



CITY OF HIGHLAND

27215 Base Line, Highland, CA 92346
Telephone (909) 864-6861 FAX: (909) 862-3180

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

To: Clerk of the Board of Supervisors Office of Planning and Research
385 North Arrowhead Avenue, 2nd Floor 1400 Tenth Street, Room 121
San Bernardino, California 92415 Sacramento, California 95814

Project Title and File No.: Mediterra Project, Tentative Tract Map No. 18893 (TTM-14-002)(PUD-13-001)

Project Location: APN Nos. 0297-021-18, 0297-051-16, 0297-061-04, 0297-061-05, 0297-061-06, 0297-061-07, 0297-061-09, 0297-061-13, 0297-061-20, 0297-061-25, 0297-061-26, 0297-061-29 and 0297-201-05 (north of Greenspot Road, east of Santa Paula Street), City of Highland, County of San Bernardino

Project Description: The project allows establishment of a planned development consisting of a low density residential development of 200 residential lots, a medium density development of 110 residential units, six (6) estate lots, and several lettered lots containing two (2) parks, landscaping and a water quality management basin within 8 Planning Areas on approximately 178 gross acres.

Project Sponsor: City of Highland

This is to advise that the City of Highland, acting as the lead agency, has prepared an Initial Study to determine if the project may have a significant effect on the environment and is proposing to adopt a Mitigated Negative Declaration based on the following finding:

- The Initial Study shows that there is no substantial evidence that the project may have a significant effect on the environment.
- The Initial Study identified potentially significant effects but:
 - (1) Revisions in the project plans or proposals made or agreed to by the applicant before this proposed Negative Declaration was released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and,
 - (2) There is no substantial evidence before the agency that the project as revised may have a significant effect on the environment.

A copy of the Initial Study and all other material which constitutes the record of proceedings upon which the City based its decision to adopt this Mitigated Negative Declaration may be obtained at:

City of Highland, Community Development Department
27215 Base Line
Highland CA 92346

The public is invited to comment on the proposed Mitigated Negative Declaration during the review period, which begins on October 22, 2015 and ends November 23, 2015.

<i>Megan Haggart</i>	Senior Planner	October 22, 2015
Signature	Title	Date

	<input checked="" type="checkbox"/>	Clerk of the Board of Supervisors
	<input type="checkbox"/>	OPR

Date received for filing and posting

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Mediterra Project, Tentative Tract Map No. 18893 (TTM-14-002)(PUD-13-001)

Lead Agency: City of Highland Contact Person: Megan Taggart
 Mailing Address: 27215 Base Line Phone: (909) 864-8732 Ext. 210
 City: Highland, CA Zip: 92346 County: San Bernardino

Project Location: County: San Bernardino City/Nearest Community: Highland

Cross Streets: Greenspot Road/Santa Paula Street Zip Code: 92346

Longitude/Latitude (degrees, minutes and seconds): _____ ° _____ ' _____ " N / _____ ° _____ ' _____ " W Total Acres: 178.73

Assessor's Parcel No.: See attached. Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: _____ Waterways: Santa Ana River

Airports: Redlands Municipal Railways: _____ Schools: _____

Document Type:

- | | | | |
|---|--|------------------------------------|--|
| CEQA: <input type="checkbox"/> NOP | <input type="checkbox"/> Draft EIR | NEPA: <input type="checkbox"/> NOI | Other: <input type="checkbox"/> Joint Document |
| <input type="checkbox"/> Early Cons | <input type="checkbox"/> Supplement/Subsequent EIR | <input type="checkbox"/> EA | <input type="checkbox"/> Final Document |
| <input type="checkbox"/> Neg Dec | (Prior SCH No.) _____ | <input type="checkbox"/> Draft EIS | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Mit Neg Dec | Other: _____ | <input type="checkbox"/> FONSI | |

Local Action Type:

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> General Plan Update | <input type="checkbox"/> Specific Plan | <input checked="" type="checkbox"/> Rezone | <input type="checkbox"/> Annexation |
| <input checked="" type="checkbox"/> General Plan Amendment | <input type="checkbox"/> Master Plan | <input type="checkbox"/> Prezone | <input type="checkbox"/> Redevelopment |
| <input type="checkbox"/> General Plan Element | <input checked="" type="checkbox"/> Planned Unit Development | <input checked="" type="checkbox"/> Use Permit | <input type="checkbox"/> Coastal Permit |
| <input type="checkbox"/> Community Plan | <input type="checkbox"/> Site Plan | <input checked="" type="checkbox"/> Land Division (Subdivision, etc.) | <input type="checkbox"/> Other: _____ |

Development Type:

- | | | | |
|---|--|--|--|
| <input checked="" type="checkbox"/> Residential: Units <u>316</u> Acres <u>178.73</u> | | | |
| <input type="checkbox"/> Office: Sq.ft. _____ Acres _____ Employees _____ | <input type="checkbox"/> Transportation: Type _____ | | |
| <input type="checkbox"/> Commercial: Sq.ft. _____ Acres _____ Employees _____ | <input type="checkbox"/> Mining: Mineral _____ | | |
| <input type="checkbox"/> Industrial: Sq.ft. _____ Acres _____ Employees _____ | <input type="checkbox"/> Power: Type _____ MW _____ | | |
| <input type="checkbox"/> Educational: _____ | <input type="checkbox"/> Waste Treatment: Type _____ MGD _____ | | |
| <input type="checkbox"/> Recreational: _____ | <input type="checkbox"/> Hazardous Waste: Type _____ | | |
| <input type="checkbox"/> Water Facilities: Type _____ MGD _____ | <input type="checkbox"/> Other: _____ | | |

Project Issues Discussed in Document:

- | | | | |
|--|--|--|---|
| <input checked="" type="checkbox"/> Aesthetic/Visual | <input type="checkbox"/> Fiscal | <input type="checkbox"/> Recreation/Parks | <input type="checkbox"/> Vegetation |
| <input checked="" type="checkbox"/> Agricultural Land | <input type="checkbox"/> Flood Plain/Flooding | <input type="checkbox"/> Schools/Universities | <input type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Air Quality | <input type="checkbox"/> Forest Land/Fire Hazard | <input type="checkbox"/> Septic Systems | <input type="checkbox"/> Water Supply/Groundwater |
| <input checked="" type="checkbox"/> Archeological/Historical | <input checked="" type="checkbox"/> Geologic/Seismic | <input type="checkbox"/> Sewer Capacity | <input type="checkbox"/> Wetland/Riparian |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Minerals | <input type="checkbox"/> Soil Erosion/Compaction/Grading | <input type="checkbox"/> Growth Inducement |
| <input type="checkbox"/> Coastal Zone | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Solid Waste | <input type="checkbox"/> Land Use |
| <input type="checkbox"/> Drainage/Absorption | <input type="checkbox"/> Population/Housing Balance | <input checked="" type="checkbox"/> Toxic/Hazardous | <input type="checkbox"/> Cumulative Effects |
| <input type="checkbox"/> Economic/Jobs | <input checked="" type="checkbox"/> Public Services/Facilities | <input checked="" type="checkbox"/> Traffic/Circulation | <input type="checkbox"/> Other: _____ |

Present Land Use/Zoning/General Plan Designation:

Zoning: Agricultural/Equestrian Residential (A/EQ) General Plan: Agriculture/Equestrian (0 - 2.0 du/acre)

Project Description: *(please use a separate page if necessary)*

The project allows establishment of a planned development consisting of a low density residential development of 200 residential lots, a medium density development of 110 residential units, six (6) estate lots, and several lettered lots containing two (2) parks, landscaping and a water quality management basin within 8 Planning Areas on approximately 178 gross acres.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X". If you have already sent your document to the agency please denote that with an "S".

<input type="checkbox"/> Air Resources Board	<input type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input checked="" type="checkbox"/> Caltrans District # <u>8</u>	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input checked="" type="checkbox"/> Regional WQCB # <u>8</u>
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input checked="" type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region # <u>6</u>	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	Other: _____
<input type="checkbox"/> Health Services, Department of	Other: _____
<input type="checkbox"/> Housing & Community Development	
<input checked="" type="checkbox"/> Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date October 22, 2015 Ending Date November 23, 2015

Lead Agency (Complete if applicable):

Consulting Firm: <u>Tom Dodson & Associates</u>	Applicant: <u>Sunland Communities, LLC</u>
Address: <u>2150 North Arrowhead Avenue</u>	Address: <u>10575 Oakdale Drive</u>
City/State/Zip: <u>San Bernardino, CA 92405</u>	City/State/Zip: <u>Rancho Cucamonga, CA 91730</u>
Contact: <u>Tom Dodson</u>	Phone: <u>(951) 538 - 4140</u>
Phone: <u>(909) 882 - 3612</u>	

Signature of Lead Agency Representative: *Megan Jaggart* Date: 10/22/2015

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

APN Nos.:

0297-021-18, 0297-051-16, 0297-061-04, 0297-061-05, 0297-061-06, 0297-061-07,
0297-061-09, 0297-061-13, 0297-061-20, 0297-061-25, 0297-061-26, 0297-061-29 and
0297-201-05



CITY OF HIGHLAND

27215 Base Line, Highland, CA 92346
Telephone (909) 864-8732 FAX: (909) 862-3180

DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency: City of Highland
27215 Base Line
Highland, CA 92346

Contact: Megan Taggart
Phone: (909) 864-8732, ext. 210
Email: mtaggart@cityofhighland.org

Project Title: Mediterra Project, Tentative Tract Map No. 18893
(TTM-14-002)(PUD-13-001)

State Clearinghouse Number: Not assigned yet

Project Location: APN Nos. 0297-021-18, 0297-015-16, 0297-061-04, 0297-061-05, 0297-061-06, 0297-061-07, 0297-061-09, 0297-061-13, 0297-061-20, 0297-061-25, 0297-061-26, 0297-061-29 and 0297-201-05 (north of Greenspot Road east of Santa Paula Street), City of Highland, County of San Bernardino

Project Description: The project allows establishment of a planned development consisting of a low density residential development of 200 residential lots, a medium density development of 110 residential units, six (6) estate lots, and several lettered lots containing two (2) parks, landscaping and a water quality management basin within 8 Planning Areas on approximately 178 gross acres.

Finding: The City of Highland's decision to implement this proposed expansion project is a discretionary decision or "project" that requires evaluation under the California Environmental Quality Act (CEQA). Based on the information in the project MND/Initial Study, the City has made a *preliminary* determination that a Mitigated Negative Declaration will be the appropriate environmental determination for this project to comply with CEQA.

Initial Study: Copies of the MND/Initial Study are available for public review at the City of Highland, 27215 Base Line, Highland, CA 92346. The public review period for the Initial Study begins October 22, 2015 and closes November 23, 2015.

Mitigation Measures: All mitigation measures identified in the MND/Initial Study are summarized on pages 107-113 and are proposed for adoption as conditions of the project. These measures will be implemented through a mitigation monitoring and reporting program if the Mitigated Negative Declaration is adopted.

