3.0 GENERAL ENVIRONMENTAL SETTING

3.1 JURISDICTIONAL SETTING

The project site lies within the boundaries of the City of Lake Elsinore. The city is within the western portion of Riverside County. See Section 2.0, Figure 2.1-1, Regional and Vicinity Map.

City of Lake Elsinore

The City of Lake Elsinore encompasses 34 square miles within the Elsinore Valley, located at the base of the Cleveland National Forest, north of the Santa Ana Mountains. Per the California Department of Finance, January 2006, the city's estimated population is 38,340. The City of Lake Elsinore's Sphere of Influence has been extended to include Horsethief Canyon, Warm Springs, and Meadowbrook.

The city is centrally located approximately 75 miles from both San Diego and downtown Los Angeles. Primary access to the city and the area is via State Route 74 (SR-74/Ortega Highway) from the west and east, and Interstate 15 (I-15) from the northwest/southeast. Portions of unincorporated County of Riverside border the city in all directions. The City of Canyon Lake lies to the northeast, the City of Murrieta and Wildomar to the southeast, the Gavilan Hills to the north, the City of Menifee to the east, and the Santa Ana Mountains/Cleveland National Forest to the south. The city surrounds Lake Elsinore, which is the largest natural lake in Southern California, covering approximately 3,000 surface-acres. Lake Elsinore is the terminus of the San Jacinto River, which is regulated by the Railroad Canyon Dam.

City of Lake Elsinore General Plan (1990)

Planning within the city is governed by the 1990 General Plan consisting of the mandatory Land Use, Circulation, Housing, Open Space, Conservation, Safety, and Noise Elements. Updates include the Circulation Element in 1995 and Housing Element in 2000.

City of Lake Elsinore – General Plan Update (2009)

At the time of writing, the City is currently in the process of updating their existing General Plan. As a part of the General Plan Update, the city was divided into 11 "district plans" for the purpose of more detailed development direction addressing land use, urban design, transportation, and parks and recreation. These district plans recognize the unique attributes of each district and identify district goals and policies for development. In order to facilitate development within the Ballpark District consistent with the proposed vision for the area, the General Plan designation for much of the area within the Ballpark District is Specific Plan.

In accordance with the proposed Ballpark District for the General Plan Update, a new land use designation will be created for this area. The Commercial Mixed Use (CMU) designation is intended to meet the overall goals of the Ballpark District and provide for new development opportunities that are in line with the vision of the city for the 21st century.

The General Plan Update is anticipated to be adopted prior to the adoption of the Diamond Specific Plan. However, the exact date for the adoption of the updated General Plan is uncertain. Therefore, this EIR analyzes the project's consistency with both the existing General Plan (1990) and the General Plan Update (2009).

Riverside County

Riverside County encompasses 7,295 square miles in Southern California. Approximately 12 percent of this area lies within 24 incorporated cities. Land use authority within the incorporated cities, including the City of Lake Elsinore, rests with the cities. The large majority of the county thus lies within unincorporated territory (covering 6,448 square miles,). Of this unincorporated area, approximately 235 square miles are held by one of the Indian Nations.

Riverside County General Plan/Riverside County Integrated Project (RCIP)

An update to all sections of the Riverside County General Plan was approved on October 7, 2003 as part of the Riverside County Integrated Project (RCIP). The RCIP is a comprehensive, three-part, integrated program to determine future conservation through a Multi-Species Habitat Conservation Plan (MSHCP); address traffic and circulation issues through the Community & Environmental Transportation Acceptability Process (CETAP); and balance housing and economic needs by updating the County's General Plan.

Elsinore Area Plan

Much of the Elsinore Area Plan (EAP) is situated within a valley, running from northwest to southeast, framed by the Santa Ana and Elsinore Mountains on the west and the Gavilan and Sedco Hills on the east. Elsinore is a gateway to the west but is also an important north/south link in the western flank of the county. The City of Lake Elsinore, Wildomar, and Canyon Lake are core communities for the area. The Elsinore planning area borders on both San Diego County to the south and Orange County to the west, and is one of five area plans that maintain a major portion of development potential in western Riverside County.

3.2 ENVIRONMENTAL RESOURCES

3.2.1 Drainages

The Elsinore area consists largely of a flat valley floor dominated by the lake, and surrounded by hillside and mountain features. The major drainages consist of the San Jacinto River, Temescal Wash, and Murrieta Creek. The San Jacinto River is part of the San Jacinto watershed. Temescal Wash serves as an outlet for Lake Elsinore and runs in a generally northwest/southeast direction between the Gavilan Hills and the Santa Ana Mountains, eventually draining into the Santa Ana River. Murrieta Creek starts just south of Lake Elsinore and eventually drains into the Santa Margarita River.

3.2.2 Geology/Soils

Mountain ranges in the vicinity of the proposed project include the Santa Ana and Elsinore Mountains. Locally, the proposed project area is located within the Elsinore Trough, which in turn is located within a larger structural block of land known as the Perris Block. The Perris Block is a geologic formation which is made of alluvial deposits underlain with granitic bedrock. It is bound on the northeast by the San Jacinto Fault, on the north by the Cucamonga fault, and on the southwest by the Santa Ana Mountains. The Elsinore Trough is a complex that has formed as a result of extensional faulting along the Elsinore Fault Zone. The Elsinore fault runs north-south through the middle of the Elsinore Plan area. The proposed project site is characterized by floodplain deposits, consisting of clays, silts, and fine sands.

Bedrock is composed of granodiorite of the Southern California Batholith under sandstone conglomerates, siltstones and Pauba Formation clay beds. The project site also contains undocumented artificial and certified fill soils.

Multiple Species Habitat Conservation Program

The proposed project area is within the Western Riverside County MSHCP, a program that encompasses core habitat, habitat linkage, and wildlife corridors, into a comprehensive plan for the protection of regional habitat resources.

3.3 INFRASTRUCTURE AND SERVICES

I-15 serves as the major transportation corridor between Riverside/Corona, Orange County, the cities in the Temecula Valley, Perris Valley, and San Diego. SR-74 provides access from coastal southern Orange County to the Elsinore Valley. Vehicular access to the project site is provided by the existing Railroad Canyon off-ramp of the I-15 freeway and the Diamond Drive, Lakeshore, and Mission Trail frontage roads.

The Riverside County Fire Department (RCFD) working in conjunction with the California Department of Forestry and Fire Protection (CDF) provides fire protection services to the region. County Fire Stations Nos. 94, 10, and 11 are located within 1.34, 2.06, and 5.9 miles of the proposed project site, respectively, and would provide primary response to the project area.

Police protection services are provided by Lake Elsinore Police Department (LEPD) under contract by the Riverside County Sheriff's Department (RCSD). Primary response to the project area is provided by the LEPD/RCSD station in the City of Lake Elsinore.

The City of Lake Elsinore is currently served by the Lake Elsinore Unified School District (LEUSD). The LEUSD consists of 14 elementary schools, five middle schools, and four high schools.

Utilities services for the project area are provided by the following entities:

- Elsinore Valley Municipal Water District (EVMWD) – water and sewer
- Southern California Edison (SCE) – electrical service
- Southern California Gas Company (SCGC) – natural gas
- Riverside County Waste Management Department (RCWMD) – solid waste collection

3.4 LAND USE AND DEVELOPMENT

3.4.1 Surrounding Land Uses

A majority of the project site is currently within the East Lake Specific Plan. The project is bordered to the north by existing retail-commercial land uses, is designated tourist commercial, general commercial and floodway area, and is zoned for Neighborhood Commercial (C1) and General Commercial (C2). To the south the project is bordered by vacant land graded for residential development within the ELSP and is zoned as such (SP). To the east of the project site is vacant property and retail-commercial uses. The area is partially designated for commercial mixed use and the rest is within the East Lake Specific Plan. It is zoned Neighborhood Commercial (C1), General Commercial (C2) and Specific Plan (SP). Lake Elsinore and vacant property are to the west of the project site and are designated and zoned for the SP.

Skylark Field Airport is the closest private airport to the project site located approximately 1.3 miles from the proposed Diamond Development. Canyon Academy is the closest school facility to the project site and is located approximately .46 miles from the site. Railroad Canyon Elementary is also in the vicinity and is approximately .6 miles away from the proposed Diamond Development site. Figure 3.4-1 shows the existing land uses for properties surrounding the Project's boundary.

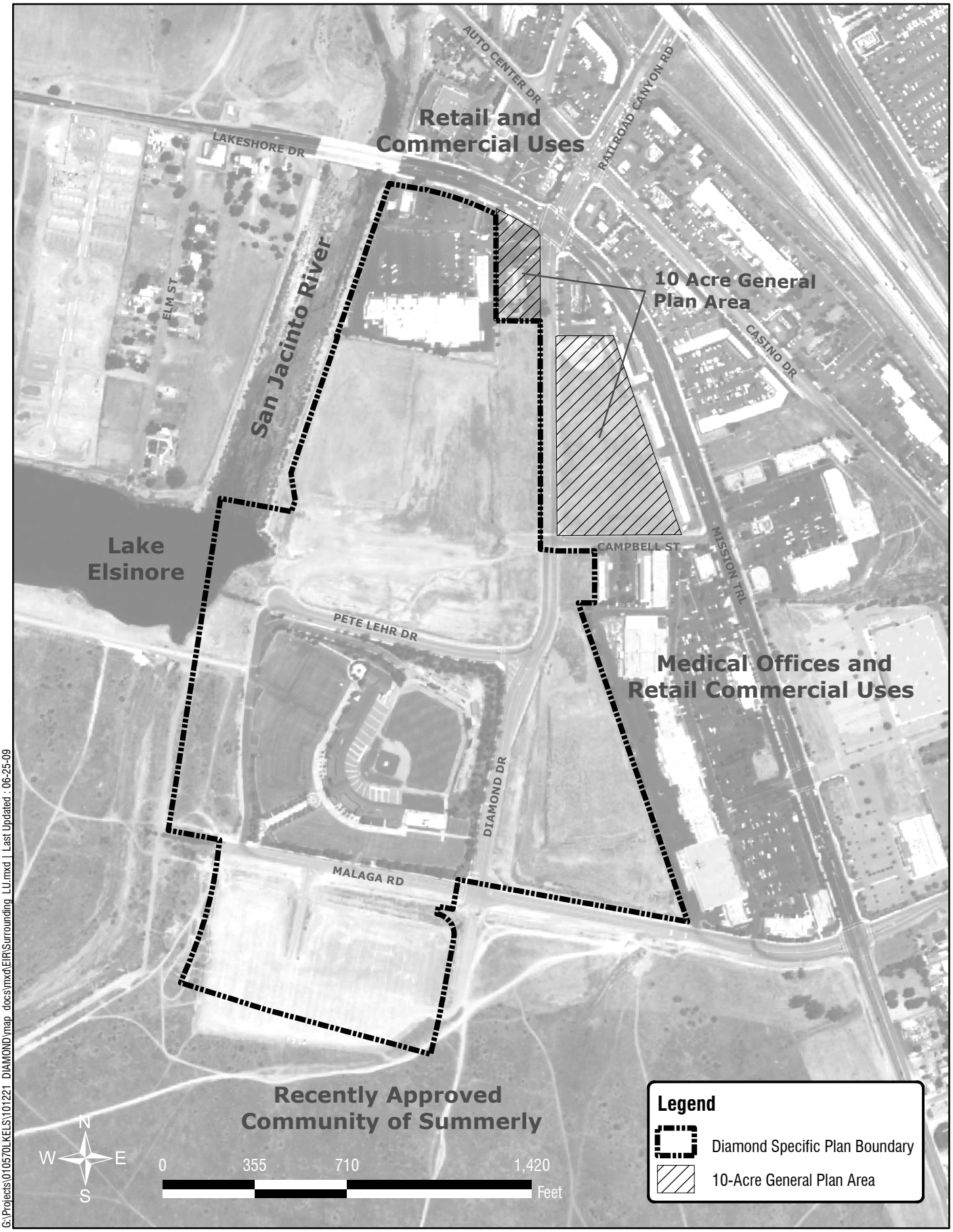
Non-native introduced grasslands and sage-scrub communities are the predominant vegetation onsite. Photos and graphics of the site and existing vegetation are shown in Figure 3.4-2.

3.5 CUMULATIVE PROJECTS

The *California Environmental Quality Act (CEQA) Guidelines* define cumulative effects as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts." The *CEQA Guidelines* further state that the individual effects can be the various changes related to a single project or the changes involved in a number of other closely related past, present, and reasonable foreseeable probable future projects (Section 15355). The *CEQA Guidelines* allow for the use of two alternative methods to determine the scope of projects for the cumulative impact analysis:

- List Method - A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency.
- Regional Growth Projections Method - A summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions (*CEQA Guidelines* Section 15130).

For the purpose of this EIR, the List Method was used to assess the project's cumulative environmental effects. Table 3.5-1 and Figure 3.5-1 summarize the recently approved or proposed projects in the City of Lake Elsinore.



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Existing Surrounding Land Uses

FIGURE 3.4-1

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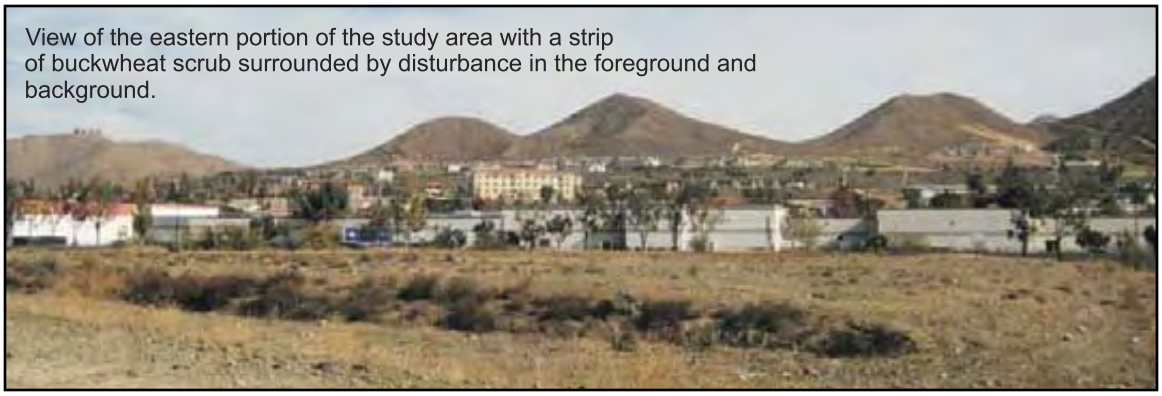

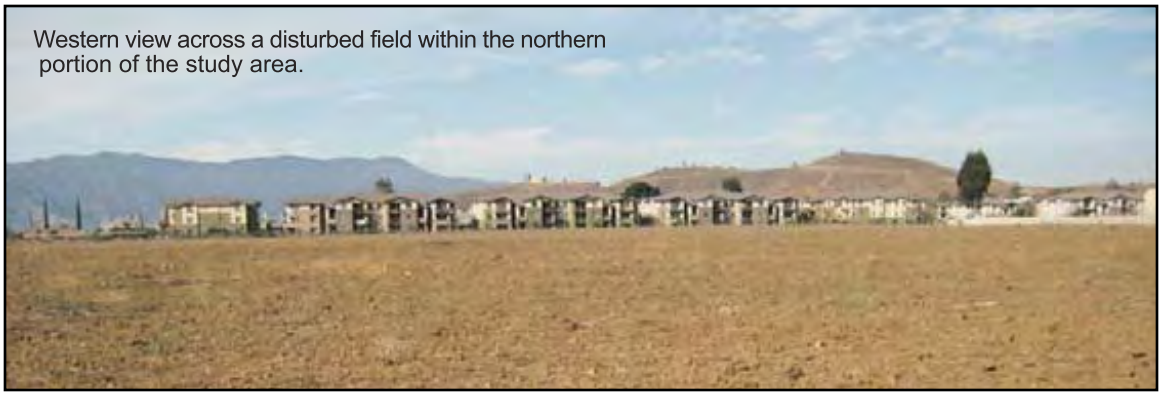

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Site Photographs

FIGURE 3.4-2

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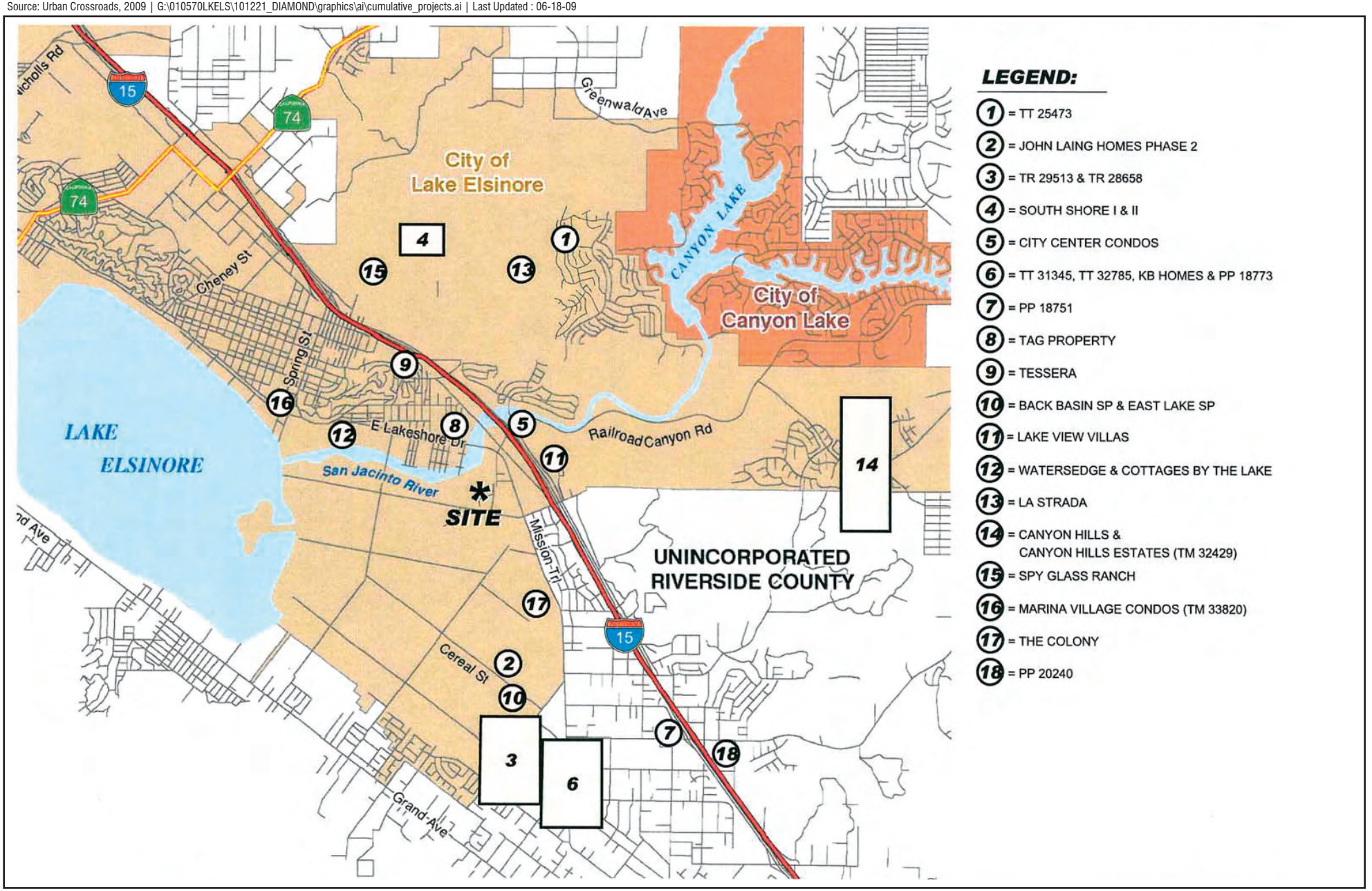
Table 3.5-1. Cumulative Projects

Project Name	Project Description	Project Location
TT 25473 (Tuscany West)	164 du SFR	North of La Strada Parkway, west of Bella Vista and Summerhill Drive
John Laing Homes Phase 2	1,955 du on 326.3 acres Residential, 11.7 acres Commercial, 329 acres Open Space	West of I-15 and Mission Trail, south of Lakeshore Drive, north of Grand Avenue; north of Back Basin SP & East Lake SP
TR 29513 & TR 28658	239 du SFR	Outside of the City limits at the Corydon Road and Como St intersection in the County of Riverside
TR 31593 (South Shore I)	521 SFR	North of Camino del Norte and I-15
TR 32013 (South Shore II)	400 SFR (detached condos)	North of Camino del Norte and I-15
City Center Condos	144 du MFR (condos)	Railroad Canyon Road at Grape Street
A) TT 31345 KB Homes, Related Projects: GPA 672/CZ 6836; B) TT 32785, Related Projects: GPA 722/CZ7058; & C) PP 18773, Related Projects: CZ 6815/CPM 1385	A) The project is a Schedule "A" tract map proposing to subdivide 14.9 acres into 50 residential lots and 3 open space lots B) County Description: The land division hereby permitted is for a Schedule "A" subdivision of 10.4 gross acres into 4 lots. Lot 1 is for residential condominium purposes. The vesting tentative map proposes to site and construct 71 two-story detached town homes, 53 guest parking spaces, a 10k s.f. recreation area with several other recreational amenities and a pocket park. The project will improve a 0.8-acre flood control channel that traverses the westerly portion of the project site C) County Description: 96 multi-family units, 24 Buildings/950 s.f. units	East of Corydon Street
PP 18751, Related Projects: CZ 6837	6,959 s.f. restaurant with 800 s.f. dining patio	North of Bundy Canyon Road, west of Orange Street, east of Angels Lane
TAG Property	50,000 s.f. Car dealership	On Lakeshore
Tessera	90 du SFR	South of I-15, north of Lakeshore Drive, west of Railroad Canyon Road, east of Main Street
Waterbury (Back Basin Specific Plan & East Lake Specific Plan)	1,796 du SFR, 611du SFR, 4 acres MFR	West of I-15 and Mission Trail, south of Lakeshore Drive, north of Grand Avenue; south of John Laing Homes Phase 2
Lake View Villas (Scott Woodward)	155 du MFR (condos)	Grape Street at Sunrise Drive
Watersedge (Marina, Cottages, Wetland Enhancement Site)	35.4 acres Mixed Use, 30.6 acres Residential, 10.9 acres Marina and right of way	North of San Jacinto River, east of Lake Elsinore, south of Railroad Avenue, west of Lucerne Street
La Strada (TTM 32077)	134 du SFR	West of Vista Palermo

Project Name	Project Description	Project Location
Canyon Hills Estates (TM 34249)	302 SFR	East of Navajo Springs Road, west of Pine Avenue, south of Sugarbush Lane
Canyon Hills (Multiple TM)	2,700 SFR, 1,575 MFR	North of Canyon Hills Road, west of Holland Road
Spyglass Ranch	523 SFR, 171 MFR, 145,000 s.f. commercial	Northeast of I-15 near Granite Street, northwest of Porto Romano, southwest of South Shore I and II
Marina Village Condos (TM 33820)	94 du MFR (condos)	Intersection of Lakeshore Drive and Spring Street
The Colony	19 acre site: 211 condominiums (restricted to age 55 plus) and 7.2 acre detention basin. Part of the East Lake Specific Plan	Mission Trail
PP 20240	250,000 s.f. of Commercial Retail	Outside of the City limits along on the south side of Bundy Canyon road west of Monte Vista Drive in the County of Riverside

du = Dwelling Units
SFR= Single Family Residential
MDR = Medium Family Residential
MFR = Multi-family Residential
Comm. = Commercial
s.f. = Square Feet

Source: Urban Crossroads, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\ai\cumulative_projects.ai | Last Updated : 06-18-09



Cumulative Projects

FIGURE 3.5.1

4.0 ENVIRONMENTAL IMPACT ANALYSIS

4.0.1 INTRODUCTION

This section provides information on existing conditions, evaluates the potential environmental consequences of the proposed project, and, where applicable, recommends mitigation measures for each environmental category. This Draft Environmental Impact Report (EIR) addresses all environmental issue areas considered under the California Environmental Quality Act (CEQA), with the exception of agricultural resources and mineral resources, which were eliminated from detailed analysis per conclusions reached in the Initial Study. The potential for cumulative impacts is also addressed. Subchapters are organized as follows:

- Environmental Setting
- Project Impacts (Including Thresholds of Significance)
- Cumulative Impacts
- Environmental Mitigation Measures
- Conclusion

The focus of the environmental analysis in each of the following sections is to address the proposed actions as described in Section 2.0, Project Description.

4.0.2 INCORPORATION OF PREVIOUS ENVIRONMENTAL DOCUMENTS

This document incorporates by reference the East Lake Specific Plan (SCH No. 9209027). When an EIR or Negative Declaration incorporates a document by reference, the incorporation must comply with Section 15150 of the *CEQA Guidelines* as follows:

- This incorporated document must be available for inspection by the public at an office of the lead agency (*CEQA Guidelines,* Section 15150[b]). This document is available at the City of Lake Elsinore, Community Development Department, 130 South Main Street, Lake Elsinore, CA 92330, phone (951) 674-3124, during normal business hours.
- This document must summarize the portion of the document being incorporated by reference or briefly describe information that cannot be summarized. (*CEQA Guidelines,* Section 15150[c]). Information from the East Lake Specific Plan EIR, including mitigation measures, which have been incorporated by reference into this Draft EIR, has been briefly summarized in Section 1.7.1 and the relationship between the incorporated part of the referenced document and this EIR has been described.
- This document must include the State identification number of the incorporated document (*CEQA Guidelines,* Section 15150[d]). The State Clearinghouse Number for the East Lake Specific Plan EIR is 92092027.

The material to be incorporated in this document will include general background information (*CEQA Guidelines,* Section 15150[f]).

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4.1 AESTHETICS

This section addresses the aesthetic resources of the proposed project area. The potential effects that the residential and commercial development may have on the visual character of the surrounding area have been examined.

4.1.1 Environmental Setting

4.1.1.1 Applicable Plans

City of Lake Elsinore General Plan Update (2009)

Chapter 4.6: Aesthetics

The City of Lake Elsinore General Plan Scenic Resource Photographs identify scenic vistas within the city. According to the Scenic Resource Photographs, Lake Elsinore and its shoreline located in the western boundary of the project site is identified as a significant natural feature. In addition, this section contains the following policies pertaining to aesthetic resources:

- 9.1: Require a dark sky analysis and mitigation of projects proposing extensive night time lighting within the "Ring Analysis" area for impacts to Mt. Palomar Observatory.
- 9.2: Preserve the City's non-urban visual character, in particular the surrounding hillsides, which topographically define the lake region.
- 9.3: For new developments and redevelopment, encourage the maintenance and incorporation of existing mature trees and other substantial vegetation on the site, whether naturally occurring or planted, into the landscape design.
- 9.4: Maintain and improve the quality of existing landscaping in parkways, parks, civic facilities, rights-of-ways, and other public open areas.
- 9.5: Where appropriate, encourage new planting of native and/or non-invasive ornamental plants to enhance the scenic setting of public and private lands.
- 10.1: Discourage development that blocks or substantially alters public views of Lake Elsinore and local ridgelines.
- 10.3: Encourage new development and redevelopment to incorporate views of Lake Elsinore from roadways and other public spaces that provide residents and tourists with scenic vistas to the water, marinas, and lakeshore activities.
- 10.4: Establish a series of community gateways for individual communities to promote the visual character of the area.

4.1.1.2 Existing Conditions

Regional Setting

The project area is bound by the Santa Ana Mountains and the Cleveland National Forest to the west, and the San Jacinto Mountains and the San Bernardino National Forest to the east. Topography varies dramatically in this region, ranging from low-lying valleys to rolling hillsides and steep mountainous terrain with large rock outcroppings. Major features of this area include the Santa Ana River basin, Lake Mathews, Lake Perris, Lake Elsinore, Lake Skinner, Vail Lake, the San Jacinto River, Murrieta Creek, the

Santa Margarita River, the vineyard and citrus region near Temecula, and the Diamond Valley Reservoir south of Hemet (the largest reservoir in southern California).

Local Setting

The Diamond Specific Plan and 10-acre General Plan area are located within the central portion of the City of Lake Elsinore, just northwest of Interstate 15 (I-15) less than one mile from downtown Lake Elsinore and near the Links at Summerly golf course. The majority of the site has not been developed, with the exception of the Diamond Stadium and associated facilities, including parking lots. There are existing commercial uses located in the northern portion of the Diamond Specific Plan as well as the northern portion of the 10-acre General Plan area. There are pre-existing paved roads within the Diamond Specific Plan including Diamond Road, Malaga Road, and Pete Lehr Drive.

The existing landscaping on the project site is relatively limited. Mostly non-native landscape, turf, and ornamental plants have been incorporated into landscaped areas around the existing stadium and residential development adjacent to the project site.

The Diamond Specific Plan and 10-acre General Plan area have relatively flat topography, primarily characterized by a consistent elevation. Elevations range from approximately 1,260 feet above mean sea level (AMSL) in the south and west portion of the property to approximately 1,275 feet AMSL in the north and east portion of the site. Figure 4.1-1 depicts the topography of the project site.

Views

The project site is located in the Elsinore Valley, which offers natural scenic vistas within the region. The primary visual resources in the City of Lake Elsinore consist of the lake and its shoreline, surrounding hillsides, and prominent ridgelines of the Santa Ana Mountains. The mountain ranges surrounding the project site include the Elsinore Mountains which is a subrange of the Santa Monica Mountains which is part of the Cleveland National Forest and the Temescal Mountains. Additionally, as part of the Elsinore Mountains to the east, Rome Hill is a prominent dome formation located at an elevation 1,446 feet AMSL, which is located to the southwest of the project site. Other scenic resources include a levee, which is visible along the eastern boundary of Lake Elsinore, as well as wetlands habitat developed by the Lake Elsinore Lake Management Project.

Viewer Groups

Sensitive visual land uses generally include homes, recreational areas, commercial uses, and drivers on designated “scenic” roads. The following description identifies sensitive viewers within the study area. Viewer responses to visual changes were inferred from a variety of factors including viewer exposures, type of viewer, number of viewers, duration of view, and viewer activities. Viewer exposure includes distance and viewing angle.

The project site is surrounded by existing shopping centers and residential development to the northwest; a mix of vacant property, medical offices, and commercial retail businesses to the east; the master planned community of Summerly, currently under construction to the south; and the San Jacinto River runs along the western border of the project leading to Lake Elsinore to the west. Therefore, the existing viewer groups consist of residents, commercial users, as well as recreational users of the Diamond Stadium, Lake Elsinore, and San Jacinto River. Due to the relatively flat elevation of the project site, available existing viewsheds are relatively the same for all user groups with the exception of Lake Elsinore. Existing project views are shown in Figure 4.1-2.

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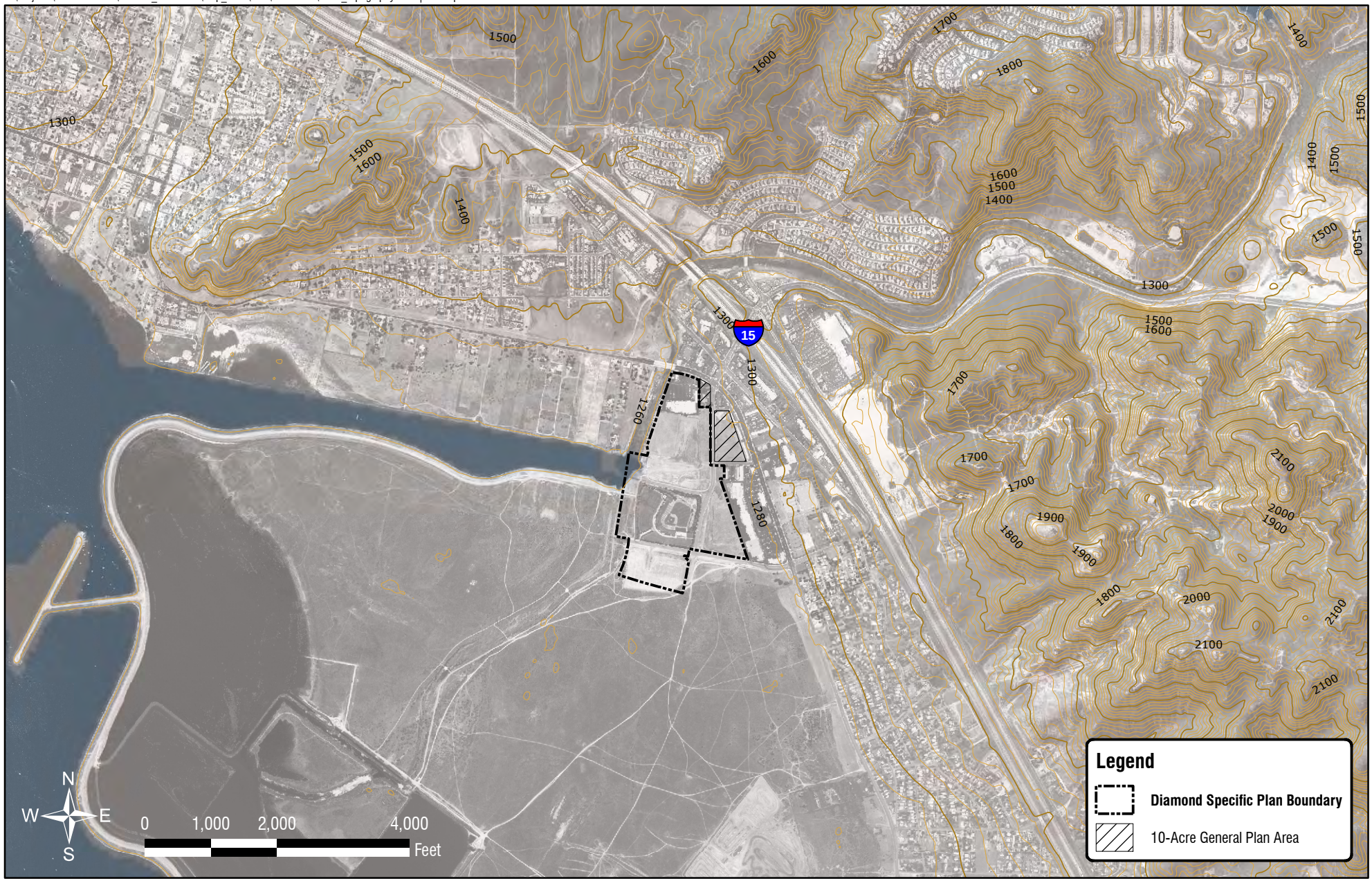

Topography

FIGURE 4.1-1

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Project Views

FIGURE 4.1-2

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

Views from Residential Areas

The existing views of the residences located northwest of the project site and future residences at Summerly, located to the south include those of eastern shoreline and wetlands of Lake Elsinore to the west and the Lake, as well as hillside and mountain views. Existing northern views are obscured by the Diamond Stadium. In addition, the residences located further to the east from the lake would not have lake views.

Views from Commercial Areas

Existing views of the commercial users located to the north and east of the project site include distant mountain and hillside views. Views of Lake Elsinore may be visible to some commercial uses; however, depending on the distance from the view's location to the lake, shoreline and wetland views would not likely be available.

Views from Recreational Area

Recreational users sitting on the bleachers at the Diamond Stadium have existing scenic views surrounding the project site. Viewers standing near the west end of Pete Lehr Drive would have dramatic and unobstructed views of Lake Elsinore as well as distant foothills of Cleveland National Forest.

Views from Designated Scenic Highways

According to the California Department of Transportation (Caltrans) the purpose of designating a highway as scenic is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources. There are no officially designated state, county, local, or city scenic routes within the project area (Caltrans 1996 and City of Lake Elsinore 1995); however, Interstate 15 (1-15) from Corona to Interstate 215 has been designated for eligibility as a state scenic highway. I-15 is approximately 0.5 miles from the project site at its closest location.

Although not a designated scenic highway, I-15 passes approximately one-half mile east of the project site. The project site is visible to drivers on I-15 as the highway is located at a higher elevation than the project site. The project site would appear as relatively flat undeveloped land with the exception of the Diamond Stadium and associated facilities. Existing viewsheds from I-15 looking southwest toward the project site, consist of residential and commercial development immediate adjacent to the highway and the proposed project site, which is flat and mostly vacant, Lake Elsinore, and the distant Elsinore Mountains and the Cleveland National Forest.

4.1.2 Project Impacts

4.1.2.1 Thresholds of Significance

Implementation of the proposed project would result in a significant impact upon aesthetics and visual resources, as defined in Appendix G (I) of the *California Environmental Quality Act* (*CEQA) Guidelines*, if the project causes any of the following:

- Substantial adverse effects on a scenic vista;
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

- Substantial degradation of the existing visual character or quality of the site and its surroundings; and/or
- Creation of a new source of substantial light or glare, which would adversely affect day or nighttime views of the area.

4.1.2.2 Environmental Impacts

Evaluation of project impacts with regard to aesthetics is related to the existing visual and aesthetic characteristics of the proposed project site and changes to views from areas surrounding the project site. Proposed site topography modification has been designed to be sensitive to natural landforms. The Diamond Specific Plan is a master planned, mixed-use development containing a maximum of 897,000 square feet (sf) of mixed use commercial, office, and education uses; 150 hotel rooms; 600 dwelling units; the existing Diamond baseball stadium, and plazas and open space. The mixed-use commercial and office development is envisioned to serve a larger region and will include a mixture of restaurants, entertainment retail, and office uses in an integrated design that will incorporate strong pedestrian linkages between uses to the adjoining baseball stadium. A hotel will be located within the mixed-use area, and an educational complex is also planned within the project. The residential portion of the development will incorporate a mix of product types and densities.

Architecture in the Diamond Specific Plan area will be primarily contemporary in style. The Diamond Specific Plan will incorporate unique lighting, signage, and public art that will set it apart from the surrounding commercial areas. Design creativity and flexibility is encouraged to incorporate unique designs is provided in the specific plan. The Diamond Specific Plan includes the following:

- Unique design features that include a main plaza and pedestrian promenade adjacent to Lake Elsinore with views of the Santa Ana Mountains to the south/southwest. The plaza is tentatively planned to be adjacent to Lake Elsinore and the core commercial area, which will include a cinema, shops, eating establishments, offices, and residences;
- An architectural design theme will be varied enough to complement the existing ball field and provide interesting distinction from area to area across the project. Common architectural design elements will be incorporated throughout the various components of the project in order to create cohesion from one area to another while allowing for variety in the ultimate design solution. This design theme will be compatible with, and complementary to, the design guidelines established for the Diamond Specific Plan;
- Design guidelines and development standards which create an active village atmosphere that incorporates an interior connected pedestrian environment with quality site amenities, design elements, combined with architecturally-enhanced landscape treatments and other amenities; and
- A mixed-use development in combination with quality site amenities and features that creates a unique village environment for those that live, work, learn, visit and shop within the Diamond Specific Plan.

Substantial Adverse Effects on a Scenic Vista

The City of Lake Elsinore General Plan Update (2009) Chapter 4.6, Aesthetics contains Scenic Resource Photographs identified scenic vistas within the city. According to the Scenic Resources Photographs, Lake Elsinore and its shoreline located in the western boundary of the project site is identified as a significant natural feature. The Diamond Specific Plan includes six planning areas, with the waterfront

planning area PA-3 located adjacent to the lake. The proposed development in PA-3 is expected to be a hotel. In PA-3, the project's frontage on Lake Elsinore would be a publicly-accessible amenity, which would include a regional trail, main plaza, lakeside promenade, and potential lake inlet channel. Along the promenade, the lake edge and main plaza development would maintain a dual orientation with buildings fronting on Diamond Circle that also provide both physical and visual access to the lake. Development frontages adjoining the promenade would incorporate semi-public and private plazas, terraces, and open space areas that augment the public promenade and would offer view opportunities of the lake and Santa Ana Mountains. Additionally, building heights are expected to integrate with the height of adjacent non-building area, which would address public view enhancement and view preservation for nearby viewer groups, including the residential, commercial, and recreational users.

Development associated with the Specific Plan will vary in height depending on the location within the Specific Plan. The Diamond Specific Plan includes design guidelines that discourage long uninterrupted expanses of walls, particularly on front elevations and recommends vines, espaliers, and potted plants to be used on walls and columns to create visual interest, add texture, and accentuate entries. Additionally, the plan states that fences and walls shall comply with city sight line standards. Finally, fences and walls in exclusively residential areas would have a maximum height of 6 feet, except in front yards, where fences may not exceed 42 inches in height. The Specific Plan further states that higher walls may be permitted for sound attenuation purpose, if warranted, but the design would be subject to approval by the Community Development Director as part of the Minor Modification process to reduce potential impacts to scenic resources. Limited use of walls is important to avoid obstruction of onsite views of Lake Elsinore and Santa Ana mountains and would not result in significant impacts on existing scenic vistas. With the implementation of the Specific Plan, views of the lake and its shorelines would be preserved for the existing residents located northwest of the project site as they are located north of the lake.

For the future residential viewers at Summerly who are located south of the Diamond Stadium parking facilities, available views to the lake would be partially altered by the Specific Plan as development would occur along Diamond Circle; however, this area has been planned for development prior to the proposed Diamond Specific Plan. Views of the mountains and hillsides to the west and south would remain and would not be significantly obscured by the proposed Specific Plan. For the commercial users, existing views of mountains and hillsides towards the south and east would not be obscured by the proposed project. However, views of Lake Elsinore to the west are already obscured by the existing stadium and the Diamond Specific Plan would not significantly alter existing lake views. Recreational area users sitting on the bleachers at the Diamond Stadium would continue to have views of distant mountains after the implementation of the Diamond Specific Plan. Viewers standing near the west end of Pete Lehr Drive would continue to have views of Lake Elsinore and distant mountains. Finally, due to the higher elevation of the I-15, drivers' views of the surrounding scene features would not be impacted by the Diamond Specific Plan. Because of the design guidelines within the Specific Plan, views of Lake Elsinore would not be obstructed by project implementation. Therefore, the Diamond Specific Plan would result in a less than significant impact to scenic vistas.

Substantial Damage to Scenic Resources

The proposed project site does not contain any rock outcroppings and historic buildings. Additionally, there are no trees of significance including palm trees within the project site. The proposed project would not remove or damage any of the aforementioned scenic resources. There are no officially designated state scenic highways or locally designated scenic highways within the project area; however, one highway within the project area has been designated for eligibility as a state scenic highway. I-15 has been designated as an "eligible state scenic highway–not officially designated." I-15 is located approximately 0.5 miles east of the project site and views to the natural features along the highway would

not be blocked by the proposed project; therefore, impacts to the eligible scenic highway are not significant. No substantial damage to scenic resources would occur, and a less than significant impact is identified.

Substantial Degradation of the Existing Visual Character

Proposed urban development associated with the Specific Plan portion of the project would alter the primarily undeveloped visual character of portions of the project site. This alteration would occur through the gradual build out of the Specific Plan with residential, retail and commercial uses. Development associated with the Specific Plan will vary in height depending on the location within the Specific Plan. The existing land use designations of the Diamond Specific Plan consist of the following: East Lake Specific Plan area, 19 acres of Special Alternative Use (SAU), 52 acres of General Commercial (GC) area, 7.5 acres of Open Space (OS), and 8 acres of roads and 11 acres of General Plan Neighborhood Commercial. Therefore, development in the project area has been anticipated and planned for. However, the Diamond Specific Plan would change the existing visual character. According to the proposed grading plan (Figure 2.4-1),the site would be graded to elevations above the flood hazard zones. In accordance with the City of Lake Elsinore municipal code, all finished floor elevations within the proposed development will be set at elevation 1267.0, which is 3.7 feet above the 100-year flood water surface elevation of 1263.3. The project site is relatively flat and the proposed grading would not significantly change the existing site elevation. The Diamond Specific Plan includes design recommendations such as building heights and limited use of walls to address public view enhancement and view preservation of Lake Elsinore and the Santa Ana mountains. Further, the Diamond Specific Plan would be consistent with existing land use and zoning and would be consistent with the visual character of the surrounding uses. Development pursuant to the Specific Plan would not obscure existing views of Lake Elsinore and its shorelines for the existing residential viewers northwest of the project site as no development would be located on the lake and existing hillside and mountains views would remain as well.

Future development within the Specific Plan area would be required to adhere to specific design requirements included in the Specific Plan which would ensure high-quality and aesthetically-pleasing developments. Chapter 5 (Design Guidelines) of the Specific Plan focuses on the visual character of future development within the Specific Plan area. The design guidelines and development standards contained in that chapter promote: (1) well-designed buildings that contribute to a sense of quality and permanence; (2) a pattern and scale of development that creates a well-defined, human-scale public environment that incorporates active, pedestrian-oriented street level uses that animate and enliven the public realm; (3) a safe and attractive system of streets, parks and civic spaces; and (4) a visually and aesthetically distinctive identity that incorporates water as a thematic element.

The Design Guidelines chapter of the Specific Plan also identifies specific requirements for the design of buildings, including: massing, facades, building entrances, roof lines, materials and colors, windows, doors, and lighting. Future development would have varied roof lines and facades, which would break up the apparent bulk and scale of the buildings. Additionally, the Specific Plan provides landscaping requirements, including the use of street trees, which would serve to soften the appearance of the buildings and enhance the pedestrian experience. Therefore, adherence to the design requirements within the Specific Plan would ensure a visually-pleasing development. The Diamond Specific Plan would not degrade the existing visual character and would result in a less than significant impact.

Creation of a New Source of Substantial Light or Glare

The Diamond Specific Plan would modify the nighttime appearance of the area from a primarily vacant area (with the exception of Diamond Stadium) to that of a lighted commercial/mixed use community. The Diamond Stadium is identified in the City's General Plan Update as a current producer of night lighting. The lighting and glare analysis considers the lighting impact of the proposed Specific Plan as a whole. The proposed project would incorporate lighting to the extent necessary for safety and security, and to complement the architectural character of future buildings developed within the Specific Plan area. Additionally, street lighting would be incorporated along the roadways that are planned for development as part of the project. Street lights would provide a safe and desirable level of illumination for both motorists and pedestrians without intruding into residential areas. The City of Lake Elsinore falls beyond the 30-mile radius but within the 45-mile radius of Mount Palomar Observatory. This outer ring is identified as resulting in secondary impacts to the ability of researchers at Mount Palomar to study the sky as a result of surrounding night-lighting. All lighting is required to comply with the City of Lake Elsinore lighting ordinance including the siting and direction of light fixtures. All outdoor lighting fixtures in excess of 60 watts would be oriented and shielded to reduce glare or direct illumination onto adjacent properties or streets (Section 17.112.040). Low pressure sodium lighting in accordance with the Mount Palomar Observatory lighting standards would be required (Section 17.112.040). Lighting fixtures would be carefully located, positioned, and shielded to minimize unwanted spillover and glare. Additionally, in general, building finishes should be non-reflective. Therefore, with adherence to these regulations, the proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views of the area. No significant impacts would result.

4.1.3 Cumulative Impacts

Substantial Adverse Effects on a Scenic Vista

The City of Lake Elsinore General Plan Update (2009) Scenic Resources Photographs identify scenic vistas within the City. As shown on Figure 3.5-1, two of the cumulative projects are in a line of sight from a scenic vista (Lake Elsinore): The WatersEdge Specific Plan and Cottages by the Lakes (considered one project) and the Marina Village Condos. Lake Elsinore is approximately 3,000 acres and the two proposed cumulative projects are contiguous and would not completely obscure views of the lake. In addition, WatersEdge Specific Plan and Cottages by the Lakes recently went through an environmental review with the City and the project will include design guidelines that will minimize visual impacts. Marina Village Condos would undergo the same the environmental review process as well as incorporate design guidelines to reduce obstruction of views the lake. None of the cumulative projects block the viewshed substantially; therefore, impacts are less than significant.

Substantial Damage to Scenic Resources

The City's General Plan (2009) lists significant natural features in Lake Elsinore, including the ridgelines of the Temescal, Santa Ana, and Elsinore Mountains and lake and shorelines. Other scenic resources considered include trees, rock outcroppings, and historic buildings within a state scenic highway. The cumulative projects WatersEdge, Cottages by the Lake, and Marina Village Condos are located adjacent to Lake Elsinore. However, these two cumulative projects would not remove or damage any aforementioned scenic resources, including Lake Elsinore. There are no officially designated state scenic highways within the cumulative projects area. Therefore, less than significant impacts to scenic resources would result from the cumulative projects.

Substantial Degradation of the Existing Visual Character

The cumulative projects are all within designated development land uses. These land uses require either the creation of a Specific Plan or the adherence to City or County design guidelines. These specific plans and design guidelines ensure that the development would be constructed in an aesthetically pleasing manner that does not considerably degrade the visual character of the area. Therefore, no significant impact would result from the cumulative projects.

Creation of a New Source of Substantial Light or Glare

Continued development and urbanization of the Lake Elsinore area over time is resulting in a more urban setting leading to an increase in nighttime lighting levels in the area. Given the developed nature of the project locale and the requirements of City lighting and Mount Palomar Observatory lighting standards on cumulative projects, the combined effect on the views in the vicinity are similar to the project's impacts themselves. Because the Diamond Specific Plan and the cumulative projects have been adequately designed to reduce substantial light or glare, cumulative impacts to aesthetics would not be considered significant.

4.1.4 Environmental Mitigation Measures

No significant impacts were identified; therefore no mitigation measures are required.

4.1.5 Conclusion

The City's General Plan (2009) lists significant natural features in Lake Elsinore, including the ridgelines of the Temescal, Santa Ana, and Elsinore Mountains and lake and shorelines. Other scenic resources considered include trees, rock outcroppings, and historic buildings within a state scenic highway. As mentioned above, the Diamond Specific Plan is located adjacent to Lake Elsinore and the proposed lake edge design concept would offer view opportunities of the lake and Santa Ana Mountains. The Diamond Specific Plan would not remove or damage any of the aforementioned scenic resources. There are no officially designated state scenic highways within the project area. Therefore, no impacts to scenic highways would occur, and no substantial damage to scenic resources would occur as a result of the proposed project. The project is considered to have a less than significant impact on scenic resources or scenic highways.

The Diamond Specific Plan is currently designated in the current General Plan (1990) as East Lake Specific Plan area, with 19 acres of SAU, 52 acres of General Commercial GC area, 7.5 acres of OS, and 8 acres of roads and 11 acres of General Plan Neighborhood Commercial; therefore, development in this area has been anticipated. This project requires the creation of a Specific Plan and the subsequent adherence to design guidelines established in the Diamond Specific Plan. The Specific Plan and the adherence to the design guidelines ensure that the development would be constructed in an aesthetically pleasing manner that does not considerably degrade the visual character of the area. Therefore, the Diamond Specific Plan would have a less than significant impact on the visual character or quality of the site.

Through implementation of the proposed design guidelines, General Plan policies, and compliance with City lighting standards, lighting provided for the Diamond Specific Plan would be consistent with the existing surrounding environment; therefore, lighting impacts would be less than significant.

4.2 AIR QUALITY

Information from the following document was used in the preparation of this section and is included in Appendix B of this Draft Environmental Impact Report (EIR):

> *Air Quality Impact Analysis, Diamond Center Specific Plan, City of Lake Elsinore, California*. Prepared by Giroux and Associates. June 23, 2009. Revised April 26, 2010.

4.2.1 Environmental Setting

The proposed project is located in western Riverside County, which is part of the South Coast Air Basin (Basin) and within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The climate is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. A temperature inversion, a warm layer of air that traps the cool marine air layer underneath it and prevents vertical mixing, is the prime factor that forces airborne contaminants to accumulate in the Basin. The mild climatological pattern in the Basin is interrupted occasionally by periods of extremely hot weather, winter storms, and Santa Ana winds. The climate of the area is not unique but the high concentration of stationary and mobile sources of air contaminants combined with the surrounding wall of mountains, contribute to poor air quality in the region. Local air quality in the Basin is monitored by the SCAQMD which operates a network of monitoring stations throughout the Basin. The California Air Resources Board (CARB) operates additional monitoring stations.

4.2.1.1 Applicable Plans and Regulations

Federal and State Regulations

Federal Clean Air Act

The federal Clean Air Act (CAA) was enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA established federal air quality standards, known as National Ambient Air Quality Standards (NAAQS). In 2003, the Environmental Protection Agency (EPA) adopted a rule which extended and established a new attainment deadline for ozone (O_3) for the year 2021. Because the State of California had established Ambient Air Quality Standards (AAQS) several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 4.2-1. Sources and health effects of various pollutants are also shown in Table 4.2-1. Because the Basin was far from attaining the 1-hour federal standard, the 8-hour O_3non-attainment designation did not substantially alter the attainment planning process. As noted above, the compliance deadline for meeting the 8-hour O_3 standard has been extended to 2021.

Amendments to the CAA also mandated that the state submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The County of Riverside is included in the Los Angeles Basin, which was designated a non-attainment area for certain pollutants that are regulated under the CAA. Through a separate state statute, the SCAQMD was established as the local air pollution control agency for the Basin. The NAAQS were amended in July 1997 to include an additional standard for O_3, and to adopt a standard for ultra-fine particulates ($PM_{2.5}$). Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (CARB) to recommend adoption of the statewide $PM_{2.5}$ standard that is more stringent than the federal standard. This standard was adopted in 2002. The state $PM_{2.5}$ standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Table 4.2-1. California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard	National Standard	Pollutant Health Effects	Major Pollutant Source(s)
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	--	High concentrations can directly affect lungs, causing irritation. Common effects are damage to vegetation and cracking of untreated rubber.	Motor vehicles
	8 hours	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)		
Carbon Monoxide (CO)	8 hours	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	Interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines (primarily gasoline powered motor vehicles)
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Irritates eyes and respiratory tract. Colors atmosphere reddish brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads
	1 hour	0.18 ppm (339 µg/m^3) (See Note 1)	--		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	0.030 ppm (80 µg/m^3)	Irritates upper respiratory tract; injures lung tissue. Can yellow the leaves of plants, and destroy marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing
	24 hours	0.04 ppm (105 µg/m^3) (see Note 2)	0.14 ppm (365 µg/m^3)		
	1 hour	0.25 ppm (655 µg/m^3)	--		
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3 (see Note 3)	--	May irritate eyes and respiratory tract. Absorbs sunlight, reducing amount of solar energy reaching the earth. Produces haze and limits visibility.	Dust and fume producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities such as wind-raised dust and ocean spray
	24 hours	50 µg/m^3	150 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	15 ug/m^3	May increase respiratory symptoms and diseases and decrease lung function.	Vehicle exhaust, industrial combustion.
	24 Hour	--	35 ug/m^3		
Lead (Pb)	30 Day Average	1.5 µg/m^3	--	May cause learning disabilities, brain and kidney damage.	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.
	Calendar Quarter	--	1.5 µg/m^3		

Source: California Air Resources Board (CARB) April 1, 2008 (http://www.arb.ca.gov/research/aaqs/aaqs2.pdf)

Notes:
1. On February 19, 2008, the Office of Administrative Law approved a new Nitrogen Dioxide ambient air quality standard, which lowers the 1-hr standard to 0.18 ppm and establishes a new annual standard of 0.030 ppm. These changes became effective March 20, 2008.
2. This SO_2 standard was formerly less strict—0.05 ppm (131 µg/m^3)—in CARB Fact Sheet 38 (1988), as reported in the April 1993 South Coast Air Quality Management District (SCAQMD) Air Quality Handbook for Preparing Environmental Impact Reports.
3. This PM_{10} standard was formerly less strict—30 µg/m^3—in CARB Fact Sheet 38 (1988), as reported in the April 1993 SCAQMD Air Quality Handbook for Preparing Environmental Impact Reports. This revised standard was approved by CARB on June 20, 2002 and became effective July 5, 2003.

mg/m^3 = milligrams per cubic meter
ppm = parts per million
µg/m^3 = micrograms per cubic meter

Similarly, the CARB extensively evaluated health effects of O_3 exposure. A new state standard for an 8-hour O_3 exposure was adopted in 2005, which mirrors the federal standard. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards.

Non-attainment and Criteria Pollutants

Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: O_3, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), fine particulates (PM_{10}), carbon monoxide (CO), and lead (Pb). The NAAQS were amended in 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 4.2-1 provides the NAAQS within the basin.

Mobile Sources

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require use of cleaner-burning gasoline and other cleaner-burning fuels, such as methanol and natural gas. Automobile manufacturers are also required to reduce tail pipe emissions of hydrocarbons and nitrogen oxides (NO_x).

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS are also shown in Table 4.2-1. Air pollution from commercial and industrial facilities is regulated by local air quality management districts, whereas mobile sources of air pollution are regulated by the California Air Resources Board (CARB) and the EPA. All air pollution control districts have been formally designated as "attainment" or "non-attainment" for each state air quality standard. Non-attainment designations are categorized into three levels of severity: (1) moderate; (2) serious; and (3) severe. If there are inadequate or inconclusive data to make a definitive attainment designation, districts are considered "unclassified."

As shown on Table 4.2-2, the current attainment designations for the Basin are as follows:

Table 4.2-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Extreme Nonattainment	Revoked June 2005
O_3 8-hour	Extreme Nonattainment	Nonattainment
PM_{10}	Serious Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment [1]
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
All others	Attainment/Unclassified	Attainment

Source: California Air Resources Board, Attainment Designation Fact Sheets, January 2006.

[1] The USEPA granted the request to redesignate the SCAB from nonattainment to attainment for the CO NAAQS on May 11, 2007 (Federal Register Volume 71, No. 91), which became effective as of June 11, 2007.

Local Regulations

South Coast Air Quality Management District

The proposed project relates to the SCAQMD's Air Quality Management Plan (AQMP) through the land use and growth assumptions used to forecast projected air pollution emissions in the Basin. The SCAQMD's AQMP provides a blueprint as to how the SCAQMD expects to bring the Basin into attainment for all NAAQS and CAAQS.

The AQMP is based on the designated land use for a project site as described in the various approved General Plans throughout the Basin. When a project is consistent with the growth assumptions in a General Plan, it is also considered consistent with the SCAQMD's AQMP. Such consistency implies that a project would not create any significant regional air quality impacts because such impacts have already been anticipated within the framework of the regional air quality planning process. However, it is recommended in the AQMP that, although incompatibility with the AQMP is a source of potentially significant impact, compatibility is not a sufficient basis for a finding of less than significant impact. Therefore, impact significance is evaluated on a project-specific basis using SCAQMD's *California Environmental Quality Act (CEQA) Air Quality Handbook* (1993) significance thresholds and other guidance in addition to the NAAQS and CAAQS.

The SCAQMD's *CEQA Air Quality Handbook* (1993) states that any project in the District with daily emissions that exceed any of the thresholds identified in Table 4.2-3 should be considered as having an individually and cumulatively significant air quality impact.

Table 4.2-3. SCAQMD Daily Emissions Thresholds

Pollutant	Thresholds (lbs/day)	
	Construction	Operational
ROG	75	55
Nitrogen Oxides (NO_x)	100	55
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Sulfur Oxides (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook 1993, 1998, 2002.

Per SCAQMD guidelines, during construction activity, if a daily emission threshold is exceeded regardless of quarterly emissions levels, the project is determined to have a significant air quality impact. Therefore, a conservative approach is used to evaluate construction emissions based on daily emissions rather than quarterly emissions.

Additionally, projects must adhere to SCAQMD Rules 403 (Fugitive Dust Control), 431.2 (Low Sulfur Fuel), 1113 (Architectural Coatings), and 1186/1186.1 (Street Sweepers) during construction-related activities.

SCAQMD Rule 403 includes a menu of fugitive dust control measures to which the proposed project must adhere, including, but not limited to:

- Active construction areas shall be watered at least three times daily.
- All haul trucks shall be covered or shall maintain at least two feet of freeboard.
- All unpaved parking or staging areas shall be watered four times daily.
- Site access points shall be swept or washed within 30 minutes of any visible dirt deposition on any public roadway.
- On-site stockpiles of debris, dirt, or other dusty material shall be covered or watered three times daily.
- Operations on any unpaved surface shall be suspended if winds exceed 25 miles per hour.
- Any cleared area that is to remain inactive for more than 96 hours after clearing shall be stabilized.

Rule 431.2 limits the sulfur content in liquid fuels and prohibits the purchase or sale of fuels that do not comply with this rule. Rule 1113 limits the volatile organic compound (VOC) content of architectural coatings by providing numeric standards for VOC concentrations per volume of coating. The applicability of this rule includes any person who applies or solicits the application of any architectural coatings used within the SCAQMD. Rule 1186 lists maintenance guidelines for paved and unpaved public roads, with a goal of reducing the amount of particulate matter generated as a result of vehicular travel on public roads. Rule 1186.1 further stipulates that any street sweepers used in compliance with Rule 1186 be fueled by alternative fuel or less-polluting sweepers shall be obtained.

In addition, the project would be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances.

Furthermore, CARB imposes a requirement that heavy duty trucks accessing the site shall not idle for greater than five minutes, as codified in Title 13, Chapter 10, Section 2485, Division 3 of the California Code of Regulations.

Localized Significance Thresholds (LSTs) were developed by SCAQMD in response to the Governing Board's Environmental Justice Enhancement Initiative I-4 and are only applicable to the following criteria pollutants: NO_x, CO, PM_{10}, and $PM_{2.5}$ during construction. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. For PM_{10}, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust.

Regional Comprehensive Plan and Guide

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties. SCAG serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the region, which includes chapters on growth management and regional mobility. Those specific chapters form the basis of the land use and transportation control portions of the AQMP and are utilized in the preparation of air quality forecasts.

Greenhouse Gases

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases (GHGs). The Governor's Office of Planning and Research is in the process of developing CEQA significance thresholds for GHG emissions and has asked CARB technical staff to recommend statewide interim thresholds of significance for GHG. The Preliminary Draft Staff Proposal for "Recommended Approaches for Setting Interim Significance Thresholds for Green House Gases under CEQA" was released October 24, 2008, but thresholds have yet to be established. In addition, the California Air Pollution Control Officers Association (CAPCOA) issued a white paper suggesting various approaches to determining significance entitled "CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to California Environmental Quality Act (January 2008)."

Several recent state actions have provided direction on global climate change: AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07. SB 1368 required California Public Utilities Commission to establish a GHG emission performance standard for baseload generation from investor-owned utilities. EO S-20-06 requires reduction in GHG emissions through motor vehicle emission standards, the Renewable Portfolio Standard that requires 20 percent electricity to be supplied by renewable power by 2010, world leading energy efficiency standards and programs, solid waste diversion and reuse programs, expanding the use of alternative fuels and investing in the hydrogen highway. EO S-1-07, the Low Carbon Fuel Standard, calls for reduction of at least 10 percent in the Carbon intensity of California's transportation fuel. The following actions apply directly to the proposed project.

Executive Order S-3-05

Executive Order S-3-05, issued June 2005, established GHG emissions targets for the state, as well as a process to ensure the targets are met. As a result of this Executive Order, the California Climate Action Team, led by the Secretary of the California EPA, was formed. The California Climate Action Team reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.[1] The GHG targets are as follows:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

California Global Warming Solutions Act of 2006 (Assembly Bill 32)

The California Global Warming Solutions Act of 2006 (also known as Assembly Bill 32 [AB 32]) committed the State to achieving the following:

- 2000 GHG emission levels by 2010 (which represents an approximately 11 percent reduction from "business-as-usual"); and[2]
- 1990 levels by 2020 (approximately 30 percent below "business-as-usual").

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary

[1] California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.
[2] The California Air Resources Board defines "business-as-usual" as emissions in the absence of any GHG reduction measures discussed in the Climate Change Proposed Scoping Plan.

sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

Climate Change Draft Scoping Plan

In 2008, CARB released a Climate Change Draft Scoping Plan, as required by AB 32. The Climate Change Draft Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment and enhance public health, reduce dependence on oil, diversify energy sources and use energy more efficiently, while creating new jobs and enhancing growth in California's economy.[3] The Climate Change Draft Scoping Plan indicates that "reducing greenhouse gas emissions to 1990 levels means cutting approximately 30 percent from "business-as-usual" emission levels projected for 2020, or about 10 percent from today's [absolute] levels."

Senate Bill 97

Senate Bill 97 (SB 97), passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires the Office of Planning and Research (OPR) to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to, effects associated with transportation and energy consumption. These guidelines must be transmitted to the Natural Resources Agency by July 1, 2009, to be certified and adopted by January 1, 2010. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. The OPR and the Resources Agency shall periodically update these guidelines to incorporate new information or criteria established by CARB. SB 97 applies to any EIR, negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized. Under SB 97, transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, and projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006 are exempted from analyzing the effects of GHGs in an EIR, negative declaration, mitigated negative declaration, or other CEQA document.

Senate Bill 375

Senate Bill 375 was passed by the State Assembly on August 25, 2008, by the State Senate on August 30, 2008, and signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating housing closer to jobs, retail, and transit. Under the bill, each Metropolitan Planning Organization would be required to adopt a sustainable community strategy to encourage compact development so that the region will meet a target, created by CARB, for reducing GHG emissions.

4.2.1.2 Existing Conditions

Existing Air Quality

Existing air quality is measured based upon ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. Those standards currently in effect for both the state and federal levels are shown in Table 4.2-1.

[3] Climate Change Proposed Scoping Plan, California Air Resources Board, October 2008.

Regional Air Quality

The air quality in a region is considered to be in attainment if: the measured ambient air pollutant levels for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, and PM_{10} are not exceeded and all other standards are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O_3, PM_{10}, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O_3 standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

The SCAQMD monitors the levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2007 the federal and state standards for O_3 at most monitoring locations exceeded threshold on one or more days. No areas of the Basin exceeded federal or state standards for CO, NO_2, SO_2, Pb, or sulfates. The SCAQMD 2007 AQMP predicted the Basin would comply with the federal $PM_{2.5}$ requirements by 2015 and the federal 8-hour O_3 standards by the year 2024. Compliance with the state standards for both $PM_{2.5}$ and ozone is expected to follow a similar schedule.

The most current regional attainment emissions forecast for ozone precursors (ROG and NO_x) and for CO and for particulate matter are shown in Table 4.2-4. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM_{10} and $PM_{2.5}$ are forecast to slightly increase.

Table 4.2-4. South Coast Air Basin Emissions Forecasts

Pollutant	Yearly Emissions (tons/day			
	2005[a]	2010[b]	2015[b]	2020[b]
NO_x	999	755	600	493
ROG	729	569	518	496
CO	4,129	2,950	2,472	2,198
PM_{10}	313	256	296	306
$PM_{2.5}$	112	103	103	105

Source: California Air Resources Board, The 2008 California Almanac of Emission & Air Quality.
[a] 2005 Base Year.
[b] With current emissions reduction programs and adopted growth forecasts.

Local Air Quality

Existing air quality data were obtained from monitoring sites maintained by the SCAQMD near the project site. As there are no nearby stations that monitor the full spectrum of pollutants, data was gathered from facilities at Lake Elsinore, Riverside, and Perris Valley. Data for O_3 and NO_2 is collected by the Lake Elsinore monitoring station. Data for PM_{10} were obtained from the Perris Valley monitoring station and data for CO and ultra-fine particulate matter ($PM_{2.5}$) were obtained from the Riverside County Rubidoux monitoring station. The six years of data in Table 4.2-5 show the number of days when standards were exceeded for the project area.

Table 4.2-5. Air Quality Monitoring Summary (2002-2007)
Days Standards were Exceeded and Maximum Observed Concentration

Pollutant/Standard	2002	2003	2004	2005	2006	2007
Ozone(O_3)[1]						
1-Hour > 0.09 ppm (S)	52	50	41	37	40	26
1-Hour > 0.12 ppm (F)*	6	7	2	4	3	3
8-Hour > 0.07 ppm (S)	-	35	51	46	58	55
8- Hour > 0.08 ppm (F)	44	35	21	15	24	19
Max. 1-Hour Conc. (ppm)	0.14	0.15	0.13	0.15	0.14	0.13
Carbon Monoxide (CO)[3]						
1-Hour > 20. ppm (S)	0	0	0	0	0	0
1-Hour > 9. ppm (S, F)	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	4.1	4.5	4.3	3.4	3.0	4.0
Max. 8-Hour Conc. (ppm)	3.1	3.7	3.0	2.5	2.1	2.1
Nitrogen Dioxide (NO_2)[1]						
1-Hour > 0.18 ppm (S)	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.07	0.07	0.06	0.07	0.07	0.06
Inhalable Particulates (PM_{10})[2]						
24-Hour > 50 μg/m^3 (S)	24/61	19/58	15/59	19/60	19/54	32/59
24-Hour > 150 μg/m^3 (F)	0/61	0/58	0/59	0/60	0/54	0/59
Max. 24-Hr. Conc. (μg/m^3)	95.	135.	79.	75.	125.	120.
Ultra-Fine Particulates ($PM_{2.5}$)[3]						
24-Hour > 65 μg/m^3 (F)	8/325	8/350	5/343	4/332	1/300	3/295
24-Hour > 35 μg/m^3 (F)**	83/327	75/350	53/343	36/337	32/300	33/295
Max. 24-Hr. Conc. (μg/m^3)	77.6	104.3	91.7	98.7	68.4	75.7

Source: SCAQMD Air Monitoring Data Summaries, Lake Elsinore Monitoring Station.
Notes: [1] = Data obtained from Riverside County Rubidoux monitoring station
[2] = Data obtained from Perris Valley monitoring station
(S) = State ambient standard
(F) = Federal ambient standard
ppm = Parts per million
μg/m^3 = micrograms per cubic meter

O_3 is the pollutant that most often exceeded previously allowable federal and state standards within the project area, with PM_{10} and $PM_{2.5}$ also exceeding allowable state standards within the project area on an occasional basis. The most current federal ambient air quality standards eliminate the standard for 1-hour O_3.

Greenhouse Gases

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These GHGs contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation. The principal greenhouse gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H_2O). CO_2 is the most common reference gas for climate change. To account for the warming potential of GHGs, GHG emissions are often quantified and reported as CO_2 equivalent (CO_2E). Large emission sources are reported in million metric tons of CO_2E ($MMTCO_2E$). Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

Emissions of CO_2 and N_2O are byproducts of fossil fuel combustion, among other sources. CH_4 results from off-gassing associated with agricultural practices and landfills, among other sources. Sinks[4] of CO_2 include vegetation and the ocean.

Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high O_3 days, more large forest fires, and more drought years (CARB 2007). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of climate change on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global climate change, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

[4] A CO_2 sink is a resource that absorbs CO_2 from the atmosphere. The classic example of a sink is a forest in which vegetation absorbs CO_2 and produces oxygen through photosynthesis.

4.2.2 Project Impacts

4.2.2.1 Thresholds of Significance

The following significance thresholds were taken from Appendix G of the *CEQA Guidelines.* A significant impact to air quality is identified if the project is determined to:

- Conflict with or obstruct implementation of the SCAQMD AQMP;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result is a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Greenhouse Gas Emissions Interim Measures

On December 5, 2008 the SCAQMD Governing Board adopted an Interim GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 metric tons CO_2E/year. According to CAPCOA's white paper from January 2008, CARB's most recent emission inventory indicates that California had annual emissions of 436 million metric tons of carbon dioxide equivalent (MMT CO_2E) in 1990 and 497 MMT CO_2E in 2004. Therefore, the threshold for industrial projects would equate to a project producing 0.00002 percent of California's annual CO_2E emissions.

As part of the Interim GHG Significance Threshold development process for industrial projects, the SCAQMD established a working group of stakeholders that also considered thresholds for residential/commercial projects. As discussed in the Interim GHG Significance Threshold guidance document the focus for residential/commercial projects is on performance standards and a screening level threshold. For discussion purposes, the SCAQMD's working group considered performance standards primarily focused on energy efficiency measures beyond Title 24 and a screening level of 3,000 metric tons CO_2E/year based on the relative GHG emissions contribution between residential/commercial sectors and stationary source (industrial) sectors. The working group and staff ultimately decided that additional analysis was needed to further define the performance standards and to coordinate with CARB staff's interim GHG proposal. SCAQMD staff, therefore, did not recommend action for adopting an interim threshold for residential/commercial projects but rather recommended bringing this item back to the Board for discussion and possible action in March 2009 if the CARB board does not take its final action by February 2009. As of this date, no final action on a significance threshold for residential/commercial projects has been taken by SCAQMD. Therefore, the City of Lake Elsinore elects to utilize the Interim GHG significance threshold for industrial projects as the threshold of significance for this Diamond Specific Plan EIR.

4.2.2.2 Environmental Impacts

Emissions that can adversely affect air quality occur both during a project's construction period and its operational phase. As identified above, CEQA Appendix G provides criteria indicating when a project is

considered to have significant air quality impacts during project operation. Construction and operational impacts relative to these criteria are discussed below.

Consistency with Air Quality Management Plan

In June 2007, the SCAQMD adopted a series of AQMPs to meet the state and federal ambient air quality standards that were being exceeded in most parts of the Basin. The Diamond Specific Plan relates to the air quality planning process through the growth forecasts that were used as input for the regional transportation model. If a proposed development is consistent with those growth forecasts, and if all available emissions reduction strategies are implemented as effectively as possible on a project-specific basis, then the project is consistent with the AQMP.

The AQMP contains a number of land use and transportation control measures (TCMs) which are divided into three categories:

1. High occupancy vehicle (HOV) measures;
2. Transit and Systems Management measures; and
3. Information-based measures.

These measures cannot be implemented by any single development, but require an integration of all development and all transportation planning. AQMP consistency on a single development basis is thus more a matter of facilitating or providing the infrastructure for TCM implementation rather than being required to carry out regionally comprehensive AQMP measures.

The Diamond Specific Plan is consistent with the currently adopted land use and zoning designations as identified in the City's General Plan and Zoning Code and will be consistent with the City's General Plan Update once adopted. Consequently, the project is consistent with the AQMP, and impacts would be less than significant.

Air Quality Standard Violation

Construction Impacts (Short-Term)

Construction of the Diamond Specific Plan is anticipated to generate onsite pollutant emissions from grading and paving activity, building construction, and finish work. Construction emissions are calculated based on the types of construction equipment required, construction schedule, and emission factors from the CARB URBEMIS2007 emissions inventory model (details of the URBEMIS runs and outputs are included in Appendix B). Emissions from construction activities would be compared to the SCAQMD's daily construction-related emissions thresholds. Construction of the Diamond Specific Plan is broken down into three phases of development. The phase with the largest construction footprint occurs during Phase 2, scheduled to have an opening year of 2014.

Construction activities associated with the Diamond Specific Plan are anticipated to generate pollutant emissions from rough grading, surface paving activities, building construction, architectural coatings containing VOCs, and construction worker commutes. Exhaust emissions from rough grading activity would result from both on-road and off-road heavy equipment operating during this activity. Dust is typically a major concern during rough grading activities. All construction projects in the SCAQMD are required to use dust control procedures. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a substantially higher PM_{10} control

efficiency. Construction activities would also conform to SCAQMD Rule 403 to control fugitive dust emissions and Rule 1113 to limit VOC emissions in architectural coatings.

Project grading will require import of 231,000 cubic yards (cy) of fill material. Total fill was divided evenly between the three construction phases. Import was assumed to require 1,200 miles per day of on-road truck travel during grading activities (see *Section 4.13 Transportation and Traffic*). Construction equipment exhaust emissions were estimated based on the CARB URBEMIS2007 emissions inventory model. Equipment exhaust is expected to be generated during construction activities (including site grading, building, paving, and finish work; e.g., painting). Equipment exhaust emissions were calculated presuming that initial demolition and heavy grading and infrastructure development would gradually shift toward building construction and then toward finish construction, paving, landscaping, etc. Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. Public exposure to heavy equipment emissions will be an extremely small fraction of the above dosage assumption. Diesel equipment is also becoming progressively "cleaner" in response to air quality rules on new off-road equipment. Any public health risk associated with project-related heavy equipment operations exhaust is therefore not quantifiable, but small.

Calculated construction activity emissions by phase are summarized in Table 4.2-6. As shown, the Diamond Specific Plan would exceed SCAQMD thresholds for PM_{10} emissions during grading for all phases and exceed thresholds for $PM_{2.5}$ during Phase 2. As show in Table 4.2-2, the Basin's current status for PM_{10} and $PM_{2.5}$ is nonattainment and the Diamond Specific Plan would contribute to the existing NAAQS and CAAQS air quality violation within the Basin during construction. Therefore, the Diamond Specific Plan would result in a significant impact during construction and mitigation is required.

Operation Impacts (Long-Term)

Air pollutant emissions associated with the operation of the Diamond Specific Plan would be generated primarily by mobile sources traveling to and from the project site, although emissions from natural gas use, landscape maintenance equipment, consumer products, and architectural coatings would also occur. Emissions modeled for the operational phase of the project were calculated based on assumptions from the CARB URBEMIS2007 emissions inventory model. Based on the trip generation factors specified in the traffic study (Appendix J) and assuming a buildout year of 2016, daily operational emissions were projected.

Table 4.2-7 summarizes the operational emissions associated with the residential, office and retail uses for the proposed opening year of each phase. URBEMIS2007 assumes that mobile source emissions are lower in the future because of advances in automotive technologies, such that the vehicular emissions attributed to Phase 1 (opening year 2012) will be less by the opening year for subsequent phases. Therefore, in addition to the new uses proposed in 2014 for Phase 2, the operational emissions for Phase 1 were calculated for year 2014. Similarly, in 2016 for Phase 3, the operational uses for Phases 1 and 2 were calculated for the year 2016 and added to the new Phase 3 uses as shown in Table 4.2-7. At project buildout, operational emissions of CO, PM_{10}, $PM_{2.5}$, and ozone precursors ROG and NO_x would exceed SCAQMD thresholds. As shown in Table 4.2-2, the Basin's current status for ozone, PM_{10} and $PM_{2.5}$ is nonattainment and the Diamond Specific Plan would contribute to the existing NAAQS and CAAQS air quality violation within the Basin during operation. Consequently, operational emissions associated with the Diamond Specific Plan would result in a significant air quality impact during operation.

Table 4.2-6. Construction Daily Emissions without Mitigation (lbs/day)

Activity	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Phase 1							
Grading 2010							
Without Mitigation	6.4	66.9	33.8	0.0	190.3	41.9	8,080.7
Construction 2010-2011							
Without Mitigation	4.6	22.0	33.8	0.0	1.6	1.4	4,738.8
Coating and Paving 2011							
Without Mitigation	36.4	17.7	13.0	0.0	1.5	1.4	1,829.5
SCAQMD Threshold	75	100	550	150	150	55	-
Significant?	*No*	*No*	*No*	*No*	*Yes*	*No*	-
Phase 2							
Grading 2012							
Without Mitigation	6.7	64.1	32.2	0.1	286.4	61.9	8,879.6
Construction Only 2012							
Without Mitigation	6.1	32.2	82.2	0.0	2.4	1.9	13,263.9
Construction and Coating 2013							
Without Mitigation	64.9	29.4	77.3	0.1	2.2	1.7	13,390.4
Coating and Paving 2013							
Without Mitigation	62.2	15.9	11.4	0.0	1.4	1.2	1,782.6
SCAQMD Threshold	75	100	550	150	150	55	-
Significant?	*No*	*No*	*No*	*No*	*Yes*	*Yes*	-
Phase 3							
Grading 2014							
Without Mitigation	4.8	45.6	27.3	0.1	191.1	41.3	8,080.6
Construction 2014-2015							
Without Mitigation	3.3	16.5	27.3	0.0	1.2	1.0	4,908.4
Coating and Paving 2015							
Without Mitigation	38.3	14.0	11.9	0.0	1.2	1.1	1,835.5
SCAQMD Threshold	75	100	550	150	150	55	-
Significant?	*No*	*No*	*No*	*No*	*Yes*	*No*	

Source: Giroux and Associates, June 2009

Table 4.2-7. Operational Emissions

	Emissions (lbs/day)						
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
2012							
Phase 1							
Area Sources	6.9	2.4	6.2	0.0	0.0	0.0	2,903.0
Mobile Sources	29.6	47.2	362.2	0.4	67.6	13.5	41,307.1
Total	*36.4*	*49.6*	*368.4*	*0.4*	*67.6*	*13.5*	*44,237.1*
2014							
Phase 2							
Area Sources	25.9	9.7	12.6	0.0	0.0	0.0	11,831.6
Mobile Sources	101.8	158.2	1,232.2	1.7	273.2	54.3	167,684.7
Phase 1 (2014)	*32.1*	*41.5*	*311.3*	*0.4*	*67.5*	*13.4*	*44,379.0*
Total (Phase 1 & 2)	*159.8*	*209.4*	*1,556.1*	*2.1*	*340.7*	*67.7*	*223,877.3*
2016							
Phase 3							
Area Sources	7.0	2.6	6.3	0.0	0.0	0.0	3,091.2
Mobile Sources	24.0	35.2	286.3	0.5	73.6	14.6	45,368.6
Phase 1 & 2 (2016)	*143.3*	*174.6*	*1,334.9*	*2.1*	*340.2*	*67.2*	*224,218.6*
Total Phases 1-3	174.3	209.8	1,627.5	2.6	413.8	81.8	272,678.4
SCAQMD Threshold	55	55	550	150	150	55	-
Significant?	*Yes*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	-

Source: Giroux and Associates, June 2009

Combined Operational and Construction Emissions

Project construction is predicted to commence in 2010 and continue though year 2016. Following completion of Phase 1 in 2012, residents and workers may occupy homes and work space during Phase 2 construction. Because of the temporary nature of construction activity emissions, any combined construction and operational project emissions are not typically compared to the recommended SCAQMD operational CEQA significance threshold. However, because phased construction activities will span up to six years, they will function similar to operational emissions in terms of regional air quality. Cumulative emissions of overlapping operational and construction emissions provide the worst-case project impact scenario as shown in Table 4.2-8. As shown in Table 4.2-8, combined construction and operational emissions would exceed SCAQMD thresholds for NO_x during 2012, and ROG, NO_x, CO, PM_{10}, and $PM_{2.5}$ in 2014 further contributing to the significant impact identified during construction and operation.

Table 4.2-8. Total Project-Related Emissions (Construction/Operational Emissions Combined)

	Emissions (lbs/day)						
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
2012							
Phase 1 Operational	*36.4*	*49.6*	*368.4*	*0.4*	*67.6*	*13.5*	*44,237.1*
Phase 2 Construction (Grading)	*4.8*	*42.1*	*27.3*	*0.1*	*18.7*	*4.6*	*8,080.6*
Total 2012	*41.2*	*91.7*	*395.7*	*0.5*	*86.3*	*18.1*	*52,317.7*
SCAQMD Threshold	55	55	550	150	150	55	--
Significant?	*No*	*Yes*	*No*	*No*	*No*	*No*	*No*
2014							
Phase 1 Operational	*159.8*	*209.4*	*1,556.1*	*2.1*	*340.7*	*67.7*	*223,877.3*
Phase 2 Construction (Grading)	*4.8*	*42.1*	*27.3*	*0.1*	*18.7*	*4.6*	*8,080.6*
Total 2012	*164.6*	*251.5*	*1,583.4*	*2.2*	*359.4*	*72.3*	*231,957.9*
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*	-
Significant?	*Yes*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*No*

Source: Giroux and Associates, April 2010

Hotspot Analysis

Air pollutant emissions related to traffic increases associated with the development of the Diamond Specific Plan have the potential to create new or worsen existing localized air quality. Specifically, exhaust emissions from motor vehicles can potentially cause a direct, localized hotspot impact at or near proposed developments or sensitive receptors. A CO hotspot is identified as a localized concentration of carbon monoxide that is above state and/or federal 1-hour or 8-hour ambient air standards that is generally associated with idling or slow moving traffic. Because the Diamond Specific Plan has the potential to worsen level of service (LOS) delays on adjacent roadways, a CO hotspot analysis is required to assess any localized CO impacts on sensitive receptors that may be situated adjacent to congested intersections.

