvements;
- Provide new development that will assist the City in obtaining fiscal balance in the years and decades ahead; and
- Address community circulation, both vehicular and pedestrian, utilizing available capacity within the existing circulation system, and provide fair share improvements to various future-year deficient intersection or road segments.

6.1.2 Summary of Proposed Project Significant Impacts

The analysis provided in Section 4.0 determined that, despite the implementation of mitigation measures, remaining significant and unavoidable environmental impacts would result from the construction and operation of the proposed on-site uses. To satisfactorily provide the CEQA-mandated alternatives analysis, the alternatives considered must reduce the following project-related significant impact(s):

- Construction equipment exhaust emissions of VOC, NO_X, and CO during construction operations;
- Fugitive dust emissions of PM_{10} and $PM_{2.5}$ during construction operations;
- Localized construction emissions of NO_X, PM_{10}, and $PM_{2.5}$ during construction activities;
- Long-term operational emissions of CO, NO_X, VOC, PM_{10} and $PM_{2.5}$ resulting from increased vehicular trips and operation of the proposed on-site uses;
- Localized operational emissions of PM_{10} and $PM_{2.5}$ resulting from increased vehicular trips and operation of the proposed on-site uses;
- Cumulative emissions of greenhouse gases on global climate change; and
- Cumulative freeway mainline traffic under long-range (2030) conditions.

6.2 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR ANALYSIS

In determining an appropriate range of alternatives to be evaluated in the EIR, one possible alternative was considered and rejected because the alternative could not accomplish the basic objectives of the project as listed above or it was considered infeasible. Per the *CEQA Guidelines* (Section 15126.6(c)), factors that may be considered when addressing the feasibility of alternatives include failure to meet most of the stated project objectives, infeasibility, or inability to avoid significant environmental effects. One of the objectives of the proposed project is to provide for and expand employment and revenue opportunities within the City of Perris. The proposed project would expand employment options in a location that is convenient to existing and future City residents and would augment the City's economic base. The following development scenario was considered and rejected as a potential alternative to implementation of the proposed project:

- Off-Site Location Alternative.

Based on Section 15126.6 of the *CEQA Guidelines*, the following alternative was rejected based on the criteria of not being reasonable or not feasibly attaining most of the basic objectives of the project while reducing or avoiding any of the significant effects of the proposed project. The reason or reasons for not selecting the rejected alternative is discussed below.

6.2.1 Off-Site Alternative

Under CEQA, factors that may be considered when addressing the feasibility of alternatives, including the off-site location alternative, include: the suitability of the site; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and whether the project proponent can reasonably acquire, control, or otherwise have access to the alternative site.

Locating the proposed project on another site within the City would most likely achieve the project objectives stated above, including the expansion of warehousing opportunities, increased revenue to the City, and new employment opportunities. As stated in the *CEQA Guidelines* (§15126.6[f][2]), "…The key questions and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or lessen any of the significant effects need to be considered for inclusion in the EIR." The analysis of alternative sites included 1) inquiries into the availability of the sites under the control of the applicant that could accommodate the proposed use, 2) an assessment of sites in the City that would also be suitable for the development as proposed, and 3) an identification of sites outside the City (in unincorporated parts of Riverside County) that were appropriately zoned/General Plan designated to accommodate the proposed project.

The project proponent owns three sites in the project region suitable for industrial warehouse development. These sites are located outside of the City of Perris in the City of Moreno Valley and include 56 acres at the northwest corner of Indian Street and Nadina Avenue, 39 acres at the northwest corner of Nandina Avenue and Perris Boulevard, and 74 acres at the southwest corner of Iris Avenue and Indian Street. The total land holdings that comprise of these three sites would be 169 acres. The proposed project would require approximately 454.7 acres to develop approximately 7,399,291 square feet of industrial warehouse space. The land holdings outside of the City are approximately 37 percent of the total land needed for the proposed project. Therefore, these sites would not be able to accommodate the entire proposed project. In addition, although these sites could involve some combination of proposed buildings, these sites are not within the City of Perris. Therefore, no property under the control of the project proponent is available for use as an alternative site within the City.

There is a group of industrial zoned parcels in the northern part of the City (bounded by Indian Avenue on the west, Markham Street on the south, Webster Avenue on the east, and Oleander Avenue on the north) which are industrial zoned. However, there are approximately 28 different parcels within this group under different owners. In addition, the total amount of land within this group of industrial zoned parcels is approximately 145 acres. This amount of acreage would not be able to fully accommodate the proposed uses. Other areas zoned for industrial use have similar constraints as the parcels are too small to accommodate the project. Therefore, although there are places in the City zoned for industrial uses, based on existing aerials of the City and the Riverside County Land Information System Database, there are no other parcels or group of parcels of industrial zoned land that are sufficiently sized to accommodate the proposed use.

The Riverside County Land Use Element dictates the ultimate pattern of development within unincorporated areas of the County. Unincorporated areas south east of City are located within the Lakeview/Nuevo Area Plan (LV/NAP). Unincorporated areas not located within an Area Plan (e.g., in

the vicinity of March Air Reserve Base) have been designated for Business Park,[1] Light Industrial,[2] or Commercial Office[3] uses by the County. Because the City has no legal authority to approve land use changes in unincorporated areas, the effort to locate potential alternative sites in unincorporated areas was restricted to areas designated by the County General Plan for industrial uses. This area is located along Ellis Avenue, Antelope-Dawson Road, and San Jacinto Avenue.

The predominant land use designation within this area is residential uses. Light Industrial uses within this area are generally limited to pockets located along Ellis Avenue, Antelope-Dawson Road, and San Jacinto Avenue. Light Industrial uses allow development of industrial and related uses including warehousing/distribution, assembly and light manufacturing, repair facilities, and supporting retail uses with a floor to area ratio (FAR) ranging from 0.25 to 0.60.[4] A field survey in these areas identified that these areas either, 1) were not of a sufficient size to support the proposed industrial development; or 2) were located in relatively close proximity to sensitive (single-family residential) uses. Because of these limitations, it is anticipated that the air quality, noise, and land use impacts associated with development of a site in an unincorporated area would exceed the impacts associated with development of the project at the proposed project site.

Despite a reasonable attempt, an alternative location for the proposed project has not been identified. Alternative locations considered were either unavailable for development, would not feasibly accommodate a project such as the proposed project, or would not reduce the significant impacts associated with the proposed project. Therefore, the off-site alternative has been rejected and was not considered further.

6.3 ALTERNATIVES ANALYSIS

The following alternatives have been identified and evaluated to provide decision-makers with a reasonable range of alternatives that would eliminate or reduce the impacts of the project. Factors considered in selecting the alternatives include site suitability, availability of infrastructure, other plans or regulatory limitations, economic viability, and whether the project proponent can reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote or speculative. In accordance with *CEQA Guidelines*, the alternatives considered in this EIR include those that 1) could accomplish most of the basic objectives of the project, 2) are reasonably feasible given the nature of the project and surrounding land uses, and 3) could avoid or substantially lessen one or more of the significant effects of the project. The following development scenarios have been identified as potential alternatives to implementation of the proposed project:

- Alternative 1: No Project Alternative;
- Alternative 2: Reduced Intensity Alternative; and
- Alternative 3: Elimination of Rail Component Alternative.

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1 The Business Park (BP) land use designation allows for employee-intensive uses, including research and development, technology centers, corporate and support office uses, "clean" industry and supporting retail uses. Building intensity ranges from 0.25 to 0.6 floor area ratio (FAR).