DRAFT

Signature

Title

Date

INITIAL STUDY

FOR

**MEDITERRA PROJECT,
TENTATIVE TRACT MAP NO. 18893
(TTM-14-002)(PUD-13-001)**

Lead Agency:

City of Highland
27215 Base Line
Highland, California 92346

Prepared by:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405
(909) 882-3612

October 2015

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ENVIRONMENTAL CHECKLIST FORM

INTRODUCTION

1. Project Title: Mediterra Project, Tentative Tract Map No. 18893
(TTM-14-002)(PUD-13-001)
2. Lead Agency Name: City of Highland
Address: 27215 Base Line
Highland, California 92346
3. Contact Person: Ms. Megan Taggart
Phone Number: 909-864-8732, ext. 210
4. Project Location: The project site consists of approximately 178.73 acres located in the eastern portion of the City of Highland, north of Greenspot Road and east of Santa Paula Street (See Figures 1 and 2). The site is depicted on the USGS Redlands and Yucaipa 7.5' Topographic Maps. TTM No. 18893 is a subdivision of a portion of the west 1/4 of the southeast 1/4 of Section 3, Township 1 South, Range 3 West, SBM in the County of San Bernardino, State of California. In Development Scenario 2 the total project area is increased to 180.65 acres through the addition of 1.92 acres that may be acquired from the San Bernardino Valley Municipal Water District (Muni).
5. Project Sponsor's Name and Address: Sunland Communities, LLC
10575 Oakdale Drive, Rancho Cucamonga, CA 91730
6. General Plan Designation: Agriculture/Equestrian (A/EQ, 0-2.0 du/ac)
7. Zoning: Agricultural/Equestrian Residential (A/EQ)
8. Project Description:

Introduction

This section contains a detailed description of the proposed project, with focus on those characteristics and activities that can cause physical changes in the environment. The description contained herein for the Mediterra Project ("proposed project") provides the reviewer with a written summary of the project as it would be developed by the project proponent, Sunland Communities, LLC, following review and consideration of this environmental document and an approval of development entitlements by the City of Highland. This project description focuses on the physical facilities and associated activities that would be implemented if the proposed project is approved by the City Council.

The City of Highland (City) received an application from Sunland Communities, LLC for a General Plan Amendment (GPA); Change of Zone (ZC); Planned Development Plan (PD), and

Tentative Tract Map (TTM) No. 18893. If approved, the GPA, ZC, Planned Development (PD) and TTM entitlements would allow development of a low density residential development of 200 residential lots, a medium density development of 110 residential units, and several lettered lots on approximately 178 gross acres. A maximum of six lots could be developed within Planning Area 5 (refer to Table 1). The project is located in the eastern portion of the City of Highland, north of Greenspot Road and east of Santa Paula Street. Figure 1 shows the Regional Location of the property. Figure 2 shows the site location on a composite map of the USGS Redlands and Yucaipa 7.5' Topographic Maps. Figure 3 is a map showing the local circulation system in the general project area (City of Highland General Plan). Finally, Figure 4 provides a draft copy of TTM No. 18893, which also contains a vicinity map and a proposed phasing map for the project.

The proposed project also includes improvements to backbone sewer and water infrastructure, which consists of 10,500 feet of pipeline for each utility that would be used by the proposed project to collect and convey sewage and deliver water respectively. A storm water quality and volume management basin is shown in the southwest corner of the project site (south side of Greenspot). The proposed project also includes on-site and off-site road improvements and an extensive trail network. The trails connect to the off-site community and area trail network and allow equestrian, pedestrian, and cycling uses. Implementation of the proposed project would involve substantial grading and construction activities, and modifications to the area utility infrastructure systems. The City is serving as the Lead Agency for compliance with the California Environmental Quality Act (CEQA) based on its responsibility for reviewing and making a decision on the proposed project entitlements required to allow the physical development to proceed.

Project Objectives

The proposed project's main objective is to create a residential community with character and quality that fits the context of the East Highlands area. The Mediterra Planned Development Plan (Plan) was designed to reflect the site's proximity to the adjacent foothills and its Mediterranean feel. The integration of site planning, architecture, and landscape standards into neighborhood design is key to achieving the objectives of this community, striving to create a lifestyle that encourages movement, recreation, and connectivity with the immediate surroundings.

The Plan establishes the type of development that can occur, and establishes the guidelines and standards for the community planning, design, and implementation of future development within the plan area, including provisions for adequate infrastructure, services and public safety. The Plan also provides the framework to integrate the Mediterra Community as part of the East Highlands area of the City and to be an asset to the surrounding community with attainable starter and move-up housing opportunities with a range of lot and residence sizes.

Project Characteristics

The project site is approximately 178 acres (approximately 180 with the Muni parcel) encompassed by TTM No. 18893, including the development area, the 13-acre A/EQ area, and the open space. The proposed project includes changes to the existing General Plan designation and Zone designation from Agriculture/Equestrian Residential (A/EQ) to Planned

Development (PD) over most of the project area with an area of approximately 13 acres to remain with the A/EQ designation. The rationale for the GPA/ZC is that the type of suburban development proposed by Mediterra is not consistent with the A/EQ designation (even though it might support the proposed number of units), which is specifically designed to accommodate low density residential development where animals, such as horses, can be raised. The A/EQ designation permits up to two units per acre to be developed, which would allow up to 356 units to be developed on the 178-acre project area. The GPA and ZC allow creation of a PD which allows additional flexibility in project design. Therefore, the developer is proposing to change the General Plan and Zone designations. The resulting gross density of the project, including 200 conventional lots in PA1 through PA3, a maximum of 110 medium density units in PA4 and 6 A/EQ lots in PA5, for a grand total of 316 units, is about 1.76 lots per acre. Figure 5 shows the existing land use designations and Figure 6 shows a conceptual Land Use Plan for the 178-acre area showing the proposed land use designations.

As previously summarized, TTM No. 18893 encompasses 178 acres with 200 conventional residential lots, 110 medium density units which will be planned in the future, 6 A/EQ lots and several lettered lots one of which will be used for an approximately 2.16-acre neighborhood park. These are shown on Figure 4. TTM No. 18893 shows an average conventional lot size of 8,370 square feet (sf), excluding the A/EQ future lots, with the smallest lot being 5,500 sf. The subdivision includes about 10,500 lineal feet of internal roadways. All utilities will be extended to each lot within these proposed roadways. Road sections will have two lanes with a typical paved width of 36 feet, with curbs and gutters. The street width is modified at certain strategic locations of the plan to enhance pedestrian mobility and encourage traffic calming. Stormwater runoff will be collected in the internal drainage system and delivered to the Water Quality Management Plan (WQMP) bioretention basin located in the southwestern portion of the project site as shown on Figure 4. The site shown as Not A Part (NAP) on Figure 4 is an existing residence that will remain within the subdivision. In addition, an existing single-family residence (SFR) will remain within PA5, but has been included within the plan.

Figure 7 shows the TTM No. 18893 planning areas. The proposed project includes eight planning areas (refer to Figure 6), but four planning areas, PA1 through PA4, represent the development proposed within TTM No. 18893. PA1 through PA3 represent the conventional detached residential development and PA4 represents a Planned Unit Development area that would be planned for the specific residential product to be proposed by a homebuilder. As can be seen on Figure 4, there are currently no lots shown in PA4. Note that under Development Scenario 2 the total acreage is increased to 180.65 acres by inclusion of the 1.92-acre Muni property in PA4. The developer anticipates that PA1 through PA3 (200 residential lots) will be absorbed by the residential home market by approximately 2020. PA4 is proposed for development as a Planned Unit Development with medium density residential; the site planning of such residential development is dependent on the type of medium density product the homebuilder proposes. As such, the site planning of PA4 will be conducted with the selection of the specific residential product type and will be processed for approval with the City of Highland at a future date. Within this document site specific environmental resource issues are evaluated for PA4, but subsequent environmental review may be required for public service utility issues when a PA4 development plan is brought forward in the future.

Each PA will be developed as a phase of the project. Phased development is envisioned to occur as follows:

- Phase I = PA1: Development of Lots 1-87 and Lettered Lot A would occur and other applicable Letter Lots would occur, as would the WQMP Basin.
- Phase II = PA2: Development of Lots 88-138 and Lettered Lot B and other applicable Lettered Lots would occur.
- Phase III = PA3: Development of Lots 139-200 and applicable Lettered Lots would occur.
- Phase IV = PA4: Medium Density PUD site; 110 units anticipated at a maximum density of about 11 dwelling units per acre (Development Scenario 1) and about 9.3 dwelling units per acre (Development Scenario 2).

Appendix 1 of this document contains sections of the Mediterra Planned Development Plan that summarizes the anticipated development in each Phase Planning Area. Table 2-1 of the Plan (Table 1 below) summarizes the anticipated development in each of the 8 PA's.

**Table 1
PLAN AREAS AND LAND USES**

Plan Component	Acreage	No. of Lots / Units	Density Target (du/ac)	Min. Lot Size	Permitted Land Uses
Plan Area 1	23.93	87	3.6	6,500 sq ft	Low Density Residential (2.1 - 6.0 du/ac) - Single Family Detached – SFD 1 / Recreation / Support Improvements
Plan Area 2	11.3	51	4.5	5,500 sq ft	Low Density Residential (2.1 - 6.0 du/ac) - Single Family Detached – SFD 2 / Recreation / Support Improvements
Plan Area 3	20.31	62	3.1	7,200 sq ft	Low Density Residential (2.1 - 6.0 du/ac) - Single Family Detached – SFD 3 / Recreation / Support Improvements
Plan Area 4	9.91 (11.83)*	110	6.1 - 12.0	N/A	Medium Density – MD (6.1 - 9.0 du/ac) / Recreation / Support Improvements
Plan Area 5	13.0	6	0.5	1.0 ac	Agriculture / Equestrian - A/Eq (0-2.1 du/ac)
Plan Area 6	2.16	N/A	N/A	N/A	Park and Recreation
Plan Area 7	94.62	N/A	N/A	N/A	Open Space / Passive Recreation / Public Facilities
Plan Area 8	3.5	N/A	N/A	N/A	PD / Public Facilities / Water Quality Management
TOTAL	178.73. (180.65)*	316			

* Development Scenario 2 (additional 1.92-acre Valley District property on Greenspot, refer to Figure 7.
Source: Mediterra Planned Development Plan; June 18, 2015

Utilities and services for this proposed project will be provided by the following companies or agencies.

Water:	East Valley Water District
Electricity:	Southern California Edison
Natural Gas:	Southern California Gas
Solid Waste:	Cal Disposal
Telephone:	AT&T
Cable:	Time Warner
School District:	Redlands Unified School District
Law Enforcement:	San Bernardino County Sheriff, under contract to City of Highland
Fire Protection:	CalFire, under contract to City of Highland

Construction Scenario

Grading

The onsite improvement area would be graded with a total mass grade encompassing cut of approximately 488,000 cubic yards. Initial estimates indicate that the cut will be balanced with the fill so that little or no imported fill dirt would be required. The following equipment is expected to be on-site during rough grading of the site:

- Cat D10 Dozer Ripper 3 each
- Cat D8 Dozer 2 each
- Cat 973 Track Loader 1 each
- Cat 966 Loader 1 each
- Cat 637 Scraper 8-10 each
- Cat 623 Scraper 3 each
- Cat 14G Motor Grader 2 each
- 4,000 gallon 6X6 water truck 3 each
- Backhoe/Skip Loader 2 each

The development would be mass graded with large development pads created at one time. Fine grading would occur as each phase of the proposed project is developed. Other phases of construction, such as installation of roads and utilities and building construction would occur sequentially. Construction of the homes and other project amenities would likely occur according to market demand and be completed in one Phase Plan Area at a time. Development of housing in each neighborhood would be coordinated with the completion of the nearby amenities. For air quality impact forecast purposes, it is assumed that no more than 87 residences would be under construction at any one time.