Micro-scale air quality impacts have traditionally been analyzed in environmental documents where the air basin was in non-attainment area for carbon monoxide (CO). However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, much worst congestion, and much higher background CO levels than anywhere in southern Riverside County. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts near the Diamond Specific Plan intersections should be well below thresholds with an even larger margin of safety.

To verify these conclusions, a CO screening analysis was performed at the closest major intersections surrounding the project. One-hour CO concentrations were calculated on the sidewalk adjacent to these intersections. Peak one-hour levels (ppm above background) are shown in Table 4.2-~~8~~9.

Table 4.2-~~8~~9. One-Hour CO Concentrations (ppm)

Intersections	Existing	2012 + Project	2012 + Project + Cum. Dev.	2014 + Project	2014 + Project + Cum. Dev.	2016 + Project	2016 + Project + Cum. Dev.	G.P. Buildout + Project
AM								
Railroad Canyon Dr/ Summerhill Dr.	1.4	1.2	1.5	1.1	1.7	1.0	1.0	1.5
Diamond Dr/ Auto Center Dr.	0.8	0.8	0.9	0.8	1.0	0.7	1.0	1.3
Diamond Dr/ Lakeshore Dr.	0.6	0.6	0.8	0.7	1.0	0.7	1.0	1.2
Diamond Dr/ Campbell St.	0.1	0.1	0.2	0.3	0.4	0.2	0.3	0.4
Diamond Dr/ Sylvester St.	0.0	0.0	0.2	0.1	0.3	0.1	0.4	0.5
PM								
Railroad Canyon Dr/ Summerhill Dr.	2.2	2.0	2.7	2.2	2.8	1.5	2.0	1.7
Diamond Dr/ Auto Center Dr.	1.1	1.0	1.3	1.1	1.8	1.0	1.4	1.4
Diamond Dr/ Lakeshore Dr.	1.1	1.0	1.2	1.2	1.9	1.1	1.5	1.5
Diamond Dr/ Campbell St.	0.8	0.2	0.4	0.6	0.8	0.4	0.7	0.5
Diamond Dr/ Sylvester St.	0.1	0.1	0.2	0.2	0.4	0.2	0.6	0.6

Source: Giroux and Associates, June 2009.
Note: Concentrations represent peak one-hour levels in parts per million (ppm) above background levels (approximately 4.0ppm).

As previously identified in Table 4.2-5, existing hourly CO levels in the Diamond Specific Plan area are approximately 4.0 ppm. Per California air quality standards for CO, the concentration for CO should not exceed 20 ppm for an averaging period of one hour and 9 ppm for an averaging period of eight hours. As shown in Table 4.2-~~8~~9, none of the study area intersections is projected to experience CO levels in excess of the allowable peak hour concentrations. The highest projected CO hotspot level above background levels is 2.8 ppm at the intersection of Railroad Canyon Drive and Summerhill Drive in 2014 PM peak hour. Combined background (4.0 ppm) plus local (2.8 ppm) equates to CO levels of 6.8 ppm. These levels are below the allowable one-hour standard of 20ppm and the allowable 8-hour exposure of 9 ppm.

Since significant impacts would not occur at intersections with the highest potential for CO hotspot formation, no significant impacts are anticipated to occur at any other locations in the project vicinity as a result of the Diamond Specific Plan. Therefore, Micro-scale CO hotspot impacts are less than significant.

Sensitive Receptors

The potential impact of the Diamond Specific Plan on sensitive receptors has also been considered. Sensitive receptors include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors. Residential land uses that can be classified as sensitive receptors are located to the west of the project site and are proposed to the south in the Summerly Development.

Residential developments within the project site are also future sensitive receptors. The nearest residences are multi-family units directly to the west of the Diamond Specific Plan approximately 100 feet away. The closest school campus to the Diamond Specific Plan site is Railroad Canyon Elementary School which is approximately 0.5 miles to the north.

Air pollutant emissions related to construction activity and traffic increases associated with the Diamond Specific Plan have the potential to worsen existing localized air quality and cause a direct, localized impact at or near proposed developments or sensitive receptors. Phase 2 of the Diamond Specific Plan construction analysis has the highest overall construction emissions of all project phases and as such was selected for the LST analysis. LST pollutant concentration data is currently only published for 1-, 2- and 5-acre sites. LST thresholds for project sites larger than 5 acres will be greater than the 5-acre cutoff. If the project construction emissions meet LST thresholds for a 5-acre site then the threshold for a larger site would be met with a larger margin of safety and no additional analysis would be required. Pollutant concentrations for a 5-acre disturbance area and for a source-receptor distance of 100 meters are as shown in Table 4.2-~~9~~10. As shown, emissions of CO and NO_x do not exceed localized thresholds for construction activity; however, PM_{10} and $PM_{2.5}$ emission exceed the allowable threshold. Therefore, the Diamond Specific Plan has the potential to exceed the localized standard during short-term construction activity.

Table 4.2-~~9~~10. Pollutant Concentration for Construction Emissions (All Phases)

Lake Elsinore 5 acres Project Site at a Distance of 100 Meters	Daily Emissions (lbs/day)			
	CO	NO_x	PM_{10}	$PM_{2.5}$
Without Mitigation	13-82	14-32	1-133	1-29
LST Threshold	4,338	803	59	16
Significant?	*No*	*No*	*Yes*	*Yes*

Source: Giroux and Associates, June 2009

Odors

The potential for the Diamond Specific Plan to generate objectionable odors has also been considered.

Construction

The Diamond Specific Plan includes short-term construction activities that would generate airborne odors. Odors from diesel and gasoline-powered equipment exhausts, pouring/spreading of asphalt pavement, and application of a variety of architectural coatings during the finish construction phase would occur. Because construction exhaust and emissions from architectural coatings settle quickly and are not expected to disperse beyond the project boundaries, no significant odor impacts are anticipated during the project's construction phases. Further, odor generation impacts from construction would be intermittent and would terminate upon completion of construction activities. In addition, incorporation of Mitigation Measure DSP-AQ-1, discussed below, would decrease diesel exhaust associated with construction activities. A less than significant impact has been identified for this issue area.

Operation

Land uses generally associated with odor complaints include: agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and

fiberglass molding facilities. The Diamond Specific Plan site is not located in the vicinity of these types of land uses. Additionally, the Diamond Specific Plan does not propose land uses typically associated with emitting objectionable odors. Therefore, the Diamond Specific Plan is unlikely to expose on-site sensitive receptors to substantial odors or generate substantial odors that would impact nearby sensitive receptors. Therefore, impacts would be less than significant.

Greenhouse Gas Emissions

Implementation of the Diamond Specific Plan would contribute to long-term increases in GHGs as a result of traffic increases (mobile sources) and minor secondary fuel combustion emissions from space heating, etc. Development occurring as a result of the Diamond Specific Plan would also result in secondary operational increases in GHG emissions as a result of electricity generation to meet project-related increases in energy demand. Electricity generation in California is mainly from natural gas-fired power plants. However, since California imports about 20 to 25 percent of its total electricity (mainly from the northwestern and southwestern states), GHG emissions associated with electricity generation could also occur outside of California. Short-term GHG emissions will also derive from construction activities.

Construction

During project construction, the URBEMIS2007 computer model predicts that a peak activity day in the single worst case year of construction (2012 during Phase 2) would generate the following CO_2 emissions:

- Grading: 3,162 pounds/day
- Construction:13,264 pounds/day

For purposes of analysis, it was assumed that primary project construction GHG emissions are from the 40 peak grading days and 200 peak construction days. The estimated annual GHG impact is estimated as follows if all the above activities were to occur in a single year:

Grading	(3,162 lbs/day x 40 peak days/yr)/2,000 lbs	= 63 tons/yr
Construction	(13,264 lbs/day x 200 peak days/yr)/2,000 lbs	= 1,326 tons/yr
	Yearly Total	**= 1,389 tons/yr**

Operation

The General Reporting Protocol (GRP) in the California Climate Action Registry (CCAR) divides project-related operational GHG emissions into three categories. These three sources include the following:

- Source 1 On-site combustion of fossil fuels
- Source 2 Consumption of purchased energy (electricity)
- Source 3 Indirect emissions (transportation, solid waste disposal, fresh-and wastewater conveyance and treatment)

For development projects such as the Diamond Specific Plan, Source 3 is typically a much larger contributor to the GHG burden than Sources 1 and 2. For convenience, project related GHG emissions were aggregated into transportation and non-transportation sources. The transportation component is

calculated and reported in the URBEMIS2007 computer model. The non-transportation sources require additional analysis.

Non-transportation sources of GHG emissions were assumed to derive from on-site combustion of natural gas for space heating and hot water, from purchase of California grid electricity, from anaerobic decomposition of solid waste in landfills and from life-cycle water use from conveyance, treatment, distribution, wastewater collection, treatment, recycling and ultimate disposal. Estimates of consumption and generation vary by location and are subject to some change as GHG emission inventories become progressively more sophisticated. The input assumptions for GHG emissions calculations, and the GHG conversion from consumption to annual regional CO_2E emissions are summarized in Table 4.2-~~10~~11. Annual GHG emissions, from both the non-transportation and transportation components are shown in Tables 4.2-11 through 4.2-13 for the Diamond Specific Plan at the end of each development phase. The total CO_2E emissions are shown per phase in Table 4.2-14.

Table 4.2-11~~10~~. Annual Non-Transportation Consumption/Generation

Land Use	Unit	Electricity (MWHR)	Nat. Gas (10^6 cu ft)	Solid Waste (tons)	Water (10^6 gal)
Residential/Hotel	DU/Room	4.4	0.0481	0.73	0.064
Office	KSF	~~1.4~~12.95	0.0240	0.75	0.041
Retail	KSF	~~1.4~~12.95	0.0348	2.40	0.032

Source: Giroux and Associates, June 2009
Conversion to CO_2E [tons/year]
Electricity MWHR x ~~0.403~~ 0.364 tons/MWHR (1)
Nat. Gas 10^6 cubic feet x ~~6.0~~ 54.6 tons/10^6 cubic feet (1)
Solid Waste tons x 0.46 tons/ton (2)
Water and Wastewater 10^6 gal(MG) x ~~5.12~~ 4.62 tons/MG (3)
(1) California Climate Action Registry
(2) Energy Information Admin., Voluntary Reporting of GHG
(3) California Energy Commission, Integrated Energy Policy Report (12.7 MWHR per MG conveyed, treated and disposed in Southern California)

Table 4.2-12~~1~~. Diamond Specific Plan-Related GHG Emissions (Year 2012)

Phase I (2012)	Unit	Electricity (MWHR)	Nat. Gas (10^6 cu ft)	Solid Waste (tons)	Water (MG)	Total CO_2E Tons/Year
Condo and Hotel	100 DU	440	4.81	73.0	6.4	
Office	100 KSF	~~140~~ 1,295	2.40	75.0	4.1	
Retail	75 KSF	~~105~~ 971	3.48	180.0	2.4	
Total		~~685~~ 2,706	10.69	328	12.9	
Conversion Factor		*~~0.403~~ 0.364*	*~~6.0~~ 54.6*	*0.46*	*~~5.12~~ 4.62*	
CO_2E tons/year		~~276~~ 985.0	~~64.1~~ 583.7	150.9	~~66.0~~ 59.6	~~557.1~~ 1,779.2

Source: Giroux and Associates, ~~June 2009~~ April 2010
Total Non-Transportation ~~557.1~~ 1,179.2 tons/year
Total Transportation* 7,034.1 tons/year
Combined tons CO_2E/yr ~~7,591.2~~ 8,813.3
Transportation Share ~~92.7%~~ 79.8%
*Office = 260 days/yr
*Residential and retail = 365 days/yr

Table 4.2-13~~2~~. Diamond Specific Plan-Related GHG Emissions (Year 2014)

Phases I and II (2014)	Unit	Electricity (MWHR)	Nat. Gas (10^6 cu ft)	Solid Waste (tons)	Water (MG)	Total CO_2E Tons/Year
Condo and Hotel	650 DU	2,860	31.3	474.5	41.6	
Office	315 KSF	~~441~~ 4,079	7.6	236.2	12.9	
Retail	390 KSF	~~546~~ 5,284	13.6	936	12.5	
Total		~~3,847~~ 12,223	52.5	1,646.7	67.0	
Conversion Factor		*~~0.403~~ 0.364*	*~~6.0~~ 54.6*	*0.46*	*~~5.12~~ 4.62*	
CO_2E tons/year		~~1,550.3~~ 4,449.3	~~315.0~~ 2,866.5	757.5	~~343.0~~ 309.5	~~2,965.8~~ 8,382.8

Source: Giroux and Associates, ~~June 2009~~ April 2010
Total Non-Transportation ~~2,965.8~~ 8,382.8 tons/year
Total Transportation* 36,544.1 tons/year
Combined tons CO_2E/yr ~~39,509.9~~ 44,926.8 tons
Transportation Share ~~92.5~~ 81.3%
*Office = 260 days/yr
*Residential and retail = 365 days/yr

Table 4.2-14~~3~~. Diamond Specific Plan-Related GHG Emissions (Year 2016)

Phases I, II and III (2016)	Unit	Electricity (MWHR)	Nat. Gas (10^6 cu ft)	Solid Waste (tons)	Water (MG)	Total CO_2E Tons/Year
Condo and Hotel	750 /900[1] DU	3,300/ 3,960[1]	36.1/ 43.29[1]	547.5/ 657[1]	48.0/ 57.6[1]	
Office	425 KSF	~~595~~ 5,504	10.2	318.8	17.4	
Retail	472 KSF	~~661~~ 6,396	16.4	1,132.8	15.1	
Total		~~4,556/ 5,216~~ 15,200/15,860[1]	62.7/ 69.89[1]	1,991.1/ 2,108.6[1]	80.5/ 90.1[1]	
Conversion Factor		*0.364 ~~403~~*	*~~6.0~~ 54.6*	*0.46*	*~~5.12~~ 4.62*	
CO_2E tons/year		~~1,836.1/ 2,102.05[1]~~ 5,532.8/5,773.04[1]	~~376.2/ 419.34[1]~~ 3,423.4/3,815.99[1]	919.6/ 969.96[1]	~~412.2/ 461.31[1]~~ 371.9/416.26[1]	~~3,544.1/ 3,952.7[1]~~ 10,247.7/10,975.25[1]

Source: Giroux and Associates, ~~June 2009~~ April 2010
[1]The Diamond Specific Plan includes an option for an increase of 150 hotel rooms (total of 300 hotel rooms) with a reduction in total mixed use development by 100,000 SF. The second set of numbers in the table reflect overly conservative estimates for electricity, natural gas, solid waste and water because only the hotel rooms are increased without the corresponding decrease in mixed use SF. This was done to represent the worst case scenario for non-transportation emissions. Transportation emissions would not be significantly affected by this option.
Total Non-Transportation ~~3,544.1/ 3,952.7~~ 10,247.7/10,975.25 tons/year
Total Transportation* 44,314.5 tons/year
Combined tons CO_2E ~~47,858.6./48,267.2~~ 54,562.2/55,289.75tons
Transportation Share ~~92.6~~ 81.2%
*Office = 260 days/yr
*Residential and retail = 365 days/yr

Table 4.2-15. Total Diamond Specific Plan-Related GHG Emissions (All Phases)

	~~Year 2012~~	~~Year 2014~~	~~Year 2016~~	~~Total All Phases~~
~~Non Transportation~~	~~557.1~~	~~2,965.8~~	~~3,544.1/3,952.7~~	~~7,067/7,475.6~~
~~Transportation~~	~~7,034.1~~	~~36,544.1~~	~~44,314.5~~	~~87,892.70~~
~~Total project related GHG Emissions (CO_2E tons/year)~~	~~7,591.2~~	~~39,509.9~~	~~47,858.6/48,267.2~~	~~94.959.7/95,368.3~~
	Year 2012	Year 2014	Year 2016	Total All Phases
Non Transportation	1,779.2	8,382.8	10,247.7/10,975.25	20,409.7/ 21,137.25
Transportation	7,034.1	36,544.1	44,314.5	87,892.70
Total project related GHG Emissions (CO_2E tons/year)	8,813.3	44,926.9	54,562.2/55,289.75	108,302.40/109,029.95

As shown in Table 4.2-15, the Diamond Specific Plan daily operational CO_2 emissions from non-transportation and transportation worst case emissions in 2016 are predicted to be approximately ~~48,267.2~~ 55,289.75(depending on number of hotel rooms) CO_2E tons per year. Total Diamond Specific Plan worst case emissions are projected to be ~~95,368.3~~ 109,029.95 CO_2E tons per year.

OPR's technical advisory document addressing GHG emissions in CEQA documents states that each public agency that is a lead agency for complying with CEQA needs to develop its own approach for performing a climate change analysis for projects that generate GHG emissions. For these projects, compliance with CEQA entails three basic steps: (1) identify and quantify the GHG emissions; (2) assess the significance of the impact on climate change; and (3) if the impact is found to be significant, identify alternatives and/or mitigation measures that will reduce the impact below significance. As stated above, the City has elected to use SCAQMD's interim significance threshold for industrial projects of 10,000 metric tons of CO_2E/year as the threshold of significance for the Diamond Specific Plan EIR. The Diamond Specific Plan's greenhouse gas emissions would exceed the 10,000 metric tons of CO_2E/year numerical threshold established by the SCAQMD. Therefore, impacts related to GHG emissions would be significant and unavoidable and require mitigation.

4.2.3 Cumulative Impacts

Other growth and development projects within the vicinity of the proposed project site are identified in Table 3.5-1. The Diamond Specific Plan is expected to exceed the thresholds set for PM_{10} and $PM_{2.5}$ during construction and ROG, NO_x, PM_{10}, $PM_{2.5}$ and CO during operation, thereby contributing to an incremental impact on declining cumulative air quality conditions. The Diamond Specific Plan in conjunction with other related developments projected within the vicinity of the site would generate increased air emissions. Increased air emissions would result from increased mobile and stationary sources, thereby further hampering the ability to achieve conformance with the SCAQMD air quality significance thresholds. Furthermore, the SCAB is designated by CARB as a non-attainment area for federal and state O_3 and PM_{10} standards as well as state $PM_{2.5}$ standards. Cumulatively, development of the Diamond Specific Plan in conjunction with other development in the project vicinity would continue to exceed SCAQMD thresholds. Implementation of the Diamond Specific Plan would result in significant cumulative impacts to air quality during short-term construction and long-term operational phases.

Greenhouse Gases

While no single development can be deemed individually responsible for global climate change, GHG emissions from the Diamond Specific Plan (and future development of the 10-acre General Plan Area) would combine with GHG emissions across California, the United States, and the world to cumulatively contribute to global climate change.

Despite compliance with OPR's technical advisory, the California Attorney General's recommendations for mitigation for global warming impacts, CAPCOA's recommendations for CEQA and Climate Change, CARB, SCAQMD, Title 24, and CBC rules and regulations, as well as the inclusion of mitigation measures that temper the impacts to climate change associated with increased development, the Diamond Specific Plan would contribute GHGs that would contribute to global climate change.

4.2.4 Environmental Mitigation Measures

Construction-Related Mitigation Measures

In addition to compliance with SCAQMD Rules and CARB requirements, the following mitigation measures are identified to reduce PM_{10} and $PM_{2.5}$ emissions during construction:

DSP-AQ-1 During construction, the contractor shall implement the following measures:

- Apply soil stabilizers according to manufacturers' specifications to inactive areas (previously graded areas inactive for ten days or more).
- Prepare a high wind dust control plan and implement plan elements and terminate soil disturbance when winds (as instantaneous gusts) exceed 25 mph.
- Stabilize previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces and haul roads three times/day.
- Cover all stock piles with tarps.
- Replace ground cover in disturbed areas as soon as feasible.
- Reduce speeds on unpaved roads to less than 15 mph.
- Require 90-day low-NO_x tune-ups for off-road equipment.
- Limit allowable idling to 5 minutes for trucks and heavy equipment.
- Utilize equipment whose engines are equipped with diesel oxidation catalysts if available.
- Utilize diesel particulate filter on heavy equipment where feasible.
- If Tier 2 or Tier 3 off-road construction equipment is not available, require alternative fueled off-road equipment.
- Configure construction parking to minimize traffic interference.
- Use electricity from power poles rather than temporary diesel or gasoline power generators.
- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.

- Schedule construction activities that affect traffic flow on the arterial system to off-peak hours to the extent practicable.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site.
- Install wheel washers where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- All streets shall be swept at least once a day using SCAQMD Rule 1186 1186.1 certified street sweepers or roadway washing trucks if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water).
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered.
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM10 generation.

Operation-Related Mitigation Measures

The Diamond Specific Plan is an infill redevelopment project. The property covered by the Specific Plan is within a Redevelopment Project area and is located adjacent to the City's largest transportation nodes. Given its location, the project will facilitate the utilization of alternative forms of transportation. Moreover, because the Specific Plan calls for mixed use development, people will live and work within walking distance. This project feature will get people out of their cars and reduce carbon emissions as a result. Despite the myriad of carbon reducing features of the proposed Diamond Specific Plan, greenhouse gas emissions would still be significant. To further temper the project's incremental impacts to global climate change, the following mitigation measures have been identified to reduce CO, PM_{10}, $PM_{2.5}$, ROG, and NO_x during operation and to reduce GHG impacts:

DSP-AQ-2 Prior to issuance of a building permit(s), the applicant shall provide an exhibit demonstrating that the following measures have been incorporated into the overall Diamond Specific Plan design to reduce reliance on the single occupancy vehicle. These provisions shall be made a Condition of Approval on the tentative map(s) as part of street improvements.

- Provide for increased utilization of public transit by providing a park-and-ride facility and opportunities on-site for the future shuttle link to the planned Metrolink station in Perris or downtown Lake Elsinore. If the Metrolink station in Perris or downtown Lake Elsinore is not implemented, the project would not be required to provide the shuttle link on the project site.
- Provide one or more secure, convenient bus stop locations, including, where feasible, seating, signage, shelters, and trash receptacles.
- Provide safe, appropriately lighted, and attractively landscaped physical linkages between land uses that encourage bicycling and walking as alternatives to driving through the provision of bike lanes and/or walking paths.

- Off-street bicycle parking shall be distributed throughout the commercial areas of the Diamond Specific Plan and placed conveniently near building entrances without obstructing pedestrian movement.

DSP-AQ-3 Prior to issuance of building permit(s), the applicant shall demonstrate that the following measures to conserve energy have been incorporated into building design:

- Submit plans demonstrating that the new residential buildings shall exceed 2009 California Title 24 energy efficiency requirements.
- Submit plans demonstrating that the new commercial buildings shall include the following green building design features
  - Utilize Low-E and ENERGY STAR windows where feasible
  - Install high-efficiency lighting systems and incorporate advanced lighting controls, such as auto shut-offs, timers, and motion sensors
  - Install high R-value wall and ceiling insulation
- Incorporate use of low pressure sodium and/or fluorescent lighting, where feasible
- Require acquisition of new ENERGY STAR qualified appliances and equipment.
- Implement passive solar design strategies in new construction. Examples of passive solar strategies include orienting building to enhance sun access, designing narrow structures, and incorporating skylights and atria
- Where feasible and appropriate as determined by the City Engineer and building official, structures shall be designed to support the added loads of rooftop solar systems and be provided with appropriate utility connections for solar panels, even if installation of panels is not planned during initial construction

DSP-AQ-4 Prior to issuance of a building permit(s), the applicant shall demonstrate that the following water and energy conservation measures have been incorporated into the landscape plan:

- Participate in green waste collection and recycling programs for landscape maintenance
- Require use of landscaping with low water requirements and fast growth.
- Plant trees or vegetation to shade buildings and thus reduce heating/ cooling demand

DSP-AQ-5 Once the City's Climate Action Plan is adopted, the project shall adhere to the guidelines, regulations, and requirements to reduce GHG emissions as stated in the plan.

4.2.5 Conclusion

The Diamond Specific Plan is consistent with the City's current General Plan (1990) and General Plan Update (2009) and therefore would be consistent with the SCAQMD AQMP. In addition, a Micro-Scale CO hotspot analysis was conducted and determined that the Diamond Specific Plan would not result in a

significant hotspot at any of the impacted intersections. Finally, the project does not propose any uses that would generate significant odors. Therefore, less than significant impacts were identified for consistency with the AQMP, CO hotspots, and odors and no mitigation was required.

As shown in Table 4.2-16~~5~~, adherence to SCAQMD rules and implementation of mitigation measure DSP-AQ -1 would reduce construction-related impacts resulting from regional emissions of PM_{10} and $PM_{2.5}$ to below a level of significance. As shown in Table 4.2-17~~6~~, implementation of DSP-AQ-1 would reduce localized PM_{10} and $PM_{2.5}$ emissions to below a level of significance.

Table 4.2-16~~5~~. Construction Daily Emissions with Mitigation

Activity	Daily Emissions (lbs/day)						
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Phase 1							
Grading 2010							
With Mitigation	6.4	62.4	33.8	0.0	19.2	5.2	8,080.7
Construction 2010-2011							
With Mitigation	4.6	19.5	33.8	0.0	0.6	0.4	4,738.8
Coating and Paving 2011							
With Mitigation	33.1	15.1	13.0	0.0	0.3	0.2	1,829.5
SCAQMD Threshold	75	100	550	150	150	55	-
Significant?	*No*	*No*	*No*	*No*	*No*	*No*	
Phase 2							
Grading 2012							
With Mitigation	6.7	58.7	32.2	0.1	27.8	6.8	8,879.6
Construction Only 2012							
With Mitigation	6.1	29.8	82.2	0.0	1.4	1.0	13,263.9
Construction and Coating 2013							
With Mitigation	58.9	27.1	77.3	0.1	1.4	1.0	13,390.4
Coating and Paving 2013							
With Mitigation	56.2	13.7	11.4	0.0	0.3	0.2	1,782.6
SCAQMD Threshold	75	100	550	150	150	55	-
Significant?	*No*	*No*	*No*	*No*	*No*	*No*	
Phase 3							
Grading 2014							
With Mitigation	4.8	42.1	27.3	0.1	18.7	4.6	8,080.6
Construction 2014-2015							
With Mitigation	3.3	14.6	27.3	0.0	0.5	0.3	4,908.4
Coating and Paving 2015							
With Mitigation	34.7	12.0	11.9	0.0	0.2	0.2	1,835.5
SCAQMD Threshold	75	100	550	150	150	55	-
Significant?	*No*	*No*	*No*	*No*	*No*	*No*	

Source: Giroux and Associates, June 2009

Table 4.2-17~~6~~. Localized Pollutant Concentration for Construction Emissions with Mitigation

Lake Elsinore 5 acres project site at a distance of 100 meters	All Phases Daily Emissions (lbs/day)			
	CO	NO_x	PM_{10}	$PM_{2.5}$
With Mitigation	13-82	12-30	1-12	1-3
LST Threshold	4,338	803	59	16
Significant?	No	No	No	No

Source: Giroux and Associates, June 2009

Operational emissions are forecast to exceed SCAQMD thresholds by a large margin by Phase 2 in 2014. For operational emissions, automotive sources are the dominant contributors to the project emissions burden. Mitigation in the form of alternatives to the single occupant automobile (SOV), therefore, were included in DSP-AQ-2. However, even with implementation of DSP-AQ -2, the daily operational and area source emissions cannot be reduced to less than significant levels for emissions of ROG, NO_x, PM_{10}, $PM_{2.5}$ and CO.

Greenhouse Gas Emissions

Beginning from the completion of Phase 2, at each phase of the proposed Diamond Specific Plan, the project's transportation component will comprise approximately 92.5 percent of the project-related GHG emissions. Reductions in the vehicular contribution are therefore critical in achieving the goals of statewide/national GHG minimization programs. However, substantial mobile source trip/vehicle miles traveled (VMT) reduction or increases in vehicular fuel efficiency are not achievable on a project-specific basis. It should be noted that state and federal standards are being reviewed to improve vehicle efficiency and thereby, reduce vehicular emissions. Reductions in emissions are anticipated through implementation of the federal Corporate Average Fuel Economy (CAFÉ) standards, Low Carbon Fuel Standards (LCFS), and Pavley fuel efficiency standard (incremental to the federal CAFÉ standard), as well as the effect of light/heavy vehicle efficiency/hybridization programs.

GHG reduction options on a project-level basis are similar to those measures designed to reduce criteria air pollutants (those with ambient air quality standards). As mentioned above, measures that reduce trip generation or trip lengths, measures that optimize the transportation efficiency of a region, and measures that promote energy conservation within a development will reduce GHG emissions. These measures have been included as part of DSP-AQ 2 through DSP-AQ 5. Many of the GHG emission reductions that would be achieved through implementation of the sustainable design policies listed cannot be quantified at this time. The maximum GHG reductions that could be quantified based on CAPCOA's white paper (January 2008) are as follows:

- Ten percent VMT due to mixed use development;
- Five percent VMT reduction due to access to transit;
- Five percent VMT reduction due to pedestrian and bicycle accessibility;
- Ten percent reduction in electricity and natural gas usage due to exceeding Title 24 standards by 10 percent;
- One percent reduction in electricity and natural gas usage due to thermal, ventilation, and lighting control;
- Twenty percent reduction in water use due to water-efficient fixtures in commercial and residential buildings, use of drought-tolerant landscaping, and water conservation policies.

There are no adopted thresholds of GHG emissions significance but the City has elected to utilize the Interim GHG significance threshold of 10,000 metric tons CO_2E/year. Climatic impacts are global in scale. Any project-specific contribution to the global issue is miniscule. The GHG emphasis on a project-specific level is to implement mitigation measures that reduce energy consumption and reduce vehicular travel as much as is reasonably feasible. Compliance with all applicable rules, regulations, and GHG reduction strategies from the CARB's Climate Change Draft Scoping Plan, SCAQMD, Title 24, and CBC and implementation of mitigation measures DSP-AQ-2 through DSP-AQ-5 would reduce the project-level impact. However, despite the Diamond Specific Plan's compliance with rules and regulations, as well as the inclusion of mitigation measures that temper the impacts to climate change associated with increased development, the Diamond Specific Plan would contribute GHGs that would contribute to global climate change. Therefore, the contribution of the Diamond Specific Plan to cumulative climate change impacts would remain significant until such time as the City's Climate Action Plan is adopted. Compliance with that Plan would reduce the project's cumulative level impact to below a level of significance.

In summary, project-related emissions for ROG, NO_x, PM_{10}, $PM_{2.5}$ and CO during operation remain significant and unavoidable. Additionally, the Diamond Specific Plan's GHG contribution to global climate change would remain cumulatively significant and unavoidable. Therefore, a Statement of Findings and Overriding Considerations would be required pursuant to *CEQA Guidelines*, Sections 15091 and 15093.

4.3 BIOLOGICAL RESOURCES/JURISDICTIONAL WATERS

The following documents were used in the preparation of this section and are located in Appendices C.1, C.2, C.3, C.4, and C.5 of this Draft Environmental Impact Report (EIR):

Biological Resources Assessment. Prepared by PCR Services Corporation. June 15, 2009 (updated November 17, 2009).

Investigation of Jurisdictional "Waters of the U.S.," "Waters of the State," and Wetlands. Prepared by PCR Services Corporation. June 12, 2009 (updated November 17, 2009).

Results of the Phase III Burrowing Owl Surveys for the Diamond Specific Plan Project Site. Prepared by PCR Services Corporation. April 29, 2009.

Determination of Biologically Equivalent or Superior Preservation. Prepared by PCR Services Corporation. June 15, 2009 (updated November 17, 2009).

Little Mousetail Mitigation Maintenance and Monitoring Plan. Prepared by PCR Services Corporation. December 23, 2009.

Smooth Tarplant Mitigation Maintenance and Monitoring Plan. Prepared by PCR Service Corporation. December 23, 2009.

DBESP Response Letter from U.S Fish and Wildlife Service and California Department of Fish & Game. January 21, 2010

Response to Comments/ Amendment to DBESP, and Smooth Tarplant Mitigation Maintenance and Monitoring Plan. Prepared by PCR Services Corporation. February 10, 2010.

Lake Elsinore Acquisition Process. Prepared by PCR Services Corporation. November 17, 2009.

Joint Project Review. Prepared by Riverside Conservation Authority. February 12, 2010

4.3.1 Environmental Setting

4.3.1.1 Applicable Plans

City of Lake Elsinore – General Plan (1990)

The City of Lake Elsinore General Plan was adopted in 1990. The General Plan "functions as a guide for local government decision makers as well as the development community with respect to future land use and development." The Open Space/Conservation Element of the General Plan identifies natural and man-made resources within the City and establishes policies and implementation programs that encourage conservation, protection, and proper management of these resources. Currently, the General Plan is being updated and will carry forth the same policies and programs that encourage resource protection.

City of Lake Elsinore –General Plan Update (2009)

The General Plan Update (2009) serves "as the basis for the City's land use decisions and should provide to both the interested public and the decision-makers a practical and implementable policy vision for the future." The Open Space/Conservation Element within the Resource Protection and Preservation Chapter of the General Plan Update continues the current General Plan's identification of natural and man-made resources within the City and continues the policies and implementation programs that encourage conservation, protection, and proper management of these resources.

Western Riverside County Multiple Species Habitat Conservation Plan

Western Riverside County is involved in a regional habitat conservation effort to provide for the long-term conservation of biological resources within defined planning areas, including the City of Lake Elsinore. The Multiple Species Habitat Conservation Plan (MSHCP) is a criteria-based plan, focused on conserving 146 species through creation of a habitat reserve system. The MSHCP also serves to enhance maintenance of biological diversity and ecosystem processes while allowing the fulfillment of future economic goals. The MSHCP identifies conservation subunits and target conservation acreages within each Area Plan. The City of Lake Elsinore, including the project site, is located within the Lake Elsinore Area Plan.

Although the MSHCP provides coverage for multiple species, there are some additional requirements for site-specific focused surveys where appropriate habitat is present. Portions of the project area are located within Criteria Cells 4743 and 4846, the Criteria Species Survey Area, the Burrowing Owl Survey Area, and Narrow Endemic Plant Species Survey Area 2 of the MSHCP. A small portion of the northwesternmost corner of the project area lies within Proposed Linkage 8 of the MSHCP. The MSCHP Criteria Cells and Survey Areas are shown in Figure 4.3-1. The ELSP was approved for development prior to the MSHCP and thus the ELSP was not originally part of the MSHCP. In order to meet Reserve Assembly requirements the City approved an agreement to preserve a 770-acre area within the ELSP known as the Back Basin 770 Agreement. A small portion of the study area is located within this 770-acre ELSP Preservation Areas for the Back Basin, although project impacts were designed to completely avoid Preservation Areas.

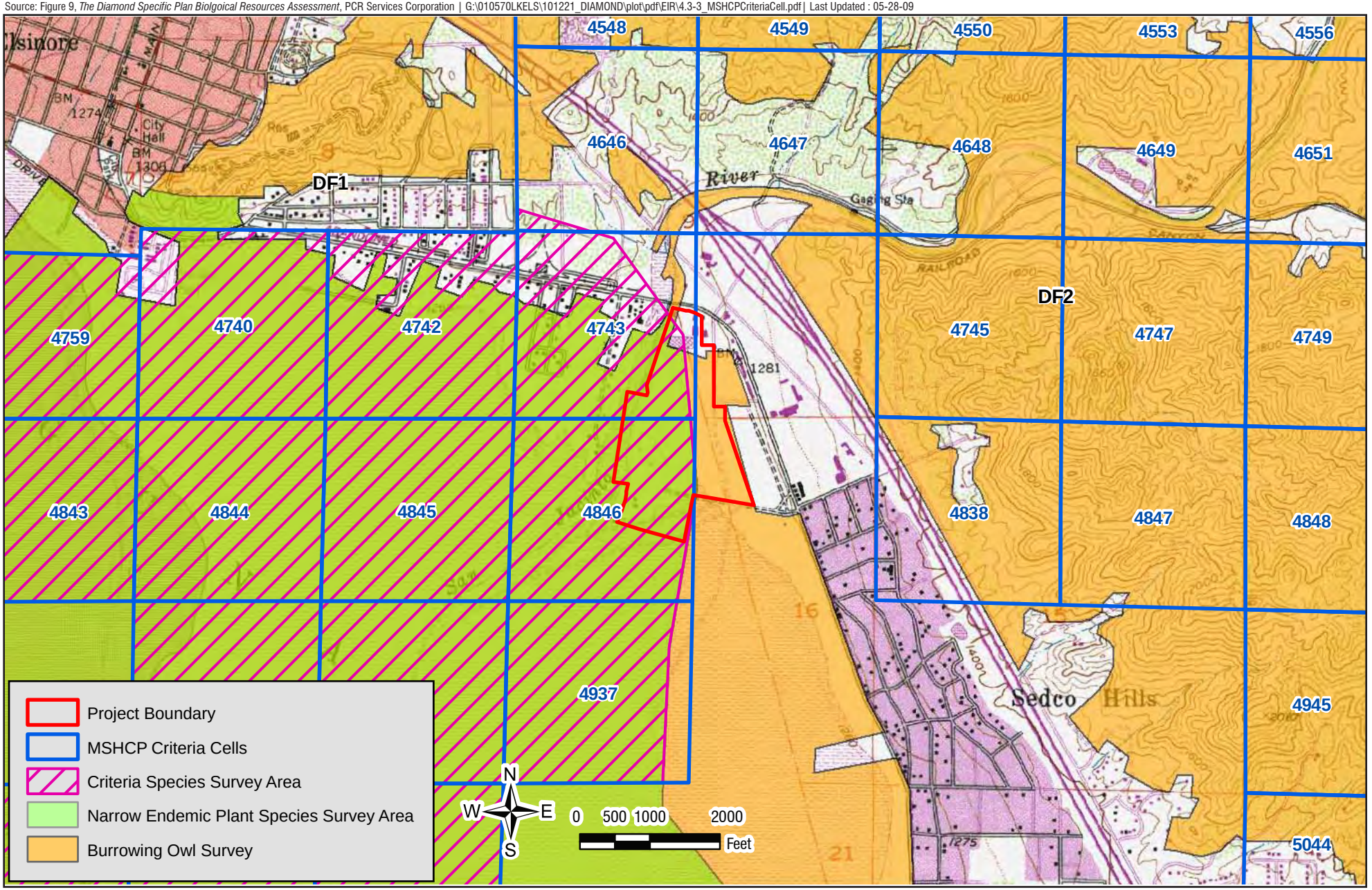
4.3.1.2 Existing Conditions of the Diamond Specific Plan

Refer to the Biological Resource Report included in Appendix C.1 for methodology of biological surveys for the project site.

Vegetation Associations and Habitats

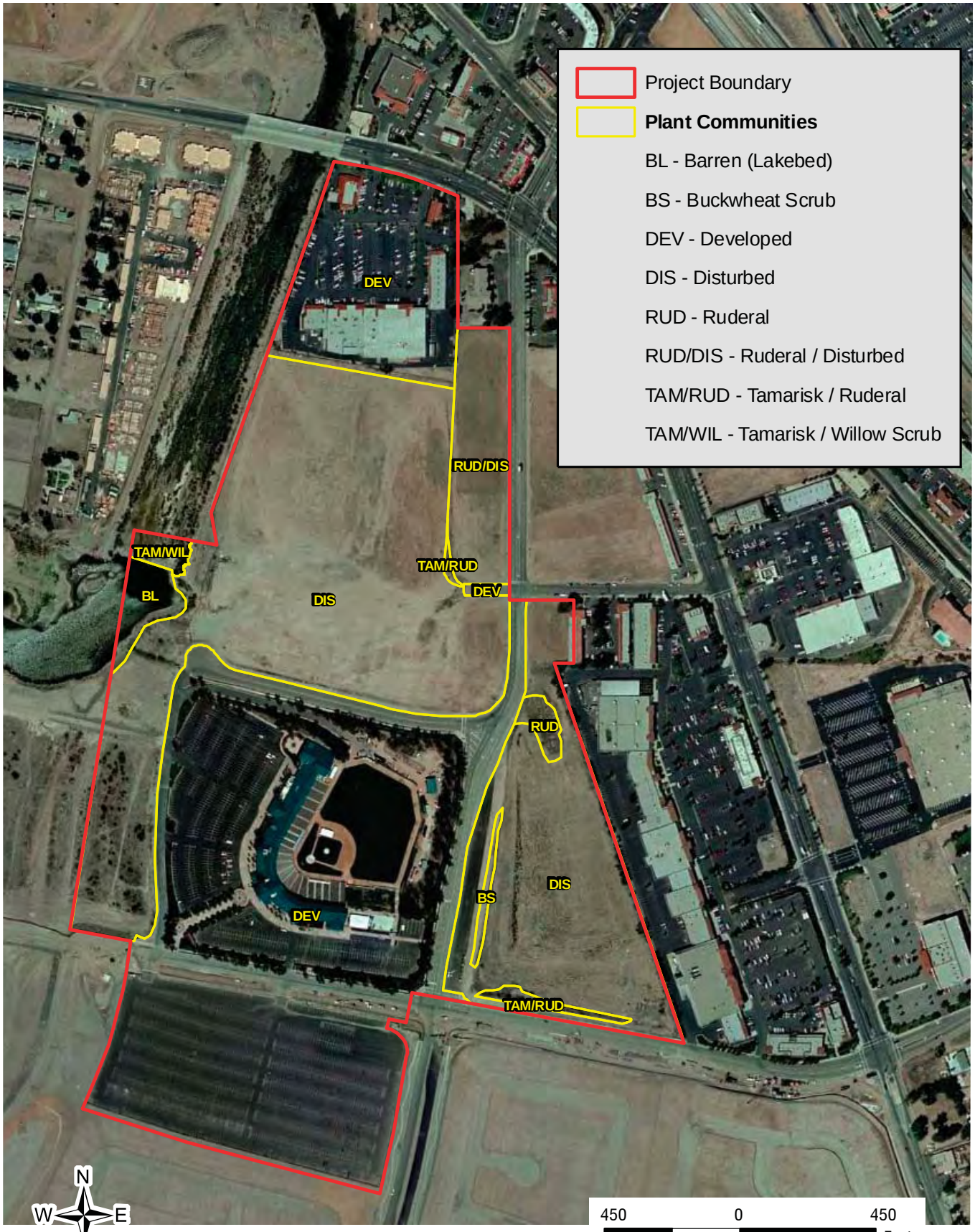
As shown in Figure 4.3-2 and Table 4.3-1, vegetation mapped within the project site include developed, disturbed, ruderal, ruderal/disturbed, barren (lakebed), buckwheat scrub, tamarisk/ruderal, and tamarisk/willow scrub areas.

Source: Figure 9, *The Diamond Specific Plan Biolgoical Resources Assessment*, PCR Services Corporation | G:\010570LKELS\101221_DIAMOND\plot\pdf\EIR\4.3-3_MSHCPCriteriaCell.pdf | Last Updated : 05-28-09



Location within MSHCP Criteria Cells and Survey Areas

FIGURE 4.3-1



Source: PCR, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\ai\Veg_communities_11242009.ai | Last Updated : 11-18-09

Vegetation Communities

FIGURE 4.3-2

Table 4.3-1. Existing Vegetation Communities

Plant Community	Acres
Developed	44.2
Disturbed	37.3
Ruderal	0.4
Ruderal/Disturbed	3.6
Barren (Lakebed)	1.0
Buckwheat Scrub	0.3
Tamarisk/Ruderal	0.4
Tamarisk/Willow Scrub	0.4
Total	87.6

The following is a general description of the vegetation communities that occur on the project site:

Developed. Developed areas consist of commercial development in the northern portion of the Diamond Specific Plan area and the Lake Elsinore Diamond stadium and paved parking lots in the central and southern portions of the study area. Developed areas comprise 44.2 acres of the Diamond Specific Plan area.

Disturbed. The majority of the Diamond Specific Plan area is comprised of vacant, disced fields with little to no vegetation. Sparse, weedy species found within this community include black mustard, Russian thistle, saltmarsh heliotrope, tarweed, coyote brush, jimson weed, giant reed, common sunflower, foxtail chess, California buckwheat, vinegar weed, rattlesnake weed, curly dock, saltgrass, tamarisk, mule fat, deerweed, five-hooked bassia), telegraph weed, saltbush, dove weed, common fiddleneck, palo verde, cocklebur, and brittlebush. Disturbed areas comprise 37.3 acres of the Diamond Specific Plan area.

Ruderal. Ruderal areas are dominated by non-native, weedy species. A small ruderal community is located within the eastern portion of the study area where piles of dirt had been previously mounded. Species found within this community include black mustard, Mexican fan palm, tamarisk, gum tree, mule fat, California buckwheat, and vinegar weed. The ruderal area comprises 0.4 acre of the Diamond Specific Plan area.

Ruderal/Disturbed. The area just west of Diamond Drive in the northeastern portion of the Diamond Specific Plan area was previously disturbed, but currently has a fair amount of ruderal vegetation growing on it. Russian thistle is the dominant ruderal plant species observed within this community. Associated plant species include black mustard, London rocket, and redstemmed filaree. The ruderal/disturbed community comprises 3.6 acres of the Diamond Specific Plan area.

Barren (Lakebed). The western boundary of the Diamond Specific Plan area overlaps with a portion of the Lake Elsinore lakebed. At the time of the site visits, the on-site portion of the lakebed was dry and contained no vegetation. The barren on-site portion of the lakebed comprises 1.0 acre of the Diamond Specific Plan area.

Buckwheat Scrub. A thin strip of buckwheat scrub was observed along Diamond Drive within the southeastern portion of the study area. This community is dominated by California buckwheat. Deerweed and brittlebush are also present within this community. Buckwheat scrub comprises 0.3 acre of the Diamond Specific Plan area.

Tamarisk/Ruderal. Two small patches of tamarisk/ruderal communities occur within the study area. One patch is located at the western end of Campbell Street. The other patch is located just north of Malaga Road in the southeastern portion of the study area. This community is dominated by tamarisk with a ruderal understory that is dominated by black mustard. Other species found within this community include Russian thistle, foxtail chess, mule fat, black willow, saltmarsh heliotrope, common sunflower, red-stemmed filaree, cocklebur, London rocket, tarplant, coastal goldenbush, and California buckwheat. The tamarisk/ruderal community comprises 0.4 acre of the Diamond Specific Plan area.

Tamarisk/Willow Scrub. The western boundary of the Diamond Specific Plan area overlaps with a small area of tamarisk/willow scrub. The majority of this community exists just off-site, adjacent to the northwestern boundary of the study area, along the San Jacinto River, which flows out into Lake Elsinore (as shown in Figure 3.4-2, *Site Photographs*). This community is dominated by tamarisk, and also includes black willow. Tamarisk/willow scrub comprises 0.4 acre of the Diamond Specific Plan area.

Sensitive Vegetation Associations and Habitats

Vegetation communities (habitats) are generally considered "sensitive" if: (1) they are considered rare within the region by various agencies including U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and other local agencies; (2) if they are known to support sensitive animal or plant species; and/or (3) they are known to serve as important wildlife corridors. These sensitive habitats are typically depleted throughout their known ranges, or are highly localized and/or fragmented.

A majority of the Diamond Specific Plan area is highly disturbed due to routine discing, and dominated by sparse, ruderal plant species. A small portion of the Diamond Specific Plan area consists of tamarisk/willow scrub (0.4 acre). Due to the disturbed nature of this community, it is not considered a high inventory priority community by the California Natural Diversity Database (CNDDB); however, it is considered Riparian/Riverine under the definitions of Section 6.1.2, Protection of Riparian/Riverine Areas and Vernal Pools under the MSHCP.

The Diamond Specific Plan area supports a total of 1.84 acres of areas which may be considered Riparian/Riverine habitat under the MSHCP definition. The MSHCP defines riparian/riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." In addition, there are nine seasonal ponds totaling approximately 1.03 acres on-site. The seasonal ponds were analyzed against MSHCP Vernal Pool requirements. Although these ponds collect and hold standing water for short periods following adequately sized rain events, these seasonal ponds appear to have been created by earth moving activities and are extensively disturbed. Although the seasonal ponds identified within the study area support seasonal hydrology and some plant indicator species, they do not support vernal pool soils (i.e., Travers, Willows, or clay soils). Thus, these seasonal ponds do not meet the three parameters (soils, vegetation, and hydrology) required to qualify as MSHCP-regulated vernal pools.

General Wildlife Inventory

The vegetation communities discussed above provide wildlife habitat. While a few wildlife species are entirely dependent on a single community, the entire mosaic of all the communities within the Diamond Specific Plan area and adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the Diamond Specific Plan area and as part of the regional ecosystem. Based on the disturbed

nature of the area, the Diamond Specific Plan area would be expected to support a minimal assortment of invertebrates. The Diamond Specific Plan area also provides foraging and cover habitat for year-round bird residents, seasonal bird residents, and migrating songbirds within disturbed and ruderal communities. Raptor species observed within the Diamond Specific Plan area include the northern harrier and red-tailed hawk. Trees within and around the Diamond Specific Plan area provide perches for roosting in the area. The ruderal/disturbed nature of the Diamond Specific Plan area also provides habitat for reptiles, songbirds, and small mammals, which has the potential to result in a sizeable prey population for raptor foraging. Collectively, the availability of prey and perches would suggest that the Diamond Specific Plan area has the potential to be used by a variety of raptor species. All invertebrate, amphibian, reptile, bird (and raptor), and mammal species observed within the study area are included within the Biological Resources Assessment Appendix as Appendix C1, Floral and Faunal Compendium.

Special-Status Plant Species

The California Native Plant Society (CNPS) is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (CNPS 2001). The list serves as the candidate list for listing as Threatened and Endangered by CDFG. CNPS has developed five categories of rarity:

- List 1A Presumed extinct in California;
- List 1B Rare or Endangered in California and elsewhere;
- List 2 Rare or Endangered in California, more common elsewhere;
- List 3 Plants for which we need more information – Review list;
- List 4 Plants of limited distribution – Watch list.

The CNPS recently added "threat ranks" which parallel the ranks used by the CNDDB. These ranks are added as a decimal code after the CNPS List (e.g., List 1B.1). The threat codes are as follows:

- 1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);
- 2 – Fairly endangered in California (20-80 percent occurrences threatened);
- 3 – Not very endangered in California (<20 percent of occurrences threatened or no current threats known).

Sensitive species that occur or potentially could occur within the Diamond Specific Plan area are based on one or more of the following: (1) the direct observation of the species on the property during one of the biological surveys; (2) a record reported in the CNDDB; and (3) the study area is within known distribution of a species and contains appropriate habitat.

A list of sensitive plant species with a distribution including the Diamond Specific Plan area is provided in the Biological Resources Assessment (Appendix C.1). While no federally- or state-listed sensitive plant species were observed on-site, several have the potential to occur. A list of sensitive plant species that were observed on site is provided in Table 4.3-2.

Table 4.3-2. Sensitive Plant Species

Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Other	Preferred Habitat	Distribution	Occurrence On the Site
Vascular Plants									
ANGIOSPERMS (DICOTYLEDONS)									
Hemizonia pungens ssp. *laevis*	smooth tarplant	Apr.-Sept.	None	None	1B	MSHCP**/MSHCP****	Valley and foothill grasslands with poorly drained alkaline soil conditions at low elevations. 0-480 meters	Riverside, San Bernardino, and San Diego Counties	OB
Comments: Portions of the study area are located within the Criteria Area Species Survey Area, and this species is protected under Section 6.1.2 of the MSHCP. Therefore, a habitat assessment was conducted for this species by PCR in December 2008. Suitable habitat for this species occurs on-site; therefore, focused sensitive plant surveys were conducted in May 2009. Approximately 12,100 smooth tarplant plants were estimated on-site, with the majority occurring within the western portion of the study area.									
Symphyotrichum defoliatum	San Bernardino aster	Jul-Nov	None	None	1B.2	None	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic), near ditches, streams, and springs. 2-2,040 meters.	Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and San Luis Obispo Counties	NE
Comments: San Bernardino aster has potential to occur within the study area. Suitable habitat for this species occurs on-site, however, surveys were conducted in July 2009 and this species was not found on-site									
Chenopodiaceae	Goosefoot Family								
Atriplex parishii	Parish's brittlescale	Jun-Oct	None	None	1B.1	MSHCP**	Chenopod scrub, playas, vernal pools; alkaline soils. 25-1,900 meters.	Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, and Baja CA	NE
Comments: Portions of the study area are located within the Criteria Area Species Survey Area. Therefore, a habitat assessment was conducted for this species by PCR in December 2008. Suitable habitat for this species occurs on-site, however, surveys were conducted in July 2009 and this species was not found on-site.									

Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Other	Preferred Habitat	Distribution	Occurrence On the Site
Ranunculaceae	Buttercup Family								
Myosurus minimus ssp. *apus*	little mousetail	Mar-Jun	None	None	3.1	MSHCP**	Valley and foothill grassland, vernal pools; alkaline soils. 20 - 640 meters.	Alameda, Contra Costa, Colusa, Lake, Merced, Riverside, San Bernardino, San Diego, Solano, Tulare Counties, Baja CA, and OR	OB
Comments: Portions of the study area are located within the Criteria Area Species Survey Area. Therefore, a habitat assessment was conducted for this species by PCR in December 2008. Suitable habitat for this species occurs on-site; therefore, focused sensitive plant surveys were conducted in May 2009. Approximately 100 little mousetail plants were estimated on-site within Seasonal Pond 9.									

Source: PCR Services Corporation 2009(a).
OB = Observed; P = Species has the potential to occur on-site; NE = Species not expected to occur on-site due to the lack of suitable habitat or negative results of focused surveys

California Native Plant Society (CNPS)
List 1A: Presumed extinct in California.
List 1B: Rare, threatened, or endangered throughout their range.
List 2: Rare, threatened, or endangered in California, but more common in other states.
List 3: Plant species for which additional information is needed before rarity can be determined.
List 4: Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

CNPS Threat Codes:
1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
2 Fairly endangered in California (20-80% occurrences threatened)
3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Western Riverside County, Multiple Species Habitat Conservation Plan (MSHCP)
MSHCP Covered species under the Western Riverside County Multiple Species Habitat Conservation Plan.
MSHCP* Covered species under the Western Riverside County Multiple Species Habitat Conservation Plan, but additional habitat assessments/surveys are required within Narrow Endemic Plant Species Survey Areas on-site.
MSHCP** Covered species under the Western Riverside County Multiple Species Habitat Conservation Plan, but additional habitat assessments/surveys are required within Criteria Area Species Survey areas on-site.
MSHCP*** These covered species will be considered to be covered species adequately conserved when conservation requirements identified in species-specific conservation objectives have been met.
MSHCP**** Additional habitat assessments/surveys are required for these species pursuant to MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine and Vernal Pools.

Special-Status Wildlife Species

The USFWS and CDFG have established classifications for listing of sensitive species. These classifications, based on level of threat, are listed below:

Classification	Criteria
Federally Endangered	USFWS identifies a federally endangered species as one which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
Federally Threatened	USFWS identifies a federally threatened species as one that is likely to become endangered in the foreseeable future in the absence of special protection and management efforts, although not presently threatened with extinction.
State Endangered	CDFG identifies a state endangered species as one which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
State Threatened	CDFG identifies a state threatened species as one that is likely to become endangered in the foreseeable future in the absence of special protection and management efforts, although not presently threatened with extinction.
California Species of Special Concern	This status applies to species that are designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats.
California Fully-Protected Species	This classification identifies protection to rare animals or those facing possible extinction. Fully-protected species may not be taken or possessed at any time and no licenses or permits may be issues for their take. Most fully-protected species have also been listed as threatened or endangered.

A list of sensitive wildlife species with potential to occur within the study area is provided in Table 4.3-3. A complete list of species with a known distribution including the project area is included within Biological Resources Assessment (Appendix C1). Of the species that were identified as having the potential to occur on the project site, most are covered by the MSHCP. However, the western snowy plover, which is classified as a federally-threatened and California Species of Special Concern, is not covered by the MSHCP but historically occurred at Lake Elsinore, however, the last known occurrence was documented in 1974 in the CNDDB; therefore, this species only has a low potential to occur. Furthermore, no impacts to habitat for this species are anticipated. The long-eared owl, burrowing owl, and mastiff bat are considered California Species of Special Concern also have the potential to occur on site and are not covered by the MSHCP.

Focused surveys for the three federally-listed fairy shrimp (vernal pool, San Diego, and Riverside) were conducted in December of 2008 and March of 2009 and a dry season survey was conducted in July 2009 (Appendix C.1).

Common fairy shrimp cysts were found during the dry season survey and a large number of the common versatile fairy shrimp were found during the wet season survey. No sensitive fairy shrimp species were found on-site during the focused wet season survey or during the dry season survey. The distribution of the vernal pool fairy shrimp is well known and is not expected to occur within the vicinity of the Diamond Specific Plan. No sensitive fairy shrimp species are expected to occur on-site.

In addition, focused surveys for burrowing owl were conducted in March 2009. No burrowing owls were found on-site during the focused surveys.

Table 4.3-3. Special-Status Wildlife Species with Potential to Occur on Diamond Specific Plan Site

Scientific Name	Common Name	Federal	State	Other	Preferred Habitat	Distribution	Occurrence On-site
AMPHIBIANS							
Pelobatidae	Spadefoot Toads						
Spea hammondii	western spadefoot	None	SSC	MSHCP	Prefer burrow sites within relatively open areas in lowland grasslands, chaparral, and pine-oak woodlands, areas of sandy or gravelly soil in alluvial fans, washes, and floodplains. Requires temporary pools for reproduction.	Coastal ranges from Point Conception, Santa Barbara Co., south to the Mexican border throughout Central Valley and adjacent foothills.	P
Comments: Western spadefoot has potential to occur within the study area; however, this species is covered under the MSHCP.							
BIRDS							
Threskiornithidae	Ibises and Spoonbills						
Plegadis chihi	white-faced ibis	None	SSC	MSHCP	Feeds in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland.	Salton Sea, Buena Vista lagoon, San Diego Co., Honey Lake, Klammoth Basin, and Central Valley, CA.	P
Comments: The white-faced ibis has potential to occur within the study area; however, this species is covered under the MSHCP.							
Accipitridae	Hawks, Kites, Harriers, and Eagles						
Aquila chrysaetos	golden eagle	None	SFP	MSHCP	Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats.	Locally throughout much of western Riverside Co. in suitable habitats.	P,F
Comments: The golden eagle has the potential to forage within the study area; however, this species is not expected to nest within the study area. In addition, this species is covered under the MSHCP.							
Elanus leucurus	white-tailed kite	None	SFP	MSHCP	Grasslands with scattered trees, near marshes, along highways.	Length of State; breeding in lowlands from Sacramento to San Diego Cos.	P,B
Comments: The white-tailed kite has the potential to forage within the study area; however, this species is not expected to nest within the study area. In addition, this species is covered under the MSHCP.							

Scientific Name	Common Name	Federal	State	Other	Preferred Habitat	Distribution	Occurrence On-site
Falconidae	Falcons						
Falco peregrinus anatum	American peregrine falcon	Delisted	SE,SFP	MSHCP*	Open country, cliffs (mountains to coasts).	Occurs uncommonly throughout CA with the exception of the se deserts.	P,F
Comments: This species is protected under Section 6.1.2 of the MSHCP; therefore, a habitat assessment was conducted by PCR in December 2008. The American peregrine falcon may forage over the study area; however, this species is not expected to breed on-site due to the lack of suitable habitat.							
Charadriidae	Plovers						
Charadrius alexandrines nivosus	western snowy plover	FT	SSC	None	Coastal beaches, sand pits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries.	Coastline from southern WA to southern Baja CA.	P
Comments: The western snowy plover historically occurred at Lake Elsinore, however, the last known occurrence was documented in 1974 in the CNDDB; therefore, this species has a low potential to occur within the study area. No impacts to habitat for this species are anticipated.							
Strigidae	Owls						
Asio otus	long-eared owl	None	SSC	None	Dense riparian areas, thickets, woodlands, and forest; riparian bottomlands grown to tall cottonwoods and willows; also belts of live oak which parallel stream courses. Require adjacent open land productive of mice for foraging and the presence of old nests of crows, hawks, or magpies for breeding.	Local resident throughout CA. Some seasonal movement away from nesting areas.	P,F
Comments: The long-eared owl has the potential to forage within the study area; however, this species is not expected to nest within the study area.							
Athene cunicularia	burrowing owl	None	SSC	None	Dry grasslands, desert habitats, and open pinyon-juniper and ponderosa pine woodlands below 5,300 feet elevation. Prefers berms, ditches, and grasslands adjacent to rivers, agricultural, and scrub areas.	Year-round resident of lowlands of s CA.	P
Comments: The study area is located within the burrowing owl survey area; therefore, Phase I and II surveys were conducted by PCR in December 2008 in accordance with MSHCP survey guidelines. Because suitable habitat was found within the study area, Phase III surveys were conducted in March 2009. No burrowing owls were found on-site. A 30-day pre-construction survey is warranted prior to ground disturbing activities.							

Scientific Name	Common Name	Federal	State	Other	Preferred Habitat	Distribution	Occurrence On-site
Alaudidae	Larks						
Eremophila alpestris actia	California horned lark	None	None	MSHCP	Open habitats, grasslands.	Throughout CA.	P
Comments: The California horned lark has potential to occur within the study area; however, this species is covered by the MSCHP							
MAMMALS							
Molossidae	Free-tailed Bats						
Eumops perotis californicus	western mastiff bat	None	SSC	None	Primarily arid lowlands, especially deserts. Open, semiarid to arid habitats including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Uncommon resident of lower elevations in se San Joaquin Valley and Coastal Ranges from Monterey Co. southward through s CA from the coast eastward to the Colorado desert.	P
Comments: The western mastiff bat has potential to occur within the study area.							
Heteromyidae	Kangaroo Rats, Pocket Mice, and Kangaroo Mice						
Dipodomys stephensi	Stephens' kangaroo rat	FE	ST	MSHCP	Annual and perennial grasslands and coastal sage scrub with sparse canopy cover.	San Jacinto Valley from Riverside Co. to the vicinity of Vista, San Diego Co.	P
Comments: The Stephens' kangaroo rat has a low potential to occur on-site due to the disturbed nature of the study area; however, this species is covered by the MSHCP.							

P = Species has the potential to occur on-site; F = For raptor species: if present, would utilize the site for foraging only; B = For raptor species: if present, would utilize the site for both foraging and nesting.

Key to Species Listing status Codes

FE	Federally Listed as Endangered	SE	State Listed as Endangered
FT	Federally Listed as Threatened	ST	State Listed as Threatened
FPE	Federally Proposed as Endangered	SCE	State Candidate for Endangered
FPT	Federally Proposed as Threatened	SCT	State Candidate for Threatened
FPD	Federally Proposed for Delisting	SR	State Rare
FC	Federal Candidate Species	SFP	State Fully Protected
		SSC	California Special Concern Species

MSHCP Western Riverside County Multiple Species Habitat Conservation Plan – Covered Species
MSHCP* Western Riverside County Multiple Species Habitat Conservation Plan – Riparian/Riverine or Vernal Pool Species

Jurisdictional Waters and Wetlands

On the Diamond Specific Plan site, there are approximately 0.04 acres of non-wetland waters within the Regional Water Quality Control Board (RWQCB) jurisdiction and approximately 0.21 acres of non-wetland waters within CDFG jurisdiction. As shown in Table 4.3-4, these areas are comprised of two ephemeral drainage features, one 217 feet in length and ranging from 2 to 20 feet in width and the other 636 feet in length and ranging from 4 to 8 feet in width.

Table 4.3-4. Jurisdictional Drainage Features

Name	Length (feet)	Width Range (feet)			Area (acres)			Nature
		USACE/RWQCB	Wetlands	CDFG	USACE/RWQCB	Wetlands	CDFG	
Drainage Feature 1	217	NA/1-4	NA	2-20	0.013	NA	0.098	Ephemeral
Drainage Feature 2	636	NA/1-3	NA	4-8	0.024	NA	0.108	Ephemeral
Drainage Feature 3	202	2-3/2-3	2-3	254.8	.03	.02	0.23	Intermittent
Total	933.5	--	--	--	0.03/0.06	.02	0.44	

Source: PCR Services Corporation 2009(C)

A final Jurisdictional Determination must be issued by the USACE; these two features have been delineated as non-federal waters. This is supported by guidance documents issued jointly by the USACE and the U.S. Environmental Protection Agency following the U.S. Supreme Court's ruling on the cases of *Carabell v. United States* and *Rapanos v. United States*. The guidance issued from these rulings identify *"swales and erosional features (e.g. gullies, small washes characterized by low volume, infrequent, or short duration flow)"* as non-jurisdictional. On the project site, one of these two drainage features was formed by gully erosion and the other is a small wash formed for discharged runoff from adjacent street gutters. Additionally, neither of these features has a direct connection to the lake, although both hydrologically eventually drain in to the lake. Therefore, these drainage features should not be considered jurisdictional under Sections 404 of the Clean Water Act (CWA), although should still be regulated by the California Fish and Game Code 1600 et seq and the Porter-Cologne Water Quality Control Act (Water Code § 13050 (e)) and should be considered jurisdictional "waters of the State."

Additionally, there is one intermittent water feature (i.e., it supports flows for more prolonged periods throughout the year). This feature is jurisdictional under State regulations and under Sections 404 and 401. Together, these three features total 933.5 linear feet of streambed, and 0.034 acres of USACE/RWQCB jurisdictional "waters of the U.S."/"waters of the State." This streambed amount is composed of 0.02 acres of wetland, 0.03 acres of RWQCB jurisdictional non-wetland "waters of the State" and 0.44 acres of CDFG jurisdictional streambed. Also, 1.50 acres of the project site lies within the USACE jurisdictional Lake Elsinore elevation boundary and 11 acres are within the CDFG jurisdictional elevation.

Wildlife Movement

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species specific, large open spaces will generally support a diverse wildlife community representing all

types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds on a "local" level to home ranges encompassing many square-miles for large mammals moving at a "regional" level.

The western border of the Diamond Specific Plan area lies within the Proposed Extension of Existing Core 3 of the MSHCP, as shown in Figure 4.3-3, Location within MSHCP Cores and Linkages. In addition, a small portion of the northwesternmost corner of the Diamond Specific Plan area, which currently exists as a commercial development, lies within Proposed Linkage 8 of the MSHCP. Proposed Linkage 8 follows the San Jacinto River, which is immediately adjacent to the Diamond Specific Plan to the west.

The barren (lakebed) and tamarisk/willow scrub communities mapped along the western border of the study area are expected to support regional movement for species utilizing the San Jacinto River as a movement corridor. The remainder of the Diamond Specific Plan area is either developed or disturbed and routinely disced, with some of the disturbed areas supporting a dominance of ruderal plant species.

Because Proposed Linkage 8 focuses on the conservation of riparian scrub, woodland, forest, and grassland habitat associated with the San Jacinto River (as mentioned under Criteria Cells 4743 and 4846 in Table 3-4, Criteria for Elsinore Area Plan of the MSHCP), the barren (lakebed) and tamarisk/willow scrub communities in the western portion of the Diamond Specific Plan area are important to maintaining the functions of this proposed linkage. In addition, due to the immediate adjacency of the Diamond Specific Plan area to the San Jacinto River, some of the species may be observed flying over the Diamond Specific Plan area as they move through Proposed Linkage 8 coming to and from the Proposed Extension of Existing Core 3. While these species may be expected to breed or forage within the avoided barren (lakebed) and tamarisk/willow scrub communities, these species are not expected to breed or forage within the remainder of the Diamond Specific Plan area due to its disturbed nature.

4.3.2 Project Impacts

Project-specific impacts can occur in two forms: direct and indirect. Direct impacts are considered to be those that involve the loss, modification, or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or wildlife, which may directly affect regional population numbers of a species or result in the physical isolation of populations, thereby reducing genetic diversity and population stability.

Indirect impacts, such as loss of foraging habitat, can occur although these areas or habitats are not directly removed by project development. Indirect impacts can involve the effects of increases in ambient levels of noise or light, unnatural predators (i.e., domestic cats and other non-native animals), competition with exotic plants and animals, and increased human disturbance such as hiking and dumping of green waste on site. Indirect impacts may be associated with the subsequent day-to-day activities associated with project build-out, such as increased traffic use, permanent concrete barrier walls or chain-link fences, exotic ornamental plantings that provide a local source of seed, etc., which may be both short-term and

long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by exotics, changes in the behavioral patterns of wildlife, and reduced wildlife diversity and abundance in existing habitats adjacent to project sites.

4.3.2.1 Thresholds of Significance

The following impact significance thresholds were taken from the *CEQA Guidelines* Appendix G screening criteria. A significant impact to biological resources would be identified if the project was determined to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA) (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

4.3.2.2 Environmental Impacts

Sensitive Vegetation Communities and Habitats

Most of the Diamond Specific Plan site would be graded during the development of the proposed project, resulting in the loss of 71 acres of various habitats as shown in Table 4.3-5. Most of this area is already disturbed habitat and is not considered sensitive. The areas that will be avoided will be the barren (lakebed) and tamarisk/willow scrub communities, with the exception of 0.0058 acre (1.4 percent of the 0.4 acre of tamarisk/willow scrub on-site) and an area along the western boundary of the project area which encompasses the densest areas of smooth tarplant and will be used as a mitigation area. Therefore, sensitive vegetation will be avoided and significant impacts to sensitive vegetation communities would not occur.

Table 4.3-5. Impacts to Vegetation Communities[1]

Plant Community	Existing (Acres)	Impacts (Acres)
Developed	44.2	29.6
Disturbed	37.3	36.7
Ruderal	0.4	0.4
Ruderal/Disturbed	3.6	3.6
Barren (Lakebed)	1.0	0.0
Buckwheat Scrub	0.3	0.3
Tamarisk/Ruderal	0.4	0.4
Tamarisk/Willow Scrub	0.4	0.0058
Total	87.6	71.0

Source: PCR Services Corporation 2010

[1] Developed acreages refer to the existing ballpark facilities. While no changes will be made to these acres, they are not considered natural habitat.

Project Boundary

Core Linkage Areas

Existing Core E

Proposed Extension of Existing Core 3

Proposed Linkage 8

N

W E

S

0 2000 4000

Feet

Source:USGS Topographic Series (Lake Elsinore, CA); PCR Services Corporation, 2009 | G:\010570LKELS\101221_DIAMOND\graphic\impacts_to_sens_plants.ai | Last Updated : 07-10-09

Location within MSCHP Cores and Linkages

FIGURE 4.3-3

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

Sensitive or Special Status Species

Sensitive Plant Species

Several sensitive plant species have the potential to occur within the Diamond Specific Plan area as shown in Table 4.3-2. Two sensitive plant species, smooth tarplant and little mousetail, were observed within the Diamond Specific Plan area. Approximately 12,100 smooth tarplant plants encompassing approximately 1.46 acres were estimated on-site, the majority of which are in the western portion of the Diamond Specific Plan area. Approximately 11,420 smooth tarplant plants covering 1.38 acres (94.4 percent) would be impacted by the proposed Diamond Specific Plan. Figure 4.3-4 identifies the locations of the smooth tarplant that is anticipated to be impacted. Due to the large number of smooth tarplant which will be impacted and because this species is a Riparian/Riverine and Criteria Area Species, impacts to smooth tarplant are considered significant. In accordance with the MSHCP, 90 percent of the smooth tarplant on-site must be avoided or preserved. If avoidance or on-site preservation is not feasible, then equivalent or superior preservation is required pursuant to MSHCP Sections 6.1.2 and 6.3.2.

Approximately 100 little mousetail plants were estimated along the edges of Seasonal Pond 9 (0.07 acre) (shown in Figure 4.3-4). Because this species is a Criteria Area Species under the MSHCP and a CNPS List 3.1 species, impacts to little mousetail are considered significant. In accordance with the MSHCP, 90 percent of the little mousetail on-site must be avoided or preserved. If avoidance or on-site preservation is not feasible, then equivalent or superior preservation is required pursuant to MSHCP Sections 6.1.2 and 6.3.2.

The San Bernardino aster is a CNPS List1B.2 and the Parish's brittlescale is a CNPS List 1B.1and covered by the MSHCP. Although the potential for both to occur onsite was identified, neither of these sensitive plant species were observed onsite during a July 2009 survey; thus, a less than significant impact is identified.

Sensitive Wildlife Species

Surveys for the three federally-listed fairy shrimp (vernal pool, San Diego, and Riverside) were conducted in the wet season (wet season survey was initiated on December 10, 2008) and dry season (dry season survey was initiated on June 1, 2009). These surveys did not identify any of these species on site. Therefore, impacts are not expected to occur to these species.

Surveys for burrowing owl (initiated on December 10, 2008) did not identify any of the species on-site. However, due to the presence of suitable habitat for burrowing owl on-site, the potential exists for burrowing owl to migrate on-site prior to construction of the Diamond Specific Plan. If this were to occur, there would be a potential for direct impact to the species. Therefore, impacts are significant and require mitigation to determine if burrowing owls are present pre-construction.

During field surveys, the northern harrier was observed flying over the Diamond Specific Plan area. It is a sensitive wildlife species and is covered by the MSHCP. Payment of required MSHCP fees would fully reduce any impacts to northern harrier to below a level of significance. All of the sensitive wildlife species either observed or with the potential to occur on the site, with the exception of the American peregrine falcon, western snowy plover, long-eared owl, and western mastiff bat, are covered under the MSHCP and do not require focused surveys. The long-eared owl and western mastiff bat are Species of Special Concern (SSC) species and do not require surveys. The long-eared owl has a low potential to occur within the tamarisk/willow scrub area on site. Additionally this area will be avoided with the exception of 0.0058 acre. The western snowy plover also has a low potential to occur within the barren

(lakebed) community and this area will be completely avoided. The American peregrine falcon is a State Endangered and State Fully Protected species that is conditionally covered under the MSHCP. Although the Diamond Specific Plan area may provide foraging habitat, this species is not expected to breed on-site due to the lack of suitable habitat, therefore no impacts to nesting habitat for this species are expected. The western snowy plover is a Federally Threatened and SSC species. The western snowy plover historically occurred at Lake Elsinore, however, the last known occurrence was documented in 1974 in the CNDDB; therefore, this species has a low potential to occur within the Diamond Specific Plan area. Furthermore, no impacts to habitat for this species are anticipated. As these are SSC species and do not carry a federal or State listing as threatened or endangered, impacts are not expected to threaten the regional populations of these species and impacts are considered less than significant.

Riparian Habitat and Other Sensitive Natural Communities

The Diamond Specific Plan area supports a small area (0.4 acre) of tamarisk/willow scrub. While it is not considered a high inventory priority community by the CNDDB due to its disturbed nature, it is considered Riparian/Riverine habitat under Section 6.1.2 of the MSHCP. In addition, the Diamond Specific Plan area supports 1 acre of barren (lakebed) community, which may be considered Riparian/Riverine habitat under Section 6.1.2 of the MSHCP. However, no impacts would occur to the barren (lakebed) community, and 0.0058 acre (1.4 percent of the total community) will be impacted of the tamarisk/willow scrub community as shown in Figure 4.3-5.

Implementation of the Diamond Specific Plan would result in permanent impacts to approximately 883.5 linear feet of streambed, 0.024 acre of USACE/RWQCB jurisdictional wetland, 0.03 acre of RWQCB jurisdictional non-wetland "waters of the State," 0.33 acre of CDFG jurisdictional streambed, and 11 acres of CDFG jurisdictional elevation. No USACE jurisdictional elevation will be impacted. Figure 4.3-5, Impacts to Jurisdictional Features, identifies the locations of these impacts. Both the RWQCB jurisdictional waters and CDFG jurisdictional streambed and elevation (for a total of 0.33 acres) are considered Riparian/Riverine habitat under Section 6.1.2 of the MSHCP because of the plant species dependency on water and the potential to support the Riparian/Riverine plant and wildlife species. Therefore, impacts to Riparian/Riverine habitat and jurisdictional waters would be significant.

Federally Protected Wetlands

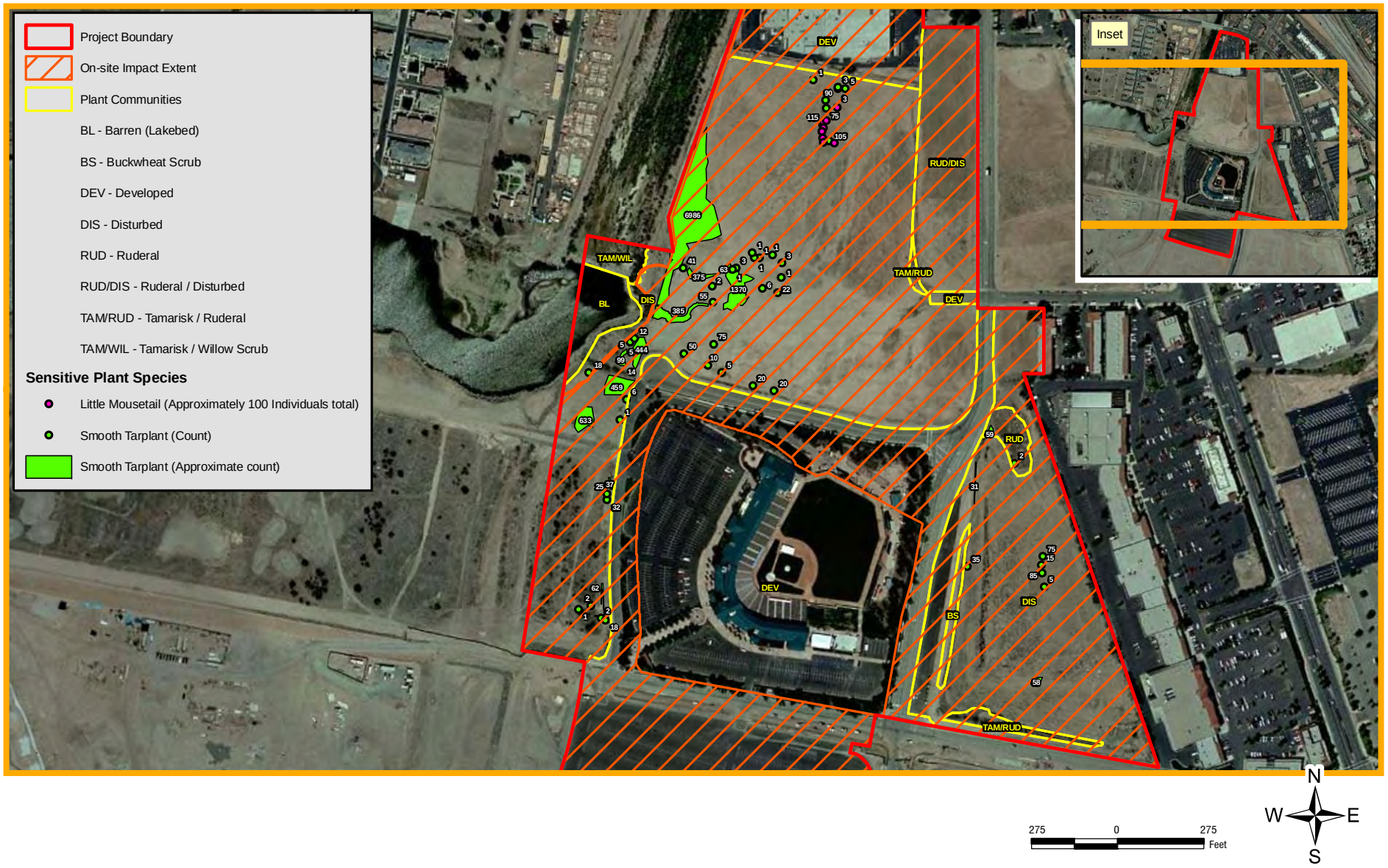
Implementation of the project would result in permanent impacts to 0.02 acre of USACE/RWQCB jurisdictional wetland. As there is a "no net loss" policy for wetlands, impacts to this resource are considered potentially significant.

Although seasonal ponds were identified within the study area, these features do not meet the three parameters (soils, vegetation, and hydrology) required to qualify as USACE regulated vernal pools. Therefore, impacts would be less than significant.

Wildlife Movement

The majority of the Diamond Specific Plan area is either developed or disturbed, with the exception of the barren (lakebed) and tamarisk/willow scrub communities in the western portion of the Plan area, and would therefore not be expected to support regional movement for large mammals with extensive home ranges. Additionally, the site is surrounded by and immediately adjacent to urban uses. However, regional movement may be provided in the form of stepping-stone habitat for birds and several reptile and small- to medium-sized mammals that are more adapted to disturbed development.

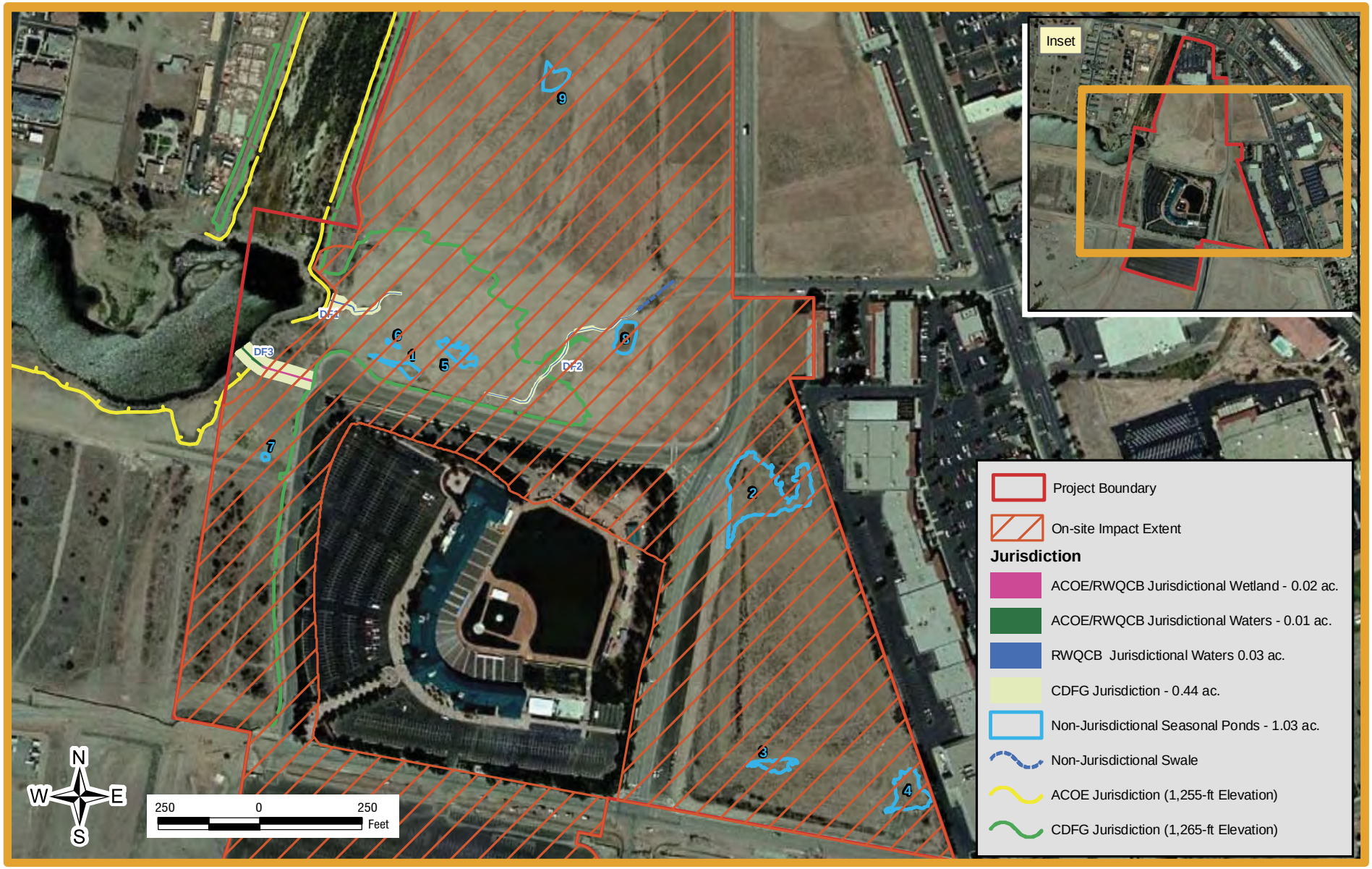
Source: PCR, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\ai\impacts_plants_11242009.ai | Last Updated : 11-19-09



Impacts to Plant Communities and Sensitive Plants

FIGURE 4.3-4

Source: PCR, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\ai\impacts_jurisdictional_11242009.ai | Last Updated : 01-27-2010



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Impacts to Jurisdictional Features

FIGURE 4.3-5

The western border of the Diamond Specific Plan area lies within the Proposed Extension of Existing Core 3 and a small portion of the northwesternmost corner of the site, which currently exists as a commercial development, lies within Proposed Linkage 8 of the MSHCP. These areas can be seen in Figure 4.3-3, Location within MSCHP Cores and Linkages. The barren (lakebed) and tamarisk/willow scrub communities may support wildlife movement; however, both of these communities are being avoided (with the exception of 0.0058 acre of tamarisk/willow scrub at the edge of the San Jacinto River). The project was designed to avoid impacts to the Preservation Areas. The remainder of the Diamond Specific Plan area is not expected to support the species identified for conservation under the proposed core extension and proposed linkage due to the lack of suitable riparian scrub, woodland, forest, or grassland habitat. Although some of the species may be observed flying over the Diamond Specific Plan area as they move through Proposed Linkage 8 to and from the Proposed Extension of Existing Core 3, they are not expected to breed or forage within the Diamond Specific Plan area due to its disturbed nature. Therefore, the Diamond Specific Plan would not significantly impact movement within and along the Proposed Extension of Existing Core 3 and Proposed Linkage 8 due to the site's lack of suitable habitat to support the species.