2 The Light Industrial (LI) land use designation allows for a wide variety of industrial and related uses, including assembly and light manufacturing, repair and other service facilities, warehousing, distribution centers, and supporting retail uses. Building intensity ranges from 0.25 to 0.6 FAR.

3 The Commercial Office (CO) land use designation allows for a variety of office uses, including financial institutions, legal services, insurance services, and other office and support services. Commercial Office uses will be permitted based on their compatibility with surrounding land uses. Floor area ratios range from 0.35 to 1.0.

4 *Table 1 Land Use Designations Summary, Lakeview/Nuevo Area Plan,* Riverside County Integrated Project, http://www.rctlma.org/genplan/content/ap2/lnap.html#List_2_1, website accessed January 22, 2009.

Table 6.A: Summary of Analyzed Alternatives

Project Alternative	Alternative Description
Alternative 1: No Project	The sites would be left in their existing condition, with continuation of the concrete bridge manufacturing business on the Phase 1 site and agricultural uses on the Phase 2 and 3 sites.
Alternative 2: Reduced Intensity	Total warehouse uses would be reduced by 25% to 5,549,468 square feet on 454.7 acres.
Alternative 3: Elimination of Rail Component	This alternative would result in the same amount development (7,399,291 square feet of distribution facility uses) on the same amount of acreage (454.7 acres). The rail component associated with Phase 2 would be eliminated under this alternative.

Source: LSA Associates, Inc. 2009

6.3.1 Environmental Impact Issues that are Generally Similar to the Proposed Project

Ten of the seventeen environmental issues for the build alternatives considered would result in a similar level of impact when compared to the project. Because the No Project Alternative contemplates no change in existing conditions, all impacts associated with the proposed project would be greater than the No Project Alternative. Rather than repeat a discussion of these impacts under each alternative, a summary of the following impact is provided below.

- Aesthetics;
- Agricultural Resources;
- Biological Resources;
- Cultural and Paleontological Resources;
- Geology and Soils;
- Hydrology and Water Quality;
- Hazards and Hazardous Materials;
- Land Use and Planning;
- Mineral Resources; and
- Recreation.

The level of impact associated with these topics would be similar if the sites were developed as proposed or if developed with any of the build alternatives. Where impacts related to any of these issues differ, an appropriate discussion is provided for analysis of the respective alternative. Analysis for the No Project Alternative will be discussed separately.

6.3.1.1 Aesthetics

The installation of on-site lighting to accommodate nighttime activities and for safety purposes would be required for any of the build alternatives. Similar to the proposed project, potential impacts from spillover light may occur on adjacent properties. However, because no substantial difference in the type, location, intensity of lighting under the build alternatives exists, adherence to these design standards would ensure that on-site lighting impacts would remain less than significant. Similarly, any of the build alternatives would have buildings with a similar mass and design that would result in changes in existing views. However, similar to the proposed project, any of the build alternatives would be required to comply with design standards, such as setbacks, building height, lot dimensions, and maximum lot coverage contained in the City of Perris Zoning and Municipal Codes. Therefore, when compared to the proposed project, all on-site build alternatives would have a similar magnitude of impacts associated with aesthetic resources.

6.3.1.2 Agricultural Resources

Development of any of the build alternatives would have similar agricultural-related impacts. As identified in Section 4.2 of the EIR, the development of the project site with urban uses would result in the conversion of fallow farmlands. The agricultural acreage inventoried in Riverside County by the FMMP has declined in each of the five past reporting cycles. Similarly, the total planted acreage in Riverside County has decreased every year over the past five years. While agricultural land is a finite resource, the City, through its designation of the sites for non-agricultural uses in its 1991 and 1995 General Plans has previously considered that continuing development pressures in the City and region would result in the conversion of agricultural land to non-agricultural uses. The value of agricultural crops produced in the County during 2007 totaled $1.257 billion. The limited nature of the existing agricultural activity does not significantly contribute to the overall economic viability of the City or County. The utilization of the property sites for low quality agricultural activity would impede the City from achieving the goals and objectives set forth in its General Plan. The City has recognized (as evidenced in its General Plan Land Use Element and the absence of agricultural preservation mitigation program) that the eventual conversion of agricultural uses within the City would occur and is in fact planned for. Therefore, compared with the proposed project, any on-site build alternatives would have a similar less than significant impact on agricultural resources.

6.3.1.3 Biological Resources

No occurrence of any federal or state endangered/threatened species was detected during the focused biological resource surveys conducted within the BSA. The basins and pool complexes within the BSA do not possess required habitat requirements and do not meet the MSHCP definition of Riparian/Riverine Habitat. One special status species (smooth tar plant) was identified within the BSA and is covered under the MSHCP. However, the locations where the smooth tar plant was found are not within the project's proposed area of disturbance; therefore, the development of the proposed uses would not impact the habitat for any special status plant species.

Implementation of the proposed project would result in permanent impacts to 0.11 of non-wetland waters of the United States. Additionally, the proposed project would permanently impact and 0.33 acre (602 linear feet) of CDFG jurisdiction non-riparian streambed. **Mitigation Measures 4.4.6.1A** through **4.4.6.1B** would reduce impacts to a less than significant level. Impacts to Stephens' kangaroo rat, the California horned lark, loggerhead shrike, and the burrowing owl would be less than significant through payment of fees and implementation of mitigation measures. Due to the disturbed condition of the development sites and adjacent areas, development of the proposed project will not result in significant habitat fragmentation or substantially affect established wildlife corridors or wildlife movement.

Development of any of the build alternatives would result in similar biological resource impacts when compared to the proposed project as the build alternatives would require disturbance of the project sites. Adherence to the biological resource mitigation measures identified for the proposed project in Section 4.4 of this EIR would reduce impacts to a less than significant level. Compared with the proposed project, no greater impact would occur with any of the on-site build alternatives.

6.3.1.4 Cultural Resources

Development of any of the build alternatives would result in extensive ground-disturbing activities affecting the project sites and similar archaeological and paleontological impacts would be anticipated when compared to the proposed project. While no such resources have previously been detected within the project limits, activities undertaken for all build alternatives (as with the proposed project) could encounter previously undetected cultural or paleontological resources. Adherence to the archaeological and paleontological mitigation measures identified for the proposed project in Section

4.5 of this EIR would reduce impacts to less than significant. Compared with the proposed project, no greater impact would occur with any of the on-site build alternatives.

6.3.1.5 Geology and Soils

Development of any of the build alternatives would have similar geologic and soil-related impacts. Like all of southern California, the project sites are located in a seismically active area and are subject to ground shaking resulting from activity on local and regional faults. However, any building constructed under the build alternatives would be required to conform to the Uniform Building Code (UBC) standards as well as the California Building Code (California Code of Regulations, Title 24) which establish engineering standards appropriate for seismic zone 4. Impacts associated with this issue would be considered less than significant. Compared with the proposed project, no greater impact would result from development of the on-site build alternatives.

6.3.1.6 Hazards/Hazardous Materials

Development of the any of the build alternatives would still result in the on-site handling of hazardous substances, both during project construction and operation. It is assumed that, like any current use, these substances would continue to be applied in accordance with applicable local, state, and federal standards. With the adherence to existing hazardous materials regulations, impacts associated with hazards and hazardous materials under any of the build alternatives would remain less than significant.