A Community Facilities District (or similar mechanism acceptable to the City of Highland or other applicable agencies) will be formed for the partial financing of infrastructure improvements or payment of Development Impact Fees.

9. Surrounding land uses and setting: (Briefly describe the project's surroundings)

Immediately to the west of the proposed Mediterra Project are residential neighborhoods with conventional single-family housing units. Immediately to the north are the foothills of the San Bernardino Mountains, most of which are under the U.S. Forest Service's ownership and management. To the southwest is open space, primarily floodplain of the Santa Ana River and its tributaries, such as Plunge Creek. Portions of this land are owned by the San Bernardino Valley Water Conservation District and other public agencies. This area is designated as Public Institutional. Immediately to the south of the project site are a mix of vacant properties and the new East Valley Water District administrative center and yard, with the Santa Ana River located further to the south. To the east is an existing citrus grove and vacant land. This land is presently used for citrus farming and related activities.

10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Based on an evaluation of the specific project location, the proposed Project will not require many permits from other agencies to support development of the project site with residential uses. The amount of area to be disturbed by the whole project will be greater than one acre; therefore, the developer will be required to file a Notice of Intent (NOI) for a General Construction permit to comply with the National Pollutant Discharge Elimination System (NPDES) requirements. The NOI is filed with the State Water Resources Control Board and enforced by the Santa Ana Regional Water Quality Control Board. A Storm Water Pollution Prevention Plan (SWPPP) must be implemented in conjunction with construction activities. Connections to East Valley Water District water and wastewater systems will be required. Also, connections to other utilities that serve the project area (SCE, SCG, Time Warner, etc.) will be required. No other permits or agency requirements have been identified in association with the proposed Project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or a "Less Than Significant With Mitigation Incorporated" as indicated by the checklist on the following pages.

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input checked="" type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Megan Taggart
Signature

10/22/15
Date

Megan Taggart, Senior Planner
Printed Name and Title

City of Highland
Lead Agency

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?		X		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?		X		
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		X		

SUBSTANTIATION: City of Highland General Plan, site visits and Mediterra Planned Development Plan

Introduction

The proposed development area consists of a portion of the site located north of Greenspot Road between the road and the foothills of the San Bernardino Mountains. Figure 3 shows this relationship between the roadway, the project site and the foothills. The project site is the next parcel of land along Greenspot Road that has yet to be converted from historic citrus farming activities to residential land uses within the City of Highland. The project site presently consists of man-made features, including two residences, out buildings, open space, and citrus groves. The primary human visual access to the site is from Greenspot Road, with limited views from the residences to the west. Views to the site are limited from further south and the north due to vegetation and limited access to the floodplain (south) and the vegetated foothills to the north.

At the present time views in many directions from the property are circumscribed by existing development and topography surrounding the property. For example, views to the north have the San Bernardino Mountain foothills that form the background view, which is limited to about one-quarter mile north of the project site. To the immediate west the view is again limited by the residential neighborhoods that form the western boundary of the property. To the southwest are spectacular views of the whole San Bernardino Valley, which on a clear day extends for tens of miles due to the site's elevation and orientation. Views of the peripheral mountains, San Gabriel Mountains, Jurupa Hills and the Badlands form the background to the Valley. Directly south, the view extends across the Santa Ana River floodplain to the Redlands Hills and the Crafton Hills. In the foreground is Greenspot Road and the newly constructed East Valley Water District's administrative and yard facilities. To the east the ridges located on the east side of the Santa Ana River form the visual background with limited views to San Bernardino Peak.

Analysis

a) *Have a substantial adverse effect on a scenic vista?*

Less Than Significant Impact – The existing citrus groves provide the foreground views from Greenspot Road north to the foothills. Immediately west of the site the existing residential neighborhoods already alter the view to the foothills to the north. Cars, bicycles and pedestrian views to the north have been altered by the presence of the residential structures and landscaping that disrupts the views to the foothills. This limited vista will be altered in a similar manner for a distance slightly less than one-quarter mile along Greenspot adjacent to the project site. Based on the existing development within the project area, this visual change will not adversely affect a scenic vista since there are no protected views in, or around the project site. From anywhere but Greenspot Road the new residential development will not substantially intrude on the views to the San Bernardino Mountains. Mitigation is provided to soften the change along the north side of Greenspot through the use of landscaping that will attenuate the change to the limited scenic vista to the north.

With regard to the changes in views to the southwest, south, southeast and east, the proposed project will not alter these long views for viewers on Greenspot Road. None of these views have any formal protection; however, these views will be retained and the proposed project will not substantially alter them. Even for a hiker in the foothills to the north, the site is low enough to not interfere with scenic vistas in these directions. For the few properties to the east at the same elevation as the proposed project, the essential views will be maintained to the southwest, south, southeast and east. Since there are no protected scenic vistas, no mitigation is required.

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

Less Than Significant With Mitigation Incorporated – The current City General Plan, Goal 3.3, Policy 1 recommends designating Greenspot Road as a City “Scenic Highway.” Policy 3 includes the following recommended actions: regulation of land use and intensity of development; detailed land and site planning; control of outdoor advertising; careful attention to and control of grading and landscaping; and careful design and maintained appearance of structure and equipment. Given the preceding residential development along Greenspot Road to the immediate west, it appears that the City finds well planned residential use and moderate density residential subdivisions compatible with an eligible scenic roadway. The proposed project includes limited intensity of development; detailed land and site planning; careful attention to and control of grading and landscaping; and careful design. Therefore, the proposed project appears to conform with the City’s requirements adjacent to an eligible scenic roadway. Mitigation measure I-1 provides for a visual buffer along Greenspot Road and will be fully consistent with land uses immediately to the west.

The removal of the citrus grove is considered an adverse impact, but it is not considered a substantial adverse impact because the visual setting is totally man-made with a few existing residences and graded dirt roadways. The loss of this grove contributes to a cumulative change in the visual character of the City of Highland, but the City’s General Plan acknowledged this when it assigned low density residential uses to this property when the General Plan was approved in 2006.

AES-1 *The landscape plan approved for the north side of Greenspot Road along the proposed project shall incorporate native trees and plants that can buffer the visual appearance of the residential development adjacent to the roadway.*

With implementation of this measure the projects effects on the scenic view to the nearby foothills north of the project can be reduced to a less than significant impact.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant With Mitigation Incorporated – The project site consists of an existing man-made landscape that will be converted to a more intense landscape. Due to the proximity of comparable residential uses immediately adjacent to the project site to the west, the proposed project will not cause a substantial degradation to the existing visual character or quality of the site and its surroundings. Once developed, the proposed project will be comparable to the character of the site as envisioned in the City General Plan. Although the clustering of units will alter this vision of the site, the number of units and the quality of the land use plan are deemed sufficient to achieve a consistency with existing land use immediately to the west and on the north side of Greenspot Road. Mitigation measure I-1 provides for a visual buffer within the project area on the north side of Greenspot Road and the envisioned visual setting will be consistent with the land uses located immediately to the west.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact – Night lighting standards are established in the City's General Plan and development code. These standards require that the Project control light and glare from new lighting so that it is directed to remain within the Project site, except for street lights adjacent to Greenspot Road. No additional mitigation is required to ensure that light and glare impacts are controlled to a nonsignificant level of impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<p>II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?		X		
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?			X	

SUBSTANTIATION:

- a) *Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

Less Than Significant With Mitigation Incorporated – A large portion of the approximately 178-acre project site is identified by the California Department of Conservation as Farmland. The area so designated appears to extend from just east of the curve on Greenspot east to the boundary of the existing orange grove on the property. Specifically, the California Important Farmland Finder map (Figure 8) shows the portion of the project site south of the San Bernardino Mountain foothills and east to the east end of the grove as a mix of Farmland of Statewide Importance and Unique Farmland. According to the Soil Survey for the San Bernardino Valley, the onsite soils that underlay the grove consist of the Soboba-Hanford Association, with portions of the site containing prime soils when irrigated, as the grove is at this time.

The proposed project will convert this Farmland to non-farmland use. The loss of approximately 38 acres of soil/land designated as Farmland of Statewide Importance and Unique Farmland is considered a significant adverse impact to the environment. The City realizes that mitigation alternatives for impacts to agricultural resources have changed since the City General Plan EIR was certified. Therefore, the City has identified mitigation that it concludes is sufficient to offset the loss of the agricultural values of converting the project site to non-agricultural uses. The analysis in this document has determined that the area around the proposed project has been rapidly changing from agricultural to residential uses, in accordance with the goals of the City General Plan and that increasing prices of land, higher water and labor costs, increased environmental regulations, higher property taxes, competition from other parts of the state, and growing urbanization have worked together to challenge the economic viability of farming in the project area. Based on this finding, the analysis concluded that given all these factors, the project site is not conducive to long-term farming as a viable use and the project specific loss to the overall agricultural industry is minimal, but may be considered cumulatively considerable.

As noted above, the approximate 38-acre orange grove is located in an area that was slated and is experiencing development for residential purposes, consistent with the General Plan. The project site is bounded on two sides by more intense human uses, including existing suburban residential uses and institutional (EVWD) uses. A major local arterial roadway exists at the south boundary of the project site. Thus, this parcel should be considered a small island of agricultural land that does not have long-term viability regardless of the current development proposal. Based on these constraints the following mitigation measure is adequate to offset the removal of this parcel of land from agricultural productivity:

AGR-1 The project developer shall fund acquisition of farmland or farmland conservation easements at a ratio of 0.50/1. The developer shall quantify the area of the site that is considered Farmland of Statewide Importance and Unique Farmland through a site survey. Based on the approximate 38-acre area of the project site in Important Farmland, a total of 17 acres of prime agricultural land or conservation easements over 17 acres of prime agricultural land shall be acquired and permanently protected. This acreage value may be adjusted with more specific information in the future, but the 0.50/1 ratio shall be preserved in determining the final acreage value. The prime agricultural land or the conservation easement shall be acquired and made available to an existing farmland trust or comparable organization within one year of occupancy of Phase 1 of the project site, or a farmland trust or comparable organization shall verify that it has received sufficient funds to acquire prime agricultural land or a conservation easement over such lands. The City concludes that implementation of this measure provides reasonable

mitigation based on the magnitude of the impact pursuant State CEQA Guidelines Section 15370.

b) *Conflict with existing zoning for agricultural use or a Williamson Act contract?*

No Impact – The proposed project is zoned for low density residential uses. The property is not subject to an existing Williamson Act contract. Therefore, there is no impact to this criterion.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact– The Project site is not located within forest land, timberland or timberland zoned for Timberland Production. Therefore, the Project will not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). No impacts are anticipated and no mitigation is required.

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

No Impact – The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use, since the project is not located on or adjacent to such land. Therefore, there are no adverse impacts to such resources.

e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

Less Than Significant Impact– This Project does not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. The Project site is just one of the properties designated by the City General Plan for non-commercial agricultural uses, and, as such, its proposed development is not, itself, the catalyst for the conversion of farmland in the immediate area. Therefore the proposed project would not, itself, be considered the trigger for the conversion of Farmland in the area of the Project and thus the impact would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?				