The Diamond Specific Plan area has the potential to support both raptor and songbird nests due to the presence of trees, shrubs, and ground cover. Nesting activity typically occurs from February 15 to August 31. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.). In addition, nests and eggs are protected under Fish and Game Code Section 3503. Implementation of the Diamond Specific Plan has the potential to impact active nests. Therefore, a significant impact is identified and mitigation required.

Local Policies/Ordinances

The only local policy or ordinance to protect biological resources of local concern in the City of Lake Elsinore is the Palm Tree Preservation Ordinance, No. 1044. Although Mexican fan palm exists on the project site, this species is not included in the ordinance.

Additionally, habitat appropriate for the Stephen's kangaroo rat is present on-site. Although the habitat is disturbed and there is a low potential for the species to occur, a significant impact is identified and mitigation is required.

Consistency with the Western Riverside County MSHCP

As mentioned previously, portions of the Diamond Specific Plan area are located within Criteria Cells 4743 and 4846 (within Subunit 3 - Elsinore), the Criteria Species Survey Area, the Burrowing Owl Survey Area, and Narrow Endemic Plant Species Survey Area 2 of the MSHCP.

Although the Diamond Specific Plan is within portions of these Criteria Cells along the western portion of the Diamond Specific Plan area, the habitats specified within the goals of the Criteria Cells 4743 and 4846 are being avoided (i.e., barren (lakebed) and tamarisk/willow scrub communities) (with the exception of .0058 acre). The goals for Criteria Cell 4743 focus on areas connected to riparian scrub, woodland, forest and grassland habitat associated with the San Jacinto River, with a conservation goal range from 45 to 55 percent of the Cell focusing in the southern and northeastern portions of the Cell. The goals for Criteria Cell 4846 focus on areas connected to grassland habitat associated with the San Jacinto River, with a conservation goal range from 65 to 75 percent of the Cell focusing in the western portion of the Cell. Conservation within both Cells would contribute to assembly of Proposed Extension of Existing Core 3 and Proposed Linkage 8. The conservation requirements for the Diamond Specific Plan and all of the East Lake Specific Plan area are met through the Back Basin 770 Agreement.

Approval of a Determination of Biologically Equivalent or Superior Preservation (DBESP) plan prepared to address mitigation for impacts to sensitive on-site species would meet the goals and objectives of Section 6.3.2, Additional Survey Needs and Procedures of the MSHCP.

In 2005, the City of Lake Elsinore, Vandermost Consulting, RCA, and the Wildlife Agencies worked together to approve the Back Basin 770 Agreement to set aside conservation land in the East Lake Specific Plan (ELSP) area. As the ELSP predates the MSHCP, the ELSP area is not held to compliance with the MSCHP reserve assembly criteria. However, the City worked with the agencies to implement the Back Basin 770 Agreement as a way to balance the needs of conservation and economic development in the ELSP area. As shown on Figure 4.3-6, areas that will be impacted by the Diamond Specific Plan do not fall within the preservation areas identified as part of this agreement and would therefore not conflict with the implementation of the MSHCP Reserve Assembly directives for the Back Basin. It should be noted that the northern portion of the Diamond Specific Plan was not previously a part of the ELSP, and thus would not be covered by the Back Basin 770 Agreement. However, this portion of the site has already undergone environmental review and is currently developed with commercial uses. As the project is adjacent to the Preservation Areas of the Back Basin 770 Agreement the potential for indirect urban edge impacts were analyzed. In order to reduce such effects on conservation lands, best management practices and project design features are incorporated into the proposed project. As a part of these design features, the project is consistent with the goals and objectives of Section 6.1.4, *Urban Wildland Interface* of the MSHCP.

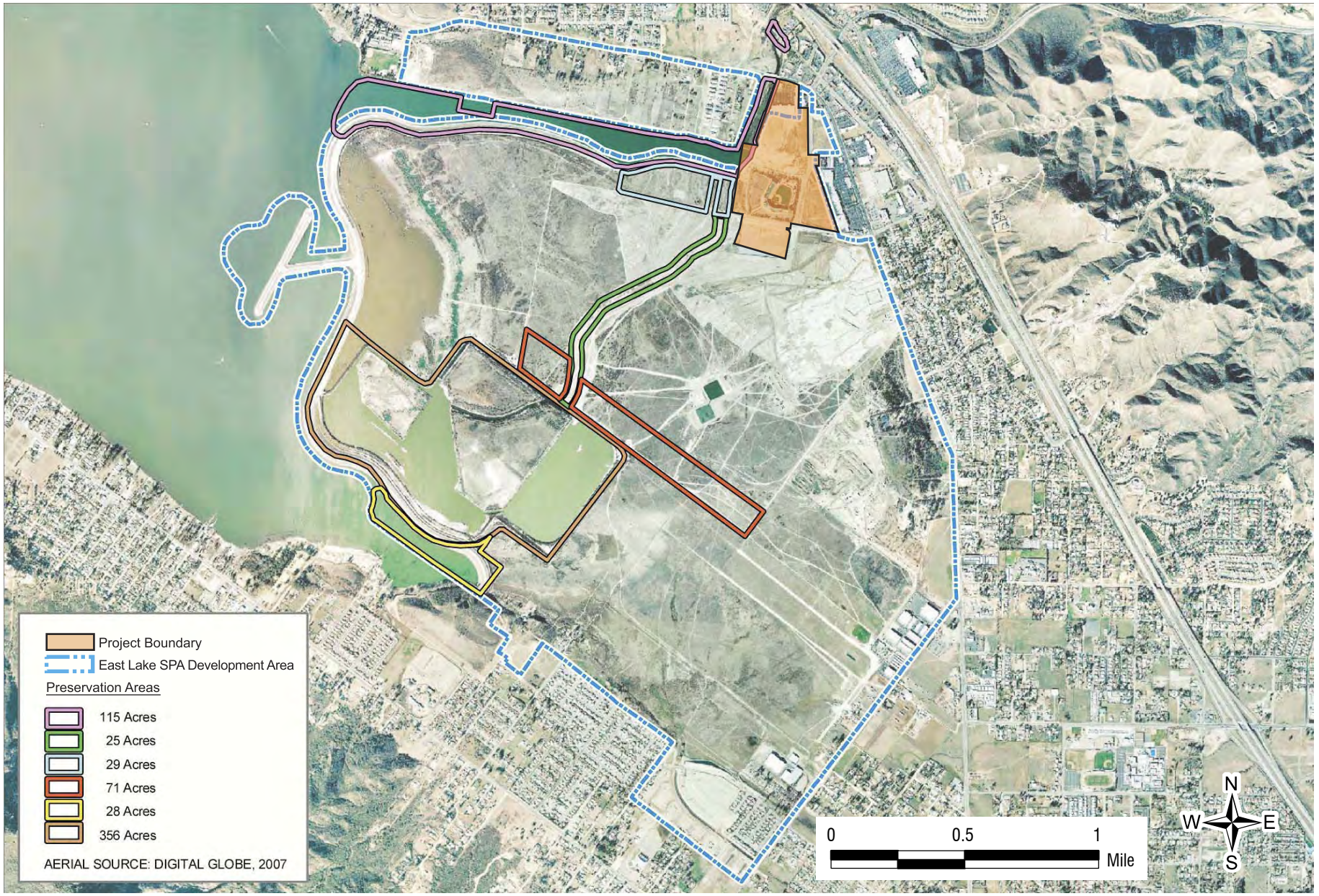
The MSHCP Consistency Analysis (Appendix C) performed for the Diamond Specific Plan determined the project is consistent with the following sections of the MSHCP:

Section 6.1.2 Riparian/Riverine. Section 6.1.2 of the MSHCP focuses on protection of riparian/riverine areas and vernal pool habitat types based on their value in the conservation of a number of MSHCP-covered species. In order to determine if a project is consistent with Section 6.1.2, a DBESP analysis must be conducted if there are impacts to Riparian/Riverine or vernal pool resources. No vernal pools exist on the project site; therefore, due to the lack of suitable habitat, there is a very low potential for vernal pool species to occur. However, the drainages on-site would be considered Riparian/Riverine areas under the meaning of the MSHCP. The DBESP (Appendix C.3) has documented the impacts and the mitigation measures for Riparian/Riverine impacts. This mitigation is also included in Section 4.3.4 below. With implementation of the mitigation measures listed in Section 4.3.4, the Diamond Specific Plan would not conflict with the policies of Section 6.1.2.

Section 6.1.3 Narrow Endemic Plant Species. Section 6.1.3 of the MSHCP focuses on the preservation of Narrow Endemic Plant Species. A portion of the Diamond Specific Plan falls within the Narrow Endemic Plant Species Survey Area 2. Therefore, protocol plant surveys were conducted in May 2009. No Narrow Endemic Plant Species were identified within the Diamond Specific Plan area during these surveys. Therefore, based on the lack of any Narrow Endemic Plant Species being observed on-site, the Diamond Specific Plan would be consistent with Section 6.1.3.

Section 6.1.4 Urban/Wildlands Interface. Section 6.1.4 of the MSHCP provides guidelines to address indirect effects associated with the location of existing and future development in proximity to the MSHCP Conservation Area. The Diamond Specific Plan is immediately adjacent to an area set aside for conservation under the Back Basin 770 Agreement (Figure 4.3-6). As such, potential for indirect impacts related to the urban edge were analyzed. These include the quantity and quality of any runoff generated by the development, night lighting, and noise-generating land uses. Any of these impacts could adversely

Source: Dudek, 2007 | G:\010570LKELS\101221 DIAMOND\graphics\ai\4.3-6 Back basin.ai | Last Updated : 11-19-09



The Diamond Specific Plan Back Basin 770 Agreement

FIGURE 4.3-6

affect sensitive species adjacent to the Specific Plan area. In order to reduce the potential for these indirect edge effects on conservation lands, the following project design features and best management practices have been incorporated into the project description to minimize these edge effects:

Lighting: The Diamond Specific Plan has been designed to minimize night lighting while remaining compliant with City of Lake Elsinore's ordinances related to street lighting, which require that any necessary lighting adjacent to the open space areas of the project will be shielded or directed away from conserved areas.

Noise: According to the MSHCP, noise impacts must be maintained at ambient noise levels or residential noise levels, whichever is higher. To address the short-term impacts associated with construction and the potential inconsistency of commercial uses adjacent to wildlife areas, the mitigation listed in Section 4.9.4 of the Noise Section and below in Section 4.3.1, will ensure compliance.

Trash/Debris: A number of non-structural best management practices (BMPs) will minimize the amount of trash/debris created by the Diamond Specific Plan and reduce adverse impacts of the Specific Plan area on sensitive species within adjacent conservation areas. These include activity restrictions placed on the tenants, the distribution of educational materials to the tenants, the placement of trash receptacles in common areas, street sweeping, and the placement and maintenance of inlet trash racks.

Drainage: Within the northern portion of the Diamond Specific Plan, the project proposes to treat project flows in a grass swale which outlets into the San Jacinto River. The location and discharge rate of the drainage within this area is similar to the existing pre-project conditions.

For the remainder of the Diamond Specific Plan area, the project proposes to re-route flows from directly entering the lake (untreated) to treating project-generated flows in an off-site grass swale, a water quality pond (infiltration basin), and detention basin to the southwest of the study area, downstream of the drainage area. The project's flow rate, volume, and duration for the post-development discharge condition will not exceed the pre-development condition for the 2-year, 24-hour and 10-year, 24-hour rainfall events, as described in Section 4.7 of this Draft EIR and in the *Draft – Project Specific Water Quality Management Plan for The Diamond, Lake Elsinore* (Wilson Mikami Corporation 2009a).

Post-construction drainage quantities will be similar to the existing conditions. The Diamond Specific Plan would result in an approximate ten percent increase in peak discharge values (existing discharge = 205.7 cfs, developed condition discharge = 226.7 cfs), as detailed in the *Conceptual Hydrology Study for The Diamond* (Wilson Mikami Corporation 2009). In addition, the existing flood storage volume within the Diamond Specific Plan area is approximately 39 acre-feet. The Diamond Specific Plan area provides for 22 acre-feet of flood storage with the additional 17 acre-feet of flood storage being provided within the open space to the southwest of the Diamond Specific Plan area (i.e., within the public open space and golf course area of the adjacent Summerly project) (Wilson Mikami Corporation 2009b).

In addition, the grass swales, water quality pond (infiltration basin), and detention basin will serve as the project's treatment control BMPs, which will address water quality. The project will re-route flows which once eroded areas within the Diamond Specific Plan area to the treatment control BMPs. These treatment control BMPs will protect against flooding, prevent downstream erosion, and improve water quality by filtering pollutants from previously untreated flows. Thus, all water leaving the Diamond Specific Plan area will be of a higher quality compared to existing site conditions and the overall water quality of flows entering the Back Basin and Preservation Areas will be improved.

Although the Diamond Specific Plan area will reduce the amount of runoff which currently flows directly into the San Jacinto River and Lake Elsinore, these flows are minimal and will remain within the watershed, eventually recharging into the lake after undergoing a more extensive filtration process through the project's treatment control BMPs. Flows treated through the treatment control BMPs will eventually reach the 25-acre Preservation Area (within the southern portion of the Back Basin Preservation Areas) (see Figure 4.3-6, Back Basin). The flow rate would be similar to existing conditions, however this would increase the duration over which the flows occur downstream, which would be beneficial to the 25-acre Preservation Area by providing hydrology over a longer duration and of improved water quality.

Toxic Material: Construction of the Diamond Specific Plan will incorporate erosion control measures (i.e., sand bags and/or straw wattles) around the perimeter of the development area to ensure all water leaving the site is filtered and an increase in siltation does not occur. In addition, for the long-term operation of the project, the above mentioned water quality features will treat project generated flows and remove pollutants. Standard construction-related BMPs, such as dust control, will be provided in the project-specific Storm Water Pollution Prevention Plan.

Exotic Plant and Animal Infestations: In order to reduce the adverse impacts of non-native plants and wildlife species, native plants will be used in the landscape plans for the common areas of the project. Native plant species shall be used in the water quality basins and other restoration and enhancement areas. The plant palette will be consistent with the MSHCP and will be careful to avoid the species listed in Table 6-2 of the MSHCP. Construction of the development shall abide by an integrated pest management plan due to the project's proximity to Preservation Areas. The integrated pest management plan shall include the following weed prevention and control measures: preventative practices to avoid the transport and spread of weeds and weed seed during project development and operation, use of only certified weed-free hay, straw and other organic mulches to control erosion, and a plan to control noxious weeds and weeds of local concern within designated open space areas.

Barriers: The MSHCP requires the incorporation of barriers, such as native landscaping, rocks/boulders, fencing, walls, and/or signage, for proposed land uses adjacent to Preservation Areas to minimize unauthorized public access, introduction of urban wildlife, and/or illegal dumping within the Preservation Areas. The Diamond Specific Plan will incorporate appropriate barriers. It is noted that the City's regional trail will provide a buffer to the Preservation Areas.

Grading/Land Development and/or Fuel Modification Activities: Manufactured slopes associated with the project would not extend into Preservation Areas. All ground disturbing activities associated with construction and operation of the project will be contained within the project's impact footprint. Within the proposed development plan, off-site trails are included to demonstrate that the Diamond Specific Plan would accommodate the City's planned trail system. However, these off-site trails are not proposed as part of the Diamond Specific Plan and therefore impacts from them are not considered project impacts. In the future, these trails would serve as additional buffers between the development of the project and natural vegetation communities.

Dust: Construction-related BMPs, such as dust control, will be provided in the project specific Storm Water Pollution Prevention Plan to reduce construction impacts on sensitive species and sensitive vegetation.

Inclusive of these design features, and the Urban/Wildland Interface mitigation measures included below in Section 4.3.4 the Diamond Specific Plan would be consistent with the goals and objectives of Section 6.1.4, Urban Wildland Interface of the MSHCP.

Section 6.3.2 Additional Surveys. Section 6.3.2 of the MSHCP discusses additional survey needs and procedures required for Criteria Area Species. Required surveys were conducted for particular species (burrowing owl and Criteria Area Species) The DBESP (Appendix C3) has documented the impacts and the mitigation measures for smooth tarplant and little mousetail impacts. This mitigation is also included in Section 4.3.4 below. With implementation of the associated mitigation measures, the Diamond Specific Plan would not conflict with the policies of Section 6.3.2.

In summary, with incorporation of associated mitigation measures and design features and BMPs listed above, which will be included in the Mitigation Monitoring and Reporting Program for the Diamond Specific Plan, the Diamond Specific Plan would be consistent with the applicable guidelines and policies of the Western Riverside MSHCP and impacts would be less than significant. The Regional Conservation Authority (RCA) has confirmed the Diamond Specific Plan's consistency with the MSHCP through Joint Project Review (Appendix C).

4.3.3 Cumulative Impacts

Implementation of the Diamond Specific Plan in conjunction with related projects within the area would cumulatively add to the loss of open space, vegetation communities, and common plant and wildlife species. However, as identified above, the Diamond Specific Plan would be consistent with Sections 6.1.2, 6.1.3, 6.1.4, and 6.3.2 of the MSHCP. The MSHCP is a long-range conservation effort with which all future development projects must be consistent. Since the Diamond Specific Plan is consistent with the MSHCP, no cumulative impact to biological resources is identified. Other projects in the area would also be required to comply with the provisions of the MSHCP, CEQA, and state and federal regulations protecting biological resources such that cumulative impacts are less than significant.

4.3.4 Environmental Mitigation Measures

The following mitigation measures address potentially significant impacts from implementation of the Diamond Specific Plan.

Sensitive Plant Species

DSP-BIO-1 Prior to issuance of a grading permit(s) for portions of the Diamond Specific Plan with smooth tarplant (Figure 4.3-7), the applicant shall implement the following measures to conserve the smooth tarplant population, resulting in 1.35 acres (0.68 acre on-site and 0.67 acre off-site) or 90 percent of the existing smooth tarplant population) of smooth tarplant mitigation:

- An applicant –retained qualified biologist shall prepare a transplantation plan outlining implementation of the proposed mitigation plan. The plan shall outline the details of the following transplantation requirements:
    a. Prior to disturbance activities, 0.68 acres of smooth tarplant shall be translocated on-site (i.e., seeded with seeds collected from the existing population on-site) along the western boundary of the Diamond Specific

Plan, contiguous to the existing populations of smooth tarplant which currently exist on-site.

b. Prior to disturbance activities, approximately 0.67 acre of smooth tarplant shall also be translocated off-site, as shown in Figure 4.3-7.

- All mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for their long-term preservation.

DSP-BIO-2 Prior to issuance of a grading permit(s) for areas within the Diamond Specific Plan identified as having little mousetail occur on-site (Figure 4.3-8), the applicant shall provide off-site mitigation through translocation of topsoil inoculum (to be collected prior to disturbance activities) to a site where suitable habitat conditions exist to provide for conservation of 100 percent of the existing 100 little mousetail plants covering approximately 0.07acre. The off-site mitigation area shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation.

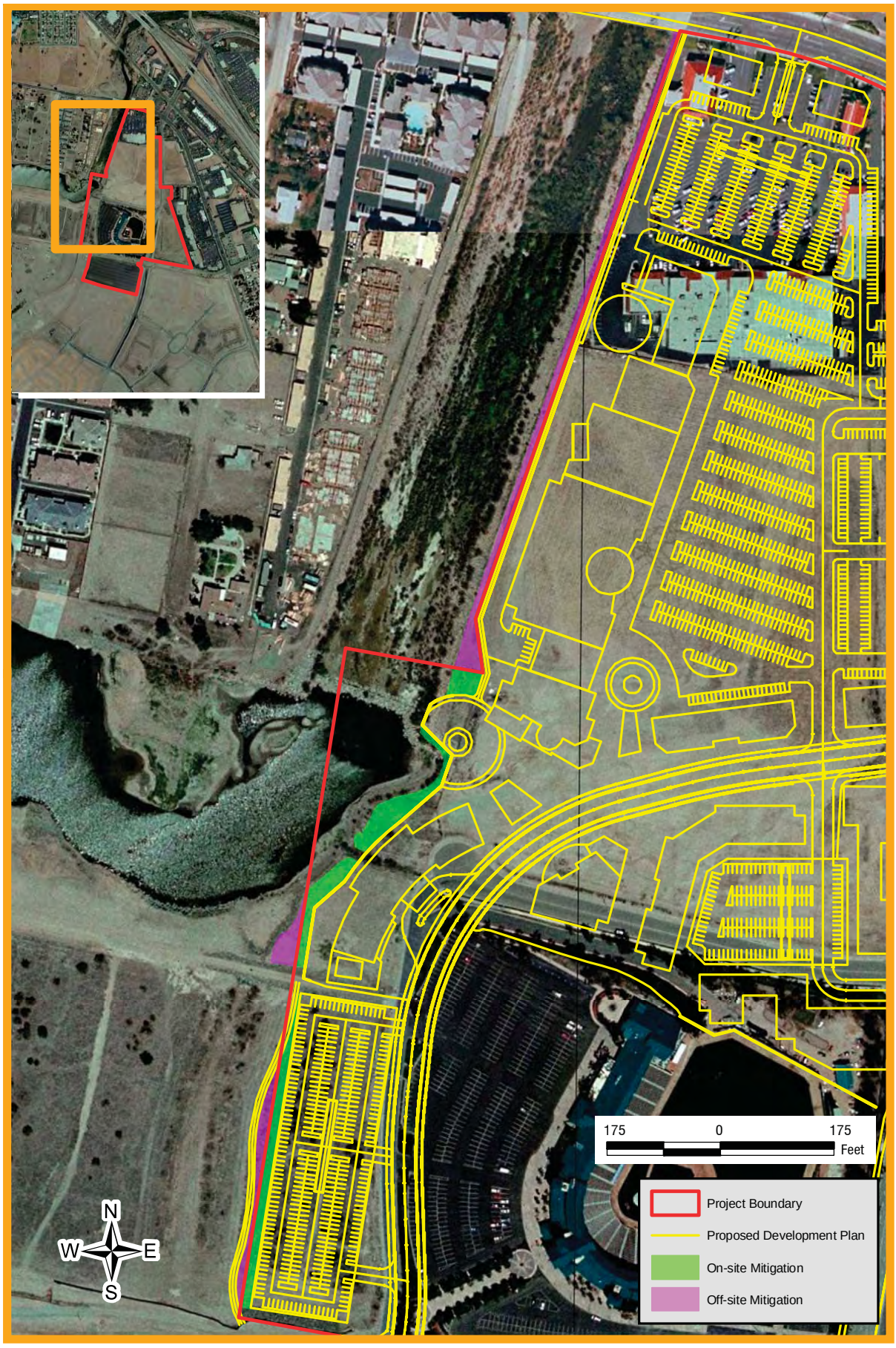
Sensitive Wildlife Species

DSP-BIO-3 Due to the presence of suitable habitat onsite for the western burrowing owl, a qualified biologist shall conduct pre-construction focused species surveys within 30 days prior to any ground-disturbing activities at the project site where suitable habitat is present. If burrowing owls are determined to occupy the project site during pre-construction surveys, CDFG shall be consulted and a passive relocation program shall be undertaken to relocate owls to an area outside the impact zone. The relocation shall be conducted following accepted protocols and would occur outside of the breeding season for the burrowing owl. Existing burrows shall be destroyed once they are vacated.

Riparian Habitat

DSP-BIO-4 Prior to issuance of a grading permit(s) for areas within the Diamond Specific Plan that contain riparian/riverine habitat, the applicant shall implement one or more of the following measures to mitigate for 0.33 acre of riparian/riverine habitat at a 1:1 ratio:

- Off-site replacement of USACE/RWQCB jurisdictional "waters of the U.S.", "waters of the State" and wetlands at no less than a 1:1 replacement to impact ratio, or as required by the agency. Off-site replacement shall include the purchase of mitigation credits at an agency-approved off-site mitigation bank or payment into an in-lieu fee agreement (i.e., San Jacinto River invasive removal project through Santa Ana Watershed Authority).
- Off-site replacement of CDFG jurisdictional streambed and associated riparian habitat at no less than a 1:1 replacement to impact ratio, or as required by the agency. Off-site replacement shall include the purchase of mitigation credits at an agency-approved off-site mitigation bank or payment into an in-lieu fee agreement (i.e., San Jacinto River invasive removal project through Santa Ana Watershed Authority).



Source: PCR, 2009 | G:\0105701LKELS\101221_DIAMOND\graphics\ai\Smooth_tarplant_11242009.ai | Last Updated : 02-10-10

Smooth Tarplant Mitigation Area

FIGURE 4.3-7

Source: PCR, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\ai\Little Mousetail Mitigation Area.ai| Last Updated : 01-26-2010

HDR
ONE COMPANY | *Many Solutions*

Little Mousetail Mitigation Area

FIGURE 4.3-8

Diamond Specific Plan | City of Lake Elsinore | Environmental Impact Report

Jurisdictional Waters

DSP-BIO-5 Prior to issuance of a grading permit for development within USACE and CDFG jurisdiction (depicted on Figure 4.3-5), the applicant shall implement one or more of the following measures, subject to USACE and CDFG approval through the Section 404 and Section 1600 Streambed Alteration Agreement permitting process:

- Purchase of credits into an agency-approved off-site mitigation bank or in-lieu fee program (e.g., San Jacinto River invasive removal project through the Santa Ana Watershed Authority) at a mitigation ratio of 0.25:1.
- Conserve land (off-site) within the same jurisdictional elevation (i.e., below 1265' in elevation) within the Back Basin at a minimum mitigation ratio of 0.25:1.
- Tamarisk removal from City-owned lands within the Back Basin at a minimum mitigation ratio of 0.25:1.
- Invasive species removal from areas within the Back Basin within the CDFG 1265' jurisdictional elevation of Lake Elsinore at a minimum mitigation ratio of 0.25:1.

Wildlife Movement (Migratory Birds)

DSP-BIO-6 The Applicant shall be responsible for implementing mitigation to reduce impacts to migratory and/or nesting bird species to below a level of significance through one of two ways: (1) Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14) to avoid potential impacts to nesting birds. This will ensure that no active nests will be disturbed and that habitat removal could proceed rapidly; (2) Any construction activities that occur during the nesting season (February 15 to August 31) shall require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) will be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor to minimize impacts.

Ordinances

DSP-BIO-7 To reduce impacts to the Stephen's kangaroo rat, the project shall pay Riverside County SKR Habitat Conservation Plan Fees of $500 per gross acre to reduce impacts as established by Riverside County Ordinance 663.The mitigation fee shall be required prior to the issuance of a grading permit. If a deferral agreement instrument is recorded by the Applicant, the fee may be deferred to the issuance of the first building permit within the development. Fee amounts are determined by Riverside County Transportation and Land Management Agency (TLMA) Building & Safety and Planning Land Use staff and can be paid at any TLMA Permit Assistance Center.

MSHCP Consistency

The Diamond Specific Plan is adjacent to a Preservation Area within the 770 Back Basin Plan. According to the MSHCP, noise impacts must be maintained at ambient noise levels or residential noise levels,

whichever is higher. To address the short-term impacts associated with construction and the potential inconsistency of commercial uses adjacent to wildlife areas the following measures shall be incorporated:

DSP-BIO-8 Prior to the commencement of construction activity, a temporary sound wall shall be erected adjacent to construction between the Diamond Specific Plan's development footprint and the Preservation Areas to ensure that wildlife are not subject to noise that would exceed residential noise standards (65 dBA) or ambient noise levels (whichever is higher). Once construction is completed, the temporary sound wall shall be removed.

DSP-BIO-9 Loading docks adjacent to the Preservation Areas shall be designed and operated to maintain noise levels at 65 dBA or ambient noise levels (whichever is higher).

4.3.5 Conclusion

Sensitive Plant Species

Because smooth tarplant is a Riparian/Riverine and Criteria Area Species, the MSHCP requires that 90 percent of those portions of the property that provide for long-term conservation value for the identified species shall be avoided or, if the 90 percent threshold cannot be met, a DBESP is required. DSP-BIO-1 requires the Diamond Specific Plan mitigate on- and off-site, placing the smooth tarplant mitigation areas adjacent to the San Jacinto River and Lake Elsinore, thus consolidating resources to be conserved whereby long-term protection is facilitated. Because the smooth tarplant on-site has survived continual discing and disturbance, this species has demonstrated that it is durable, thus the successful translocation of smooth tarplant is anticipated. Pursuant to DSP-BIO-1, a transplantation plan shall be prepared to outline implementation of the proposed mitigation and outline the ultimate success criteria of the plan. In addition, mitigation areas will be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for their long-term preservation. Because 90 percent of the smooth tarplant will be mitigated (1.35 acres or 90 percent of the existing population) and preserved in perpetuity, the conservation objectives for this species will be met and exceeded with implementation of the proposed mitigation measures. The proposed smooth tarplant mitigation areas will preserve contiguous populations of smooth tarplant adjacent to the San Jacinto River and Lake Elsinore. Preservation of the smooth tarplant within the mitigation area will ensure that continual discing and disturbance no longer impact these populations, as well as preserving the biodiversity functions and values of this sensitive plant species. In addition, weeding of the mitigation area to get the smooth tarplant populations established will improve the habitat for this sensitive plant species from the ruderal (i.e., weedy) habitat where it currently exists. Thus, the improved habitat conditions would have higher functions and values for this species than currently exists.

Mitigation Measure DSP-BIO-2 would ensure the conservation of 100 percent of the existing little mousetail population resulting in 100 little mousetail plants. In addition, mitigation areas will be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for their long-term preservation. Because 100 percent of the little mousetail will be mitigated and preserved in perpetuity, the conservation objectives for this species will be met with implementation of the DSP-BIO-2. Preservation of the little mousetail within the mitigation area will improve habitat quality from the ruderal (i.e., weedy) habitat where it currently exists, reduce competition with non-native species, and ensure that continual discing and disturbance no longer impact these populations. In addition, the little mousetail mitigation will preserve the biodiversity functions and values of this sensitive plant species. Thus, the improved habitat conditions would have higher functions and values for this species than those that currently exist.

Sensitive Wildlife Species

Pre-construction surveys and appropriate measures during construction for burrowing owl, should they be found as required in DSP-BIO-3 would reduce impacts to the burrowing owl to below a level of significance.

Riparian Habitat

Mitigation measure DSP-BIO-4 would reduce adverse impacts to riparian/riverine habitats to less than significant. Off-site mitigation for impacts to Riparian/Riverine resources would ensure mitigation within areas that are contiguous and will be maintained and preserved in perpetuity.

Jurisdictional Waters

DSP-BIO-5 requires off-site mitigation to reduce the Diamond Specific Plan's impacts to jurisdictional waters to less than significant. This mitigation will be subject to USACE and CDFG approval through the permitting process.

Wildlife Movement (Migratory Birds)

Mitigation measures DSP-BIO-6 would reduce adverse impacts to migratory wildlife species to less than significant. Impacts to migratory and/or nesting bird species, including raptor and songbirds, would be mitigated to below a level of significance through the appropriate timing of vegetation removal and construction activities. Surveying and avoidance of nests shall further reduce adverse effects.

Ordinances

The Diamond Specific Plan falls within the Stephen's Kangaroo Rat Habitat Conservation Plan. Payment of fees to the conservation plan as outlined in DSP-BIO-7 would reduce the potential for impacts to Stephen's Kangaroo Rat to below a level of significance.

MSHCP Consistency

Mitigation measures DSP-BIO-8 and DSP-BIO-9 would ensure that the potential for noise impacts associated with construction and operation of the Diamond Specific Plan on the adjacent preservation area would reduce urban/wildland interface impacts to below a level of significance. With incorporation of DSP-BIO-1 through DSP-BIO-9 and the project design features outlined in Section 4.3.1.1, the Diamond Specific Plan would be consistent with the MSHCP.

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4.4 CULTURAL RESOURCES

The following documents were used in the preparation of this section and unless confidential are included in Appendices D.1, D.2, and D.3, respectively:

> *Archaeological Assessment for the Diamond Specific Plan Project, Riverside County, California.* Prepared by McKeehan Environmental Consultants. May 2009.
>
> *Phase II Archaeological Test Excavation and Evaluation for the Diamond Specific Plan Project, Riverside County, California.* Prepared by McKeehan Environmental Consultants. February 2010. (Confidential)
>
> *Paleontologic Survey and Assessment for the Diamond Specific Plan Project, Riverside County, California.* Prepared by McKeehan Environmental Consultants. May 2009.

4.4.1 Environmental Setting

Cultural resources are places, structures, or objects that are important for scientific, historic, and/or religious reasons to cultures, communities, groups, or individuals. Cultural resources include historic and prehistoric archaeological sites, architectural remains, engineering structures, and artifacts that provide evidence of past human activity. They also include places, resources, or items of importance in the traditions of societies and religions.

Paleontological resources are any remains, traces, or imprints of a plant or animal that have been preserved in the Earth's crust since some past geologic time. Paleontological resources include invertebrate fossils, microfossils, petrified wood, plants, tract, and vertebrate fossils.

The historical/archaeological resources record search conducted by McKeehan Environmental Consultants revealed that twenty-two cultural resources studies have been conducted within the vicinity of the Diamond Specific Plan, five of these studies involved the project area itself. Five additional studies provide an overview of cultural resources in the general project vicinity. One of the cultural resources identified is located within the boundary of the project area and is discussed below under Archaeological Resources.

Historical Resources

The records search and on-site field survey did not identify previously recorded historic sites on the Diamond Specific Plan site. The closest recorded historic archaeological site is the Camp Haan Barracks and associated buildings located 0.5 mile from the project site. The barracks are currently used as an American Legion Hall. Located 0.9 miles from the project site is a residence from 1924. The records search identified nineteen more archaeological resources located within a one mile radius of the Diamond Specific Plan. There are no National Register, California Register, California Points of Historical Interest, or California State Historic Landmarks on or within the project area.

Archaeological Resources

The records search and on-site field survey identified one previously recorded prehistoric site location on the project site. The prehistoric site, designated CA-RIV-4042, is located within the proposed Diamond Specific Plan Planning Area 2.

The field survey conducted in 2008 confirmed the general nature and boundaries of CA-RIV-4042 as it was recorded in 1990, however some lithic materials were re-identified and groundstone was not observed in 2008.The surficial expression of CA-RIV-4042 indicates that it was utilized as a lithic resource gathering and reduction site with at least temporary or intermittent occupation. The soil is cobbled and the site is slightly higher in elevation than that of the surrounding landscape except for the fanglomerate of pebbles, gravel, cobbles and gravel described above and the commercially developed land immediately to the north. It is possible that the site originally extended northward but has been obscured by development.

In 1987, significant archaeological resources were found approximately one mile from the project site at CA-RIV-2798/H. Extensive data recovery excavations conducted were conducted there in 1992 and published in 1997. McKeehan Environmental Consultants suspected that similar conditions, e.g., soil type, adjacency to the lake, etc., existed at the location where CA-RIV-4042 was identified and therefore completed further research. Upon completion of this research, McKeehan Environmental Consultants concluded the micro-environments would have been quite different and thus the project site may contain archaeological resources with cultural adaptations and periods of occupation other than those at CA-RIV-2798/H. Letters received during Senate Bill (SB) 18 consultation from both the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians expressed concern that the project site may contain significant cultural resources. Both Tribes have identified the site as being within their Tribal Use Area although the sacred lands file search was negative.

As a result, McKeehan Environmental Consultants conducted a Phase II assessment consisting of a series of test trenches and excavation units in July 2009. The results of this Phase II assessment are discussed below.

Paleontological Resources

A records and literature search (McLeod 2009) was conducted at the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (abbreviated LACM). The project area was field inspected for surficial paleontological resources by Mark A. Roeder, Riverside County recognized paleontologist, with Judy McKeehan on January 14 and again on May 8, 2009, to observe the geomorphology after obtaining the records search results.

While nothing was found within the boundaries on the project site, the records search revealed a fossil horse specimen was found northeast of the property in the vicinity of the Railroad Canyon Reservoir in similar sediments that are present at the project site. Additionally, a fossil camel specimen was found between the current Lake Elsinore margin and the San Jacinto River drainage in similar sediments to those present at the project site. None of these specimens were found within a one-mile radius to the project.

The Paleontologic Survey and Assessment for the project site determined the rock units present within the project boundaries to be highly sensitive.

4.4.2 Cultural Setting

Ethnography

The project site is situated within the traditional boundaries of the Luiseño Indians, a Takic-speaking people whose territory extended from the northern half of San Diego County and western edge of

Riverside County. Along the coast their territory extended from Agua Hedionda Creek northward to Aliso Creek, and inland to the Palomar Mountains at the south and east of Santiago Peak towards the north. Their neighbors were the Cahuilla to the east and the Juaneño (Acjachemen) to the west, who spoke a Luiseño dialect.

Luiseño villages were generally situated near reliable sources of water to facilitate daily leaching of milled acorn flour, and to provide potable water. The Luiseño resided in permanent villages with 50-400 people, but during certain seasons inhabited camps that included many fewer people. Village social structure revolved around lineages and clans. Smaller villages generally included a single lineage, whereas larger villages were clan-centered with people from multiple lineages. Each clan/village owned a resource territory that was politically independent, but maintained ties to other nearby clans through economic, religious, and social networks.

History

The Native American historic period in Riverside County is divided into three periods, beginning with the first Spanish land expedition through the region in 1769.

Spanish Period, 1769- 1822

The Spanish Period is represented by exploration of the region and establishment of Spanish settlements and missions in Alta California. The introduction of livestock, agricultural goods, and European architecture and construction techniques was also notable of this period. Spanish influence continued through the 1930s due to the mission system.

Mexican Period, 1822-1848

After the Mexican Revolution (1810-1821) against the Spanish crown, all Spanish holdings in North America (including both Alta and Baja California) became part of the new Mexican republic. With the onset of the Mexican Period, an era of extensive land grants was begun, in contrast to the Spanish colonization through missions and presidios. Most of the land grants to Mexican citizens in California (Californios) were in the interior, granted to increase the population away from the more settled coastal areas where the Spanish had concentrated their settlements. The Mexican Period is also marked by exploration by American fur trappers west of the Sierra Nevada Mountains.

American Period, 1848- Present

With the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, California became a territory of the United States. The discovery of gold in 1848 at Sutter's Mill near Sacramento and the resulting Gold Rush era influenced the history of the state and the nation. Thousands of settlers and immigrants poured into the state, particularly after the completion of the transcontinental railroad in 1869. Largely as a result of the Gold Rush, California became the 31st state in 1850. By 1853, the population of the state exceeded 300,000 and in 1854, Sacramento became the state capital.

Known as *Paiakche* to the Luiseño and *Laguna Grande* to the Spanish and Mexicans, the land that eventually came to be the City of Lake Elsinore was acquired in 1883 in a business partnership. Franklin Heald, Donald Graham, and William Collier purchased the La Laguna Land and the town of Elsinore was established and set out to attract new residents by exploiting the curing properties of the hot mineral spring centrally located within the town. By the late 1880s, Elsinore had a population of approximately

2,000, with two banks, two hotels, two bathhouses, a water supply system, a schoolhouse, three churches, and a rail connection.

4.4.2.1 Methodology and Results

Records Search

An historical/archaeological resources records search was conducted by the Eastern Information Center (EIC), University of California, Riverside. Previous historical/archaeological investigations were reviewed to determine if any known archaeological sites, historic structure locations, or other cultural resources are present on or adjacent to the Diamond Specific Plan site.

Field Survey

Judy McKeehan and Mark Roeder of McKeehan Environmental Consultants conducted the cultural resources intensive field survey of the property on January 14, 2009, with a follow up survey of the geomorphology (land forms) on May 8, 2009.

During the initial survey, the archaeological site CA-Riv-4042, which was recorded and submitted to the Eastern Information Center, California Historical Resources Information System on September 4, 1990, was relocated and assessed for accuracy and current condition.

Lithic scatter artifacts observed during the survey were pin-flagged and mapped using a hand-held Garmin GPS. The site boundaries were re-established. Photographs were taken before removing the pin flags.

Phase II Excavations

In July 2009, McKeehan Environmental Consultants conducted a Phase II Sub-Surface Evaluation to further explore the CA-RIV-4042 archaeological site. Phase II included a series of test trenches surrounding the site and hand excavation of 1 x 1 meter units. Large-scale surface survey, mapping and artifact collection were also conducted.

The purpose of the test trenches was to confirm the site boundaries and to determine the nature and depth of alluvial sediments. No artifacts or features were found during observation and partial screening of the trenched soil. However, silt was between 3 and 6 feet in depth below surface, and fine-grained sand extended to a depth of about 13 feet.

The 1 x1 meter units determined that the density of cultural material was distributed between 10 and 80 centimeters below the surface. Lithics and faunal bone were recovered.

Both the Pechanga and Soboba Tribes of Luiseño Indians had Tribal Monitors onsite during the Phase II.

Lithics

Tool Type and Manufacture

The site is composed of mainly two lithic categories: (1) groundstone and tools for shaping groundstone; and (2) flaked cutting and scraping tools, along with debitage from secondary shaping and resharpening of these tools. Materials used to make these tools were almost exclusively locally obtainable and

consisted of granitics, metavolcanics and quartzites for the groundstone category. Finer grained metavolcanics and quartzite, along with cherts and quartz comprised the flaked stone category. Hard hammer technique dominated tool manufacture, although flake type indicates that soft hammer was sometimes utilized. The only exceptions to the use of local materials is found in a small amount (16% of total chert) of Piedra de Lumbre chert from west of the Santa Ana Mountains in the vicinity of Camp Pendleton, and two tiny obsidian flakes. The obsidian was sourced using XRF analysis and found to originate from the Sugarloaf and West Sugarloaf Mountains about 240 miles to the north of the site. Obsidian hydration was also performed. Hydration rates for various obsidian sources in the area vary and are not well documented. However, according to recent research, markers on the West Sugarloaf sample indicate that the hydration rate for this particular obsidian may correlate to a date of about 2,600 years ago. The second sample includes two separate measurements, indicating that the tool from which it was removed had been resharpened for use at a much later date.

Faunal Bone

The faunal material recovered substantiates hunting and food consumption as a major function of the site. Animals typically used for food, such as rabbit (69%), deer (7%), ducks/birds (2%), and rodents (21%) were recovered, with 18 percent bearing evidence of some type of heat altering.

Site Function and Age

The highest density of subsurface lithics occurred at the 40 to 60 centimeter level depth. The only indications for the time of occupation of the site are the millingstone-type tools, lack of later period artifacts and the date derived from the obsidian hydration rind for the West Sugarloaf obsidian flake. These indicate a date of about 2600 B.P. and earlier.

That the occupation of this site was highly sedentary is indicated through the lithic evidence by the manufacture and utilization of large amounts of groundstone and cutting tools, and the fact that the groundstone was heavily worked, then recycled, often as hearth material.

The very small amount of non-local materials may indicate that little long distance trade occurred.

Tribal Consultation

The Diamond Specific Plan is not located on Native American reservation land. A record search of the Sacred Lands Files of the Native American Heritage Commission (NAHC) did not identify Native American-registered cultural resources located on the project site.

The project includes a Specific Plan Amendment and Specific Plan resulting in the need for Senate Bill 18 Tribal consultation. The City has conducted extensive consultation with the Tribes on this project and has a long history of working with the Tribes on many other projects. Specifically for this project, the City sent a letter to the NAHC requesting a list of Native American individuals who may have knowledge of cultural resources in the project area. Letters were then sent to the Tribes included on the NAHC response on February 19, 2009, inviting Tribes to request consultation. Letters were received during SB 18 consultation from both the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians; both Tribes expressed concern that the Diamond Specific Plan site may contain significant cultural resources and identified the site as being within their Tribal Use Area.

The City consulted with the Soboba Tribe on July 23, 2009, at a meeting in Lake Elsinore to review their concerns about the archaeological site located within the project site. The City also consulted with the Pechanga Tribe via e-mails, telephone calls, and a meeting on August 26, 2009. Based on concerns raised by the Tribes regarding the potential for cultural significance, the City requested that a Phase II subsurface evaluation be conducted. Tribal monitors from both Tribes were on site during the Phase II investigation. Following the Phase II, the City provided both Tribes with draft mitigation measures to review and provide early comment. While both Tribes agree on the cultural significance of the site, they differ in their preferences for the disposition of artifacts once uncovered and with regards to which Tribe will monitor the site during project grading pursuant to the mitigation measures set forth in Section 4.4.5. The City has attempted to schedule a joint meeting with both Tribes present to come to resolution regarding the mitigation measures; however, the Tribes expressed preference for the continuation of individual consultation. The City has made a good faith attempt to find a mutually acceptable resolution of these differences.

Consultation, pursuant to Government Code §65352.3 and §65352.4, should be considered concluded at the point in which:

- The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- Either the local government or Tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning appropriate measures of preservation or mitigation.

The City finds that mutual agreement cannot be reached concerning mitigation but has made a good faith effort to address the Tribes' concerns. All Tribes included on the NAHC list, including the Pechanga and Soboba Tribes, will receive a copy of this Draft Environmental Impact Report (EIR) for review and comment.

4.4.3 Project Impacts

4.4.3.1 Thresholds of Significance

Based on *California Environmental Quality Act* (*CEQA) State Guidelines* Appendix G, a significant cultural resources impact would be identified if the project is determined to:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature or;
- Disturb any human remains, including those interred outside of formal cemeteries.

CEQA requires that historic and archaeological resources be evaluated for local significance and for the California Register of Historical Resources. According to Section 15064.5(a) (3) (A-D) in the revised *CEQA Guidelines* (Governor's Office of Planning and Research 2009), a resource is considered *historically significant* if it meets at least one of the following criteria:

A. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. The resource is associated with the lives of persons important in our past;

C. The resource embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and/or

D. The resource has yielded, or may be likely to yield, information important in prehistory or history.

4.4.3.2 Environmental Impacts

Historical Resources

Due to the absence of significant historic resources on-site, no further historical assessments would be required for future development projects within the project site. Furthermore, since no additional historic resources were located during the records search and field survey of the project site; it is unlikely that undiscovered historic resources exist on-site. The Diamond Specific Plan would not cause a substantial adverse change in the significance of a historical resource**.** Thus, development of the Diamond Specific Plan would result in a less than significant impact to historic resources.

Archaeological Resources

CEQA regulations and agreements with the Tribes stipulate cultural resources should not be impacted during development of the project. Due to the identification of CA-RIV-4042 and the concern of the Tribes, a Phase II sub-surface evaluation was conducted. Although no ceremonial or sacred artifacts were uncovered during the Phase II, a substantial amount of cultural resource artifacts were identified during the Phase II. Due to the discovery of archaeological artifacts, the potential may exist for the discovery of additional resources throughout the site during ground disturbance. Because the research potential of the site was not exhausted during Phase II excavations, Section 15064.5(a) (3) D) in the revised *CEQA Guidelines* (Governor's Office of Planning and Research 2009) applies. Therefore, a potentially significant impact is identified and mitigation is required.

Human Remains

Although no human remains were identified, the potential, however unlikely, always exists for discovery once ground disturbance occurs during construction. Therefore, a potentially significant impact is identified and mitigation required.

Paleontological Resources

The results of the literature review and field survey indicate that construction and development of the proposed Diamond Specific Plan has a potential to adversely impact undiscovered significant fossil resources through ground disturbance; therefore, a significant impact has been identified for this issue area and mitigation is required.

4.4.4 Cumulative Impacts

The cumulative total of all related project development in the City of Lake Elsinore and in surrounding towns as identified in Table 3.5-1 and shown in Figure 3.5-1, creates the potential for additional impacts to historical, archaeological, and/or paleontological resources. In addition to the Diamond Specific Plan's potential impacts to previously unidentified historic and/or cultural resources, a records search identified 19 archaeological resources sites within a one mile radius of the project site. With more development in the City and surrounding areas, there is an increased possibility of encountering historical, archaeological, and/or paleontological resources. However, mitigation measures would be implemented for the Diamond Specific Plan and other projects subject to CEQA. Through recordation and curation of resources to provide the public and historians the opportunity to review these resources in addition to State Law 21083.2 or 21084.1 and CEQA 15064.5 and 15126.4, the Diamond Specific Plan and other development in the area would not result in a cumulatively significant impact.

4.4.5 Environmental Mitigation Measures

DSP-CR-1 Prior to issuance of grading permit(s) for the Diamond Specific Plan, the project applicant shall retain an archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to a cultural resources evaluation.

DSP-CR-2 At least 30 days prior to seeking a grading permit, the project applicant shall contact the appropriate Tribe[1] to notify the Tribe of grading, excavation and the monitoring program, and to coordinate with the City of Lake Elsinore and the Tribe to develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources, the designation, responsibilities, and participation of Native American Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on the site.

DSP-CR-3 Prior to issuance of any grading permit, the project archaeologist shall file a pre-grading report with the City ~~and County (if required)~~ to document the proposed methodology for grading activity observation. Said methodology shall include the requirement for a qualified archaeological monitor to be present and to have the authority to stop and redirect grading activities. In accordance with the agreement required in DSP-CR-2, the archaeological monitor's authority to stop and redirect grading will be exercised in consultation with the appropriate Tribe in order to evaluate the significance of any archaeological resources discovered on the property. Tribal monitors shall be allowed to monitor all grading, excavation and groundbreaking activities, and shall also have the authority to stop and redirect grading activities in consultation with the project archaeologist.

DSP-CR-4 Prior to any grading at or near the vicinity of CA-RIV-4042 within proposed Planning Area 2, the Developer shall meet and confer with the appropriate Tribe to develop an appropriate controlled grading plan. The purpose of the controlled grading at and around

[1] It is anticipated that the Pechanga Tribe will be the "appropriate" Tribe due to its prior and extensive coordination with the City and project applicant in determining potentially significant impacts and appropriate mitigation measures and due to its demonstrated cultural affiliation with the project area.

the site is to afford the opportunity to determine whether any subsurface resources are associated with the site and if so, the significance of any such resources. All such controlled grading shall be monitored according to the provisions of the Agreement required in DSP-CR-2. Soil within archaeological site CA-RIV-4042 boundaries as recorded in the Phase II testing program and within a buffer zone of 50 feet surrounding the site shall be systematically removed utilizing a paddle-wheel scraper or other equipment approved by the project archaeologist and the Native American representative. Soil shall be removed across the entire site sequentially in individual layers not to exceed four inches at a time, unless specifically recommended otherwise by the project archaeologist and project Native American Tribal representative who shall supervise their respective monitors. Further, if subsurface resources are discovered at the site, the provisions of DSP-CR-8 shall apply.

DSP-CR-5 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the NAHC shall be contacted within a reasonable timeframe. Subsequently, the NAHC shall identify the "most likely descendant." The most likely descendant shall then make recommendations, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

DSP-CR-6 The landowner shall relinquish ownership of all cultural resources, including sacred items, burial goods and all archaeological artifacts that are found on the project area to the appropriate Tribe for proper treatment and disposition. Said disposition shall entail reburial in area(s) which will not be subject to further disturbance and which have been determined to be acceptable by the appropriate Tribe.

DSP-CR-7 All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.

DSP-CR-8 If inadvertent discoveries of subsurface archaeological/cultural resources are made during grading, the Developer, the project archaeologist, and the appropriate Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. If the Developer and the Tribe cannot agree on the significance or the mitigation for such resources, these issues will be presented to the Community Development Director (CDD) for decision. The CDD shall make the determination based on the provisions of CEQA with respect to archaeological resources and shall take into account the religious beliefs, customs, and practices of the appropriate Tribe. Notwithstanding any other rights available under the law, the decision of the CDD shall be appealable to the City of Lake Elsinore Planning Commission.

DSP-CR-9 Prior to issuance of a grading permit(s), the applicant shall retain a qualified paleontological monitor. The paleontological monitor shall be responsible for the following:

- Monitoring all grading that includes initial cutting into any area of the project site. Paleontological monitoring shall occur only for those undisturbed sediments wherein fossil plant or animal remains are found with no associated evidence of human activity or any archaeological context.
- If any paleontological resources are identified during these activities, the paleontologist shall temporarily divert construction until the significance of the resources is ascertained.
- Paleontological monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays, and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if the potentially fossiliferous units described above are not present or if the fossiliferous units present are determined by a qualified paleontological monitor to have low potential to contain fossil resources.
- All recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.
- Specimens shall be identified and curated into an established, accredited, professional museum repository with permanent retrievable storage. The paleontologist shall have a written repository agreement in hand prior to the initiation of mitigation activities.
- A report of findings with an appended itemized inventory of identified specimens shall be prepared. The report shall address archaeological and paleontological items. This report shall incorporate the full results of the literature review, as well as the full results of the recommended review of the records of the Eastern Information Center at the University of California, Riverside. The report shall be submitted to the City of Lake Elsinore prior to the issuance of the Certificate of Occupancy.

4.4.6 Conclusion

The Diamond Specific Plan would not significantly impact any historical resource. A records search and subsequent field surveys determined that a previously recorded prehistoric site location within the project site does represent significant potential for additional cultural resources. The possibility remains that previously unidentified archaeological resources and paleontological resources could be significantly impacted during project grading. Through recordation and curation of resources to provide the public and historians the opportunity to review potentially discovered resources, adherence to state laws, and incorporation of mitigation measures DSP-CR-1 through DSP-CR-9 would reduce significant impacts to archaeological and paleontological resources to below a level of significance. If human remains are encountered, DSP-CR-5 would ensure that the appropriate actions are taken to notify the "most likely descendent" and that appropriate treatment and disposition occurs, reducing the impact to below a level of significant. Compliance with these mitigation measures would ensure that impacts to cultural resources resulting from the proposed project would be less than significant.

4.5 GEOLOGY/SOILS

Information from the following document was used in the preparation of this section and is included in Appendix E of this Draft Environmental Impact Report (EIR):

> *Preliminary Geologic and Geotechnical Investigation for the Proposed Diamond Development Project, City of Lake Elsinore, California. Prepared by Neblett & Associates Inc. November 13, 2008.*

4.5.1 Environmental Setting

Regional and Site Geology

The proposed project site is located in the northwestern portion of the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges Province is characterized by northwest-southeast trending mountain ranges and intervening basins and valleys. The Province extends from the Transverse Ranges Geomorphic Province and the Los Angeles Basin to the tip of Baja California. The Province varies in width and is bound by the Pacific Ocean to the west, the Gulf of California to the south, and the Colorado Desert Province to the east. The area is also situated within the northwest-trending Elsinore Fault Zone (EFZ). The EFZ separates the relatively stable Perris structural block in the northeast from the Lake Elsinore Mountains on the southwest. The EFZ is generally composed of several sub-parallel, right-lateral strike-slip faults within a one to four-kilometer (km) wide zone. A trough is formed by the zone with low hills on the northeast side and steep Elsinore Mountains on the southwest. The EFZ consists of the Glen Ivy North Fault Zone along the north of the lake, and the Wildomar and Willard faults along the south shore.

The basement bedrock is composed mostly of granodiorite of the Southern California batholith. Overlain on the basement complex are medium to coarse-grained, granitic and non-marine sandstone conglomerates, siltstones and beds of clay of the Pauba formation. This formation is overlain by floodplain deposits, which in turn is overlain with clays, silts and fine sands formed in the sink and terminus of the San Jacinto River. The deposits are of Holocene age and lacustrine in origin and are relatively poorly consolidated at the surface although more consolidated at depth.

4.5.1.1 Applicable Plans

Additionally, all earthwork and grading at the project site shall be performed in accordance with all applicable building code requirements, the California Occupational Safety and Health Administration (Cal-OSHA), and the Grading Code of the City of Lake Elsinore (Section 17.10.070 of the Zoning Code).

4.5.1.2 Existing Conditions

Soils

Based on field mapping, subsurface excavations, and a review of existing literature and published geologic maps, the project site is underlain by younger alluvial fan deposits to at least fifty feet below grade, young wash deposits, and very young lacustrine deposits. On portions of the site there is undocumented artificial fill generated from construction of the Lake Elsinore Stadium, certified fill of near-source origin from grading of the Mission Trail Plaza shopping center (the developed portion of the project site), certified fill by Pacific Soils from construction of the stadium and associated roadways, and

certified fill by Neblett & Associates, Inc from construction of the stadium parking lot as a part of the neighboring Summerly development.

Soils derived from the underlain material and bedrock on the project site include Grangeville loamy fine sand, Greenfield sandy loam (0 to 2 percent and 2 to 8 percent slopes), Hanford coarse sandy loam, Pachappa fine sandy loam, Ramona sandy loam, Soboba stony loamy sand, Waukena loamy fine sand (saline-alkali). These soils are discussed in more detail below. Figure 4.5-1 depicts the soils mapped on the project site.

Grangeville loamy fine sand (GoB), 0 to 5 percent slopes: The soils of the Grangeville series are developed in alluvium from granitic plains and have slopes from 0 to 15 percent. These soils occur on alluvial fans and flood plains. The soil is moderately drained, runoff is slow, and the potential for erosion is low.

Greenfield sandy loam (GyA), 0 to 2 percent slopes: Soils of the Greenfield series are well drained and have slopes of 0 to 25 percent. They are developed in alluvium of primarily granitic materials and occur on alluvial fans and terraces. Runoff is slow and the potential for an erosion hazard is low.

Greenfield sandy loam (GyC2), 2 to 8 percent slopes eroded: Soils of the Greenfield series are well drained and have slopes of 0 to 25 percent. They are developed in alluvium of primarily granitic materials and occur on alluvial fans and terraces. Runoff is slow to medium and the hazard of erosion is slight to moderate.

Hanford coarse sandy loam (HcC), 2 to 8 percent slopes: The Hanford series of soils are well- to excessively drained and slopes are from 0 to 15 percent. They are developed in alluvium made up of granitic materials and occur on alluvial fans. Runoff is slow to medium and the hazard for erosion is slight to moderate.

Pachappa fine sandy loam (PaC2), 2 to 8 percent slopes, eroded: The Pachappa soil series are well drained and have slopes from 0 to 8 percent. The soils are primarily developed in granitic alluvium and occur on alluvial fans. Runoff and the hazard for erosion are both moderate.

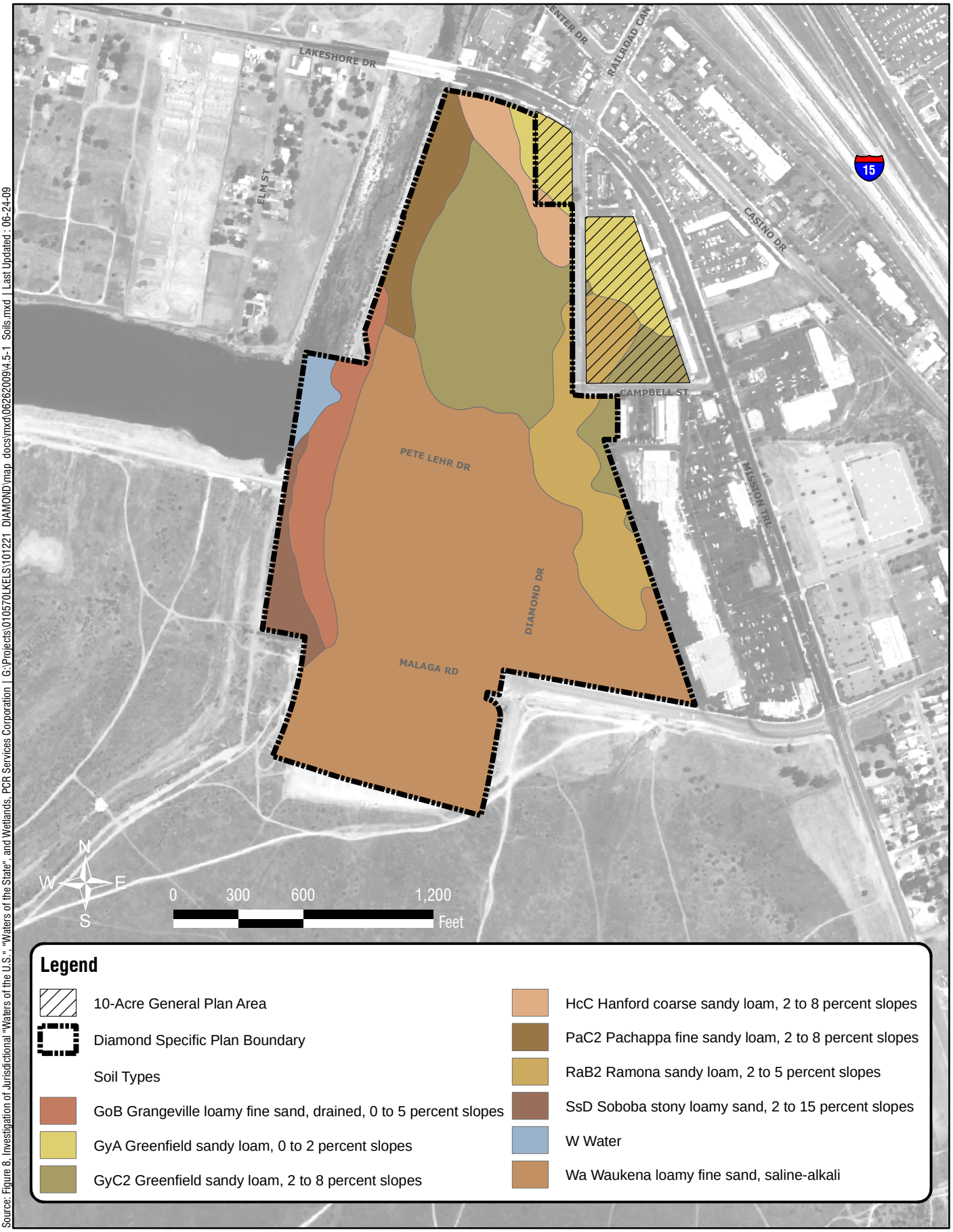
Ramona sandy loam (RaB2), 2 to 5 percent slopes, eroded: Soils of the Ramona series are well drained and slopes range from 0 to 25 percent. The soils are developed in alluvium consisting mainly of granitic materials and occur on alluvial fans and terraces. Runoff and the hazard for erosion are both moderate.

Soboba stony loamy sand (SsD), 2 to 15 percent slopes: Soils of the Soboba series are very well drained and have slopes of 2 to 25 percent. They occur on talus slopes and alluvial fans and develop from gravelly, cobbly or stony granitic materials. Runoff is slow and the potential for erosion is low.

Waukena loamy fine sand (Wa), saline-alkali: Soils of the Waukena series are moderately well drained with slopes of 0 to 2 percent. The soil is moderately saline-alkali. They occur in basins and on flood plains and develop in alluvium primarily from granitic materials. Runoff is slow and the potential for erosion is moderate.

Topography

Topography within the project site is relatively flat and primarily characterized by a consistent elevation. Elevations range from approximately 1,260 feet above mean sea level (AMSL) in the south and west portion of the property to approximately 1,275 feet AMSL in the north and east portion of the site. Figure 4.1-1 depicts the topography of the project site.



Source: Figure 8, Investigation of Jurisdictional "Waters of the U.S.", "Waters of the State", and Wetlands, PCR Services Corporation | G:\Projects\010570LKELS\101221 DIAMOND\mxd\062620094.5-1 Soils.mxd | Last Updated: 06-24-09

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Soils

FIGURE 4.5-1

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

Seismicity

The geologic structure of southern California is dominated by northwest-trending faults associated with the San Andreas system; therefore, the proposed project is in a seismically active region.

The Lake Elsinore area is located within the northwest-trending EFZ, which separates the relatively stable Perris structural block on the northeast from the Elsinore Mountains on the southwest. The EFZ consists of five major branches: the Wildomar Fault zone, the Willard Fault zone, the Wolf Valley Fault zone, the Glen Ivy North Fault and the Glen Ivy South Fault. Figure 4.5-2 depicts the active faults within the vicinity of the project site. The site is not situated within an Alquist-Priolo Earthquake Fault Zone or a Special Studies Zone. The project is approximately 1¾ miles southwest of the nearest Alquist-Priolo zoned fault. While faults are present in the general area of the project, these faults were found to be inactive, and not within the project site.

Liquefaction, the process by which saturated, unconsolidated soil or sand is converted into a suspension, can result from strong vibratory motions generated by earthquakes. Liquefaction is characterized by a build-up of water pressure in the affected soil layer to a point where a total loss of shear strength occurs, causing the soil to behave as a liquid. Liquefaction primarily occurs in loose, saturated, granular soils; while cohesive soils such as clays are generally not considered susceptible to soil liquefaction. The effects of liquefaction may become apparent at the ground surface as rapid settlement, lateral spreading, and/or sand boils. The historical high groundwater level is on the order of 25 feet below existing grades and exploratory drilling found groundwater between 36 feet and 40 feet below the surface. Investigation has shown a potential for soil liquefaction to occur. Subsurface materials are predominately dense to very dense silty sands and sands with occasional gravel, clayey silts, and gravelly sands. Minor zones of clayey silt and silty sand are present and present the potential for soil liquefaction to occur. These minor zones of soil liquefaction are present below depths on the order of 25 feet. The lack of relief at the project site indicates the site is relatively stable and has not been subject to earthquake-induced large-scale land sliding in the recent geologic past.

4.5.2 Project Impacts

4.5.2.1 Thresholds of Significance

Based on *CEQA Guidelines* Appendix G (VI), project impacts to geological resources are considered significant if any of the following occur:

a) Expose people or structures to potential substantive adverse effects, including the risk of loss, injury, or death involving:

   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (Refer to Division of Mines and Geology *Special Publication 42*)

   ii) Strong seismic ground shaking;

   iii) Seismic related ground failure, including liquefaction;

   iv) Landslides;

b) Result in substantial soil erosion or the loss of topsoil;

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (UBC) (1994), creating substantial risks to life or property; or

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

4.5.2.2 Environmental Impacts

Faults capable of generating earthquakes generally produce seismic hazards such as: (1) strong ground motion/shaking; (2) ground rupture; (3) liquefaction; and (4) landslides. Ground motion/shaking occurs when a fault ruptures deep underground, where the pressure is extremely high, resulting in an earthquake. Ground rupture occurs when a fault ruptures deep underground and movement along the fault propagates to the ground surface resulting in vertical and/or lateral displacement. Liquefaction and landslides are the result of ground motions where localized surface and subsurface ground unit conditions are susceptible to collapse or flow.

Rupture of Known Earthquake Fault Ground Shaking

The project site is not located on an active fault (Neblett & Associates 2008) and is not situated within an Alquist-Priolo Earthquake Fault Zone or a Special Studies Zone (Figure 4.5-2). Therefore, the possibility of damage due to ground rupture is considered low. The Diamond Specific Plan is located within the EFZ and is 1¾ miles from the nearest Alquist-Priolo Special Studies Zones of the California Division of Mines and Geology (CDMG). According to the Geologic and Geotechnical Investigation for the project, minor cracking of near-surface soils due to shaking from distant seismic events is not considered a significant hazard, although it is a possibility at any site located in California. The possibility of ground acceleration or shaking at the project site is similar to the Southern California region as a whole. Due to the site's proximity to the EFZ, an active fault system, the proposed development would likely experience moderate to occasionally high ground shaking, as well as some ground movement from other seismically active areas of the Southern California region. However, it is very unlikely the project site would experience fault related surface rupture. While the project site may be subject to ground shaking in the event of an earthquake, the standard geotechnical recommendations identified in the Preliminary Geologic and Geotechnical Investigation would provide adequate protection for the project to reduce seismic risk to an "acceptable level." The "acceptable level" of risk is defined by the California Code of Regulations (CCR) as "that level that provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project" (Section 3721[a]). These recommendations are also in accordance with the 1997 UBC, 2001 CBC and 2007 CBC requirements for resistance to seismic shaking. The UBC and CBC standards and grading specifications outlined in the technical report will establish building foundations appropriate for building in the seismically active area of Southern California. Because the project would implement standard UBC requirements and measures, as outlined in the Preliminary Geologic and Geotechnical Investigation for the proposed project, impacts related to a rupture of a known earthquake fault and strong seismic ground shaking would be reduced to less than significant levels.

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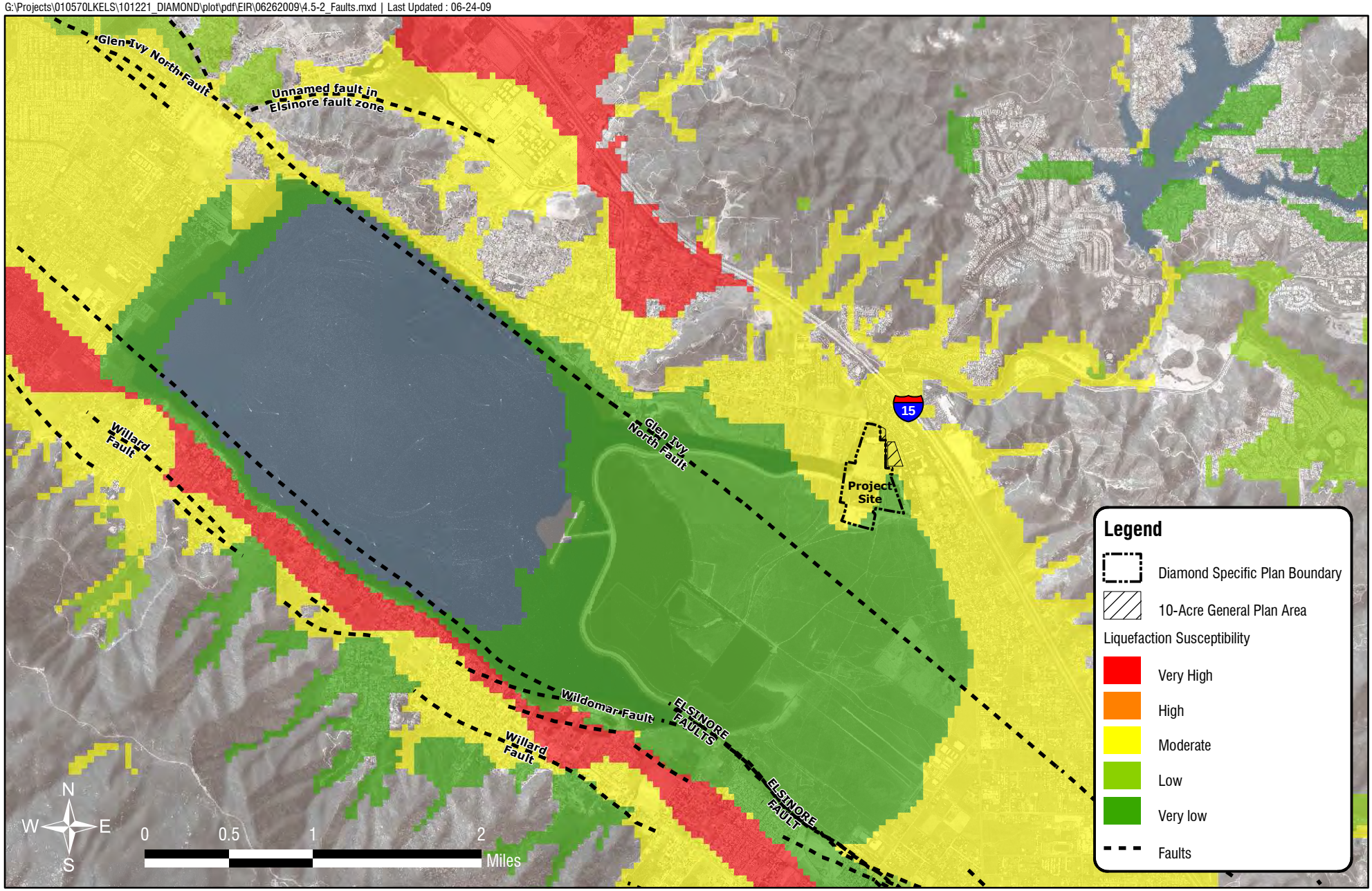


Faults

FIGURE 4.5-2

Liquefaction

The Geotechnical Report and the General Plan Update (2009) identifies the Diamond Specific Plan site as having a moderate to low potential for liquefaction to occur due to shallow groundwater, and the underlying soils. Figure 4.5-2 shows the areas of low and moderate liquefaction risk. Subsurface materials are predominately dense to very dense silty sands and sands with occasional gravel, clayey silts, and gravelly sands. Minor zones of clayey silt and silty sand are present and present the potential for soil liquefaction to occur. These minor zones of soil liquefaction are present below depths on the order of 25 feet. Given the relatively shallow groundwater level and areas of liquefiable material, there is a potential for adverse effects due to liquefaction. Because the existing soil foundation does not have a high potential for liquefaction, as specified in the Geologic and Geotechnical Investigation for the project, appropriate building foundations and/or improvement of the soils will reduce risk of liquefaction. Compliance with the recommendations outlined in the Preliminary Geologic and Geotechnical Investigation (Appendix E) for the proposed project will reduce impacts related to liquefaction to less than significant.

Landslides

Although many natural events have the potential to cause landslides, a slope is required for a landslide to occur. Observations and the lack of relief at the project site indicated the site is relatively stable in recent geologic history and has not been subject to earthquake-induced large scale land sliding (Geotechnical Report 2008). Site mapping, aerial photo analysis, and field exploration indicate that landslides do not exist on or adjacent to the site. Risk of landslides or earthquake-induced landslides will be further reduced by the general grading standards presented by the Preliminary Geologic and Geotechnical Investigation and UBC and CBC building standards. Furthermore, the area around the site is fairly level which reduces the potential for off-site landslides to occur and affect the project site. Because the existing risk for landslides is low and standard building procedure will reduce the risk further, there is a less than significant risk of landslides on the project site.

Erosion

Erosion of project site soils has the potential to decrease the stability of structures on the project site and to decrease water quality of nearby waterways. The soils found on the project site are primarily floodplain deposits and are relatively poorly consolidated near the surface. Given the relative density of the surface soils and the moderate erosion risk of each occurring soil, there is a moderate potential for erosion.

During construction, soil erosion shall be controlled and reduced to a less than significant impact through the implementation of a project-specific Erosion Control Plan and a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the California State Water Resources Control Board Order No. 92-08-DWQ, NPDES General Permit No. CAS000002. The SWPPP shall comply with Best Available Technology (BAT), and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate soil erosion from areas of construction activity. With implementation of the SWPPP, BAT and BCT, there will be a less than significant impact of erosion.

Expansive Soils

The geologic units located on the project site consist predominantly of dense to very dense silty sands and sands with occasional gravel, clayey silts, and gravelly sands. These soils are classified by the Soil

Survey of the Western Riverside Area as having a low to moderate potential for expansion. While surface soils on the site may have relatively lower levels of cohesion, the underling materials (consisting predominantly of bedrock) are composed of granodiorite of the Southern California batholithic. Furthermore, with the addition of compacted engineered fill to developed portions of the site, and compliance with CBC requirements, impacts from lateral spreading, liquefaction, subsidence, or collapse are not expected to occur. Therefore, less than significant impacts are identified for expansive soils.

Alternative Disposal

Water and wastewater service is to be provided by Elsinore Valley Municipal Water District (EVMWD). Wastewater service for the site will be provided by utilizing existing infrastructure within Malaga Road and Diamond Drive. Therefore, the project would not use septic tanks as an alternative waste water disposal system and no impact is identified for this issue area.

4.5.3 Cumulative Impacts

Potential impacts related to geologic, seismic, and soils hazards are all site specific. All cumulative development would be subject to similar requirements to those imposed and implemented on the proposed project site and would be required to adhere to applicable regulations, standards, and procedures. Therefore, the proposed project would not result in significant cumulative impacts in regards to geology and soils.

4.5.4 Environmental Mitigation Measures

With incorporation of standard geotechnical recommendations set forth in the Preliminary Geologic and Geotechnical Investigation and adherence to UBC and CBC requirements, all impacts would be less than significant. No mitigation is required.

4.5.5 Conclusion

The existing potential for liquefaction, landslides, and the effects of expansive soil were each identified as less than significant. The potential for erosion and ground shaking due to seismic activity were identified as moderate yet would be reduced to a less than significant impact by implementing UBC and CBC standards in addition to the building procedures included in the Geologic and Geotechnical Investigation. Project-related and cumulative impacts would be less than significant.

4.6 HAZARDS AND HAZARDOUS MATERIALS

The following documents were used in the preparation of this section and are included in their entirety in Appendices F.1, F.2, and F.3 of this Environmental Impact Report (EIR):

> *Phase I Environmental Site Assessment, Diamond Retail Center, East Lakeshore Drive, Lake Elsinore, Riverside County, California 92530.* Prepared by A/E West Consultants, Inc. March 26, 2008
>
> *Phase I Environmental Site Assessment Report, Undeveloped Parcels, Lake Elsinore, California 92530.* Prepared by LandAmerica Assessment Corporation. July 13, 2007.
>
> *Environmental Database Review for JIC-CP Diamond, LLC.* Prepared by A/E West Consultants Inc. July 14, 2009.

Several Phase I Environmental Site Assessments (ESAs) were prepared for the Diamond Specific Plan. The Phase I ESA for the Diamond Retail Center conducted in March 2008, covered the developed area directly south of Lakeshore Drive and along the Specific Plan border. In addition, a Phase I ESA for undeveloped parcels located throughout the Specific Plan site was conducted in July 2007. These Assessments both included site reconnaissance, limited observations of adjoining properties, a review of the historical usage of the property, and a review of relevant documentation provided by various public and private sources. Historical review included aerial photograph review, review of topographic maps, a previously conducted report for the property from 2005 and discussions with Ms. Tina Alexander (Representative from JIC-CP) and Mr. Bart Tucker (Property Manager, Jamboree Management). Regulatory information was also reviewed from federal, state, and local agencies through various electronic databases listing possible hazardous waste-generating facilities within and in the vicinity of the Diamond Specific Plan.

For parcels within the Diamond Specific Plan that are currently not owned by JIC-CP or are currently developed, a review of environmental databases was conducted in July 2009. These parcels were not subject to on-site observations.

The assessments were undertaken to evaluate the presence or likely existence of recognized environmental conditions or potential environmental issues which may not rise to the level of recognized environmental conditions.

4.6.1 Environmental Setting

Aerial photography has indicated that the Diamond Specific Plan area was historically used for agricultural production. In 1981, the parcels in the northern portion of the Diamond Specific Plan area were developed. At this point, the remainder of the site was no longer used for agriculture and remained vacant. In 1993, the Diamond Stadium was built on a portion of the site. The map and photographs show no other surficial evidence of on-site or adjacent-site improvements that could represent significant potential sources of petroleum contamination and/or hazardous waste.

Sanitary wastewater from existing on-site development is disposed of by the Elsinore Valley Municipal Water District (EVMWD). Based on review of historic use, there are no septic tanks present on-site.

According to Mr. Tucker, property manager for Jamboree Management which oversees the property, there are no underground storage tanks (USTs) or aboveground storage tanks (ASTs) on the Diamond Specific Plan site, with the exception of an above ground storage vessel located under the emergency generator utilized by the Lake Elsinore Family Health Center located at the northern portion of the Diamond Specific Plan in the Diamond Retail Center. There is an underground sump located at the southeast corner of the Diamond Specific Plan site, with two sewage ejector pumps. An abandoned cesspool is also located in the north east portion of the Diamond Specific Plan site. Although there were no active wells identified on the site, one vertical steel pipe 6 inches in diameter extends approximately 3 feet out of the ground and is located in the northern area of the site. The pipe was filled and appeared to be a former irrigation well.

A/E West Consultants conducted a review of the Environmental Data Resources, Inc. (EDR) database of federal, state, and local agency regulatory information and environmental data concerning the presence of USTs, hazardous waste generation, or hazardous material releases within a 2-mile radius of the Diamond Specific Plan site. The Diamond Specific Plan site was not identified as being located on any site designated by Federal Government Code Section 65962.5 to be a hazardous material site. There are no listings of permitted ASTs or USTs on the project site.

Table 4.6-1 lists the twelve sites that were listed on one or more of several environmental databases which pertain to underground storage tanks. The identified sites are within a 1-mile radius of the Diamond Specific Plan.

Surface Characteristics

Approximately 26.5 acres of the Diamond Specific Plan site is currently developed (approximately 30 percent) while the remaining 61 acres of the project site consists of vacant land. The developed portion of the Diamond Specific Plan includes the Diamond Stadium, a parking lot surrounding the stadium, and approximately 80,000 square feet (sf) of retail-commercial and office uses in the existing Lake Elsinore Valley Center (LEVC) along the Lakeshore Drive frontage. A minimally improved remote parking lot of approximately 12 acres is south of the stadium and is not included in the 27 acres of developed area.

Site visits were not conducted for the portions of the Diamond Specific Plan site that are currently developed or are not currently owned by the applicant. However, records searches were conducted for the entirety of the Diamond Specific Plan site.

Approximately 50-60 piles of soil were observed on the parcel of land at the southeast corner of the intersection of Diamond Drive and Pete Lahr Drive. No soil staining or odors were noted associated with the soil. The soil piles are associated with the grading of the stadium (in approximately 1994) and appear to be imported, rather than due to on-site grading activities.

The site exhibited no substantial superficial staining, or other evidence of onsite hazardous materials/waste or petroleum contamination. The site did not show evidence of USTs or ASTs or mining activity. The site did not display any active surface evidence of water wells or private sewage disposal systems.