6.3.1.7 Hydrology and Water Quality

As with the proposed project, the development of any of the build alternatives would require the modification of the existing on-site pattern of drainage and would require the installation of drainage improvements that may include detention/retention basins, connection to existing in-street drainage features, on-site storm drains, and other features. While the extent of the impermeable surfaces (parking area) required under each alternative is reduced from that required for the proposed project, the environmental impact of these improvements would be similar. All local, state, and federal policies and regulations pertaining to surface water and groundwater resources would remain in effect under these alternatives. Sedimentation and erosion from any on-site development has the potential to affect water quality. Similar to the proposed project, the construction of any on-site use would be required to follow applicable NPDES requirements, including the preparation of and adherence to an SWPPP and BMPs. As with the proposed project, runoff from paved surfaces, especially during a "first-flush" event, may be contaminated by a mixture of sediment, debris, and other contaminants. A standard condition with any such development would be preparation and implementation of a Water Quality Management Plan, which would effectively mitigate post-construction water quality impacts from the developed area. Similar to the proposed project, potential impacts related to hydrology and water quality would be less than significant.

6.3.1.8 Land Use and Planning

Development of any of the build alternatives would have similar impacts as identified for the proposed project. As identified for the proposed project, Phase 1 and Phase 2 sites are designated as General Industrial in the City of Perris General Plan. Phase 3 is within the New Perris Specific Plan and is zoned for industrial and commercial uses. The commercial designation covers an 8 acre area located in the northwest corner of the Phase 3. Entitlements for Phase 3 would include a General Plan Amendment and Zone Change from Specific Plan to General Industrial. Similarly, Alternative 2 (Reduced Intensity) and Alternative 3 (Elimination of Rail Component) would require a zone change and General Plan Amendment to the Phase 3 for the 8 acres that are currently zoned for commercial

uses. Like the proposed project, these alternatives would comply with applicable provisions of local and regional plans (e.g., Water Quality Control Plan, AQMP, and MSHCP). Compliance with applicable City policies related to development within the project site would ensure that on-site alternative uses would be compatible with existing development in the project area. Land use impacts associated with these alternatives would be similar in magnitude when compared with the proposed project.

6.3.1.9 Mineral Resources

The City of Perris General Plan does not identify the project sites as locally important mineral resource recovery site. Development of the project sites with any build alternatives would not result in the loss of or reduce the availability of mineral resources or the resource base from which they would be derived. Compared with the proposed project, no greater impact would occur for any of the project build alternatives.

6.3.1.10 Recreation

As with the proposed project, none of the build alternatives would include a residential component and that the warehouse jobs generated by the build alternatives would be filled by people already residing in the City. Therefore, there would be no increase in existing population and no increase in demand for park and recreation facilities resulting from development of Alternatives 2 and 3. Because no increase in demand for recreational facilities would occur, impacts associated with recreation for any of the build alternatives would be similar in magnitude as the proposed project. Compared with the proposed project, no greater impact would occur for any of the project build alternatives.

6.3.2 Description and Impact Analysis of Alternatives

The following discussion compares the impacts of each alternative with the impacts of the proposed project, as detailed in Section 4.0 of this EIR. A conclusion is provided as to whether each alternative would result in one of the following:

- Reduction or elimination of the impact;
- A greater impact than the proposed project;
- The same impact as the proposed project; or
- A new impact in addition to the impacts of the proposed project.

6.3.2.1 Alternative 1: No Project

Pursuant to CEQA (§15126.6[e][2]), the No Project Alternative should discuss what would reasonably be expected to occur, based on current plans and consistent with available infrastructure and community services, in the foreseeable future. Under the No Project Alternative, the proposed project would not be carried forward. Due to the current economic recession and associated land development slow down, it is unlikely that the subject properties would be developed as identified in the City's General Plan in the foreseeable future for two interrelated reasons. First, it is unlikely that another industrial developer would propose development of all three sites simultaneously given the current economic recession. Second, the lack of existing road, sewer, water, and drainage infrastructure is an impediment to development within the project vicinity. It is unlikely that a developer would include as part of its project a set of Master Plans for infrastructure improvements necessary to accommodate land development within the project area. Therefore, for purposes of analysis, the No Project Alternative assumes that the proposed project would not be carried forward and the sites would remain in their existing conditions. The concrete bridge manufacturing business

would continue on the Phase 1 site; while fallow farmland would continue on the Phase 2 and 3 sites. This alternative represents baseline against which the impacts of the proposed project would be measured. Because no new development would occur under this alternative within unincorporated areas, none of the existing roadways or infrastructure facilities would be expanded.

Impact Analysis. Because the No Project Alternative would result in no additional impacts to the environment, all environmental issues would be less than those identified for the proposed project. However, since there is existing development on the Phase 1 site that would remain under this alternative, the following impact analysis provides a quantitative analysis as a means to disclose what the existing development on the project sites produces, emits, or otherwise utilizes.

Air Quality. Under the No Project Alternative, no land would be graded; therefore, no construction emissions from the development of the alternative would occur. Since Phase 1 is developed with a concrete bridge fabrication facility, air pollutants would still occur as they currently exist. As indicated in Table 6.B, the volume of each operational pollutant emitted during existing conditions would be less than what would occur under the proposed project.

Table 6.B: Alternative 1 Operational Emissions

Source	Pollutant Emissions, lbs/day					
	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project	3,733	591	3,725	11	817	264
Alternative 1	1.43	0.13	0.91	0.0	0.12	0.02
Net Change	-3,731	-591	-3,724	-11	-817	-264
SCAQMD thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Alt. 1 exceeds thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., January 2009.

As previously stated, Alternative 1 would result in the continuance of the existing conditions of the project sites. Operational air quality emissions would be greater under the proposed project when compared to the existing operations only.

Noise. Under the proposed project, construction-related noise impacts were reduced to a less than significant level through the implementation of mitigation measures. Under this alternative, no construction would occur since the alternative would result in the continuation of existing conditions on the project sites; therefore, there would be no construction noise impacts associated with Alternative 1. As with the proposed project, the No Project Alternative would have truck deliveries and noise that would be generated during the operation of the concrete bridge fabrication facility on Phase 1. However, this noise currently occurs and is considered to be a part of existing ambient conditions. Therefore, the proposed project would generate more noise than the No Project Alternative.

Public Services. Implementation of the No Project Alternative would result in the continuance of existing conditions on site. Development under this alternative already resulted in payment of development impact fees for schools, police services, and fire services. Therefore, when compared to the proposed project, impacts associated with public services would remain less than significant.

Traffic. As indicated in Table 6.C, the No Project Alternative currently generates approximately 7 daily trips and 3 p.m. peak hour trips.

Table 6.C: Comparison of Average Daily and PM Peak Hour Trips

Type of Development	PM Peak Hour	Average Daily Trips
Proposed Project	813	11,915
Alternative 1 (No Project)	3	7
Alternative 2 (Reduced Intensity)	610	8,936
Alternative 3 (Elimination of Rail Component)	813[1]	11,969

[1] Uses assumption that additional truck traffic does not travel during the p.m. peak hour.
Source: LSA Associates, Inc., January 2009.

As identified in Table 6.C, Alternative 1 would maintain existing traffic volumes and would therefore generate less daily vehicle trips than the proposed project. Since these vehicle trips are part of the existing baseline condition, no traffic impacts associated with this alternative would occur. Cumulative traffic impacts to freeway mainlines would still occur under this alternative. However, since existing traffic trips are considered to be part of existing conditions, the continuation of existing uses on the project sites would not contribute any additional traffic to freeways in the area. Therefore, traffic-related impacts are eliminated under this alternative.