SUBSTANTIATION: The “Air Quality and GHG Impact Analyses Mediterra at East Highlands City of Highland, California,” Giroux & Associates, February 2015 was utilized for the following analysis. A copy of this document is provided as Appendix 2 of this Initial Study.

Background

The following information is abstracted from Appendix 2 of this document and provided herein to establish a data summary from which the Initial Study questions can be addressed. For more detailed information regarding a specific air quality topic please refer to the Air Quality section of Appendix 2.

Atmospheric Setting

The climate of Highland, in the eastern San Bernardino Valley, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidity levels. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

Mediterra is situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives San Bernardino County some of the worst air quality in

all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

For additional details on the area climate please refer to Appendix 2.

Ambient Air Quality Standards (AAQS)

In order to gauge the significance of the air quality impacts of the Mediterra at East Highlands project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthy, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2014, but the final numerical value has not yet been selected. It will require additional public input in 2016, then three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2025. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be close to 2030.

A new federal one-hour standard for nitrogen dioxide (NO₂) was adopted in 2010. This standard is more stringent than the existing state standard. Based upon air quality monitoring data throughout Southern California, the basin was designated as "attainment" for the new national one-hour standard.

For additional information regarding AAQS and health impacts please refer to Appendix 2 and Tables III-1 and III-2 on the following pages.

Baseline Air Quality

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the South Coast Air Quality Management District (SCAQMD) at its Central San Bernardino monitoring station. The SCAQMD monitoring station at Redlands is physically closer to the project site (4 miles) than the Central San Bernardino Station (8 miles). However, the Redlands site does not monitor the full spectrum of pollutants (only ozone and PM-10). The San Bernardino site has therefore been selected as best describing project site baseline air quality. This station measures both regional pollution levels such as dust (particulates) and smog, as well as levels of primary vehicular pollutants such as carbon monoxide. Table III-3 summarizes the last five years of the published data from the Central San Bernardino monitoring station.

**Table III-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O3)	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.075 ppm (147 µg/m3)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		–		
Fine Particulate Matter (PM2.5) ⁸	24 Hour	–	–	35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	15 µg/m3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m3)		9 ppm (10 mg/m3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 g/m3)		–	–	
Nitrogen Dioxide (NO2) ⁹	1 Hour	0.18 ppm (339 µg/m3)	Gas Phase Chemiluminescence	100 ppb (118 µg/m3)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)		0.053 ppm (100 µg/m3)	Same as Primary Standard	
Sulfur Dioxide (SO2) ¹⁰	1 Hour	0.25 ppm (655 µg/m3)	Ultraviolet Fluorescence	75 ppb (196 µg/m3)	–	Ultraviolet Flourescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m3)	
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm (for certain areas) ⁹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ⁹	–	
Lead ^{8, 11,12}	30-Day Average	1.5 µg/m3	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m3 (for certain areas) ¹¹	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m3)		
Visibility Reducing Particles ¹³	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride ¹¹	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

Footnotes

- 1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- 5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- 8 On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM2.5 standards (primary and secondary) were retained as 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 9 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 10 On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 11 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 12 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 13 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board (6/4/2013)

**Table III-2
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS**

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM ₁₀)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM _{2.5})	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

**Table III-3
AIR QUALITY MONITORING SUMMARY (2009-2012)
(Number of Days Standards Were Exceeded, and Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)**

Pollutant/Standard	2009	2010	2011	2012	2013
Ozone					
1-Hour > 0.09 ppm (S)	53	27	40	41	22
8-Hour > 0.07 ppm (S)	78	60	66	74	53
8- Hour > 0.075 ppm (F)	61	40	39	54	36
Max. 1-Hour Conc. (ppm)	0.050	0.129	0.135	0.124	0.139
Max. 8-Hour Conc. (ppm)	0.127	0.105	0.121	0.109	0.112
Carbon Monoxide					
1-hour > 20. ppm (S)	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0
Max 1-hour Conc. (ppm)	2.5	2.0	1.9	xx	xx
Max 8-hour Conc. (ppm)	2.2	1.7	1.7	1.7	1.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.084	0.069	0.062	0.067	0.072
Inhalable Particulates (PM-10)					
24-hour > 50 µg/m ³ (S)	10/52	2/59	2/60	1/55	3/60
24-hour > 150 µg/m ³ (F)	0/52	0/59	0/60	0/55	0/60
Max. 24-Hr. Conc. (µg/m ³)	64.	61.	54.	53.	102.
Ultra-Fine Particulates (PM-2.5)					
24-Hour > 35 µg/m ³ (F)	2/110	2/119	2/101	0/107	1/110
Max. 24-Hr. Conc. (µg/m ³)	37.8	39.3	65.0	34.8	55.3

xx = not reported on CARB website

Source: South Coast Air Quality Management District; San Bernardino 4th Street Monitoring Station data:
www.arb.ca.gov/adam/

- a. Photochemical smog (ozone) levels frequently exceed standards in San Bernardino. The 8-hour state ozone standard has been exceeded an average of 18 percent of all days in the past 5 years near the project site while the 1-hour state standard has been violated an average of 10 percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago.
- b. Measurements of carbon monoxide have shown very low baseline levels in comparison to the most stringent 1- and 8-hour standards.

- c. Respirable dust (PM-10) levels very infrequently exceed the state standard with approximately 7 percent of all measurement days above the threshold. However, the less stringent federal PM-10 standard was not violated in the last 5 years.
- d. Some fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). PM-2.5 readings rarely exceed the federal 24-hour PM-2.5 ambient standard (7 times in the last 5 years).

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Air Quality Planning

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The South Coast Air Basin (SoCAB) could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SoCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard. Refer to Table III-4 regarding future forecast emissions in tons/day within the SoCAB

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification sets a later attainment deadline (2024), but also requires the air basin to adopt even more stringent emissions controls.

**Table III-4
SOUTH COAST AIR BASIN EMISSIONS FORECASTS (Emissions in tons/day)**

Pollutant	2010^a	2015^b	2020^b	2025^b
NOx	603	451	357	289
VOC	544	429	400	393
PM-10	160	155	161	165
PM-2.5	71	67	67	68

^a 2010 Base Year.

^b With current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, 2013 Almanac of Air Quality

In other air quality attainment plan reviews, EPA has disapproved part of the SoCAB PM-2.5 attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the ARB submittal to EPA as part of the California State Implementation Plan (SIP) is expected to remedy identified PM-2.5 planning deficiencies.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing residential land use projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

Air Quality Impact

Standards of Significance

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
- c. Results in a cumulatively considerable net increase of any criteria pollutants 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 ozone precursors).
- d. Exposes sensitive receptors to substantial pollutant concentrations.
- e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the SoCAB for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines. Refer to Table III-5.

**Table III-5
DAILY EMISSIONS THRESHOLDS**

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project could generate vehicle trips that cause a CO hot spot.

Additional Indicators

The SCAQMD CEQA Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Except for the small diameter particulate matter ("PM-2.5") fraction of diesel exhaust generated by heavy construction equipment, there are no secondary impact indicators associated with project construction or operations.

For PM-2.5 exhaust emissions, recently adopted policies require the gradual conversion of delivery fleets to diesel alternatives, or the use of "clean" diesel if their emissions are demonstrated to be as low as those from alternative fuels. Because health risks from toxic air contaminants (TAC's) are cumulative over an assumed 70-year lifespan, measurable off-site public health risk from diesel TAC exposure would occur for only a brief portion of a project lifetime during construction, and only in dilute quantity because prevailing daytime winds are from west to east away from the closest existing homes.

Sensitive Receptors

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called "sensitive receptors." Sensitive population groups include young children, the elderly and the acutely and chronically ill (especially those with cardio-respiratory disease). Residential areas adjacent to a proposed site are considered to be sensitive to air pollution exposure because they may be occupied for extended periods, and residents may be outdoors when exposure is highest. The residential uses along the western project perimeter would be considered the closest sensitive receptors.

Construction Activity Impacts

Dust is typically the primary concern during construction of new buildings. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the proposed project site. As noted previously, emissions estimation for project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are estimated to be about 10 pounds per acre. This estimate presumes the use of reasonably available control measures (RACMs). The SCAQMD requires the use of best available control measures (BACMs) for fugitive dust from construction activities.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated to comprise 10-20 percent of PM-10.

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

Although exhaust emissions will result from on and off-site heavy equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Estimated construction emissions were modeled using CalEEMod2013.2.2 to identify maximum

daily emissions for each pollutant during project construction. Construction emissions include all emissions associated with the construction equipment, worker trips, and supply truck deliveries.

The proposed development of 277 single family residences was modeled in CalEEMod2013.2.2. As the project evolved, the number of units increased to 316 residential units. However, because the actual footprint of the area being developed (constructed), the following construction emission forecast is accurate. No additional ground disturbance will occur to support the 316 unit site preparation; daily building construction activities will remain the same; and the equipment list is considered sufficient to construct the additional units on a per day basis. The modeled prototype construction equipment fleet and schedule is indicated in Table III-6 and based on CalEEMod defaults for a project of this size.

**Table III-6
 CONSTRUCTION ACTIVITY EQUIPMENT FLEET**

Phase Name and Duration	Equipment
Grading (160 days)	1 Grader
	2 Excavators
	1 Dozer
	2 Scrapers
	2 Loader/Backhoes
Construction (500 days)	1 Crane
	3 Forklifts
	1 Generator Set
	1 Welder
	3 Loader/Backhoes
Paving (100 days)	2 Pavers
	2 Paving Equipment
	2 Rollers

Utilizing this indicated equipment fleet shown in Tables III-6 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table III-7.

**Table III-7
 CONSTRUCTION ACTIVITY EMISSIONS, MAXIMUM DAILY EMISSIONS (pounds/day)**

Maximal Construction Emissions	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
2015						
Unmitigated	6.9	79.2	52.3	0.1	12.6	7.1
Mitigated	6.9	79.2	52.3	0.1	7.4	4.9
2016						
Unmitigated	4.1	31.6	28.0	0.0	3.3	2.2
Mitigated	4.1	31.6	28.0	0.0	3.3	2.2
2017						
Unmitigated	38.1	29.2	26.8	0.0	3.1	2.1
Mitigated	38.1	29.2	26.8	0.0	3.1	2.1
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation. The only model-based mitigation measure applied for this project was watering exposed dirt surfaces at least three times per day to minimize the generation of fugitive dust during grading.

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. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

Construction-Related Localized Significance Thresholds

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project the nearest sensitive use is the adjacent residences and therefore a 25 meter distance was selected for analysis.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). 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.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, the following tables should be used to determine the maximum daily disturbed-acreage for comparison to LSTs. Table 8 shows the equipment fleet assigned by the computer model for the LST analysis.