Table 4.6-1. Hazardous Sites in the Vicinity of the Diamond Specific Plan

Environmental Databases[1]	Site	Location	Direction/ Distance	Status
RCRA-SQG, LUST, UST, SWEEPS UST, CHMIRS, FINDS, HAZNET	Arco Facility # 05346	250 Diamond Drive	0.15 miles north of the Diamond Specific Plan	Open-Remediation
RCRA-SQG, UST, CA FID UST, SWEEPS UST, FINDS, HAZNET	A and M Automotive	31760 Mission Trail Road	0.35 miles north of the Diamond Specific Plan	No violations
RCRA-SQG, UST, CA FID UST, SWEEPS UST, FINDS, HAZNET	Chevron Station 90802	31640 Mission Trail Road	0.35 miles north of the Diamond Specific Plan	Permitted Underground Storage Tank
LUST, UST, CA FID UST, HIST UST, SWEEPS UST, CHMIRS, HIST CORTESE, HAZNET	Mobil #18-991	31702 Mission Trail Road	0.27 miles north/ northeast of the Diamond Specific Plan	Open Remediation
LUST, HIST UST, SWEEPS UST, RCRA-NonGen, HIST CORTESE	Circle K #0807	32510 Mission Trail Road	0.59 miles southeast of the Diamond Specific Plan	Completed- Case Closed
LUST, HIST UST, HIST CORTESE	Arco #1042	265 Railroad Canyon Road	0.58 miles north/ northeast of the Diamond Specific Plan	Completed-Case Closed
UST, AST, FTTS, HIST FTTS, FINDS, HAZNET	Wal-Mart #2077	31700 Grape Street	0.45 miles east/northeast of the Diamond Specific Plan	Permitted Underground Storage Tank
LUST, UST, HAZNET	76 Station #5739	31805 Grape Street	0.5 miles north/northeast of the Diamond Specific Plan	Open Site Assessment
LUST	Arco #3067	365 San Jacinto River Road	0.46 miles north of the Diamond Specific Plan	Completed Remediation-Case Closed
ERNS, CA FID UST, SWEEPS UST, FINDS	Wal-Mart Store #2077	31700 Casino Drive	0 .32 miles north/northeast of the Diamond Specific Plan	No violations found
UST, CA FID UST, SWEEPS UST, CHMIRS, RCRA-NonGen, FINDS, HAZNET	Lake Elsinore Car Wash	31784 Casino Drive	0.31 miles east/northeast of the Diamond Specific Plan	Permitted Underground Storage Tank

Source: GeoTracker 2008

[1] RCRA-SQG =Resource Conservation and Recovery Act- Small Quantity Generator; LUST= Leaking Underground Storage Tank; UST = Underground Storage Tank; SWEEPS UST = Statewide Environmental Evaluation and Planning System; CHMIRS = California Hazardous Material Incident Report System; FINDS = Facility Index System; HAZNET= Hazardous Waste Database; CA FID UST= California Facility Inventory Database Underground Storage Tank; HIST UST= Historical UST Registered Database; HIST CORTESE = Historical Cortese; RCRA-NonGen = RCRA- Non-Generators; AST= Aboveground Storage Tank; FTTS = Federal Insecticide Fungicide and Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) Tracking System; HIST FTTS = Historical FTTS; ERNS = Emergency Response Notification System

Adjacency to Schools

The closest school to the project site is Canyon Academy, which is located approximately 0.5 miles north of the Diamond Specific Plan. However, a school is proposed to be developed approximately 0.3 miles south of the project site on the Summerly property.

Adjacency to Airports

Airport Land Use Plan/Public Airport

The nearest public airport to the project site is the Perris Valley Airport, located approximately 8.7 miles northeast of the Diamond Specific Plan site.

Private Airstrip

The nearest private airstrip project site is the Skylark Airfield, located approximately 1.7 miles south of the project site. The Diamond Specific Plan is not located within the Airport Operation Zones.

Emergency Plans

As identified in the City's General Plan of 1990, Lake Elsinore has adopted an Emergency Operations Plan (EOP) to meet the requirements of the California Emergency Services Act of 1951 (Section 8550 et seq., Government Code). While the EOP (March 2007) is the authority for emergency actions within the city, it recognizes and supports the general concepts contained within Riverside County and the State of California Emergency Plans.

Wildland Fire

Much of Riverside County is undeveloped and consists of rugged topography with highly flammable indigenous vegetation. However, the Lake Elsinore General Plan Update (2009) and the Riverside County General Plan identify the Diamond Specific Plan site as being located in an area of no to low wildfire susceptibility. A map of wildfire susceptibility provided by the City of Lake Elsinore GIS Department identifies the Diamond Specific Plan has having a moderate risk of wildfire.

The Diamond Specific Plan's impact on fire protections services is analyzed in Section 4.11.2.

4.6.2 Project Impacts

4.6.2.1 Thresholds of Significance

Based on *CEQA Guidelines* Appendix G (VII), the following significance criteria have been developed for hazardous materials compliance. A significant impact to or resulting from hazards and hazardous materials would be identified if the project was determined to result in any of the following:

- 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 1/4-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 §65962.5 and, as a result, create a significant hazard to the public or the environment;

- 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, and would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip, and would 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 plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.6.2.2 Environmental Impacts

Hazardous Materials

Hazardous materials include solids, liquids, or gaseous materials that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, could pose a threat to human health or the environment. Hazards include the risks associated with potential explosions, fires, or release of hazardous substances in the event of an accident or natural disaster, which may cause or contribute to an increase in mortality or serious illness, or pose substantial harm to human health or the environment.

Routine Transport, Use, or Disposal

Implementation of the Diamond Specific Plan would involve the transport of fuels, lubricants, and various other liquids needed for operation of construction equipment at the site and would be transported to the construction site on an as-needed basis by equipment service trucks. In addition, workers would commute to the project site via private vehicles, and would operate construction vehicles/equipment on both public and private streets. The use of these construction vehicles/equipment has the potential to utilize hazardous material. Materials hazardous to humans, wildlife, and sensitive environments would be present during project construction of the buildings. These materials include diesel fuel, gasoline, equipment fluids, concrete, cleaning solutions and solvents, lubricant oils, adhesives, human waste, and chemical toilets. The potential exists for direct impacts to human health and biological resources from accidental spills of small amounts of hazardous materials from construction equipment during construction of the buildings; however, existing federal and state standards are in place for the handling, storage and transport of these materials. Because compliance with all standards is required through federal, state, county, and municipal regulations, no significant impacts are expected due to the transport, use, or disposal of hazardous materials.

Off-Site Hazardous Sites

As identified above in Table 4.6-1, review of the database searches identified 12 sites with the potential for hazardous materials within a two-mile radius of the Diamond Specific Plan. However, the majority of these sites are either within the process of remediation, have completed it or have not been found to violate hazardous waste regulations. In the instance of the sites with permitted underground storage tanks, leaks have not been reported for these sites, and therefore remediation is not required. Therefore, it is not anticipated that a significant impact from the release of hazardous materials would occur.

On-site Hazardous Sites

The Diamond Specific Plan site was not identified as being located on any site designated by Government Code Section 65962.5 as a hazardous material site. Further, there are no listings of permitted aboveground storage tanks (ASTs) or underground storage tanks (USTs) on the project site. In addition, based upon historic property use, no septic tank systems exist on the property. However there is an underground sump, an aboveground diesel storage vessel and an abandoned cesspool located in the northern portion of the project site. These facilities were not identified by the database search done by EDR or by the ESA report as significant. Although these facilities were identified onsite, they were not identified to have been associated or presently be associated with hazardous materials.

Although records searches were conducted for the entirety of the Diamond Specific Plan site, site visits were not conduced for the portions of the Diamond Specific Plan site that are currently developed or are not currently owned by the applicant. The following developed parcels have not been surveyed through a Phase I ESA: 373-210-042 (Diamond Stadium), 371-030-035 (adjacent to the south of the stadium), and 373-210-016 373-210-019,373-210-024, 373-210-027 (Lake Elsinore Valley Retail center). Therefore, the potential exists for hazardous materials to be uncovered during any potential redevelopment of those parcels. Similarly, the following undeveloped parcels of the proposed Specific Plan have not been surveyed through a field reconnaissance during a Phase I ESA: 363-161-032, -33, -34, -35, -37, and -12 and 373-210-030. Therefore, the potential exists for hazardous materials to be uncovered during future ground disturbance activities on these parcels. Due to the uncertainty of the presence of hazardous materials on the aforementioned parcels, a significant impact is identified and mitigation required.

Asbestos and Lead Based Paint

Asbestos is a strong, incombustible material which was used in many commercial products prior to the 1940s and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. Intact lead based paint is not considered a hazardous material. However, lead based paint in poor condition (peeling and cracking) can create potential health hazards for building occupants, especially children. Site inspections found painted surfaces to be in good condition. Renovation, remodeling and new construction on the site was completed after 1981 and as such the existing structures are not suspected of containing asbestos or lead based paint. The Phase I ESA concluded removal of any on-site structure would not have a significant impact.

Solid Waste Disposal

In the areas in which solid waste is generated, it is collected and removed on a regular basis by CR&R Disposal Service. No indication of on-site solid waste disposal (i.e., landfills) was apparent during the site inspections. Land filling operations were not identified through the site visit of interviews. Because the site is not currently used for solid waste disposal and is not identified as a formal site for solid waste disposal, impacts are not significant.

Adjacency to Schools

Canyon Academy is the closest school and is located 0.5 miles from the project site. A school is proposed 0.3 miles south of the Diamond Specific Plan. The proposed school would be surrounded predominately by residential uses. Commercial uses that may potentially handle hazardous materials would be developed as a part of the mixed use area within the Diamond Specific Plan approximately 0.3 miles from the proposed school site. Since emitting hazardous emission or handling hazardous or acutely hazardous materials, substances, or waste is not permitted in residentially-zoned areas, and the potential commercial uses in the mixed use zone would be sited over one-quarter mile, a generally accepted safe distance, from

the proposed school, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter-mile of an existing or proposed school zone. Therefore, no impact is identified for this issue area.

Adjacency to Airports

Airport Land Use Plan/Public Airport

The nearest public airport to the project site is the Perris Valley Airport located approximately 8.5 miles northeast of the project site. As the project is not located within 2 miles of a public airport, impacts would be less than significant.

Private Airstrip

The nearest private airport to the project site is the Skylark Airfield located approximately 1.7 miles southeast of the project site. The Diamond Specific Plan is not located within the Airport Operation zones. As the size of the planes able to utilize this airfield is limited to smaller planes, no sensitive receptors are identified in the area, the airfield is not directly adjacent to the project site and take off and landings do not occur over the project site, a less than significant impact is identified.

Emergency Operations Plan

The Diamond Specific Plan is not of a type or use to impair implementation of or physically interfere with the EOP.

Wildland Fire

Within the Riverside County General Plan and the Lake Elsinore General Plan Update (2009), the Diamond Specific Plan is identified as having low wildfire susceptibility. A map of wildfire susceptibility provided by the City of Lake Elsinore GIS department identifies the Diamond Specific Plan as having a moderate risk of wildfire. Currently, the Diamond Specific Plan is primarily undeveloped. However, there is commercial development to the north and east of the site. The area to the south and southwest of the site is currently undeveloped but is proposed for residential development. To the west, the Diamond Specific Plan borders the San Jacinto River and the Lake Elsinore Outlet Channel. To the southwest, the Diamond Specific Plan borders a wetland area proposed for conservation by the MSHCP. Although considered an urban/wildland interface, this area would pose a low risk for wildfire due to the proximity to Lake Elsinore. The Diamond Specific Plan would be served by the Lake Elsinore Fire Department which is operated by the County of Riverside Fire Department and CAL Fire. The Diamond Specific Plan is sited within appropriate response time area for the fire department. Jason Neumann of the Riverside County Fire Department reviewed the site plan and in particular the circulation plan for the Diamond Specific Plan and identified the plan as having adequate fire access (Appendix I). Therefore, implementation of the Diamond Specific Plan would not be anticipated to expose people or structures to a significant risk associated with wildland fires. A less than significant impact is identified for this issue area.

4.6.3 Cumulative Impacts

The simultaneous development of the Diamond Specific Plan, along with other developments in the vicinity would not result in cumulatively significant impacts for hazardous materials since all future developments in the vicinity would be subject to the same local, regional, state, and federal regulations.

As with the Diamond Specific Plan, environmental review would be required for future projects and compliance with the Riverside County Fire Protection Master Plan staffing and facility levels and the response time indicated in the City of Lake Elsinore General Plan Update would be required. Therefore, the Diamond Specific Plan would result in a less than significant cumulative impact.

4.6.4 Environmental Mitigation Measures

Because the potential for undiscovered hazardous materials/sites exists for parcels that were not surveyed in the field, the following mitigation measures are required.

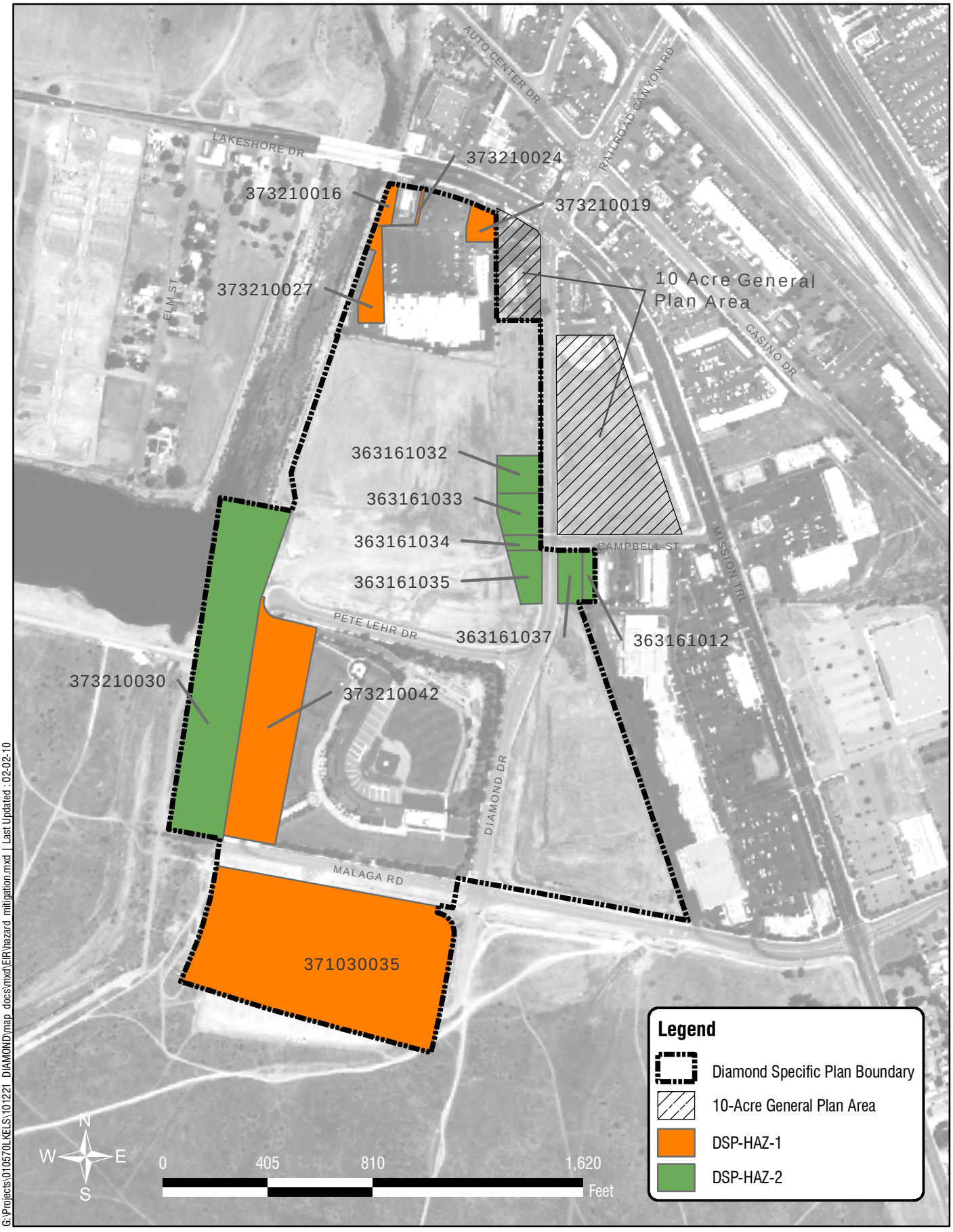
DSP-HAZ-1 Prior to approval of a site plan including redevelopment on the following parcels: 373-210-016, -019, -024, -027, -042 and 371-030-035, a Phase I ESA shall be conducted on those parcels. If no hazardous materials are identified, the project may proceed. In the event that hazardous materials are identified, the removal, transport and disposal of said materials shall be handled according to Federal, State, and local laws. Figure 4.6-1 depicts the locations of these parcels.

DSP-HAZ-2 Prior to issuance of a grading permit (or prior to initiation of any ground-disturbing activities), a Phase I ESA shall be conducted on the following parcels: 363-161-012, -032, -033, -034, -035, and -037, and 373-210-030. If no hazardous materials are identified, the project may proceed. In event that hazardous materials are identified, the removal, transport and disposal of said materials shall be handled according to federal, state, and local laws. Figure 4.6-1 depicts the locations of these parcels.

4.6.5 Conclusion

Although the potential exists for uses within the Diamond Specific Plan to transport fuels, lubricants, and various other liquids needed for operation of construction equipment at the site, all applicable federal, state, county and municipal regulations and standards would be complied with reducing the potential risk to human health to below a level of significance. The ESAs and Environmental Database Records searches demonstrated that no hazardous sites are located on the parcels surveyed within the Diamond Specific Plan. Twelve hazardous sites were identified within a 2-mile radius of the Diamond Specific Plan. However, these sites are all within the process of remediation, have completed it, or have not been found to violate hazardous waste regulations. Therefore, they would not result in a significant impact to the Diamond Specific Plan. Incorporation of mitigation measures DSP-HAZ-1 and -2 would reduce the potential for unknown hazardous materials on parcels that were not surveyed to below a level of significance through proper identification, handling and disposal of potential hazardous materials in accordance with federal, state, and local laws. While an underground sump, an aboveground diesel storage vessel, and an abandoned cesspool were identified during the site observations, the ESAs do not identify these facilities to potentially be associated with hazardous contaminants.

Within the portion of the Diamond Specific Plan that is developed, all buildings have been built or remodeled after 1981 and are free of asbestos and lead-based paint (asbestos and lead based paint are identified hazards in structures built before the early 1970s). Therefore, no impact has been identified for asbestos and lead. The Diamond Specific Plan area does not have a history of on-site waste disposal or land filling operations. In areas in which solid waste is generated, it is collected and removed from the site on a regular basis by CR&R and there would be a less than significant impact concerning solid waste disposal. The Diamond Specific Plan is located outside an area of adverse impact to schools or public or private airports or airstrips and would have a less than significant impact on these facilities. The Diamond Specific Plan would not impair the implementation of the Lake Elsinore Emergency Response Plan and, therefore, would have a less than significant impact on the Emergency Response Plan.



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Hazards Mitigation Areas

FIGURE 4.6-1

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

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4.7 HYDROLOGY/WATER QUALITY

Information from the following documents were used in the preparation of this section and are included in Appendices G.1,G.2, and G.3 of the Draft Environmental Impact Report (EIR):

> *Conceptual Hydrology Study for The Diamond, Lake Elsinore, California.* Prepared by Wilson Mikami Corporation, March 2009.
>
> *Draft- Project Specific Water Quality Management Plan for The Diamond, Lake Elsinore.* Prepared by Wilson Mikami Corporation, March 2009; Revised January 2010.
>
> *Letter of Map Revision Based on Fill Determination Document.* Federal Emergency Management Agency. August 2007.

4.7.1 Environmental Setting

4.7.1.1 Hydrology

Regional Hydrology

The Diamond Specific Plan site lies within the San Jacinto River Basin and encompasses approximately 765 square miles within western Riverside County. The watershed originates in the San Jacinto Mountains, drains westerly into Canyon Lake and terminates in Lake Elsinore. The watershed elevation varies from over 11,000 feet at its eastern boundary to approximately 1,240 feet at Lake Elsinore. Precipitation varies significantly across the watershed.

The San Jacinto River is a major tributary of Lake Elsinore. Since construction of Railroad Canyon Dam, located approximately 3.3 miles from the Diamond Specific Plan site, flow has been regulated and is minor to nonexistent most of the year. The projected 100-year flow is completely contained within the existing river channel between the dam and Interstate 15 (I-15). With the improvement of the channel-type inlet to the Lake Management Project (further discussed below), the 100-year San Jacinto River flow between Lakeshore Drive Bridge and I-15 is also contained completely within the channel.

Diamond Specific Plan Hydrology

The Diamond Specific Plan is located on approximately 87.2 acres of relatively level land at the eastern edge of Lake Elsinore. Currently, the site drains to five outlet concentration points as shown on Figure 4.7-1. Runoff from the existing stadium and the vacant lots directly north of the stadium and east of Railroad Canyon Road, a portion of the vacant lot east of the stadium, and runoff from Railroad Canyon Road and Campbell Street and a portion of Lakeshore Drive is collected at the western end of Pete Lehr Drive and empties directly in to Lake Elsinore. A portion of the existing stadium parking lot drains through a separate drainage point into Lake Elsinore. Runoff from the remainder of the stadium parking lot, Malaga Road, and a portion of the temporary stadium overflow parking lot is collected and discharged to water quality features and a detention basin on an adjacent property, the Summerly development. At the northern portion of the Diamond Specific Plan, runoff is channeled through storm drains and discharges directly into the Lake Elsinore inlet channel. Ultimately all drainage from the Diamond Specific Plan site is discharged into Lake Elsinore.

Table 4.7-1 summarizes the current runoff potential for the Diamond Specific Plan site. The location of each existing drainage zone can be seen in Figure 4.7-1.

Table 4.7-1. Flow Summary
(Diamond Specific Plan Existing Condition)

Drainage Zone	Area (ac)	100-Year Storm Event (cfs)
A	58.2	118.6
B	3.8	12.3
C	14.8	42.8
D	5.3	15.9
E	4.3	16.1
Total	86.4	205.7

ac = acres
cfs = cubic feet per second

4.7.1.2 Water Quality

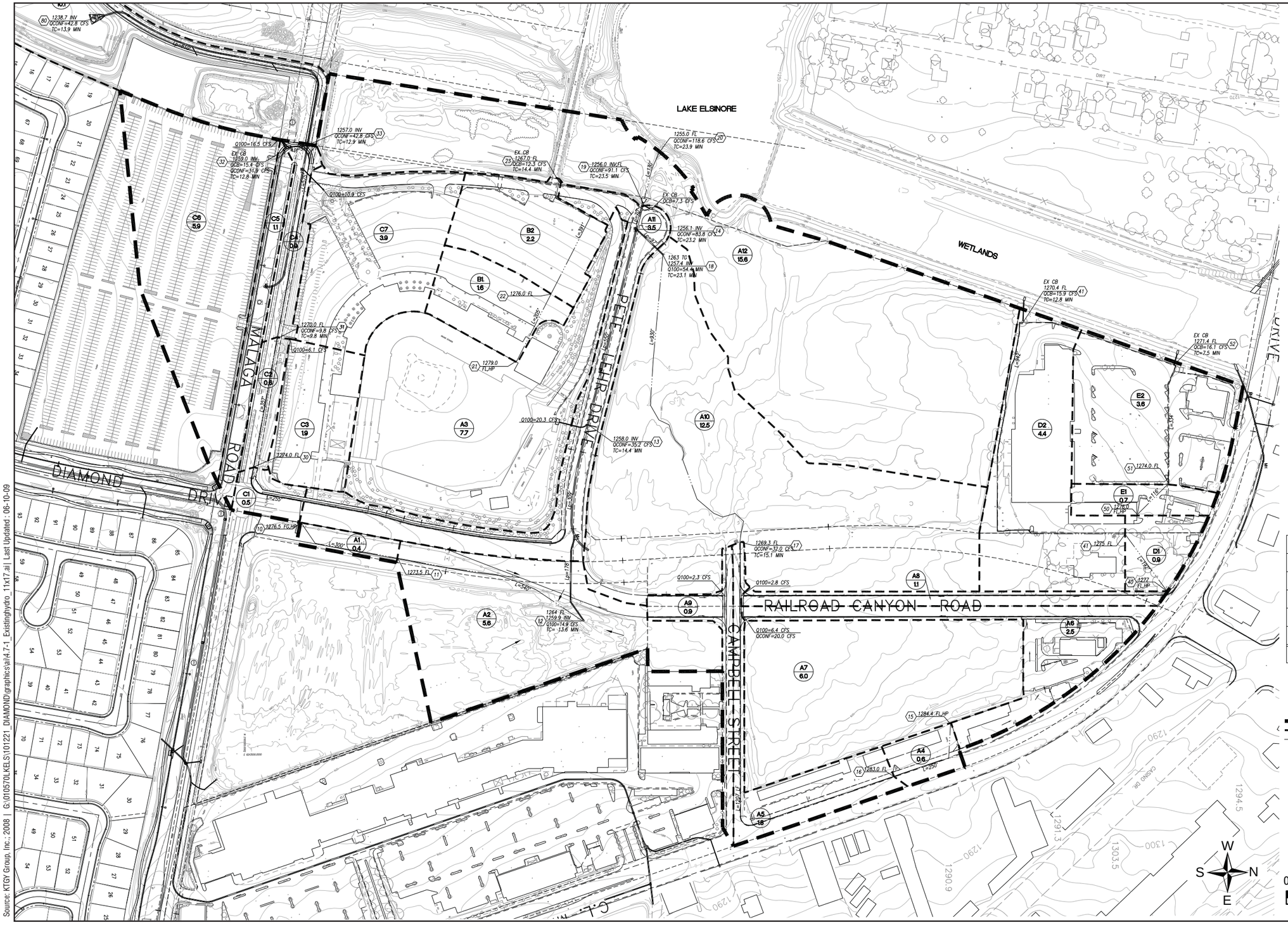
Poor water quality in the regional area of Lake Elsinore, Riverside County, has been related to inadequate subsurface sewage disposal, waste disposal management of the Santa Ana River watershed, agricultural runoff, sediment from construction-related erosion, and urban storm water runoff. The California Regional Water Quality Control Board (RWQCB) regions provide state-level water quality policy for Riverside County. The federal National Pollutant Discharge Elimination System (NPDES) also serves to minimize adverse effects on water quality.

Federal and State Regulations

Clean Water Act (CWA) Section 402(p)

The federal Water Pollution Control Act (also known as the Clean Water Act [CWA]) was amended in 1972 to prohibit discharge of any pollutant into waters of the United States unless the discharge is authorized by a NPDES Permit. Originally, the NPDES program focused on reducing pollutants from discharges from industrial processed wastewater and municipal sewage treatment plants. In 1987, the CWA was amended to require the U.S. Environmental Protection Agency (USEPA) to regulate storm water discharges through use of NPDES storm water permits. Section 402(p) of the CWA established a framework for regulating discharges under the NPDES program.

In California, the EPA has delegated authority to issue NPDES permits to the State Water Resources Control Board (SWRCB). The SWRCB and nine California RWQCBs carry out the regulation, protection, and administration of water quality. The state is divided into nine regions related to water quality and quantity characteristics. Each RWQCB is required to adopt a Water Quality Control Plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. The Diamond Specific Plan site is located within the Santa Ana Region, which is addressed in the Water Quality Control Plan for the Santa Ana Basin (Basin Plan). This Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters.



SUMMARY TABLE

	Q100 (CFS) AT OUTLET	TRIBUTARY AREA (ACRES)
SUB–AREA A	118.6 CFS	58.2 AC
SUB–AREA B	12.3 CFS	3.8 AC
SUB–AREA C	42.8 CFS	14.8 AC
SUB–AREA D	15.9 CFS	5.3 AC
SUB–AREA E	16.1 CFS	4.3 AC
TOTAL	205.7 CFS	86.4 AC

LEGEND

- WATERSHED BOUNDARY
- SUB–AREA BOUNDARY
- FLOWLINE AND DIRECTION OF FLOW
- A5 / 0.3 — SUBAREA LABEL / AREA (ACRES)
- (20) — NODE NUMBER

Q10	10–YEAR PEAK FLOW IN CFS
Q100	100–YEAR PEAK FLOW IN CFS
WS 100	100–YEAR PEAK FLOW WATER SURFACE ELEVATION
QCONF	100–YEAR CONFLUENCE PEAK FLOW IN CFS
TC	TIME OF CONCENTRATION (100–YEAR STORM) IN MIN
MIN	MINUTES
CFS	CUBIC FEET PER SECOND
EG	EXISTING GRADE ELEVATION
FG	FINISH GRADE ELEVATION
FS	FINISH SURFACE ELEVATION
INV.	INVERT OF PIPE
L=870'	LENGTH OF FLOWPATH IN FEET

Diamond Specific Plan Existing Hydrological Conditions

FIGURE 4.7-1

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

Beneficial uses are defined in the Basin Plan as the uses of water necessary for the survival or well being of humans, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind. Examples are drinking, swimming, industrial and agricultural water supply, and the support of fresh and saline aquatic habitats (RWQCB *Santa Ana River Basin Water Quality Control Plan*, January 24, 1995).

Riverside County has adopted the Santa Ana Regional Drainage Area Management Plan (SAR-DAMP) to satisfy and meet NPDES program requirements. In accordance with SAR-DAMP and NPDES requirements, an applicant for a project encompassing more than five acres is required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). New regulations [December 1999 Phase II Rule] expanded the NPDES program to include sites that disturb land equal to or greater than one acre and less than five acres. The objective of the SWPPP is to identify and control storm water discharges due to construction activity and to identify and implement Erosion, discharge of pollutants and sediment, and drainage flows generated during construction would be controlled with implementation of structural (e.g., silt fences, sandbags, spill control) and non-structural (e.g., scheduling) best management practices (BMPs) to be detailed in the SWPPP. Discharges associated with construction activity are covered under one statewide General Permit. Coverage under the General Permit requires submittal of a Notice of Intent (NOI) to the SWRCB prior to construction, and development and implementation of a defensible SWPPP prior to disturbing a site and for the duration of construction. All construction period non-storm and storm water BMPs shall adhere to the California Stormwater Quality Association Stormwater *Best Management Handbook for Construction*.

California Water Code, Division 7 (Porter-Cologne Act)

The California Water Code contains provisions regulating water and its use. Division 7 establishes a program to protect water quality and beneficial uses of the state water resources including groundwater and surface water. The SWRCB and RWQCB administer the program and are responsible for control of water quality. They establish waste discharge requirements, water quality control planning and monitoring, enforcement of discharge permits, and ground and surface water quality objectives.

Riverside County Municipal Stormwater NPDES Permit

On October 25, 2002, the Santa Ana RWQCB issued the Riverside County Municipal Stormwater NPDES Permit CAS 618033 (Order R8-220-001) for the County of Riverside and several incorporated cities, including the City of Lake Elsinore. This order regulates discharge of urban runoff within the permit area, which includes the Diamond Specific Plan site and surrounding areas. In addition, the Diamond Specific Plan site is located within the region covered by the Watershed-wide Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with New Development within the San Jacinto Watershed (Order 01-34, NPDES CAG 618005). The order requires that all development projects tributary to Canyon Lake and Lake Elsinore obtain an NPDES permit, and implement best available technology (BAT) that is economically achievable and best conventional technology (BCT) to reduce or eliminate storm water pollution, including the preparation of a SWPPP.

Surface Water

Section 303(d) of the 1972 CWA defines water quality standards as consisting of both the uses of surface waters (beneficial uses) and the water quality criteria applied to protect those uses (water quality objectives). State and regional water quality control boards have been charged with ensuring that beneficial uses and water quality objectives are established for all waters of the state. With respect to Lake Elsinore, the following beneficial uses have been identified by the RWQCB:

Water Contact Recreation (REC1): Waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible.

Non-Contact Water Recreation (REC2): Waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible.

Warm Freshwater Habitat (WARM): Waters support warm water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

Wildlife Habitat (WILD): Waters support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

The federal CWA further requires that a list of water quality limited segments be developed to identify those water bodies that do not meet water quality standards even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that action plans, referred to as Total Maximum Daily Loads (TMDLs), be developed by regulatory agencies to improve water quality for these limited segments. On July 25, 2003, the USEPA gave final approval to California's 2002 Section 303(d) list of Water Quality Limited Segments and TMDLs priority schedule. Lake Elsinore is identified as an impaired water body on the Section 303(d) list for the following pollutant contributors: nutrients (most notably nitrogen and phosphorous), organic enrichment/low dissolved oxygen, sedimentation/siltation, and unknown toxicity.

Groundwater

Due to the proximity of the Diamond Specific Plan to Lake Elsinore and a variation of permeating soils, the presence of groundwater at the site is estimated to be at a variety of elevations (Geotechnical Report). Geologic testing found groundwater levels to be at shallower depths at the western portion of the site, closer to the lake. Drillings further from the lake did not encounter groundwater at all. The groundwater level is estimated based on historic data to be 25 feet below existing site grades. However, variations in groundwater level may occur due to fluctuations in rainfall, runoff, and other factors.

Groundwater at the Diamond Specific Plan site is a part of the Elsinore Basin of the Elsinore Valley Municipal Water District. Deep alluvial deposits made up the basin. A major source of surface water recharge for the basin is the San Jacinto River, although water recharge is also received from percolation of precipitation, from underground septic tanks, and from water directly applied to the land through irrigation in addition to other uses. A general description of groundwater quality is presented in the Elsinore Basin Groundwater Management Plan (2003). The plan's major objective is to establish baseline measurements and establish a groundwater storage program.

4.7.2 Project Impacts

4.7.2.1 Thresholds of Significance

A significant impact to hydrology and/or water quality would be identified if the proposed Diamond Specific Plan is determined to result in any of the following:

- 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 or siltation on- 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 in a manner which would result in flooding on- or off-site;
- 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Violate any water quality standards or waste discharge requirements;
- 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;
- Result in runoff from the project site that would adversely impact designated beneficial uses in the runoff-receiving watershed, or substantially impact public agency efforts to improve any currently recognized conditions of water quality impairment.
- 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; or,
- Inundation by seiche, tsunami, or mudflow.

4.7.2.2 Environmental Impacts

Alter Drainage Patterns Resulting in Substantial Erosion or Siltation

The Diamond Specific Plan would drain to three outlet points with the majority of the drainage being collected in the proposed backbone storm drain system. Stormwater runoff would be collected from the three drainage subareas. Figure 4.7-2, Conceptual Drainage Plan, illustrates the drainage subareas and placement of the backbone drainage system.

Construction and operation of the Diamond Specific Plan have the potential to alter the existing drainage pattern of the site. The Diamond Specific Plan design includes creating a backbone storm water drainage system to efficiently transport storm water with minimal erosion or siltation to both on and off site areas. The backbone drainage would include two grassy swales, a detention basin and an infiltration basin. The system would transport storm water to one of these areas. Each of these design measures would slow the flow of runoff water, which would reduce or eliminate erosion and siltation. Construction and operation of the Diamond Specific Plan would not alter any stream or river. By implementing the project design features of the storm water drainage system and complying with all appropriate water discharge standards, the Diamond Specific Plan would have a less than significant impact to siltation or erosion.

Erosion and sedimentation due to construction-related activities would potentially impact surface water quality within the watershed. Erosion can occur when protective vegetation is removed and cuts and fills

are left unprotected. If appropriate measures are not implemented, such erosion can create local problems (downstream sediment damage). Additionally, improper handling of construction materials and/or equipment could result in accidental spills that could affect surface water quality.

To reduce or eliminate soil erosion and pollution, the Diamond Specific Plan applicant would be required to ensure that construction activity is in compliance with the State's General Permit for Construction Activities administered by the California RWQCB, located in Riverside (Santa Ana, Region 8). One condition of this permit is the development and implementation of a site-specific SWPPP that identifies BMPs to reduce/eliminate erosion and sedimentation associated with construction.

Grading during construction would orient site drainage into three Subareas. From these Subareas, runoff from the Diamond Specific Plan would drain into the offsite drainage basin or water quality features. Subarea A would collect 69.1 acres of the project runoff though a proposed backbone storm drain system within the proposed roadway (Diamond Circle) as well as the existing roadway drainage accumulated along Railroad Canyon Road, Campbell Street and a portion of Lakeshore/Mission Trail Drive. This backbone storm drain system would range in size from 24 inches to 63 inches and discharge to water quality features and a detention basin within the Summerly Development adjacent to the golf course. The Diamond Specific Plan would construct a storm drain which leads off-site to connect to the existing detention basin. The backbone storm drain would receive an approximate 100 year storm flow of 174.72 cubic feet per second (cfs) and would be adequately sized to accept expected flows. It should be noted that the off-site storm drain would connect through the City's access road to the park proposed within the Summerly Development. This access road has already been graded and disturbed and impacts were covered in the Supplemental Environmental Impact Report for the East Lake Specific Plan Amendment No. 6 (also known as John Laing Homes or Summerly Development)

Subarea B would utilize the existing drainage outlet at the north end of the Diamond Specific Plan and discharge directly into the Lake Elsinore inlet channel.

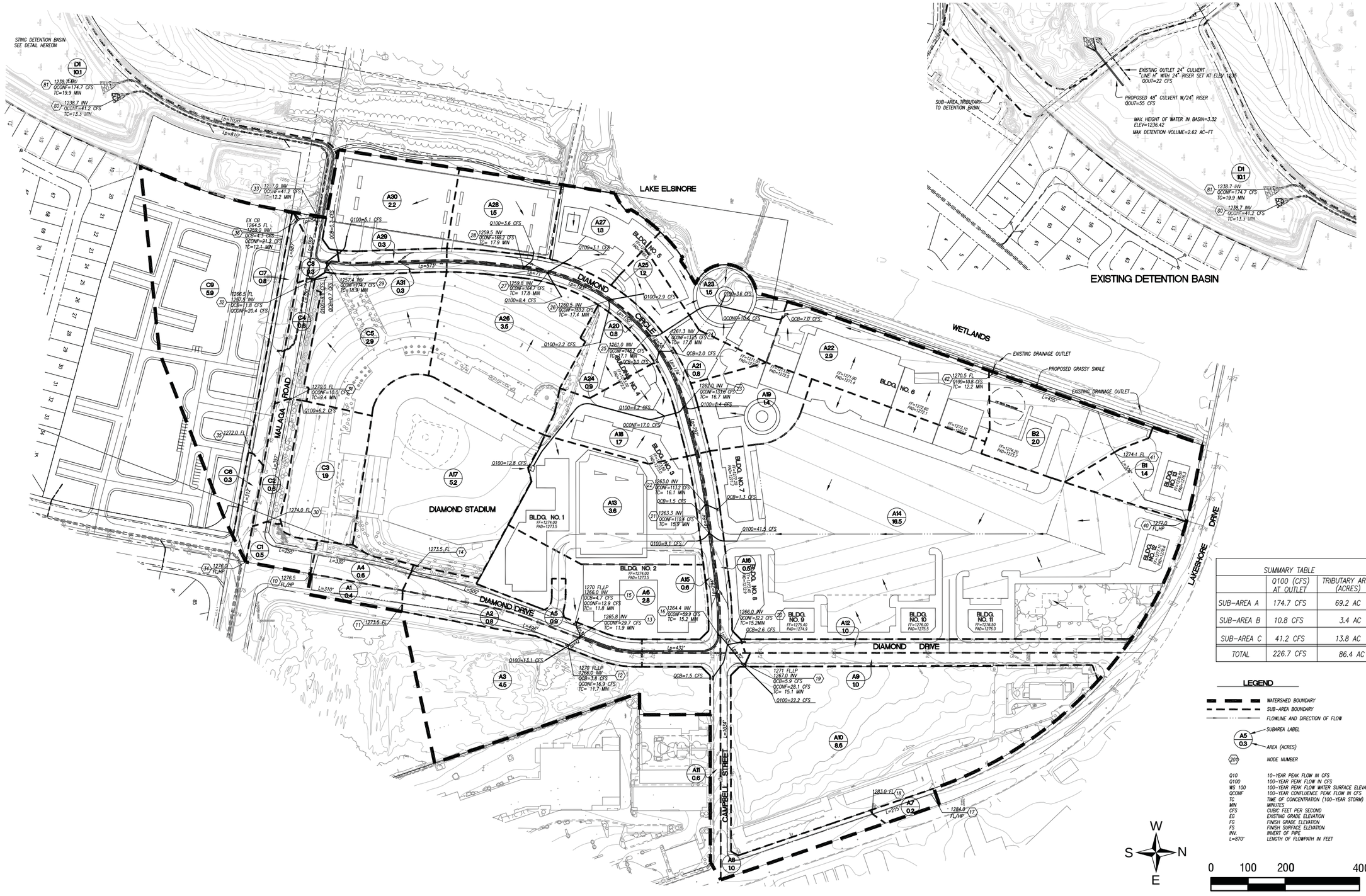
Subarea C currently collects drainage from the majority of the Stadium parking lot, Malaga Road, and the proposed development south of Malaga Road. The drainage patterns for this area would remain unchanged and would continue to discharge to the existing storm drain located at the end of Malaga.

Both erosion and siltation of the site would adversely impact the water quality of neighboring waterways. Implementation of BMPs and the SWPPP program during construction and the above mentioned drainage features would reduce the potential for erosion and or siltation to less than significant.

Alter Drainage Patterns Resulting in Flooding

The Diamond Specific Plan would drain to three outlet points with the majority of the drainage being collected in the proposed backbone storm drain system. The three drainage subareas of the project site are described above.

The proposed drainage system would be designed to have the capacity to accommodate the stormwater flow of a 100-year storm event. Construction and operation of the Diamond Specific Plan would not result in alteration of either a stream or river. The proposed drainage system would not increase the rate of surface runoff. From the drainage system, runoff would be directed into on-site or adjacent water quality improvement features. The Diamond Specific Plan would have a less than significant potential for flooding on or off site.



Source: KTGY Group, Inc.; 2008 | G:\010570LKELS\101221_DIAMOND\graphics\ai\4.7-1_Existinghydro_11x17.ai | Last Updated: 06-10-09

Diamond Specific Plan Conceptual Drainage Plan

FIGURE 4.7-2

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Groundwater Supplies and Recharge

Groundwater is a minimal source of water for Elsinore Valley Municipal Water District (EVMWD) and development on Diamond Specific Plan site would not use groundwater as its water supply. Additionally, the Diamond Specific Plan is located within the service area of the EVMWD and would be eligible for water service (Appendix I).The Diamond Specific Plan site is primarily undeveloped; therefore, groundwater absorption rates may be reduced due to an increase of impervious surfaces resulting from the development of the Diamond Specific Plan. However, regional absorption and infiltration rates should not be significantly affected, given the limited size of the Diamond Specific Plan site and that the major source of groundwater recharge is the San Jacinto River. The bioswales, infiltration basin and detention basin would also provide opportunities for groundwater recharge. Although the Diamond Specific Plan is adjacent to the river, it is not proposed to divert or impact the ability of the river to recharge the groundwater supply. Regional absorption would continue after development at relatively similar rates as existing conditions. Drainage and storm water run-off patterns would not be significantly affected by the proposed actions. Therefore, the Diamond Specific Plan would have a less than significant impact on groundwater supplies or recharge.

Water Quality Standards

The Diamond Specific Plan has the potential to result in long-term impacts on water quality due to the addition of pollutants typical of urban runoff, including:

- Motor oil and fluids that leak from cars onto streets;
- Oil, paint, or household cleaners dumped in gutters;
- Soap and dirt from car washing;
- Dirt, leaves, and lawn clippings;
- Litter and grime that collects on roadways and sidewalks;
- Bare soil that erodes and flows into streets;
- Weed killers, fertilizers, and pesticides; and
- Animal wastes.

The Diamond Specific Plan proposes approximately 81.4 acres of mixed use and 5.8 acres of roadway. An increased amount of impervious surfaces due to development could potentially decrease the surface area available for storm and runoff water to recharge the groundwater supply. While the development would increase the amount of impervious surfaces with the addition of development areas and roadways, the landscaping design specifies (Section 5.10.2 of the Diamond Specific Plan) that where appropriate, permeable landscaping should be used in the place of hardscape in order to increase replenishment of groundwater supplies, reduce stormwater runoff, and reduce the heat island effect. Additionally, the Diamond Specific Plan would comply with all water quality standards and waste discharge requirements. The Diamond Specific Plan would not violate any water quality standards or waste discharge requirements and thus would not have a significant impact.

Stormwater Runoff

The State's General Permit for Construction Activities regulates construction-related activities, and requires that pollutant discharges into receiving waters be minimized and/or eliminated. This permit also requires that management measures be incorporated into new development to ensure that once construction is completed, the residential land use does not contribute substantially to water quality problems in water bodies that receive storm water and non-storm water runoff from the projects.

A project-specific water quality plan has been developed to address storm water runoff management and water quality treatment objectives (Wilson Mikami Corporation 2009). The treatment control plan sets forth an integrated approach involving the utilization of BMPs designed to: (1) function with the drainage plan for the project site and offsite areas; and (2) to address treatment of urban and storm water runoff. The sizing of treatment control BMPs for the Diamond Specific Plan is based upon a criteria established by the Riverside County Flood Control and Water Conservation District (RCFCWCD), which acts on behalf of the City for flood control and the discharge of urban runoff.

The constructed storm drain system would be able to accommodate any additional runoff contributed by the Diamond Specific Plan (approximately 10% increase in peak discharge amounts) in addition to the storm water flows of a 100-year storm. Thus, any runoff water from the site would not exceed the capacity of the stormwater drainage system.

According to the hydrology report for the Diamond Specific Plan, the proposed drainage facilities for the Diamond Specific Plan would be constructed and adequately sized to accommodate the stormwater runoff from the site. The detention basin located adjacent to the Diamond Specific Plan site would adequately reduce the velocity of storm water flows as it enters Lake Elsinore and the infiltration basin. The infiltration basin shall allow for a gradual recharge of the groundwater basin while pollutants are naturally filtered out through soils and plants. With incorporation of these water quality features, the Diamond Specific Plan would have a less than significant impact on the amount of runoff and polluted runoff.

Water Quality Degradation

The Diamond Specific Plan would feature on-site BMPs consisting of extended detention basins (volume-based) and grassed swales (flow-based) designed to address storm water runoff management and water quality treatment objectives. Figure 4.7-3 depicts the water quality improvement areas. The Water Quality Management Plan sets forth an integrated approach to water quality involving the utilization of treatment control BMPs designed to function with the drainage plan for the project site; and to address treatment of urban and storm water runoff. Specifically, the following treatment BMPs would reduce storm water flow and water quality degradation:

- An extended detention basin, designed according to criteria set forth and defined by Riverside County, will detain and slowly release the design volume of storm water.
- Two grassed swales constructed according to County criteria will receive and slow nuisance flows and first flush flows each of the drainage areas. Pollutants shall be naturally filtered through plants and soils.
- An infiltration basin shall allow storm water runoff to gradually replete the groundwater basin .
- Permeable area of the project will be maximized.
- Landscaped buffer areas will be incorporated between sidewalks and streets.

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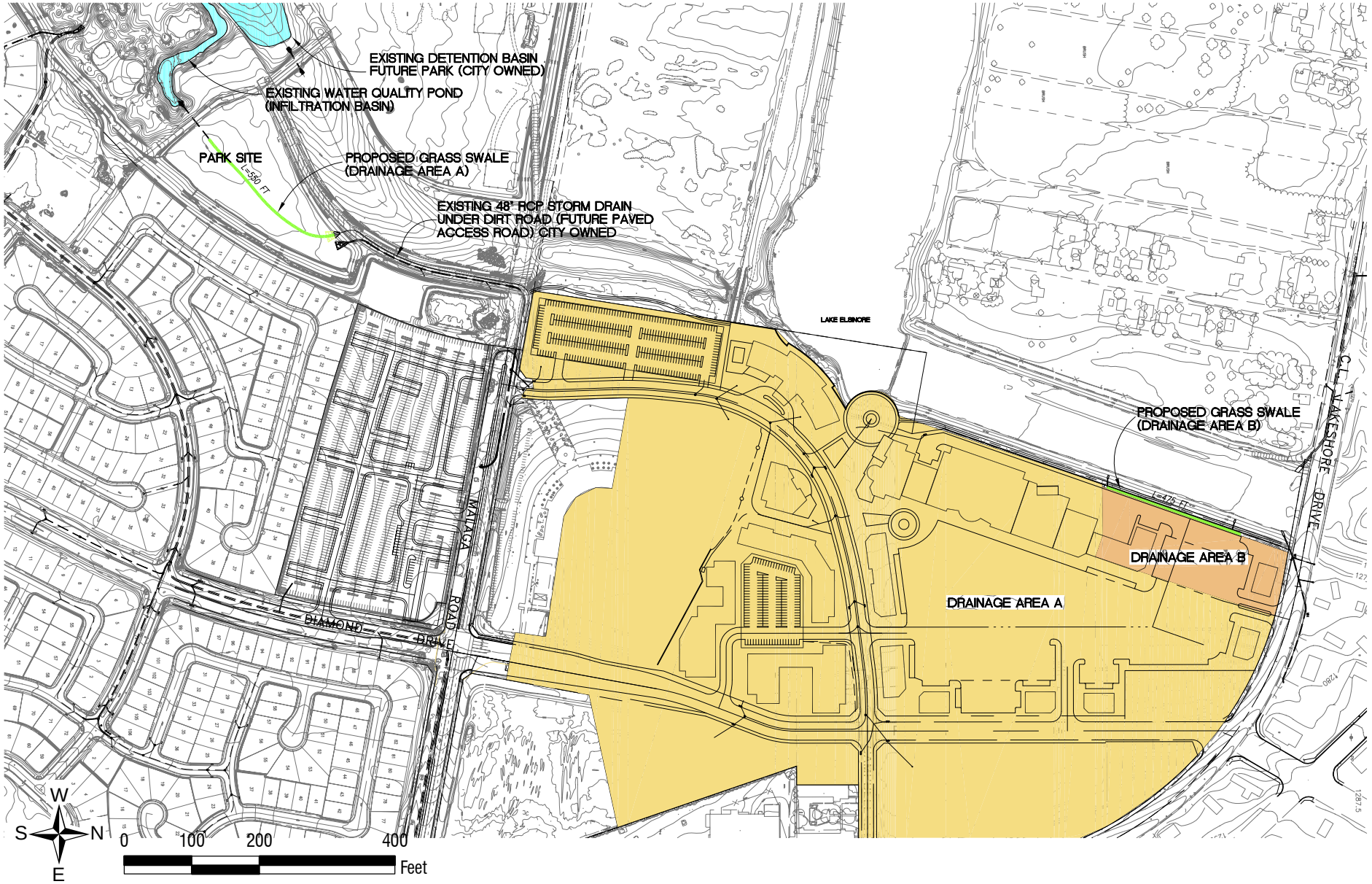

Diamond Specific Water Quality Improvement Area

FIGURE 4.7-3

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- Onsite ponding areas and retention facilities will increase opportunities for infiltration.
- Streets, sidewalks, and parking aisles will be constructed to the minimum widths necessary, provided the walkable environment and pedestrians' public safety is not compromised.
- Where off-street parking is available, street widths will be reduced.
- The use of impervious surfaces will be minimized in the landscape design.
- Where landscaping is proposed in parking areas, landscaping will be incorporated into the drainage design.
- Water quality education will be given to property owners, operators, tenants, occupants, and employees.
- Activity restrictions shall be in place to control water pollution sources.
- Irrigation systems and landscaping will have appropriate maintenance.
- Common area litter control will be in place.
- Street sweeping of private streets and parking lots shall occur.

With the Diamond Specific Plan improvements, the majority of storm flows would be contained within vegetated swales, or the infiltration and detention basins before ultimately draining into Lake Elsinore. The BMP improvements, grassy swales and use of detention and infiltration basins would effectively improve the water runoff quality draining from the Diamond Specific Plan site into the lake (Appendix G). Source control BMPs would be implemented through the authority of the Homeowner's Association. The backbone drainage system of the Diamond Specific Plan would be designed to reduce the flow of stormwater to prevent erosion or siltation of Lake Elsinore (Appendix G). With incorporation of BMPs, imposed water quality control features and compliance with all applicable standards, the Diamond Specific Plan would result in a less than significant impact on water quality.

Impacts to Beneficial Uses

Because the Diamond Specific Plan would be required to comply with the State's General Permit for Construction Activities, in addition to the implementation of an Erosion Control Plan and SWPPP, development of the Diamond Specific Plan would not result in runoff from the site that would adversely impact designated beneficial uses in the runoff-receiving watershed nor would it substantially impact public agency efforts to improve any currently recognized conditions of water quality impairment. Therefore, a less than significant impact is anticipated and mitigation is not required.

100-Year Flood Hazard (1% Chance of Flooding)

Federal Emergency Management Agency (FEMA) has changed their terminology when referring to 100-year flood hazards. Instead of mapping 100-year flood hazards, they refer to it as a 1 percent annual chance of flooding. As shown in Figure 4.7-4, portions of the site are located within FEMA-mapped zones that annually have a 0.2 percent or 1 percent chance of flooding (500-year or 100-year flood zones respectively). However, this map does not reflect the current floodplain elevations as updated through the August 2007 Determination of Letter of Map Revision. Based on Fill provided to the City of Lake Elsinore by FEMA (Appendix G.3). Figure 4.7-5 reflects the current floodplain elevation. The Diamond Specific Plan is mixed use and would consist of both commercial and residential uses throughout the project site. In accordance with the City of Lake Elsinore Municipal Code Section 15.68.010, all finished floor elevations within the proposed development would be set at or above an elevation of 1,267 feet,

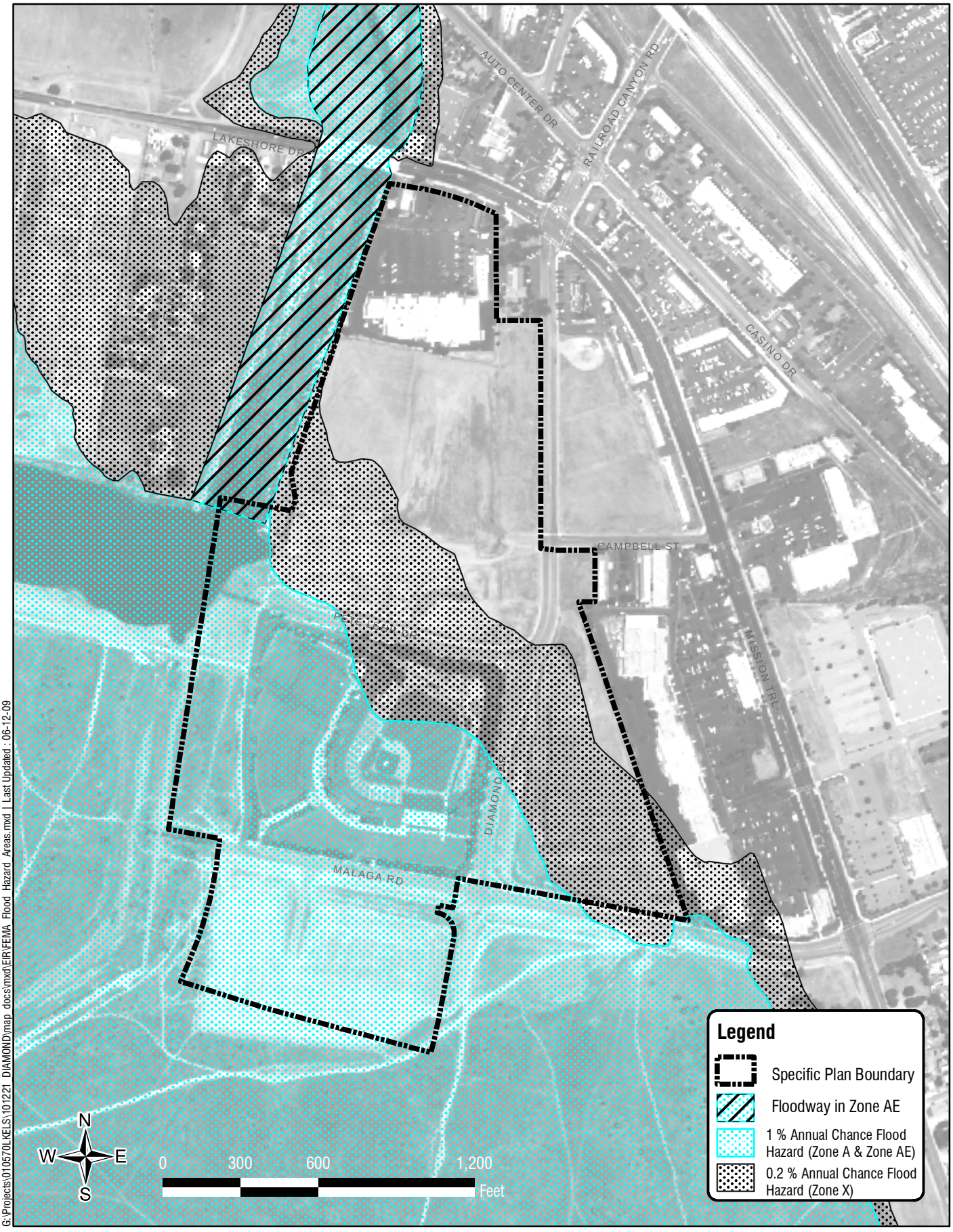
which is 3.7 feet above the 100-year flood water surface elevation of 1,263.3. As shown in Figure 2.3-11 (Grading Plan), the Diamond Specific Plan would be graded to elevations above the flood hazard zones. The Diamond Specific Plan would file a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) in order to show the change in elevation of the Diamond Specific Plan due to grading during construction. Because the mixed use structures would be constructed above the 100-year flood zone, the Diamond Specific Plan would result in a less than significant impact related to housing in the 100-year flood zone.

Impede or Redirect Flood Flows

The Diamond Specific Plan is currently located within a 100-year flood zone. However, the project applicant shall request a LOMR from FEMA, which would update official FEMA maps to accurately show the Specific Plan site as outside of a floodplain. During construction, the Diamond Specific Plan site would be graded to elevations above the flood hazard zones. The plan provides 22 acre-feet of flood storage. 17-acre-feet of flood storage are provided within the public open space and golf course area of the approved Summerly project. The flood storage is based on the current as-built conditions for Summerly and is to be maintained in perpetuity as required by the U.S. Army Corps of Engineers (USACE) Section 404 permit and approved HEC-5 analysis for the Summerly project. Any work within the flood storage area is required to be permitted and subject to the conditions which maintain the flood storage volumes for the back basin system. Therefore, the Diamond Specific Plan would not place structures, which would impede or redirect flood flows within a 100-year flood-hazard area or reduce overall flood storage such that flood heights would increase. Therefore, a less than significant impact is identified.

Failure of Levees or Dams

According to the Elsinore Area Plan of the Riverside County Integrated Project (RCIP), the Diamond Specific Plan is located within the high inundation zone of the Railroad Canyon Dam, which is located approximately three miles upstream and holds approximately 12,000 acre-feet of water. If a catastrophic failure were to occur at the dam, the 12,000 acre-feet of water would flow into the San Jacinto River and Lake Elsinore, possibly impacting the Diamond Specific Plan (a portion of the flow would dissipate into surrounding areas before reaching the site). According to the 1991 Dam Break Analysis for Railroad Canyon Dam, the surface elevation of Lake Elsinore varies between 1,240 and 1,260 feet above mean sea level (AMSL). The available storage created by this 20-foot difference in water surface elevation is approximately 95,000 acre-feet, which is more than sufficient to accommodate the 12,000 acre-feet stored in Railroad Canyon Dam should a failure occur. During a worst-case scenario (catastrophic failure of the dam), if 12,000 acre-feet of water were discharged into the lake when it is at its highest level of 1,260 feet AMSL with no discharge out of the lake and no discharge into the back basin, the water surface would reach 1263.4 feet AMSL. This would leave 3.6 feet of freeboard between the water surface level to finish floors of development in the Diamond Specific Plan (Pers. Comm. with Scott Wilson, Project Engineer, July 2009). Therefore, the Diamond Specific Plan would not be substantially impacted by inundation as a result of a failure of the Railroad Canyon Dam, and a less than significant impact has been identified for this issue area.



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FEMA Flood Hazard Areas

FIGURE 4.7-4

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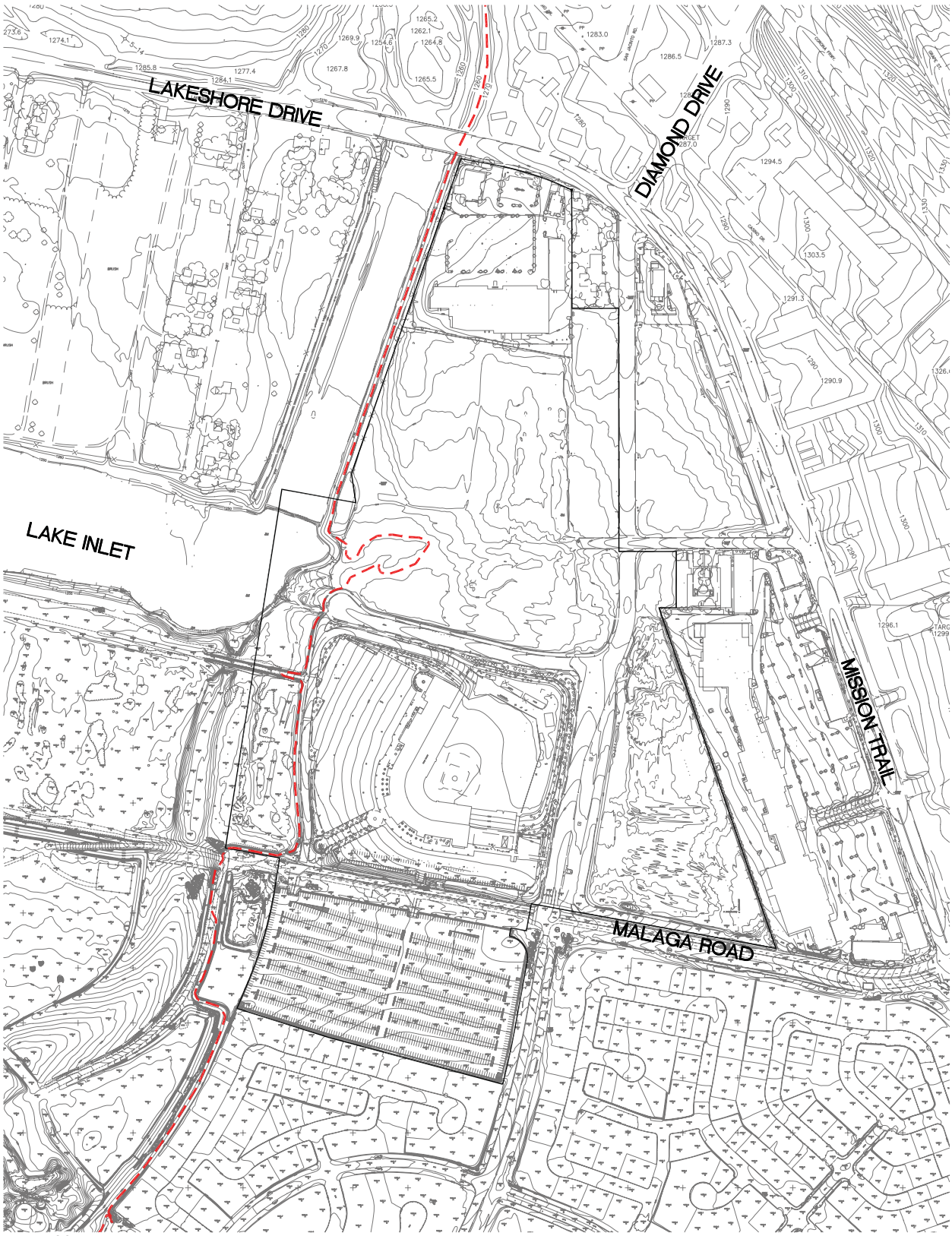

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Flood Elevation Based on Letters of Map Revision

FIGURE 4.7-5

Inundation by Seiche, Tsunami or Mudflow

Seiches are periodic oscillations of water in confined basins, typically caused by earthquakes. As noted in the Lake Elsinore General Plan of 1995, there is the potential for a seiche to occur in Lake Elsinore during an earthquake, although it would take a geologically substantial earthquake to cause a seiche. Seiche potential is highest in large, deep, steep-sided reservoirs or water bodies. Lake Elsinore lacks significant potential for a damaging seiche because it is very shallow, and because of flood control devices constructed by the USACOE including the berm fill at the southern end of the lake, and the proposed finish residential pad grades. Additionally, implemented flood control devices lower the potential for a seiche to occur. Therefore, a less than significant impact is anticipated.

The potential for the occurrence of a tsunami is similarly very low because the Pacific Ocean is the closest tsunami-producing open body of water and is located approximately 25 miles from the Specific Plan site; therefore, no impact from tsunami is anticipated.

The Diamond Specific Plan is flat with very little variation in elevation. Additionally, adjacent land is similarly without a great variation in elevation and primarily developed. Due to the relatively level elevation of both the site and the surrounding land uses there is a low potential for mudflow. As there is a low potential for the Diamond Specific Plan to be inundated by seiche, tsunami or mudflow, there is a less than significant hazard to the Diamond Specific Plan.

4.7.3 Cumulative Impacts

4.7.3.1 Hydrology

The Lake Elsinore Lake Management Plan addresses cumulative hydrological impacts for the San Jacinto River watershed affecting the lake. The watershed encompasses the following urban areas: Gilman Hot Springs, Hemet, Lake Elsinore, Menifee, Moreno Valley, Perris, San Jacinto, Sun City, and Winchester. Development on this area was anticipated by the East Lake Specific Plan (ELSP) of 1993 and was thus accounted for within the regional plan and watershed plan. Other projects, as this one, would be sized to accommodate storm water flows. The project does not convey water from other sites. Therefore, a less than significant cumulative impact is anticipated.

4.7.3.2 Water Quality

Ultimate development as planned in the watershed in conjunction with the proposed Diamond Specific Plan would potentially impact both surface water and groundwater quality. Without controls, both short-term construction-related impacts and long-term impacts due to pollutants and sediments in urban runoff could substantially impact water quality. However, as with the Diamond Specific Plan, related projects would be required to mitigate impacts through implementation of project specific construction (short-term) BMPs and permanent (long-term) drainage improvements. Therefore, cumulative water quality impacts are less than significant.

4.7.4 Environmental Mitigation Measures

The Diamond Specific Plan and cumulative projects would result in a less than significant impact to hydrology and water quality. No mitigation would be required.

4.7.5 Conclusion

Construction on the Diamond Specific Plan would alter the existing drainage patterns; however, water quality features such as the detention and infiltration basins and the grassy swales would be in place to prevent substantial erosion, siltation, flooding and limit polluted runoff, and recharge groundwater storage. Site drainage would have the appropriate capacity for surface runoff water. During construction and operation of the Diamond Specific Plan, water quality standards would be met to prevent violation of waste discharge requirements and prevent any adverse impact of beneficial uses of the watershed. The Specific Plan area would be graded to elevations above the floodplain and thus would not place any structures within a 100-year flood hazard area. Due to geographic elements, the site has a low potential of inundation by seiche, tsunami, mudflow, flood, or failure of a levee or dam. No significant project or cumulative impacts to hydrology or water quality were identified.

4.8 LAND USE AND PLANNING

4.8.1 Environmental Setting

Applicable Plans

The following plans were considered for analysis in the Environmental Impact Report (EIR) because they potentially have jurisdiction over the Diamond Specific Plan and the 10-acre General Plan Area.

City of Lake Elsinore – General Plan (1990)

The City of Lake Elsinore (City) General Plan is the officially adopted statement of local policy concerning the City's long-term development. The General Plan contains goals, objectives, and policies which guide development within the City. The spirit and intent of the General Plan is to "achieve and sustain a high quality of life for residents and visitors." The General Plan contains all the required elements, including Land Use, Open Space/Conservation, Public Safety and Urban Services, Circulation, Housing, and Noise. It also contains two voluntary elements, Parks and Recreation and Community Design. All local actions and documents must be consistent with the adopted General Plan.

Land Use Element (1990)

The City's General Plan Land Use Element establishes the framework for the principal development within the City. The Land Use Element describes existing land use characteristics and development patterns in the City. The Land Use Element is intended to reflect the values of the community with respect to development, redevelopment, and preservation of public and private properties within the City.

The City of Lake Elsinore General Plan Land Use Element also contains a section about land use compatibility considerations. It states that "compatibility between adjacent land uses in the Study Area is essential to achieve a safe, efficient, and well-organized community. The issues involved in examining compatibility of proposed projects include, but are not limited to, traffic generation, access locations, noise generation, public service demands, siting and visual appearance, and public safety."

Community Design Element (1990)

The City of Lake Elsinore Community Design Element serves to guide Lake Elsinore as it seeks to maintain its desirable rural characteristics while gaining those benefits found in urbanized communities. The goals, objectives, and policies of the Community Design Element address the evolutionary nature of the city as well as the rural characteristics that have historically contributed to a quality of life that residents seek to preserve and enhance.

The Community Design Element assesses Special Purpose Design Guidelines which are applicable to the project which include urban design features relating to Community Gateways and the I-15 corridor.

City of Lake Elsinore – Zoning Code (1990)

The City of Lake Elsinore Zoning consists of the establishment of various districts, including all the territory within the boundaries of the city, within which the use of land and buildings, the space of buildings, and the height and bulk of buildings are regulated. No buildings or structures shall be erected, reconstructed or structurally altered in any manner, nor shall any buildings or land be used for any

purpose other than as permitted and in conformance with the Zoning Code and all other ordinances, laws and maps referred to therein.

City of Lake Elsinore – General Plan Update (2009)

At the time of writing, the City is currently in the process of updating their existing General Plan. The proposed General Plan Update is based on a "vibrant vision of Lake Elsinore for the 21st Century…a city that has remembered, retained, and recreated the important qualities of its rich culture and history." The General Plan Update is divided into five chapters. The Community Form chapter includes: Land Use, Circulation, Growth Management, Housing, Community Facilities and Services, Parks and Recreation, Historic Preservation, and identifies the 11 District Plans as described below. The Public Safety and Welfare chapter includes Air Quality, Hazardous Materials, and Noise. The Resource Protection and Preservation chapter includes: Biological Resources, Open Space, Water Resources, Cultural Resources and Paleontological Resources, Aesthetics, and Sustainable Environment. Once adopted, all local actions and documents must be consistent with the updated General Plan.

As a part of the General Plan Update, the City was divided into 11 "District Plans" for the purpose of more detailed development direction addressing land use, urban design, transportation, and parks and recreation. These district plans recognize the unique attributes of each district and identify district goals and policies for development. The Ballpark District is intended to be an area characterized by vibrant mixed use entertainment, commercial, and residential uses that capitalize on the area's association with the Diamond Stadium. In order to facilitate development within the Ballpark District consistent with this vision, the General Plan designation for much of the area within the Ballpark District is Specific Plan.

In accordance with the proposed Ballpark District for the General Plan update, a new land use designation would be created for this area. The Commercial Mixed Use (CMU) designation is intended to meet the overall goals of the Ballpark District and provide for new development opportunities that are in line with the vision of the City for the 21st Century.

The exact date for the adoption of the updated General Plan is uncertain. Therefore, this EIR analyzes the project's consistency with both the existing General Plan (1990) and the General Plan Update (2009).

East Lake Specific Plan (1993)

The East Lake Specific Plan (ELSP), originally adopted in 1993, covered a 3,000-acre area at the east end of Lake Elsinore, and originally provided for up to 9,000 dwelling units and a combination of commercial, recreational and open spaces, in an area that was once undevelopable due to erratic flooding conditions associated with Lake Elsinore. This area is now developable due to the implementation of the Lake Management Plan and construction of flood management measures, including, but not limited to, the Spring Street outflow channel, the reinforced overflow weir and the 3.3-mile long/30-foot-high earthen levee at the Lake's south end.

The ELSP was subsequently amended by a series of Specific Plan Amendments (SPAs) between 1998 and 2006. Most of these amendments affected portions of the Recreation Village District in the easterly portion of the ELSP plan area, and involved redistribution of land uses due to flood storage needs, which were not provided for in the 1993 plan. The construction of the stadium in 1994 remained one of the only major improvements within the ELSP plan area until the grading and golf course construction provided for in SPA 6 was completed in 2007.

The proposed project includes preparation of a specific plan separate from the ELSP and a concurrent amendment to the ELSP to remove this area from within the ELSP so that it can be incorporated into a new specific plan for the Diamond project area. An additional 10 acres would be removed from the ELSP and would retain its underlying land use designation. This project includes an amendment to the 1993 ELSP.

City of Lake Elsinore - Redevelopment Agency (1980)

The City Council has been established as the Redevelopment Agency (RDA) for the City. The purpose of the Redevelopment Areas is to revitalize blighted areas, improve development potential, and to restore or increase the economic vitality of the City. Within the redevelopment areas, the RDA has the authority to dedicate tax increment and incur indebtedness in order to construct redevelopment projects or offer other qualified RDA programs. The Diamond Specific Plan area lies within Project Area Number 2 and Project Area Number 3 of the adopted Redevelopment Project Area

Western Riverside County Multiple Species Habitat Conservation Plan (2003)

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County. This Plan is one of several large, multi-jurisdictional habitat planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region, including the City of Lake Elsinore. The MSHCP is a criteria-based plan, focused on conserving 146 species through creation of a habitat reserve system. The MSHCP also serves to enhance maintenance of biological diversity and ecosystem processes while allowing the fulfillment of future economic goals. The County of Riverside adopted the MSHCP on June 17, 2003. The MSHCP identifies conservation [reserve] subunits and target conservation acreages within each area plan. The City of Lake Elsinore, including the project site, is located within the Elsinore Area Plan.

Additional information on these Riverside County Integrated Plan (RCIP) components and their relationship with the proposed project is provided in Sections 4.13, Transportation and Traffic, and 4.3, Biological Resources of this EIR.

Southwest Transportation Uniform Mitigation Fee Zone Transportation Improvement Program (2009)

The Riverside County Transportation Commission's Transportation Uniform Mitigation Fee (TUMF) is the largest multi-jurisdictional fee program in the nation. The TUMF has become a critical way to make sure that growth doesn't create gridlock on regional and local thoroughfares. The TUMF is structured so that 48.7 percent of funds generated in each zone go back to that zone to be programmed for projects. Another 48.7 percent is allocated to regional inter-zone projects programmed by the Riverside County Transportation Commission (RCTC), and 2.6 percent is allocated for regional transit projects programmed by the Riverside Transit Agency.

Under the TUMF, Western Riverside County is divided into five zones. The City of Lake Elsinore is within the Southwest TUMF Zone and has agreed to participate in the fee program.

2008 Regional Transportation Plan: Making the Connections – Southern California Association of Governments

On May 8, 2008, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 2008 Regional Transportation Plan (RTP): Making the Connections. The RTP is the

culmination of a multi-year effort involving stakeholders from across the SCAG Region; including Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial Counties. The RTP focuses on improving the balance between land use, and the current and future transportation systems.

The goals and policies of the 2008 RTP were adopted to help guide regional transportation investments and continue to reflect the transportation policies of the region. Transportation investments in the SCAG Region that receive State or Federal transportation funds must be consistent with the RTP and must be included in the Regional Transportation Improvement Program (RTIP) when ready for funding. The RTP contains seven core goals to help guide regional transportation investments and continue to reflect the transportation policies of the region.

Compass Blueprint Growth Vision – Southern California Association of Governments (2004)

In an effort to provide local decision-makers with the tools they need to plan more effectively for the six million new residents projected to live in Southern California by 2030, SCAG undertook a growth visioning initiative called *Southern California Compass*. The objective of this effort was to develop a comprehensive new vision for Southern California over the next 30 years by taking an inclusive approach to planning at both the local and regional levels.

The input derived from this multi-phased involvement effort led directly to the development of a new vision for Southern California. The Southern California Compass vision adopted by SCAG's Regional Council in June 2004 helps to set a new course for Southern California to accommodate growth, reduce traffic congestion, preserve open space, manage and minimize pollution, and manage resources more efficiently. The implementation framework known as the *2% Strategy: Shared Values, Shared Future* seeks to assist cities and counties develop strategies to accommodate future growth while promoting SCAG's regional principles of Mobility, Livability, Prosperity and Sustainability for current and future generations of Southern Californians.

Existing Land Uses

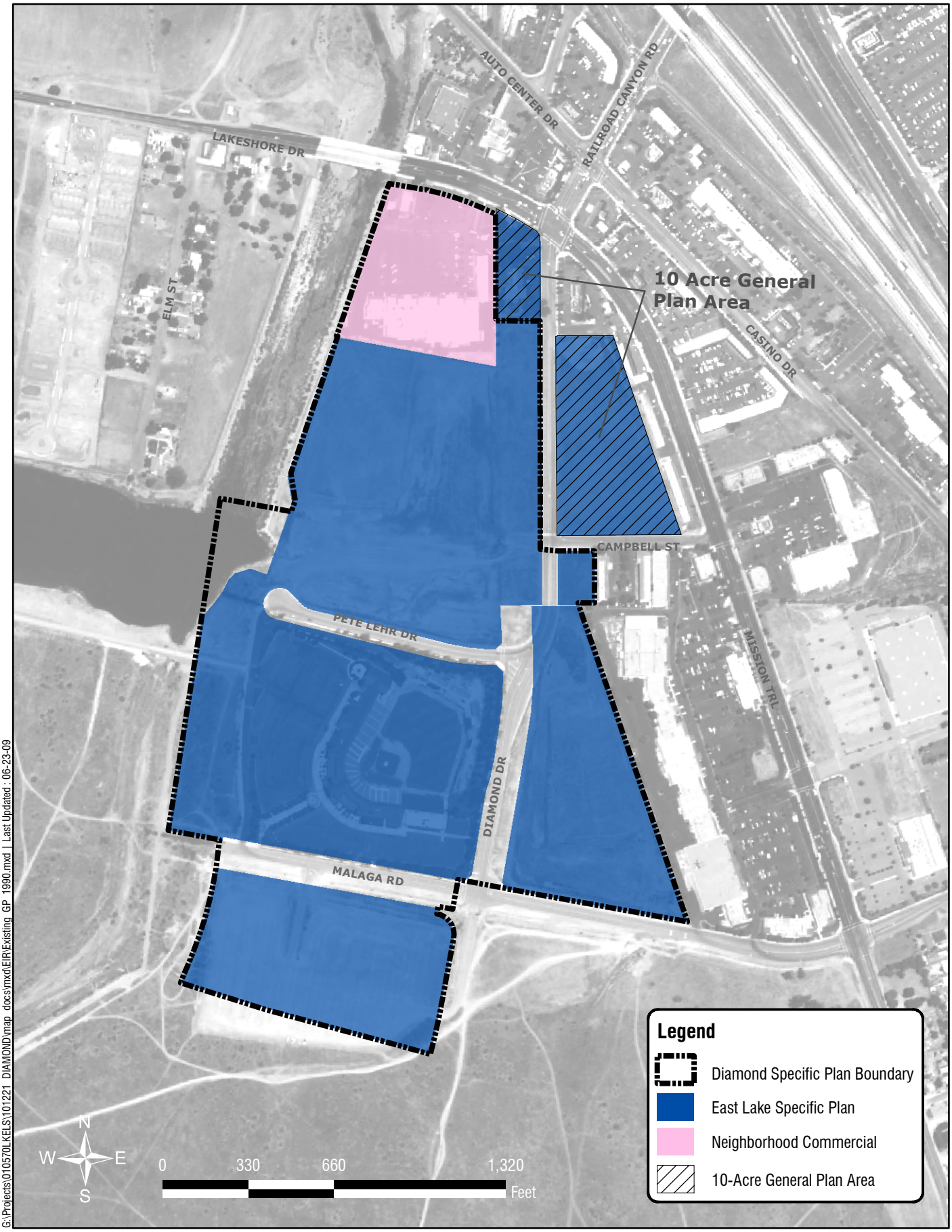
Existing General Plan Land Use Designations (1990)

Under the existing General Plan (1990), the Diamond Specific Plan area is designated as a combination of Neighborhood Commercial and Specific Plan Area, governed by the ELSP. The 10-acre General Plan Area is designated as Specific Plan Area, governed by the ELSP.

The existing General Plan land use designations for the Diamond Specific Plan, and the 10-acre General Plan area, are shown on Figure 4.8-1 and Table 4.8-1.

Table 4.8-1. Land Use Acreages (1990 General Plan)

Land Use	Acreage	% of the Diamond Site
Diamond Specific Plan		
Neighborhood Commercial	11	12.6%
East Lake Specific Plan	76.2	87.4%
Total	87.2	100%
10-Acre General Plan Area		
East Lake Specific Plan	10.0	0%
Total	10.0	0%



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Existing General Plan Land Use Designation (1990)

FIGURE 4.8-1

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Preferred General Plan Land Use Designation (General Plan Update 2009)

Under the General Plan Update (2009), the Diamond Specific Plan area is designated as a combination of Neighborhood Commercial and Specific Plan Area, governed by the ELSP within the General Plan Ballpark District. The 10-acre General Plan Area is designated as CMU within the General Plan Ballpark District.

The Preferred General Plan land use designations within the General Plan Update (2009) for the Diamond Specific Plan area, and the 10-acre General Plan area, are shown on Figure 4.8-2 and Table 4.8-2.

Table 4.8-2. Land Use Acreages (General Plan Update 2009)

Land Use	Acreage	% of the Diamond Site
Diamond Specific Plan		
Neighborhood Commercial	11	12.6%
East Lake Specific Plan	76.2	87.4%
Total	87.2	100%
10-Acre General Plan Area		
Commercial Mixed Use	10.0	0%
Total	10.0	0%

The Neighborhood Commercial designation is intended for neighborhood shopping centers and small convenience centers which provide for the day-to-day goods and services required by residents in the immediate vicinity. This area is intended to provide a concentration of retail uses, including, but not limited to, personal services, food and general merchandise stores, eating establishments, and repair stores.

The East Lake Specific Plan was adopted in 1993 and amended eight times since its adoption. The plan provides specific land use development direction for the project area, generally calling for commercial development on the surrounding parcels. The ELSP, as amended also provides direction on overall infrastructure and circulation layouts in the area. As a part of the General Plan Update (2009), the area covered by the 1993 ELSP would be divided into two district plans, the East Lake District and the Ballpark District. The Ballpark District includes all of the acreage of the Diamond Specific Plan and the 10-acre General Plan Area.

The CMU district is intended to accommodate a mix of land uses in a compact pattern that would promote high quality, pedestrian friendly, interactive neighborhoods where amenities are focused on a local main street. Commercial mixed-use districts are characterized by interconnected streets with on-street parking, wide sidewalks, building entries along the street, and architectural features and outdoor public spaces and activities that promote pedestrian activity.

Zoning Designation

A small area in the northern portion of the Diamond Specific Plan area is zoned C-1 (Neighborhood Commercial District). The remaining portion of the Diamond Specific Plan area is within the East Lake Specific Plan, which governs the zoning of the site. The zoning directly corresponds to the approved land uses of the Specific Plan as follows: General Commercial (GC), Open Space (OS), and Special Alternative Use (Diamond Stadium).

The 10-acre General Plan Area is currently zoned GC, per the ELSP. The existing zoning for the Diamond Specific Plan and the 10-acre General Plan Area is shown on Figure 4.8-3 and Table 4.8-3.