Utilities and Service Systems. Some existing utility infrastructure for stormwater and wastewater is present in adjacent roadways or parcels. Implementation of this alternative would result in the continuance of existing uses on the project sites. Necessary infrastructure to support these developments is already installed and is subject to the terms and conditions of the City and EMWD. No master plans associated with potable water, sewer, recycled water, or drainage would be implemented under this alternative. Therefore, impacts associated with the implementation of these master plans would not occur.

As indicated in Table 6.D, the amount of water that would be utilized under the No Project Alternative is less than the water that would be utilized for the proposed project. The amount of water utilized by the No Project Alternative takes into account the existing concrete bridge fabrication facility on the Phase 1 site and agricultural uses on the Phase 2 and Phase 3 site. Therefore, when compared to the proposed project, this alternative would utilize less water and impacts related to water usage and water treatment/conveyance facilities are reduced in magnitude than what was identified for the proposed project.

Table 6.D: Comparison of Average Water Use

Type of Development	Gallons per day (gpd)
Proposed Project	363,960
Alternative 1 (No Project)	51,420
Alternative 2 (Reduced Intensity)	254,820
Alternative 3 (Elimination of Rail Component)	363,960

Source: LSA Associates, Inc. January 2009.

As identified in Table 6.E, the existing uses identified in the No Project Alternative would generate approximately 880 gallons of wastewater per day, which is significantly less than the amount of wastewater that would be generated by the proposed project. When compared to the proposed project, this alternative's demands on wastewater treatment and capacity at existing wastewater treatment facilities would be reduced in magnitude. In addition, the wastewater generated under this alternative has already been taken into account for the wastewater plant's treatment capacity.

Table 6.E: Comparison of Average Wastewater Generation

Type of Development	Gallons per day (gpd)
Proposed Project	147,985
Alternative 1 (No Project)	880
Alternative 2 (Reduced Intensity)	111,000
Alternative 3 (Elimination of Rail Component)	147,985

Source: LSA Associates, Inc. January 2009.

The No Project Alternative currently generates some solid waste. As identified in Table 6.F, the No Project Alternative currently generates 104 pounds of solid waste per day, which is less than what the proposed project would generate. The In addition, uses currently operating under the No Project Alternative already adhere to the provisions of the solid waste provider that service the project site.

Table 6.F: Comparison of Average Solid Waste Generation

Type of Development	Pounds per day (lb/day)
Proposed Project	10,148
Alternative 1 (No Project)	104
Alternative 2 (Reduced Intensity)	7,992
Alternative 3 (Elimination of Rail Component)	10,148

Source: LSA Associates, Inc. 2009

Global Climate Change. GHG emissions associated with the No Project Alternative are identified in Table 6.G. This alternative would generate 250 tons of carbon (CO_2), 0.0013 ton of methane (CH_4), and 0.0014 ton of nitrous oxide (N_2O) per year. The total CO_2 equivalent for this alternative is 0.00025 Tg/yr CO_2 Eq., which is less than the 0.145 Tg/yr CO_2 Eq. that would result from the operation of the proposed project. Impacts associated with global climate change would not occur as these activities are considered to be part of baseline conditions in global climate change policy documents.

Table 6.G: Comparison of Greenhouse Gas Emissions

Alternatives	Total CO_2 equivalent (Tg/yr CO_2 Eq.)*
Proposed Project	0.145
Alternative 1 (No Project)	0.00025
Alternative 2 (Reduced Intensity)	0.144
Alternative 3 (Elimination of Rail Component)	0.145

* Tg/yr CO_2 Eq. = teragrams or one million metric tons per year; this denotation is the standard metric unit utilized worldwide.
Source: LSA Associates, Inc and URS, 2009

Cumulative Impacts. The No Project Alternative would not result in ~~the permanent conversion of farmland,~~ long-term operational air pollutant emissions, or increased traffic operations on freeway segments. Since the No Project Alternative would result in the continuance of existing uses on the project site, no additional operational air pollutant emissions and traffic would occur. Cumulative greenhouse gas emissions associated with this alternative would not occur as the alternative anticipates the continuation of existing uses on the project sites. Since these existing uses would continue, no additional greenhouse gas emissions would occur from what currently exists.

Conclusion. Impacts associated with this alternative, when compared to the proposed project, would not occur as no additional development would be build under this alternative. In the absence of additional development, no impacts would occur.

6.3.2.2 Alternative 2: Reduced Intensity

With the intent of avoiding or substantially reducing significant impacts created by the project's traffic, air quality, and noise impacts, the City has considered a Reduced Intensity Warehouse Alternative. This alternative includes development of the three sites with approximately 5,550,000 square feet of industrial warehouse space, resulting in a 25 percent reduction in building area. Under this alternative, the proposed warehouse uses would represent a net decrease of approximately 25 percent (1,850,000 square feet) as compared with the proposed project.

Impact Analysis. As discussed previously, impacts to the following ten environmental issues would have similar impacts as for the proposed project. These include the following:

- Aesthetics;
- Agricultural Resources;
- Biological Resources;
- Cultural and Paleontological Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Mineral Resources; and
- Recreation

The remaining environmental issues would, in some cases, result in similar impacts, but would be different enough to be discussed separately.

Air Quality. Because the amount of land to be graded with Alternative 2 would be equal to that of the proposed project, a similar mix of equipment as the proposed project would operate during earthmoving activities. Therefore, construction emissions from the development of Alternative 2 would be similar to the proposed project, which is significant and unavoidable for CO, VOC, NO_X, PM_{10} and $PM_{2.5}$. Under this alternative, average daily traffic volumes would be reduced by 25 percent in comparison with the proposed project. As indicated in Table 6.H, the volume of each operational pollutant emitted during operation of this alternative would be correspondingly reduced. However, like the proposed project, operational emissions for CO, VOC, NO_X, PM_{10} and $PM_{2.5}$ would still exceed daily SCAQMD thresholds. Application of Leadership in Energy and Environmental Design (LEED) standards and green building design principles could reduce emissions from building operations such as heating and cooling; however, such standards and principles would not reduce CO, VOC, NO_X, PM_{10} and $PM_{2.5}$ emissions to below SCAQMD thresholds.

Table 6.H: Alternative 2 Operational Emissions

Source	Pollutant Emissions, lbs/day					
	CO	**VOC**	**NO_X**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project	3,733	591	3,725	11	817	264
Alternative 2	3,054	316	423	3.42	567	110
Net Change	-679	-275	-3,302	-8	-250	-154
SCAQMD thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Alt. 2 exceeds thresholds?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: LSA Associates, Inc., January 2009.

Although the volume of operational air quality emissions would be reduced when compared to the proposed project during operations only, impacts would remain significant and unavoidable.

Noise. Under the proposed project, construction-related noise impacts were reduced to a less than significant level through the implementation of mitigation. Under this alternative, a similar amount of land would be disturbed; therefore, noise impacts associated with the construction of this alternative would be similar to those identified under the proposed project. With the implementation of mitigation identified for the proposed project, the short-term construction-related noise impacts associated with this alternative would remain less than significant. As with the proposed project, the noise generated under the Reduced Intensity Alternative would be generated during loading/unloading, trash compacting, truck movements on roadways, and parking lot activities. The operational-related noise impacts associated with this alternative would remain less than significant, as identified for the proposed project.