**Table III-8
MAXIMUM DAILY DISTURBED ACREAGE PER EQUIPMENT TYPE**

Equipment Type	Acres/8-hr-day
Crawler Tractor	0.5
Graders	0.5
Rubber Tired Dozers	0.5
Scrapers	1

Based on this table, the proposed project will result in 3.0 disturbed daily acres during peak construction grading activity:

$$(1 \text{ dozer} \times 0.5 + 1 \text{ grader} \times 0.5 + 2 \text{ scrapers} \times 1 = 3.0 \text{ acres disturbed}).$$

The following thresholds and emissions in Table III-9 are therefore determined (pounds per day):

**Table III-9
LST AND PROJECT EMISSIONS (pounds/day)**

LST 3.0 acres/25 meters Central San Bernardino Valley	CO	NOx	PM-10	PM-2.5
Max On-Site Emissions *	1,230	203	10	6
Grading				
Unmitigated	51	79	12	7
Mitigated	51	79	7	5
Construction				
Unmitigated	19	30	2	2
Mitigated	19	30	2	2
Paving				
Unmitigated	15	20	1	1
Mitigated	15	20	1	1

CalEEMod Output in Appendix
*interpolated between a 2 and 5 acre site

LSTs were compared to the maximum daily construction activities. As seen in Table III-9, with active dust suppression, mitigated emissions meet the LST for construction thresholds. LST impacts are less-than-significant.

Therefore, the following construction mitigation measure is necessary to ensure LST thresholds are maintained below significance thresholds:

- Exposed surfaces shall be watered at least three times per day during grading activities

Operational Emissions

The project would generate 2,637 daily trips using trip generation numbers provided by the project traffic consultant. Operational emissions were calculated using CalEEMod2013.2.2 for an assumed project build-out year of 2018 as a target for full occupancy. As indicated in the preceding discussion on construction emissions, the project has been modified from a total of 277 units to 316 units. However, because the total number of condominium units has been increased, the project will actually generate about 37 fewer average daily trips. This finding is based on the updated trip generation analysis provided by Urban Crossroads (July 9, 2015), a copy of which is provided in Appendix 9b. Thus, the net emissions from this increase in units (277 to 316) results in a slight reduction in daily trips and a similar slight reduction in the emissions forecast in Table III-10. The operational emission impacts for the proposed project are shown in Table III-10. As shown, operational emissions will not exceed applicable SCAQMD operational emissions or CEQA thresholds of significance.

**Table III-10
DAILY OPERATIONAL IMPACTS**

Source	Operational Emissions (lbs/day)						
	ROG	NOx	CO	SO ₂	PM-10	PM-2.5	CO ₂
Area	12.1	0.3	23.0	0.0	0.5	0.4	5,353.4
Energy	0.2	2.1	0.9	0.0	0.2	0.2	2,658.4
Mobile	8.7	25.2	102.0	0.3	19.4	5.5	23,578.9
Total	21.0	27.6	125.9	0.3	20.1	6.1	31,590.7
SCAQMD Threshold	55	55	550	150	150	55	-
Exceeds Threshold?	No	No	No	No	No	No	NA

Source: CalEEMod2013.2.2 Output in Appendix
*assumes use of natural gas hearths for residential use

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact – Developments such as the proposed Mediterra project do not directly relate to the Air Quality Management Plan (AQMP) in that there are no specific air quality programs or regulations governing general development. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. Thus, even though the proposed project is seeking a General Plan Amendment, the proposed project will not increase the overall number of residential units that could be developed on the property. The South Coast Air Quality Management District (SCAQMD), however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections.

The SCAQMD CEQA Air Quality handbook provides a method of evaluating consistency with the current AQMP, the 2012 Air Quality Management Plan. The first step is to evaluate whether a project can increase the frequency or severity of an air quality standard violation or cause a new violation. The emission forecast for this proposed redevelopment project indicates that it will not exceed the thresholds of significant impact established by SCAQMD for both construction and operations. Based on this forecast and related finding, the proposed project would be consistent with the CEQA Handbook. The second step examines whether a project is consistent with the growth assumptions contained in the AQMP and related planning guidance in the Southern California Association of Government’s (SCAG) documents. The proposed Mediterra Project would be consistent with the City’s General Plan because it would not increase the total number of units that could be developed on the property. Consequently, the project remains consistent with SCAG’s Regional Comprehensive Plan and Guide (2008). Thus, based on the proposed project’s consistency with City and regional growth assumptions, the proposed project will not conflict with the AQMP. No mitigation is required.

- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*
- d) Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant With Mitigation Incorporated – Based on the modeled data summarized in the Background section and in Appendix 2, the project emissions will not exceed any of the established air

quality impact thresholds. Mitigation must be implemented to control fugitive dust and to reduce construction emissions to the extent feasible. The following measures will be implemented:

AIR-1 *The proposed Project and its contractors shall utilize the following Best Management Practices as outlined by SCAQMD Rule 403.*

- *Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).*
- *Water active sites at least three times daily.*
- *Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.*
- *Reduce traffic speeds on all unpaved roads to 15 mph or less.*
- *Install and maintain track-out control devices in effective condition at all access points where paved and unpaved access or travel routes intersect (e.g. Install wheel shakers, wheel washers, and limit site access.*
- *All streets shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers utilizing reclaimed water trucks if visible soil materials are carried to adjacent streets.*
- *The builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary to prevent transport of dust offsite*
- *Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours.*
- *All stockpiles of debris, dirt or other dust generating material shall be covered or watered three times daily.*
- *Suspend use of all construction equipment operations during second stage smog alerts.*

AIR-2 *The proposed Project and its contractors shall ensure that, during construction, contractors shall turn off all diesel-powered construction vehicles when vehicles are not in use and contractors shall prohibit idling of vehicles for longer than three minutes.*

AIR-3 *The proposed Project shall implement the following additional construction equipment exhaust controls:*

- *Utilize well-tuned off-road construction equipment.*
- *Establish a preference for contractors using Tier 3 or better heavy equipment.*

e) *Create objectionable odors affecting a substantial number of people?*

Less Than Significant Impact – Heavy-duty equipment in the proposed Project area during construction will emit diesel combustion odors. Such odors are noticeable but are common in the urban environment and because the construction activity would cease to occur after individual construction is completed, this odor source is not considered a significant adverse impact. Once occupied the residents will generate typical cooking odors (barbeques) and other odors associated with residential living, but none of these odors are considered to be abnormal or intrusive for the adjacent uses. No other sources of objectionable odors have been identified for the proposed Project, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

SUBSTANTIATION: The following analysis is based on three biology reports provided in Appendix 3: “General Biological Resources Report and Habitat Assessment for the Mediterra Project, City of Highland, San Bernardino County, California, Revised January 8, 2015, Jericho Systems Inc.; “45-Day Report Presence/Absence SBKR Survey Mediterra Residential Development Project, City of Highland, San Bernardino County,” November 30, 2014, Jericho Systems Inc.; and Focused Non-Breeding Period Survey for Coastal California Gnatcatcher (*Polioptila californica californica*) on Mediterra Residential Development Project City of Highland San Bernardino County, California,” February 2015, Jericho Systems, Inc. A copy of these documents are provided as Appendix 3 of this Initial Study. Note that although Development Scenario 2 would incorporate an additional 1.92 acres within the project boundary, this area was included in the footprint of the biological resources evaluation.

Environmental Setting

The project area is within the Southern California Mountains and Valleys Ecological Section (Subsection M262Bg San Gorgonio Mountains) of California, which includes mountains, hills and valleys of the Transverse Ranges and the Peninsular Ranges that are near the Pacific Ocean, but not bordering it. Much of the section is close enough to the Pacific Ocean for the climate to be modified moderately marine influence. This subsection comprises the lower and warmer parts of the San Bernardino Mountains, which are between the southern branch of the San Andreas Fault on the south-southwest and the Mojave Desert on the north. It extends from the Cajon Pass eastward to near the Pipes Canyon fault. It includes mountains between the Mission Creek fault and the Banning fault on the south. The climate is hot to temperate and sub-humid. Marine effects on climate are moderate on the south-southwest side and slight on the north and east sides of the mountains.

Elevations within the proposed project area range from approximately 1,660 to 2,080 feet above mean sea level. The terrain consists of steep foothills and boulder-littered floodplain, with rocky outcrops sloping downward from the east to the west. The area under consideration is surrounded by rugged foothill topography and alluvial fan. The local area climate is semi-arid, with an average annual temperature of 67°F and a range from 25-110°F. The rainy season begins in November and continues through March, with the quantity and frequency of rain varying from year to year. The average annual rainfall is approximately 18.1 inches. The general vicinity consists of open space, vacant land, orchards, and a mixed suburban and rural residential community.

The surrounding land use consists of agricultural (citrus groves), residential development, utilities infrastructure, and undeveloped open space. The area adjacent to the northern boundary of the site consists entirely of San Bernardino National Forest open space. Land to the east of the site consists of San Bernardino National Forest, citrus groves, and open space. To the south of the site lies the Santa Ana River, open space, citrus groves, utility infrastructure (East Valley Water District Facility), and water conservation recharge basins. West of the proposed project site, land use consists of residential development (north of Greenspot Road) and open space (south of Greenspot road).

The habitat types within the project site consist of post-fire coastal sage scrub (CSS) [monotypic *Encilia farinosa*], active citrus groves, disturbed Riversidean Alluvial Fan Sage Scrub (RAFSS), chamise chaparral and southern willow scrub. The CSS (monotypic *Encilia farinosa*) occurs along the northern hillside areas. Of the 176.7 acres, approximately 50 acres in the central portion of the project site consists of orange groves and disturbed ground. An approximate 2.5 acre patch of RAFSS occurs immediately adjacent to the north of Greenspot Road near the southern boundary of the Project site. Immediately adjacent to the south of Greenspot Road, within the southwest corner of the Project site is an approximately 9-acre patch of chamise chaparral. A thin swath of southern willow scrub is found along an unnamed drainage that crosses the east side of the project area.

Environmental Surveys

A general biological survey was conducted for the Project site (Appendix 3a).

Sensitive Plant Communities

According to the results of field survey, two sensitive habitats were observed on the subject property: RAFSS and Southern Willow Scrub. The subject property encompasses 178 acres in the eastern portion of the City of Highland, San Bernardino County, California. The development envelope, or land disturbing footprint, associated with the proposed project primarily includes the central portion of the subject property, with less than a 10 acre disturbance area located south of Greenspot Road. According to the most current project design, the RAFSS habitat and southern willow scrub habitat associated with the

unnamed drainage feature will be avoided. No development or land disturbing activities are proposed in these areas.

Sensitive Plant Species

Of the 18 sensitive plant species documented within the Redlands and Yucaipa quadrangles, six have a moderate to high potential to occur within the southern boundary of the subject property adjacent to Greenspot Road within the RAFSS and Chamise Chaparral habitats. The sensitive plant species include the following:

- Santa Ana River woolly-star
- Slender horned spineflower
- Plummer's mariposa lily (*Calochortus plummerae*)
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*)
- White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*)
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)

A sensitive plant survey conducted in 2014 (Jericho Systems, January 8, 2015) determined that these species do not exist on site, and are presumed absent from the project site.

Sensitive Bird Species

Although the federally-listed endangered least Bell's vireo (LBVI) and Southwestern willow flycatcher (SWWF) have been documented to exist within a few miles of the subject property, no suitable habitat exists on site for these two species. The narrow strip of southern willow scrub habitat found in association with the unnamed drainage feature was determined to provide marginal habitat that is insufficient to support either of these species. Further, this area will be avoided and set aside as open space. No potential direct or indirect impacts to LBVI or SWWF can be identified and focused surveys for either of these two species are not recommended.

Burrowing owl (BUOW) is considered a Species of Special Concern by the CDFW. No individuals or sign have been observed within the vicinity of the subject property, nor have BUOW been historically (within the last 3 years) identified on or adjacent to the site. The nearest recorded BUOW occurrence to the site is approximately 5.6 miles southwest of the site at the San Bernardino International Airport and within City Creek along the south side of 3rd Street, west of Palm Avenue.