Table 4.8-3. Zoning

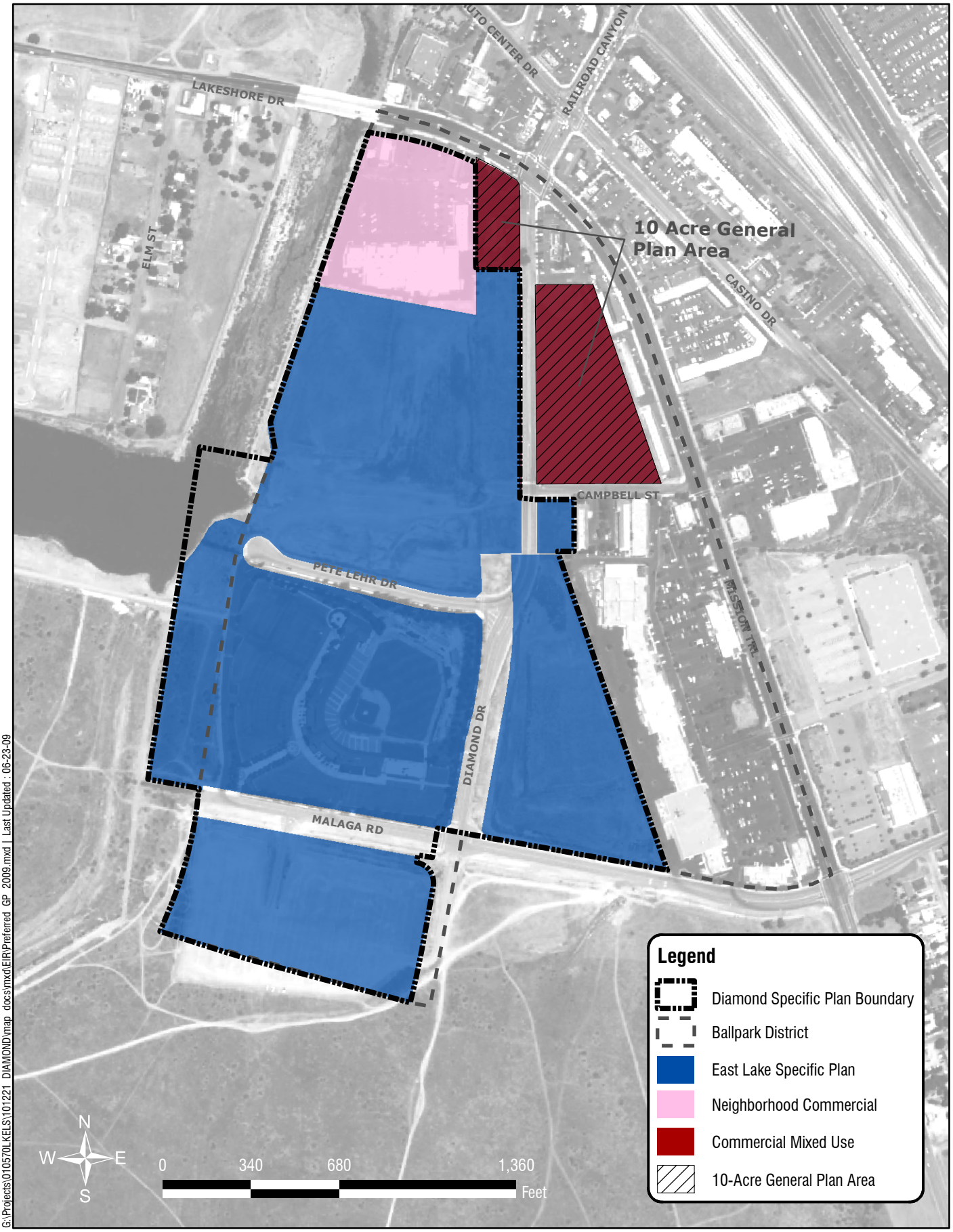
Zoning	Acreage	% of the Diamond Site
Diamond Specific Plan		
C-1(Neighborhood Commercial)	11	12.6%
General Commercial (GC)	39.7	45.5
Open Space (OS)	9.5	10.9
Special Alternative Use (SAU)	19	21.8
Roads	8	9.17
Total	87.2	100%
10-Acre General Plan Area		
General Commercial	10.0	0%
Total	10.0	0%

The "C-1" District is intended to provide locations for general retail and office uses which offer the sale of goods and services to the general public and which, through characteristics of their operation, serve primarily the day-to-day shopping needs of the local residents. Whereas C-1 properties are expected to be located in closer proximity to residential districts and on smaller City streets than the more intense commercial designations, the C-1 district is not intended for those uses which because of size or nature of operation generate vehicular or truck traffic beyond that normally associated with a neighborhood use. Uses permitted shall include apparel stores, appliance stores, bicycle shops, general merchandise stores, florists, dry cleaners, markets, bakeries, health food establishments, and candy stores etc.

The GC land use designation per the ELSP is intended to provide for a wide range of retail and service activities including department stores, restaurants, hotels, theatres, office, and specialized services. GC has been located to encourage consolidated centers of activity with direct access to major roads and freeway interchanges. GC areas are intended to be of high quality design and pedestrian oriented and shall contain sufficient off-street parking.

The OS land use designation per the ELSP is an integral component of East Lake. The OS system primarily consists of two broad types of open space, including Developed OS and Natural OS. Developed OS includes public parks, sports parks, private parks and/or recreation centers, marinas, golf courses, and trails. Natural OS includes multi-habitat corridors, wetland mitigation area, and a portion of Rome Hill. In addition, this land use category indicates lands acquired by exaction, easement, fee, and other methods sanctioned by state and federal law to preserve areas of biological and cultural significance and areas with development constraints due to topography, geologic instability, flooding, and other hazards.

The Special Alternative Use Area land use designation serves as the location of the Diamond stadium and other related commercial uses in accordance with the ELSP. The stadium was constructed in 1994 and lies at the northwest corner of Malaga Road and Diamond Drive.



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Preferred General Plan Land Use Designations (2009)

FIGURE 4.8-2

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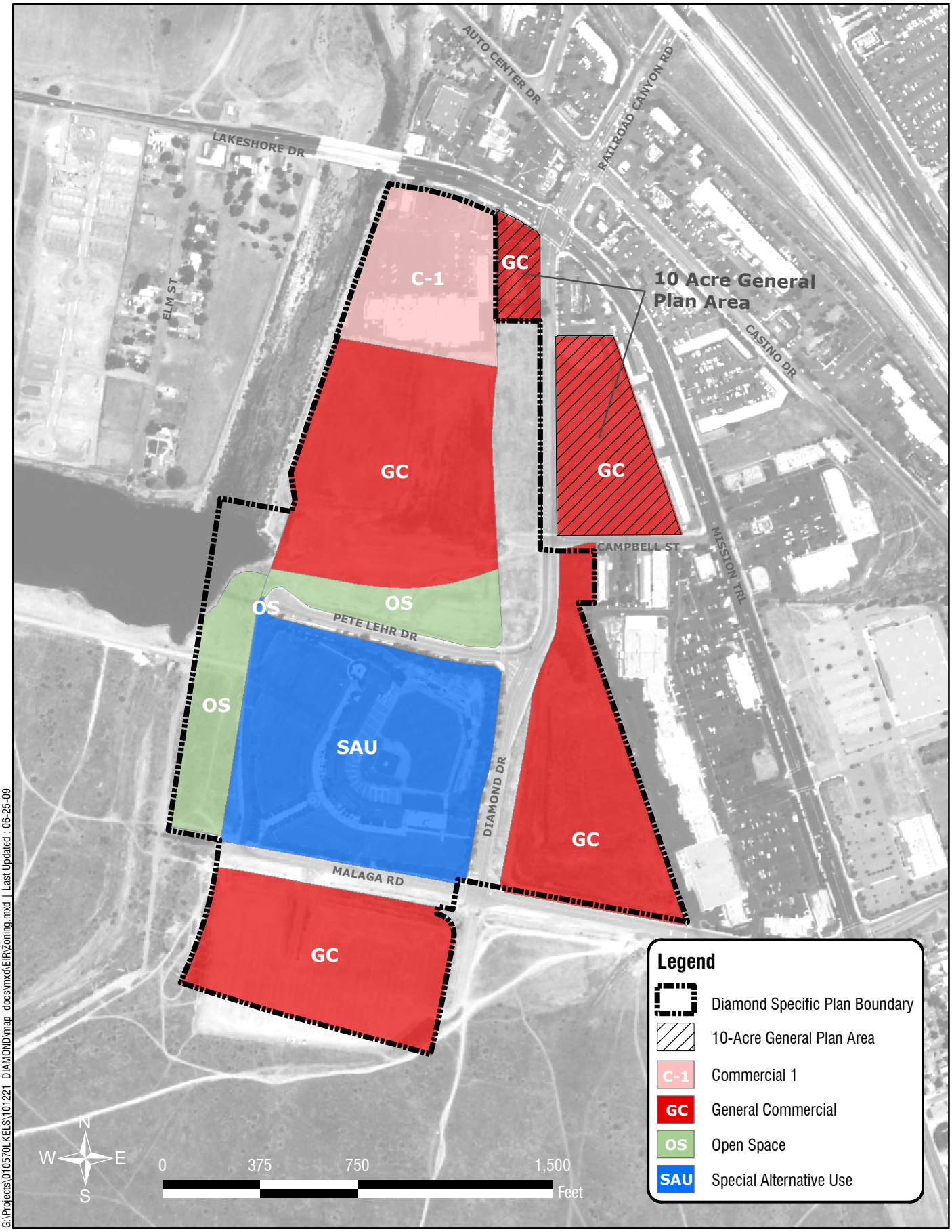

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Existing Zoning Designations

FIGURE 4.8-3

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Redevelopment Areas

The purpose of redevelopment is to revitalize blighted areas and encourage new development. The Diamond Specific Plan area lies within Project Area Number 2 and Project Area Number 3 of the adopted Redevelopment Project Area, as shown in Figure 4.8-4. The 10-acre General Plan Area is within Project Area Number 2, as shown in Figure 4.8-4.

Surrounding Land Uses

The project site is surrounded by a number of land use designations per the City's General Plan Update (2009). Surrounding land uses include: Floodway, Tourist Commercial and CMU to the north; CMU and Specific Plan Area (Residential up to 6 du/acre per the ELSP) to the east; Specific Plan Area (OS and Residential up to 6 du/acre per the ELSP) to the south and Lake Elsinore to the west.

Specifically, the site is bound by Lakeshore Drive and existing shopping centers and to the north; a mix of vacant property, medical offices, and commercial retail businesses to the east; the master planned community of Summerly, currently under construction to the south; and the San Jacinto River runs along the western border of the project leading to Lake Elsinore to the west, as shown in Figure 3.1-1.

Proposed Land Uses

The project includes an amendment to the ELSP to remove 86.4 acres from the ELSP and place the majority of that acreage within a new specific plan called the "Diamond Specific Plan." The proposed ELSP Amendment (Amendment 9) removes from the ELSP the Stadium which accounts for 19 acres of Special Alternative Use, approximately 52 acres of GC area, 7.5 acres of OS, and 8 acres of roads, as shown in Table 4.8-4, ELSP Amendment 9 Project Area. The proposed Amendment 9 is consistent with the goals and objectives of the ELSP and only changes the boundary of the ELSP and reduces the maximum yields for buildout. Amendment 9 would also require a General Plan Amendment to the City's current General Plan (1990).

Table 4.8-4. ELSP Amendment 9 Project Area

Land Use Category	Acreage
General Commercial	51.7
Open Space	7.5
Special Alternative Use (Stadium)	19.0
Roads	8.2
Total	86.4

Approximately 10 acres would not be included within the newly created Diamond Specific Plan. If Amendment 9 is approved ***prior to*** the adoption of the City's updated General Plan, the area referred throughout this EIR as the "10-acre General Plan Area" would retain the underlying land use designation of the ELSP, which is GC. The proposed land uses under the existing General Plan (1990) are shown on Figure 4.8-5.

If Amendment 9 is approved ***after*** the adoption of the City's General Plan Update (2009), the area referred throughout this EIR as the "10-acre General Plan Area" would retain the underlying CMU General Plan land use designation and Zoning for that area, consistent with the Ballpark District for the area, as shown on Figure 4.8-6. The ELSP Amendment 9 Project Area is shown on Figure 2.1-3.

The Diamond Specific Plan would contain an overall "Mixed Use" land use designation that would be integrated both horizontally and vertically, and would incorporate pedestrian linkages, plazas, commons, and promenades that reflect the goals and objectives of the East Lake Specific Plan and the Ballpark District, providing for commercial, office, educational, entertainment, and residential uses in a mixed use urban setting. The Diamond Land Use Plan would be allocated to six Planning Areas, as shown in Figures 4.8-5 and 4.8-6.

Currently there are no development plans for the 10-acre General Plan Area. The Amendment 9 does not include any development plans or changes to the substantive portions or goals of the existing ELSP. In order to eliminate the creation of an island governed by the ELSP, the 10-acre General Plan area would be removed from the ELSP resulting in a contiguous ELSP boundary along the southern edge of the Diamond project site and Malaga Road and a new specific plan for the Diamond project area.

Table 4.8-5, Planning Area Statistical Summary indicates the maximum amount of development, or land use yields, throughout the Diamond Specific Plan.

Table 4.8-5. Summary of Diamond Land Use Plan

SP Land Use Designation	Acres	Target Yield(1)	
		Floor Area/ Hotel Rooms	Units
PA-1	7.1	82,000 SF	50
PA-2	27.5	590,000	275
PA-3	7.3	30,000 SF(2)/ 150 Rooms (3)	----
PA-4	16.1	35,000 SF	----
PA-5	11.7	110,000 SF	50
PA-6	11.7	50,000 SF	225
Roads	5.8		
Total Acres	87.2		
Maximum Floor Area(4) (SF) Maximum Hotel Rooms		897,000 SF 150 Rooms	
Maximum Residential Units			600

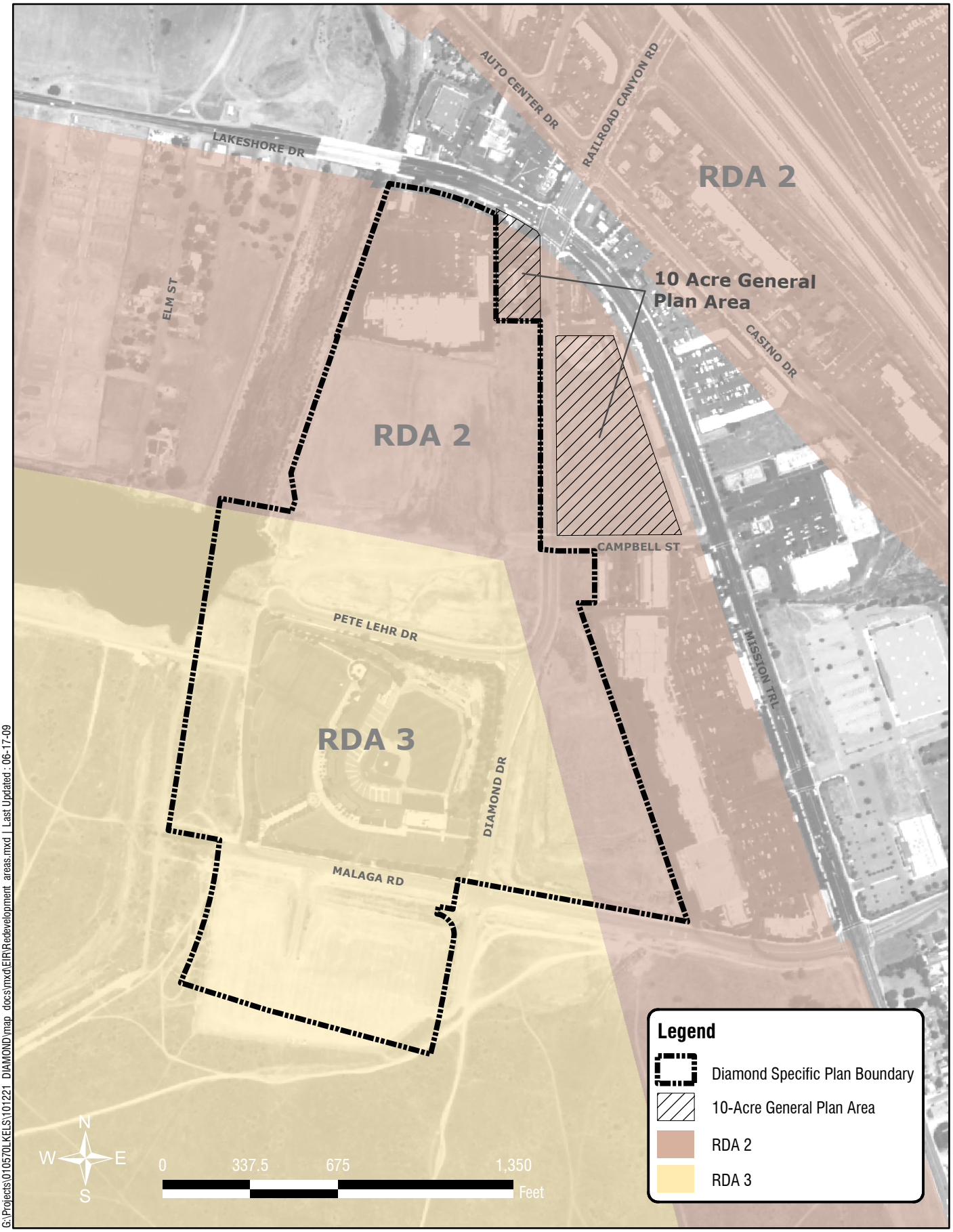
Source: RGP Planning & Development Services 2009 (a)

[1] Target Yields are based on preliminary land use Programming and subject to the Plan Flexibility provisions outlined in Section 3.3.1 of the Specific Plan

[2] Floor area for retail uses within hotel and does not include the floor area for rooms.

[3] The number of rooms will be based upon market conditions and may be increased to 300 rooms. Should the number of hotel rooms increase, the permitted square footage of mixed-use development would be reduced by 100,000 SF to 797,000 SF.

[4] Maximum floor area represents new development. However, this total does not include residential floor area, the hotel floor area or the existing floor area within the Diamond Stadium (50,000 SF±), which are in addition to the Mixed Use total shown.



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Redevelopment Areas

FIGURE 4.8-4

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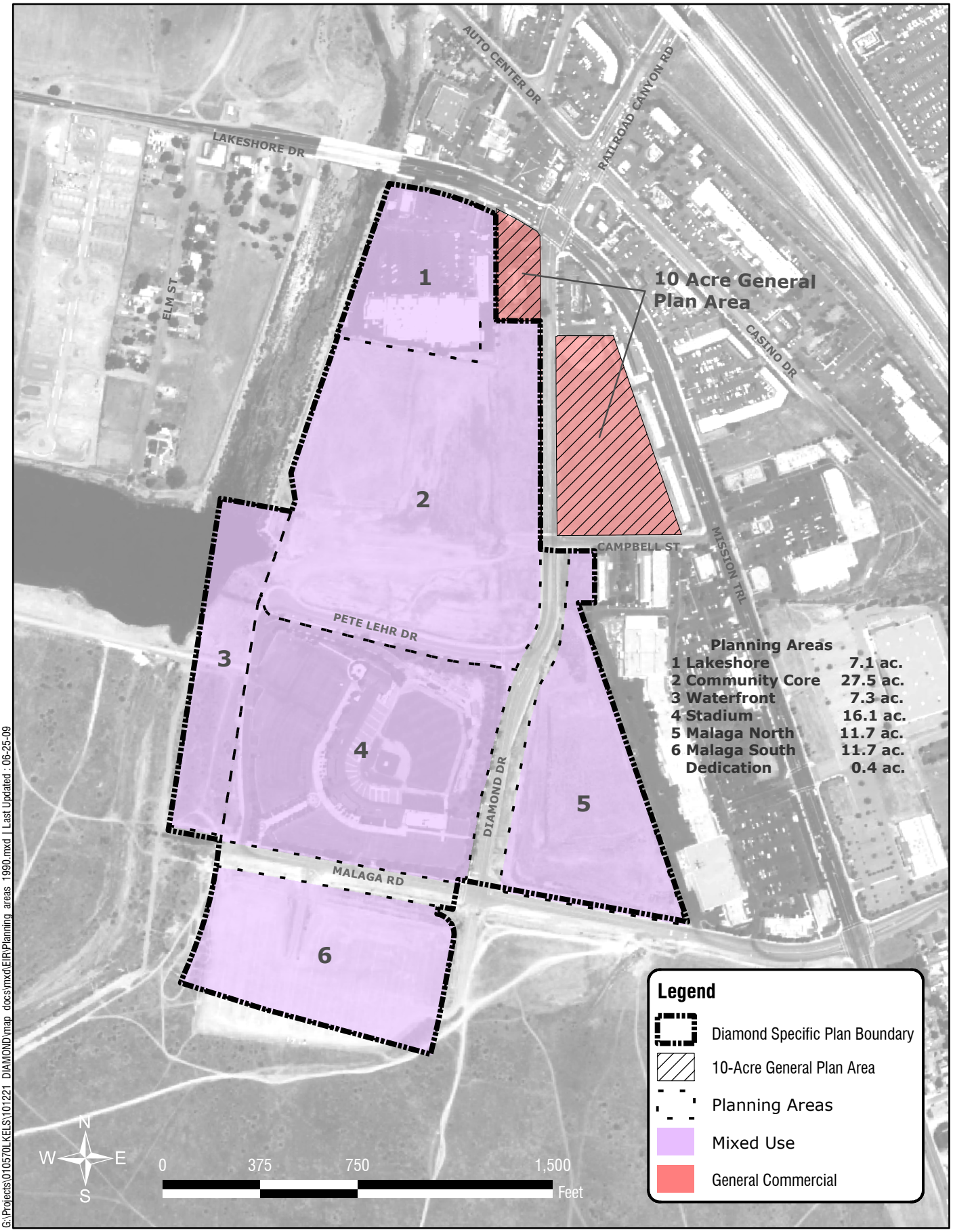

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Proposed Land Uses and Planning Areas Under Existing General Plan (1990)

FIGURE 4.8-5

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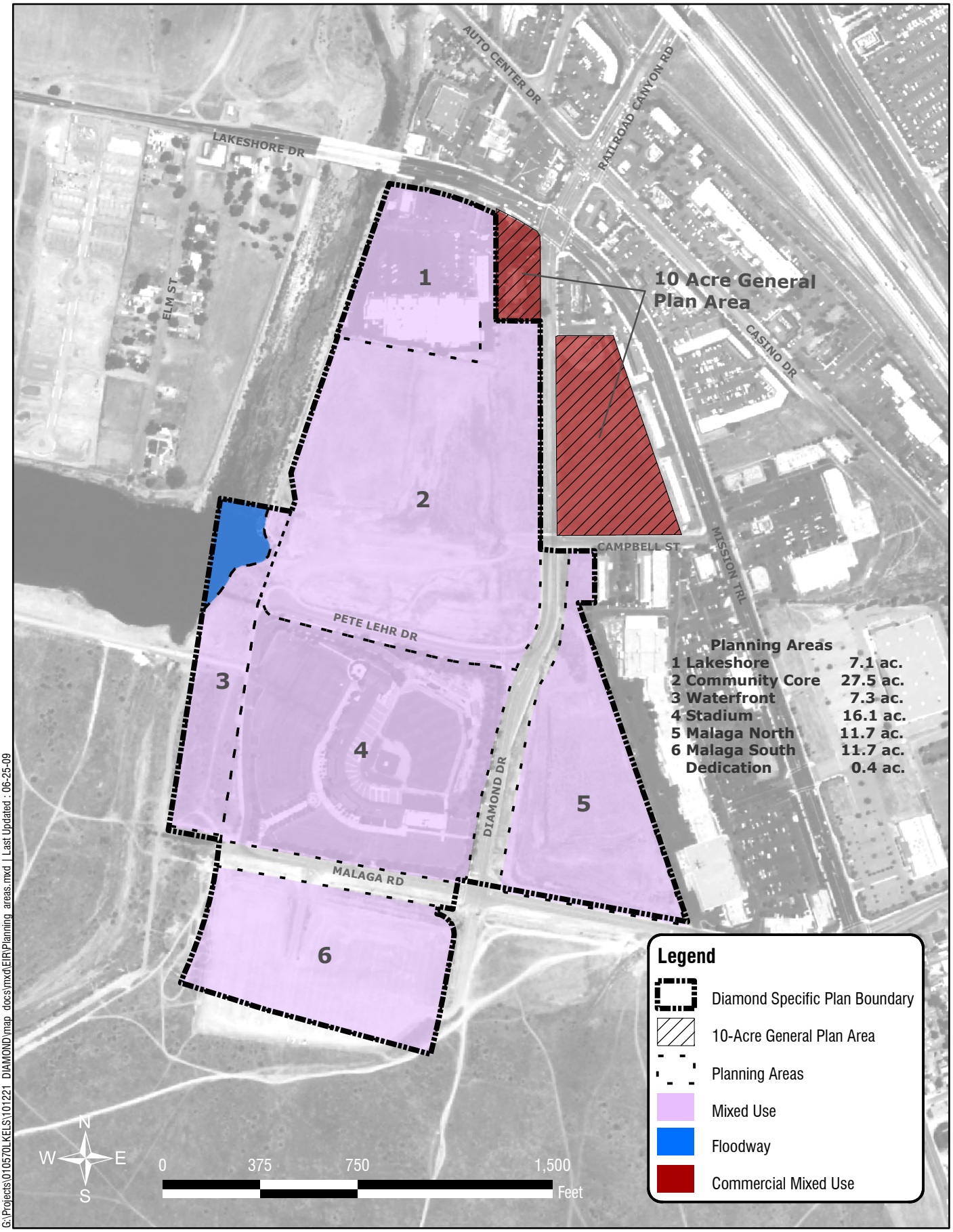

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Proposed Land Uses and Planning Areas Under General Plan Update (2009)

FIGURE 4.8-6

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4.8.2 Project Impacts

Thresholds of Significance

Implementation of the Diamond Specific Plan would result in a significant land use impact, as defined in Appendix G (IX) of the *CEQA Guidelines*, if the project would:

- 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; or
- Conflict with any applicable habitat conservation plan.

Environmental Impacts

The project proposes a Specific Plan Amendment to the East Lake Specific Plan. Additionally, a new Specific Plan proposed for the Diamond project area, would serve as the zoning and development standards for the project site. It is unknown whether the General Plan Update (2009) will be adopted prior to the close of the environmental review of this project. If the updated General Plan is adopted after the approval of the project, the proposed land uses in accordance with the Diamond Specific Plan and the 10-acre General Plan area for either scenario would apply; and would be consistent with the existing General Plan at the time of adoption.

The proposed project consists of the following discretionary approvals:

- General Plan Amendment to City of Lake Elsinore General Plan (1990)
- Zone Change
- East Lake Specific Plan Amendment
- Diamond Specific Plan Approval

All of these discretionary actions would be considered when creating an understanding of the potential impacts to land use and planning of the proposed project.

Physical Division of an Established Community

The Diamond Specific Plan area and the 10-acre General Plan area already serve as a gateway to the community. Any future development in accordance with the Diamond Specific Plan is intended to complement the existing Diamond Stadium and provide access and connectivity between the site and surrounding uses. The specific plan would provide a connection from the existing master planned community to south (Summerly), through the ballpark area, and to the rest of the City. Neither components of the project would create new barriers in areas that contain existing communities. Therefore, the project would not physically divide an established community; and a less than significant impact is identified.

Consistency with Applicable Land Use Plans, Policies, or Regulations

See Table 4.8-6 for consistency with applicable land use plans, policies, or regulations.

Table 4.8-6. Applicable Land Use Regulations

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
The City of Lake Elsinore General Plan (1990)	Neighborhood Commercial (NC) Designation	The Neighborhood Commercial General Plan designation is intended for neighborhood shopping centers and small convenience centers which provide for the day-to-day goods and services required by residents in the immediate vicinity. This area is intended to provide a concentration of retail uses, including, but not limited to, personal services, food and general merchandise stores, eating establishments, and repair stores.	Under the existing General Plan (1990), the northern portion of the Diamond Specific Plan area is designated "NC," and is the site of the Lake Elsinore Valley Center. The proposed Specific Plan would result in an overall Mixed Use (MU) land use designation for the site (Figure 4.8-5) The Diamond Specific Plan allows for the same uses that are allowed in the Neighborhood Commercial area. Therefore, the Diamond Specific Plan would not result in a significant impact.	N/A
The City of Lake Elsinore General Plan (1990)	Specific Plan Area H (East Lake Specific Plan)	The Specific Plan area is intended to provide a range of housing types, tourist-oriented uses, regional and local commercial activities, and a variety of recreational uses. The project area is currently designated as Specific Plan Area H.	Under the existing General Plan (1990), the majority of the Diamond Specific Plan area is designated as Specific Plan Area, governed by the ELSP. The proposed Specific Plan would result in an overall Mixed Use (MU) land use designation for the site (Figure 4.8-5) and is intended to complement and build upon the existing development of the Diamond Stadium. The Diamond Specific Plan would allow for all of the uses currently allowed in ELSP Plan Area H and would not result in a significant impact.	The area includes 4 acres of existing retail development, with a current land use designation of General Commercial (GC). Although no development plans are proposed as part of this project, future commercial uses could be developed on vacant portions of the site. The GC land use designation would remain the same for the 10-acre General Plan Area. Therefore, the project would not result in a significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
The City of Lake Elsinore General Plan Update (2009)	Neighborhood Commercial (NC) Designation	The Neighborhood Commercial General Plan designation is intended for neighborhood shopping centers and small convenience centers which provide for the day-to-day goods and services required by residents in the immediate vicinity. This area is intended to provide a concentration of retail uses, including, but not limited to, personal services, food and general merchandise stores, eating establishments, and repair stores.	Under the General Plan Update (2009), the northern portion of the Diamond Specific Plan area is designated "NC" within the Ballpark District. The proposed Specific Plan would result in an overall Mixed Use (MU) land use designation for the site (Figure 4.8-6) to implement the goals and objectives of the Ballpark District. The Diamond Specific Plan allows for the same uses that are allowed in the Neighborhood Commercial area. Therefore, the Diamond Specific Plan would not result in a significant impact.	N/A
The City of Lake Elsinore General Plan Update (2009)	Specific Plan Area H (East Lake Specific Plan)	The Specific Plan area is intended to provide a range of housing types, tourist-oriented uses, regional and local commercial activities, and a variety of recreational uses. The project area is currently designated as Specific Plan Area H.	The proposed project would result in an amendment to the existing Specific Plan (Amendment 9) removing 86.4 acres and incorporating the majority of this land into a new Specific Plan called the Diamond Specific Plan. The Diamond Specific Plan would result in an overall Mixed Use (MU) land use designation for the site (Figure 4.8-6). The MU designation would offer a dynamic mix of commercial, entertainment, and residential uses to implement the goals and objectives of the Ballpark District. The Diamond Specific Plan would allow for all of the uses currently allowed in ELSP Plan Area H and would not result in a significant impact.	Currently there are no development plans for the 10-acre General Plan Area. In addition, the Amendment 9 does not include any development plans or any changes to the substantive portions of the existing ELSP, or any of the Plan's goals. In order to eliminate the creation of an island governed by the ELSP, Amendment 9 would result in a contiguous ELSP boundary along the southern edge of the Diamond project site and Malaga Road and provide for a contiguous CMU land use designations for the area along Mission Trail and Lakeshore Drive. The new land use designation of CMU for the 10-acre General Plan Area would be consistent with the goals and policies of the Ballpark District. Therefore, the 10-acre General Plan area would not result in a significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
The City of Lake Elsinore General Plan Update (2009)	Ballpark District Goal #1	The primary goal of the Ballpark District is to redevelop into a vibrant "Dream Extreme" mixed-use entertainment, commercial, and residential district by capitalizing upon the opportunity associated with Diamond Stadium.	Consistent with the General Plan direction from the Ballpark District, the proposed uses would be combined in an overall Mixed Use (MU) land use designation for the site (Figure 4.8-6) that allows creative blending of the retail, office, hotel, education, and high density residential uses throughout the plan area. The existing Diamond Stadium would form an organizing design feature and activity focal point. Non-residential Floor Area Ratios (FARs) and residential density would also be consistent with the CMU and Tourist Commercial use development criteria outlined in the General Plan, designated at up to 0.80 FAR and 18 dwelling units per acre (DU/AC) respectively.	In accordance with the proposed Ballpark District for the General Plan Update (2009), a new land use designation would be created for this area. The CMU designation is intended to meet the overall goals of the Ballpark District and provide for new development opportunities that are in line with the vision of the City for the 21st Century.
The City of Lake Elsinore General Plan Update (2009)	Ballpark District Policy BP 2.1	Establish design guidelines for the Ballpark District that encourage pedestrian oriented development.	The plan includes public plazas, walkways, trails, and social gathering points incorporated into the plan to promote outdoor activity and pedestrian mobility. Therefore, no impact is identified.	The CMU land use designation is proposed for the 10-acre General Plan area. This designation is intended to accommodate a mix of land uses in a compact pattern that would promote high quality, pedestrian friendly, interactive neighborhoods where amenities are focused on a local main street. Commercial mixed-use districts are characterized by interconnected streets with on-street parking, wide sidewalks, building entries along the street, and architectural features and outdoor public spaces and activities that promote pedestrian activity.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
The City of Lake Elsinore General Plan Update (2009)	Ballpark District Policy BP 2.2	Encourage commercial and entertainment uses in mixed use areas along street frontages.	The development plan provides for street-adjacent mixed use development along Diamond Drive, and the proposed Diamond Circle that includes a mix of office, retail, and restaurants with outdoor seating proposed throughout the project. Therefore, no impact is identified.	The 10-acre General Plan Area is located along Railroad Canyon Road. Although no development plans are proposed as part of the project, commercial and entertainment uses would be permitted in this area along Railroad Canyon Road. Therefore, no impact is identified.
The City of Lake Elsinore General Plan Update (2009)	Ballpark District Policy BP 2.3	Construct community gateway identification signs at the I-15 and Diamond Drive interchange and main points of entry to the "Ballpark District" and surrounding neighborhoods.	The Diamond Specific Plan includes primary entry treatments and secondary entry treatments to enhance the identification of the project to the surrounding community. These entry monuments would provide a main point of entry into the project. Therefore, no impact is identified.	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
City of Lake Elsinore General Plan Community Design Element	Special Purpose Design Guidelines, Community Gateways	The purpose of community gateways guidelines are to provide for entryway as a first impression of the community identity to visitors. The entries of the City should be enhanced and strengthened. Entryways include the I-15 corridor and Railroad Canyon Road and Mission Trail that both lead into the project site. The design of the community gateways should reflect special accent points which announce community entry and establish a unique theme, character and concept. Monumentation, signs, entryways and streetscape features should provide an initial impression and image of the community	The Community Design Element identifies the Diamond Stadium as a civic focal point for the community. The Diamond Specific Plan would implement site planning, building design, landscaping, sustainability, and other design guidelines outlined in Chapter 5 of the Diamond Specific Plan that are intended to achieve the City's goal of a vibrant, mixed-use, sports and entertainment-centered district and enhance the community character surrounding the Diamond Stadium. In addition, the Specific Plan includes a development plan with primary and secondary entry treatments to provide a sense of arrival to the Ballpark District and the diamond project area to increase the visibility and development	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
			potential for the site. Therefore, the Specific Plan would result in a less than significant impact.	
City of Lake Elsinore General Plan Community Design Element	The I-15 View Corridor	The views from the I-15 corridor present a significant opportunity to project the positive image of quality development. Implementation of design guidelines in Architecture, Parking, Views, Noise Attenuation, Landscape, and Signs ensure that future public and private improvements are sensitive to public views.	The proposed Diamond Specific Plan follows the I-15 view corridor design guidelines, as detailed in the Specific Plan. Therefore, the Specific Plan is in compliance with this portion of the Community Design Element, and would result in a less than significant impact.	No development is proposed for the 10-Acre General Plan Area. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
The City of Lake Elsinore Zoning Code	Neighborhood Commercial District (C-1)	The "C-1" District is intended to provide locations for general retail and office uses which offer the sale of goods and services to the general public and which, through characteristics of their operation, serve primarily the day-to-day shopping needs of the local residents. Uses permitted shall include apparel stores, appliance stores, bicycle shops, general merchandise stores, florists, dry cleaners, markets, bakeries, health food establishments, and candy stores etc. Whereas C-1 properties are expected to be located in closer proximity to residential districts and on smaller City streets than the more intense commercial designations, the C-1 district is not intended for those uses which because of size or nature of operation generate vehicular or truck traffic beyond that normally associated with a neighborhood use.	The northern portion of the Diamond Specific Plan area is currently zoned "NC". The proposed Specific Plan would result in an overall Mixed Use (MU) zoning for the site. Any legally existing uses, buildings, or other structures which are made non- conforming by the establishment of the Diamond Specific Plan would be deemed to be legal, non-conforming uses or structures and may continue to exist. Therefore, the Specific Plan would result in a less than significant impact.	N/A

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
East Lake Specific Plan (1993)	General Commercial (GC)	GC land use designation per the ELSP is intended to provide for a wide range of retail and service activities including department stores, restaurants, hotels, theatres, office, and specialized services. GC has been located to encourage consolidated centers of activity with direct access to major roads and freeway interchanges. GC areas are intended to be of high quality design and pedestrian oriented and shall contain sufficient off-street parking.	The Diamond Specific Plan designates the site mixed use which allows for a wide range of retail, restaurant, hotel, office and residential uses in a clustered land use plan. These uses are compatible with the GC land use. Therefore, the Specific Plan would result in a less than significant impact.	The area includes 4 acres of existing retail development, with a current land use designation of GC, per the ELSP. Although no development plans are proposed as part of the project, future commercial uses could be developed on vacant portions of the site. If Amendment 9 is approved ***prior to*** the adoption of the City's updated General Plan, this area would retain the existing underlying land use designation of the ELSP, which is GC. Therefore, the project would not represent a significant impact. If Amendment 9 is approved ***after*** the adoption of the City's updated General Plan (2009), this area would retain the underlying CMU General Plan land use designation and Zoning for that area, consistent with the Ballpark District for the area. The CMU designation allows for the same uses as allowed under the GC designation and also provides for mixed uses. The CMU designation also increases the development flexibility, as it relates to allowable uses. Therefore, the project would result in a less than significant impact

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
East Lake Specific Plan (1993)	Open Space (OS)	The OS land use designation is an integral component of East Lake. The OS system primarily consists of two broad types of open space, including Developed OS and Natural OS. Developed OS includes: public parks, sports parks, private parks and/or recreation centers, marinas, golf courses, and trails. Natural OS includes: multi-habitat corridors, wetland mitigation area, and a portion of Rome Hill.	The project site is within one planning area of the ELSP currently designated for a 0.5 acre park. However, there is currently an existing commercial development on this piece of land. The Specific Plan proposes private recreational facilities for residents, in addition to plazas and connections to the Lake Elsinore regional trail, but does not meet the requirement for the Lake Elsinore Quimby Act requirement. Through the payment of in-lieu fees, impacts to existing recreational facilities would be reduced to below a level of significance. Therefore, the project would result in a less than significant impact.	N/A
East Lake Specific Plan (1993)	Special Alternative Use (SAU)	The Special Alternative Use Area falls within the City of Lake Elsinore General Plan's Ballpark District and serves as the location of the Diamond stadium and other related commercial uses in accordance with the ELSP.	The Diamond stadium has already been developed. The Specific Plan proposes a mix of land uses surrounding the Diamond Stadium. The land uses would be developed to complement the existing stadium and establish uses to achieve the City's goal of a vibrant, mixed-use, sports and entertainment-centered district consistent with the vision of the Ballpark District. Therefore, the Specific Plan would result in a less than significant impact.	N/A

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
City of Lake Elsinore Redevelopment Plan Project Areas II and III	Goal #1	Eliminate or alleviate blighting influences and environmental deficiencies.	The proposed Specific Plan would allow for the replacement of vacant land and declining commercial uses with a high quality development. Additionally, the Specific Plan is consistent with the Redevelopment Plan. Therefore, the Diamond Specific Plan is in compliance with the Redevelopment Plan Goal #1, and implementation would result in a less than significant impact.	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
City of Lake Elsinore Redevelopment Plan Project Areas II and III	Goal #2	Provide for the re-planning, redesign and/or redevelopment of areas that are stagnant or improperly utilized.	The proposed Specific Plan would improve vacant land and declining commercial uses with a master-planned development with tailored design guidelines and development standards that would achieve the City's land use goals for this area. Therefore, the Specific Plan would result in a less than significant impact.	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
City of Lake Elsinore Redevelopment Plan Project Areas II and III	Goal #3	Install new or replace existing public improvements, facilities, and utilities in areas that are currently inadequately served with regard to such improvements, facilities, and utilities.	The proposed Specific Plan provides the necessary public improvements, facilities, and utilities for the proposed development. Therefore, the Specific Plan would result in a less than significant impact.	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
City of Lake Elsinore Redevelopment Plan Project Areas II and III	Goal #4	Provide opportunities for participation by owners and tenants in the revitalization of their properties.	The proposed Specific Plan incorporates properties owned by various property owners, including the City of Lake Elsinore. Specific plans are developed, reviewed and approved in the public arena in public hearings at the Planning Commission and City Council levels. Therefore, the Specific Plan would result in a less than significant impact.	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
City of Lake Elsinore Redevelopment Plan Project Areas II and III	Goal #5	Provide for the development and rehabilitation of housing in the proposed Project Area and elsewhere in the City for low and moderate income persons and families.	The proposed Specific Plan calls for the development of housing types at higher densities that are intended to cater to a range of income levels including, but not limited t moderate income persons and families. Therefore, the Specific Plan would result in a less than significant impact.	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
City of Lake Elsinore Redevelopment Plan Project Areas II and III	Goal #6	Strengthen the commercial base of the Project Area and the corresponding expansion of employment opportunities.	As described further in Chapter 3 of the Specific Plan, the Specific Plan proposes a mixed-use plan that includes significant commercial, office and educational components, which would increase the employment opportunities in the City and train the future and existing workforce to be more competitive in the workplace. Therefore, the Specific Plan would result in a less than significant impact	No development is proposed for the 10-Acre General Plan Area at this time. However, any new development proposed after the adoption of the General Plan update would be required to be consistent with the General Plan.
Riverside County Integrated Project (RCIP)	Transportation Uniform Mitigation Fees	TUMF was adopted in December 2002. It establishes a comprehensive funding source for regional arterial highway improvements in western Riverside County,	Traffic generated by development of the Specific Plan would impact countywide transportation corridors, and the proposed Specific Plan would be required to contribute to TUMF. The proposed Specific Plan is in compliance with the TUMF requirements, and implementation would result in a less than significant impact.	N/A
Riverside County Integrated Project (RCIP)	MSHCP	The MSHCP is a criteria-based federal HCP and State NCCP, focused on preserving 146 individual covered species through habitat conservation. The MSHCP also serves to enhance maintenance of biological diversity and ecosystem processes while allowing the fulfillment of future economic goals. Consistency with the MSHCP provides full mitigation	The Specific Plan is located within the Elsinore Area Plan of the Western Riverside MSHCP Plan Area. Portions of the study area are located within Criteria Cells 4743 and 4846 (within Subunit 3 - Elsinore), the Criteria Species Survey Area, the Burrowing	The 10-Acre General Plan Area does not fall within a Criteria Cell within the MSHCP. Further, existing commercial development comprises 4-acres in the northern portion of the site. When additional development is proposed for the remaining 6-acres, the project applicant

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
		under CEQA, NEPA, federal ESA, and California ESA for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the USFWS, the CDFG and/or any other appropriate participating regulatory agencies and as set forth in the Implementing Agreement for the MSHCP.	Owl Survey Area, and Narrow Endemic Plant Species (NEPS) Survey Area 2 of the MSHCP. As demonstrated in Section 4.3, Biological Resources, the Diamond Specific Plan would be consistent with the MSHCP. Therefore, a less than significant impact is identified.	would be required to demonstrate compliance wit the MSHCP. No conflicts from the development of commercial and/or mixed uses are anticipated. Therefore, a less than significant impact is identified.
SCAG Regional Transportation Plan (RTP)	RTP Goal #1	Maximize mobility and accessibility for all people in the region	The proposed Specific Plan is proposed along Lakeshore Drive and is accessed by Railroad Canyon Road and Malaga Road. The Specific Plan would include improved vehicular and pedestrian circulation on site and within the surrounding area. By keeping development close to existing roads in conjunction with a mixed use land use concept; this would provide increased access and mobility to the region. Mixed use development allows people to live and work in the same place, which reduces vehicle trips on the circulation network. In addition, implementation of the Specific Plan would bring jobs, entertainment and shopping to Lake Elsinore, reducing the need of its residents to go out of town to satisfy those needs. Therefore, the proposed Specific Plan is in compliance with the first goal of the RTP, and implementation would result in a less than significant impact.	The proposed land use designation would allow commercial and or/ mixed uses on this site. In accordance with RTP Goal #1, any new development on the 10-acre General Plan Area would have to address circulation and accessibility for the site. Implementation would result in a less than significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
SCAG Regional Transportation Plan (RTP)	RTP Goal #2	Ensure travel safety and reliability for all people and goods in the region.	The Specific Plan's mixed-use concept promotes walkability throughout the project site and its surrounding area. The layout of the plan is designed to be within a safe walking distance or bicycle ride to many everyday amenities. The circulation network would be constructed in accordance with all City regulations and Policies. Therefore, the proposed Specific Plan is in compliance with the second goal of the RTP, and implementation would result in a less than significant impact.	In accordance with RTP Goal #2, any new development on the 10-acre General Plan Area would have to address reliable transportation needs and safety for the site. Implementation would result in a less than significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
SCAG Regional Transportation Plan (RTP)	RTP Goal #3	Preserve and ensure a sustainable regional transportation system.	Primary access to the Diamond Specific Plan area would be from Diamond Drive, Malaga Road, and Lakeshore Drive. These roads connect to the I-15 Freeway via the Railroad Canyon Road/Diamond Drive interchange. The roads accessing the site have all been constructed; however, ultimate road widths have not been completed pursuant to the General Plan Circulation Element. The Specific Plan includes street improvements to both Diamond Drive and Malaga Road. Therefore, the proposed Specific Plan is in compliance with the third goal of the RTP, and implementation would result in a less than significant impact.	In accordance with RTP Goal #3, any new development on the 10-acre General Plan Area would have to address sustainable transportation systems for the site. Implementation would result in a less than significant impact.
SCAG Regional Transportation Plan (RTP)	RTP Goal #4	Maximize the productivity of the region's transportation system.	The proposed Specific Plan includes a mixed use land use plan to promote a walkable community that relieves congestion and increased traffic associated with a typical subdivision neighborhood or commercial center. Therefore, the proposed Specific Plan is in compliance with the fourth goal of the RTP, and implementation would result in a less than significant impact.	In accordance with RTP Goal #4, any new development on the 10-acre General Plan Area would have to address productivity of the proposed circulation for the site. Implementation would result in a less than significant impact.
SCAG Regional Transportation Plan (RTP)	RTP Goal #5	Protect the environment, improve air quality, and promote energy efficiency.	The Specific Plan adequately protects the environment through appropriate mitigation measures that would reduce any identified impacts to a less than significant level. The clustered land use development plan provides for physical connections to promote multi-modal transportation options including walking	In accordance with RTP Goal #5, any new development on the 10-acre General Plan Area would have to address environmental issues resulting from increased traffic for the site. Implementation would result in a less than significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
			and bicycling throughout the site helping to reduce the harmful effects associated with increased emissions. The Specific Plan highlights sustainability, green building, and energy efficiency within the plan that includes: provisions for both passive and active solar systems, utilizing dual-pane windows, high-efficiency lighting systems and lighting controls, and utilizing high efficiency water fixtures and appliances within the Specific Plan area. Therefore, the proposed Specific Plan is in compliance with the fifth goal of the RTP, and implementation would result in a less than significant impact.	
SCAG Regional Transportation Plan (RTP)	RTP Goal #6	Encourage land use and growth patterns that complement the transportation investments and improve the cost-effectiveness of expenditures.	The land uses proposed would be combined in a "mixed use" designation which would allow a blending of retail, office, hotel, education, and high-density residential uses throughout the plan area. Non-residential areas would be designed to be built at Floor Area Ratios (FAR) up to 0.80 and residential uses would be provided at densities up to 18 du/acre; respectively. Additionally, the project is not receiving any State or Federal Transportation funds. Therefore, the proposed Specific Plan is in compliance with the sixth goal of the RTP, and implementation would result in a less than significant impact.	In accordance with RTP Goal #6, any new development on the 10-acre General Plan Area would have to address any land use or growth inducing impacts for the site. Implementation would result in a less than significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
SCAG Compass Blueprint Growth Vision	Compass/Growth Visioning Principles	The implementation framework known as the 2% Strategy: Shared Values, Shared Future seeks to assist cities and counties develop strategies to accommodate future growth while promoting SCAG's regional principles of Mobility, Livability, Prosperity and Sustainability for current and future generations of Southern Californians. The following are the Compass/Growth Visioning Principles: 1) Improve mobility for all residents • Encourage transportation investments and land use decisions that are mutually supportive. • Locate new housing near existing jobs and new jobs near existing housing. • Encourage transit-oriented development. • Promote a variety of travel choices. 2) Foster livability in all communities • Promote infill development and redevelopment to revitalize existing communities. • Promote developments, which provide a mix of uses. • Promoted "people scaled", walkable communities. • Support the preservation of stable, single-family neighborhoods. 3) Enable prosperity for all people • Provide, in each community, a variety of housing types to meet the housing needs of all income levels. • Support educational opportunities that promote • Balanced growth.	The proposed Specific Plan complies with each of the four principles. 1. The Specific Plan provides for a mixed use land use plan that encourages mobility for residents. Mixed use development allows people to live and work in the same place, which improves mobility. In addition, implementation of the Specific Plan would bring jobs, entertainment and shopping to Lake Elsinore, reducing the need of its residents to go out of town to satisfy those needs. The Plan is located near the Diamond Stadium with easy access to the I-15 freeway. The Riverside Transit Agency (RTA) currently provides bus service along Lakeshore Drive and Mission Trail, with stops near the Specific Plan site at Railroad Canyon and at Malaga Road. The proposed Specific Plan design incorporates "transit ready" features that would accommodate transit service in the future when it becomes available. Such features include the provision for bus stops within the internal parking areas of the plan, walkways to the perimeter streets with future bus stops, and the provision of "park and ride" parking areas within the plan. Potential transit stop locations are intended to be included within or adjacent to the Specific Plan area. 2. The Specific Plan provides for infill mixed use development with	In accordance with Compass Blueprint Vision, any new development on the 10-acre General Plan Area would have to promote SCAG's regional principles of Mobility, Livability, Prosperity and Sustainability outlined in the Vision of the Compass Blueprint. Implementation would result in a less than significant impact.

Applicable Plan	Regulation	Regulation Description	Potential Conflict with Diamond Specific Plan	Potential Conflict with 10-Acre GP Area
		• Ensure environmental justice regardless of race, ethnicity, or income class. • Support local and state fiscal policies that encourage balanced growth. • Encourage civic engagement. 4) Promote sustainability for future generations • Preserve rural, agricultural, recreational, and environmentally sensitive areas. • Focus development in urban centers and existing cities. • Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution, and significantly reduce waste. • Utilize "green" development techniques.	redevelopment on-site consistent with the City's Redevelopment Plan. The Plan provides for pedestrian friendly, interactive neighborhoods where amenities are focused on a local main street. The Plan is characterized by interconnected streets with on-street parking, wide sidewalks, building entries along the street, and architectural features and outdoor public spaces and activities that promote pedestrian activity. 3. The Specific Plan provides for a variety of housing types to meet demands of a large cross-section of people. In addition, the Plan allows for education uses and will create jobs for residents. 4. The Specific Plan is infill development around an existing stadium. It includes green standards as discussed in Section 4.2 Air Quality and in the project design features listed in Section 2.0 Project Description.	

4.8.3 Cumulative Impacts

The proposed project represents land use changes to the current City of Lake Elsinore General Plan. It is consistent with the adjacent land uses surrounding the project site and with the developing character of the City of Lake Elsinore. The Diamond Specific Plan would result in additional urban intensity for the project site and in conjunction with surrounding, developing areas.

None of the cumulatively considered projects listed in Table 3-5 would result in the physical division of, or create barriers to, an established community, as they are all in areas that are currently undeveloped, or would result in complementary infill development. The Diamond Specific Plan does not propose new roadways that would split established communities. The site is bordered by Lake Elsinore on the west and existing commercial uses to the north and east. Therefore, the cumulative effects of the proposed project and the other projects that are being considered on the physical division of an established community would be less than significant.

Many of the other projects being considered for cumulative impacts include or have included General Plan Amendments to be consistent with the existing Lake Elsinore General Plan. With approval of these amendments and zone changes, the cumulative projects as well as the Diamond Specific Plan would be consistent with the General Plan.

The cumulative effects of the Diamond Specific Plan and the other projects that are being considered would also be less than significant regarding a conflict with any applicable habitat conservation plan or natural community conservation plan, as any projects that are approved would be required to demonstrate consistency with MSHCP requirements.

4.8.4 Environmental Mitigation Measures

No impacts were identified for land use and planning. Therefore, no mitigation measures are required.

4.8.5 Conclusion

The Diamond Specific Plan and 10-acre General Plan Area would not result physically dividing an established community. Additionally, the project would not result in significant impacts due to conflicts with the existing City of Lake Elsinore General Plan (1990), the General Plan Update (2009), the East Lake Specific Plan, the City of Lake Elsinore Zoning Code, the City of Lake Elsinore Redevelopment Plan, the Riverside County RCIP, the SCAG RTP, or the SCAG Compass Growth Vision Plan. Therefore, project implementation would result in a less than significant impact to land use and planning.

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4.9 NOISE

Information from the following document was used in the preparation of this section:

> *Noise Impact Analysis, Diamond Center Specific Plan, City of Lake Elsinore, California.* Prepared by Giroux & Associates. June 23, 2009.

The complete report is included in Appendix H of the Draft Environmental Impact Report (EIR).

4.9.1 Environmental Setting

General Noise Concepts

Noise is defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only frequencies audible to the human ear.

Range of Noise

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA, which can cause serious discomfort.

Perceived Noise Levels

Due to the logarithmic nature of the decibel scale, increasing a sound intensity by a factor of 10 raises its level by 10 dB; increasing it by a factor of 100 raises its level by 20 dB; by 1,000, 30 dB and so on. However, due to the internal mechanism of the human ear and how it receives and processes noise, when two sound sources of equal intensity or power are measured together, their combined effect (intensity level) is 3 dB higher than the level of either separately. Thus, two 72 dB cars together measure 75 dB under ideal conditions. Typically, a sound must be nearly 10 dBA higher than another sound to be judged twice as loud.

Noise Descriptors

Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak hour L_{eq} is the noise metric used to collect short-term noise level measurement samples and to calculate the Day-Night Level (L_{dn}). The L_{eq} descriptor is listed here for reference only; the City of Lake Elsinore relies on the L_{dn} to assess transportation related impacts on noise sensitive land uses. L_{dn} is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to dBA L_{eq} sound levels at night between

10 p.m. and 7 a.m. These additions are made to account for the noise sensitive time periods during nighttime hours when sound appears louder, and thus, is weighted accordingly. For example, monitoring experience has shown that 24-hour weighted L_{dn} is typically 2-3 dB higher than the mid-afternoon L_{eq} sound levels. L_{dn} does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. As identified in the City of Lake Elsinore General Plan (1990 and 2009) Noise Element, the City relies on the L_{dn} noise level standard to assess transportation related impacts on noise sensitive land uses. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for some planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

Traffic Noise

The level of traffic noise depends on three factors: (1) the volume of the traffic; (2) the speed of the traffic; and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks.

Due to the logarithmic nature of traffic noise levels, a doubling of the traffic (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the Federal Highway Administration (FHWA) community noise assessment criteria, this change is considered "barely perceptible."

Applicable Plans

City of Lake Elsinore Noise Standards

The City of Lake Elsinore has identified two separate types of noise sources: (1) mobile, and (2) stationary. To control mobile or transportation related noise sources such as arterial roads, freeways, airport and railroads, the City of Lake Elsinore has established guidelines for acceptable community noise levels in the Noise Element of both the current General Plan (1990) and the General Plan Update (2009). To control stationary source/non-transportation related noise impacts (such as speakerphones, trash compactors, air-conditioning units, etc.) in residential areas, the City of Lake Elsinore has adopted a noise control ordinance.

Lake Elsinore General Plan Update (2009) Noise Element Criteria

The State of California established noise exposure standards to guide local municipalities in the development of Noise Elements as part of their General Plan. Table 4.9-1, from the City of Lake Elsinore General Plan Update (2009) Chapter 3 Public Safety and Welfare, presents the City of Lake Elsinore Noise and Land Use Compatibility Matrix, which deviates slightly from State noise guidelines. This matrix is consistent with the City's existing General Plan (1990) Noise Element.

For example, residential uses are "clearly compatible" with noise conditions up to 60 dBA L_{dn}, and are "normally compatible" in conditions up to 70 dBA L_{dn}. A 65 dBA L_{dn} exterior level is the threshold when noise begins to substantially interfere with the enjoyment of outdoor activities. Therefore, a 65 dBA L_{dn} exterior noise level (45 dBA L_{dn} interior noise level) would be the applicable noise standard for the proposed Diamond Specific Plan. In the context of this noise analysis, on-site noise impacts associated with traffic are controlled by the City Noise Element.

Table 4.9-1. Noise and Land Use Compatibility Matrix

Land Use Categories		Day-Night Noise Level (L_{dn})						
Categories	Uses	<55	60	65	70	75	80>	
Residential	Single Family, Duplex, Multiple Family	A	A	B	B	C	D	D
Residential	Mobile Homes	A	A	B	C	C	D	D
Commercial -Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
Commercial -Regional, Village -District, Special	Commercial Retail, Bank, Restaurant, Movie Theatre	A	A	A	A	B	B	C
Commercial Industrial, Institutional	Office Building, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C	D
Commercial -Recreation Institutional -Civic Center	Amphitheatre, Concert Hall Auditorium, Meeting Hall	B	B	C	C	D	D	D
Commercial Recreation	Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	B	B	D	D
Commercial -General, Special Industrial, Institutional	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Institutional General	Hospital, Church, Library School's Classroom	A	A	B	C	C	D	D
Open Space	Parks	A	A	A	B	C	D	D
Open Space	Golf Course, Cemeteries, Nature Centers Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
Agriculture	Agriculture	A	A	A	A	A	A	A

Source: City of Lake Elsinore General Plan Update (2009) Chapter 3 Public Safety and Welfare

Notes:

Zone A (Clearly Compatible)	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
Zone B (Normally Compatible)	New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.
Zone C (Normally incompatible)	New Construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in this design.
Zone D (Clearly incompatible)	New construction or development should generally not be undertaken.

Noise Ordinance Criteria

The most effective method to control community noise impacts from non-transportation noise sources (such as trash compactors, air-conditioning units, etc.) is through the application of a community noise ordinance. For the purpose of this analysis, the noise impacts associated with the proposed commercial uses are controlled by the City of Lake Elsinore Noise Ordinance.

The Lake Elsinore Municipal Code (Table 4.9-2) restricts and regulates hours of construction operation and levels of construction noise. In Chapter 17.176, Section 17.78.080 (F), construction noise is restricted from 7:00 p.m. to 7:00 a.m. weekdays and at any time on Sundays or holidays when it creates a noise disturbance across a residential or commercial property line. Section 17.176.080 (F) (2) regulates construction activity noise levels as follows:

B. Noise Restrictions at Affected Structures. When technically and economically feasible, the contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those levels listed in the following schedule:

1. At Residential Structures.

    a. Mobile Equipment. Maximum noise levels for non-scheduled, intermittent, and short-term operation (less than 10 days) of mobile equipment.

    b. Stationary Equipment Maximum noise level for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment.

2. At Business Structures.

    a. Mobile equipment. Maximum noise levels for non-scheduled, intermittent, short-term operation of mobile equipment: Daily, including Sunday and legal holidays, all hours: maximum of 85 dBA.

Table 4.9-2. City of Lake Elsinore Noise Ordinance

City of Lake Elsinore Noise Ordinance	Single-family Residential (dBA)	Multi-family Residential (dBA)	Semi-residential/ Commercial (dBA)
Mobile Equipment[1]			
Daily, 7:00 a.m. – 7:00 p.m. (except Sundays and legal holidays)	75	80	85
Daily, 7:00 p.m. – 7:00 a.m. (includes Sundays and legal holidays)	60	65	70
Stationary Equipment[2]			
Daily, 7:00 a.m. – 7:00 p.m. (except Sundays and legal holidays)	60	65	70
Daily, 7:00 p.m. – 7:00 a.m. (includes Sundays and legal holidays)	50	55	60

Source: City of Lake Elsinore Noise Ordinance

Notes: [1] Includes non-scheduled intermittent, short-term operations (less than 10 days) of mobile equipment.
[2] Includes repetitively scheduled and relatively long-term operations (10 days or more) of stationary equipment.

Community Noise Assessment Criteria

In community situations, noise exposure and changes in noise levels occur over a number of years. The generally accepted level at which changes in the community noise levels become "barely perceptible" typically occur at values of greater than 3 dBA. Changes of 5 dBA are defined as "readily perceptible" and 10 dBA is considered twice as loud. To be considered a significant impact, Diamond Specific Plan traffic must create a noise level increase in the area adjacent to the roadway segment of greater than 3 dBA and the resulting noise level must exceed the City Noise Element 65 dBA L_{dn} exterior noise threshold. In the context of this noise analysis, off-site noise impacts associated with traffic are controlled by the Community Noise Assessment Criteria.

State of California Code of Regulations Title 24

The California Code of Regulations (CCR), Title 24, Noise Insulation Standards, states that multi-family dwellings, hotels, and motels located where the L_{dn} exceeds 60 dBA, must obtain an acoustical analysis showing that the proposed design shall limit interior noise to less than 45 dBA L_{dn}. The maximum noise levels, either existing or future, must be used for this determination. Future noise levels must be predicted at least ten years from the time of building permit application.

4.9.1.1 Existing Conditions

Ambient noise conditions in the project area are primarily influenced by vehicular traffic from surrounding roadways. The majority of vehicular traffic noise impacting the project site is generated from Mission Trail Road/Lakeshore Drive and Diamond Drive/Railroad Canyon Road, which are the main roadways that service the site. Noise measurements were made in order to document existing baseline levels in the area. These help to serve as a basis for projecting future noise exposure, both from the Diamond Specific Plan upon the surrounding community and from ambient noise activity upon the proposed Diamond Specific Plan. Noise measurements were conducted by Giroux & Associates for 24 hours on two different weeks. The first 24-hour reading captured noise levels on a Friday with no baseball game and the second 24-hour reading captured noise levels during a Friday with a baseball game and fireworks. Noise readings locations are shown in Figure 4.9-1 and measurement results are shown in Tables 4.9-1 and 4.9-2.

The "no game" noise measurements in Table 4.9-3 obtained on Friday, May 15, 2009 and "game day" readings in Table 4.9-4 were obtained one week later on Friday, May 22, 2009. As shown on Tables 4.9-3 and 4.9-4, "game" Friday has a higher L_{eq} starting at about 5 p.m. and extending through about 11 p.m. The hour with the largest change is 9-10 p.m. when fireworks occurred. The difference between game and no game Friday is about 4 dB CNEL in the stadium parking lot.

Residential land uses are located to the west of the project site and the nearest residences are multi-family units directly to the west of the Diamond Specific Plan approximately 100 feet away. In the residential areas, background "no game" Friday noise measurements were 56-57 dB CNEL. On the Friday with a game, measured CNELs at the same locations were 60-63 dB. Again, the most marked difference in noise levels occurred at 9 p.m. during fireworks. Because the fireworks occur during a timeframe of greater noise sensitivity during nighttime, a greater penalty is incurred for the CNEL calculation.

Regardless, even on a game and fireworks day, measured noise levels in the closest residential neighborhoods adjacent to the Diamond Stadium were within the City of Lake Elsinore recommended

compatibility guidelines. As shown in Table 4.9-3 and Table 4.9-4, ambient sound levels in the Diamond Specific Plan vicinity range from 55.5dBA to 62.9 dBA L_{eq}.

Table 4.9-3. Ambient Noise Level Measurements - "No Game" Friday L_{eq} and CNEL

Time Interval	Site 1 (L_{eq})	Site 2 (L_{eq})	Site 3 (L_{eq})
0:00-1:00	44.5	53.3	44.8
1:00-2:00	52.0	40.5	43.6
2:00-3:00	44.7	42.6	43.0
3:00-4:00	47.6	40.5	57.2
4:00-5:00	49.5	43.9	48.0
5:00-6:00	54.4	48.1	49.4
6:00-7:00	53.7	49.5	49.4
7:00-8:00	57.0	48.2	49.0
8:00-9:00	51.0	45.6	44.1
9:00-10:00	49.9	46.3	44.3
10:00-11:00	47.5	48.5	44.2
11:00-12:00	51.7	47.0	45.2
12:00-13:00	50.4	49.5	45.5
13:00-14:00	51.3	46.3	44.4
14:00-15:00	55.0	48.0	44.9
15:00-16:00	54.2	50.1	47.3
16:00-17:00	55.3	52.6	47.4
17:00-18:00	55.4	52.0	46.9
18:00-19:00	54.6	53.2	48.7
19:00-20:00	54.0	53.1	49.0
20:00-21:00	52.1	52.6	53.6
21:00-22:00	48.6	51.2	49.4
22:00-23:00	48.1	48.1	47.7
23:00-24:00	51.2	48.5	50.0

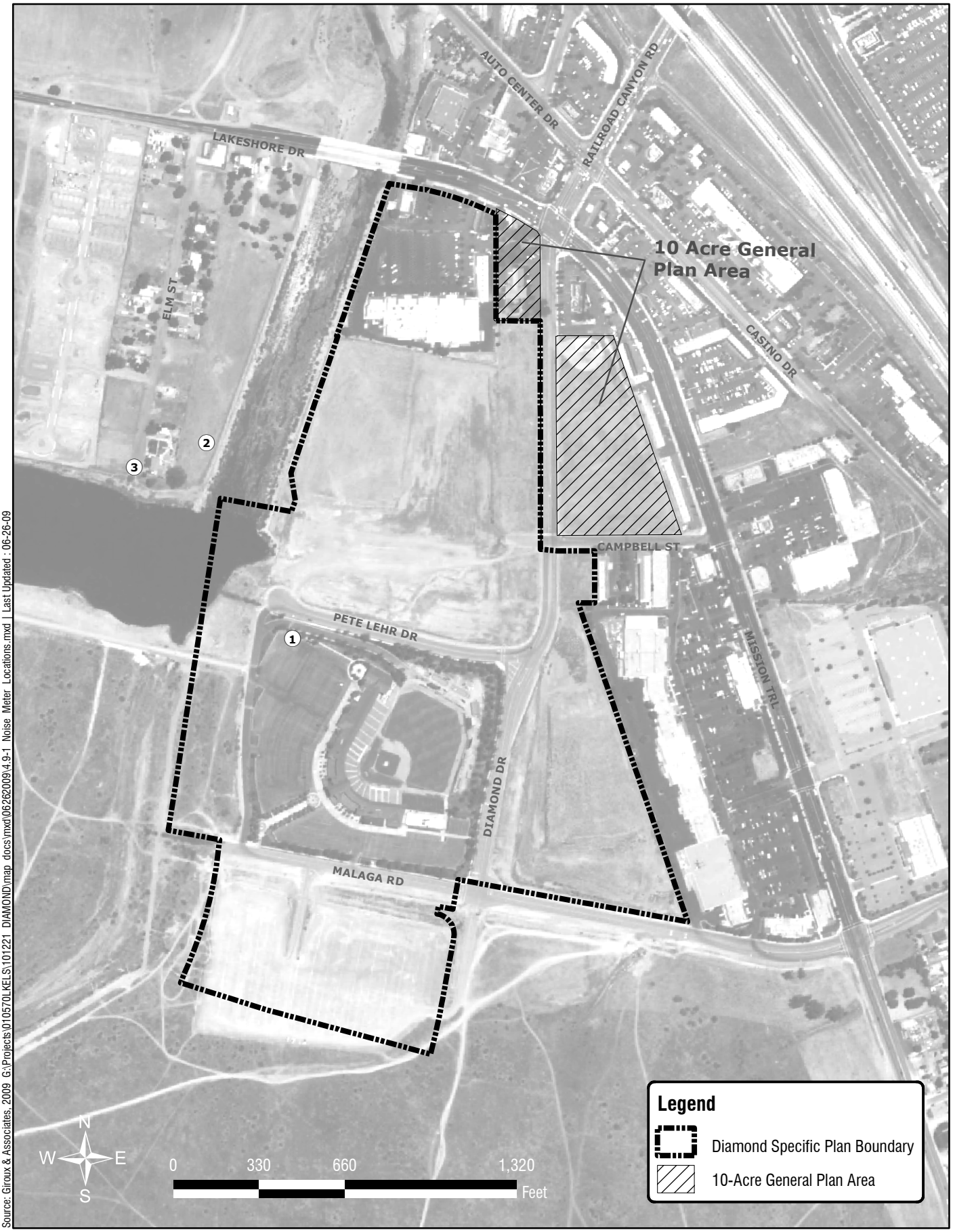
Source: Giroux & Associates, June 2009

The ambient noise measurements are "penalized" by +5 dB in the evening from 7 p.m. to 10 p.m., and by +10 dB at night from 10 p.m. to 7 a.m. in the following CNEL calculations (a weighted 24 hour average).

Resultant CNEL

Measurement Parameter	Site 1	Site 2	Site 3
24-Hour CNEL	57.7	55.5	56.9

Source: Giroux & Associates June 2009



Source: Giroux & Associates, 2009 G:\Projects\010570LKELS\101221 DIAMOND\map docs\mxd\06262009\4.9-1 Noise Meter Locations.mxd | Last Updated : 06-26-09

Noise Meter Locations

FIGURE 4.9-1

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Table 4.9-4. Ambient Noise Level Measurements - "Game" Friday L_{eq} and CNEL

Time Interval	Site 1 (L_{eq})	Site 2 (L_{eq})	Site 3 (L_{eq})
0:00-1:00	50.6	50.5	45.9
1:00-2:00	44.9	47.7	40.5
2:00-3:00	49.4	49.4	43.0
3:00-4:00	45.2	43.7	55.8
4:00-5:00	48.4	44.0	43.4
5:00-6:00	53.9	47.1	48.8
6:00-7:00	51.7	50.7	47.8
7:00-8:00	52.6	48.8	49.6
8:00-9:00	52.4	47.2	52.1
9:00-10:00	58.8	47.5	43.4
10:00-11:00	54.6	51.1	49.3
11:00-12:00	57.2	49.6	46.4
12:00-13:00	55.8	51.2	46.1
13:00-14:00	54.7	54.2	50.7
14:00-15:00	54.8	60.7	49.6
15:00-16:00	53.2	49.9	45.6
16:00-17:00	55.8	48.0	45.6
17:00-18:00	60.3	49.6	47.0
18:00-19:00	59.7	53.4	50.4
19:00-20:00	57.5	55.8	51.7
20:00-21:00	56.4	54.9	52.3
21:00-22:00	67.6	65.6	70.7
22:00-23:00	57.4	51.9	49.9
23:00-24:00	51.7	49.4	46.0

Source: Giroux & Associates, June 2009

The ambient noise measurements are "penalized" by +5 dB in the evening from 7 p.m. to 10 p.m., and by +10 dB at night from 10 p.m. to 7 a.m. in the following CNEL calculations (a weighted 24 hour average).

Resultant CNEL

Measurement Parameter	Site 1	Site 2	Site 3
24-Hour CNEL	62.4	59.9	62.9
Game Day versus No Game	+4.7	+4.4	+6.0

Source: Giroux & Associates, June 2009

Sensitive Receptors

Uses that are typically considered noise sensitive include residences, schools, hospitals, parks, and wildlife habitats. The proposed project site is currently partially undeveloped but is adjacent to sensitive residential areas. The nearest residences are multi-family units directly to the west of the project site approximately 100 feet away.

4.9.2 Project Impacts

4.9.2.1 Thresholds of Significance

As defined in Appendix G (XI) of the *CEQA Guidelines*, project impacts from noise are considered significant if any of the following occur:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

CEQA Guidelines identify significant impacts as those that cause standards to be exceeded when the standards are currently met. Impacts are also considered significant if they "substantially" worsen an existing unacceptable noise environment.

"Substantially" is not defined in any guidelines. The accuracy of sound level meters and of sound propagation computer models is no better than ±1 dB. This is also below the human loudness difference discrimination level under ideal laboratory conditions. Most people cannot distinguish a change in the noise environment that differs by less than 3 dB between the pre- and post-project exposure if the change occurs under ambient conditions. For the purposes of this analysis, an increase of +3 dB which creates or worsens an area of noise/land use incompatibility would be considered a significant degradation of noise quality.

Because of the logarithmic relationship between traffic volumes and noise levels, it requires a dramatic increase in traffic to create even a perceptible change in noise levels. A +1 dB increase requires a 25 percent greater traffic volume. A +3 dB noise increase occurs when volumes double. In those areas where traffic levels are already high enough to create a noise concern, few projects would individually cause traffic volumes to double. Off-site traffic noise impacts tend therefore to be more of a cumulative, rather than an individual impact.

4.9.2.2 Environmental Impacts

Construction

Construction noise impacts vary markedly because the noise generated by various types of construction equipment ranges widely as a function of the equipment used which changes during the course of the project. Construction noise tends to occur in discrete phases dominated initially by demolition and/or earth-moving sources and later for finish construction. As shown in Figure 4.9-2, heavy equipment noise can exceed 90 dBA and averages about 85 dBA at 50 feet from the source when the equipment is operating at typical loads. Most heavy equipment operates with varying load cycles over any extended period of time.

Construction noise exposure can be further increased when several pieces of equipment operate simultaneously in proximity to each other. Because of the logarithmic nature of decibel addition, two equally loud pieces of equipment will be +3 dB louder than either one individually. Three simultaneous sources are +5 dB louder than any single source. Thus, while average operational equipment noise levels are perhaps 5 dB less than at peak power, simultaneous equipment operation can still yield an apparent noise strength equal to any individual source at peak noise output. Whereas the average heavy equipment reference noise level is 85 dBA, short-term levels from either peak power or from several pieces operating in close proximity can be as high as 90 dBA.

Point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance. The loudest construction activities would require less than 200 feet of distance between the source and a nearby receiver to reduce the peak 90 dB source strength to the generally acceptable 80 dB exterior exposure level for multi-family residences specified in Chapter 17.176, Section 17.176.080 (F) of the City Municipal Code. The closest existing residence is approximately 100 feet from the nearest Diamond Specific Plan perimeter and will therefore experience construction noise levels within the allowable envelope as long as activities occur in daytime hours of lesser noise sensitivity (7 a.m. to 7 p.m.). Additionally, the City of Lake Elsinore standards for stationary source noise impacts limits operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the weekday hours of 7 p.m. and 7 a.m.

By limiting the hours in which construction can occur, early morning and evening noise nuisance related to construction activities can be reduced. As the Specific Plan area builds out, residences established in the early phases of the Specific Plan may be subject to construction noises due to later phases of development. Therefore, there is a potential for significant short-term noise impacts due to buildout of the Specific Plan.

Sensitive Receptors

The nearest residence is located approximately 100 feet west of the Diamond Specific Plan site. The proposed Diamond Specific Plan would adhere to the Lake Elsinore Noise Ordinance governing construction hours. Therefore, noise generated during the construction of the project would not affect any surrounding sensitive receptors and would represent a less than significant impact.

On-Site Noise Analysis

As identified above, on-site noise impacts are controlled by the City of Lake Elsinore Noise Element Community Noise Assessment Criteria, which stipulates 65 dBA L_{dn} as the applicable exterior noise

standard. The primary source of on-site exterior noise impacts to the Diamond Specific Plan would be traffic noise from Mission Trail/Lakeshore Drive and Diamond Drive/Railroad Canyon Road. The Diamond Specific Plan would also experience some background traffic noise impacts from the internal roads within the site. Due to the distance, topography and low traffic volume/speed, traffic noise from those internal roads would not make a significant contribution to the noise environment.

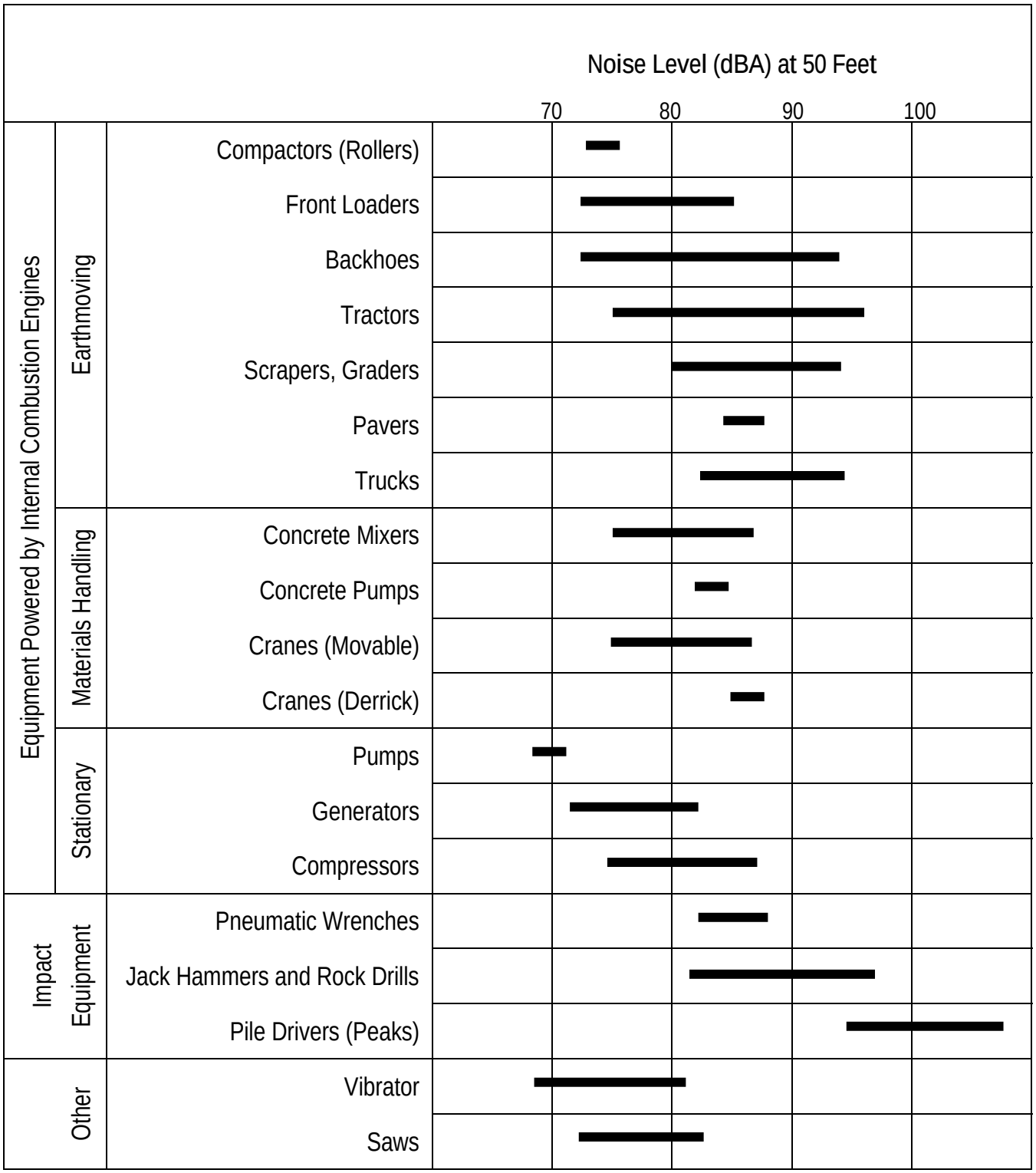
Both the current General Plan (1990) and the General Plan Update (2009) set noise standards for residential development projects. These standards include a provision that outdoor living areas should not experience noise levels greater than 65 dB CNEL with proper noise mitigation measures are in place. According to the noise analysis conducted by Giroux & Associates, within the Diamond Specific Plan site, several area roadways will experience traffic noise impacts exceeding 65 dB CNEL at 50 feet from roadway centerline and may impact proposed residential uses. Table 4.9-5 lists the roadway segments that have the potential to impact on-site noise levels at the project site.

Table 4.9-5. Maximum Interior Roadway Traffic Noise Build-Out with Diamond Specific Plan

Roadway Segment	dB CNEL at 50 feet from Centerline	Distance to 65 dB CNEL (feet)
Sylvester Street		
W of Diamond Circle	48	<50
Diamond Circle to Lakeshore	67	68
Diamond Circle		
Diamond Drive-Sylvester St.	70	108
Diamond Drive		
Sylvester to Diamond Circle	73	171
Diamond Circle to Lakeshore Dr.	74	200
Lakeshore Drive		
Diamond Drive adjacent	75	233

Source: Giroux & Associates June 2009

Noise impacts along the segments identified in Table 4.9-5 would be potentially significant for possible residential uses if built without recommended mitigation measures. Within the Diamond Specific Plan, as long as residences are sited 50 feet from the centerline along Sylvester Street roadway segments, no additional noise mitigation will be necessary for the projected General Plan build-out traffic volumes on this roadway within the project site. There is currently no development along Sylvester Street off the project site. Possible future residential uses to the south of the project site (off-site) approved in the East Lake Specific Plan would experience less-than-significant traffic noise impacts at build-out if residences are sited at least 68 feet from the Sylvester Street centerline or incorporate supplemental mitigation such as sound walls. Private yards are not expected for the residences within the Diamond Specific Plan, rather, usable outdoor space would be provided by patios and balconies. At this time, detailed site plans for the Specific Plan area are not available. For the other roadway segments from Table 4.9-5 within the project site, potential residences would require the above indicated setbacks in order to achieve 65 dB CNEL with no additional mitigation.



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

Photo Source: G:\Projects\010570LKELS\101221_DIAMON Dgraphics\ai\Noise_levels.ai | Last Updated: 06-18-09

Typical Construction Equipment Noise Generation Levels

FIGURE 4.9-2

Therefore, depending on the ultimate location of the residential uses, there is a potential for balcony and patio areas to exceed the 65 CNEL contour. This represents a significant impact. Further, interior noise levels are expected to exceed the 45 dB CNEL requirement for these residential units as well. This also represents a significant impact. If it is not possible to meet these setbacks then additional mitigation may be required.

Off-Site Vehicular Noise

As identified above, off-site noise impacts are controlled by the Community Noise Assessment Criteria, which stipulates a significant impact would occur if Diamond Specific Plan traffic creates a noise level increase in the area adjacent to the roadway segment of greater than 3 dBA and the resulting noise level exceeds the City Noise Element 65 dBA L_{dn} exterior noise threshold. Long-term noise concerns from the increase of residential uses at the Diamond Specific Plan center primarily on vehicular operations on project area roadways.

Long-term noise concerns from the increase of residential uses at the project site center primarily on vehicular operations on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). This model calculates the L_{eq} noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers.

Table 4.9-6 summarizes the 24-hour CNEL level at 50 feet from the roadway centerline along 31 roadway segments. The noise analysis utilizes data from the Diamond Specific Plan traffic analysis (Appendix J). Five timeframes were evaluated including existing conditions, Phase 1 (2012), Phase 2 (2014), and Phase 3 (2016) and General Plan build-out.

Several of the roadway segments examined in this study are to be built in the future to support the Diamond Specific Plan such as Loop Road and Diamond Drive and the site entrances off these roadways. Some of these roadways do not currently exist so that future comparison to existing noise levels is not possible. However traffic noise on these segments must be mitigated to below significance thresholds for any adjacent residential user.

Phase 1 Timeframe

Phase 1 is to be completed by 2012. As shown in Table 4.9-6, implementation of Phase 1 will not cause any roadway segments to exceed significance thresholds. Diamond Specific Plan only impacts are the difference between the 2012 “no Diamond Specific Plan” scenario and the 2012 “with Diamond Specific Plan” scenario. The maximum project-only traffic noise increment will be +2.2 dB CNEL.

Future Phases and General Plan Build-Out

Phase 2 is to be completed in 2014 and Phase 3 in 2016. Diamond Specific Plan only impacts were examined for each phase/timeframe. For the opening year of Phases 2 and 3, the roadway segments shown as bolded in Table 4.9-6 are expected to exceed significance thresholds. Table 4.9-7 identifies potentially impacted segments.