The reduction in project-related traffic under this alternative would result in a decrease in long-term traffic noise due to a reduction of daily traffic trips to the project site. Under the proposed project, the increase in future traffic noise along certain local roadway segments would increase beyond the threshold of perception. However, the increases in noise along these local roadway segments are the result of dirt roads being upgraded to paved roads. Such noise increases would bring these dirt roads up to the ambient noise of surrounding roadways in the area. Under this alternative, future increases in traffic-related noise would have a similar effect on local roadway segments. When compared to the proposed project, this alternative's contribution to future traffic noise would be reduced, thereby reducing overall mobile source noise impacts within the area. When compared to the proposed project, operational noise associated with the Reduced Intensity Alternative would result in a less than significant impact, as identified for the proposed project.

Population and Housing. This alternative would result in the development of approximately 5,550,000 square feet of industrial warehouse space. Utilizing an employment factor of one employee for every 2,500 square feet of warehouse space,[1] the Reduced Intensity Alternative is anticipated to generate approximately 2,220 jobs.[2] It is anticipated that these warehouse jobs would be filled by persons already residing in the area; therefore, no population increase would occur with the development of these warehouse jobs. When this alternative is compared to the proposed project, the number of new jobs would be 25 percent less than the proposed project. Similar to the proposed project, impacts related to population and housing would remain less than significant as this alternative would continue the existing development trend envisioned by the City.

Public Services. Demands on schools, parks, other public facilities, law enforcement, and fire protection services would be similar in magnitude as that associated with the proposed project as no residential uses (impacts to schools and parks) are proposed under this alternative. Like the proposed project, development under this alternative would require payment of development impact fees for schools, police services, and fire services. The payment of development impact fees would offset impacts to public services that may result from the development of the uses envisioned under this alternative. Similar to the proposed project, impacts associated with public services would remain less than significant.

[1] *Inland Empire Distribution Center Operations Profile,* WCL Consulting, June 10, 2008. 2,500 square feet per employee is an average of the Inland Empire rates.

[2] 1 employee/2,500 square feet of warehouse use × 5,550,000 square feet of warehouse use = 2,220 warehouse jobs.

Traffic. As identified in Table 6.C, the Reduced Intensity Alternative would generate approximately 8,936 daily vehicle trips, which is approximately 75 percent of the traffic associated with for the proposed project. It is reasonable to conclude that traffic volumes on local roadways and intersections would be reduced under this alternative. The addition of traffic volumes associated with this alternative could result in a deficient LOS at one or more of the intersections in the project vicinity or on one of the freeway segments during the lifetime of the development. While significant traffic impacts may occur under this alternative, these impacts would be mitigated in a manner similar to those of the proposed project. However, since the City does not have control over when freeway improvements would occur, traffic impacts associated with a deficient LOS on freeway segments would remain significant and unavoidable until such improvements can be installed or constructed by Caltrans.

Utilities and Service Systems. Limited stormwater and wastewater infrastructure is currently located in adjacent roadways or parcels within the project area. Like the proposed project, development under this alternative would be required to provide necessary infrastructure to support the future development of the three sites. The resulting development under this alternative would be subject to the terms and conditions of the City and EMWD. Similar to the proposed project, development under the Reduced Intensity Alternative would also include implementation of master plans for potable water, sewer, recycled water, and drainage for the project study area. Since the development under this alternative would be similar in use and size to the proposed project, it is anticipated that the same type and quantity of utility infrastructure would be required for the area. Therefore, implementation of these master plans under this alternative would have similar impacts to those identified for the proposed project.

The development of the Reduced Intensity Alternative would require the installation of water supply infrastructure of a size and extent needed to serve the proposed project. As indicated in Table 6.D, the amount of water demand associated with the Reduced Intensity Alternative (254,820 gallons per day) would be 30 percent less than that required for the proposed project. Similar to the proposed project, development under this alternative would be required to obtain verification from the water purveyor that water is available to serve the development. Since this alternative would utilize less water than the proposed project and because EMWD has stated that water supply required for the proposed project is available, it is reasonable to conclude that if this alternative was built, adequate water would be available. Therefore, impacts related to water usage and water treatment/conveyance facilities would remain less than significant, similar to the proposed project.

As identified in Table 6.E, the Reduced Intensity Alternative would generate approximately 111,000 gallons of wastewater per day, which is 25 percent less than that generated by the proposed project. This alternative's demands on wastewater treatment and capacity at existing wastewater treatment facilities would be reduced in magnitude. Similar to the proposed project, development under this alternative would be required to pay infrastructure fees and obtain approval from the wastewater treatment provider that would ensure there is excess capacity for the wastewater that would be generated by the proposed development. Therefore, like the proposed project, adherence to existing requirements identified by the City and EMWD would result in impacts remaining at a less than significant level.

Like the proposed project, the Reduced Intensity Alternative would also generate solid waste. As identified in Table 6.F, the Reduced Intensity Alternative would generate 7,992 pounds of solid waste per day, which is approximately 21 percent less than what the proposed project would generate. The reduction in solid waste generated by the uses under this alternative would have a reduced demand of solid waste services and landfill capacity. Therefore, demands on solid waste services and landfill capacity would be reduced in magnitude. However, similar to the proposed project, development under the Reduced Intensity Alternative would be required to adhere to the provisions of the solid

waste provider that would service the project site. When compared to the proposed project, solid waste impacts would remain less than significant.

Global Climate Change. This alternative would generate 143,247 tons of carbon (CO_2), 0.27 ton of methane (CH_4), and 0.15 ton of nitrous oxide (N_2O) per year. GHG emissions resulting from operation of the uses envisioned under the Reduced Intensity Alternative would be correspondingly reduced as this alternative would reduce the number of daily traffic trips and energy consumed. The total CO_2 equivalent for this alternative would be 0.144 Tg/yr CO_2 Eq., which is less than the 0.145 Tg/yr CO_2 Eq. that would result from the operation of the proposed project. Although the Reduced Intensity Alternative would generate less greenhouse gas than the proposed project, impacts associated with cumulative global climate change would remain significant and unavoidable since no mitigation measures are available to fully reduce cumulative greenhouse gas emissions.

Cumulative Impacts. Similar to the proposed project, the Reduced Intensity Alternative would contribute to the permanent conversion of farmland, long-term operational air pollutant emissions, global climate change, and increased traffic operations on freeway segments. Although the amount of operational air pollutant emissions would be reduced in magnitude, because there are no feasible mitigation measures to reduce long-term air pollutant operational emissions, cumulative impacts would remain significant and unavoidable. Although the greenhouse gas emissions associated with this alternative are less than that identified for the proposed project, such emissions would still contribute to global climate change and would remain significant and unavoidable. The Reduced Intensity Alternative would reduce traffic volumes that would occur in the project vicinity. However, the additional traffic associated with this alternative would contribute to deficient levels of service on freeway segments during the lifetime of the project. Since the City is not in control of when freeway improvements are made, impacts associated with deficient LOS on freeway segments would remain significant and unavoidable until such time that the freeway improvements are installed or constructed by Caltrans. In addition, this alternative would also require the development of the project site. ~~Since there is no feasible mitigation that would reduce the cumulative impacts associated with the conversion of farmland, cumulative impacts associated with farmland conversion would remain significant and unavoidable.~~ Although the Reduced Intensity Alternative would contribute to the permanent conversion of farmland, the City has recognized (as evidenced in its General Plan Land Use Element and the absence of agricultural preservation mitigation program) that the eventual conversion of agricultural uses within the City would occur and is in fact planned for. Therefore, cumulative impacts associated with agricultural resources for Alternative 2 would remain less than significant, similar to the proposed project.