The State- and federally-listed threatened California gnatcatcher (CAGN) is documented to occur close to the subject property. The primary constituent elements (PCEs) for this species (RAFSS and coastal sage habitats with proximal non-sage scrub habitats) are present within the property and surrounding areas. Focused CAGN surveys conducted on the subject property in 2014 (Jericho Systems, February 2015) were negative, as no CAGN were observed. Further, the project site is not located within federally designated critical habitat for CAGN.

Migratory Birds

Vegetation suitable for nesting birds exists throughout the proposed project site. Most birds are protected by the Migratory Bird Treaty Act.

San Bernardino Kangaroo Rat

The federally-listed endangered San Bernardino kangaroo rat (SBKR) has been documented to occur approximately 2 miles south of the subject property within the active Santa Ana River Channel where suitable habitat occurs, according to the results of recent surveys (refer to Appendix 3b that discusses the

locations of these surveys). Primary Constituent Elements (PCEs) for this species are present in the small patch of RAFSS habitat located on the southern portion of the site. A protocol-level presence/absence survey was conducted in the suitable portions of the Project site (Appendix 3b). No SBKR were trapped during the protocol-level presence/absence survey; therefore, SBKR are determined to not exist on site, and are presumed absent from the project site.

All federal agencies are required to consult with the USFWS regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a permit from the Corps). If there is a federal nexus, such as a CWA Section 404 permit from the USACE, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS under Section 7 of the federal Endangered Species Act (ESA).

Approximately 11.7 acres of the subject property is located within the Santa Ana River critical habitat Unit (Unit 1). This SBKR critical habitat unit abuts the south side of Greenspot Road, PA8. The portion of the subject property that is within SBKR critical habitat is in the southwest of the site, on the south side of Greenspot Road. The total impact area to SBKR critical habitat cannot exceed 3.8 acres based on the size of PA8 but the exact area of disturbance is not known at this time. However, the proposed project is not federally funded and will not require a CWA Section 404 permit from the USACE. Therefore, there is no federal nexus which would trigger a Section 7 Consultation with the USFWS for loss or adverse modification to Critical Habitat. As a result, the designation of Critical Habitat will not affect development of the project.

Sensitive Reptiles

The western spadefoot is a Species of Special Concern (SSC), according to the California Department of Fish and Wildlife (CDFW). Suitable habitat for this species exists within the southern half of the subject parcel, the California Natural Diversity Data Base (CNDDB) indicates presence of this species on site, and surveys conducted on the Project site observed this species immediately adjacent to the southern boundary of the subject property in 2013 and 2014 (HERP, 2014). The subject parcel is within one of the few areas in the region where this species has been documented, specifically, where they were observed breeding in rain pools within the water conservation basins immediately south and southeast of the subject property in early 2014.

Given that western spadefoot toad have been observed adjacent to the southern boundary of the site, and potential breeding habitat exists within the unnamed drainage on site, it is likely that this species is present. Measure BIO-3 will minimize and reduce potential impacts to western spadefoot toad to less than significant.

Additionally, the California glossy snake is proposed to be designated as a SSC and should be considered as such. Suitable habitat for California glossy snake exists within the southern half of the subject property, the CNDDB indicates presence of this species on the property, the species was observed immediately adjacent to the southern boundary of the subject property and within the southern corner of the subject property in 2013 (HERP, 2014). In early 2014, they were also observed on Greenspot Road along the subject property and on dirt access roads adjacent to the subject property (Jericho Systems, 2014).

- a) *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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant With Mitigation Incorporated – Based on surveys of the project area, there will be few impacts, direct or through habitat modification, on species identified as candidate, sensitive, or special status species, in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Candidate species identified, and their survey results, and the proposed mitigation include the following:

**Table IV-1
SENSITIVE SPECIES SUMMARY**

Species	Designation	Survey Results	Mitigation Required	Mitigation Measure #
Least Bells Viero	Federal – Endangered	Marginal suitable habitat in Project area not scheduled for development; species not anticipated to be present due to low-quality habitat	No	
Southwestern Willow Flycatcher	Federal – Endangered	Marginal suitable habitat in Project area not scheduled for development; species not anticipated to be present due to low-quality habitat	No	
Burrowing Owl	State – Species of Special Concern	Suitable habitat exists on Project site; species not detected on Project site.	Yes – preconstruction survey	BIO-1
California gnatcatcher	State – Threatened Federal – Threatened	Suitable habitat exists on Project site; species not detected on Project site during protocol survey.	No.	
San Bernardino kangaroo rat	Federal – Endangered	Suitable habitat exists on Project site; species not detected on Project site during protocol survey.	No.	
Western spadefoot	State – Species of Special Concern	Suitable habitat exists on Project site; species detected on Project site.	Yes – preconstruction surveys and avoidance	BIO-3
California glossy snake	State – Species of Special Concern	Suitable habitat exists on Project site; species detected on Project site.	Yes – biological monitor	BIO-4
Migratory birds	Federal – Migratory Bird Treaty Act	Suitable habitat exists on the Project site; nesting bird season varies between March and September	Yes – Preconstruction Nesting Bird Surveys; develop Bird Nesting Management Plan.	BIO-5

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Less Than Significant – The development envelope, or land disturbing footprint, associated with the proposed project primarily includes the central portion of the subject property, with less than a 10 acre

disturbance area located south of Greenspot Road. According to the development plans, the RAFSS habitat and unnamed drainage feature with associated southern willow scrub habitat will be avoided. No development or land disturbing activities are proposed in these areas.

No aspect or component of the project will result in the alteration or filling of jurisdictional waters or streambed. No impacts will occur and no regulatory approvals are required from the following regulatory agencies: U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW).

- c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact – There are no federally protected wetlands identified to exist on the subject project site.

- d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant With Mitigation Incorporated – Given the site's geographic location and surrounding land uses, the project site is not considered an essential component of a wildlife corridor. No such corridor is documented within or adjacent to the project site. This project will not impede or interfere with resident or migratory wildlife movement through established wildlife corridors and will not impede or interfere with the use of native wildlife nursery sites.

Suitable avian nesting opportunities occur on and adjacent to the project site. Pursuant to the Migratory Bird Treaty Act and California Fish and Game Code, the removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season to avoid impacts to nesting birds. The nesting season generally extends from February 15 through August 31, but can vary slightly from year to year based upon seasonal weather conditions. If construction or vegetation clearing activities occur during the avian nesting season, then a qualified biologist will conduct a nesting bird survey and develop a nesting bird plan in coordination with the CDFW.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact – The City of Highland protects heritage trees through its Municipal Code Section 16.64.040. There are no heritage trees in the Project development area.

- f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact – There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan that exists over the subject Project area.

Mitigation Measures

- BIO-1** ***Burrowing Owl. Preconstruction presence/absence surveys for burrowing owl shall be conducted within 30 days prior to any onsite ground disturbing activity. The burrowing owl survey shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife. In the event this species is not identified within the project limits, no further mitigation is required. If during the preconstruction survey,***

the burrowing owl if found to occupy the site, Mitigation Measure BIO-2 shall be required.

BIO-2 *If burrowing owls are identified during the survey period, the City shall require the project applicant to take the following actions to offset impacts prior to ground disturbance:*

Active nests within the areas scheduled for disturbance or degradation shall be avoided from February 1 through August 31, and a minimum of 250-foot buffer shall be provided until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.

If impacts on occupied burrows in the non-nesting period are unavoidable, onsite passive relocation techniques may be used if approved by the CDFW to encourage owls to move to alternative burrows outside of the impact area.

If relocation of the owls is approved for the site by the CDFW, the City shall require the developer to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site. The relocation plan must include all of the following:

- The location of the nest and owls proposed for relocation.*
- The location of the proposed relocation site.*
- The number of owls involved and the time of year when the relocation is proposed to take place.*
- The name and credentials of the biologist who will be retained to supervise the relocation.*
- The proposed method of capture and transport for the owls to the new site.*
- A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control).*

BIO-3 *Western Spadefoot. If construction is to occur in winter or spring (i.e., between November 1 and May 31), focused pre-construction surveys shall be conducted following rain events for the western spadefoot within a 1,200-foot buffer of potential breeding pools. The buffer is consistent with literature values for average terrestrial use by amphibians (Semlitsch and Brodie 2003).*

Appropriate survey methods shall be employed to maximize the possibility of detecting the western spadefoot, such as time of day and specific locations searched. The survey shall be phased into specific areas where construction will be taking place. A survey of the rain pool(s) for eggs, tadpoles, and toadlets (i.e., metamorphs) by a qualified biologist familiar with all life stages of the western spadefoot shall also be necessary to identify and translocate western spadefoot tadpoles to adjacent pool sites known to support this species. If western spadefoot are determined present in rain pools during survey, land disturbing activities within rain pools and the associated 1,200-foot buffer will be avoided while the pools are wet during the western spadefoot breeding season (March 1 through May 31).

- BIO-4** *California Glossy Snake.* *The subject property encompasses 178 acres in the eastern portion of the City of Highland, San Bernardino County, California. The development envelope, or land disturbing footprint, associated with the proposed project includes less than 10 acres of disturbance area that is suitable glossy snake habitat, located south of Greenspot Road. Therefore, a qualified biological monitor familiar with glossy snake shall be present during land disturbing activities within the suitable habitat area for glossy snake, to monitor for this species and if possible translocate any glossy snakes found during grubbing and grading.*
- BIO-5** *Nesting Birds.* *A migratory nesting bird survey of the Project's impact footprint shall be conducted by a qualified biologist within 2 weeks and 3 days prior to initiating vegetation clearing or ground disturbance. If active nests are found during the pre-construction nesting bird surveys, a Nesting Bird Plan (NBP) will be prepared and implemented. At a minimum the NBP will include guidelines for addressing active nests, establishing buffers, monitoring, and reporting. The NBP will include a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be determined by the biologist in consultation with the CDFW, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be visually marked in the field, which no vegetation clearing or ground disturbance shall commence until the qualified biologist has determined the nest in question has become inactive (failed or successful with fledged young birds) and a monitoring report has been submitted to the CDFW for review and approval. Construction within the designated buffer area shall not proceed until approved by the site biologist.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

SUBSTANTIATION: The “Historical/Archaeological Resources Survey Report Tentative Tract Map No. 18893 City of Highland, San Bernardino County, California January 21, 2015,” was utilized for the following analysis. A copy of this document is provided as Appendix 4 of this Initial Study. Note that although Development Scenario 2 would incorporate an additional 1.92 acres within the project boundary, this area was included in the footprint of the cultural resources evaluation.

Report Findings

CRM TECH, a cultural resources consulting firm, prepared a technical report of findings for cultural resources and resource values for the project site. This investigation included a records search; historical research; consultation with Native Americans; and a field survey. Based on these investigative efforts, the Report reached the following conclusions:

The purpose of the study is to provide the City of Highland with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any “historical resources,” as defined by CEQA, that may exist in or around the project area.....