Table 4.9-6. Diamond Specific Plan Traffic Noise Impact Analysis (dBA CNEL at 50 feet from Centerline)

Segment	Existing	2012 w/o Diamond Specific Plan	2012 w/ Diamond Specific Plan	Diamond Specific Plan Only Impacts	2012 w/ Diamond Specific Plan and Cumulative	2014 w/o Diamond Specific Plan	2014 w/Diamond Specific Plan	Diamond Specific Plan Only Impacts	2014 w/Diamond Specific Plan and Cumulative	2016 w/o Diamond Specific Plan	2016 w/Diamond Specific Plan	Diamond Specific Plan Only Impacts	2016 w/Diamond Specific Plan and Cumulative	Build-Out w/o Diamond Specific Plan	Build-Out w/Diamond Specific Plan	Diamond Specific Plan Only Impacts
Railroad Canyon Rd./ N of Summerhill	72.4	72.7	72.8	0.1	73.7	72.9	73.1	0.2	74.5	73.1	73.3	0.2	75.1	76.9	77.0	0.1
Auto Center Dr/ N of Diamond	66.4	66.6	66.9	0.3	67.4	66.8	67.7	0.9	68.4	67.0	68.0	1	69.1	70.8	71.3	0.5
Casino Dr/ S of Diamond	66.2	66.4	66.5	0.1	66.8	66.5	67.1	0.6	67.5	66.8	67.4	0.6	67.9	74.1	74.2	0.1
N of Malaga	66.2	66.4	66.5	0.1	66.8	66.5	67.1	0.6	67.5	66.8	67.4	0.6	67.9	67.8	68.3	0.5
Diamond Dr/ Summerhill – I-15 NB Ramps	74.2	74.5	74.6	0.1	75.2	74.7	74.9	0.2	75.9	74.8	75.2	0.4	76.5	75.7	76.0	0.3
I-15 NB Ramps - I-15 SB Ramps	73.1	73.4	73.5	0.1	74.3	73.6	74.1	0.5	75.2	73.7	74.4	0.7	75.8	75.5	76.0	0.5
I-15 SB Ramps- Auto Center	71.5	71.8	72.1	0.3	73.0	71.9	73.1	1.2	74.3	72.1	73.4	1.3	75.0	75.3	76.0	0.7
Auto Center- Lakeshore	70.0	70.3	70.8	0.5	72.1	70.5	72.4	1.9	73.8	70.7	72.7	2	74.6	75.2	76.0	0.8
Lakeshore-Dwy 5	62.0	62.3	64.6	2.3	67.5	62.5	68.5	6.0	70.7	62.6	69.0	6.4	71.7	72.9	74.1	1.2
Dwy 5 –Campbell	62.0	62.3	63.8	1.5	67.1	62.5	66.9	4.4	69.8	62.6	67.8	5.2	71.1	73.2	74.0	0.8
Campbell-Dwy 6	58.6	59.0	60.1	1.1	65.8	59.0	62.3	3.3	68.0	59.3	64.8	5.5	70.0	71.7	72.3	0.6
Dwy 6 - Dwy 7	57.4	58.3	59.3	1	65.6	57.8	63.0	5.2	68.2	57.8	64.3	6.5	69.8	71.6	72.2	0.6
Dwy 7 – Sylvester	57.4	58.3	59.3	1	65.6	57.8	63.0	5.2	68.2	57.8	64.0	6.2	69.7	72.1	72.6	0.5
S of Sylvester	58.6	59.0	59.6	0.6	66.3	59.0	61.1	2.1	68.4	59.3	62.0	2.7	70.0	72.1	72.3	0.2
Mission Trail/ S of Malaga	70.3	70.6	70.8	0.2	71.3	70.7	71.8	1.1	72.4	70.9	72.1	1.2	73.0	72.5	73.4	0.9
Lakeshore Dr/ Avenue 6-Dwy 2	68.9	74.2	74.3	0.1	70.1	69.3	70.2	0.9	71.2	69.5	70.5	1	71.9	74.0	74.4	0.4
Dwy 2 – Diamond	69.6	69.9	70.0	0.1	70.8	70.1	70.8	0.7	71.8	70.2	71.3	1.1	72.6	74.2	74.7	0.5
Diamond – Campbell	70.5	70.8	71.0	0.2	71.3	70.9	71.8	0.9	72.3	71.1	72.1	1	72.8	72.9	73.6	0.7
Campbell – Malaga	69.9	70.2	70.4	0.2	70.8	70.4	71.1	0.7	71.7	70.5	71.3	0.8	72.1	72.8	73.3	0.5

Segment	Existing	2012 w/o Diamond Specific Plan	2012 w/ Diamond Specific Plan	Diamond Specific Plan Only Impacts	2012 w/ Diamond Specific Plan and Cumulative	2014 w/o Diamond Specific Plan	2014 w/Diamond Specific Plan	Diamond Specific Plan Only Impacts	2014 w/Diamond Specific Plan and Cumulative	2016 w/o Diamond Specific Plan	2016 w/Diamond Specific Plan	Diamond Specific Plan Only Impacts	2016 w/Diamond Specific Plan and Cumulative	Build-Out w/o Diamond Specific Plan	Build-Out w/Diamond Specific Plan	Diamond Specific Plan Only Impacts
Diamond Circle/ Diamond-Dwy3	NA	0.0	61.8	61.8	61.8	0.0	68.4	N/A	68.4	0.0	68.4	N/A	68.4	0.0	69.6	N/A
Dwy 3-Dwy 1	NA	NA	NA	NA	NA	0.0	65.7	N/A	65.7	0.0	65.7	N/A	65.7	0.0	65.7	N/A
Dwy 1-Sylvester	47.8	47.8	47.8	0	47.8	47.8	63.6	15.8	63.6	47.8	63.6	15.8	63.6	47.8	63.6	15.8
S of Sylvester	47.8	47.8	47.8	0	47.8	47.8	58.3	10.5	58.3	47.8	58.3	10.5	58.3	47.8	58.3	10.5
Campbell St/ Diamond-Lakeshore	61.1	61.3	64.0	2.7	64.0	61.5	67.8	6.3	67.8	61.6	68.3	6.7	68.3	62.6	68.5	5.9
E of Lakeshore	62.8	63.0	63.0	0	63.2	63.2	63.4	0.2	63.5	62.0	63.6	1.6	63.8	63.5	63.8	0.3
Pete Lehr Dr/ W of Diamond	52.6	52.6	52.6	0	52.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sylvester St/ W of Diamond Cir	47.8	47.8	47.8	0	47.8	47.8	47.8	0	47.8	47.8	47.8	0	47.8	47.8	47.8	0
Diamond Cir-Dwy 4	50.9	50.9	50.9	0	50.9	50.9	62.9	12	62.9	50.9	62.9	12	62.9	50.9	62.9	12
Dwy 4-Diamond	50.9	50.9	50.9	0	50.9	50.9	63.6	12.7	63.6	50.9	63.6	12.7	63.6	50.9	63.6	12.7
Diamond-Dwy 8	58.3	58.6	59.3	0.7	61.5	58.6	64.3	5.7	65.6	59.0	65.5	6.5	67.0	64.4	67.4	3
Dwy 8-Lakeshore	58.3	58.6	59.3	0.7	61.5	58.6	64.3	5.7	65.6	59.0	65.2	6.2	66.8	64.4	67.2	2.8
Malaga Rd/ E of Lakeshore	61.8	62.2	62.2	0	63.2	62.3	63.0	0.7	64.4	62.5	63.2	0.7	65.1	68.4	68.6	0.2

Source: Giroux & Associates, June 2009

Bolded entries indicate that the traffic from the Diamond Specific Plan increases ambient noise levels by 3 dBA and the resultant noise level exceeds 65 dBA Ldn.

Table 4.9-7 shows roadway segments with potentially significant noise impacts. To be considered a significant impact, Specific Plan traffic must create a noise level increase in the area adjacent to the roadway segment of greater than 3 dBA and the resulting noise level must exceed the City Noise Element 65 dBA L_{dn} exterior noise threshold. Each segment that exceeds this significance threshold is either contained on the project site or has no existing adjacent residential use. Most potentially significant impacts are rendered less than significant in the future at build-out when the background traffic noise level is higher and the projects contribution to the overall noise environment is diluted. However, in the future, there may be residential uses to the south of the site as per the East Lake Specific Plan. No site plan is yet available but if residences are constructed adjacent to Sylvester Street, traffic noise levels at build-out could be as high as 67 dB CNEL at 50 feet from the roadway centerline. Traffic noise levels could be potentially significant if homes are sited closer than 68 feet from the roadway centerline and no noise wall were erected. Therefore, traffic noise levels are determined to be less-than-significant if homes are sited at least 68 feet from the Sylvester Street centerline or if a sound wall is constructed. If homes are built at less than this setback distance, or if a soundwall or other noise attenuation is not practical, then impacts are potentially significant.

Table 4.9-7. Roadway Segments with Potentially Significant Noise Impacts (dB CNEL)

Segment	Diamond Specific Plan Impact in 2014	Diamond Specific Plan Impact in 2016	Diamond Specific Plan Impact at Build-out
Diamond Drive/			
Lakeshore-Dwy 5*	6.0	6.4	1.2
Dwy 5 –Campbell*	4.4	5.2	0.8
Campbell St/			
Diamond-Lakeshore*	6.3	6.7	5.9
Sylvester St/			
Diamond-Dwy 8*	5.6	6.5	3.0
Dwy 8-Lakeshore**	5.6	6.3	2.9

Source: Giroux & Associates, June 2009 (Appendix H)
*Within project site
** No existing adjacent residential uses

Non-Transportation Related On-Site Noise Generation

Mixed-use developments, such as those proposed by the Specific Plan, can result in potential noise conflicts at the interface between retail commercial development and residential uses. In mixed-use urban-character environments, the source of noise conflict may be more vertical when residential uses are constructed above commercial uses. Typical noises that may be generated by commercial land uses include alarm systems, truck deliveries, landscaping maintenance and maintenance services. Uses for large and more noise prone uses such as grocery stores or restaurants operate under conditional use permits (CUP). These uses are required to adhere to the City of Lake Elsinore Noise Ordinance and Community Noise Assessment Criteria to minimize noise impacts to adjacent uses. Although the exact mix of commercial tenants is unknown, mechanisms, such as permit conditions, are in place to ensure that future mixed-use nature of the project site will maintain compatibility with respect to noise generation. The City of Lake Elsinore Municipal Code further restricts the level of noise that may be created upon

residential properties from commercial activities. The code restricts the increased level of noise as no more than 5 dB greater than ambient conditions without such a source.

In addition, to the future development of mixed uses, residential uses may be located adjacent to the existing animal hospital within Planning Area 1 and along the east side of PA-5 which abuts the rear loading area of the Lake Elsinore Town Center. Therefore, the potential for exterior and interior noise may occur as a result of the interface between residential and commercial uses. A significant impact is identified and mitigation is required.

4.9.3 Cumulative Impacts

Cumulatively, traffic noise will increase both from area growth and from the implementation of other area projects. By area build-out traffic noise will have increased substantially along many roadways. Traffic volume changes from infill development and from conversion of existing uses will substantially increase in the future and will modify the area's acoustic environment. Noise-level differences between "with Diamond Specific Plan" versus "no Diamond Specific Plan" scenarios have been determined to be individually less-than-significant for project level impacts analysis.

Cumulatively, traffic noise will increase both from area growth and from the implementation of other area projects. Cumulative impacts are defined as the difference between the "build-out with Diamond Specific Plan" scenario and "existing" noise levels. As seen in Table 4.9-6, at 50 feet from roadway centerline, most segments will experience potentially significant cumulative impacts. However, with the exception of on-site roadway segments, the Diamond Specific Plan itself does not contribute substantially to this impact and the noise increases would occur even without Diamond Specific Plan implementation. Therefore, cumulative impacts due to Diamond Specific Plan implementation are determined to be less-than-significant.

4.9.4 Environmental Mitigation Measures

The following mitigation measures are required to reduce potential construction and operational noise impacts to less than significant levels.

Construction Noise

DSP-NSE-1 All construction equipment shall use properly operating mufflers.

DSP-NSE -2 All stationary noise generating construction equipment shall be located as far as practical from existing residences. If impulsive noise generation such as pile driving or jack-hammers is necessary close to noise-sensitive users, activity scheduling to minimize off-site impacts, or erection of temporary barriers, shall be necessary.

Future Residential Units Interior/Exterior Noise Levels

DSP-NSE -3 As detailed site plans come forward for the Specific Plan area, site design in the form of setbacks from the roadway or noise attenuation shall be required to reduce noise levels to acceptable standards. In the event that patios and balconies are determined to occur within the 65 dBA noise contour, noise attenuation shall be required to reduce noise levels to 65 dBA L_{dn} or lower. This may include the use of architectural treatments, barriers, or other noise attenuating measures. The mitigation measures shall provide

sound level reductions so that future uses within the Diamond Specific Plan area are consistent with the CNEL levels identified in the Lake Elsinore General Plan.

DSP-NSE -4 Prior to the issuance of building permits, the applicant shall submit a detailed acoustical study demonstrating that all the Diamond Specific Plan structures will meet applicable City interior noise levels and exterior living area noise levels, in accordance with applicable noise standards and zoning regulations.

a. The study shall be prepared by a City-approved acoustical expert, to the satisfaction of the Community Development Director.

b. The study shall document projected ultimate noise exposure for interior office, retail and residential space and shall demonstrate that the Diamond Specific Plan design plans have incorporated adequate sound attenuation measures to achieve the applicable noise standards.

DSP-NSE -5 Prior to the issuance of any building permits for residential uses located within Planning Area 1, the applicant shall incorporate appropriate buffering and/or sound attenuation in the building designs to limit potential incompatibilities with the nearby animal hospital. Noise levels for the residential units shall be reduced to 65 dBA for exterior noise levels and 45 dBA for interior noise levels.

DSP-NSE-6 Prior to issuance of building permits for residential uses along the east side of Planning Area 5 which abut the rear loading area of the Lake Elsinore Town Center, the applicant shall incorporate appropriate buffering and/or sound attenuation features to reduce exterior noise levels to 65 dBA and interior noise levels to 45 dBA.

4.9.5 Conclusion

Construction activities for the Diamond Specific Plan would adhere to the requirements of the Lake Elsinore Noise Ordinance, Section 17.78.080. In addition, implementation of mitigation measures DSP-NSE-1 and DSP-NSE -2 would reduce construction noise impacts to below a level of significance.

Vehicular trips associated with the Diamond Specific Plan development would result in a noise increase along roadway segments. Future residential uses proposed by the Diamond Specific Plan may be impacted by roadway noise levels. Mitigation measures, requiring that future development incorporate measures to reduce noise levels to acceptable ranges would be incorporated as specific development plans come forward, have been identified. Mitigation measure DSP-NSE-3 and DSP-NSE-4 would reduce impacts to exterior and interior noise levels associated with vehicular noise and the potential incompatibility between commercial and residential interface to below a level of significance. Incorporation of DSP-NSE-5 and -6 would reduce noise levels for residential uses located within Planning Area 5 and 6 adjacent to commercial uses to below a level of significance. No cumulative impacts are anticipated for the Diamond Specific Plan.

4.10 POPULATION/HOUSING

This section relies on data from the Riverside County Integrated Project (RCIP), the Lake Elsinore Housing Element Update (2009), and Southern California Association of Governments (SCAG).

4.10.1 Environmental Setting

Applicable Plans and Standards

The City of Lake Elsinore General Plan – Housing Element Update (2009)

The City of Lake Elsinore General Plan Housing Element Update is a document designed to ensure that the City establishes policies, procedures, and incentives in its land use planning and redevelopment activities that would result in current and projected housing needs for all economic segments of the community, including groups with special housing needs. The City's General Plan also established policy for providing adequate housing and related action programs. Under State law, Housing Elements are to be reviewed and updated every five years. The City of Lake Elsinore Housing Element Update presents the City's Housing Plan for the period 2008-2014.

Riverside County Integrated Project General Plan Housing Element (2003)

The RCIP General Plan Housing Element is a comprehensive assessment of the current and projected housing needs for all economic segments of the community, including groups with special housing needs. The RCIP also established policy for providing adequate housing and related action programs. Under state law, Housing Elements are to be reviewed and updated every five years. The RCIP Housing Element presents the County's Housing Action Plan for the period of 2003-2008.

Regional Comprehensive Plan and Guide – Southern California Association of Governments (1996)

SCAG is designated by the federal government as the Southern California region's Metropolitan Planning Organization (MPO) and Regional Transportation Planning Agency (RTPA). SCAG has sought to address regional planning concerns through various documents, including the 1996 Regional Comprehensive Plan and Guide (RCPG). The RCPG is "intended to serve the region as a framework for decision making with respect to the growth and changes that can be anticipated during the next 20 years and beyond." The RCPG contains a chapter on housing.

East Lake Specific Plan

The East Lake Specific Plan (ELSP), originally adopted in 1993, covered a 3,000 acre area at the east end of Lake Elsinore, and originally provided for up to 9,000 dwelling units and a combination of commercial, recreational and open spaces uses in three distinct districts. The ELSP was subsequently amended by a series of Specific Plan amendments (SPAs) between 1998 and 2006. Most of these amendments affected portions of the Recreation Village District in the easterly portion of the ELSP plan area, and involved redistribution of land uses due to flood storage needs, which were not provided for in the 1993 plan. Including all of the SPAs up through SPA-8, the ELSP is anticipated to develop 7,389 residential units on 1,153 acres.

Existing Conditions

Population Growth

Historically, Riverside County has primarily consisted of rural residential and agriculture land uses. In the last several decades, residential development in the County has increased dramatically. According to population figures from the California Department of Finance, the population in the County rose by 70 percent between 1980 and 1990 and then another 30 percent between 1990 and 2000. According to SCAG, in 2000 the County of Riverside had a population of 1,545,387. By the year 2020, the population in the County is expected to increase to approximately 2.8 million people. The California Department of Finance estimates that Riverside County will continue to grow to 3.3 million people by the year 2030.

According to the California Department of Finance, the City of Lake Elsinore experienced 1.4 percent increase of population from 2008 to 2009 as the city grew from 49,556 to 50,267. Over the past nine years, from 2000 to 2009, the City has been among the 20 cities of the state that have experienced the most growth. From 2000 to 2009, Lake Elsinore has experienced a growth rate of 73.8 percent, which is above the growth rate of Riverside County of 35.2 percent for the same period. The city growth rate has slowed in the later end of the decade compared to an approximately 10 percent growth rate from 2000 to 2002 and 2004 to 2005. The furthest projection of population that SCAG gives is through 2035, at which point it is predicted the City of Lake Elsinore will have 92,438 residents (SCAG Growth Estimates 2008). As of 2009, Lake Elsinore represented approximately 2.4 percent of the population in Riverside County. Additionally, SCAG produces population growth estimates. Table 4.10-1 shows the most recent estimates.

Table 4.10-1. Adopted SCAG Regionwide Forecasts

	2010	2015	2020	2025	2030
Population	19,418,349	20,465,819	21,468,934	22,395,124	23,255,378
Housing Units	6,086,983	6,474,074	6,840,331	7,156,635	7,449,484
Employment	8,349,454	8,811,402	9,183,026	9,546,782	9,913,372

Source: Southern California Association of Governments, Growth Estimates 2008.

Employment

In 2008 the total amount of jobs within the City of Lake Elsinore reached 10,287, which is approximately 14 percent higher than its 2003 level. Retail trade jobs constituted 23 percent of the total jobs followed closely by jobs in education and health at 21 percent. Although overall employment decreased from 2006 to 2008, jobs in professional and management positions increased by 22 percent. Manufacturing jobs saw the greatest decline as employment in the sector decreased by 1 percent between 2006 and 2008. According to the California Employment Development Department (EDD), the City of Lake Elsinore had an unemployment rate of 9.5 percent in a labor force of 17,500 as of November 2008. This unemployment rate reflects the current 9.5 percent unemployment rate of the combined Riverside and San Bernardino Counties (as defined by the Riverside-San Bernardino-Ontario metropolitan statistical area).

At the northern portion of the project site, there is an existing center of 80,000 square feet (sf) of commercial use known as Lake Elsinore Valley Center. The Lake Elsinore Diamond Stadium is currently operating within the project site as well.

Housing

According to the SCAG 2008 statistical profile of Lake Elsinore, there are 14,952 households within the city limits, with an average of 2.9 persons per household. This constitutes 2.4 percent of the county households and the average household size of Lake Elsinore is below the county average of 3.1. The period between 2000 and 2008 saw a steady increase in total number of households, with a 77.1 percent increase. This household growth rate was more than twice the county rate of 31.4 percent.

Data from 2007, and reported by SCAG in the 2009 profile of the City of Lake Elsinore, shows close to 57 percent of Lake Elsinore households have three or less people, and nearly a quarter of households have at least 5 people.

Table 4.10-2 provides a summary of the housing unit estimates and percentage growth for the City of Lake Elsinore, as provided by the City's Housing Element Update.

Table 4.10-2. Housing Unit Estimates

	2005	2010	2015	2020	2025	2030	2035
Housing Units	12,716	16,429	19,566	22,792	25,922	28,704	31,117
% Growth		29.20%	19.09%	16.49%	13.73%	10.73%	8.41%

Source: City of Lake Elsinore Housing Element, 2009

Table 4.10-3 provides a summary of the predicted regional housing needs in the City of Lake Elsinore from 2006 to 2014. The need for low and very low income housing is close to the need for above moderate income housing.

Table 4.10-3. 2006-2014 Housing Needs Assessment City of Lake Elsinore

	Income Category			
Total Adjusted Need	Very Low (23.5%)	Low (16.5%)	Moderate (18.6%)	Above Moderate (41.4.0%)
5,590	1,311	921	1,041	2,316

Source: SCAG, Final Regional Housing Needs Allocation, July 2007

Affordability refers to the relationship between total household income and total expenditure for housing. Affordable housing is a factor in improving the social and economic conditions of a region. A lack of affordable housing can result in socioeconomic impacts, such as households paying more for housing than they can reasonably afford. According to the SCAG city profile of Lake Elsinore, the period from 2000 to 2006 saw almost a tripling in the median home sale price from $149,500 to $422,250. Median home sale prices began to drop after 2006 and saw a substantial decrease after 2007, when half of city households earned less than $50,000. Median home prices continued to fall and reached $235,000 in 2008.

Job-Housing Balance

A job-housing balance has been identified by the SCAG, the Southern California Air Quality Management District (SCAQMD) and the City of Lake Elsinore as a way to establish a sustainable live/work community, achieve regional air quality improvement goals, reduce infrastructure needs and costs and mitigate traffic congestions.

The housing element of the 2008 SCAG Regional Comprehensive Plan (RCP) includes policy elements to establish a balance of jobs, homes and people throughout Southern California. In creating a job/housing balance, a region includes the correct number (or balance) of housing and employment opportunities as that the majority of the people living in the subregion can also work in the subregion. A lower jobs/housing ratio results in fewer jobs for residents, which results in workers commuting out of the area. A higher jobs/housing ratio results in a larger number of jobs that cannot be filled by residents. Longer commutes result in increased vehicle trip lengths, which create potentially significant environmental impacts associated with transportation, air quality and noise.

The City of Lake Elsinore identifies the importance of achieving a strong jobs-to-housing balance within the city. It is reasoned that to stay financially stable, an ideal ratio is approximately 1.5 jobs for every household (General Plan Update 2009). While the General Plan Update 2009 identifies this ratio as ideal, it acknowledges that a ratio of 1.05 is more achievable with the City's economic development strategy. With 10,287 jobs in Lake Elsinore in 2008, (not including volunteers and private household workers), and 14,952 households in the same year, Lake Elsinore falls 5,412 jobs below the 1.05 jobs to homes ratio.

4.10.2 Project Impacts

4.10.2.1 Thresholds of Significance

Implementation of the proposed project would result in a significant impact to population and housing, as defined in Appendix G (XII) of the *California Environmental Quality Act (CEQA) Guidelines* if any of the following occur:

- Induce substantial population growth in an area, either directly or indirectly;
- The displacement of substantial numbers of residential units, requiring the construction of replacement housing elsewhere; and/or
- The displacement of a substantial number of persons, necessitating the construction of replacement housing.

Significance thresholds for employment impacts are based upon §15064(e) of the *CEQA Guidelines*. According to this section, a socioeconomic impact must either cause or be caused by a physical change to the environment before it can be considered a significant impact. "Economic and social changes resulting from a project shall not be treated as significant effects on the environment." Socioeconomic changes may have substantial impacts on the lives of people, but evidence of economic and social impacts that do not contribute to, or are not caused by, physical changes in the environment is not substantial evidence that the project may have a significant impact on the environment (*CEQA Guidelines* §15064 (f)(6)). Land use changes that entail no discernable effects on the environment cannot be deemed to be significant socioeconomic impacts.

4.10.2.2 Environmental Impacts

Population and Housing Projections

The project includes adoption of SPA-9 to the ELSP. Adoption of SPA-9 would result in a change in the ELSP boundary, a reduction in commercial development and open space acreage within the ELSP, and the removal of the baseball stadium from the ELSP. With SPA 9, the ELSP would continue to have 7,389 residential dwelling units. Therefore implementation of SPA-9 would not have a significant impact to the population and housing projections for the ELSP.

Within the Diamond Specific Plan approximately 600 multifamily residential units would be built with an average population of 2.7 people per household giving an overall residential population of 1,620 people. The 1,620 anticipated residents of the Diamond Specific Plan constitute approximately three percent of the SCAG 2015 population forecast for Lake Elsinore. SCAG forecasts a 1.25 percent annual growth for the Southern California region including Los Angeles, Orange, Riverside, San Bernardino, Imperial and Ventura regions. This would be equal to adding 209,000 people to the region annually. Of this, the Diamond Specific Plan would add 0.7 percent of this population. Although the addition of 1,620 residents in this area may not have been anticipated in SCAG's 2008 growth projections, the addition of 3 percent of the population would not be considered a substantial population increase.

Similarly, the residential units included in the Diamond Specific Plan are anticipated in the Lake Elsinore General Plan Update (2009) but may not have been considered in the SCAG 2008 household projections. SCAG forecasts there to be 15,239 households in Lake Elsinore in 2010. The addition of 600 dwelling units would constitute 3.9 percent of the SCAG forecast. Therefore, the increase in population caused by the Diamond Specific Plan would not substantially exceed the existing population or exceed forecasted population growth.

Displacement of Residential Units and Persons

The Diamond Specific Plan site is currently vacant with exception of the Diamond Stadium and commercial uses. Therefore, implementation of the Diamond Specific Plan would not result in the displacement of any residential units or persons, and a less than significant impact is identified.

4.10.3 Cumulative Impacts

The geographic context for the cumulative impacts associated with population and housing issues is the City of Lake Elsinore, which assumes full buildout of the 2009 General Plan Update. SCAG's regional growth data projects that the population of Lake Elsinore would be 92,438 people in 2035 an increase of 41,300 persons over the estimated 2010 population of 51,138.

None of the cumulative projects that are being considered with the Diamond Specific Plan result in the demolition of existing housing units, displacing existing persons or dwelling units. Additionally, development related to the Diamond Specific Plan or any of the cumulative projects would not result in or contribute to substantial demolition of existing housing that would displace existing people or dwelling units. Therefore, the Diamond Specific Plan and the rest of the cumulative projects, would not contribute to a cumulative impact, and would result in a less than significant contribution to this effect.

4.10.4 Environmental Mitigation Measures

No mitigation measures are required for population and housing.

4.10.5 Conclusion

While the Diamond Specific Plan would increase the population of the area, this growth would not be considered substantial on a regional level. The Diamond Specific Plan would be developed on primarily vacant land with the exception of the Diamond Stadium and commercial uses, and thus would not displace existing housing units or populations. The Diamond Specific Plan would have a less than significant impact to population and housing.

4.11 PUBLIC SERVICES

The following section describes existing fire protection, police protection, school, and library services and potential impacts of the Diamond Specific Plan on the availability of these facilities and services. Letters from service providers are included in Appendix I of this Draft Environmental Impact Report (EIR).

4.11.1 Environmental Setting

Fire Protection

The City of Lake Elsinore contracts for fire services with the Riverside County Fire Department (RCFD), which is a joint agency with the California Department of Forestry and Fire Protection (CDF or CAL Fire). The RCFD stations, shown on Figure 4.11-1, that would serve the Diamond Specific Plan include:

- Fire Station No. 94 (Canyon Hills), located at 21775 Railroad Canyon Road, approximately 1.4 miles northeast of the project site.
- Fire Station No. 10 (Lake Elsinore), located at 410 W. Graham Avenue, approximately 2.2 miles northwest of the project site.
- Fire Station No. 61 (Wildomar), located at 32637 Gruwell Street, Canyon Lake, CA.

Each of the above mentioned fire stations are staffed full-time with a minimum three person crew, including Paramedics operating "Type-1" structural fire fighting apparatus. Station No. 10 has two Cal Fire Type III engines staffed with one Fire Captain or Fire Apparatus Engineer and three firefighters during declared fire season.

Police Protection

Police protection services are provided by the Lake Elsinore Police Department (LEPD) under contract by the Riverside County Sheriff's Department (RCSD). Services include City police protection and the Lake Elsinore safety patrol. The LEPD also provides cooperative programs including community oriented policing, crime-free multi-housing, Neighborhood Watch, and other deterrents to crime.

The Lake Elsinore Police Department/Sheriff's Station is located at 333 West Limited Avenue in the City of Lake Elsinore, approximately 1.84 miles from the project site (Figure 4.11-1). The Lake Elsinore Police Department Lake Patrol patrols the lake, beaches, and lake-adjacent parks and assists stranded boaters. The Lake Patrol is also augmented by a special group of volunteers known as Lake Elsinore Marine Search and Rescue (LEMSAR). Current police staffing requirements for Lake Elsinore are 1.5 officers per 1,000 population.

Average response times for City police protection vary due to the differing priorities of each call received by 911 and dispatched to officers. In the last year, the average response times for priority one calls is 3.3 minutes, for priority two calls, 8.8 minutes, for priority three calls, 18.8 minutes, and for priority four calls, 23.8 minutes. This criterion for first response would be applied to the Diamond Specific Plan.

Schools

The City of Lake Elsinore is currently served by the Lake Elsinore Unified School District (LEUSD). There are fifteen elementary schools, five middle schools, three high schools, and one continuation high school that serve the District. There are no schools present within the project site. Schools within

proximity to the project site are shown in Figure 4.11-1. The closest school campus to the project site is Canyon Academy which is approximately 0.5 miles north of the Diamond Specific Plan. However, because Canyon Academy is a private school and would not be required to accept students living within the Diamond Specific Plan, it would not be impacted by the project.

The Diamond Specific Plan is currently located within the attendance boundaries of Railroad Canyon Elementary School, Elsinore Middle School, and Elsinore High School. Table 4.11-1 shows the enrollment and capacity for each of these schools for the 2008/09 school year. Each of the schools serving the Diamond Specific Plan has available capacity. As of April 2009, there were 135 seats available at Railroad Canyon Elementary School, 484 seats available at Elsinore Middle School, and 380 seats available at Elsinore High School. Per communication with LEUSD, the district will continue to accept students from the Diamond Specific Plan, but the district cannot guarantee enrollment at these facilities in the future due to increasing enrollment.

Table 4.11-1. Capacity, Enrollment and Generation at Schools Servicing Diamond Specific Plan for 2008/09 School Year

School	Enrollment	Capacity	Seats Available
Railroad Canyon Elementary School	615	750	135
Elsinore Middle School	880	1364	484
Elsinore High School	2,168	2,548	380

Source: Communication with Gregory J. Bowers, LEUSD, April 3, 2009 (Appendix I).

Libraries

The Riverside County Library System (RCLS) is a network of public and academic libraries serving Riverside County. It is administered by Library Systems and Services, Inc. (LSSI) for the Riverside County Board of Supervisors. Libraries within proximity to the project site are shown in Figure 4.11-1. The project site is currently served by two facilities:

- Lake Elsinore Library located at 600 W. Graham Avenue in Lake Elsinore; and
- Lakeside Library located at 32593 Riverside Drive in Lake Elsinore.

In addition, the City has begun planning for a new library, although discussions are still at the initial stages. The Lake Elsinore Library currently contains 66,879 volumes. The Lakeside Library currently holds approximately 25,060 volumes.

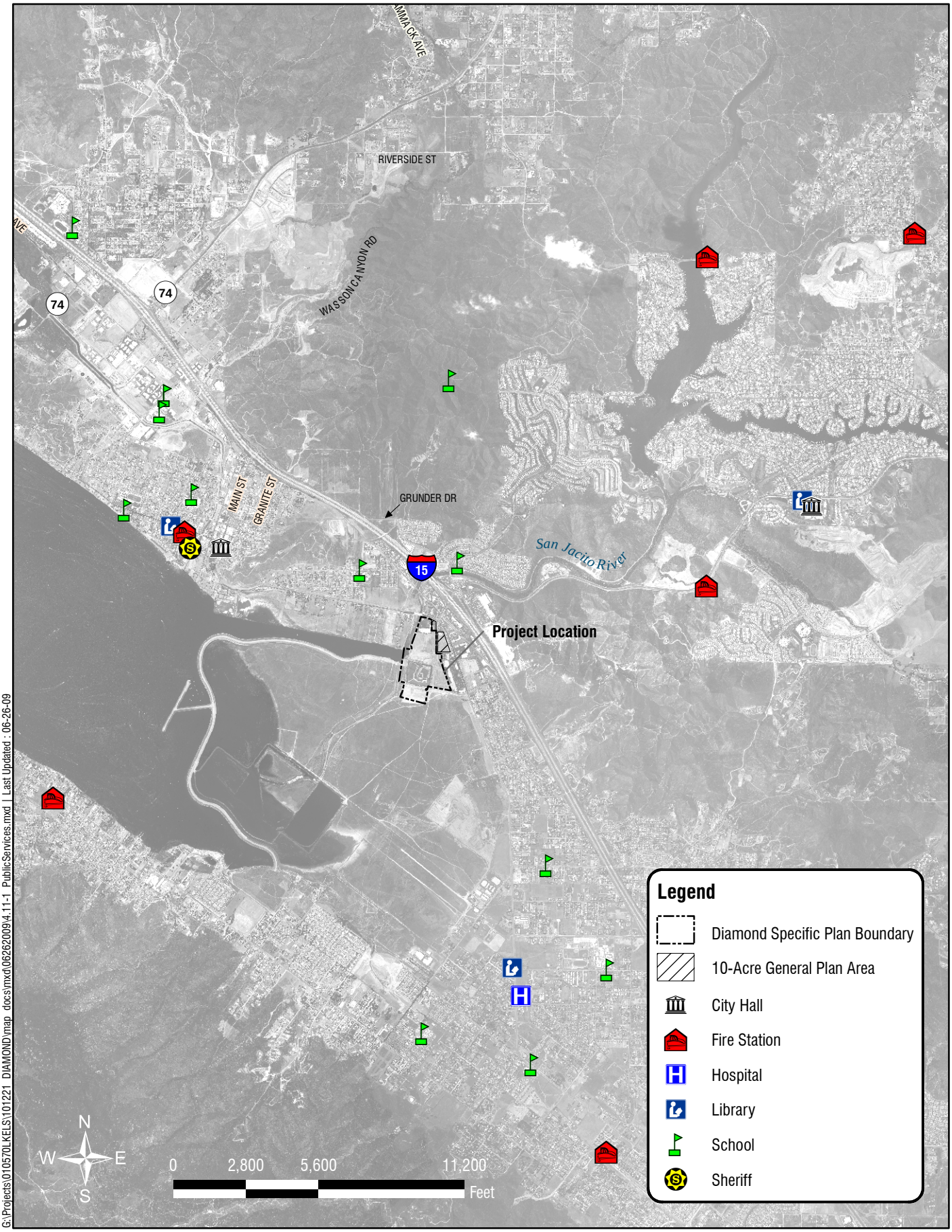
4.11.2 Project Impacts

4.11.2.1 Thresholds of Significance

Fire Protection Services

A significant impact to fire protection services is expected if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives of RCFD.



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Public Services

FIGURE 4.11-1

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

Police Protection Services

A significant impact to police protection services is expected if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives of LEPD.

Schools

A significant impact to schools is expected if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives of LEUSD.

Libraries

A significant impact to libraries is expected if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives of RCLS.

4.11.2.2 Environmental Impacts

Fire Protection

During construction and operation of the Diamond Specific Plan, compliance with all applicable fire code and ordinance requirements would be required and made conditions of approval for the Diamond Specific Plan. The Diamond Specific Plan would comply with the 2006 International Fire Code, California Building Code (CBC), and applicable RCFD Code requirements and standards for construction, access, water mains, fire flow, and fire hydrants. RCFD indicated fire flow requirements for commercial structures is 1,500 gallons per minute (gpm), at a residual operating pressure of 20 pounds per square inch (psi), and can rise to 8,000 gpm. Any water system would be designed to meet this demand and flow. The project has been determined by fire department personnel to have adequate primary and secondary access for fire department vehicles.

RCFD guidelines establish a level of service standard of seven minutes to any location within the city. From Fire Station No. 94, the first unit would arrive approximately 3-4 minutes after dispatch, a unit from Fire Station No. 10 approximately 4-5 minutes after dispatch, and from Fire Station No. 61 approximately 7-8 minutes.

Based upon communication with RCFD[1], current staff levels are sufficient to meet existing demands. Therefore, there is no need for additional facilities and/or equipment to accommodate existing demands. To accommodate for the increase demand created by the Diamond Specific Plan, the applicant would be required to contribute to the City's Community Facilities District (CFD) No. 2003-1 (Law Enforcement, Fire, and Paramedic Services). The funds contributed to this district are distributed to provide for additional staff, facility expansion and maintenance, and purchasing of additional equipment. With payment of these fees, implementation of the Diamond Specific Plan would not hinder the attainment of established level of service goals, there would be no need for new facilities and/or equipment, and a less than significant impact is identified.

Police Protection

According to the City of Lake Elsinore General Plan Update (2009) officers within the City equates to 38, which meets the desired ratio of 1.5 officers per 1,000 residents. Current response times for emergency calls for service are less than five minutes, which meets the department's standard for response times. According to communication with the LEPD,[2] one more officer would need to be hired for each 1,000 people the project adds to the area. To handle the full generation of 1,620 residents of the Diamond Specific Plan, one officer would need to be hired in the future. All new development projects, including the Diamond Specific Plan, are required to contribute to the City's CFD No. 2003-1 (Law Enforcement, Fire, and Paramedic Services). The funds contributed to this district are distributed to provide for additional staff, facility expansion and maintenance, and purchasing of additional equipment. Consequently, the project would pay a fair share of fees to provide additional service for the demand generated by the project.

Schools

The Diamond Specific Plan includes the development of 600 housing units with an estimated increase of 1,620 persons in residential population. The number of students projected to be generated at build-out of the Diamond Specific Plan is shown in Table 4.11-2 below. The generation factors per dwelling unit were obtained through communication with the LEUSD.[3]

Table 4.11-2. Diamond Specific Plan Student Generation Impacts

School	Generation Factor Students/ Dwelling Unit[1]	Number of Residential Units	Diamond Specific Plan Generation	Seats Available at School[2]	Resulting Seat Capacity at School with Specific Plan
Railroad Canyon Elementary School	0.3323	600	199	135	-64
Elsinore Middle School	0.1669	600	100	484	384
Elsinore High School	0.1707	600	102	380	278
Total			401		

Notes: [1] Generation rates provided by LEUSD (Appendix I).
[2] See Table 4.11.1 for information on seat availability per school.

[1] Communication with Jason Neumann, Fire Captain, Riverside County Fire Department, sent June 14, 2009.
[2] Communication with Deputy Dean, City of Lake Elsinore Police Department/Sheriff's Station, on June 17, 2009.
[3] Communication with Gregory J. Bowers, Assistant Superintendent of Facilities and Operations, Lake Elsinore Unified School District, sent April 9, 2009.

As shown in Table 4.11-2, the Diamond Specific Plan is expected to generate 401 total students. Of the 401 total estimated students, 135 would be elementary school students, 100 would be middle school students, and 100 would be high school students. The expected generation of elementary school children would exceed the capacity of the Railroad Canyon Elementary, but the expected generation of middle and high school students would be within the capacity of the servicing middle and high schools.

Because the Diamond Specific Plan would result in the addition of approximately 401 students to LEUSD, and the elementary school identified to serve the Diamond Specific Plan does not have existing capacity for expected project-related student generation, a potentially significant impact to schools will result. However, the Diamond Specific Plan will be required to pay applicable development fees levied by LEUSD pursuant to the School Facilities Act (Senate Bill [SB] 50, Stats. 1998, c.407) to offset these impacts on school facilities resulting from new development. SB 50 provides limitations on development fee exactions for school mitigation purposes, specifying that it is the exclusive method for financing school facilities and provides the exclusive method for mitigating environmental effects related to the adequacy of school facilities. Compliance with SB 50 also constitutes full and complete mitigation of impacts on adequate school facilities. The amount would be determined at the time of project approval. Payment of required school fees would reduce impacts to schools to below a level of significance.

Libraries

The existing library capacity within the project vicinity is adequate to serve the current population. According to Mark Smith, the library administrator for the Riverside County Libraries, the existing library facilities in the City of Lake Elsinore are adequate to meet the future demand of the Diamond Specific Plan. Therefore, a less than significant impact is anticipated.[4] In addition, the Diamond Specific Plan would be required to participate in the Riverside County Uniform Mitigation Fee program that collects fees on new residential housing developments to support future facility development and library material purchases.

4.11.3 Cumulative Impacts

Fire Protection Services

Implementation of the Diamond Specific Plan in conjunction with other development in the area would result in a cumulative increase in fire protection requirements due to a collective increase to the City's fire protection service load. As with the Diamond Specific Plan, development of future projects would require participation in county wide impact fees to offset any additional fire protection services needed to serve the project site. Therefore, the Diamond Specific Plan would result in a less than significant cumulative impact to fire protection services.

Police Protection Services

The cumulative residential population increase associated with development of the Diamond Specific Plan and related projects is expected to collectively intensify the City's police protection service load to the project site. Similar to the Diamond Specific Plan, development of the related projects would require participation in county-wide impact fees to offset any additional police protection services need to serve

[4] Communication with Mark Smith, Administrator, Riverside County Library System, on June 17, 2009 (Appendix I).

the project site. Therefore, the Diamond Specific Plan would result in a less than significant cumulative impact to police protection services.

Schools

Implementation of the Diamond Specific Plan in conjunction with related projects would result in a cumulative increase in student population. However, as with the Diamond Specific Plan, other development projects would be required to pay applicable developer fees levied by LEUSD, pursuant to SB 50, to offset these impacts on school facilities resulting from new development. Therefore, the Diamond Specific Plan would result in a less than significant cumulative impact to schools.

Libraries

Implementation of the Diamond Specific Plan in conjunction with related projects would result in a cumulative increase in demand for library facilities and services. Similar to the Diamond Specific Plan, development of related projects would require participation in the County's Uniform Mitigation Fee program that collects fees on new residential housing developments to support future facility development and offset any potential impacts to libraries. Therefore, the Diamond Specific Plan would result in a less than significant cumulative impact to library services.

4.11.4 Environmental Mitigation Measures

No impacts to fire protection, police protection, schools, or libraries are anticipated with implementation of the Diamond Specific Plan. Therefore, no mitigation measures are recommended.

4.11.5 Conclusion

The Diamond Specific Plan would increase demand for fire and police services. However, the Diamond Specific Plan would be required to contribute to the City's Community Facilities District (CFD) No. 2003-1 (Law Enforcement, Fire, and Paramedic Services). The funds contributed to this district are distributed to provide for additional staff, facility expansion and maintenance, and purchasing of additional equipment. Payment of these fees would reduce impacts to fire and police services to below a level of significance.

The Diamond Specific Plan would result in the addition of approximately 401 students to LEUSD, and the elementary school identified to serve the Diamond Specific Plan would not meet the expected generation. However, the Diamond Specific Plan would be required to pay applicable development fees levied by LEUSD pursuant to the School Facilities Act (SB 50, Stats. 1998, c.407) to offset these impacts on school facilities resulting from new development. Payment of school fees would reduce impacts to schools to below a level of significance.

The Diamond Specific Plan would result in an increase in demand for library services. Payment of library fees would reduce impacts to below a level of significance.

4.12 RECREATION

According to the Open Space/Conservation Element of the City of Lake Elsinore General Plan Update (2009), parks represent an important resource in the city for the preservation of natural resources, the managed production of resources, outdoor recreation, and public health and safety. This section analyzes the potential impacts of the Diamond Specific Plan to existing recreational facilities and to potential impacts resulting from construction of new parks.

4.12.1 Environmental Setting

A variety of recreational amenities currently exists within and in proximity to the City of Lake Elsinore, including the lake itself, the adjacent Cleveland National Forest, local and regional parks, athletic fields, and access to school facilities. According to the City's General Plan Update (2009), there are several regional recreational facilities in addition to the Lake Community Center and the Senior Activity Center. An estimated 1,000 people per week currently use the Lake Community Center, while an additional 3,500 senior citizens are hosted by the Senior Activity Center each month. Within the City of Lake Elsinore, there are 16 existing parks with an additional 12 parks slated for future development. Presently, the city has 125 acres of developed park land, while an additional 129.5 acres is identified and committed to the development of new park land (Lake Elsinore Parks and Recreation Master Plan 2008-2030). From 2008 through 2030, the City of Lake Elsinore will continue to develop these new parks in addition to expanding and renovating existing park and activity center facilities.

The Quimby Act permits cities and counties to require the dedication of three acres of parkland for every 1,000 residents. The City of Lake Elsinore has adopted a more stringent standard requiring dedication of land or payment of an in lieu fee, or five acres of parkland for every 1,000 residents. Following this standard of five acres of parkland per 1,000 residents, the City would need 251.34 acres of parkland to support its January 2009 population of 50,267 residents (as estimated by the California Department of Finance). Existing park facilities do not meet this standard, and the City has a deficit of 126 acres of developed parkland. Buildout of the Diamond Specific Plan is expected by 2020, at which point the projected population of the city will be 69,558 (SCAG 2008 Growth Forecasts). Providing that all currently proposed and committed parkland presently identified is developed by that time, a deficit of 94 acres would remain.

4.12.2 Project Impacts

4.12.2.1 Thresholds of Significance

As defined in Appendix G (XI) of the *California Environmental Quality Act (CEQA) Guidelines*, project impacts to recreation are considered significant if any of the following occur:

- The project increases the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- The project includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.12.2.2 Environmental Impacts

The City parks and open space requirement for residential development is five acres of parkland per 1,000 residents. By this standard, the Diamond Specific Plan would need to provide 8.1 acres of parkland for the 1,620 residents expected to be generated by the plan. The Specific Plan proposes 6.8 acres of open space in the form of private recreational facilities for residents and space for public gathering. However, this does not meet the entire requirement for the Lake Elsinore Quimby Act. Through the payment of in-lieu fees, impacts to existing recreational facilities would be reduced because these fees would go towards the creation of new parks or the enhancement of existing facilities. Payment of in-lieu fees would reduce impacts to below a level of significance. It should be noted that residents of the Diamond Specific Plan would have access to the 21.5-acre community park proposed to be developed within the adjacent Summerly Development. This park is intended to for use by residents within the East Lake Specific Plan area. Additionally, the Diamond Specific Plan provides for access to the regional trail located along the western boundary of the Specific Plan. Because no recreational facilities are proposed to be constructed (beyond improvements to the portions of the City's regional trail that falls on-site), the Diamond Specific Plan would have a less than significant impact associated with new facilities.

4.12.3 Cumulative Impacts

Development of the Diamond Specific Plan would result in an increase in the population of the City of Lake Elsinore by approximately 1,620 residents. Combined with the population increase generated from the projects listed in Table 3.5-1, the Diamond Specific Plan would cumulatively increase the need for parks and recreational facilities. These projects would be required to comply with the Lake Elsinore Quimby Act through one of or a combination of the following methods: land dedication, park improvements, and/or in-lieu park fees. Additionally, any new parks proposed would be required to adhere to the City's park design standards. Therefore, in conjunction with the cumulative projects, the project would not result in cumulative impacts to parks and recreational facilities.

4.12.4 Environmental Mitigation Measures

No significant impacts are anticipated for the Diamond Specific Plan; therefore, no mitigation measures pertaining to recreation would be required.

4.12.5 Conclusion

Payment of required park fees would ensure that project-specific and cumulative impacts to recreation would be less than significant. In addition no impacts would result from construction of new park facilities.

4.13 TRANSPORTATION / TRAFFIC

The following reports were used in the preparation of this section and are included in their entirety in Appendices J of this Environmental Impact Report (EIR):

> *Diamond Specific Plan, Traffic Impact Analysis. Lake Elsinore, California.* Prepared by Urban Crossroads. April 13, 2009.

4.13.1 Environmental Setting

4.13.1.1 Applicable Plans

Regional Plans and Policies

2008 Regional Transportation Plan: Making the Connections

The 2008 Regional Transportation Plan: Making the Connections (RTP) provides a regional framework for the six counties of Southern California including Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The RTP focuses on improving the balance between land use and the current as well as future transportation systems. The Southern California Association of Governments (SCAG) is required to develop, maintain, and update the RTP on a three-year cycle.

The 2008 RTP presents the transportation vision with an investment framework for addressing the region's transportation and related challenges over the plan horizon of 2035. The RTP provides the basic policy and program framework for long-term investment in the vast regional transportation system in a coordinated, cooperative, and continuous manner. Transportation investments in the SCAG region that receive State or federal transportation funds must be consistent with the RTP and must be included in the Regional Transportation Improvement Program (RTIP) when ready for funding.

Consistency with the RTP is included in Section 4.8, Land Use, and Table 4.8-3, Applicable Land Use Regulations.

Transportation Uniform Mitigation Fee

The Western Riverside Transportation Uniform Mitigation Fee (TUMF) program evolved from the need to establish a comprehensive funding source for regional arterial highway improvements for western Riverside County. This program (adopted December 2002) establishes a single uniform mitigation fee to mitigate the cumulative regional impacts of new development on the regional arterial highway system. It was adopted with the intention to avoid multiple, discrete fee programs with varying policies, fees, and improvement projects. The project proponent would be required to contribute the required amount of TUMF for funding regional transportation improvements.

Local Plans and Policies

Riverside County Congestion Management Plan

Congestion Management Plans (CMPs) are required pursuant to California Proposition 111, passed in June 1990, which requires that a designated Congestion Management Agency develop and adopt a CMP for each County with a population of more than 50,000. The County of Riverside is responsible for the development, monitoring, and biennial updating of the County's CMP. The goals of the County's CMP are to reduce traffic congestion and to provide a mechanism for coordinating land use and development

decisions. The CMP is also used as a method for proposing transportation projects that are eligible to compete for state gasoline tax funds.

In 1997, Riverside County Transportation Commission (RCTC) modified its original CMP to focus on meeting federal Congestion Management System (CMS) guidelines. The focus of the CMP is the development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by RCTC, Coachella Valley Association of Governments, and Caltrans to evaluate the condition of the CMS, as well as meet other monitoring requirements at the State and Federal levels. In preparation of the 2001 CMP, there were no deficiencies found on the CMP system based upon the year 2001 monitoring effort. The CMP for Riverside County was developed through a cooperative effort involving local jurisdictions, public agencies, businesses, and community groups. The regional transportation system subject to the CMP is defined as all state highways and principal arterials.

The RCTC has defined the CMP roadway system in Lake Elsinore to be State Route 74 (SR-74) and Interstate 15 (I-15). All local jurisdictions are responsible for determining the impacts of local development/land use decisions on the CMP roadway system. RCTC requires local agencies whose developments impact the CMP system by causing the Level of Service (LOS) on a non-exempt segment to fall to "F" to prepare deficiency plans. These plans would outline specific mitigation measures and a schedule for mitigating the deficiency.

City of Lake Elsinore General Plan (1990)

The City of Lake Elsinore General Plan Circulation Element provides the definition of an intersection deficiency and therefore, the required LOS for the City's circulation system. LOS is a qualitative measure that describes operational conditions in terms of the level of flow, congestion, or delay experienced by motorists. The LOS which can range from A (best) through F (worst), rates traffic congestion at intersections and along roadway segments. The City of Lake Elsinore General Plan states that peak hour intersection operation of LOS D or better is generally acceptable. Therefore, any intersection operating at LOS E and F would be considered deficient.

City of Lake Elsinore General Plan Update (2009)

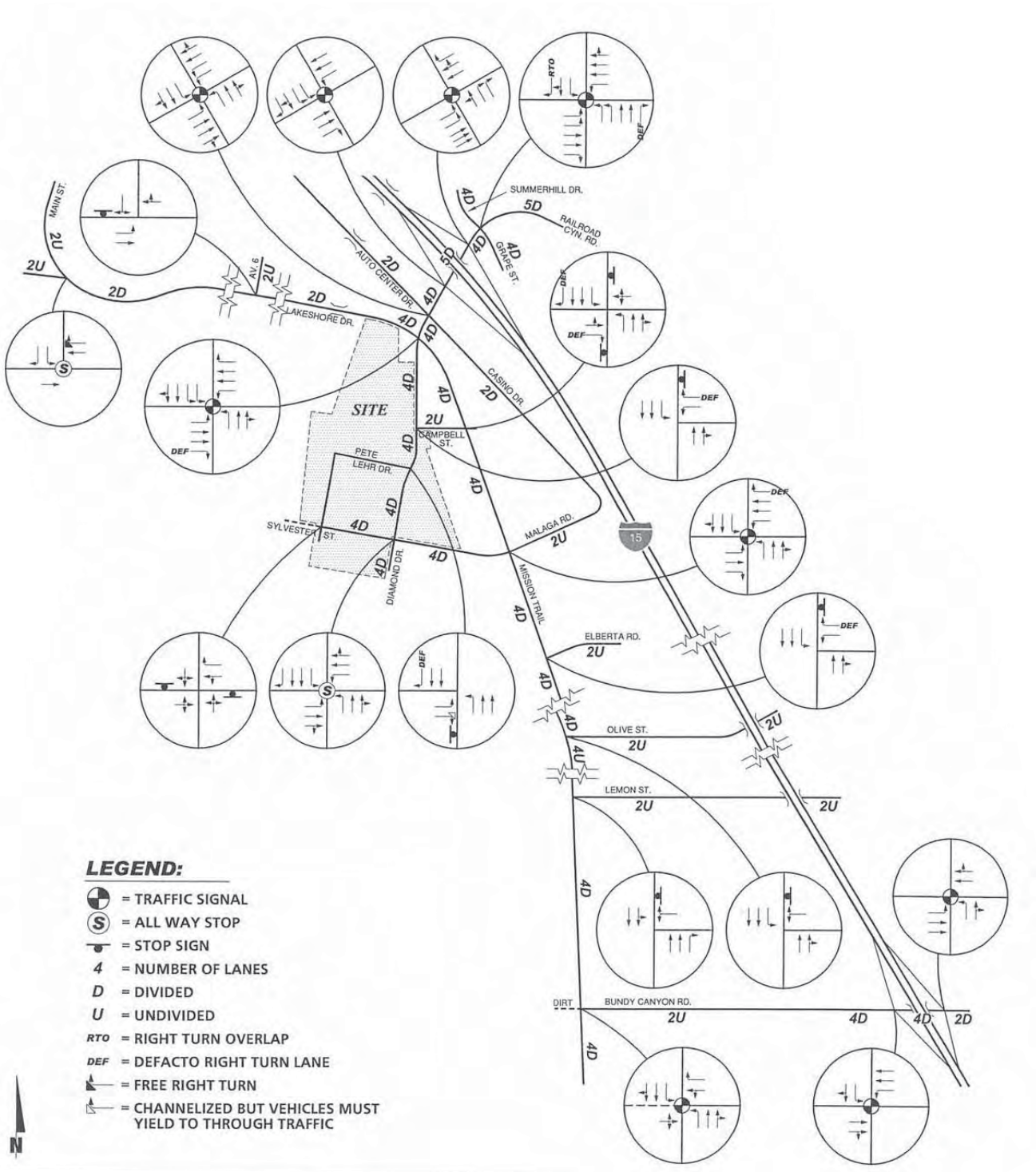
The City of Lake Elsinore is undergoing a process of updating their General Plan. It is unknown whether the General Plan Update (2009) will be adopted prior to approval of the proposed project. The Community Forum Chapter of the General Plan Update states the following:

> *"The City of Lake Elsinore, in general, requires that peak-hour intersection operations contain an LOS of D or better to be considered acceptable. Therefore, any City intersection operating at LOS E or LOS F will be considered deficient. However, LOS E will be considered acceptable in both the Main Street Overlay area and the Ballpark District Planning Districts in an effort to increase activity and revitalize these areas. Any intersection operating at LOS F will be considered deficient."*

4.13.1.2 Existing Conditions

Project Area Roadways

The Diamond Specific Plan is located south of Lakeshore Drive and west of Mission Trail Road at the southeastern side of Lake Elsinore in the City of Lake Elsinore. The existing roadway network and intersections for the traffic study area roadways within the project vicinity are shown in Figure 4.13-1.



Source: Urban Crossroads, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\ai\Existing_circulation_network.ai | Last Updated : 06-18-09

Existing Circulation Network

FIGURE 4.13-1

The following roadway classifications are derived from the City of Lake Elsinore General Plan Circulation Update (2009):

- Lakeshore Drive is currently a two-lane undivided roadway between Main Street and Diamond Drive. Lakeshore Drive widens to a four-lane divided roadway as it approaches Diamond Drive where commercial retail development exists to the north and south. Lakeshore Drive is designated as an urban arterial roadway and provides access to Main Street in downtown Lake Elsinore.
- Mission Trail from Diamond Drive to south of Bundy Canyon Road is primarily a four-lane divided roadway and is an important southerly route from the commercial area at the Railroad Canyon Road interchange with the I-15 freeway. Most of Mission Trail is dived by a striped two-way left turn lane while a few segments of the roadway have raised medians. Mission Trail from Diamond Drive to south of Bundy Canyon Road is designated as an urban arterial roadway.
- Railroad Canyon Road from north of Summerhill Drive/Grape Street to Lakeshore Drive/Mission Trail is designated as an urban arterial roadway and is primarily a four-lane divided roadway except in segments that are five-lanes. Railroad Canyon Road north of the I-15 freeway is a major link between the I-15 and the I-215 freeways.
- Diamond Drive from Lakeshore Drive/Mission Trail to south of Sylvester Street is currently a four-lane divided roadway. The General Plan Update designates all of Diamond Drive as a major roadway.
- Bundy Canyon Road is currently a two-lane undivided roadway near Mission Trail and widens to a four-lane divided roadway near the I-15 freeway interchange. It is designated as an urban arterial roadway.
- Grape Street/Summerhill Drive is currently a four-lane divided roadway. Summerhill Drive north of Railroad Canyon Road provides access to some commercial retail uses immediately to the north of Railroad Canyon Road and residential uses further north. Grape Street to the south of Railroad Canyon Road has commercial uses and residential uses further south. Grape Street provides access to Mission Trail via I-15 freeway undercrossings at Olive Street and Lemon Street. Grape Street/Summerhill Drive is designated as a major roadway.
- Auto Center Drive/Casino Drive is designated as a major roadway and is currently a two-lane roadway with the exception of a four-lane divided roadway segment immediately to the north and south of Diamond Drive.
- Olive Street and Lemon Street are currently tow-lane undivided roadways with sparse residential development and are designated as major roadways. Both streets provide east-west access between Grape Street and Mission Trail Road.
- Sylvester Street/Malaga Road is currently a four-lane undivided roadway to the west of Mission Trail and a two-lane undivided roadway to the east. It is designated as a major roadway.
- Field observations indicate that Hidden Trail (western extension of Elberta Road) on Mission Trail is paved and exists; however, there is no vehicular traffic, as the development to the west of Mission Trail has not been completed at this time. For the purposes of this analysis, Hidden Trail is assumed to be in place by Existing Plus Ambient Growth Plus Project Traffic (EAP) (2012) conditions. It should be noted that the existing Pete Lehr Drive has been assumed to be vacated by Phase 2 of the Diamond Specific Plan.

Alternative Transportation Facilities

Local Public Transit Service

Riverside Transit Agency (RTA) provides public transportation within a 2,500 square mile service area, including the City of Lake Elsinore. RTA maintains a total of 38 fixed route services (primarily using buses and vans), five commuter services, and Dial-A-Ride service. In total, the RTA fleet includes 231 vehicles. Annual ridership on RTA exceeds seven million passengers. Currently, Route 40 runs adjacent to the Diamond Specific Plan along Diamond Drive, and Routes 7 and 8 run near the project site along Mission Trail Road. Route 7 serves the Lake Elsinore area with stops at Lake Elsinore Outlet Center, the Lake Elsinore Senior Center, downtown Lake Elsinore and the WalMart Shopping Center. Route 8 serves the Lake Elsinore and Wildomar areas from Riverside and Lakeshore drives to the Inland Valley Regional Medical Center. Route 40 serves the Lake Elsinore area with stops at Lake Elsinore Town Center, WalMart Shopping Center, Lake Elsinore City Hall, Quail Valley Fire Station, and Stater Bros./Vons Center.

Park-and-Ride

The Riverside County Transportation Commission provides park-and-ride lots to facilitate ride-sharing and car-pooling. There are three park-and-ride lots located in the City of Lake Elsinore, near the intersection of SR-74 and I-15; near the Lake Elsinore Outlet Mall at Collier Street and Nichols Road; and at Ortega Market near the intersection of Grand Avenue and Ortega Highway. None of these park-and-ride lots would serve the project site.

Study Intersections

Based on consultation with the City of Lake Elsinore, the following 19 intersections in the project area have been analyzed to determine operating conditions:

- Main St. (NS[1]) at Lakeshore Drive (EW)
- Avenue 6 (NS) at Lakeshore Drive (EW)
- Diamond Circle (NS) at Sylvester St. (EW)
- Summerhill Drive/Grape St. (NS) at Railroad Canyon Road. (EW)
- I-15 NB Ramps (NS) at Railroad Canyon Road. (EW)
- I-15 SB Ramps (NS) at Railroad Canyon Road (EW)
- Auto Center Drive/Casino Dr. (NS) at Diamond Dr. (EW)
- Diamond Dr. (NS) at Lakeshore Dr./Mission Trail (EW)
- Diamond Dr. (NS) at Campbell St. (EW)
- Diamond Dr. (NS) at Pete Lehr Dr. (EW)
- Diamond Dr. (NS) at Sylvester St. (EW)
- Mission Trail (NS) at Campbell St. (EW)
- Mission Trail (NS) at Sylvester St./Malaga Rd. (EW)
- Mission Trail (NS) at Elberta Rd. (EW)
- Mission Trail (NS) at Olive St. (EW)
- Mission Trail (NS) at Lemon St. (EW)
- Mission Trail (NS) at Bundy Canyon Rd. (EW)
- I-15 SB Ramps (NS) at Bundy Canyon Rd. (EW)
- I-15 NB Ramps (NS) at Bundy Canyon Rd. (EW)

[1] [1]Roadways running north to south are indicated (NS). Roadways running east to west are indicated (EW).

Methodology

The following scenarios were identified by the City for evaluation:

Existing 2009 Conditions. Existing 2009 ADT volumes are based on counts that have been factored from peak hour counts

Existing Plus Ambient Growth Plus Project Traffic (2012). This scenario, referred to as EAP (2012), presents existing conditions plus Diamond Specific Plan Phase 1 (2012) traffic plus three years of ambient growth.

Existing Plus Ambient Growth Plus Project Plus Cumulative Traffic (2012). This scenario, referred to as EAPC (2012), presents existing conditions plus Diamond Specific Plan Phase 1 (2012) traffic plus three years of ambient growth, plus traffic from other future developments which are approved or being processed concurrently in the project area.

Existing Plus Ambient Growth Plus Project Traffic (2014). This scenario, referred to as EAP (2014), presents existing conditions plus Diamond Specific Plan Phase 2 (2014) traffic plus five years of ambient growth.

Existing Plus Ambient Growth Plus Project Plus Cumulative Traffic (2014). This scenario, referred to as EAPC (2014), presents existing conditions plus Diamond Specific Plan Phase 2 (2014) traffic plus five years of ambient growth, plus traffic from other future developments which are approved or being processed concurrently in the project area.

Existing Plus Ambient Growth Plus Project Traffic (2016). This scenario, referred to as EAP (2016), presents existing conditions plus Diamond Specific Plan Phase 3 (2016) traffic plus seven years of ambient growth.

Existing Plus Ambient Growth Plus Project Plus Cumulative Traffic (2016). This scenario, referred to as EAPC (2016), presents existing conditions plus Diamond Specific Plan Phase 3 (2016) traffic plus seven years of ambient growth, plus traffic from other future developments which are approved or being processed concurrently in the project area.

For 2012, 2014, and 2016, the cumulative conditions analyses for years 2012, 2014 and 2016 assume Hidden Trail, Olive Street and Bundy Canyon Road are constructed and in place to the west of Mission Trail. It should be noted that planned future development is assumed to utilize these roadways to gain access to Mission Trail.

General Plan Buildout With Project Traffic

Land use for the existing Diamond Specific Plan has been incorporated into the General Plan buildout with project scenario. This scenario is based on the General Plan Update (2009) growth projections. The zone containing the project land use experiences a minor reduction in total commercial and residential mixed-use land uses, and there is a corresponding increase in office and high density residential uses. These minor changes are not expected to result in substantial changes to the travel patterns. The variance between traffic forecasts for General Plan buildout "without project" as compared to General Plan buildout "with project" was nominal. Therefore, intersection operations analysis has been presented for the "with project" scenario only, as the difference in analysis results between the "without project" and "with project" scenarios would be negligible.

General Plan buildout with project traffic conditions assumes the proposed interchange at Franklin Street as well as the re-configured interchange at Railroad Canyon Road. It should also be noted that volumes for long-range General Plan buildout with project conditions assumes a circulation network consistent with the City of Lake Elsinore General Plan Circulation Element (2009). As such, volumes along Railroad Canyon Road, Mission Trail and Lakeshore Drive may have decreased from EAPC (2016) traffic conditions since additional parallel routes are utilized.

The Western Riverside Sub-area Applications Traffic Model (WRSATM) was utilized to generate the future traffic volumes for this project.

Stadium Plus Project Traffic (2016). This scenario assumes buildout of the proposed Diamond Specific Plan (2016) with the addition of special event traffic related to the existing Lake Elsinore Diamond Stadium. The additional traffic is of particular concern during the weekday PM peak hour commute. As such, the potential impacts to study area intersections under project buildout (EAPC 2016) conditions with special event traffic have been assessed. The stadium's special events that have the potential to impact peak hour operations are typically seasonal in nature, and include baseball games, high school graduations, meetings or conferences, etc. It is also important to note that these events usually occur in the evening (after 6pm) and thus do not impact morning peak hours. Lastly, stadium operations are not anticipated to change with the development of the Diamond Specific Plan, so Urban Crossroads conducted an assessment of typical weekday operations for the stadium.

Ambient Growth and Cumulative Project Assumptions

Based on discussions with City of Lake Elsinore Staff, the traffic generated by the assumed cumulative developments listed in Table 3.5-1 are proposed to be phased due to the comprehensive number of future projects included and current economic conditions. As such, the Traffic Impact Analysis assumed approximately 30 percent of the total cumulative traffic for 2012 traffic conditions, 50 percent for 2014 conditions and 75 percent for 2016. For long-range General Plan Buildout conditions, all projects included in the City of Lake Elsinore's General Plan Update (2009) are assumed to be built and occupied. This reflects background traffic and traffic from area wide growth already approved by the City of Lake Elsinore, plus the development of the proposed project. At the direction of the City of Lake Elsinore staff, the background traffic growth has been analyzed at two percent per year. The 2012 traffic conditions analyses are based upon three years of background traffic growth, for a total of six percent. 2014 traffic conditions analyses are based upon five years of background traffic growth for a total of ten percent. Lastly, 2016 traffic conditions analyses are based upon seven years of background traffic growth for a total of fifteen percent.

Intersection Operations Analyses

The intersection operations analyses have been evaluated based on the 2000 Highway Capacity Manual (HCM) methodology for both signalized and unsignalized intersections. For the purposes of the Traffic Impact Analysis, the cumulative conditions analyses for years 2012, 2014 and 2016 assume Hidden Trail, Olive Street and Bundy Canyon Road are constructed and in place to the west of Mission Trail. It should be noted that planned future development is assumed to utilize these roadways to gain access to Mission Trail.

Levels of Service

LOS is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. LOS ranges from A through F, with LOS A representing the best operating

conditions and LOS F representing the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating needs. Table 4.13-1 shows the average daily traffic volumes (ADT), average travel speeds, and delay ranges that are equivalent to each LOS.

Table 4.13-1. Level of Service Ranges

LOS	Intersections	
	Signalized Intersection Average Delay (Seconds/Vehicle)	Unsignalized Intersection Average Delay (Seconds/Vehicle)
A	Less than or equal to 10.0	Less than or Equal to 10.0
B	10.01 to 20.00	10.01-15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	Greater than 80.00	Greater than 50.00

Source: Based on the 2000 Highway Capacity Manual

Traffic Signal Warrant Analysis

A supplemental traffic signal warrant analysis has been prepared to determine whether unsignalized intersections need to be signalized. The traffic analysis uses the signal warrant criteria, (criteria used by Caltrans and other public agencies to justify or ascertain the need for a traffic signal and an otherwise unsignalized intersection) presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices.*

For future traffic conditions, unsignalized intersections and new intersections have been assessed regarding the need for new traffic signals based on future average daily traffic (ADT) volumes, using the planning level ADT-based signal warrant analysis worksheets.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. This evaluation has been done for intersections warranting traffic signals and is included in the discussion below and in the Traffic Impact Assessment (Appendix J).

It should also be noted that signal warrants do not necessary correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above LOS "C" or operate below LOS "C" and not meet signal warrant.

Existing Traffic Volumes

Existing intersection peak hour LOS are summarized in Table 4.13-2. As shown, all analyzed intersections operate at acceptable LOS D or better under existing conditions with the exception of the intersections at Mission Trail at Campbell St and Mission Trail at Lemon St. These intersections operate at a LOS F during the PM peak hour.

Table 4.13-2. Intersection Analysis for Existing (2009) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	9.9	11.8	A	B
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)	CSS	0	0	0	0	1	0	1	1	0	0	1	0	15.2	22.0	C	C
Diamond Circle (NS) at:																	
Sylvester St. (EW)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)	TS	2	2	1	1	1	1>	2	2	1	1	3	0	31.0	46.2	C	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)	TS	0	1	2	0	0	0	2	3	0	0	2	1	22.9	24.7	C	C
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)	TS	0	0	0	2	1	1	0	2	1	1	2	0	27.8	32.6	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.0	25.8	C	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)	TS	1	2	0	2	2	0	1	2	1	1	2	1	27.2	52.3	C	D
Campbell St. (EW)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	8.9	9.0	A	A
Pete Lehr Dr. (EW)	CSS	1	2	0	0	2	1	1	0	1	0	0	0	9.2	9.0	A	A
Sylvester St. (EW)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	7.6	7.6	A	A
Mission Trail (NS) at:																	
Campbell St. (EW)	CSS	1	2	0	1	2	1	0	1	1	0	1	0	21.7	84.4	C	F
Sylvester St./Malaga Rd. (EW)	TS	1	2	0	1	2	0	1	1	1	1	2	1	14.8	14.3	B	B
Elberta Rd. (EW)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	20.5	23.9	C	C
Olive St. (EW)	CSS	0	2	0	1	2	0	0	0	0	0	1	0	22.7	27.0	C	D
Lemon St. (EW)	CSS	0	2	1	0	2	0	0	0	0	0	1	0	18.5	63.2	C	F
Bundy Canyon Dr. (EW)	TS	1	2	0	1	2	0	0	1	0	0	1	1	18.8	21.4	B	C
I-15 SB Ramps (NS) at:																	
Bundy Canyon Rd. (EW)	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.8	25.7	C	C
I-15 NB Ramps (NS) at:																	
Bundy Canyon Rd. (EW)	TS	1	1	0	0	0	0	1	2	0	0	2	0	31.1	29.7	C	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing

[2] Delay and LOS calculated using the following analysis software: HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

In order to determine the need for a traffic signal at project intersections, a traffic signal warrant analysis was performed and indicated that a traffic signal is currently warranted at the intersections of Mission Trail at Campbell St., Mission Trail at Olive St., and Mission Trail at Lemon St. Urban Crossroads concluded that although the intersection of Mission Trail at Olive St. has been identified as warranting a traffic signal, a signal would not yet be required because the intersection is anticipated to operate at acceptable LOS.

4.13.2 Project Impacts

4.13.2.1 Thresholds of Significance

As defined in Appendix G of the *California Environmental Quality Act* (*CEQA) Guidelines*, project impacts to the transportation system would be considered significant if the project is determined to:

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).
- 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;
- Cause an increase in traffic, which 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);
- Exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways;

4.13.2.2 Environmental Impacts

Site Access and On-site Circulation

As shown in Figure 4.13-2, major north-south access to the Diamond Specific Plan would be provided by I-15, which connects the project area to San Diego County to the south and central Riverside County and San Bernardino County to the north. Main access to the I-15 freeway from the Diamond Specific Plan would be Railroad Canyon Rd. Lakeshore Drive would provide access to the project site from the north, Diamond Drive which runs through the site would provide access from the east. The southern portion of the project site would accessed by Malaga Road. Because the Specific Plan includes four primary access points, and is in proximity to I-15, the Diamond Specific Plan would provide adequate emergency access.

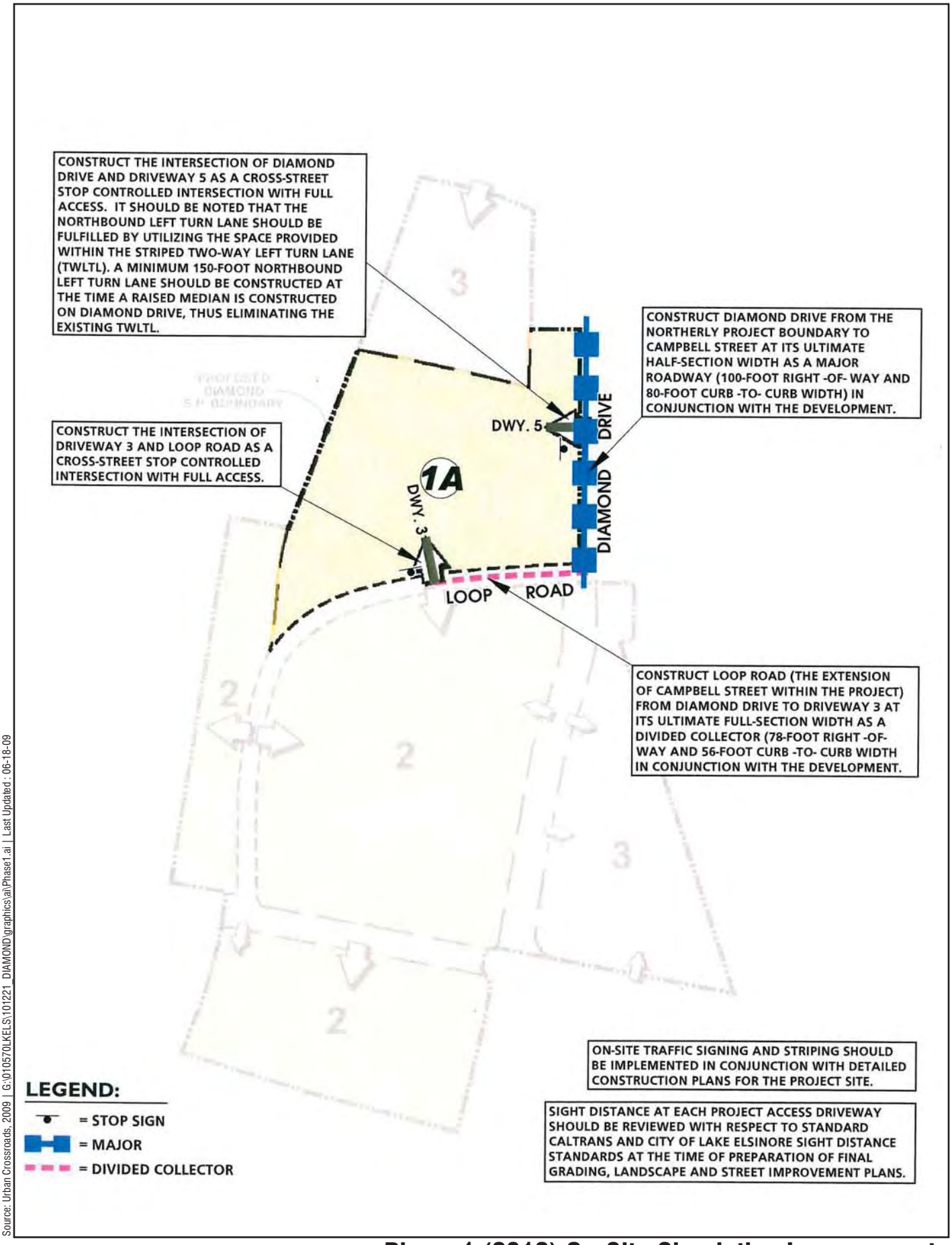
The Diamond Specific Plan would require on-site circulation improvements to accommodate project access and circulation needs for each phase of development. These improvements (listed below) have been incorporated into each phase of the project and are shown on Figures 4.13-2, 4.13-3, and 4.13-4.

On-Site Circulation Improvements (Phase 1 2012)

- Construct Diamond Drive from the northerly project boundary to Campbell Street at its ultimate half-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.
- Construct Diamond Circle (Loop Road) (the extension of Campbell Street within the project) from Diamond Drive to Driveway 3 at its ultimate full-section width as a divided collector (78-foot right-of-way and 56-foot curb-to-curb width) in conjunction with the development. It should be noted that the 10-foot shoulders will be utilized for parallel on-street parking. The 12-foot painted median can be utilized as a two-way left turn lane under normal operating conditions, or as additional inbound or outbound capacity for special events held at Diamond Stadium. See Exhibit 4-5 within the Traffic Impact Analysis (Appendix J) for further details on the proposed cross-section.
- Construct the intersection of Driveway 3 and Diamond Circle (Loop Road) as a cross-street stop controlled intersection with full access.
- Construct the intersection of Diamond Drive and Driveway 5 as a cross-street stop controlled intersection with full-access. A minimum 150-foot northbound left turn lane should be constructed at the time a raised median is constructed on Diamond Drive, thus eliminating the existing two-way left turn lane.
- On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for each phase.
- Sight distance at each project access driveway shall be reviewed with respect to standard Caltrans and City of Lake Elsinore sight distance standards at the time of preparation of final grading, landscape and street improvement plans for each phase.

On-Site Circulation Improvements (Phase 2 2014)

- Construct Diamond Drive from Campbell Street to Sylvester Street at its ultimate full-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.
- Construct Diamond Circle (Loop Road) from Driveway 3 to Sylvester Street at its ultimate full-section width as a divided collector (78-foot right-of-way and 56-foot curb-to-curb width) in conjunction with the development. It should be noted that the 10-foot shoulders are anticipated to be utilized for parallel on-street parking. See Exhibit 4-5 within the Traffic Impact Analysis (Appendix J) for further details on the proposed cross-section.
- Construct Sylvester Street from Diamond Circle (Loop Road) to Diamond Drive at its ultimate full-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.
- Construct the intersection of Driveway 1 on Diamond Circle (Loop Road) as a cross-street stop controlled intersection with full access.
- Construct the southern leg of Diamond Circle (Loop Road) at Sylvester Street with full access. A stop control should be installed for the northbound direction of travel at this intersection.
- Install a traffic signal at the intersection of Driveway 3 on Diamond Circle (Loop Road).



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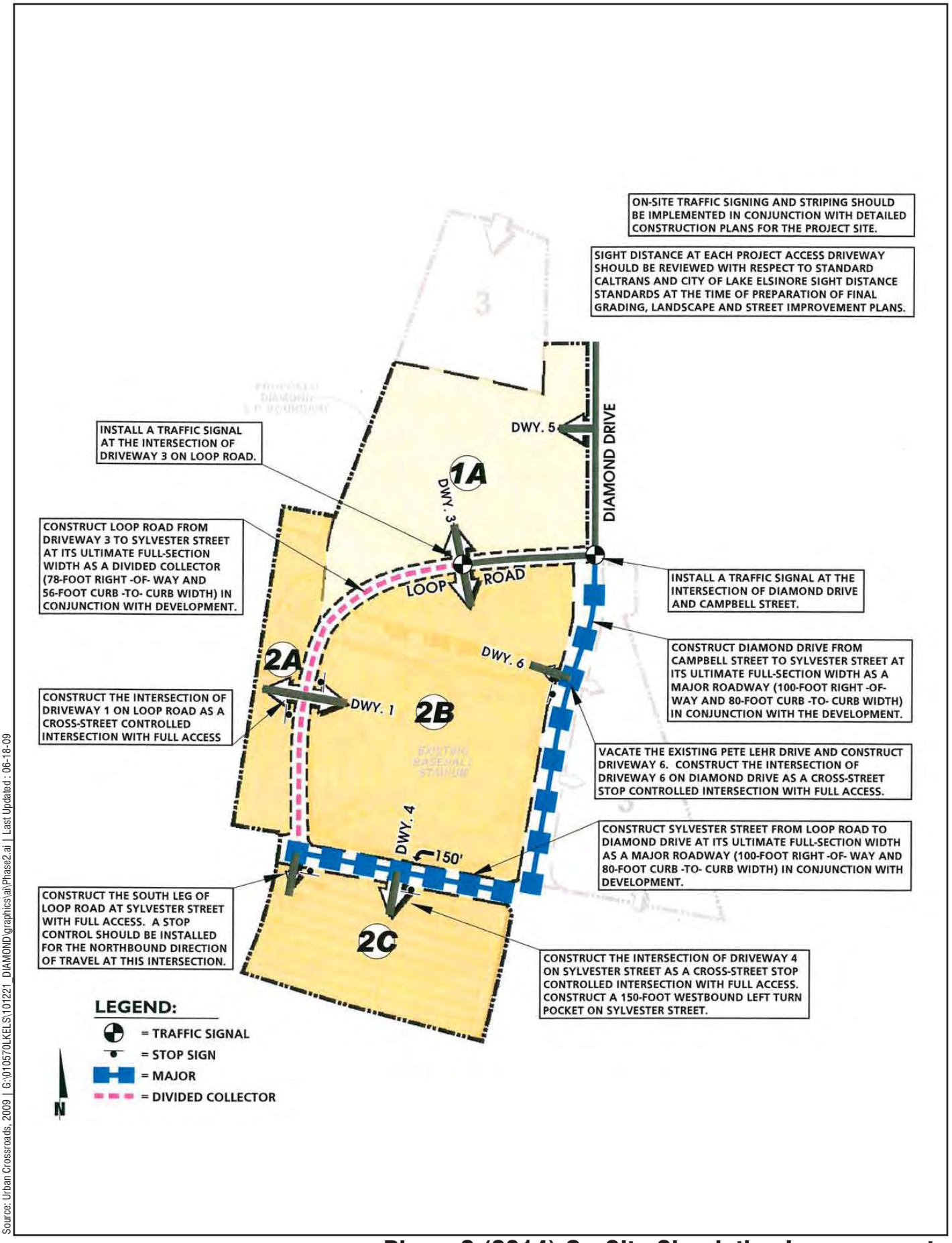
Phase 1 (2012) On-Site Circulation Improvements

FIGURE 4.13-2



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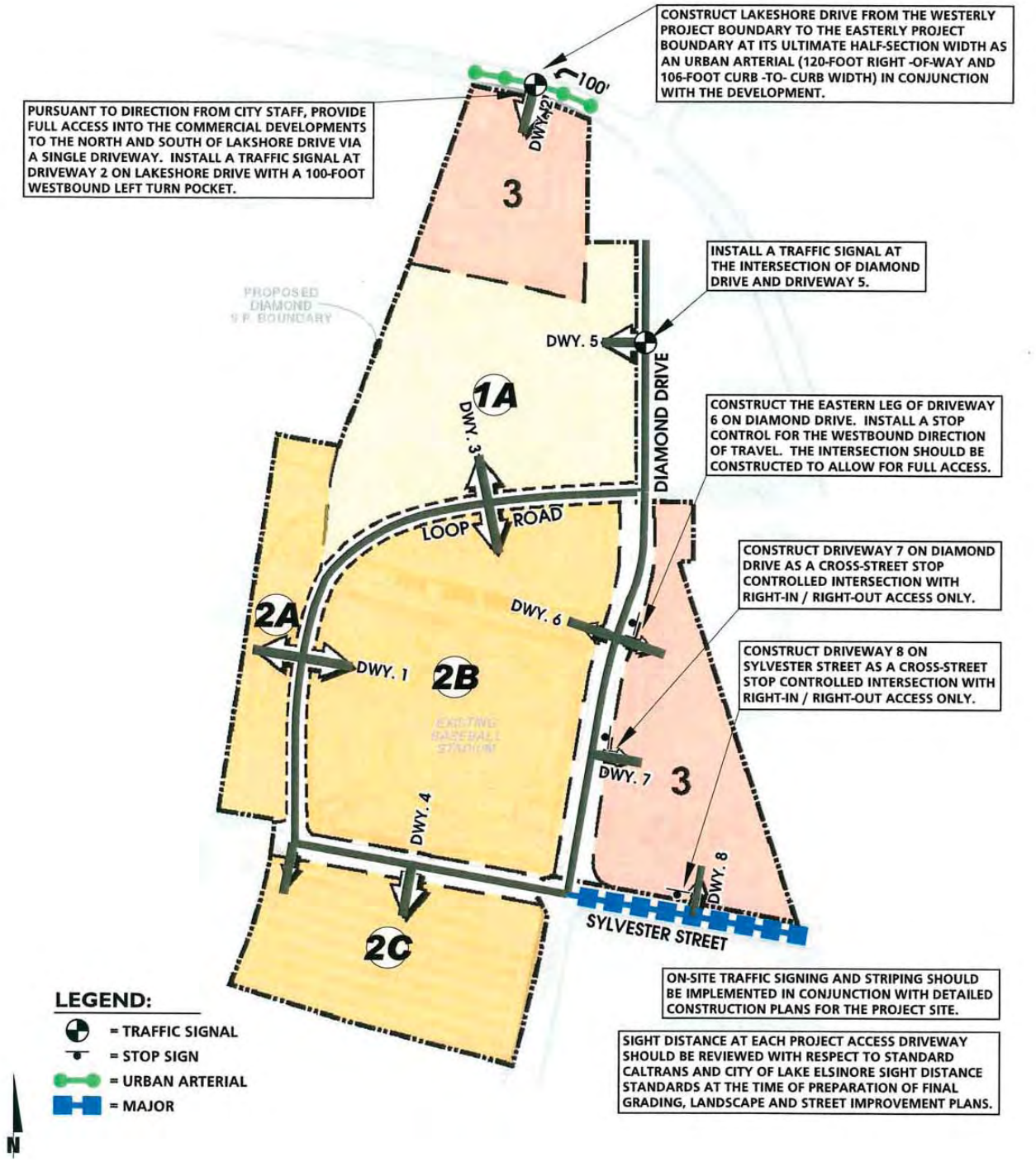
Phase 2 (2014) On-Site Circulation Improvements

FIGURE 4.13-3



Source: Urban Crossroads, 2009 | G:\0105701LKELS\101221_DIAMOND\graphics\ai\Phase3.ai | Last Updated : 06-18-09

Phase 3 (2016) On-Site Circulation Improvements

FIGURE 4.13-4

- Construct the intersection of Driveway 4 on Sylvester Street as a cross-street stop controlled intersection with full access. Construct a 150-foot westbound left turn pocket on Sylvester Street.
- Install a traffic signal at the intersection of Diamond Drive and Campbell Street.
- Vacate the existing Pete Lehr Drive and construct Driveway 6. Construct the intersection of Driveway 6 on Diamond Drive as a cross-street stop controlled intersection with full access.
- On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for each phase.
- Sight distance at each project access driveway shall be reviewed with respect to standard Caltrans and City of Lake Elsinore sight distance standards at the time of preparation of final grading, landscape and street improvement plans for each phase.