Conclusion. Under the Reduced Intensity Alternative, impacts related to short-term construction-related air quality would be similar to the proposed project as the same amount of land would be disturbed and the same mix of equipment would be utilized. Long-term operational-related air quality impacts would be reduced in magnitude when compared to the project but would remain significant and unavoidable. Because this alternative would require a zone change and General Plan Amendment for the 8 acres designated for commercial uses on the Phase 3 site, land use impacts would be similar to the proposed project. The decrease in the amount of warehouse uses would result in a reduction of permanent jobs that would be created. This alternative would have a reduced demand on public services, recreation, and water use. Similar to the proposed project, the payment of fees, dedication of parkland, and adherence to utility requirements would reduce these impacts to a less than significant level.

Because of the decrease in vehicle trips achieved under this alternative, impacts to the operation of local roadways and intersections would be proportionally reduced from what was identified for the proposed project. However, long-term traffic impacts would remain significant and unavoidable for

impacts associated with freeway segments as the City does not have control of when such freeway improvements would occur. Traffic-related noise would be reduced in magnitude and would be mitigated to a less than significant level in a manner similar to the proposed project. Under this alternative, the volume of water required and the amount of wastewater and solid waste generated would be reduced.

6.3.2.3 Alternative 3: Elimination of Rail Component

With the intent of avoiding or substantially reducing significant impacts created by the project traffic, air quality, and noise, the City has considered an alternative that would result in the elimination of the rail component for Phase 2 of the proposed project. This alternative includes development of the three sites with the same amount of development identified for the proposed project (7,399,291 square feet of distribution facility uses) on the same amount of acreage (454.7 acres).

Impact Analysis. As discussed previously, impacts to the following ten environmental issues would have similar impacts as for the proposed project due to the alternative being in the same location with the same type of land use and the same size of development. These include the following:

- Aesthetics;
- Agricultural Resources;
- Biological Resources;
- Cultural and Paleontological Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Mineral Resources; and
- Recreation

Since the amount, location, and type of development would stay the same, the following three environmental issues, in addition to the issues identified above, would have the same impacts as identified for the proposed project.

- Population and Housing;
- Public Services; and
- Utilities and Service Systems.

The remaining environmental issues would, in some cases, result in similar impacts, but would be increased or decreased enough to be discussed separately.

Air Quality. Because the amount of land to be graded with Alternative 3 would be equal to that of the proposed project, a similar mix of equipment as the proposed project would operate during earthmoving activities. Construction emissions from the development of Alternative 3 would be similar to the proposed project. Like the proposed project, emissions of VOC, NO_X, PM_{10}, and $PM_{2.5}$ would exceed established thresholds. Even with implementation of identified mitigation, VOC, NO_X, PM_{10}, and $PM_{2.5}$ emissions would exceed established thresholds and would remain significant and unavoidable. Average daily traffic volumes under this alternative would be increased in comparison with the proposed project due to the elimination of the rail component and the addition of truck traffic. As indicated in Table 6.I, the volume of each operational pollutant associated with truck traffic would be correspondingly increased. Like the proposed project, operational emissions for CO, VOC, NO_X, PM_{10}, and $PM_{2.5}$ would still exceed daily SCAQMD thresholds. There are no feasible mitigation measures, standards, or principles that would reduce operational emissions to below SCAQMD thresholds.

Table 6.I: Alternative 3 Operational Emissions

Source	Pollutant Emissions, lbs/day					
	CO	VOC	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Proposed Project	3,733	591	3,725	11	817	264
Alternative 3[1]	3,743	591	3,748	9	818	264
Net Change	10	0	23	-2	0	0
SCAQMD thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Alt. 3 exceeds thresholds?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: URS Corporation, June 18, 2009

As identified in Table 6.I, air quality emissions associated with operational air quality would be greater for some criteria air pollutants and would be reduced for other criteria air pollutants. Under this alternative, SO_X would be reduced, while CO, NO_X emissions would increase. All other criteria air pollutants (e.g. VOC, PM_{10}, and $PM_{2.5}$) would remain the same. Despite the reduction in some of the criteria air pollutants, long-term air quality impacts associated with this alternative would remain significant and unavoidable.

Noise. Under the proposed project, construction-related noise impacts were reduced to a less than significant level through adherence to City limitations of when construction can occur. Under the Elimination of the Rail Component Alternative, the same amount of land would be disturbed; therefore, noise impacts associated with the construction of this alternative would be similar to those identified under the proposed project. As with the proposed project, Alternative 3 would have noise generated during loading/unloading, trash compacting, truck movements, and parking lot activities. It is anticipated that since this alternative would result in the elimination of the rail component, additional truck traffic would occur within the project vicinity as goods that would originally be delivered to the project sites would now be delivered to the project sites via truck trailers.

The increase in project-related traffic under this alternative would result in an increase in long-term traffic noise due to an increase of daily traffic trips to the project site. Under the proposed project, the increase in future traffic noise along certain local roadway segments would increase beyond the threshold of perception. Under this alternative, it is anticipated that these local roadway segments would also experience an increase of noise that is perceivable. When compared to the proposed project, this alternative's contribution to future traffic noise would be increased, thereby increasing overall mobile source noise impacts within the area. However, noise impacts associated with the rail service to the Phase 2 site would not occur as this alternative would not have a rail component, thereby eliminating significant and unavoidable rail line noise associated with the proposed project. When compared to the proposed project, operational noise associated with the Elimination of Rail Component Alternative would result in noise impacts reduced in magnitude. Similar to the proposed project, implementation of mitigation measures for noise impacts to noise sensitive receptors under this alternative would reduce impacts to a less than significant.

Traffic. As identified in Table 6.C, Alternative 3 would generate approximately 11,969 daily vehicle trips, which is approximately 0.5 percent greater than what was identified for the proposed project. With a 0.5 percent increase in daily trips, it is reasonable to conclude that traffic volumes on local roadways and intersections would be slightly increased under this alternative. It is anticipated that since the increase is only 0.5 percent, impacts to LOS at nearby intersections and roadway segments would still occur and would require mitigation. The addition of traffic volumes associated with this alternative could result in a deficient LOS at one or more of the intersections or freeway segments in the project vicinity during the lifetime of the development. While significant traffic impacts may occur

under this alternative, these impacts would be mitigated in a manner similar to those of the proposed project. However, despite the identification of mitigation measures, certain freeway improvements would not be under the jurisdiction of the City and cannot be guaranteed to be in place when development under Alternative 3 would become operational. Therefore, traffic-related impacts associated with freeway mainlines would remain significant and unavoidable, similar to the proposed project.

Global Climate Change. GHG emissions under this alternative are correspondingly increased as traffic trips are increased. This alternative would generate 193,809 tons of carbon (CO_2), 0.36 ton of methane (CH_4), and 0.20 ton of nitrous oxide (N_2O) per year. The total CO_2 equivalent for this alternative would be 0.145 Tg/yr CO_2 Eq., which is equal to the 0.145 Tg/yr CO_2 Eq. that would result from the operation of the proposed project. However, similar to the proposed project, there are no feasible mitigation measures to reduce the cumulative generation of greenhouse gases under this alternative to below a less than significant level. Therefore, a significant and unavoidable cumulative impact associated with global climate change would occur under this alternative.