The results of the records search indicate that Site 36-005978, consisting of a historic-period structural foundation, a segment of irrigation ditch, and a refuse scatter in a citrus grove, was previously recorded within the project boundaries, while three linear features dating to the mid- and late 19th century, namely the North Fork Canal (36-006544), the Cram and van Leuven Ditch (36-006848), and the Santa Ana Canyon Road (36-008094), were recorded as lying partially across the project area. With the exception of 36-006848, these sites were relocated at their reported locations, and the site boundary for 36-005978 was significantly expanded to include additional irrigation features, a barn, and a single-family residence. No other potential “historical resources” were encountered within the project area.

Among the three sites that remain in existence in the project area, 36-006544 appears to meet CEQA’s definition of a “historical resource” due to the significant role it once played in the early agricultural growth of the Highland area. However, the physical components of the canal in the project area, now an abandoned underground conduit under a concrete cover and several feet of soil, are of much later vintage than the period of significance for the site, namely the late 19th century. As such, they do not contribute to the significance of Site 36-006544, which is largely symbolic in nature. The potential impact

of the proposed project on these features, therefore, would not constitute "a substantial adverse change in the significance of a historical resource" (PRC Para 21084.1). The term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register or historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.5(a)(1)-(3)).

Three historic-period sites are known to be present within or partially within the project area. Among these sites, Site 36-006544 appears to meet CEQA's definition of a "historical resource," but the proposed project will not adversely affect its significance. The other two sites, 36-005978 and 36-008094, do not appear to qualify as "historical resources" under CEQA provisions. No other potential "historical resources" were encountered during the course of this study. A fourth site previously recorded as lying partially across the project area 36-006848, is no longer in existence at this location.

Based on these findings, and pursuant to PRC Para. 21084.1, CRM TECH recommends to the City of Highland that the proposed project will not cause a substantial adverse change to any known historical resources. No further cultural resources investigation is recommended for the project unless development plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during any earth-moving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

- a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant With Mitigation Incorporated – Due to the findings in the Historical/Archaeological Resources Survey Report, none of the existing sites are eligible for listing on the California Register of Historic Resources. Although no archaeological sites were identified, if prehistoric archaeological materials are encountered, all work in the area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

As discussed in the Agricultural section of this document, the project site contains soils comprised of Soboba-Hanford Association. This soil has been formed in recent granitic alluvium on valley floors and alluvial fans. Most of the area is underlain by Holocene-age sediments, aged 10,000 years to the present. These sediments consist of sands and gravels deposited by the Santa Ana River and by other streams originating in the San Bernardino Mountains. Since Holocene sediments generally have a low potential to contain paleontological (fossil) resources, a low paleontological sensitivity for the project area is expected. However, construction of the proposed project could result in a potentially significant impact to paleontological resources. Although the project site is underlain by Holocene units, these units may overlie older Pleistocene alluvial sediments, which have a "high" potential for impacts to significant fossil resources. Therefore, should older Pleistocene deposits be encountered during project-related earthmoving, impacts to significant fossil resources might occur.

The Implementation of Mitigation Measures CUL-1 through CUL-3 would reduce potential impacts to historical, archaeological, or paleontological resources. These measures would ensure that any accidental exposure of subsurface resources would be properly managed.

CUL-1 If subsurface prehistoric or historic resources over 50 years of age are encountered during land modification activities, then activities in the immediate area of the find shall be halted so that a qualified professional archaeologist can assess the find, determine its significance, and make

recommendations for appropriate mitigation measures consistent with the provisions of Public Resources Code section 21083.2 (b), (c) and (d). The developer shall fund recommended management requirements for accidentally exposed archaeological materials.

CUL-2 *If human remains and/or “grave goods” (i.e., funerary objects) are found within the Project area, the City or its designee shall notify the San Bernardino County coroner as soon as possible, in any event not later than 24 hours after the time of discovery. The coroner shall determine whether or not the circumstances, manner, and cause of death require further investigation as a crime scene. If not, the coroner shall endeavor to determine if the remains are Native American. This shall be accomplished in consultation with a physical anthropologist, human osteologist, or other qualified specialist.*

If the coroner determines that the remains are Native American and not evidence of a crime, he/she shall contact the Native American Heritage Commission (NAHC) per CH&SC §7050.5(b). The NAHC would then immediately identify the persons or Tribe it believes to be to be most likely descended from the deceased Native American. With the permission of the landowner, the most likely descendant (MLD) may inspect the site of the discovery and recommend means for treating or disposing of the human remains and any associated grave goods with appropriate dignity. The MLD shall complete the inspection and make a recommendation within 48 hours of notification by the NAHC.

If the NAHC is unable to identify an MLD, or if the MLD fails to make a recommendation, or if the landowner rejects the MLD’s recommendation and mediation by the NAHC fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and any associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC §5097.98).

If the human remains are not those of a Native American, the City shall consult with the coroner, a biological anthropologist or human osteologist, and a qualified historical archaeologist to develop an appropriate plan for treatment and to determine if historical research, further archaeological excavations, and/or other studies may be necessary before a treatment plan can be finalized. Also, if the remains are those of an identifiable individual and not evidence of a crime, the City shall notify the next-of-kin, who may wish to influence or control the subsequent disposition of the remains.

If the next-of-kin (for non-Indian remains) or MLD so requests, the City shall coordinate discussions among concerned parties to determine if reburial at or near the original site in a location not subject to further disturbance is feasible. If a proximate reburial location is not feasible, then the City may continue to coordinate discussions until a final disposition of the remains is decided upon.

Following the initial discovery and identification of any human remains, funerary objects, sacred objects, or objects of cultural patrimony within the Project area, no further archaeological excavation, recording, or analysis of such remains and/or objects shall occur until after the MLD has made a

recommendation to the landowner with respect to the disposition of the remains and/or objects. Thereafter, the City shall take into account the recommendation of the MLD, and shall decide on the nature of any archaeological excavation, recording, or analysis to be done of the discovered remains and/or funerary objects.

CUL-3 If subsurface paleontologic resources are encountered during land modification activities, then activities in the immediate area of the find shall be halted so that a qualified professional archaeologist can assess the find, determine its significance, and make recommendations for appropriate mitigation measures consistent with the professional management standards for paleontological resources. The developer shall fund recommended management requirements for accidentally exposed paleontological materials.

Implementation of the above measures can reduce potential impacts to cultural and paleontological resources to a less than significant level.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact – There are no known human remains within the vicinity of the project site, and no conditions exist that suggest human remains are likely to be found on the project site. It is not anticipated that implementation of the project would disturb human remains, including those interred outside of formal cemeteries. However, ground-disturbing activities, such as grading or excavation, have the potential to disturb human remains. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. The Native American Graves Protection and Repatriation Act (NAGPRA) includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. State of California Public Resources Health and Safety Code Section 7050.5-7055 describes the general provisions regarding human remains, including the requirements if any human remains are accidentally discovered during excavation of a site. As required by state law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the “most likely descendant.” If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. As this is existing law and a mandatory measure to manage an accidental exposure of human remains, no additional mitigation is required to ensure human remains can be properly managed if encountered on this project site.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
<ul style="list-style-type: none"> 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. 		X		
<ul style="list-style-type: none"> Strong seismic ground shaking? 		X		
<ul style="list-style-type: none"> Seismic-related ground failure, including liquefaction? 			X	
<ul style="list-style-type: none"> Landslides? 		X		
b) Result in substantial soil erosion or the loss of topsoil?		X		
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

SUBSTANTIATION: Several geotechnical reports were prepared over the past 15 years for the project site/area. The most recent report contains a synthesis of information and was utilized for the following analysis. This report is titled: "Fault Hazard Investigation Summary Report Proposed Residential Development Phase 1 of the Preliminary Tract 18893 East Highlands Area San Bernardino County, California, LOR Geotechnical Group, Inc.; September 16, 2014." A copy of this document is provided as Appendix 5 of this Initial Study.

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

- *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.*

Less Than Significant With Mitigation Incorporated – According to the LOR geotechnical report, the area being proposed for development by the project does not appear to be subject to fault rupture even though it is located within an Alquist-Priolo Earthquake Fault Zone. Specifically, LOR findings state: “Our observations and review of aerial photographs lead us to concur with Matti, et al. (2003) that the San Andreas fault appears to cross the northern portion of the site, north of the proposed development area, as one major break as indicated their recent map...” To ensure that structures and humans are not exposed to fault rupture, the following mitigation measure will be implemented.

GEO-1 *Based on findings of the geotechnical investigation report, all structures for human occupancy shall be setback from the toe of the hillside along the northern side of the proposed development area a minimum distance of 50 feet. Additional trenching is required prior to finalizing the design of Phases 2-4 and the trenching and a report of findings shall be reviewed and approved prior to approval of the designs in these phases. This measure addresses both slope stability and will increase the Restricted Use Zone width established for possible fault hazards in virtually all areas.*

- *Strong seismic ground shaking?*

Less Than Significant With Mitigation Incorporated – According to the LOR geotechnical report, the project site will be subject to strong seismic ground shaking over the life of the project. Several regional faults are discussed, but the two faults that pose the greatest seismic ground shaking hazard are the nearby San Andreas Fault and the San Jacinto Fault. Both are active faults and they represent significant groundshaking related to earthquakes ranging from Magnitude (M) 6.5 to M8.0. The following mitigation measure is designed to minimize structure damage and protect human life in the event an earthquake.

GEO-2 *Based upon the comprehensive geotechnical investigation all inhabited structures shall be designed to do the following:*

- Resist minor earthquakes without damage;*
- Resist moderate earthquakes without structural damage, but with some nonstructural damage; and*
- Resist major earthquakes, of the intensity or severity of the strongest forecast to occur within the City of Highland, without collapse, but with some structural, as well as nonstructural damage.*

- *Seismic-related ground failure, including liquefaction?*

Less Than Significant Impact – According to the LOR geotechnical report, the project site has a low probability of being exposed to liquefaction hazards. Specifically, the document indicates that the depth to static groundwater at this time is at least 50 feet below the ground surface within the proposed development area of the site. “In addition, it is our opinion that the coarseness of the underlying alluvial materials greatly reduces the liquefaction potential and that, overall, the potential for liquefaction occurring at the site is low. Based on these findings, the proposed project’s exposure to seismic-related ground failure due to liquefaction is considered to be a less than significant adverse impact.

- *Landslides?*

Less Than Significant With Mitigation Incorporated – The portion of the project site where the development is proposed does not have substantial topographic variation and is relatively flat. According to the LOR geotechnical report, the area adjacent to the foothills may be exposed to some potential slope failure. Mitigation Measure GEO-1 contains a setback to minimize exposure to significant landslide hazards. With implementation of this measure the potential impact from exposure to landslides will have a less than significant adverse impact.

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

Less Than Significant With Mitigation Incorporated – The proposed project site falls outside areas with generalized erosion potential due to the shallow slopes on the property. However, implementation of the proposed project may result in erosion or unstable soil conditions from excavation, grading or fill. Grading of the property to accommodate the development may expose the soils onsite to wind and water erosion during and immediately following construction. As noted, the site is relatively flat and would not require an extensive or significant amount of soil movement, and the site would maintain the same general gradient after development. Specific fugitive dust control measures have been identified in this document in Section III. Accordingly, it is expected that impacts related to soil erosion will be less than significant with implementation of mitigation. Mitigation Measures GEO-3 and GEO-4 have been included in an abundance of caution to ensure that impacts from the extensive size of the project grading will be less than significant. Mitigation Measure GEO-3 requires the applicant to provide the City with a Soil Erosion Control Plan that shall include measures designed to reduce wind and water erosion of the site during and after construction. Mitigation Measure GEO-4 requires that all permanent landscaping shall be installed prior to final occupancy; further, that after construction, disturbed soils shall be landscaped, or otherwise treated, to protect soils from wind and water erosion. Implementation of these measures would ensure that potential impacts related to erosion are reduced to less than significant levels.