On-Site Circulation Improvements (Phase 3 2016)

- Construct Lakeshore Drive from the westerly project boundary to the easterly project boundary at its ultimate half-section width as an urban arterial (120-foot right-of-way and 106-foot curb-to-curb width) in conjunction with the development.
- Construct Sylvester Street from Diamond Drive to the easterly project boundary at its ultimate half-section width as a major (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.
- Pursuant to direction from City staff, provide full access into the commercial developments to the north and south of Lakeshore Drive via a single driveway. Install a traffic signal at Driveway 2 on Lakeshore Drive with a 100-foot westbound left turn pocket.
- Install a traffic signal at the intersection of Diamond Drive and Driveway 5.
- Construct the eastern leg of Driveway 6 on Diamond Drive. Install a stop control for the westbound direction of travel. The intersection should be constructed to allow for full access.
- Construct Driveway 7 on Diamond Drive as a cross-street stop controlled intersection with right-in/right-out access only.
- Construct Driveway 8 on Sylvester Street as a cross-street stop controlled intersection with right-in/right-out access only.
- On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for each phase.
- Sight distance at each project access driveway shall be reviewed with respect to standard Caltrans and City of Lake Elsinore sight distance standards at the time of preparation of final grading, landscape and street improvement plans for each phase.

Construction-Related Impacts

The Diamond Specific Plan includes six planning phases. However, in the event that planning phases are combined, the traffic analysis assumed the construction schedule for the Diamond Specific Plan would occur in three phases between 2012 and 2016. During that time, it is possible that construction activities would result in short-term impacts to traffic. Construction equipment, employees, and the potential for importing/exporting of fill material could generate a substantial amount of construction-related traffic. During construction grading, approximately 231,000 cubic yards of soil would need to be transported.

Over the three project phases, it is anticipated that 77,000 cubic yards of fill would be required per phase. Based on the air quality report (Appendix B), grading was assumed to take 3 months per phase, utilizing a haul truck with 20 cubic yard capacity over a round trip of 20 miles per day. This would result in 60 round truck trips (120 one-way trips) per day for fill import. This increase in traffic could generate sufficient ADT to result in significant impacts to the local roadway network. Therefore, a potentially significant construction related impact is identified and mitigation is required.

Hazards/Incompatible Uses

The City's current General Plan (1990) and General Plan Update (2009) Circulation Elements designate specific design criteria including roadway cross-sections for street improvements. Implementation of the design criteria assures that all street improvements would be safely designed. The Diamond Specific Plan would comply with all specified design criteria. The project will result in new sections of roadway and traffic signals providing safe and efficient access to and from the proposed uses and will not result in the creation of circulation design hazards. A less than significant impact is identified.

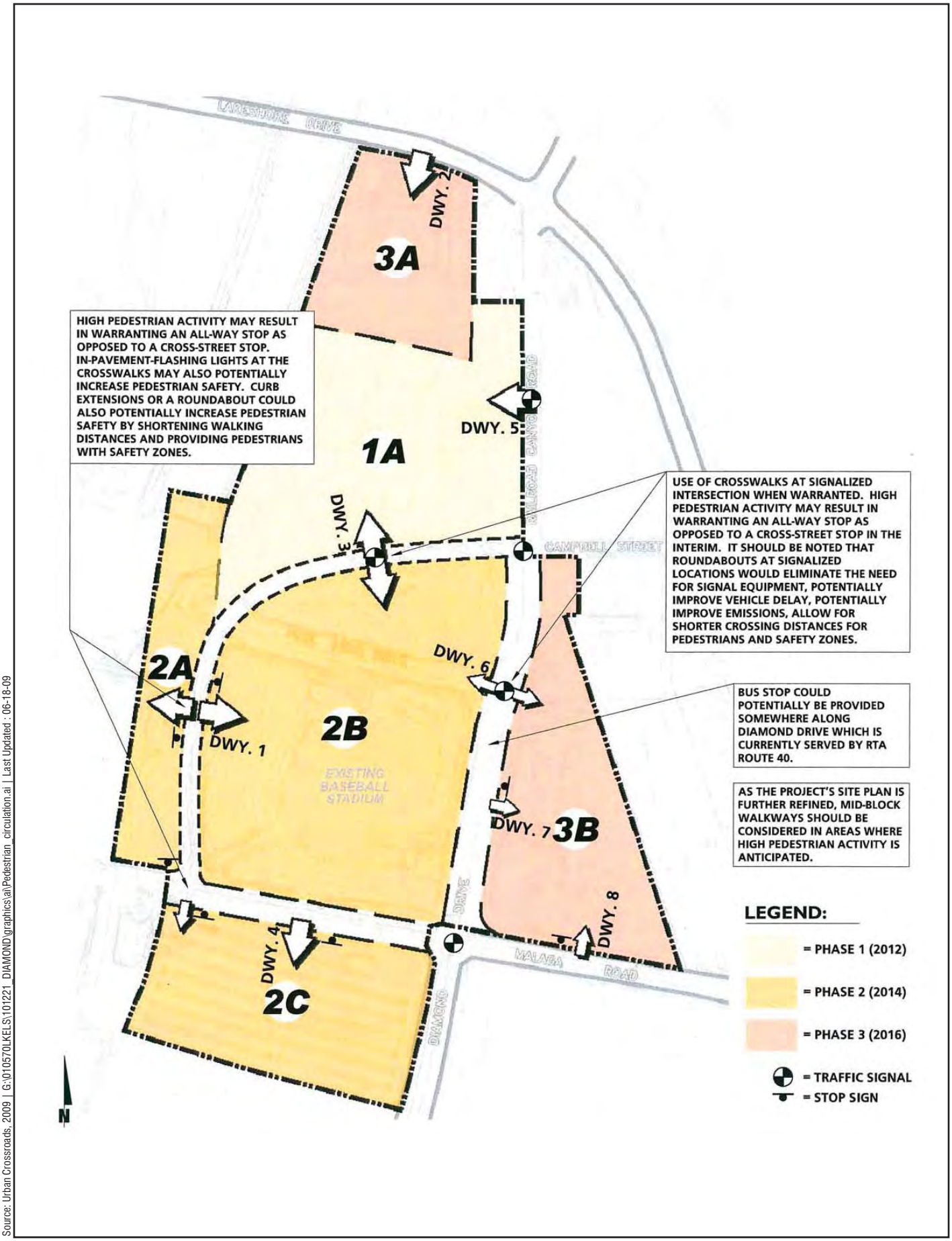
Parking Capacity

According to the Diamond Specific Plan, parking for the project will be accommodated in both surface and structure parking, and distributed throughout the site in proximity to the land uses. The most prevalent form of parking is expected to be surface parking, which will be integrated within each area of the project. During site plan review, the city will review the plan to ensure compliance with the Lake Elsinore municipal code. Compliance with the municipal code would ensure impacts associated with parking would be less than significant.

Alternative Transportation

The Riverside Transit Agency (RTA) currently provides bus service along Lakeshore Drive and Mission Trail, with stops near the Project Site at Railroad Canyon Road and at Malaga Road. Although no transit route currently follows the Diamond Drive frontage, the Specific Plan design incorporates "transit ready" features that will accommodate transit service in the future when it becomes available. Such features include provisions for bus stops within the internal parking areas of the plan, walkways to perimeter streets with future bus stops, and the provision for "park and ride" parking areas within the plan. Potential public transit stop locations are shown on the On-site Circulation Plan shown in Figure 4.13-3. The existing and future public transit features (if approved by RTA) would provide service to the residents and visitors of the Diamond Specific Plan, and would encourage alternative transportation as a viable alternative to single passenger automobile transport.

The Diamond Specific Plan proposes a variety of transportation options by providing interconnections of land uses that are amenable to pedestrians, bicyclists, public transit riders and motorists. Two trails, the Regional Trail and the Community Trail, are planned to connect the Diamond Specific Plan to areas north and south of the project area. An extensive pedestrian and cyclist network has the potential to connect the different planning areas within the Diamond Specific Plan. The Diamond Specific Plan will implement the following pedestrian circulation improvements: curb extensions , roundabouts, all-way stop controlled intersections, raised intersections, mid-block walkways, pedestrian amenities and bus transit service as part of project design. Suggested locations for these features are shown in Figure 4.13-5. With incorporation of these design features, the Diamond Specific Plan would result in less than significant impacts associated with alternative transportation.



Source: Urban Crossroads, 2009 | G:\0105701LKELS\101221_DIAMOND\graphics\ai\Pedestrian_circulation.ai | Last Updated : 06-18-09

On-Site Pedestrian Circulation Improvements

FIGURE 4.13-5

Long-Term Operational Impacts – Level of Service

Diamond Specific Plan Trip Generation

Trip generation represents the amount of traffic that is attracted to and produced by a development. For the Diamond Specific Plan, additional traffic to the area would be generated from the development of multi-family residential dwelling units and additional commercial and office space. To assess future traffic conditions, project traffic is combined with existing traffic, ambient growth, and cumulative traffic generated by other known developments that are approved or being processed concurrently within or in close proximity to the study area.

Project traffic has been estimated based on the Institute of Transportation Engineers (ITE) trip generation rates (*ITE Trip Generation Manual,* 8th Edition) Table 4.13-3. Both daily and peak-hour trip generation for the Diamond Specific Plan site are shown in Table 4.13-4. The Diamond Specific Plan is projected to generate a net total of approximately 25,689 daily trip-ends with 1,298 AM peak hour trips and 2,584 PM peak hour trips. Trip generation for the project has been adjusted to account for internal interaction.

Table 4.13-3. Project Trip Generation Rates

Land Use	ITE Code	Units[1]	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Condominium/Townhouse	230	DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
General Office (425.0 TSF)	710	TSF	1.24	0.17	1.41	0.22	1.08	1.30	9.56
Shopping Center (472.0 TSF)	820	TSF	0.50	0.32	0.82	1.87	1.94	3.81	39.45
Hotel	310	RM	0.34	0.22	0.56	0.31	0.28	0.59	8.17

Source: Institute of Transportation Engineers (ITE), *Trip Generation,* Eighth Edition, 2008.
[1] DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms

A key characteristic of a mixed-use development such as the proposed Diamond Specific Plan is that trips among the various land uses (i.e., residential, commercial retail, office, etc.) can be made on-site without the need to travel on the major street system. For example, someone living in the residential component of the project may work, shop or eat at the nearby office and retail uses located within the project. These internal trips help to reduce peak period traffic congestion on the nearby street system as they can be made by walking or biking and would likely never enter the arterial street system. Rates of internal capture were derived based on the *ITE Trip Generation Handbook*, 2nd Edition, and were approved by City of Lake Elsinore staff as part of the traffic study scoping process.

Diamond Specific Plan Trip Distribution

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, surrounding land uses, local circulation patterns and the regional freeway system.

The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the community, and existing traffic volumes. The project traffic is distributed via primary access locations to identify impacts to these project access points and to nearby intersections. Future focused map level traffic studies will help to more accurately define the specific geometric improvements at the project driveways and more accurately assign the improvements required off-site for each component of development.

Table 4.13-4. Diamond Specific Plan Trip Generation Summary

Land Use	Quantity	Units[1]	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Phase 1 (2012)									
1A-Condominium/Townhouse	100	DU	7	37	44	35	17	52	581
1A-General Office	100.000	TSF	124	17	141	22	108	130	956
Internal Capture (Office-Residential)			*0*	*0*	*0*	*0*	*-1*	*-1*	*-9*
Internal Capture (Office-Commercial)			*-1*	*-2*	*-3*	*-4*	*-3*	*-7*	*-131*
Office Subtotal			123	15	138	18	104	122	816
1A-Shopping Center	75.000	TSF	38	24	62	140	146	286	2,959
Internal Capture (Commercial-Residential)			*-2*	*-2*	*-4*	*-9*	*-11*	*-20*	*-206*
Commercial Subtotal			36	22	58	131	135	266	2,753
Phase 1 (2012) Total			166	74	240	184	256	440	4,150
Phase 2 (2014)									
2B-Condominium/Townhouse	150	DU	11	56	66	53	26	78	872
2C-Condominium/Townhouse	250	DU	18	93	110	88	43	130	1,453
Residential Subtotal			29	149	176	141	69	208	2,325
1A-General Office	115.000	TSF	143	20	162	25	124	150	1,099
2B-General Office	50.000	TSF	62	9	71	11	54	65	478
2C-General Office	50.000	TSF	62	9	71	11	54	65	478
Internal Capture (Office-Residential)			*0*	*0*	*0*	*0*	*-3*	*-3*	*-11*
Internal Capture (Office-Commercial)			*-3*	*-6*	*-9*	*-15*	*-12*	*-27*	*-195*
Office Subtotal			264	32	295	32	217	250	1,849
1A-Shopping Center	200.000	TSF	100	64	164	374	388	762	7,890
2A-Shopping Center	30.000	TSF	15	10	25	56	58	114	1,184
2B-Shopping Center	85.000	TSF	43	27	70	159	165	324	3,353
Internal Capture (Commercial-Residential)			*-8*	*-7*	*-15*	*-37*	*-44*	*-81*	*-826*
Commercial Subtotal			150	94	244	552	567	1,119	11,601
2A-Hotel	150	RM	51	33	84	47	42	89	1,226
Phase 2 (2014) Subtotal			*494*	*308*	*799*	*772*	*895*	*1,666*	*17,001*
Phases 1 & 2 (2014) Total			660	382	1,039	956	1,151	2,106	21,151
Phase 3 (2016)									
3B-Condominium/Townhouse	100	DU	7	37	44	35	17	52	581
3A-General Office	20.000	TSF	25	3	28	4	22	26	191
3B-General Office	90.000	TSF	112	15	127	20	97	117	860
Internal Capture (Office-Residential)			*0*	*0*	*0*	*0*	*-1*	*-1*	*-9*
Internal Capture (Office-Commercial)			*-1*	*-2*	*-3*	*-5*	*-3*	*-8*	*-114*
Office Subtotal			*136*	*16*	*152*	*19*	*115*	*134*	*928*

Land Use	Quantity	Units[1]	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
3A-Shopping Center	62.000	TSF	31	20	51	116	120	236	2,446
3B-Shopping Center	20.000	TSF	10	6	16	37	39	76	789
Internal Capture (Commercial-Residential)			-2	-2	-4	-9	-11	-20	-206
Commercial Subtotal			*39*	*24*	*63*	*144*	*148*	*292*	*3,029*
Phase 3 (2016) Subtotal			*182*	*77*	*259*	*198*	*280*	*478*	*4,538*
Project Total (Phases 1, 2 & 3)			842	459	1,298	1,154	1,431	2,584	25,689

Source: Urban Crossroads Traffic Analysis Study 2009

1 DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms

2 Note: Internal capture calculations have been determined based upon ITE methodology outlined in the ITE Trip Generation Handbook (2nd Edition).

Trip distributions for the Diamond Specific Plan have been based upon near-term conditions. These conditions include highway facilities which are either in place or will be completed in conjunction with other future developments. The project trip distribution patterns for Phase 1 (2012), Phase 2 (2014) and Phase 3 (2016) are graphically depicted on Exhibits 5-1 through 5-10 in the Traffic Impact Analysis. It should be noted that the distribution of project traffic varies between land uses. As such, a trip distribution has been shown for each of the four proposed land uses for each of the three (3) phases of development. Internal project trip distribution patterns are also provided and illustrated on Exhibits 5-11 and 5-12 for Phase 2 (2014) and Phase 3 (2016), respectively. An illustration of the internal project trip distribution for Phase 1 (2012) has not been provided as these internal project trips are not anticipated to access any of the nearby study area intersections. Consequently, the internal project trip reductions have been taken at the trip generation level as shown on Table 4.13-4.

Trip Assignment

The assignment of traffic from the site to the adjoining roadway system has been based upon the Diamond Specific Plan's trip generation, trip distribution, and the proposed arterial highway and local street systems which would be in place by the time of initial occupancy of the site.

Existing Plus Ambient Growth Plus Project (2012) Conditions

Intersection Analysis

A summary of the ADT volumes and intersection operations analysis results for the Diamond Specific Plan area intersections for EAP (2012) conditions, based on the respective existing geometrics at the intersections is shown in Table 4.13-5. As shown in Table 4.13-5, it is anticipated that all study area intersections would operate at acceptable LOS (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of the four intersections. As shown in Table 4.13-5, the following four intersections are anticipated to operate at unacceptable LOS:

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street (EW)
- Lemon Street (EW)

Table 4.13-5. Intersection Analysis For Existing Plus Ambient Growth Plus Project (2012) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	10.7	13.3	B	B
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	16.8	26.7	C	D
Diamond Circle (NS) at:																	
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	Intersection Does Not Exist																
- With Improvements	CSS	0	0	0	1	0	0	0	0	0	0	0	1	8.7	9.1	A	A
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	33.8	54.9	C	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	25.5	26.1	C	C
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.7	36.6	C	D

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.4	23.4	C	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	37.5	35.9	D	D
Diamond Dr. (NS) at:																	
Driveway 5 (EW)																	
- Without Improvements	Intersection Does Not Exist																
- With Improvements	CSS	1	2	0	0	2	0	0	1	0	0	0	0	9.8	10.6	A	B
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	11.6	13.7	B	B
Pete Lehr Dr. (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.0	9.3	A	A
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	7.6	7.7	A	A
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	31.5	--[4]	D	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	0	17.0	24.2	B	C
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	14.8	16.2	B	B
Elberta Rd. (EW)																	
- Without Improvements[5]	CSS	0	2	0	1	2	0	1	1	0	1	1	0	28.1	38.0	D	E

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	27.5	37.8	D	E
- With Improvements	TS	0	2	0	1	2	0	0	0	0	0	1	0	9.3	11.3	A	B
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	21.1	--[4]	C	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	0	1	0	11.9	10.2	B	B
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	20.3	49.2	C	D
I-15 SB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	27.2	26.2	C	C
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	32.7	31.1	C	C

Source: Urban Crossroads 2009

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- Delay High, Intersection Unstable; LOS "F".

[5] This intersection improvement is proposed as part of the Summerly Development. If the improvement is not in place prior to Phase 1 of the Diamond Specific Plan, the project will pay fair share toward the improvement (as indicated in the cumulative scenarios).

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.
Unacceptable LOS is indicated in bold.

Implementation of the Diamond Specific Plan would result in significant impacts to the aforementioned intersections with the exception of the intersections of Mission Trail at Campbell Street and Mission Trail at Lemon Street. As previously noted, these intersections operate at LOS "F" under existing (2009) conditions without the project. These intersections experience high delays for the vehicles on the minor legs due to insufficient gaps in the through traffic along Mission Trail. The unacceptable 2012 peak hour operations of these locations are not a result of the addition of project traffic.

Traffic Signal Warrant Analysis

Traffic signals are not warranted at the study area intersections under EAP (2012) traffic conditions in addition to the locations that currently meet warrants under existing (2009) traffic conditions.

Existing Plus Ambient Growth Plus Project Plus Cumulative Traffic (2012) Conditions

Intersection Analysis

Table 4.13-6 summarizes the intersection operations analysis results for the study area intersections for EAPC (2012) conditions, based on the respective existing geometrics at the intersections. As shown in Table 4.13-6, it is anticipated that all study area intersections would operate at acceptable LOS (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of eight intersections:

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street (EW)
- Lemon Street (EW)

Implementation of the Diamond Specific Plan would result in significant cumulative impacts to the aforementioned intersections.

Table 4.13-6. Intersection Analysis for Existing Plus Ambient Growth Plus Project Plus Cumulative Development (2012) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.0	24.0	B	C
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CS	0	0	0	0	1	0	1	1	0	0	1	0	18.1	42.4	C	E
- With Improvements	TS	0	0	0	0	1	0	1	1	0	0	1	0	13.5	10.6	B	B
Diamond Circle (NS) at:																	
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	0	0	1	0	0	0	0	0	0	0	1	8.7	9.1	A	A
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	40.5	--[4]	D	F
- With Improvements	TS	2	2	1	1	1	1>	2	3	1>	1	3	0	35.2	44.8	D	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	31.3	34.2	C	C

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	31.5	66.7	C	F[5]
- With Improvements	TS	0	0	0	2	1	1	0	2	1	2	2	0	26.8	33.2	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	27.0	24.8	C	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.7	34.7	D	C
Driveway 5 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	2	0	0	2	0	0	1	0	0	0	0	11.0	14.8	B	B
Campbell St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	1	0	1	13.5	27.5	B	D
Pete Lehr Dr. (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	1	0	1	0	0	0	10.0	12.0	A	B
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.7	10.0	A	A
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	33.9	--[4]	D	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	0	17.7	25.8	B	C
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	13.7	20.0	B	C

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	33.3	--[4]	D	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	9.4	11.0	A	B
Olive St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	71.8	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	15.6	12.3	B	B
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	26.5	--[4]	D	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	0	1	0	10.7	12.8	B	B
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	35.4	40.5	D	D
I-15 SB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	21.2	21.4	C	C
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	32.3	34.2	C	C

Source: Urban Crossroads Traffic Analysis Report 2009

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software: HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] Volume to capacity ratio is greater than 1.00; Level of Service "F".

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.
Unacceptable LOS is indicated in **bold**.

Traffic Signal Warrant Analysis

Traffic signals are projected to be warranted at the following study area intersections under EAPC (2012) conditions, in addition to the locations currently warranted under existing (2009) traffic conditions:

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Diamond Drive (NS) at:

- Campbell Street (EW)

Mission Trail (NS) at:

- Elberta Road (EW)

The following intersections, which warrant traffic signals under EAPC (2012) conditions, are anticipated to operate at acceptable LOS and do not present safety issues as cross-street stop or all-way stop controlled intersections:

Main Street (NS) at:

- Lakeshore Drive (EW)

Diamond Drive (NS) at:

- Sylvester Street (EW)

Existing Plus Ambient Growth Plus Project (2014) Conditions

Intersection Analysis

Table 4.13-7 summarizes the intersection operations analysis results for the study area intersections for EAP (2014) conditions, based on the respective existing geometrics at the intersections. As shown in Table 4.13-7, it is anticipated that all study area intersections would operate at acceptable LOS (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of eight intersections:

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Table 4.13-7. Intersection Analysis for Existing Plus Ambient Growth Plus Project (2014) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.7	20.1	B	C
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	20.6	44.3	C	E
- With Improvements	TS	0	0	0	0	1	0	1	1	0	0	1	0	13.0	9.1	B	A
Diamond Circle/Loop Road (NS) at:																	
Driveway 1 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	1	0	1	1	0	0	1	0	0	1	0	10.2	16.6	B	C
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.9	12.1	A	B
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	6.0	13.2	A	B
Driveway 4 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	8.8	9.6	A	A

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	35.5	87.8	D	F
- With Improvements	TS	2	2	1	1	1	1>	2	2	1>	1	3	0	32.9	50.8	C	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	29.6	27.8	C	C
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.9	45.9	C	F[5]
- With Improvements	TS	0	0	0	2	1	1	0	2	1	2	2	0	22.0	30.4	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.3	25.2	C	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.6	36.6	D	D
Driveway 5 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	2	0	0	2	0	0	1	0	0	0	0	12.6	28.7	B	D
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	52.0	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	23.9	34.8	C	C

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.0	10.2	A	B
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.6	9.6	A	A
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	0	21.3	36.5	C	D
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	16.6	26.2	B	C
Elberta Rd. (EW)[6]																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	38.9	93.0	E	F
Mission Trail (NS) at:																	
Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	42.4	--[4]	E	F
- With Improvements	TS	0	2	0	1	2	0	0	0	0	0	1	0	10.1	10.5	B	B
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	27.4	--[4]	D	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	0	1	0	8.0	10.8	A	B
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	35.3	41.6	D	D
I-15 SB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	24.4	19.9	C	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	34.8	32.0	C	C

Source: Urban Crossroads Traffic Analysis Report 2009

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software: HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; LOS "F".

[5] Volume to capacity ratio is greater than 1.00; LOS "F".

[6] This intersection improvement is proposed as part of the Summerly Development. If the improvement is not in place prior to Phase 1 of the Diamond Specific Plan, the project will pay fair share toward the improvement (as indicated in the cumulative scenarios).

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Unacceptable LOS is indicated in **bold**.

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

Diamond Drive (NS) at:

- Campbell Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street

The Diamond Specific Plan would result in significant impacts to the aforementioned intersections with the exception of the intersections of Mission Trail at Campbell Street and Mission Trail at Lemon Street. As previously noted, these intersections operate at LOS "F" under existing (2009) conditions without the project. These intersections experience high delays for the vehicles on the minor legs due to insufficient gaps in the through traffic along Mission Trail. The unacceptable 2014 peak hour operations of these locations are not a result of the addition of project traffic.

Traffic Signal Warrant Analysis

Traffic signals are projected to be warranted at the following study area intersections under EAP (2014) conditions, in addition to the locations currently warranted under existing (2009) traffic conditions:

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Driveway 3 (NS) at:

- Diamond Circle (Loop Road) (EW)

Diamond Drive (NS) at:

- Driveway 5 (EW)
- Campbell Street/Diamond Circle (Loop Road) (EW)

As stated earlier, satisfying a peak hour or daily volume-based warrant in and of itself does not necessarily require that a traffic signal should automatically be installed. The following intersections,

which warrant traffic signals under EAP (2014) conditions, are anticipated to operate at acceptable LOS and do not present safety issues as cross-street stop or all-way stop controlled intersections:

Main Street (NS) at:

- Lakeshore Drive (EW)

Diamond Drive (NS) at:

- Driveway 5 (EW)

Existing Plus Ambient Growth Plus Project Plus Cumulative (2014) Conditions

Table 4.13-8 summarizes the intersection operations analysis results for the study area intersections for EAPC (2014) conditions, based on the respective existing geometrics at the intersections. As shown in Table 4.13-8, it is anticipated that the following 13 intersections would operate at unacceptable LOS during the peak hours with existing geometrics without improvements:

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 NB Ramps (NS) at:

- Railroad Canyon Road (EW)

I-15 SB Ramps (NS) at:

- Railroad Canyon Road (EW)

Auto Center Drive/Casino Drive (NS) at:

- Diamond Drive (EW)

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)
- Campbell Street (EW)

Table 4.13-8. Intersection Analysis for Existing Plus Ambient Growth Plus Project Plus Cumulative Development (2014) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	17.9	--[4]	C	F
- With Improvements	TS	0	0	0	1	0	1	0	1	0	0	1	1>>	5.0	8.3	A	A
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	26.2	--[4]	D	F
- With Improvements	TS	0	0	0	0	1	0	1	1	0	0	1	0	10.3	13.5	B	B
Diamond Circle/Loop Road (NS) at:																	
Driveway 1 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	1	0	1	1	0	1	1	0	1	1	0	10.2	16.6	B	C
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.2	A	B
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	6.0	13.2	A	B
Driveway 4 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	8.8	9.6	A	A

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	63.9	--[4]	E	F
- With Improvements	TS	2	2	1	2	2	1>	2	3	1>	1	3	0	38.7	42.4	D	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	75.5	75.7	F[5]	F[5]
- With Improvements	TS	1	1	1>>	0	0	0	2	3	0	0	3	1	17.9	16.6	B	B
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	62.7	--[4]	F[5]	F
- With Improvements	TS	0	0	0	2	1	2	0	3	1	2	2	0	24.2	30.4	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	28.9	48.7	C	F[5]
- With Improvements	TS	1	2	0	1	2	0	1	3	0	2	3	0	25.5	31.2	C	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	36.7	--[4]	D	F
- With Improvements	TS	2	2	0	2	2	0	2	2	1	1	2	1>	30.7	51.0	C	D
Driveway 5 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	2	0	0	2	0	1	0	1	0	0	0	6.1	14.0	A	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	22.1	34.0	C	C
Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.9	14.7	A	B
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	11.4	17.5	B	C
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	0	24.7	42.2	C	D
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	17.8	33.0	B	C
Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	67.1	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	11.9	14.6	B	B
Olive St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	13.8	20.4	B	C
Mission Trail (NS) at:																	
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	53.7	--[4]	F	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	0	1	0	10.6	15.6	B	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	37.5	60.6	D	F[5]
- With Improvements	TS	1	2	0	2	2	0	1	1	0	1	1	1>	33.2	36.6	C	D
I-15 SB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	21.8	23.8	C	C
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	36.3	40.7	D	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software: HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; LOS "F".

[5] Volume to capacity ratio is greater than 1.00; LOS "F".

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Unacceptable LOS is shown in **bold**.

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street (EW)
- Lemon Street (EW)
- Bundy Canyon Road (EW)

Implementation of the Diamond Specific Plan would result in significant cumulative impacts to the aforementioned intersections.

Traffic Signal Warrant Analysis

Traffic signals are projected to be warranted at the following study area intersections under EAPC (2014) conditions, in addition to the locations previously warranted under EAPC (2012) traffic conditions:

Driveway 3 (NS) at:

- Diamond Circle (Loop Road) (EW)

Diamond Drive (NS) at:

- Driveway 5 (EW)
- Sylvester Street (EW)

The following intersection, which warrants a traffic signal under EAPC (2014) conditions, is anticipated to operate at acceptable LOS and does not present a safety issue as an all-way stop controlled intersection:

Diamond Drive (NS) at:

- Sylvester Street (EW)

Existing Plus Ambient Growth Plus Project (2016) Conditions

Intersection Analysis

Table 4.13-9 summarizes the intersection operations analysis results for the study area intersections for EAP (2016) conditions, based on the respective existing geometrics at the intersections. As shown in Table 4.13-9, it is anticipated that all study area intersections would operate at acceptable LOS (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of eight intersections.

As shown in Table 4.13-9, the following eight intersections are anticipated to operate at unacceptable LOS:

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

Table 4.13-9. Intersection Analysis for Existing Plus Ambient Growth Plus Project (2016) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	14.3	26.7	B	D
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	23.3	60.4	C	F
- With Improvements	TS	0	0	0	0	1	0	1	1	0	0	1	0	14.6	12.6	B	B
Diamond Circle/Loop Road (NS) at:																	
Driveway 1 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	1	0	1	1	0	0	1	0	0	1	0	10.3	16.7	B	C
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	10.0	12.1	A	B
Driveway 2 (NS) at:																	
Lakeshore Drive (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	1	0	1	1	0	1	2	1	1	2	1	31.0	15.6	C	B
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	6.1	13.3	A	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Driveway 4 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	38.0	--[4]	D	F
- With Improvements	TS	2	2	1	2	2	1>	2	2	1>	1	3	0	33.6	39.4	C	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	33.2	28.9	C	C
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.6	58.1	C	F[5]
- With Improvements	TS	0	0	0	2	1	1	0	2	1	2	2	0	20.3	30.7	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	28.4	26.4	C	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.6	46.0	D	D
Driveway 5 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	2	0	0	2	0	1	0	1	0	0	0	9.0	20.0	A	C

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	31.1	30.0	C	C
Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	0	0	1	0	9.8	13.0	A	B
Driveway 7 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	2	0	0	2	0	0	0	0	0	0	1	8.7	9.1	A	A
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.8	10.4	A	B
Driveway 8 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	0	0	0	0	1	0	2	0	0	2	0	8.9	9.3	A	A
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	0	18.9	35.0	B	D
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	19.0	28.6	B	C
Elberta Rd. (EW)[6]																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	46.4	--[4]	E	F
Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	61.3	--[4]	F	F
- With Improvements	TS	0	2	0	1	2	0	0	0	0	0	1	0	9.8	11.2	A	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	31.6	--[4]	D	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	0	1	0	8.6	13.4	A	B
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	36.1	44.9	D	D
I-*15 SB Ramps (NS) at:*																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.3	19.5	C	B
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	37.6	33.7	D	C

Source: Urban Crossroads Traffic Analysis 2009

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software: HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; LOS "F".

[5] Volume to capacity ratio is greater than 1.00; LOS "F".

[6] This intersection improvement is proposed as part of the Summerly Development. If the improvement is not in place prior to Phase 1 of the Diamond Specific Plan, the project will pay fair share toward the improvement (as indicated in the cumulative scenarios).

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Unacceptable LOS is indicated in **bold**.

I-15 Southbound Ramps (NS) at:

Railroad Canyon Road (EW)/Diamond Drive (NS) at:

- Campbell Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street

The Diamond Specific Plan would result in significant impacts to the aforementioned intersections.

Traffic Signal Warrant Analysis

A traffic signal is projected to be warranted at the following study area intersection under existing plus ambient growth plus project (2016) conditions, in addition to the locations previously warranted under EAP (2014) traffic conditions:

Driveway 2 (NS) at:

- Lakeshore Drive (EW)

Existing Plus Ambient Growth Plus Project Plus Cumulative (2016) Conditions

Table 4.13-10 summarizes the intersection operations analysis results for the study area intersections for EAPC (2016) conditions, based on the respective existing geometrics at the intersections. As shown in Table 4.13-10, it is anticipated that project area intersections will operate at unacceptable LOS during the peak hours with existing geometrics. The following 14 intersections are anticipated to operate at LOS "E" or worse in the peak hours without improvements:

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Railroad Canyon Drive (EW)
- Bundy Canyon Road (EW)

Table 4.13-10. Intersection Analysis for Existing Plus Ambient Growth Plus Project Plus Cumulative Development (2016) Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	26.3	--[4]	D	F
- With Improvements	TS	0	0	0	1	0	1	0	1	0	0	1	1>>	5.8	12.3	A	B
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	34.7	--[4]	D	F
- With Improvements	TS	0	0	0	0	1	0	1	1	0	0	1	0	10.3	16.9	B	B
Diamond Circle/Loop Road (NS) at:																	
Driveway 1 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	1	0	1	1	0	0	1	0	0	1	0	10.3	16.7	B	C
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.1	A	B
Driveway 2 (NS) at:																	
Lakeshore Drive (EW)																	
- Without Improvements	INTERSECTION NOT ANALYZED																
- With Improvements	TS	1	1	0	1	1	0	1	2	1	1	2	1	10.7	17.3	B	B
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	9.1	12.2	A	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Driveway 4 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	88.0	--[4]	F	F
- With Improvements	TS	2	2	1	2	2	1>	2	3	1>	2	3	0	55.0	51.6	D	D
I-15 NB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	--[4]	--[4]	F	F
- With Improvements	TS	1	1	1>>	0	0	0	2	3	0	0	3	1	24.4	24.0	C	C
I-15 SB Ramps (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	--[4]	--[4]	F	F
- With Improvements	TS	0	0	0	2	1	2	0	3	1	2	2	0	33.0	43.3	C	D
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	34.4	94.2	C	F
- With Improvements	TS	1	2	0	1	2	0	2	3	0	2	3	0	14.7	34.7	B	C
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	39.3	--[4]	D	F
- With Improvements	TS	2	2	0	2	2	1>	2	2	1	1	2	1>	37.1	53.7	D	D

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Driveway 5 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	2	0	0	2	0	1	0	1	0	0	0	5.8	14.1	A	B
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	17.3	27.1	B	C
Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	0	0	1	0	12.0	32.8	B	D
Driveway 7 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	2	0	0	2	0	0	0	0	0	0	1	10.6	10.8	B	B
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	15.0	44.3	C	E
- With Improvements	TS	1	2	0	1	2	1	1	2	0	1	2	0	20.8	23.0	C	C
Driveway 8 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	0	0	0	0	1	0	2	0	0	2	0	9.0	9.8	A	A
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	0	20.7	41.4	C	D
Mission Trail (NS) at:																	
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	20.5	37.1	C	D

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	11.5	20.5	B	C
Olive St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	14.2	20.4	B	C
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	97.7	--[4]	F	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	1	0	1	9.4	14.6	A	B
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	39.6	--[4]	F	F
- With Improvements	TS	1	2	0	2	2	0	1	1	0	1	1	1>	36.4	42.6	D	D
I-15 SB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	26.8	22.9	C	C
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	39.7	56.1	D	E
- With Improvements	TS	1	1	1	0	0	0	1	2	0	0	2	0	39.2	47.7	D	D

1 When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

2 Delay and LOS calculated using the following analysis software: HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

3 TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

4 -- = Delay High, Intersection Unstable; LOS "F".

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.
Unacceptable LOS is shown in **bold**.

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

Auto Center Drive/Casino Drive (NS) at:

- Diamond Drive (EW)

Diamond Drive (NS) at:

- Campbell Street (EW)
- Lakeshore Drive/ Mission Trail (EW)
- Sylvester Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street
- Bundy Canyon Road (EW)

Implementation of the Diamond Specific Plan would result in significant cumulative impacts to the aforementioned intersections.

Traffic Signal Warrant Analysis

A traffic signal is projected to be warranted at the following study area intersection under EAPC (2016) conditions, in addition to the locations previously warranted under EAPC (2014) traffic conditions:

Driveway 2 (NS) at:

- Lakeshore Drive (EW)

General Plan Buildout with Project Traffic

Intersection Analysis

Table 4.13-11 summarizes the intersection operations analysis results for the project area intersections for General Plan buildout with project conditions, based on the respective existing geometrics at the intersections. As shown in Table 4.13-11, it is anticipated that the following study area intersections will operate at unacceptable LOS during the peak hours with existing geometrics:

Table 4.13-11. Intersection Analysis for General Plan Buildout With Project Conditions

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Main St. (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	--[4]	--[4]	F	F
- With Improvements	TS	0	0	0	2	0	1	0	2	0	0	2	1>>	7.0	14.0	A	B
Auto Center Dr. (NS) at:																	
Franklin Street (EW)																	
- Without Improvements	INTERSECTION NOT ANALYZED																
- With Improvements	TS	1	2	1>	1	2	0	1	2	1	2	2	1>	28.1	46.4	C	D
Old Franklin Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	12.1	34.5	B	D
I-15 SB Ramps (NS) at:																	
Franklin Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	0	0	0	0	1	1	0	2	1	1	2	0	26.5	33.8	C	C
I-15 NB Ramps (NS) at:																	
Franklin Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	0	1	1	0	0	0	1	2	0	0	2	0	30.5	28.6	C	C
Avenue 6 (NS) at:																	
Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	0	0	0	1	0	1	1	3	0	0	3	1	9.4	29.1	A	C

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Diamond Circle/Loop Road (NS) at:																	
Driveway 1 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	1	1	0	1	1	0	0	1	0	0	1	0	10.3	16.7	B	C
Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.1	A	B
Driveway 2 (NS) at:																	
Lakeshore Drive (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	0	1	1	1	1	0	1	3	1	2	3	1	10.5	21.6	B	C
Driveway 3 (NS) at:																	
Loop Road (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	10.3	12.2	B	B
Driveway 4 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	1	0	0	0	0	0	1	0	1	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	--[4]	--[4]	F	F
- With Improvements	TS	2	2	2>	2	2	1>	2	3	1>	2	3	2>	33.7	51.4	C	D
I-15 Northbound Ramps (EW)[5]																	
- With Improvements	TS	2	2	0	0	2	1>>	2	0	1	0	0	0	23.8	17.4	C	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Auto Center Dr./Casino Dr. (NS) at:																	
Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	--[4]	--[4]	F	F
- With Improvements	TS	2	2	0	2	2	1	2	3	1	2	3	1	38.7	34.7	D	C
I-15 Southbound Ramps (EW)[5]																	
- With Improvements	TS	0	2	1	1	2	0	0	0	0	2	0	2>	13.0	13.8	B	B
Diamond Dr. (NS) at:																	
Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	--[4]	--[4]	F	F
- With Improvements	TS	2	3	1	2	3	2>	2	3	1	1	3	1>	31.0	45.7	C	D
Diamond Dr. (NS) at:																	
Driveway 5 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	2	0	0	2	1	1	0	1	0	0	0	4.8	14.7	A	B
Campbell St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	1	0	1	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	1	1	1	0	1	1	1>	15.0	27.6	B	C
Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	0	19.0	17.7	B	B
Driveway 7 (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	2	0	0	2	0	0	0	0	0	0	1	12.9	12.1	B	B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	62.8	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	1	1	2	0	1	2	0	19.8	30.7	B	C
Driveway 8 (NS) at:																	
Sylvester Street (EW)																	
- Without Improvements	INTERSECTION DOES NOT EXIST																
- With Improvements	CSS	0	0	0	0	0	1	0	2	0	0	2	0	9.3	10.0	A	B
Mission Trail (NS) at:																	
Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	2	3	0	2	3	1	2	1	1>	1	1	0	20.2	35.9	C	D
Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	25.5	--[4]	C	F
- With Improvements	TS	2	3	1	2	3	0	1	1	1	1	2	1	18.8	42.6	B	D
Elberta Rd. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	1	0	1	--[4]	--[4]	F	F
- With Improvements	TS	1	3	0	1	3	0	1	1	0	1	1	0	11.6	19.5	B	B
Mission Trail (NS) at:																	
Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	1	2	0	1	2	0	1	1	0	1	1	0	15.3	21.3	B	C
Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	TS	0	2	1	1	2	0	0	0	0	1	0	1	16.6	42.2	B	D

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	--[4]	--[4]	F	F
- With Improvements	TS	2	2	0	2	2	0	1	2	1	2	2	1>	32.6	41.7	C	D
I-15 SB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	--[4]	--[4]	F	F
- With Improvements	TS	0	0	0	2	1	0	0	3	1	2	3	0	27.4	27.1	C	C
I-15 NB Ramps (NS) at:																	
Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	--[4]	--[4]	F	F
- With Improvements	TS	2	1	1	0	0	0	2	3	0	0	3	1	21.6	28.0	C	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections. Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; LOS "F".

[5] It should be noted that the I-15 interchange at Railroad Canyon Road has been assumed to be re-configured. As such, "without improvement" conditions have not been analyzed.

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.
Unacceptable LOS is shown in **bold**

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

Auto Center Drive/Casino Drive (NS) at:

- Diamond Drive (EW)

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)
- Campbell Street (EW)
- Sylvester Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Sylvester Street/Malaga Road (EW)
- Elberta Road (EW)
- Olive Street (EW)
- Lemon Street (EW)
- Bundy Canyon Road (EW)

I-15 SB Ramps (NS) at:

- Bundy Canyon Road (EW)

I-15 NB Ramps (NS) at:

- Bundy Canyon Road (EW)

Implementation of the Diamond Specific Plan would result in significant cumulative impacts to the aforementioned intersections.

Traffic Signal Warrant Analysis

Traffic signals are projected to be warranted at the following study area intersections under General Plan buildout with project conditions, in addition to the locations previously warranted under EAPC (2016) traffic conditions:

Diamond Drive (NS) at:

- Driveway 6 (EW)

I-15 Northbound Ramps (NS) at:

- Franklin Street (EW)

I-15 Southbound Ramps (NS) at:

- Franklin Street (EW)

Auto Center Drive (NS) at:

- Franklin Street/Avenue 6 (EW)

Grape Street (NS) at:

- I-15 Northbound Ramps (EW)

Casino Drive (NS) at:

- I-15 Southbound Ramps (EW)

Although the intersection of Diamond Drive and Driveway 6 is anticipated to meet a traffic signal warrant under long-range conditions due to the potentially high volumes on Diamond Drive, it is important to note that the driveway is not anticipated to meet a traffic signal warrant under EAPC (2016) conditions (project buildout). As such, it is recommended that this location be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal.

Stadium Traffic

Traffic generation rates for outdoor sports facilities were taken from the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, 2002) and from them it is assumed that Diamond Stadium would generate approximately 50 trips per acre. As the current stadium and parking areas total approximately 19 acres, this would result in about 475 inbound trips before events and 475 outbound trips after events for a total of 950 daily trips. A stadium representative indicated that records for paid parking for weekday games typically range between 200-500 vehicles per game, with the higher end occurring for "big games" only. Based upon both the SANDAG trip generation rate and the empirical parking data provided by the Stadium, it was determined that the Diamond Stadium would likely contribute 475 inbound vehicle trips during the typical weekday PM peak hour. A follow-up discussion with the Stadium representative confirmed that 475 inbound PM peak hour trips was indeed a conservative estimate. The trip generation rates and trip generation estimated for the Diamond Stadium have been provided in Appendix 7.1 of the Traffic Impact Analysis (Appendix J of this EIR).

The inbound trip distribution has been based upon the anticipated travel patterns of patrons to the Stadium. According to the Stadium representative, most of the traffic coming to and from the venue tends to be from the surrounding communities. The assignment of Stadium traffic from the adjoining

roadway system to the site has been based upon the site's trip generation, trip distribution and the arterial highway and local street system assumed to be in place for the requisite time horizon. Anticipated Diamond Stadium traffic has been added to the EAPC (2016) volumes shown in Table 4.13-10.

PM Peak Hour Level of Service Analysis

For EAPC (2016) conditions with stadium traffic, it is anticipated that the following study area intersections would operate at unacceptable LOS during the PM peak hours with the same lane geometrics improvements recommended under EAPC (2016) traffic conditions which are shown on both Table 4.13-10 and 4.13-12:

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)

Mission Trail (NS) at:

- Bundy Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Bundy Canyon Road (EW)

As shown in Table 4.13-12, most of the study area intersections experience an increase in delay that is in the range of one second to four seconds with an event occurring at the Diamond Stadium during the PM peak hour. However, five locations experience delay increases of more than four seconds with inbound event impacts. Table 4.13-12 shows the highest increase in delay is experienced at intersections closest to the Stadium. Capacity issues and unacceptable LOS are anticipated near and through the I-15 Freeway/Bundy Canyon Road interchange area and I-15 Freeway/Railroad Canyon Road interchange area.

It should be noted that the four locations that are anticipated to operate at unacceptable LOS during the PM peak hour would experience an increase in delay of less than ten seconds when weekday evening events are occurring at the Diamond Stadium. To accommodate Diamond Stadium traffic, the Diamond Specific Plan is proposing Diamond Road to be constructed as a divided collector in Phase 1. The I-15 Northbound and Southbound ramps on Bundy Canyon Road are anticipated to operate at LOS "D" but with a volume-to-capacity (V/C) ratio of 1.02. Per the Highway Capacity Manual, an intersection with a V/C ratio greater than 1.00 is considered to be operating at LOS "F". It is important to note that it is not uncommon for a professional sporting venue, such as Diamond Stadium, to impact near-by intersections as a result of the heavy inbound traffic flows that occur in a short time span for special events. The impacts are typically short in duration, do not occur on a daily basis, and may not occur at the same intensity over time. In lieu of capacity enhancements to correct unacceptable LOS of temporary and irregular traffic flows, the City and stadium will continue manual traffic control measures during times of high stadium traffic. The City of Lake Elsinore General Plan (1990) identifies manual traffic control measures as the best measure to target event traffic. Therefore with the continuation of manual traffic controls already in place, a less than significant impact is identified for this scenario.

Table 4.13-12. Intersection Analysis for Existing Plus Ambient Growth Plus Project Plus Cumulative Development (2016) Conditions with Lake Elsinore Diamond Stadium Traffic

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.) PM	Change in Delay (secs.) PM	Level of Service PM
		North-Bound			South-Bound			East-Bound			West-Bound					
		L	T	R	L	T	R	L	T	R	L	T	R			
Main St. (NS) at:																
Lakeshore Dr. (EW)																
- EAPC (2016)	TS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.3	+1.8	B
- EAPC (2016) with Stadium	TS	0	0	0	1	0	1	0	1	0	0	1	1>>	14.1		B
Avenue 6 (NS) at:																
Lakeshore Dr. (EW)																
- EAPC (2016)	TS	0	0	0	0	1	0	1	1	0	0	1	0	16.9	+2.4	B
- EAPC (2016) with Stadium	TS	0	0	0	0	1	0	1	1	0	0	1	0	19.3		B
Diamond Circle/Loop Road (NS) at:																
Driveway 1 (EW)																
- EAPC (2016)	CSS	1	1	0	1	1	0	0	1	0	0	1	0	16.7	+11.8	C
- EAPC (2016) with Stadium	CSS	1	1	0	1	1	0	0	1	0	0	1	0	28.5		D
Sylvester St. (EW)																
- EAPC (2016)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	10.1	+1.3	B
- EAPC (2016) with Stadium	CSS	0	1	0	0	1	0	0	1	0	0	1	1	11.4		B
Driveway 2 (NS) at:																
Lakeshore Drive (EW)																
- EAPC (2016)	TS	1	1	0	1	1	0	1	2	1	1	2	1	17.3	+0.5	B
- EAPC (2016) with Stadium	TS	1	1	0	1	1	0	1	2	1	1	2	1	17.8		B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.) PM	Change in Delay (secs.) PM	Level of Service PM
		North-Bound			South-Bound			East-Bound			West-Bound					
		L	T	R	L	T	R	L	T	R	L	T	R			
Driveway 3 (NS) at:																
Loop Road (EW)																
- EAPC (2016)	TS	1	1	0	1	1	0	1	1	0	1	1	0	12.2	+6.5	B
- EAPC (2016) with Stadium	TS	1	1	0	1	1	0	1	1	0	1	1	0	18.7		B
Driveway 4 (NS) at:																
Sylvester Street (EW)																
- EAPC (2016)	CSS	0	1	0	0	0	0	0	1	0	1	1	0	9.6	+0.4	A
- EAPC (2016) with Stadium	CSS	0	1	0	0	0	0	0	1	0	1	1	0	10.0		B
Summerhill Dr./Grape St. (NS) at:																
Railroad Canyon Rd. (EW)																
- EAPC (2016)	TS	2	2	1	2	2	1>	2	3	1>	2	3	0	51.6	+4.0	D
- EAPC (2016) with Stadium	TS	2	2	1	2	2	1>	2	3	1>	2	3	0	55.6		E
I-15 NB Ramps (NS) at:																
Railroad Canyon Rd. (EW)																
- EAPC (2016)	TS	1	1	1>>	0	0	0	2	3	0	0	3	1	24.0	+1.0	C
- EAPC (2016) with Stadium	TS	1	1	1>>	0	0	0	2	3	0	0	3	1	25.0		C
I-15 SB Ramps (NS) at:																
Railroad Canyon Rd. (EW)																
- EAPC (2016)	TS	0	0	0	2	1	2	0	3	1	2	2	0	43.3	+1.7	D
- EAPC (2016) with Stadium	TS	0	0	0	2	1	2	0	3	1	2	2	0	45.0		D
Auto Center Dr./Casino Dr. (NS) at:																
Diamond Dr. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	2	3	0	2	3	0	34.7	+1.5	C
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	2	3	0	2	3	0	36.2		D

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.) PM	Change in Delay (secs.) PM	Level of Service PM
		North-Bound			South-Bound			East-Bound			West-Bound					
		L	T	R	L	T	R	L	T	R	L	T	R			
Diamond Dr. (NS) at:																
Lakeshore Dr./Mission Trail (EW)																
- EAPC (2016)	TS	2	2	0	2	2	1>	2	2	1	1	2	1>	53.7	+0.2	D
- EAPC (2016) with Stadium	TS	2	2	0	2	2	1>	2	2	1	1	2	1>	53.9		F[4]
Driveway 5 (EW)																
- EAPC (2016)	TS	1	2	0	0	2	0	1	0	1	0	0	0	14.1	+3.0	B
- EAPC (2016) with Stadium	TS	1	2	0	0	2	0	1	0	1	0	0	0	17.1		B
Campbell St. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	1	1	0	1	1	0	27.1		C
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	1	1	0	1	1	0	46.7	+19.6	D
Pete Lehr Dr./Driveway 6 (EW)																
- EAPC (2016)	CSS	1	2	0	1	2	1	0	1	0	0	1	0	32.8	+1.6	D
- EAPC (2016) with Stadium	CSS	1	2	0	1	2	1	0	1	0	0	1	0	34.4		D
Driveway 7 (EW)																
- EAPC (2016)	CSS	0	2	0	0	2	0	0	0	0	0	0	1	10.8	+0.0	B
- EAPC (2016) with Stadium	CSS	0	2	0	0	2	0	0	0	0	0	0	1	10.8		B
Sylvester St. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	1	1	2	0	1	2	0	23.0	+1.4	C
- EAPC (2016) with Stadium	TS	1	2	0	1	2	1	1	2	0	1	2	0	24.4		C
Driveway 8 (NS) at:																
Sylvester Street (EW)																
- EAPC (2016)	CSS	0	0	0	0	0	1	0	2	0	0	2	0	9.8	+0.6	A
- EAPC (2016) with Stadium	CSS	0	0	0	0	0	1	0	2	0	0	2	0	10.4		B

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.) PM	Change in Delay (secs.) PM	Level of Service PM
		North-Bound			South-Bound			East-Bound			West-Bound					
		L	T	R	L	T	R	L	T	R	L	T	R			
Mission Trail (NS) at:																
Campbell St. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	1	1	1	0	1	1	0	41.4	+0.0	D
- EAPC (2016) with Stadium	TS	1	2	0	1	2	1	1	1	0	1	1	0	41.4		D
Mission Trail (NS) at:																
Sylvester St./Malaga Rd. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	1	1	1	1	2	1	37.1	+15.6	D
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	1	1	1	1	2	1	52.7		D
Elberta Rd. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	1	1	0	1	1	0	20.5	+0.4	C
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	1	1	0	1	1	0	20.9		C
Olive St. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	1	1	0	1	1	0	20.4	+0.7	C
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	1	1	0	1	1	0	21.1		C
Lemon St. (EW)																
- EAPC (2016)	TS	0	2	1	1	2	0	0	0	0	1	0	1	14.6	+0.7	B
- EAPC (2016) with Stadium	TS	0	2	1	1	2	0	0	0	0	1	0	1	15.3		B
Bundy Canyon Road (EW)																
- EAPC (2016)	TS	1	2	0	2	2	0	1	1	0	1	1	1>	42.6	+7.5	D
- EAPC (2016) with Stadium	TS	1	2	0	2	2	0	1	1	0	1	1	1>	50.1		F[4]
I-15 SB Ramps (NS) at:																
Bundy Canyon Road (EW)																
- EAPC (2016)	TS	0	0	0	1	1	0	0	2	0	1	2	0	22.9	+0.9	C
- EAPC (2016) with Stadium	TS	0	0	0	1	1	0	0	2	0	1	2	0	23.8		C

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.) PM	Change in Delay (secs.) PM	Level of Service PM
		North-Bound			South-Bound			East-Bound			West-Bound					
		L	T	R	L	T	R	L	T	R	L	T	R			
I-15 NB Ramps (NS) at:																
Bundy Canyon Road (EW)																
- EAPC (2016)	TS	1	1	1	0	0	0	1	2	0	0	2	0	47.7	+3.2	D
- EAPC (2016) with Stadium	TS	1	1	1	0	0	0	1	2	0	0	2	0	50.9		F[4]

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and LOS calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections, all way stop control. For intersections with cross-street stop control, the delay and LOS for the worst individual movement (or the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] Volume to capacity ratio is greater than 1.00; LOS "F".

Note: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.
Unacceptable LOS is shown in **bold**.

4.13.3 Cumulative Impacts

The preceding analysis of the proposed project is based on methodologies that incorporate the cumulative effects of traffic from general growth and anticipated development in the area as shown in Table 3-5. This reflects background traffic and traffic from area wide growth already approved by the City of Lake Elsinore plus the development of the proposed project. As mentioned above, traffic impacts would result from seven intersections under EAP (2012) conditions, 8 intersections under EAP (2014) conditions, 13 intersections under EAPC (2014) conditions, 8 intersections under EAP (2016) and 15 intersections under EAPC (2016) conditions and 15 intersections under General Plan buildout conditions. Therefore, cumulative impacts to the regional circulation guide are significant and require mitigation.

4.13.4 Environmental Mitigation Measures

Construction Related Impacts

To reduce construction related impacts to roadway traffic, the following mitigation measure is required:

DSP-TR-1 Prior to the start of construction of each phase of the Diamond Specific Plan, the Applicant shall implement the following measures documented in a construction management plan to be approved by the City Engineer:

- Control for any street closure, detour, or other disruption to traffic circulation;
- Routes that construction vehicles will utilize to access the site;
- Hours of construction traffic (not to occur during AM or PM peak hour);
- Off-site vehicles staging and parking areas,
- Proposed construction staging plan for the project,
- Posted information for contact in case of emergency or complaint; and
- Hours of construction and traffic control during construction shall not interfere with ingress/egress to and from the Lake Elsinore Storm Baseball Stadium during the baseball season.

Traffic Capacity/Level of Service

DSP-TR-2 The project shall participate in the phased construction of the off-site intersection improvements shown in Table 4.13-13 through payment of City of Lake Elsinore fees, and participation in the Western Riverside County Transportation Uniform Mitigation Fees (TUMF) program. Where required improvements are not covered by these programs, mitigation shall be implemented through a fair-share contribution or as otherwise determined by the City Engineer. The improvements listed in Table 4.13-13 shall be in place prior to issuance of the first building permit for each phase (as identified in the Traffic Impact Analysis) unless the following scenarios occur: ~~a new traffic study is submitted and approved by the City's Traffic Engineer documenting that the intersection improvement is no longer needed to maintain LOS D or better.~~

- A new traffic study is submitted and approved by the City's Traffic Engineer demonstrating that the identified intersection improvement is no longer needed to maintain an acceptable LOS as determined by the City's Traffic Engineer. (The City's General Plan Update proposes to allow LOS E within the Ballpark District).
- In the event that the project combines phases or is developed according to a more accelerated schedule than anticipated in the Traffic Impact Analysis for the Diamond Specific Plan, a new traffic study shall be submitted and approved by the City's Traffic Engineer identifying the timing of the improvements required to reduce impacts to below a level of significance.
- In the event that a programmed improvement is delayed, a new traffic study shall be submitted and approved by the City's Traffic Engineer identifying improvements that shall reduce the project's contribution to the impacted intersection or interchange.

4.13.5 Conclusion

Less than significant impacts are anticipated to occur with respect to air traffic, hazards/incompatible uses, emergency access, on-site circulation, alternative transportation, and parking capacity.

Mitigation Measure DSP-TR-1 requires the project applicant to implement measures approved by the City Engineer to reduce impacts to the local circulation network and adjacent business and residences during construction prior to each phase of the Diamond Specific Plan. By preventing construction traffic from occurring during peak hour, implementation of this mitigation measure would reduce short term impacts to the circulation network to below a level of significance.

As shown in Tables 4.13-5 through 4.13-12, with implementation of DSP-TR-2 all intersections would operate at acceptable LOS. During EAP 2012, 2014, 2016 conditions, the intersection of Elberta Road on Mission Trail appears to be unmitigated. The intersection improvement is included as part of the Summerly Development to the south. However, if the improvement is not constructed prior to Phase 1 of the Diamond Specific Plan, the project shall improve the intersection as indicated in the EAPC scenarios. With the improvements, the intersection is anticipated to operate at acceptable LOS during all phases.

With the project's TIF, TUMF and fair-share contributions, funds will be available to install traffic signaling and provide additional lanes necessary to increase LOS to acceptable levels. Temporary decreases in LOS due to stadium traffic will be reduced by manual traffic control measures to specifically target traffic increases generated by the stadium.

Table 4.13-13. Diamond Specific Plan Intersection Mitigation

Intersection	Total Improvements Required by 2012	Total Improvements Required by 2014	Total Improvements Required by 2016	Total Improvements Required by GP Buildout
Main St. (NS) & Lakeshore Dr. (EW)	None	Install Signal	None	1.SBL, 1.EBT, 1.WBT
Auto Center Dr. (NS) & Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.NBL, 1.NBT, 1.NBR with Overlap Phasing, 1.SBL, 1.SBT, 1.EBL, 2.EBT, 1.EBR, 2.WBL, 2.WBT, 1.WBR with Overlap Phasing
Auto Center Dr. (NS) & Old Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.NBT, 1.SBL, 1.SBT
I-15 SB Ramps (NS) & Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.SBT/L, 1.SBR, 2.EBT, 1.EBR, 1.WBL, 2.WBT
I-15 NB Ramps (NS) & Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.NBT/L, 1.NBR, 1.EBL, 2.EBT, 2.WBT
Avenue 6 (NS) & Lakeshore Dr. (EW)	Install Signal	None	None	1.SBL, Restripe SBT/R as SBR, 2.EBT, 2.WBT, 1.WBR
Summerhill Dr. (NS) & Railroad Canyon Rd. (EW)	1.EBT, Overlap Phasing EBR	1.SBL, 1.SBT	1.WBL	1.NBR with Overlap Phasing, 2.WBR with Overlap Phasing
I-15 NB Ramps (NS) & Railroad Canyon Rd. (EW)	None	1.NBL, Free Right for NBR, 1.WBT	None	2.NBL, Free Right for SBR, 2.EBL, 1.EBR
I-15 SB Ramps (NS) & Railroad Canyon Rd. (EW)	1.WBL	1.SBR, 1.EBT	None	1.NBR, 1.SBL, 2.WBL, 2.WBR with Overlap Phasing
Auto Center Dr. (NS) & Diamond Dr. (EW)	None	1.WBT	1.EBL	1.NBL, 1.SBL, 1.SBR, 1.EBR, 1.WBR
Diamond Dr. (NS) & Lakeshore Dr. (EW)	None	1.NBL, 1.EBL, Overlap Phasing WBR	1.SBR with Overlap Phasing	1.NBT, 1.NBR, 1.SBT, 1.SBR with Overlap Phasing, 1.EBT, 1.WBT
Diamond Dr. (NS) & Campbell St. (EW)	1.NBL, 1.EBL/T/R, Restripe WBR as WBT/R	Install Signal, 1.EBL	None	1.SBR, 1.EBR with Overlap Phasing
Diamond Dr. (NS) & Sylvester St. (EW)	None	None	Install Signal	None
Mission Trail (NS) & Campbell St. (EW)	Install Signal, Restripe for 1.EBL and 1.EBT/R, 1.WBL	None	None	1.NBL, 1.NBT, 1.SBL, 1.SBT, 1.EBL, Overlap Phasing on EBR
Mission Trail (NS) & Malaga Rd. (EW)	None	None	None	1.NBL, 1.NBT, 1.NBR, 1.SBL, 1.SBT

Intersection	Total Improvements Required by 2012	Total Improvements Required by 2014	Total Improvements Required by 2016	Total Improvements Required by GP Buildout
Mission Trail (NS) & Elberta Rd. (EW)	Install Signal	None	None	1.NBL, 1.NBT, 1.SBT, 1.EBL, 1.EBT/R, Restripe WBR as WBT/R
Mission Trail (NS) & Olive St. (EW)	Install Signal, 1.EBL, 1.WBL	None	None	1.NBL, 1.EBT
Mission Trail (NS) & Lemon St. (EW)	Install Signal, 1.SBL	None	1.WBL, Restripe WBL/T/R as WBR	None
Mission Trail (NS) & Bundy Canyon Rd. (EW)	None	1.SBL, 1.EBL, 1.WBL, Overlap Phasing WBR	None	1.NBL, 1.EBT, 1.EBR, 1.WBL, 1.WBT
I-15 SB Ramps (NS) & Bundy Canyon Rd. (EW)	None	None	None	1.SBL, 1.EBT, 1.EBR, 1.WBL, 1.WBT
I-15 NB Ramps (NS) & Bundy Canyon Rd. (EW)	None	None	1.NBR	1.NBL, 1.EBL, 1.EBT, 1.WBT, 1.WBR

Source: Urban Crossroads, 2009
NBL = North Bound Left; NBT = North Bound Through; NBR = North Bound Right; SBL = South Bound Left; SBT = South Bound Through; SBR = South Bound Right; EBL= East Bound Left; EBT = East Bound Through; EBR = East Bound Right; WBL = West Bound Left; WBT = West Bound Through; WBR = West Bound Right

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4.14 UTILITIES / SERVICE SYSTEMS

The following section describes existing water, wastewater, solid waste, and gas and electricity service systems and potential impacts of the Diamond Specific Plan on the availability of these facilities and services. Service provider letters are included in Appendix I.1. Elsinore Valley Municipal Water District prepared a Water Supply Assessment (WSA) for the Diamond Specific Plan in November 2009. The WSA is included as Appendix I.2.

4.14.1 Environmental Setting

4.14.1.1 Water Supply

Water supply to the developed portions of western Riverside County (i.e., the inland valley) is sustained by local groundwater, surface water from Canyon Lake, and imported water from northern California and the Colorado River. Riverside County incorporates four major watershed areas. The Diamond Specific Plan is located in the southern portion of the Santa Ana River Basin watershed. A two-day to one-week water supply to meet peak demand is provided by many local water agencies within Riverside County. Long-term storage of large quantities of water is provided only at the Metropolitan Water District (Metropolitan) and State of California Department of Water Resources (DWR) facilities.

The Diamond Specific Plan site is located within the water service area of the Elsinore Valley Municipal Water District (EVMWD). Located in southwestern Riverside County, EVMWD's service area includes the cities of Lake Elsinore, Canyon Lake, Murrieta, and unincorporated communities. EVMWD is a sub-agency of the Western Municipal Water District (WMWD), a member agency of Metropolitan. As a special district, EVMWD's powers include provision of public water service, water supply development and planning, wastewater treatment and disposal, and recycling. EVMWD's water supply is a blend of local groundwater from eight wells, surface water from Railroad Canyon Reservoir/Canyon Lake Water Treatment Plan, and imported water from Metropolitan through the Auld Valley and Temescal Valley Pipelines.

EVMWD prepared a Water Supply Assessment (WSA) for the Diamond Specific Plan pursuant to Senate Bill (SB) 610[1], which describes existing and planned water supply and demand. The WSA also documents EVMWD's ability to meet existing and planned future demands over a 20 year period. According to the WSA, EVMWD serves a total of 38,099 potable service connections with an annual demand of 32,700 acre-feet per year as of January 2008. Existing supply is currently 66,500 acre-feet per year (acre-ft/yr). According to the WSA, future demand projections (without Diamond Specific Plan) would be 33,900 acre-ft/yr.

As discussed in the project description, the Diamond Specific Plan water, reclaimed water, and wastewater (sewer) infrastructure plans are depicted in Figure 2.3-9. Domestic water service for the site will be provided by existing infrastructure within Malaga Road and Diamond Drive. Reclaimed water service to the Diamond Specific Plan is under consideration; however, reclaimed water is currently not available. A reclaimed water pipeline is proposed to be constructed within Malaga Road. EVMWD's reclaimed water master plan identifies the Diamond Specific Plan area as a potential reclaimed water user.

[1] Signed into law October 9, 2001, SB 610 resulted in amendments to the Public Resources Code and the Water Code. Revising provisions established by SB 901, SB 610 requires that any city or county having determined that a project is subject to CEQA to identify any public water system that may supply water for the project and to request those public water systems to prepare a specified water supply assessment. The assessment would include the 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.

4.14.1.2 Wastewater

In addition to EVMWD's provision of public water service, water supply development, and planning, EVMWD also provides wastewater treatment and disposal, and recycling to the region, including the cities of Lake Elsinore and Canyon Lake, as well as portions of Murrieta and the unincorporated County of Riverside. EVMWD's main wastewater collection and treatment facility is the Regional Wastewater Reclamation Facility (WRF) located in Lake Elsinore near the intersection of Chaney Street and Treleven Avenue. Three other treatment plants provide additional wastewater treatment facilities: the Horsethief Canyon Wastewater Treatment Plant (WWTP), the Railroad Canyon WWTP, and RCWD's Santa Rosa WRF. According to the EVMWD Wastewater Master Plan (2008), the Regional WRF was constructed in 1981 with a capacity of 2.0 million gallons per day (mgd) and the plant was expanded to a capacity of 3.0 mgd in 1989. In 1994, an ultraviolet disinfection system was installed and the plant was re-rated to a capacity of 4.0 mgd. In 2002, a new 4.0 mgd process train (Train B) was added to the existing 4.0 mgd Train A, expanding the Regional WRF to accommodate a flow of 8.0 mgd. The existing average flow and peak flow capacities of the Regional WRF are 8 mgd and 17.6 mgd, respectively. Wastewater production at the Regional WRF is currently 5.65 mgd. Future expansion to 32 mgd is possible on the plant's existing site.

Wastewater service for the site will be provided by utilizing existing infrastructure within Malaga Road and Diamond Drive. The portion of the Diamond Specific Plan south of Malaga Road will be serviced by a wastewater line within Diamond Drive which discharges to a pump station adjacent to Lakeshore Drive.

4.14.1.3 Solid Waste

County Facilities

The Riverside County Waste Management Department (RCWMD) operates and maintains the landfills of Riverside County for solid waste disposal for cities and incorporated areas of the County, including the City of Lake Elsinore. RCWMD is responsible for: (1) implementing the goals, policies, and objectives of the County's Source Reduction and Recycling Element (SRRE) for meeting the 50 percent diversion goals; (2) implementing programs that adhere to the goals, policies, and objectives outlined in the County's Household Hazardous Waste Element (HHWE) for reducing household hazardous waste; (3) meeting the solid waste disposal needs of the County's residents; and (4) maintaining and updating the Countywide Integrated Waste Management Plan (CIWMP) and reporting on the County's progress in complying with Assembly Bill (AB) 939 (in which the state mandates volume and toxicity reduction of solid waste). The individual cities within the County, including Lake Elsinore, are independently responsible for the implementation of CIWMP goals and objectives to comply with AB 939.

According to the ~~Riverside County Integrated Project (RCIP) General Plan EIR, the~~ Riverside County Annual Report for 200~~6~~[2]~~0~~ (~~August~~ March 200~~8~~1~~)documents that~~ the County's disposal facilities ~~provide more than 15 years of disposal capacity, based on projected growth in disposal with~~ have a 5~~3~~0 ~~-~~percent (after Biomass Credit) diversion rate. The area is serviced by CR&R, a private company that provides refuse hauling, recycling, and green waste disposal and is the operator of the Perris Material Recovery Facility (MRF). The location that will serve the Diamond Specific Plan site is located at 1706 Goetz Road in the City of Perris. The CR&R Incorporated facility at the Perris Transfer Station and MRF is a total of 12.3 acres and has a permitted capacity of 3,600 tons/day. The solid waste generation rate provided by CR&R is 12.38 pounds of solid waste per person per day. Within the unincorporated area, there are ~~eight~~ three regional landfill facilities and several other smaller sites which are open only a few times a year~~,~~

[2]Report located at http://wwww.rivcowm.org/other/Annual%20Report%20Summary-2006.htm.

~~seven of which are operated by the County and the eighth (El Sobrante), which is privately owned and operated under an agreement with the County.~~ The three regional landfills are Class III municipal solid waste landfills. Waste collection for the City of Lake Elsinore is provided by CR&R Incorporated, located in Perris.

The landfill closest to the Diamond Specific Plan site is El Sobrante Landfill, located at 10910 Dawson Canyon Road, ~~in Corona~~, east of Interstate 15 (I-15) and Temescal Canyon Road to the south of the City of Corona. The El Sobrante Landfill is an active Class III (non-hazardous municipal solid waste), permitted landfill and accepts mixed municipal waste, construction/demolition waste, and tires. El Sobrante Landfill is owned and operated by USA Waste of California, a subsidiary of Waste Management, Inc. It has a total acreage of 1,322 acres and disposal acreage of ~~481~~645 acres. The landfill is currently permitted to receive 10,000 tons of refuse per day (tpd), of which 4,000 tpd is reserved for refuse generated within Riverside County. The 2007 maximum daily average volume disposed was 10,542 tons, which was due to an emergency situation.[3] The landfill had a total capacity of approximately ~~184,930,000 tons~~ 109 million tons, as of ~~April 30, 2007~~January 1, 2009 and had a remaining in-county disposal capacity of approximately ~~118,573,540~~ 39.969 tons. The daily average for in-County waste was 2,786 tons. The landfill is expected to reach capacity by approximately 2031~~0~~. While El Sobrante Landfill is the closest landfill to the Diamond Specific Plan site, it is the decision of CR&R Incorporated as to where the waste generated at the project site will be delivered.

The Lamb Canyon Landfill is located at 16411 Lamb Canyon Road between the City of Beaumont and the City of San Jacinto. The Class III permitted landfill is owned and operated by Riverside County ~~currently active~~ and accepts agricultural, construction/demolition, dead animal, green material, industrial, inert, metal, mixed municipal, and tire waste. It has a total acreage of 1,18~~0~~9 acres and disposal acreage of 144.6 acres. Permitted capacity of the landfill is 34,292,000 cubic yards (cy). The remaining total capacity is approximately 9.541 million tons ~~20,908,171 cy.~~ Total daily permitted capacity is 3,000 tons. The projected closure date of the facility is ~~2023~~2020.

The Badlands Landfill is owned and operated by Riverside County and located at 31125 Ironwood Avenue, northeast of the City of Moreno Valley. The Class III permitted landfill is currently active and accepts agricultural, ash, construction/demolition, dead animals, green materials, industrial, inert, metals, mixed municipal, tire, and wood waste. It has a total acreage of 1,168.3 acres and disposal acreage of 150 acres. Permitted capacity of the landfill is ~~30,386,332 cy~~ 15.237 million tons as of June 30, 2008. The remaining capacity is approximately ~~21,866,092 cy~~ 7.556 million tons. Total daily permitted capacity is 4,000 tons. The projected closure date of the facility is 2016, although further landfill expansion potential exists at the site.

4.14.1.4 Gas Services

According to the 2008 California Gas Report, Southern California Gas Company (SCGC), a regulated subsidiary of Sempra Energy, is the principal distributor of natural gas in southern California, serving retail and wholesale customers. Southern California Gas Company is the nation's largest natural gas distribution utility, serving 20.3 million consumers through 5.7 million meters. The company's service territory encompasses approximately 20,000 square miles in most of central and southern California.

According to the 2008 California Gas Report, SCGC demand for all markets is expected to grow at an annual rate of 0.02 percent from 2008 to 2030. SCGC service area experienced declines in 2008 due to

[3] Riverside County Waste Management Department. El Sobrante Landfill SWFP Revision Supplemental Environmental Impact Report, March 2009.

the over-supply of homes and a declining state economy. Population trends are forecasted to average a modest 0.9 to 1.0 percent annual growth from 2007 to 2030.

SCGC calculates average temperatures as base case, and cold temperatures as high case scenarios. The base case refers to expected gas demand for an average temperature year and normal hydroelectric power (hydro) year, and the high case refers to expected gas demand for a cold temperature year and dry hydro conditions. Under an average temperature condition and a normal hydro year, gas demand for the state is projected to average 6,291 million cubic feet per day (MMcf/d) in 2008 increasing to 6,428 MMcf/d by 2030, a cumulative growth of just 2 percent in 22 years. The Southern California area has a weather-adjusted residential demand forecast, on average, is expected to decline by 0.12 percent per year. In 2007, temperature adjusted residential demand was 245 billion cubic feet (Bcf). By the year 2030, residential demand is expected to decline to 239 Bcf.

4.14.1.5 Electricity Services

Southern California Edison (SCE), a subsidiary of Edison International, provides electricity to the City of Lake Elsinore. SCE is a provider for 13 million customers, 5,000 large businesses, and 280,000 small businesses in 430 cities. SCE provides a significant amount of energy from alternate and renewable energy and from a variety of other sources. There are 16 utility interconnections, 4,990 transmission and distribution circuits, and 425 transmission and distribution crews.

According to the California Energy Commission (CEC), SCE is projected to deliver 103.3 million megawatt-hours (MWh) to its customers during 2007. By 2018, SCE's demand is expected to increase to 121,400 million MWh.[4]

Both SCE and The Gas Company anticipate the ability to accommodate future growth within the City of Lake Elsinore; development proposals will be required to formally request "will serve" letters on an individual basis.

4.14.2 Project Impacts

4.14.2.3 Thresholds of Significance

Water

According to *CEQA Guidelines* Appendix G, a significant impact on water supply would be identified if the proposed project is determined to result in one of the following:

- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.

Wastewater

According to *CEQA Guidelines* Appendix G, a significant impact on wastewater utilities would be identified if the proposed project is determined to result in one of the following:

[4] California Energy Commission. California Energy Demand 2008-2018, Staff Revised Forecast. Staff Final Report. Docket #CEC-200-2007-015-SF2. November 2007.

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new 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 storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Solid Waste

According to *CEQA Guidelines* Appendix G, a significant impact to solid waste services would be identified if the proposed project is determined to result in one of the following:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Project development does not comply with federal, state, and local statutes and regulations related to solid waste.

Gas Service

A significant impact on gas services would be identified if the proposed project is determined to result in one of the following:

- Require or result in the construction of new gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Have insufficient gas supplies available to serve the project from existing entitlements and resources or require new or expanded entitlements.

Electricity Service

A significant impact on electricity services would be identified if the proposed project is determined to result in the following:

- Would create demands on electricity supply and infrastructure which exceed the capacity of the utility serving the project site.

4.14.2.4 Environmental Impacts

Implementation of the Diamond Specific Plan would result in the development of 87.2 acres of mixed-use development on what is currently a mix of developed, undeveloped, and disturbed land. The Diamond Specific Plan would result in the development of 897,000 square feet (sf) of commercial uses, 600 dwelling units (DUs), and 150 hotel rooms. The Specific Plan includes an option for an increase of 150 hotel rooms (total of 300 hotel rooms) with a corresponding decrease in retail square footage by 100,000 sf. Given a housing generation rate of 2.7 persons per household, the estimated residential population would be approximately 1,620 persons.

Water Supply

As stated, the proposed Diamond Specific Plan consists of 600 DUs of residential, 897,000 sf of commercial, and a 150-room hotel. A targeted density of 18 DU per acre and a floor to area ratio (FAR) of 0.40 are proposed. Future potable water demands are calculated by applying a water duty factor to each of the Diamond Specific Plan's three land-use categories: high density residential, general commercial, and hotel, as shown in Table 4.14-1, to each specific land-use type of the Diamond Specific Plan. It is assumed that all Diamond Specific Plan demands are potable and none are recycled. The average potable water demand for the Diamond Specific Plan is approximately 400 acre-ft/yr as shown in Table 4.14-2. With the option to increase hotel rooms but decrease retail sf included in the Specific Plan, total potable water demand would decrease to 393 acre-ft/yr.

Table 4.14-1. Water Duty Factors

Land Use Category	Water Duty Factor[1]	Duty Factor Unit	Conversion to EDU	EDU Conversion Unit
Low Density Residential	750	gpd/DU	1.5	DU/EDU
Medium Density Residential	500	gpd/DU	1.0	DU/EDU
High Density Residential[2]	350	gpd/DU	0.7	DU/EDU
General Commercial	2,500	gpd/acre	5.0	acre/EDU
School	4,000	gpd/acre	8.0	acre/EDU
Parks/Landscaping	4,000	gpd/acre	8.0	acre/EDU
Hotels/Inn	100	gpd/room	0.2	room/EDU

1. Based on EVMWD Water Distribution System Master Plan (WDSMP) (2008).
2. A range of 12-24 DU/acre is assumed (EVMWD WDSMP 2008).
Notes: GPD= Gallons Per Day; DU= Dwelling Unity; EDU: Equivalent Dwelling Unit

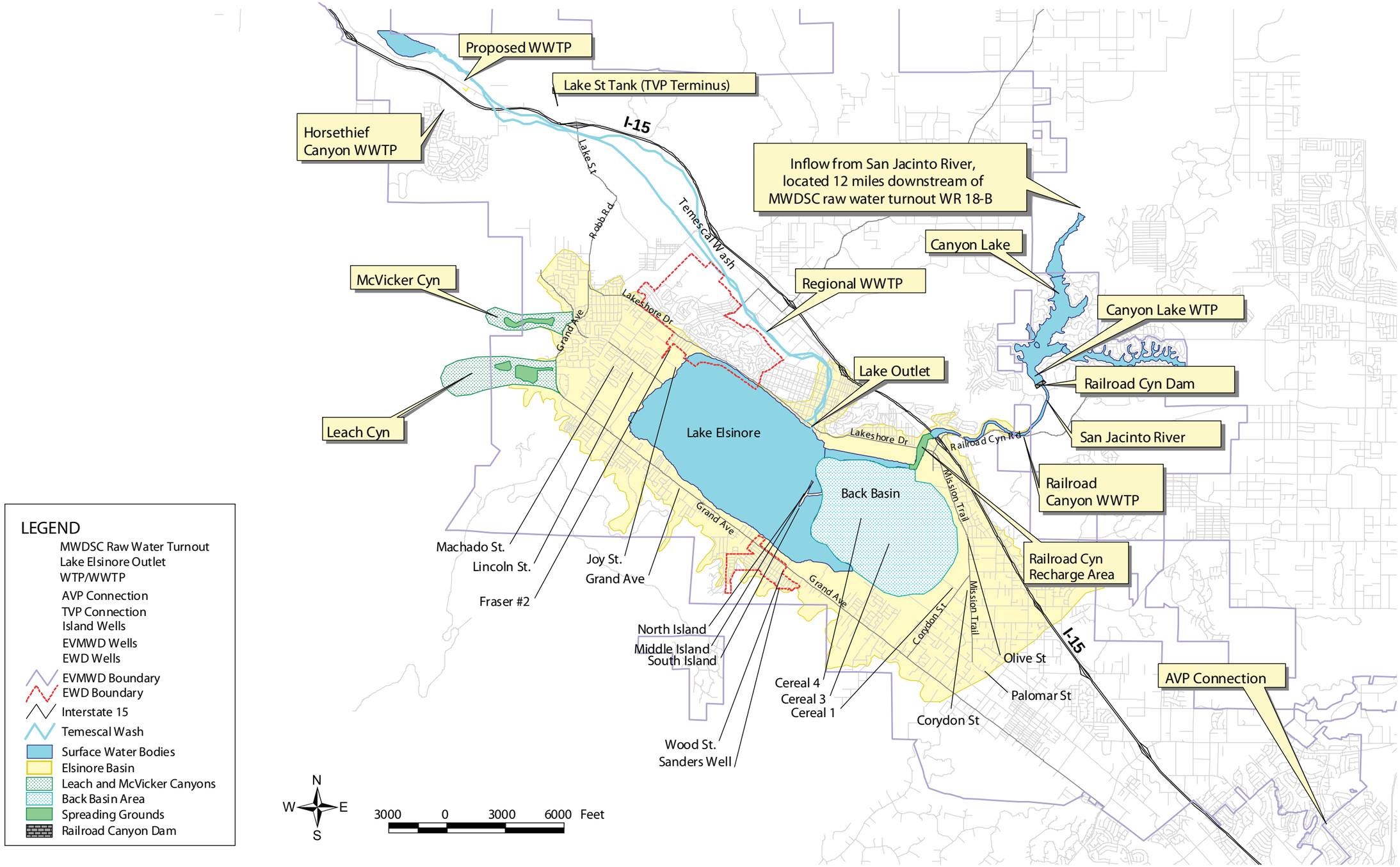
Table 4.14-2. Diamond Specific Plan Potable Water Demand Projections

Land Use Category	Average Day Demand (acre-ft/yr)	Maximum Day Demand[1] (MGD)	Wet Year Demand (acre-ft/yr)[2]	Dry Year Demand (acre-ft/yr)[2]
High Density Residential[3]	240	0.4	220	260
General Commercial[4]	140	0.2	130	150
Hotel[5]	20	0.0	20	20
Total Demand	400	0.6	370	430

1. An Average Day Demand (ADD) to Maximum Day Demand (MDD) peaking factor of 2.0 is used (EVMWD WDSMP 2008).
2. Based on historical potable water demands, wet and dry year demands are 9.4 percent below and 8.5 percent above average demands, respectively.
3. A water duty factor of 350 gpd/DU is used.
4. A water duty factor of 2,500 gpd/acre is used.
5. A water duty factor of 100 gpd/room is used.