Cumulative Impacts. Similar to the proposed project, Alternative 3 would contribute to the permanent conversion of farmland, long-term operational air pollutant emissions, and increased traffic operations on freeway segments. Since there are no feasible mitigation measures to reduce long-term air pollutant operational emissions, cumulative air quality impacts would remain significant and unavoidable. Under this alternative, greenhouse gas emission impacts would remain significant and unavoidable since greater greenhouse gas emissions would occur under this the Elimination of the Rail Component Alternative. This alternative would slightly increase traffic volumes that would occur in the project vicinity and contribute to deficient LOS on freeway segments during the lifetime of the project. Since the City is not in control of when freeway improvements are made, impacts associated with deficient LOS on freeway segments would remain significant and unavoidable until such time that the freeway improvements are installed or constructed by Caltrans, similar to what was identified for the proposed project. This alternative would also require the development of the project site. ~~Since there is no feasible mitigation that would reduce the cumulative impacts associated with the conversion of farmland, cumulative impacts associated with farmland conversion would remain significant and unavoidable.~~ Although Alternative 3 would contribute to the permanent conversion of farmland, the City has recognized (as evidenced in its General Plan Land Use Element and the absence of agricultural preservation mitigation program) that the eventual conversion of agricultural uses within the City would occur and is in fact planned for. Therefore, cumulative impacts associated with agricultural resources for Alternative 3 would remain less than significant, similar to the proposed project.

Conclusion. Under the Elimination of Rail Component Alternative, impacts related to short-term construction-related air quality would be similar to the proposed project as the same amount of land would be disturbed and the same mix of equipment would be utilized. Long-term operational-related air quality impacts would similar in magnitude when compared to the project and would remain significant and unavoidable. Because this alternative would also require a zone change and General Plan Amendment, land use impacts would be similar to the proposed project. Because of the increase in vehicle trips achieved under this alternative, impacts to the operation of local roadways and intersections would be proportionally increased from what was identified for the proposed project. Traffic-related noise would be increased in magnitude but would be similarly mitigated like the proposed project and would remain less than significant. In addition, there would be no noise impacts associated with rail service. Water use, wastewater, and solid waste for this alternative would be similar to the proposed project.

6.4 COMPARISON OF PROJECT ALTERNATIVES

The following discussion compares the impacts of each alternative with the impacts of the proposed project, as detailed in Section 4.0 of this EIR. Table 6.J compares the impacts of the alternatives with those of the proposed project. This table identifies whether the alternative results in (1) a reduction of the impact; (2) a greater impact than the project; or (3) the same impact as the project.

Table 6.J: Comparison of Alternatives to the Proposed Project

Environmental Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Reduced Intensity	Alternative 3: Elimination of Rail Component
Aesthetics	LTS	-	=	=
Agricultural Resources	LTS ~~SIG~~	-	=	=
Air Quality	SIG	-	← SIG	=
Biological Resources	LTS/mit	-	=	=
Cultural Resources	LTS/mit	-	=	=
Geology and Soils	LTS	-	=	=
Hazards and Hazardous Materials	LTS/mit	-	=	=
Hydrology and Water Quality	LTS/mit	-	=	=
Land Use and Planning	LTS	-	=	=
Mineral Resources	NI	-	=	=
Noise	LTS/mit	-	=	-
Population and Housing	LTS	-	=	=
Public Services	LTS	-	=	=
Recreation and Parks	LTS	-	=	=
Transportation and Traffic	SIG	-	← SIG	→
Utilities and Service Systems	LTS/mit	-	←	=
Global Climate Change	SIG	-	← SIG	=

Proposed Project
NI: No Impact
LTS: Less than Significant Impact
LTS/mit: Less than Significant Impact with Mitigation
SIG: Significant Impact with or without Mitigation

Project Alternatives
= Compared with the proposed project, no change in the significance of impact will occur.
→ Compared with the proposed project, the significance of the impact is increased.
← Compared with the proposed project, the significance of the impact is reduced.
\+ Compared with the proposed project, a new impact has been identified.
\- Compared with the proposed project, an impact has been eliminated.
←SIG Compared with the proposed project, the volume or extent of the impact is reduced, yet still significant.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA (*CEQA Guidelines Section 15126.6 (e[2])* requires that the environmentally superior alternative be identified in the EIR. Based on the analysis in this section and the summary contained in

Table 6.J, Alternative 1, the No Project Alternative, is the environmentally superior alternative. Impacts associated with this alternative, when compared to the proposed project, would not occur. In the absence of additional development, no impacts would occur and this alternative would be the environmentally superior alternative. However, disallowing development of the sites, as suggested by this alternative, would not fulfill the primary objectives of the proposed project. Retention of the Phase 1 project site in its current condition would not expand employment opportunities to residents of the City. Retaining the Phase 2 and Phase 3 sites in their current undeveloped condition would not generate the revenue (e.g., property tax) that could augment the City's current revenue stream. Although the No Project Alternative reduces the severity of all project-related impacts, it would not satisfy any of the identified project objectives.

As identified in Table 6.J, Alternative 2 would reduce the amount of operational emissions and the volume of daily traffic trips when compared to the proposed project; however, such impacts would remain significant and unavoidable. In addition, Alternative 2 would reduce the magnitude of impacts associated with utilities and service systems since Alternative 2 would use less water and would generate less wastewater and solid waste. Alternative 3 (Elimination of Rail Component) would eliminate the significant and unavoidable noise impacts associated with the use of rail services since there would no longer be a rail component associated with Phase 2. However, Alternative 3 would also slightly increase the volume of daily traffic to the proposed project. The remaining environmental issues would ultimately be similar to the proposed project through adherence to existing standards and mitigation measures.

Alternative 2 would not satisfy the identified project objectives to the extent that the proposed project would. The following objectives either would not be satisfied or their ability to be met would be significantly reduced:

- Create employment-generating opportunities for the citizens of Perris and surrounding communities;
- Provide the infrastructure improvements required to meet project needs in an efficient and cost-effective manner;
- Provide a high density, high-quality large-scale industrial development to provide jobs for residents at a variety of income levels;
- Facilitate the efficient and cost-effective movement of goods in and through the City, which, in turn, allows the City to compete economically on a domestic and international scale;
- Provide oversized street and highway improvements that facilitate the movement of goods and vehicles within and through the City;
- Cluster industrial warehouse uses near efficient access points to the state highway system to reduce traffic congestion on surface streets and to reduce concomitant air pollutant emissions from vehicle sources;
- Implement the City's General Plan Industrial Land Use designations that are largely applicable to the sites;
- Provide new development that will assist the City in obtaining fiscal balance in the years and decades ahead; and
- Address community circulation, both vehicular and pedestrian, utilizing available capacity within the existing circulation system, and provide fair share improvements to various future-year deficient intersection or road segments.

The development of warehouse uses and the provision of new employment opportunities, meets some of the City's stated project objectives, while reducing the magnitude or severity of impacts associated with the proposed project. Therefore, the Reduced Intensity Alternative has been

determined to be the environmentally superior alternative. While the Reduced Intensity Alternative would be environmentally superior, it would only allow 75 percent of the proposed project to be built. This would result in a 25 percent reduction in benefits to the City and the community by reducing new employment, City revenue, and the potential for large-scale fair-share improvements to roadways and infrastructure. Additionally, the reduction in intensity would not allow the fullest use of the property with in the City that is designated for industrial use. Without building out the proposed project area to its fullest potential, additional industrial projects would likely be necessary in other areas of the City creating industrial sprawl and a potentially disjointed industrial district of the City. A higher intensity project allows the creation of an industrial warehouse center that can maximize the benefits of the transportation corridors in the area by keeping these uses focused in one area. For these reasons the proposed project has been selected as the preferred project alternative.