Combining the existing and future potable water demands yields a total future average potable water demand of 33,900 acre-ft/yr without the Diamond Specific Plan and 34,300 acre-ft/yr with the Diamond Specific Plan, as shown in Table 4.14-3. EVMWD obtains its potable water supplies from local groundwater, local surface water from Canyon Lake, and imported water. The locations of these sources are presented in Figure 4.14-1.

Source: MWH, 2009 | G:\010570LKELS\101221_DIAMOND\graphics\docs\EIR\06-24-2009\4.14-1_Existing_water_sources.ai| Last Updated : 11-19-09



Existing Water Supply Sources

FIGURE 4.14-1

Diamond Specific Plan | City of Lake Elsinore | Draft Environmental Impact Report

HDR ONE COMPANY | *Many Solutions*℠

Table 4.14-3. Summary of Future Potable Water Demand

Demand Category	Average Day Demand (acre-ft/yr)	Maximum Day Demand (MGD)[1]	Wet Year Demand (acre-ft/yr)[2]	Dry Year Demand (acre-ft/yr)[2]
With Diamond Specific Plan	34,300	60.3	30,970	37,330
Without Diamond Specific Plan	33,900	59.7	30,600	36,900

1. An Average Day Demand to Maximum Day Demand peaking factor of 2.0 is used (EVMWD WDSMP 2008).
2. Based on historical potable water demands, wet and dry year demands are 9.4 percent below and 8.5 percent above average demands, respectively.

Table 4.14-4 summarizes the available water supplies to meet average annual demands during average/normal, single-dry, multiple-dry, and wet years. As evident from the Table 4.14-4, existing water supply for an average year is currently 43,800 acre-ft/yr and the projected demand with the Diamond Specific Plan would be 34,300 acre-ft/yr. Therefore, EVMWD has sufficient water supplies available to meet projected water demands for the Diamond Specific Plan and additional capacity would remain. Therefore, water supply impacts would be less than significant.

Table 4.14-4. Available Existing Water Supplies for Average Annual Demands

	Units are in acre-ft/yr				
Water Supply Source	Capacity	Average Year	Single-Dry Year	Multiple-Dry Years	Single Wet Year
Canyon Lake	8,000	4,900	2,500	3,000	8,000
Groundwater Extraction	17,300	3,700	11,300	10,000	3,400
Groundwater Injection	(7,600)	(6,100)	0.0	0.0	(6,900)
Temescal Valley Pipeline	14,200	12,700	10,2001	10,2001	12,700
Auld Valley Pipeline	27,000	22,500	18,0002	18,0002	22,500
Total Potable Supplies	66,500	43,800	42,000	41,200	46,600

Source: Water Supply Optimization (MWH 2009).
1. It is assumed that 80% of 12,700 (83% of TVP capacity) is available during dry year & multiple dry years.
2. It is assumed that 80% of 22,600 (83% of AVP capacity) is available during dry year & multiple dry years.

Water Infrastructure

The Diamond Specific Plan water infrastructure plans are depicted in Figure 2.3-9. As shown, the Diamond Specific Plan would connect to existing water infrastructure within Malaga Road and Diamond Drive. Existing on-site infrastructure include 12-inch water pipes, 8-inch sewer pipes along Mission Trail, Malaga Road, Diamond Drive, and Campbell Street. On-site improvements include 12-inch and 8-inch sewer lines, 12-inch water pipes, and a 4-inch reclaimed water line within the Diamond Specific Plan site. Also, an existing 8-inch water line located north of the stadium will be abandoned. The water infrastructure plan has been prepared by the project engineer and reviewed by the City Engineer and would be adequate to provide the project water services demand. Adherence to City and EVMWD regulations would ensure that less than significant impacts would result from the installation of water lines and utility improvements required to serve raw and potable water to the proposed project. Therefore, impacts for this issue area would be less than significant.

Wastewater

Wastewater Treatment Requirements

The Diamond Specific Plan is located within the EVMWD wastewater service area, WRF. Collected wastewater would then flow to the Regional WRF. The facility has an 8 mgd capacity and currently treats approximately 4.5 mgd of wastewater to tertiary standards and discharges the effluent to Temescal Wash. The current Regional Water Quality Control Board (RWQCB)-issued NPDES permit for the Regional WRF requires that a minimum of 0.5 mgd of flow be discharged to the wash for environmental habitat needs. The remaining treated wastewater from the district's reclamation facility is expected to be recycled for irrigation or industrial purposes. Adherence to the NPDES permit would ensure that the Diamond Specific Plan would not exceed wastewater treatment requirements of the Santa Ana Region RWQCB and therefore, a less than significant impact is identified.

Stormwater Facilities

Storm water runoff from the Diamond Specific Plan would be collected and drained to three outlet concentration points. The majority of the storm water flows for the Diamond Specific Plan will be collected through a proposed backbone storm drain system within Diamond Drive. This drain system will discharge water to a bioswale, infiltration basin and detention basin within the Summerly Development adjacent to the Diamond Specific Plan. To connect to these drainage systems, the Diamond Specific Plan proposes construction of an off-site storm drain. However, this storm drain would connect through the City's access road to the park proposed within the Summerly Development. This access road has already been graded and disturbed and impacts were covered in the Supplemental Impact Report for the East Lake Specific Plan Amendment No. 6 (also known as John Laing Homes or Summerly Development). A drainage outlet at the north end of the Specific Plan will collect storm drain runoff and will utilize grassy drainage swales as the flow discharges directly into the Lake Elsinore inlet channel. A third drainage channel will collect flows from the Stadium parking lot and will continue to discharge to the storm drain at the end of Malaga Road. Figure 2.3-8 depicts the conceptual drainage plan. A finalized Drainage Plan identifying proposed improvements and confirming adequate sizing/capacity of storm drains would be approved by the City of Lake Elsinore prior to initiating construction. Drainage and flood control infrastructure and improvements shall be provided in accordance with the requirements of the City of Lake Elsinore and Riverside County Flood Control and Water Conservation District (RCFCWCD). Adherence to City and RCFCWCD requirements would ensure that less than significant impacts would result from the installation of storm drains required to serve the Diamond Specific Plan. Therefore, impacts for this issue area would be less than significant.

Wastewater Facilities

EVMWD provides wastewater treatment and disposal, and recycling to the Diamond Specific Plan area. Wastewater flow factors from EVMWD Wastewater Master Plan (2008) were used to determine the wastewater generation for the Diamond Specific Plan. Wastewater discharge factor used for the Diamond Specific Plan is 87.2 acres of mixed-used development at build-out at 2,300 gallons per day per acre (gpd/ac). Therefore, the Diamond Specific Plan would discharge 200,560 gpd of wastewater. Wastewater from the Diamond Specific Plan site would go into existing sanitary sewer infrastructure within Malaga Road and Diamond Drive. The portion of the Diamond Specific Plan south of Malaga Road will be serviced by a wastewater line within Diamond Drive which discharges to a pump station adjacent to Lakeshore Drive.

Per EVMWD, the Diamond Specific Plan is eligible for sewer service and EVMWD has adequate capacity to serve the projected increase in wastewater service due to implementation of the Diamond Specific Plan. Sewer-related infrastructure would be designed and installed in accordance with the requirements and specifications of the City, EVMWD, Riverside County Department of Health, and RWQCB. Therefore, impacts would be less than significant.

Solid Waste

Minor amounts of non-hazardous solid waste including wood and concrete would be generated in the short-term by construction of the Diamond Specific Plan. The California Integrated Waste Management Board (CIWMB) prepared a waste characterization study which quantified and characterized disposal and diversion rates from construction and demolition activities (CIWMB 2006). According to the study, approximately 74 percent of waste generated from new construction is able to be diverted. Therefore, on average, a significant portion of waste generated during construction of the Diamond Specific Plan could be diverted, thereby substantially reducing the total amount of waste that would be disposed of at the landfill during construction of the Diamond Specific Plan.

Table 4.14-5 demonstrates that the Diamond Specific Plan's combined annual solid waste generation would be 5,870 tons/year. If hotel rooms were increased to 300 and commercial square footage decreased to 797,000, as permitted in the Specific Plan, the total solid waste generation would be less at 5,739 tons/year.

Table 4.14-5. Estimated Diamond Specific Plan Solid Waste Generation

Land Use	Persons/ Square Footage	Generation Factor	Yearly Solid Waste Generated (tons/year)
Residential	1,620 persons	.0061tons/person/day[1]	3,607
Commercial	897,000 sf	0.0024 tons/sf/year[2]	2,153
Hotel	150 rooms	4 pounds/room/day[3]	110
Total			5,870

1. CR&R 2009 (Appendix I)
2. CIWMB estimated solid waste generation rates
3. CIWMB estimated solid waste generation rates

The Perris Transfer Station and MRF, has a capacity of 3,600 tpd. The Diamond Specific Plan is expected to generate 5,870 tons/per year or 16 tpd. The El Sobrante Landfill is currently permitted to receive 10,000 tpd, of which 4,000 tpd is reserved for refuse generated within Riverside County. This represents approximately a 0.4 percent of the daily capacity of the servicing landfill.

In addition, the Diamond Specific Plan would comply with all applicable federal, state, and local statutes and regulation related to solid waste, including the County's SRRE, HHWE, and City Ordinance 14.12 Construction and Demolition Waste Management of the Lake Elsinore Municipal Code regarding construction debris removal. However, these figures do not take into consideration diversion rates through recycling efforts for the City of Lake Elsinore of 50 percent. Considering this diversion rate, the Diamond Specific Plan would generate 8tpd or 2,935 tons/per year. Therefore, the El Sobrante Landfill, which is closest to the Diamond Specific Plan, has sufficient permitted capacity to accommodate the solid waste generated by the Diamond Specific Plan. Impacts would therefore be considered less than significant.

Gas Services

Natural gas would be provided to the Diamond Specific Plan by SCGC. Based on a system area average of 482 therms per year for multi-family residential, the Diamond Specific Plan is estimated to have a gas demand of 289,200 therms per year, as shown in Table 4.14-6. Due to the fact that construction for commercial and hotel developments varies so widely (e.g., a glass building vs. a heavily insulated building) and there is such a wide variation in types of materials, a typical demand figure is not available for this type of construction. Calculations would need to be made after the building has been designed. Considering the varying demands for commercial needs, estimated figures for commercial gas demand is not available at this time. Although, based on the 2008 Gas Report, a temperature-adjusted basis, core commercial market demand in 2007 totaled 82 Bcf, up about 2.7 Bcf, or 3.4 percent, from 2006. On average, the core commercial market demand is expected to decrease about 0.4 percent per year, over the next 23 years, to just below 75 Bcf in 2030. The decrease in gas usage is mainly the result of gas demand decreases expected from the impact of energy efficiency programs in this market.

Table 4.14-6. Estimated Gas Demand

Land Use	Dwelling Units	System Area Average (therms per year)	Yearly Gas Demand (therms)
Multi-Family Residential	600	482	289,200
Total	600		289,200

*Source: Southern California Gas Company

SCGC has infrastructure in the area, specifically, a 4-inch pipe located near the intersection of Lakeshore Drive, and Diamond Drive. According communication provided from SCGC, the Diamond Specific Plan would not require the construction of new natural gas facilities or expansion of existing facilities. Therefore, impacts related to the provision of gas service would be considered less than significant.

Electricity Services

Implementation of the proposed Diamond Specific Plan would result in an increase in demand for electrical power and service. As indicated in Table 4.14-7, Estimated Diamond Specific Plan Electricity Demand, development pursuant to the Specific Plan would result in an electricity demand of approximately 14,993.6 MWh/year of electricity, which is a net increase of approximately 10 percent over existing conditions.

Table 4.14-7. Estimated Diamond Specific Plan Electricity Demand

Land Use	Dwelling Unit/ Square Footage	Consumption Factor*	Electricity Demand (MWh/year)
Residential	600 du	5,626.5 kWh/du/year**	3,375.9
Commercial	897,000 sf	12.95kWh/sf/year	11,616.2
Hotel	150 rooms	9.95kWh/sf/year	1.49
Total			14,993.6

kWh = kilowatt-hour, sf = square feet, du = dwelling unit, MWh = Megawatt-hour

* Consumption factors obtained from South Coast Air Quality Management District CEQA Air Quality Handbook, April 1993, Table A9-11-A.

** Electricity consumptions rates available do not separate single-family and multi-family residential uses.

The anticipated service demands created by implementation of the proposed Diamond Specific Plan are within the service parameters of SCE current transmission and service infrastructure. SCE would update existing facilities or add new facilities in the Diamond Specific Plan area based upon specific requests for service from end users. Financial responsibility for any updates or additional facilities would be in accordance with SCE's rules and tariffs. All new developments that require new electricity lines to be installed would be required to pay applicable fees assessed by SCE to extend electricity lines to serve the specific Diamond Specific Plan site. SCE would not provide service to new developments if there were not adequate electricity supplies and infrastructure to maintain existing service levels and meet the anticipated electricity demands of the specific development requesting service.

In addition, all new construction in the State of California is subject to the energy conservation standards set forth in Title 24, Part 6, Article 2 of the California Administrative Code. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings. Therefore, impacts would be less than significant.

4.14.3 Cumulative Impacts

Water Supply

Cumulative water demand is addressed by EVMWD projections for water usage and supply in the WSA. These projections take into account population growth and changing trends in increased development. The Elsinore Division is rapidly growing with population forecasted to increase by approximately 74 percent between 2005 and 2030. According to the WSA, EVMWD anticipates to use 34,400 acre-feet annually by the year 2030. In addition, the WSA projects 43,800 acre-feet per year of water supply would be available in 2030, with additional water supply sources. Water purveyors cannot approve projects without demonstrating adequate water supplies, pursuant to SB 221. As with the Diamond Specific Plan, proof of adequate project-specific water supply would be required for other development projects to ensure adequate supplies are available to serve projects. Therefore, implementation of the Diamond Specific Plan would result in a less than significant cumulative impact with regard to water supply.

Water Infrastructure

As discussed above, water service for the Diamond Specific Plan would be provided by existing infrastructure. There are no cumulative projects with the potential to use the same water infrastructure as the Diamond Specific Plan. Each project would be reviewed by the City engineer to confirm adequate infrastructure is available to serve the projects. Therefore, cumulative impacts would be less than significant with regards to water infrastructure.

Wastewater

As previously discussed, wastewater treatment at the Regional WRF is currently 5.65 mgd. Future expansion to 32 mgd is possible on the plant's existing site. According to the 2008 Wastewater Master Plan, wastewater volumes treated at the district's reclamation facility are expected to increase. Future wastewater volumes are expected to be 16.7 mgd in 2030 based on currently anticipated growth. As current facility capacity is only 8 mgd, EVMWD would begin planning for expansion of the Regional WRF when the average flow reaches 6 mgd to meet the additional flows. As stated previously, future expansion to 32 mgd is possible on the plant's existing site.

The EVMWD has a master plan to meet long-term wastewater treatment demands. Cumulative demands are identified in the EVMWD Wastewater Master Plan prepared by Kennedy-Jenks Consultants and improvements detailed in the district's capital improvement program. Therefore, the WRF would have adequate capacity to accommodate the wastewater treatment demand generated by the project in addition to cumulative development. Implementation of the Diamond Specific Plan would result in a less than significant cumulative impact to wastewater treatment facilities.

Wastewater Infrastructure

As discussed above, wastewater service for the Diamond Specific Plan would be provided by existing infrastructure. There are no cumulative projects with the potential to use the same wastewater infrastructure as the Diamond Specific Plan. Each project would be reviewed by the City engineer to confirm adequate infrastructure is available to serve the projects. Therefore, cumulative impacts would be less than significant with regards to wastewater infrastructure.

Solid Waste

The addition of solid waste from the Diamond Specific Plan in conjunction with the solid waste generated from cumulative projects would result in an increase in demand for capacity at the El Sobrante Landfill, but will also be distributed to other area landfills, including Lamb Canyon, and Badlands. According to Table 4.14-8, approximately 12,615.15 tons of solid waste per year or 34.56 tpd would be generated from all of the cumulative projects identified in Table 3.5-1 at build out.

Table 4.14-8. Estimated Cumulative Solid Waste Generation

Land Use	Dwelling Units/ Square Footage (sf)	Generation Factor* (tons/sf/year)	Yearly Solid Waste Generated (tons/year)
Residential – Single Family	12,238 du	0.41	5,017.58
Residential- Multi Family	3,875 du	0.41	1,588.75
Commercial	2,503,676 sf	0.0024	6,008.82
Total			12,615.15

*Source: Riverside County, RCIP Draft General Plan EIR, Section 4.15 Public Services. August 2002

As discussed above, the Lamb Canyon landfill, Badlands Landfill and El Sobrante Landfill would serve the Diamond Specific Plan and cumulative projects. Given that area solid waste will be distributed throughout three area landfills, all of which have remaining capacity, the cumulative effects of the Diamond Specific Plan would be considered less than significant. Additionally, fees for disposal would be put towards the development of new facilities.

Gas Service

Cumulative natural gas demand is addressed in the 2008 California Gas Report, which identifies policies and rules to ensure reliable, long-term supplies of natural gas to California. The report covers a 20-year natural gas demand forecast period from 2007-2030. Demand for natural gas is projected to grow at an annual average rate of 0.02 percent over all market sectors. Residential meters are estimated to increase an average annual rate of 1.38 percent, with commercial market demand expected to decrease by 0.4 percent per year to just below 75 Bcf in 2030, and industrial sector and electric generation making up

the rest of the gas demand. Future demand for Southern California residential market is projected to be 654 with a capacity of 2,709 MMcf/day in 2030. Considering natural gas demand is expected to decrease over the next 20 years, gas service would be sufficient to meet the cumulative project demand. Therefore, implementation of the Diamond Specific Plan would result in a less than significant cumulative impact with regard to natural gas service.

Electricity Service

According to communication provided by SCE (Appendix I), SCE did not identify any conflicts with their ability to meet the needs of the Diamond Specific Plan and other planned projects in the project area. Therefore, it is expected that the electrical loads of the Diamond Specific Plan and related projects are within the parameters of projected load growth, which SCE is planning to meet in the area. As such, cumulative electricity supplies and distribution infrastructure impacts would be less than significant. It is not anticipated that the cumulative projects would increase the demand for electricity supply and infrastructure that exceed the capacity of SCE.

4.14.4 Environmental Mitigation Measures

No significant impacts to water supply, wastewater services, solid waste services, natural gas or electricity services are anticipated; therefore, no mitigation measures would be required.

4.14.5 Conclusion

Impacts to water supply, sewer services, solid waste services, and natural gas services, and electrical services would be less than significant.

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5.0 ALTERNATIVES

5.1 INTRODUCTION

The identification and analysis of alternatives is a fundamental concept under California Environmental Quality Act (CEQA). This is evident in that the role of alternatives in an Environmental Impact Report (EIR) is set forth clearly and forthrightly within the CEQA statutes. Specifically, CEQA §21002.1(a) states:

> *"The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."*

The *CEQA Guidelines* require an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (*CEQA Guidelines* §15126.6(a)). The *CEQA Guidelines* direct that selection of alternatives focus on those alternatives capable of eliminating any significant environmental effects of the project or of reducing them to a less-than significant level, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly. In cases where a project is not expected to result in significant impacts after implementation of recommended mitigation, review of project alternatives is still appropriate.

The range of alternatives required within an EIR is governed by the "rule of reason" which requires an EIR to include only those alternatives necessary to permit a reasoned choice. The discussion of alternatives need not be exhaustive. Furthermore, an EIR need not consider an alternative whose implementation is remote and speculative or whose effects cannot be reasonably ascertained.

Alternatives that were considered but were rejected as infeasible during the scoping process should be identified along with a reasonably detailed discussion of the reasons and facts supporting the conclusion that such alternatives were infeasible.

Based on the alternatives analysis, an environmentally superior alternative is designated among the alternatives. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (*CEQA Guidelines* §15126.6(e)(2)).

5.2 CRITERIA FOR ALTERNATIVES ANALYSIS

As stated above, pursuant to CEQA, one of the criteria for defining project alternatives is the potential to attain the project objectives. Established objectives of the project applicant for the proposed project include:

1. Set forth a comprehensive development plan that implements the applicable portions of the City of Lake Elsinore 2009 General Plan Update and achieves the City's development goals[1] for the Ballpark District.
2. Stimulate private sector investment in the project by implementing a project that is fiscally sound and capable of financing the construction and maintenance of necessary infrastructure improvements.
3. Maximize the advantages of the site's location in terms of visibility and proximity to the I-15 freeway.
4. Improve the housing stock by providing a substantial residential component with a variety of residential product types and densities that are compatible with the entertainment and activity function of the project area.
5. Facilitate economic vitality within the City and provide additional opportunities for housing, employment, and commercial development consistent with Redevelopment Project Area objectives.
6. Increase revenues to the City by providing for a variety of commercial and retail activities with the potential to generate substantial sales- and property-tax revenue.
7. Provide for connectivity within the Plan within and between use areas by incorporating gathering places, strong pedestrian linkages, passive areas, and linkages to surrounding citywide trails and open space.
8. Plan for phased development and supporting infrastructure improvements consistent with market forces and sufficiently sized to sustain the land use plan in terms of adequate water supply, sewer and storm water collection systems, and transportation system improvements.
9. Expand the City's shopping, entertainment and hospitality opportunities for City residents and visitors and maintain a sustainable balance of residential and nonresidential uses in a mixed-use format that includes entertainment, retail shopping, restaurants and residential units.
10. Create an aesthetically pleasing and distinct development identity reflective of the unique character of the Ballpark District through establishment of design criteria for architecture, landscaping, hardscape, street and pedestrian improvements, signage, entry monumentation, and other design features.
11. Incorporate a public space that has a direct relationship to the lake.

10-Acre General Plan Area Objectives

- Prevent the formation of a non-contiguous portion of the ELSP.

[1] **Goal 1.** The primary goal of the Ballpark District is to redevelop into a vibrant "Dream Extreme" mixed-use entertainment, commercial, and residential district by capitalizing upon the opportunity associated with Diamond Stadium.
Goal 2. Create a contemporary theme within the Ballpark District, by incorporating design elements that create a progressive entertainment image.
Goal 3. Improve the near-by street system for the Diamond Drive and Railroad Canyon Road interchange improvement, especially the intersection of Auto Center Drive and Diamond Drive, Railroad Canyon Road, Grape Street, and southbound on-ramp to I-15.
Goal 4. Promote the stadium, "Dream Extreme" sports activities, and other recreational opportunities in the Ballpark District and provide linkages to the Lake and other park and recreation amenities. General Plan Update (2009)

5.3 EVALUATION OF ALTERNATIVES

5.3.1 Alternative 1: No Project/No Development Alternative

The No Project/No Development Alternative proposes to leave the Diamond Specific Plan area and 10-acre General Plan area in its present condition, without project development or new construction. Existing conditions for each environmental issue, as described in Sections 3 and 4 of the Draft EIR, would remain. The current General Plan (1990) land use designation and zoning designation for the Diamond Specific Plan area allows for commercial development. In addition, the Diamond Stadium and commercial uses in the northern portion of the site are already developed. These uses would continue.

Environmental Impact of No Project/No Development Alternative

Aesthetics: Since the No Project/No Development Alternative would not modify the existing project site, or add construction to the project site, no changes to the visual character of the site would occur. Therefore, no aesthetic impacts would occur. It is important to note that vacant undeveloped property is not necessarily more aesthetically pleasing than the proposed project. However, because no change in visual quality would occur under this alternative, there would be no impact. Compared to the proposed project, which identified a less than significant impact, this alternative would have fewer visual impacts.

Air Quality: Under the No Project/No Development Alternative, there would be no air emissions due to project construction or operation, and no project- or cumulative-level air quality impact would occur. Therefore, no impact to air quality is identified under this alternative. The proposed project identified significant and unmitigated impacts to air quality. Therefore, this alternative would result in fewer air quality emissions compared to the proposed project.

Biological Resources: Under the No Project/No Development Alternative, biological resource conditions on the site would largely remain as described under Section 4.3 of the Draft EIR. Compared to the proposed project, this alternative would decrease the level of biological resources impacts, and would not require mitigation.

Cultural Resources: Since there would be no development under the No Project/No Development Alternative, there would not be any soil disturbance or potential impact to cultural or paleontological resources. Therefore, no impact is identified for this alternative for cultural and paleontological resources. Compared to the proposed project, this alternative would reduce any impacts to cultural or paleontological resources and would not require mitigation.

Geology and Soils: Since there would be no development at the project site under the No Project/No Development Alternative, there would be no population exposed to additional seismic risk. In addition, no grading would occur. Less than significant impacts were identified for the proposed project with incorporation of the standard geotechnical recommendations set forth in the Geotechnical Evaluation. Compared to the proposed project, this alternative would have less of an impact to geology and soils.

Hazards and Hazardous Materials: Since there would be no increase in population at the project site under the No Project/No Development Alternative, there would be no potential exposure to hazardous materials and/or sites. Therefore, no impact is identified for this alternative for hazards and hazardous materials. The proposed project identified less than significant impacts; therefore, development under this alternative would have a similar level of impact to hazards and hazardous material.

Hydrology/Water Quality: The No Project/No Development Alternative would not result in modifications to the existing drainage patterns or volume of storm water runoff, as the total impervious area on-site would remain unchanged from present conditions. In addition, implementation of the No Project/No Development Alternative would not result in modification to the existing treatment of stormwater runoff. Furthermore, no changes with regard to water quality would occur; therefore, no water quality impacts would occur. The proposed project identified less than significant hydrology and water quality impacts. Compared to the proposed project, this alternative would have less of a hydrology/water quality impact.

Land Use and Planning: The No Project/No Development Alternative would not result in the modification of any land use on the project site as the site would remain vacant. Similar to the proposed project, the No Project/No Development Alternative would not divide an established community. Also, the No Project/No Development Alternative would not conflict with any applicable land use plan with the exception of the City's General Plan Update (2009). The Diamond Specific Plan is proposed to meet the objectives of the Ballpark District within the General Plan Update. The No Project/No Development Alternative would not meet these goals and as a result would have greater impacts than the proposed project.

Noise: Since there would be no construction and no future project operations on the site, the No Project/No Development Alternative would not increase noise in the vicinity, and no significant noise impacts would occur. Therefore, no impact is identified for this alternative for noise. The proposed project had significant, but mitigable noise impacts. Compared to the proposed project, this alternative would reduce any potentially significant impacts to noise and eliminate the need to incorporate mitigation measures.

Population and Housing: Since there would be no development on the project site, the No Project/No Development Alternative would not result in an increase in housing or population. However, no housing will be provided to accommodate the predicted growth in the General Plan. The proposed project would have less than significant impacts to population and housing. Compared to the proposed project, this alternative would result in the same level of impact to population and housing.

Public Services: The No Project/No Development Alternative would not require increased public services to the site, since there would not be any new development that would require police, fire protection, school, or library services. Therefore, no impact to public services is identified for this alternative. The proposed project would have less than significant impacts. Compared to the proposed project, this alternative would have fewer impacts to public services.

Recreation: The No Project/No Development Alternative would not lead to an increase in population requiring the provision of additional recreational amenities. This alternative would not provide any recreational use. No impact is identified for this alternative. The proposed project identified less than significant impacts. Compared to the proposed project, this alternative would have fewer impacts to recreation.

Transportation and Traffic: Since there would be no new development under the No Project/No Development Alternative, no increase in vehicular trips due to project construction or project operation are identified for this alternative, and no impact is noted. Existing intersection peak hour levels of service (LOS) are summarized in Table 4.13-2. As shown, all analyzed intersections operate at acceptable LOS D or better under existing conditions with the exception of the intersections at Mission Trail at Campbell St and Mission Trail at Lemon St. These intersections operate at a LOS F during the PM peak hour. The proposed project identified a significant yet mitigable impact to transportation and traffic. Compared to the proposed project, this alternative would result in fewer intersections that exceed acceptable LOS.

Utilities: The No Project/No Development Alternative would not require increased utilities or to the site, since there would not be any new development that would require water, wastewater, or landfill/recycling services. The proposed project had less than significant impacts for this issue area. Compared to the proposed project, this alternative would have less impact to utility services.

Conclusion: Implementation of the No Project/No Development Alternative would result in reduced impacts for all environmental issues areas except population and housing and land use as compared to the proposed project.

Comparison of the No Project/No Development Alternative to Project Objectives

The No Project/No Development Alternative would not meet any of the objectives of the project applicant. Specifically, this alternative would not create a balanced community with integrated land uses within the City of Lake Elsinore, nor would it offer a mix of residential, commercial, and recreational land uses located next to Lake Elsinore (Objectives 1, 4, 5, 6, 7, 9, 10, and 11). Furthermore, this alternative would not create job or housing opportunities (Objectives 1, 2, 4, 5, 9). Since this alternative does not meet any of the basic objectives of the proposed project, the No Project/No Development Alternative is rejected.

5.3.2 Alternative 2: Existing General Plan Designation and Zoning Alternative

Under the Existing General Plan Designation and Zoning Alternative, the Diamond Specific Plan and 10-acre General Plan area would retain its current General Plan land use designations of C-1 (Neighborhood Commercial) and East Lake Specific Plan. The General Plan Update (2009) contains similar land uses for the project area. The ELSP Amendment 9 Project Area is zoned as C-1(Neighborhood Commercial), General Commercial (GC), Open Space (OS), Special Alternative Use (SAU), and Roads. The Special Alternative Use Area zoning designation serves as the location of the Diamond stadium and other related commercial uses in accordance with the ELSP. There are no residential uses allowed within ELSP Amendment 9 Project Area as the area designated as SAU is already developed with the Diamond Stadium. The "C-1" District is intended to provide locations for general retail and office uses. The GC zoning designation, per the ELSP, is intended to provide for a wide range of retail and service activities including department stores, restaurants, hotels, theatres, office, and specialized services. The OS system primarily consists of two broad types of open space, including Developed OS and Natural OS. The stadium was constructed in 1994 and lies at the northwest corner of Malaga Road and Diamond Drive.

Tables 5.3-1, 5.3-2, and 5.3-3 illustrate the difference in land use designations between this alternative and the proposed project.

Table 5.3-1. Existing Land Use Designations (1990 General Plan)

Land Use	Acreage	% of the Diamond Site
Diamond Specific Plan		
Neighborhood Commercial	11	12.6%
East Lake Specific Plan	76.2	87.4%
Total	87.2	100%
10-Acre General Plan Area		
East Lake Specific Plan[1]	10.0	0%
Total	10.0	0%

1. The land use designation for the 10-Acre General Plan Area would be Commercial Mixed Use in the General Plan Update (2009)

Table 5.3-2. Existing Zoning

Zoning	Acreage	% of the Diamond Site
Diamond Specific Plan		
C-1(Neighborhood Commercial)	11	12.6%
General Commercial (GC)	39.7	45.5
Open Space (OS)	9.5	10.9
Special Alternative Use (SAU)	19	21.8
Roads	8	9.17
Total	87.2	100%
10-Acre General Plan Area		
General Commercial	10.0	0%
Total	10.0	0%

Table 5.3-3. Proposed Project Land Use Designation and Zoning

Land Use Designation	Acres	Target Yield(1)	
		Maximum Floor Area(2) (SF)/ Maximum Hotel Room(3)	Units
Diamond Specific Plan			
Mixed Use (Open Space)(4)	81.6 (6.8)	897,000 SF 150 Rooms	600
Roads	5.6		
10-Acre General Plan Area Designation			
General Commercial/Commercial Mixed Use(5)	10.0		0

Source: RGP Planning & Development Services 2009 (a)

[1] Target Yields are based on preliminary land use Programming and subject to the Plan Flexibility provisions outlined in Section 3.3.1 of the Specific Plan

[2] Maximum floor area represents new development. However, this total does not include residential floor area, the hotel floor area or the existing floor area within the Diamond Stadium (50,000 SF±), which are in addition to the Mixed Use total shown.

[2] The number of rooms will be based upon market conditions and may be increased to 300 rooms. Should the number of hotel rooms increase, the permitted square footage of mixed-use development would be reduced by 100,000 SF to 797,000 SF

[4]The Open Space acreage listed herein will be accommodated in the Mixed-Use Land Use Category

[5] The 10-acre General Plan Area would retain the existing General Plan land use designation based on the approved General Plan upon project adoption. Under the 1990 General Plan, this area would be designated General Commercial. Under the General Plan Update (2009), this area would be designated Commercial Mixed Use.

Environmental Impact of Existing General Plan Designation and Zoning Alternative

Aesthetics: Buildout of the Existing General Plan Designation and Zoning Alternative would result in the entire project site being developed. This alternative would provide slightly more acres of open space than compared to the proposed project. However, due to the overall intensity of development associated with the Existing General Plan Designation and Zoning Alternative and the proposed Diamond Specific Plan, the

level of impact with regards to aesthetics would be similar. Both alternatives would result in a less than significant impact.

Air Quality/Global Climate Change: Implementation of the Existing General Plan Designation and Zoning Alternative would result in a similar level of construction-related air emissions, since project grading and associated emissions from construction equipment would still occur. Emissions from project operation would be higher under this alternative, since this alternative is modeled to generate a greater number of vehicle trips due to the increased amount of general commercial uses proposed versus mixed use. Therefore, this alternative would still result in significant impacts to reactive organic gases (ROG), nitrogen oxides (NO_x), and fine particulates (PM_{10}) during the project's construction phase and ROG, NO_x, and carbon monoxide (CO) during the project's operational phase. This alternative would also contribute to cumulative greenhouse gas emissions similar to the proposed project. Similar to the proposed project, mitigation measures comparable to those identified for the proposed project would be required, but would not reduce construction-, operational-, or cumulative-level impacts to below a level of significance. Impacts would remain significant and unmitigated. The proposed project identified significant and unmitigated impacts to air quality. Because operational emissions would be increased, this alternative would have a greater impact to air quality than the proposed project.

Biological Resources: Similar to the proposed project, implementation of the Existing General Plan Designation and Zoning Alternative would result in comparable impacts to biological resources because the entire project site would be identified for development. Similar to the proposed project, mitigation measures comparable to those identified for the proposed project would be required to reduce potential impacts to biological resources to less than significant levels. The proposed project identified significant and mitigable impacts. Therefore, compared to the proposed project, this alternative would have a similar level of impact to biological resources.

Cultural Resources: Similar to the proposed project, implementation of the Existing General Plan Designation and Zoning Alternative would likely result in similar impacts to cultural resources because the entire project site would be identified for development. In addition, this alternative would incorporate mitigation measures to reduce potential impacts to cultural resources to less than significant levels. The proposed project identified significant but mitigable impacts to cultural resources. Therefore, compared to the proposed project, this alternative would have a similar level of impact to cultural resources.

Geology and Soils: Similar to the proposed project, development under the Existing General Plan Designation and Zoning Alternative would result in less than significant impacts to geology and soils as development would need to comply with the same applicable federal and state regulations as the proposed project. Under this alternative, the level of significance would be the same as the proposed project at less than significant.

Hazards and Hazardous Materials: Similar to the proposed project, development of the Existing General Plan Designation and Zoning Alternative would not be of a land use or type that is likely to generate hazardous materials. A small quantity of materials typically utilized during construction would be present in similar quantities to those generated by the proposed project. The proposed project site exhibited no substantial surficial staining, or other evidence of onsite hazardous materials/waste or petroleum contamination. The site did not show evidence of underground storage tanks (USTs) or aboveground storage tanks (ASTs) or mining activity. The site did not display any active surface evidence of water wells or private sewage disposal systems. The proposed project identified less than significant impacts; therefore, development under this alternative would have a similar level of impact to hazards and hazardous material.

Hydrology/Water Quality: Implementation of the Existing General Plan Designation and Zoning Alternative would result in development of the entire project site. Therefore, impacts to hydrology and water quality would be similar to the proposed project. Development under this alternative would be required to comply with the same best management practices (BMPS) and project design features that the proposed project is subject to, and compliance with those BMPs and design features would reduce impacts to below a level of significance. The proposed project identifies less than significant impacts. Therefore, compared to the proposed project, this alternative would result in a similar level of impact to hydrology and water quality.

Land Use and Planning: Implementation of the Existing General Plan Designation and Zoning Alternative would not result in a significant impact to land use and planning. Similar to the proposed project, this alternative would not divide an established community. To develop the project site under this alternative, a zone change would not be required. However, this alternative would not meet the goals of the City's Ballpark District, namely it would not redevelop the area in a mixed use entertainment, commercial, and residential district, nor would it allow a mix of uses to be developed. Therefore, this alternative would not be consistent with the goals of the City's General Plan Update (2009). The proposed project identified less than significant impacts; therefore, development under this alternative would have a greater level of impact to land use and planning.

Noise: Implementation of the Existing General Plan Designation and Zoning Alternative would result in a similar level of noise impact related to construction as identified for the proposed project, since the majority of the project site would still be identified for development. However, this alternative is expected to generate a higher level of noise associated with operational vehicular trips, since this alternative is projected to generate more traffic than projected for the proposed project. However, this alternative would not result in greater on-site noise impacts as there is no existing residential zoning within the project site. Similar to the proposed project, this alternative would incorporate mitigation measures to reduce impacts to less than significant levels. Because of the increased noise levels, this alternative would result in a greater level of noise impacts than the proposed project.

Population and Housing: Implementation of the Existing General Plan Designation and Zoning Alternative would not result in residential development. The proposed project would result in an addition of 600 dwelling units which would constitute 3.9 percent of the forecast for the City, as prepared by the Southern California Association of Governments (SCAG). This alternative would not exceed regional population growth estimates but would also not provide housing to accommodate predicted growth in the General Plan. The proposed project would result in a less than significant impact. Compared to the proposed project, this alternative would result in the same level of impact to population and housing.

Public Services: The Existing General Plan Designation and Zoning Alternative proposes no residential development but allows more commercial uses than the proposed project. Impacts to public services under the proposed project were concluded to be less than significant. The Existing General Plan Designation and Zoning Alternative would reduce demand on local schools and libraries due to fewer residences. However, an increase in commercial uses may require additional fire and police service. Compared to the proposed project, this alternative would result in the same level of impact to public services.

Recreation: Implementation of the Existing General Plan Designation and Zoning Alternative would require 7.5 acres of open space. However, the existing zoning would not include residential zoning; therefore, no parkland is required per the Quimby Act as. Impacts to parks and recreation would be less than significant. The proposed project was identified to have less than significant impacts to recreation

due to in-lieu park fees. Compared to the proposed project, this alternative would result in a similar level of impact to recreation.

Transportation and Traffic: Implementation of the Existing General Plan Designation and Zoning Alternative would generate greater average daily trips as opposed to the proposed project which would generate fewer trips due to mixed use development designation. The proposed project identified significant but mitigable impacts to transportation and traffic. Compared to the proposed project, this alternative would have a greater impact to overall traffic. However, mitigation measures similar to those identified for the proposed project would be incorporated to reduce impacts to less than significant levels. Therefore, compared to the proposed project, this alternative would also result in significant but mitigable impacts to transportation and traffic.

Utilities: The Existing General Plan Designation and Zoning Alternative proposes no residential development but includes more commercial uses than the proposed project. Impacts to utilities under the proposed project were concluded to be less than significant. The level of intensity of build-out would be approximately the same under this alternative as with the proposed project even if the mix of uses would be slightly different. It is anticipated that this alternative would have similar impacts to water, wastewater, gas, electricity, and landfill services due to the increase in commercial uses.

Conclusion: Implementation of the Existing General Plan Designation and Zoning Alternative would increase impacts to air quality, land use, noise, and transportation and traffic; and result in similar impacts for aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, population and housing, public services recreation, and utilities as compared to the proposed project.

Comparison of the Existing General Plan Designation and Zoning Alternative to Project Objectives

The Existing General Plan Designation and Zoning Alternative would not meet all of the objectives of the project applicant. Specifically, this alternative would result in no residential development and would not meet the project's primary objective of fulfilling the City's development goals for the Ballpark district (Objectives 1, 4, 5, and 9). The development goals for the Ballpark district include creating a vibrant mixed use community.

5.3.3 Alternative 3: Reduced Density Alternative

The Reduced Density Alternative was developed to reduce impacts associated with the project, with the specific goal of bringing the air quality impact to below a level of significance. Trip generation would need to be reduced by approximately 65 percent in order to reduce the air emissions to less than significant levels. With that parameter, the reduced density alternative would develop a combination of uses including 209 condos/townhouses, 148,172 sf of office use, 164,559 sf of commercial development, and 52 hotel rooms on the project site. The Diamond Stadium would continue to exist in its current location.

Environmental Impact of Reduced Density

Aesthetics: Implementation of the Reduced Density Alternative would reduce the amount of development that could be developed on the project site but would not reduce the acreage of impact. However, the overall intensity of development would be decreased, which could potentially result in reduced building heights. Therefore, similar to the proposed project, development under this alternative would also result in less than significant impacts to aesthetics but overall impacts to aesthetics may be less.

Air Quality/Global Climate Change: Implementation of the Reduced Density Alternative would not result in a reduced level of construction-related air emissions, since project grading would occur over the same acreage as under the proposed project. Therefore the construction emission would be equal. However, emissions from project operation under this alternative would be reduced, as this alternative reduces trip generation by approximately 65 percent. Therefore, the significant impacts to ROG, NO_x, and CO during the project's operational phase would be reduced to less than significant levels under this alternative. The proposed project identified significant and unmitigated impacts to air quality. Similarly, this alternative's contribution to greenhouse gas emissions would be less than the proposed project because of the reduction in ADT. Compared to the proposed project, this alternative would reduce operational related impacts to air quality to less than significant levels.

Biological Resources: Implementation of the Reduced Density Alternative would not reduce the development footprint of the project site and would therefore result in the in the same level of biological impacts as the proposed project. Any impacts resulting from implementation of this alternative would be mitigated with incorporation of measures similar to those identified for the proposed project. Similar to the proposed project, this alternative would have significant but mitigable impacts to biological resources.

Cultural Resources: Implementation of the Reduced Density Alternative would not reduce the development footprint of the project site and would therefore result in the in the same level of cultural resource impacts as the proposed project. Any impacts resulting from implementation of this alternative would be mitigated with incorporation of measures similar to those identified for the proposed project. Similar to the proposed project, this alternative would have significant, but mitigable impacts to cultural resources.

Geology and Soils: Similar to the proposed project, development under the Reduced Density Alternative would result in less than significant impacts to geology and soils as development would need to comply with the same applicable federal, state, and local regulations as the proposed project. Under this alternative, the level of significance would be the same as the proposed project at less than significant.

Hazards and Hazardous Materials: Similar to the proposed project, development of the Reduced Density Alternative would not be of a land use or type that is likely to generate hazardous materials. A small quantity of materials typically utilized during construction would be present in similar quantities to those generated by the proposed project. The proposed project site exhibited no substantial surficial staining, or other evidence of onsite hazardous materials/waste or petroleum contamination. The site did not show evidence of USTs or ASTs or mining activity. The site did not display any active surface evidence of water wells or private sewage disposal systems. The proposed project identified less than significant impacts; therefore, development under this alternative would have a similar level of impact to hazards and hazardous material

Hydrology/Water Quality: Implementation of the Reduced Density Alternative would result in a similar level of impact to hydrology and water quality as compared to the proposed project because the amount of impervious services would remain the same. Impacts to water quality would also be expected to be similar under this alternative as with the proposed project. In addition, development would be required to comply with the same conditions that the proposed project is subject to, and compliance with those conditions identified for the proposed project would reduce impacts to below a level of significance. Compared to the proposed project, this alternative would result in a similar level of impact to hydrology and water quality.

Land Use and Planning: Implementation of the Reduced Density Alternative would require a General Plan Amendment and approval of the ELSP Amendment 9 to remove 86.4 acres from the ELSP

(including a portion of the Diamond Specific Plan and the 10-acre General Plan area). Similar to the proposed project, this approval would eliminate any inconsistency with the General Plan and would reduce the impact to below a level of significance. In addition, similar to the proposed project, this alternative would not divide an established community. The proposed project identified less than significant impacts; therefore, development under this alternative would have a similar level of impact to land use and planning.

Noise: Implementation of the Reduced Density Alternative would result in a similar level of noise impact related to construction as identified for the proposed project, since less development would be constructed. Additionally, this alternative would generate a lower level of noise associated with vehicular trips, since this alternative could decrease traffic by approximately 65 percent. The proposed project identifies significant, but mitigable impacts to noise. While noise impacts are projected to be less under this alternative, any impacts will be mitigated through incorporation of measures similar to those identified for the proposed project. Similar to the proposed project, this alternative would result in significant, but mitigable noise impacts.

Population and Housing: Implementation of the Reduced Density Alternative would result in the development of 209 dwelling units and generate approximately 565 residents. No residential units were included in SCAG's growth forecast for this area. Although the proposed project would result in the addition of 600 dwelling units (and 1,620 residents), this increase was not determined to be a substantial increase and would not result in a significant impact. Similarly, the development of 209 dwelling units above SCAG's growth projections would not be considered substantial. Compared to the proposed project, this alternative would result in fewer impacts to population and housing but both alternatives would be less than significant.

Public Services: The Reduced Density Alternative would result in an increased demand for public services and similar to the proposed project, impacts to public services would be reduced through payment of appropriate development impact fees. This alternative would result in lower demand for fire and police protection since it proposes 65 percent fewer residential dwelling units than the proposed project. The decrease in residential uses proposed under this alternative would also decrease the demand for local schools and libraries. Impacts to public services under the proposed project were also concluded to be less than significant; however, compared to the proposed project which proposed 600 dwelling units; this alternative would result in less demand on public service providers and, therefore, would have less of an impact to public services when compared to the proposed project.

Recreation: Implementation of the Reduced Density Alternative would not meet the acres of parkland required by the Quimby Act. The lower density associated with this alternative could result in more surface parking and lower story buildings distributed throughout the site, which would develop most of the project site and not leave space for the creation of parks. Similar to the proposed project, impacts to parks and recreation can be mitigated through inclusion of recreation areas and/or payment of appropriate Quimby Act fees. Therefore, this alternative would have a similar level of impact as the proposed project and would be less than significant.

Transportation and Traffic: Implementation of the Reduced Density Alternative would generate approximately 8,990 ADT, which represents a 65 percent reduction in trips compared to the maximum number identified for the proposed project. Compared to the proposed project, this alternative would have less of an impact to overall traffic. As implementation of this alternative would contribute additional trips to already impacted project area roadways, this alternative would also be required to incorporate mitigation measures similar to those identified for the proposed project to reduce impacts to less than

significant levels. Therefore, similar to the proposed project, this alternative would result in a significant but mitigable impact to transportation and traffic.

Utilities: The Reduced Density Alternative would result in lower demand for water, wastewater, gas, and electric services since it proposes 65 percent fewer homes than the proposed project. The decrease in residential uses proposed under this alternative would also decrease the demand for landfill capacity. Similar to the proposed project, impacts to utilities under this alternative would be less than significant; however, compared to the proposed project which proposed 600 dwelling units, this alternative would have less of an impact on utilities and utility providers.

Conclusion: Implementation of the Reduced Density would reduce impacts to air quality, noise, population and housing, public services, recreation, transportation and traffic, and utilities. Impacts to aesthetics, biological resources, cultural resources, geology and soils, hazardous materials, hydrology and water quality, and land use and planning would be the same under this alternative as with the development of the proposed project.

Comparison of the Reduced Density Alternative to Project Objectives

The Reduced Density Alternative would some of the objectives of the project; however, it would not maximize many of the objectives to the extent that the project would. For example the proposed project, with its additional development, would maximize the facilitation of economic viability within the City and provide additional housing within the City. This alternative would still meet this objective, but to a lesser degree. Similarly, this alternative would increase revenues by providing commercial and retail activities to generate sales and property tax revenues; however, compared to the project, this alternative would not maximize those revenues. In addition, the Reduced Density Alternative would not create a vibrant mixed use development consistent with the City's development goals for the Ballpark District (Objective 1). The reduced size of development would reduce the financial feasibility of creating true mixed uses. Instead, this alternative would likely develop similar to traditional disjointed use communities with a distinct and separate shopping center and residential area. Also, due to the limited development size, the opportunity to include entertainment functions within the plan would be reduced.

The limited size of the development under this alternative (65% reduction from the proposed plan) may also make it infeasible to fund infrastructure requirements necessary to develop the rest of the site. Without a critical mass of development to fund water, sewer, road, and other property improvements, Objective 2 would not be met. Due to the reduced density and limited scale and inability to provide a true mixed use environment, this alternative may be limited in providing a variety of residential product types that are compatible with the entertainment and activity function of the area (Objective 4). Because of the reduced density, this alternative would not be able to incorporate all of the public places and pedestrian friendly facilities due to the dispersed nature of uses that would be expected under reduced density (Objective 7). Finally, due to the reduced commercial component and greatly reduced hotel size, this alternative would not significantly expand the City's shopping entertainment and hospitality opportunities for residents and visitors (Objective 9).

5.3.4 Alternative 4: Reduced Density/Reduced Acreage Alternative

The Reduced Density/Reduced Acreage Alternative was developed to reduce impacts associated for the project, with the specific goal of bringing the air quality impact to below a level of significance. Trip generation would need to be reduced by approximately 65 percent in order to reduce the air emissions to less than significant levels. With that parameter, the reduced density alternative would develop a

combination of uses including 209 condos/townhouses, 148,172 sf of office use, 164,559 sf of shopping development, and 52 hotel rooms on the project site. To further reduce impacts to issue areas such as biological resources and cultural resources, this alternative reduces the acreage within Planning Area 2 by a minimum of 8.1 acres to avoid impacts to smooth tarplant, little mousetail, and sensitive cultural resources associated with CA-RIV-4042 (a significant archaeological site). These acres would be put into open space.

Environmental Impact of Reduced Density/Reduced Acreage Alternative

Aesthetics: Implementation of the Reduced Density/Reduced Acreage Alternative would reduce the amount of residential units that could be developed on the project site. The project would include additional open space area within Planning Area 2 which would reduce impacts to the Lake shoreline. With the reduction in density, acreage and grading, this alternative would reduce impacts to aesthetics. Similar to the proposed project, development under this alternative would also result in less than significant impacts to aesthetics.

Air Quality/Global Climate Change: Implementation of the Reduced Density/Reduced Acreage Alternative would result in a reduced level of construction-related air emissions, since project grading would occur over a smaller portion of the project site and the resultant construction emissions would be less. Emissions from project operation under this alternative would also be reduced, as this alternative reduces trip generation by approximately 65 percent. Therefore, the significant impacts to ROG, NO_x, and PM_{10} identified during the project's construction phase would be reduced and significant impacts to ROG, NO_x, and CO during the project's operational phase would be reduced to less than significant levels under this alternative. The proposed project identified significant and unmitigated impacts to air quality. Compared to the proposed project, this alternative would reduce operational impacts to air quality to less than significant levels.

Biological Resources: Implementation of the Reduced Density/Reduced Acreage Alternative would result in a reduced level of impact to smooth tarplant and little mousetail because development within Planning Area 2 would be reduced under this alternative, thus avoiding areas where tarplant and little mousetail were observed. Any other biological impacts resulting from implementation of this alternative would be mitigated with incorporation of measures similar to those identified for the proposed project. Similar to the proposed project, this alternative would have significant but mitigable impacts to biological resources. However, these impacts would be fewer than under the proposed project.

Cultural Resources: Impacts to cultural resources under the Reduced Density/Reduced Acreage Alternative because the majority of the area within Planning Area 2 that contains the cultural sensitive archaeological site would be avoided under this alternative. The potential for previously undiscovered cultural and paleontological resources would still be significant throughout the rest of the project site and would be mitigated with incorporation of measures similar to those identified for the proposed project. Similar to the proposed project, this alternative would have significant, but mitigable impacts to cultural resources. However, these impacts would be fewer than under the proposed project.

Geology and Soils: Similar to the proposed project, development under the Reduced Density/Reduced Acreage Alternative would result in less than significant impacts to geology and soils as development would need to comply with the same applicable federal and state regulations as the proposed project. Under this alternative, the level of significance would be the same as the proposed project at less than significant.

Hazards and Hazardous Materials: Similar to the proposed project, development of the Reduced Density/Reduced Acreage Alternative would not be of a land use or type that is likely to generate hazardous materials. A small quantity of materials typically utilized during construction would be present in similar quantities to those generated by the proposed project. The proposed project site exhibited no substantial surficial staining, or other evidence of onsite hazardous materials/waste or petroleum contamination. The site did not show evidence of USTs or ASTs or mining activity. The site did not display any active surface evidence of water wells or private sewage disposal systems. The proposed project identified less than significant impacts; therefore, development under this alternative would have a similar level of impact to hazards and hazardous material

Hydrology/Water Quality: Implementation of the Reduced Density/Reduced Acreage Alternative would result in a decreased impact to hydrology and water quality than with the development of the proposed project because it would support less impervious surfaces. Accordingly, there would be a decrease in surface runoff as opposed to the proposed project. Impacts to water quality would also be expected to decrease under this alternative since less of the project site would be exposed to development. In addition, development would be required to comply with the same conditions that the proposed project is subject to, and compliance with those conditions identified for the proposed project would reduce impacts to below a level of significance. Compared to the proposed project, this alternative would result in reduced impacts to hydrology and water quality.

Land Use and Planning: Implementation of the Reduced Density/Reduced Acreage Alternative would require a General Plan Amendment and approval of the ELSP Amendment 9 to remove 86.4 acres from the ELSP (including a portion of the Diamond Specific Plan and the 10-acre General Plan area). Similar to the proposed project, this approval would eliminate any inconsistency with the General Plan would reduce the impact to below a level of significance. The proposed project identified less than significant impacts; therefore, development under this alternative would have a similar level of impact to land use and planning.

Noise: Implementation of the Reduced Density/Reduced Acreage Alternative would result in a reduced level of noise impact related to construction as identified for the proposed project, since less construction would occur. Additionally, this alternative would generate a lower level of noise associated with vehicular trips, since this alternative could decrease traffic by approximately 65 percent. Moreover, site design under this alternative would include a buffer from the roadway to further reduce noise impacts from roadway traffic. The proposed project identifies significant, but mitigable impacts to noise. While noise impacts are projected to be less under this alternative, any impacts will be mitigated through incorporation of measures similar to those identified for the proposed project. Similar to the proposed project, this alternative would result in significant, but mitigable noise impacts.

Population and Housing: Implementation of the Reduced Density Alternative would result in the development of 209 dwelling units and approximately 565residents. No residential units were included in SCAG's growth forecast for this area. Although the proposed project would result in the addition of 600 dwelling units, this increase was not determined to be a substantial increase and would not result in a significant impact. Similarly, the development of 209 dwelling units above SCAG's growth projections would not be considered substantial. Compared to the proposed project, this alternative would result in fewer impacts to population and housing but both alternatives would be less than significant.

Public Services: The Reduced Density/Reduced Acreage Alternative would result in an increased demand for public services and similar to the proposed project, impacts to public services would be reduced through payment of appropriate development impact fees. This Alternative would result in lower demand for fire and police protection since it proposes 65 percent fewer residential dwelling units than the proposed project. The decrease in residential uses proposed under this alternative would also decrease the demand for local schools and libraries. Impacts to public services under the proposed project were also concluded to be less than significant; however, compared to the proposed project which proposed 600 dwelling units; this alternative would result in less demand on public service providers and therefore would have less of an impact to public services when compared to the proposed project.

Recreation: To reduce biological and cultural resource impacts associated with the proposed project, 8.1 acres within Planning Area 2 would be dedicated to open space under the Reduced Density/Reduced Acreage Alternative. Due to the reduction in density and acreage, no additional park space would be anticipated under this Alternative. Therefore, similar to the proposed project, payment of Quimby Act fees would reduce impacts to recreation to below a level of significance. Therefore, impacts to recreation would be similar under this alternative was with the proposed project.

Transportation and Traffic: Implementation of the Reduced Density/Reduced Acreage Alternative would generate approximately 8,990 ADT, which represents a 65 percent reduction in trips compared to the maximum number identified for the proposed project. Compared to the proposed project, this alternative would have less of an impact to overall traffic. As implementation of this alternative would contribute additional trips to already impacted project area roadways, this alternative would also be required to incorporate mitigation measures similar to those identified for the proposed project to reduce impacts to less than significant levels. Therefore, similar to the proposed project, this alternative would result in a significant but mitigable impact to transportation and traffic.

Utilities: The Reduced Density/Reduced Acreage Alternative would result in lower demand for water, wastewater, gas and electric services since it proposes 65 percent fewer homes than the proposed project. The decrease in residential uses proposed under this alternative would also decrease the demand for landfill capacity. Similar to the proposed project, impacts to utilities under this alternative would be less than significant; however, compared to the proposed project which proposed 600 dwelling units, this alternative would have less of an impact on utilities and utility providers.

Conclusion: Implementation of the Reduced Density/Reduced Acreage Alternative would decrease impacts to aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, noise, population and housing, public services, transportation and traffic, and utilities. Impacts to geology and soils, hazardous materials, land use and planning, and recreation would be the same under this alternative as with the development of the proposed project.

Comparison of the Reduced Density/Reduced Acreage Alternative to Project Objectives

The Reduced Density/Reduced Acreage Alternative would meet some of the objectives of the project; however, it would not maximize many of the objectives to the extent that the project would. For example the proposed project, with its additional development, would maximize the facilitation of economic viability and provide additional housing within the city. This alternative would still meet this objective, but to a lesser degree. Similarly, this alternative would increase revenues by providing commercial and retail activities to generate sales and property tax revenues; however, compared to the project, this alternative would not maximize those revenues. In addition, the Reduced Density/Reduced Acreage Alternative would not create a vibrant mixed use development consistent with the City's development goals for the Ballpark District (Objective 1). The City's General Plan's goals promote development of the

entire site to maximize mixed use opportunities near the Diamond Stadium. The reduced size of development would reduce the financial feasibility of creating true mixed uses. Instead, this alternative would likely develop similar to traditional disjointed use communities with a distinct and separate shopping center and residential area. Also due to the limited development size, the opportunity to include entertainment functions within the plan would be reduced. The limited size of the development under this Alternative (65% reduction in intensity from the proposed plan and 9% reduction in acreage) may also make it infeasible to fund infrastructure requirements necessary to develop the rest of the site. Without a critical mass of development to fund water, sewer, road, and other property improvements, Objective 2 would not be met. With the reduced development area, multiple stories and potential parking structures would be needed, resulting in higher infrastructure costs, but with less development to distribute the costs over. Due to the reduced density and limited scale and inability to provide a true mixed use environment, this Alternative may be limited in providing a variety of residential product types that are compatible with the entertainment and activity function of the area (Objective 4). Because of the reduced density, this alternative would not be able to incorporate all of the public places and pedestrian friendly facilities due to the dispersed nature of uses that would be expected under reduced density (Objective 7). Finally, due to the reduced commercial component and greatly reduced hotel size, this alternative would not significantly expand the City's shopping entertainment and hospitality opportunities for residents and visitors (Objective 9).

5.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 5.4-1 provides a qualitative comparison of the impacts for each alternative compared to the proposed project. As noted in Table 5.4-1, the No Project/No Development Alternative would be considered the environmentally superior alternative, since it would eliminate all of the significant and unmitigated impacts identified for the project. However, *CEQA Guidelines* Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." The Reduced Density/Reduced Acreage Alternative is identified as the environmentally superior alternative since it decreases significant unmitigated impacts to air quality and results in a less than significant or mitigated to below a level of significance impact to aesthetics, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, transportation and traffic, and utilities.

Table 5.4-1. Comparison of Alternative Impacts to Proposed Project

Environmental Issue Area	Proposed Project[1]	Alternative 1 No Project/ No Development[2]	Alternative 2 Existing General Plan Designation and Zoning[3]	Alternative 3 Reduced Density[4]	Alternative 4 Reduced Density/Reduced Acreage[5]
Aesthetics	Project Level: Less than significant Cumulative Level: Less than significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Similar impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact
Air Quality	Project Level: Significant and unmitigated Cumulative Level: Significant and unmitigated	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Significant and unmitigated Comparison to Project: Greater level of impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact
Biological Resources	Project Level: Mitigated to below a level of significance Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Similar impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Similar impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Less impact
Cultural Resources	Project Level: Mitigated to below a level of significance Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Similar impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Similar impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Less impact
Geology and Soils	Project Level: Less than Significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Similar impact	CEQA Significance: Less than significant Comparison to Project: Similar impact	CEQA Significance: Less than significant Comparison to Project: Similar impact

Environmental Issue Area	Proposed Project[1]	Alternative 1 No Project/ No Development[2]	Alternative 2 Existing General Plan Designation and Zoning[3]	Alternative 3 Reduced Density[4]	Alternative 4 Reduced Density/Reduced Acreage[5]
Hazards and Hazardous Materials	Project Level: Less than significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Similar impact	CEQA Significance: Less than significant Comparison to Project: Similar impact	CEQA Significance: Less than significant Comparison to Project: Similar impact
Hydrology/ Water Quality	Project level: Less than Significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than Significant Comparison to Project: Similar impact	CEQA Significance: Less than Significant Comparison to Project: Less impact	CEQA Significance: Less than Significant Comparison to Project: Less impact
Land Use and Planning	Project level: Less than Significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than Significant Comparison to Project: Similar impact	CEQA Significance: Less than Significant Comparison to Project: Similar impact	CEQA Significance: Less than Significant Comparison to Project: Similar impact
Noise	Project level: Mitigated to below a level of significance Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Greater impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Less impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Less impact
Population and Housing	Project level: Less than significant Cumulative Level: Less than significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than Significant Comparison to Project: Less impact	CEQA Significance: Less than Significant Comparison to Project: Less impact

Environmental Issue Area	Proposed Project[1]	Alternative 1 No Project/ No Development[2]	Alternative 2 Existing General Plan Designation and Zoning[3]	Alternative 3 Reduced Density[4]	Alternative 4 Reduced Density/Reduced Acreage[5]
Public Services	Project level: Less than Significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Similar Impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact
Recreation	Project level: Less than Significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Similar impact
Transportation and Traffic	Project level: Mitigated to below a level of significance Cumulative Level: Mitigated to below a level of significance	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Greater impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Less Impact	CEQA Significance: Mitigated to below a level of significance Comparison to Project: Less Impact
Utilities and Service Systems	Project level: Less than Significant Cumulative Level: Less than Significant	CEQA Significance: No impact Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Similar impact	CEQA Significance: Less than significant Comparison to Project: Less impact	CEQA Significance: Less than significant Comparison to Project: Less impact

Note: This table provides a qualitative comparison of the level of impact for each issue area compared to the proposed project. Please see Sections 4.1 through 4.14 for a discussion of impacts for the proposed project.

[1] The proposed project would result in 87.2 acres of mixed use development including 600 dwelling units, 897,000 sf of commercial development, and 150 hotel rooms within the Diamond Specific Plan and 10 acres of commercial uses (either general commercial or commercial mixed use dependant on the governing General Plan at the time of adoption)

[2] The No project/ No Development Alternative would leave the project area in its present condition without project development or new construction

[3] The Existing General Plan Designation and Zoning Alternative would result in 11 acres of neighborhood commercial, 51.7 acres of general commercial, 7.5 acres of open space, 19 acres of special alternative use (baseball stadium), and 8 acres of roads. No residential units would result.

[4] The Reduced Density Alternative would result in 209 condos/townhouses, 148,172 sf of office use, 164,559 sf of commercial development and 52 hotel rooms.

[5] The Reduced Density/Reduced Acreage Alternative would result in 209 condos/townhouses, 148,172 sf of office use, 164,559 sf of commercial development and 52 hotel rooms and would avoid a minimum of 8.1 acres of land in Planning Area 2 to preserve cultural and biological resources and to comply with the Quimby Act.

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6.0 GROWTH-INDUCING IMPACTS

This section discusses growth-inducing impacts, which are ways the proposed project could foster economic or population growth. Inducements to growth include the generation of construction and permanent employment opportunities in the support sector of the economy. A project could also induce growth by lowering or removing barriers to growth or by creating an amenity that attracts new population or economic activity.

In accordance with Section 15126.2(d) of the *California Environmental Quality Act* (*CEQA) Guidelines*, an Environmental Impact Report (EIR) must *"discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth ... Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

Two issues must be considered when assessing the growth-inducing impacts of a project:

- Elimination of obstacles to population growth: The extent to which additional infrastructure capacity or a change in regulatory structure would allow additional development in the City; and
- Promotion of economic growth: The extent to which the proposed project can cause increased activity in the local or regional economy. Economic impacts can include direct effects, such as the direction and strategies implemented within the project area, and indirect or secondary impacts, such as increased commercial activity needed to serve the additional population projected from the project.

6.1 ELIMINATION OF OBSTACLES TO POPULATION GROWTH

The elimination of either physical or regulatory obstacles to population growth is considered to be a growth-inducing impact. A physical obstacle to population growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas not currently provided with these services is expected to support new development. Similarly, the elimination of or change to a regulatory obstacle, including existing growth and development policies, can result in new population growth. West Riverside Council of Governments (WRCOG) is a subregion within Southern California Association of Governments (SCAG). WRCOG subregion includes fourteen cities and unincorporated communities in the western portion of Riverside County west of San Jacinto and Santa Rosa mountains. SCAG's growth estimates include cities and communities within WRCOG.

The adopted forecasts for the region, subregion, and City are presented in Tables 6.1-1 through 6.1-3.

Table 6.1-1. Adopted SCAG Regionwide Forecasts

	2010	2015	2020	2025	2030
Population	19,418,349	20,465,819	21,468,934	22,395,124	23,255,378
Housing Units	6,086,983	6,474,074	6,840,331	7,156,635	7,449,484
Employment	8,349,454	8,811,402	9,183,026	9,546,782	9,913,372

Source: Southern California Association of Governments, Growth Estimates, 2008.

Table 6.1-2. Adopted West Riverside Council of Governments Forecasts

	2010	2015	2020	2025	2030
Population	1,735,426	1,918,962	2,096,539	2,262,989	2,414,254
Housing Units	546,046	609,218	671,932	727,620	780,741
Employment	588,523	691,260	797,626	901,163	1,005,923

Source: Southern California Association of Governments, Growth Estimates, 2008.

Table 6.1-3. Adopted City of Lake Elsinore Forecasts

	2010	2015	2020	2025	2030
Population	51,138	61,045	69,558	78,044	85,378
Housing Units	15,239	18,149	21,022	23,898	26,448
Employment	12,152	13,525	15,006	16,487	18,012

Source: Southern California Association of Governments, Growth Estimates 2008.

In the case of the Diamond Specific Plan, all public service infrastructure is currently available adjacent to the project and would need to be extended onto the project site. The development would require the extension of roadways, sewer, water, gas, and electrical lines, but would not require the construction of new infrastructure designed to serve the surrounding areas. The Diamond Specific Plan is located within the area already planned for growth. The Diamond Specific Plan is an infill development, and is surrounded by existing and approved development to the north, east, and south and to Lake Elsinore on the west. Because development associated with the Diamond Specific Plan would result in the extension of public facilities that would serve only the Diamond Specific Plan, the project would not be considered growth inducing.

Buildout of the Diamond Specific Plan is expected to be complete in 2016. Table 6.1-4 details the population housing unit, and employment figures and growth estimates for the City of Lake Elsinore, as reported by SCAG.

Table 6.1-4. Adopted SCAG Regionwide Forecasts

	2010	2015	2020	2025	2030
Population	19,418,349	20,465,819	21,468,934	22,395,124	23,255,378
Housing Units	6,086,983	6,474,074	6,840,331	7,156,635	7,449,484
Employment	8,349,454	8,811,402	9,183,026	9,546,782	9,913,372

Source: Southern California Association of Governments, Growth Estimates 2008.

The City of Lake Elsinore updated General Plan uses a factor of 2.7 persons per household for multifamily residential. This factor is used to estimate the population for the proposed mixed-use residential. Table 6.1-5 shows the estimated population.

Table 6.1-5. Population Estimates for Diamond Specific Plan

Residence Type	Average Population/Unit	Estimated No. of Dwelling Units	Estimated Population
Mixed-Use Residential	2.70	600	1,620
Total		600	1,620

Source: Diamond Specific Plan 2009.

Development pursuant to the Diamond Specific Plan would result in 1,620 residents living in the City of Lake Elsinore. As discussed in Section 4.10, the project would not conflict with population and housing projections for the East Lake Specific Plan. Additionally, the 1,620 anticipated residents of the Diamond Specific Plan constitute approximately three percent of the SCAG 2015 population forecast for Lake Elsinore. Although the addition of 1,620 residents in this area may not have been anticipated in SCAG's 2008 growth projections, the addition of 3 percent of the population would not be considered a substantial population increase. Similarly, the residential units included in the Diamond Specific Plan have been anticipated in the Lake Elsinore General Plan Update (2009) but may not have been considered in the SCAG 2008 household projections. SCAG forecasts there to be 15,239 households in Lake Elsinore in 2010. The addition of 600 dwelling units would constitute 3.9 percent of the SCAG forecast. Therefore, the increase in population caused by the Diamond Specific Plan would not substantially exceed the existing population or exceed forecasted population growth.

The increase in population could be considered a significant growth inducing impact if the increase in population could spur surrounding projects to increase their densities at a future date. However, the Diamond Specific Plan is largely surrounded by developed land. The site is surrounded by an existing shopping center and residential development to the north; a mix of vacant property, medical offices, and commercial retail businesses to the east; the master planed community of Summerly, currently under construction to the south; and the San Jacinto River runs along the western border of the project leading to Lake Elsinore to the west. The Diamond Specific Plan is not anticipated to spur an increase in density on the surrounding parcels, as they are expected to remain developed with existing land uses. Therefore, the Diamond Specific Plan would not be considered growth inducing due to population growth.

Additionally, while the project does include changing the land use designation of the 10-acre General Plan area from the East Lake Specific Plan to the underlying land use depending upon which General Plan is in effect at the time, no development or change in intensity is proposed. Therefore, the land use designation change would not be considered growth inducing due to population growth.

Promotion of Economic Growth

Increased industrial, commercial, and residential development typically generates a secondary or indirect demand for other services. The City's growing population would require additional goods and services, such as groceries, entertainment, and medical services which would stimulate economic activity.

The Diamond Specific Plan is a mixed use development. The Plan includes the creation of 600 dwelling units and up to 897,000 square feet (sf) of commercial uses to meet the needs of the residents in terms of

goods and services, entertainment, and the provision of jobs. As a result, the Diamond Specific Plan would not be anticipated to generate a secondary or indirect demand for other services. Similarly, the change in land use designation for the 10-acre General Plan area would not change the type or intensity of uses proposed in that area and thus would not generate a secondary or indirect demand for other services.

In summary, neither the Diamond Specific Plan nor the 10-acre General Plan area would directly induce substantial population growth or directly induce economic growth beyond the Specific Plan area.

7.0 INVENTORY OF UNAVOIDABLE ADVERSE IMPACTS

In accordance with *California Environmental Quality Act (CEQA) Guidelines* Section 15126(b), Environmental Impact Reports (EIRs) must include a discussion of significant environmental effects that cannot be avoided if the proposed project is implemented. The impact analysis, as detailed in Section 4.0 of this Draft EIR, concludes that the impacts discussed below would remain significant after mitigation.

7.1 AIR QUALITY (PROJECT- AND CUMULATIVE-LEVEL)

Project and Cumulative Operational Criteria Pollutant Emissions

At Diamond Specific Plan buildout, operational emissions of carbon monoxide (CO), fine particulate matter (PM_{10}), ultra-fine particulate matter $PM_{2.5}$), and ozone (O_3) precursors reactive organic gas (ROG) and nitrogen oxides (NO_x) would exceed South Coast Air Quality Management District (SCAQMD) thresholds. The Basin's current status for O_3, PM_{10} and $PM_{2.5}$ is nonattainment and the Diamond Specific Plan would contribute to the existing National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) air quality violation within the Basin during operation. For operational emissions, automotive sources are the dominant contributors to the project emissions burden. Mitigation in the form of alternatives to the single occupant vehicle (SOV), therefore, were included in DSP-AQ-2. However, even with implementation of DSP-AQ-2, the daily operational and area source emissions cannot be reduced to less than significant levels for emissions of ROG, NO_x, PM_{10}, $PM_{2.5}$ and CO; therefore, operational air quality impacts would be significant and unavoidable.

Cumulative Greenhouse Gases

Implementation of the Diamond Specific Plan would contribute to long-term increases in greenhouse gases (GHGs) as a result of traffic increases (mobile sources) and minor secondary fuel combustion emissions from space heating, etc. Development occurring as a result of the Diamond Specific Plan would also result in secondary operational increases in GHG emissions as a result of electricity generation to meet project-related increases in energy demand. Climatic impacts are global in scale. Any project-specific contribution to the global issue is miniscule. The GHG emphasis on a project-specific level is to implement mitigation measures that reduce energy consumption and reduce vehicular travel as much as is reasonably feasible. Compliance with all applicable rules, regulations, and GHG reduction strategies from the CARB's Climate Change Draft Scoping Plan, SCAQMD, Title 24, California Building Code (CBC), and implementation of mitigation measures DSP-AQ-2 through DSP-AQ-5 would reduce the project-level impact. However, despite the Diamond Specific Plan's compliance with rules and regulations, as well as the inclusion of mitigation measures that temper the impacts to climate change associated with increased development, the Diamond Specific Plan would contribute GHGs that would contribute to global climate change. Therefore, the contribution of the Diamond Specific Plan to cumulative climate change impacts would remain significant until such time as the City's GHG Emissions Reduction Plan is adopted. Compliance with that Plan would reduce the project's cumulative level impact to below a level of significance.

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8.0 SIGNIFICANT IRREVERSIBLE CHANGES

In accordance with *California Environmental Quality Act (CEQA) Guidelines* Section 15126.2(c), an Environmental Impact Report (EIR) must identify any significant irreversible environmental changes that would be caused by implementation of the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources or secondary growth-inducing impacts that commit future generations to similar uses. Growth inducing impacts of the project area are discussed in Section 6.0 of the Draft EIR.

Construction and operation of the Diamond Specific Plan would contribute to the incremental depletion of resources, including renewable and non-renewable resources. Resources such as lumber used in building construction, are generally considered renewable resources, and would be replenished over the lifetime of the project. Non-renewable resources, such as natural gas, petroleum products, steel, copper and other materials are typically considered to be in finite supply and would not be replenished over the lifetime of the project.

Implementation of the Diamond Specific Plan would result in project-related emissions for reactive organic gas (ROG), nitrogen oxides (NO_x), fine particulate matter (PM_{10}), ultra-fine particulate matter ($PM_{2.5}$), and carbon monoxide (CO) during operation that would be significant and unavoidable. Additionally, the Diamond Specific Plan's greenhouse gas (GHG) contribution to global climate change would remain cumulatively significant and unavoidable.

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9.0 PERSONS AND ORGANIZATIONS CONSULTED

9.1 PERSONS AND ORGANIZATIONS CONSULTED

9.1.1 Preparation of an Environmental Impact Report (EIR)

The following firms and individual were responsible for the content of this Draft Environmental Impact Report (EIR):

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- Wilson Mikami Corporation – Scott Wilson, Engineer
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- Lake Elsinore Police Station/Riverside County Sheriff's Department – Jason Brown, CSO
- Lake Elsinore Unified School District – Gregory Bowers, Assistant Superintendent, Facilities and Operations
- Riverside County Fire Department – Jason Neumann, Fire Captain, Strategic Planning Bureau
- Riverside County Library System – Mark Smith, Library Administrator
- Southern California Gas Company – Lynn Gerlach, Technical Services Supervisor

9.2 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2008. *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act.* January.

California Air Resources Board. 2008. *Climate Change Proposed Scoping Plan*. October.

California Climate Action Team. 2006. *Climate Action Team Report to Governor Schwarzenegger and the California State Legislature*. March.

California Environmental Protection Agency Integrated Waste Management Board. 2006. *Targeted Statewide Waste Characterization Study: Detailed Characterization of Construction and Demolition Waste.*

California Gas and Electric Utilities. 2008. *California Gas Report*.

California Integrated Waste Management Board (CIWMB). 2006. *Detailed Characterization of Construction and Demolition Waste*. June.

California Stormwater Quality Association. *Stormwater Best Management Handbook for Construction*.

City of Lake Elsinore. 1990. *City of Lake Elsinore Zoning Code.*

City of Lake Elsinore. 1993. *East Lake Specific Plan.*

City of Lake Elsinore. 1990. *City of Lake Elsinore General Plan.* November 27. Reprinted 1995.

City of Lake Elsinore. 2007. *City of Lake Elsinore Emergency Operations Plan.*

City of Lake Elsinore. 2008. *City of Lake Elsinore Parks and Recreation Master Plan.*

City of Lake Elsinore. 2009. *Parks and Recreation Master Plan.*

County of Riverside. 2000. *Riverside County Integrated Project – Multiple Species Habitat Conservation Plan.*

Dean, Michael. Deputy, Lake Elsinore Police Department. 2009. Personal Communication with Emily Lipoma, HDR Inc. June 17.

Eastern Municipal Water District. 1990. *West San Jacinto Groundwater Management Plan.*

Elsinore Valley Municipal Water District. 2005. *District-Wide Water Supply Assessment*.

Elsinore Valley Municipal Water District. 2008. *Wastewater Master Plan*.

Giroux and Associates. 2009. *Noise Impact Analysis, Diamond Center Specific Plan, City of Lake Elsinore, California*. June 5.

Giroux and Associates. 2009. *Air Quality Analysis, Diamond Center Specific Plan, City of Lake Elsinore, California*. June 24.

Institute of Transportation Engineers. 2003. *Trip Generation Manual*. 7th Edition.

Kennedy/Jenks Consultants. 2002. *EVMWD Wastewater Master Plan*. July.

Land America Commercial Services. 2007. *Phase I Environmental Site Assessment Report*.

McKeehan Environmental Consultants. 2009(a). *Archeological Assessment for the Diamond Specific Plan Project*, Riverside County, California.

McKeehan Environmental Consultants. 2009(b). *Paleontologic Survey and Assessment for the Diamond Specific Plan Project*, Riverside County, California.

MWH. 2009. *Diamond Specific Plan Water Supply Assessment*. November.

Neblett & Associates, Inc. 2008. *Preliminary Geologic and Geotechnical Investigation for the Proposed Diamond Development Project City of Lake Elsinore*, California. November 13.

PCR Services Corporation. 2009(a). *Biological Resources Assessment*. November 17.

PCR Services Corporation. 2009(b). *Determination of Biologically Equivalent or Superior Preservation.* November 17.

PCR Services Corporation. 2009(c). *Investigation of Jurisdictional "Waters of the U.S.," "Waters of the State" and Wetlands.* November 17.

PCR Services Corporation. 2009(d). *Lake Elsinore Acquisition Process.* November 17.

PCR Services Corporation. 2009(e). *Little Mousetail Mitigation Maintenance and Monitoring Plan.* December 23.

PCR Services Corporation. 2009(f). *Phase III Burrowing Owl Survey.*

PCR Services Corporation. 2009(g). *Smooth Tarplant Mitigation Maintenance and Monitoring Plan* December 23.

RGP Planning & Development Services. 2009(a). *The Diamond Specific Plan*.

RGP Planning & Development Services. 2009(b). *The East Lake Specific Plan Amendment #9*.

SANDAG. 2002. *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region.*

Smith, Mark. 2009. Administrator, Riverside County Library System. Personal Communication with Emily Lipoma, HDR Inc. June 17.

Southern California Association of Governments. 2008. *2008 Regional Transportation Plan: Making the Connections*.

Southern California Association of Governments. 2009. *Profile of the City of Lake Elsinore*.

United States Department of Agriculture Soil Conservation Service. *Soil Survey, Western Riverside Area.* 1971.

Urban Crossroads. 2009. *Diamond Specific Plan Traffic Impact Analysis* Lake Elsinore, California. April 13.

Wilson Mikami Corporation. 2009. *Conceptual Hydrology Study for The Diamond*.

9.3 ELECTRONIC RESOURCES

California Department of Finance. 2009. *Population Estimates*. http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/2008/-09/

California Employment Development Department. Local Area Profile for Riverside County. http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProQSSelection.asp?menuChoice=localAreaPro

California Gas and Electric Utilities. Company Profile. http://www.socalgas.com/aboutus/profile.html

City of Lake Elsinore. 2009. City of Lake Elsinore General Plan Update. http://www.lake-elsinore.org/index.aspx?page=232

Elsinore Valley Municipal Water District. Groundwater Management Plan, 2003 http://www.evmwd.com/civica/filebank/blobdload.asp?BlobID=2096

Riverside County Integrated Project Multiple Species Habitat Conservation Plan (MSHCP). http://www.ricp.org/mshcpadopted.htm

Riverside County RCIP General Plan EIR. 4.15 Public Services http://www.rctlma.org/genplan/content/eir/volume1.html

Riverside Transit Agency. 2008. *Riverside Transit Agency Statistics July 1, 2007 – June 30, 2008.* http://www.riversidetransit.com/about/statistics.htm

Southern California Association of Governments. 2007. Final Regional Housing Needs Assessment. http://www.scag.ca.gov/Housing/rhna/index.htm

Southern California Association of Governments. 2009. Growth Estimates. http://www.scag.ca.gov/forecast/index.htm

State Water Resources Control Board. 2008. GeoTracker. http://www.geotracker.waterboards.ca.gov/