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9.0 ACRONYMS AND ABBREVIATIONS

Acronyms	
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACOE	(United States) Army Corps of Engineers
ADT	Average Daily Traffic
AICUZ	Air Installation Compatible Use Zone
ALUP	Airport Land Use Plan
ANSI	American National Standards Institute
AMS	accelerator mass spectrometer
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
APZ	Accident Potential Zone
AQAP	Air Quality Attainment Plan
AQMP	Air Quality Management Plan
BMP	Best Management Practice
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAPCOA	California Air Pollution Control Officers Association
CAPSSA	Criteria Area Plant Species Survey Area
CASSA	Criteria Area Species Survey Area
CBC	California Building Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAT	California Climate Action Team
CC	Community Commercial
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFA	California Fire Alliance
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CIWMB	California Integrated Waste Management Board

Acronyms	
CMP	Congestion Management Program
CN	Neighborhood Commercial
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CLUP	Comprehensive Land Use Plans
Code	California Fish and Game Code
CHU	Central Homicide Unit
CPF	Cancer Potency Factor
CRA	California Resource Agency
CRA	California Resource Agency
CVC	California Vehicle Code
CWA	Federal Clean Water Act
DAMP	Drainage Area Management Plan
DEH	Department of Environmental Health
DHS	(California) Department of Health Services
DIF	development impact fees
DPR	(California) Department of Pesticide Regulation
DOC	(California) Department of Conservation
DOF	(California) Department of Finance
DTSC	Department of Toxic Substance Control
DWR	(California) Department of Water Resources
EDU	equivalent residential dwelling units
EIC	Eastern Information Center
EIR	Environmental Impact Report
EMTS	Emergency Medical Technicians
EMWD	Eastern Municipal Water District Urban Water
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPCA	Environmental Pollution Control Act's
EPAct	The Energy Policy Act
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	Greenhouse gas
GPA	General Plan Amendment
GWP	Global Warming Potential

Acronyms	
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HCP	Habitat Conservation Plan
HDT	Hazardous Device Team
HMBP	Hazardous Materials Business Plan
HMMA	Hazardous Materials Management Act
HNT	Hostage Negotiation Team
HRA	Health Risk Assessment
HVAC	Heating, Ventilating, and Air Conditioning
HVLP	high-volume low-pressure
HWCL	Hazardous Waste Control Law
IPM	Integrated Pest Management
IPCC	United Nations Intergovernmental Panel on Climate Change
ISCST3	Industrial Source Complex–Short Term
ITE	Institute of Transportation Engineers
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
LSA	LSA Associates, Inc.
LST	Local Significance Threshold
MARB	March Air Reserve Base
MBTA	Migratory Bird Treaty Act
MCP	Mid County Parkway
MEI	maximum exposed individual
MFR-22	Multiple Family Residential
MICR	maximum individual cancer risk
MJPA	March Joint Powers Authority
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer Systems
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MUSD	Menifee Union School District
MVUSD	Moreno Valley Unified School District
MRF	Materials Recovery Facility
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NDDB	Natural Diversity Data Base
NEPSSA	Narrow Endemic Plant Species Survey Area
NFIP	National Flood Insurance Program

Acronyms	
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	Ordinary High Water Mark
OMB	White House Office of Management and Budget
OPR	Office of Planning and Research
PCE	Passenger Car Equivalent
PESD	Perris Elementary School District
PVSC	Perris Valley Storm Channel
RCALUP	Riverside County Airport Land Use Plan
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCIP	Riverside County Integrated Plan
RCP	Regional Comprehensive Plan
RCPG	Regional Comprehensive Plan and Guide
RCSD	Riverside County Sheriff's Department
RSD	Romoland School District
RTA	Riverside Transit Authority
RTP	Regional Transportation Plan
RUSD	The Riverside Unified School District
RWQCB	Regional Water Quality Control Board
R-4	Single-Family Residential
SARA	The Superfund Amendments and Reauthorization Act
SARWQCB	Santa Ana Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCREEN3	The Screen View Model
SHPOs	State Historic Preservation Offices
SIP	State Implementation Plan
SKR	Stephens' Kangaroo Rat
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
SLF	Sacred Lands File
SRA	Source Receptor Area

Acronyms	
SRA	State Recreation Area
SP	Specific Plan
SWIS	Solid Waste Information System
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
TAC	Toxic Air Contaminants
TCM	Transportation Control Measure
TCPs	traditional cultural places
TDM	Travel Demand Management
TDS	Total Dissolved Solids
TDV	Time Dependent Valuation
TIA	Traffic Impact Analysis
TRI	Toxics Release Inventory
TSM	Transportation Systems Management
TUMF	Transportation Uniform Mitigation Fee
UBC	Uniform Building Code
UDA	Urban Decay Analysis
UNFCCC	United Nations Framework Convention on Climate Change
URF	Unit Risk Factor
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
VVUSD	Val Verde Unified School District
WDR	Wastewater Discharge Requirements
WQMP	Water Quality Management Plan
WSA	Water Supply Assessment
WRCOG	Western Riverside County Council of Governments

Units of Measurement	
ac-ft/yr	acre feet per year
cfs	cubic feet per second
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	decibel on the A-weighted scale
FAR	Floor to Area Ratio
GFA	gross floor area

Units of Measurement	
g/hr	grams per hour
gpcd	gallons per capita per day
gpm	gallons per minute
g/s	grams per second
GWh/y	gigawatt-hours per year
in/sec	inch per second
lbs	pounds
L_{dn}	day-night average noise
L_{eq}	Equivalent continuous sound level (L_{eq})
L_{max}	maximum noise level
mg/kg/day	milligrams per kilograms per day
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
mgd	million gallons per day
mph	miles per hour
mg	million gallons
MW	megawatt
ppm	parts per million
sf	square feet
Tg CO_2 Eq.	teragrams of carbon dioxide equivalent
therms/y	therms per year
$\mu g/m^3$	micrograms per cubic meter
VdB	vibration velocity in decibels
V/C	volume to capacity ratio
VMT	vehicle miles traveled

Chemical Abbreviations	
CFCs	Chlorofluorocarbons
CF_4	Tetrafluoromethane
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
DDT	Dichloro-Diphenyl-Trichloroethane
HFCs	Hydrofluorocarbons
MTBE	Methyl Tertiary-Butyl Ether
NO	Nitric Oxide
NO_2	Nitrogen Dioxide

Chemical Abbreviations	
NO_X	Oxides of Nitrogen
N_2O	nitrous oxide
O_3	Ozone
PAHs	Polycyclic Aromatic Hydrocarbons
Pb	Lead
PFCs	Perfluorocarbons
PM	Particulate Matter
PM_{10}	Particulate Matter with a Diameter of 10 Microns or Less
$PM_{2.5}$	Particulate Matter with a Diameter of 2.5 Microns or Less
ROC	Reactive Organic Compounds
ROG	Reactive Organic Gases
SF_6	Sulfur Hexafluoride
SO_2	Sulfur Dioxide
TDS	Total Dissolved Solids
VOC	Volatile Organic Compounds

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APPENDICES

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