GEO-3 The applicant shall be required to include a Soil Erosion Control Plan as part of the Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP) for the project site. This section of the SWPPP/WQMP shall include measures designed to control wind and water erosion on the site during and after construction. These Best Management Practices (BMPs) shall include measures including landscaping, hardscaping and incorporation of site retention facilities to reduce the volume of stormwater runoff, minimize soil exposed to concentrated runoff and infiltrate surface runoff on the project site in accordance with the City's Stormwater Management ordinance (Section 15.54.160 of the Municipal Code). These best management practices shall be monitored by the Municipal Utilities and Engineering Services Department and the Building & Safety Division of the Development Services Department to verify effectiveness during construction and future occupancy.

GEO-4 All permanent landscaping shall be installed prior to final occupancy, and, following construction, disturbed soils shall be landscaped, or otherwise treated (covered with gravel, mulch or hardscape, to protect soils from wind and water erosion; to be monitored by the Development Services Department, Planning Division, and satisfied prior to occupancy of the project.

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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact – Geotechnical Investigations determined that the project site contains alluvium that generally consists of loose, to very loose, silty fine sand, and groundwater as being more than 50 feet below the ground surface and the site is not within an area that is underlain by soils that have high liquefaction potential. Given the low potential for onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse, the proposed project will have a less than significant impact regarding this criterion.

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

Less Than Significant Impact – Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. The project site is not within an area that is underlain by soils that have high expansion potential based on the data in Appendix 5 and the Soil Survey. The site is underlain by alluvial soils that generally consist of interbedded layers of loose to medium dense silty fine sand and fine sandy silt. Therefore, no additional mitigation measures are required. Thus, the proposed project will have a less than significant impact.

e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

No Impact – The project would be required to connect to East Valley Water District sewer lines. No septic tanks or alternative wastewater disposal systems have been proposed. Therefore, there is no impact to this criterion.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

SUBSTANTIATION: The “Air Quality and GHG Impact Analyses Mediterra at East Highlands City of Highland, California,” Giroux & Associates, February 2015 was utilized for the following analysis. A copy of this document is provided as Appendix 2 of this Initial Study.

Background: Greenhouse Gas Emissions

The following information is abstracted from Appendix 2 and summarized in this section of the analysis.

“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 greenhouse gases 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 in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. 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.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 97, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.

- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Thresholds of Significance

In response to the requirements of SB 97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment; or
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative 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 (MT) CO₂ equivalent/year. In September 2010, the Working Group released revisions which recommended a threshold of 3,500 MT CO₂e for residential use projects. This 3,500 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Project Impact: Construction GHG Emissions Forecast

The build-out timetable for this project is assumed to be approximately three years. During project construction, the CalEEMod2013.2.2 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table VII-1.

**Table VII-1
 CONSTRUCTION EMISSIONS (Metric Tons CO₂e)**

	CO₂e
Year 2015	688.3
Year 2016	529.2
Year 2017	430.8
Total	1,648.3
Amortized	55.0

*CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

Project Impact: Operational GHG Emissions Forecast

The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO₂(e) emissions are summarized in the CalEEMod2013.2.2 output files found in Appendix 2. As indicated in the preceding discussion on construction emissions, the project has been modified from a total of 277 units to 316 units. However, because the total number of condominium units has been increased and the number of detached SFRs decreased, the project will actually generate about 37 fewer average daily trips. This finding is based on the updated trip generation analysis provided by Urban Crossroads (July 9, 2015), a copy of which is provided in Appendix 9b. Thus, the net emissions from this increase in units (277 to 316) results in a slight reduction in daily trips and a similar slight reduction in the emissions forecast in Table VII-2.

The total operational and annualized construction emissions are identified in Table VII-2.

**Table VII-2
 OPERATIONAL EMISSIONS**

Consumption Source	MT CO₂(e) tons/year
Area Sources	65.0
Energy Utilization	1,039.5
Mobile Source	3,704.6
Solid Waste Generation	147.7
Water Consumption	108.2
Annualized Construction	55.0
Total	5,120.0
Guideline Threshold	3,500

This total is above the guideline threshold of 3,500 MTY CO₂e for residential projects suggested by the SCAQMD. Project-related GHG emissions would not exceed the 10,000 MT CO₂e level for industrial sources (although the project is not industrial in nature, this comparison is provided as a reference because it is the only formally adopted numerical CEQA threshold for GHGs). This project total includes both direct (amortized construction, area source and on-site mobile emissions) and indirect (electricity, solid waste and water usage) GHG emissions. Hence, the project will result in generation of a substantial level of greenhouse gases. The finding triggers a requirement to incorporate reasonable and feasible project design features to reduce project-related GHG emissions.

In order to support a finding that project-related GHG emissions have been reduced as much as is reasonably possible, the project must be consistent with applicable plans and policies. Unfortunately, there exists a patchwork quilt of guidance on how to determine such consistency. The most promising course of action is that many local jurisdictions are adopting Climate Action Plans (CAP) to specifically address the shared responsibilities of developers, government and various agencies in minimizing GHG emissions as they affect climate change.

The San Bernardino Associated Governments (SANBAG) has developed a model CAP recommended for adoption by its member communities. SANBAG released the Final version of the San Bernardino County Regional Greenhouse Gas Reduction Plan and its Final Environmental Impact Report (FEIR) for certification on March 5, 2014 at the SANBAG Board of Directors Meeting. The regional plan presents the goals identified by the participating cities in reducing GHG emissions by levels they have individually selected. The regional plan includes an inventory of 2008 GHG emissions, forecast of 2020 emissions, GHG reduction measures for each participating city, and baseline information for the development of city climate action plans. All comments received in response to the DEIR and the Regional Greenhouse Reduction Plan have been reviewed and considered by SANBAG in preparation of the FEIR. Within the EIR, the City of Highland has contributed a chapter entitled *Greenhouse Gas Inventories and Reduction Plan EIR (Volume X: Draft 4.9 City of Highland)*.

The draft CAP quantifies the existing baseline CO₂(e) emissions, estimates the future GHG emissions for the business as usual (BAU) scenario, calculates the emissions reductions likely to be achieved from state and federal programs, and then realistically estimates the additional reductions that could be realized from local initiatives. The City of Highland has selected a goal to reduce its community GHG emissions to a level that is 22 percent below its projected emissions in 2020. The City will meet and exceed this goal through a combination of state (63%) and local (37%) efforts. The City actually exceeds the goal with only state/county level actions, but has committed to several additional local measures. The Pavely vehicle standards, the states low carbon fuel standard, the renewable portfolio standards (RPS), and other state measures will reduce GHG in Highland's on-road, solid waste, and building energy sectors in 2020.

The objective of the CAP would be to achieve a combined 37 percent reduction (22% growth and 15% AB-32 target) by 2020. The estimated attainable reduction from all state and regional programs is 32%. An additional reduction of 5% or more is needed from local actions. Table VII-3 summarizes the annual GHG emissions for baseline conditions, for future growth, for existing GHG reduction programs and for feasible local actions. With realistic estimates of GHG reduction effectiveness, AB-32 targets can be reached.

**Table VII-3
SANBAG HIGHLAND EMISSIONS (MT CO₂e / year)**

Scenario	Annual Emissions	
2008 Baseline	267,058	
2020 BAU	303,538	(+12%)
2020 With Plan	196,157	
Reductions	107,381	(-35%)

The above table demonstrates that Highland exceeds its emissions reduction goal.

Most of the “local measures” apply to city-wide implementation actions beyond the scope of any single development such as Mediterra. Table VII-4 summarizes the estimated local measure reduction potential. Measures such as more bicycle trails, coordinated traffic signals, expanded transit routes or schedules, fixed guide ways, etc. cannot be implemented effectively on a single project basis. A development can support these measures by providing space or infrastructure for their integration into a regional system, but cannot implement them individually. The project design features (PDF) for Mediterra that are consistent with the model CAP include:

Energy Conservation, Green Building Design and Recycling

- Coordinate energy-related policies and actions with local utilities and energy agencies.
- Incorporate passive solar design techniques including building orientation, energy-saving materials, roof overhangs, and window and door placement.
- Channel runoff to permeable surfaces through the design of roofs and rain gutter systems and drainage courses.
- Distribute and participate in incentive programs for incorporation of solar and photovoltaic panels (active solar) into existing or new buildings.
- Encourage new development to provide reasonable and secure space for bicycle storage.

Solid Waste Management/Recycling

- Continue to implement the policies and programs identified in the City’s SRR (Source Reduction and Recycling Element), HHW (Household Hazardous Waste Element), and develop measures to evaluate their effectiveness.

Green Building and Planning Practices

- Encourage landscaping practices that increase energy efficiency and conserve natural resources.
- Using native and drought-tolerant landscaping (xeriscaping) and drip irrigation to conserve water resources.
- Encourage designs that channel runoff to permeable surfaces.
- Encourage transit-oriented, infill development to make efficient use of existing land.
- Encourage site planning and building orientation that maximizes solar and wind resources for cooling and heating.
- During construction, require developers and builders to protect topsoil in order to reduce dust and runoff impacts.

As noted above, the overall contribution is limited. However, the importance of any design features lies more in the possible integration into a sub-regional program rather than the effectiveness of any individual developer-sponsored measure.

**Table VII-4
2020 GHG REDUCTIONS FOR HIGHLAND (MT/CO₂(e)/year)**

Local Measure by Sector		Emissions Reductions
State and County Measures		
State-1	Renewable Portfolio Standard	14,504
State-2	Title 24	4,227
State-3	AB 1190	3,902
State-4	Solar Water Heating	147
State-5	Industrial Boiler Efficiency	354
State-6	Pavley and Low Carbon Fuel Standard	36,772
State-7	AB 32 Transportation Reduction Strategies	3,217
State-8	Low Carbon Fuel Standard Off Road	1,190
State-9	AB 32 Methane Capture	0
County-1	County GHG Reduction Plan Landfill Controls	3,715
Building Energy		
E-4	Solar Installation for New Housing	113
E-5	Solar Installation for New Commercial	138
Water-4	Implement SBX 7-7	32,807
Subtotal		33,058
On-Road Transportation		
Transportation-2	Smart Bus Technologies	436
Off-Road Equipment		
Off-Road-2	Idling Ordinance	90
Wastewater Treatment		
Water-4	Implement SBX 7-7	271
Water Conveyance		
Water-4	Implement SBX 7-7	2,387
GHG Performance Standard for New Development		
PS-1	GHG Performance Standard for New Development (30% below BAU)	3,114
State and County Measures		68,038
Total Reductions		107,381*

*MAY NOT BE EXACT DUE TO ROUND-OFF

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant Impact – The proposed project will generate GHG emissions, but through a combination of state-wide emission reductions and project-related emissions reductions it will reduce its emissions to a level that will not cause a significant impact to climate change. The project commitments

to reduce emissions outlined in Table III-4 will be implemented as a condition of approval and mitigation is not required. Thus, project-related GHG emissions will be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact – With implementation of the project design measures included in Table VII-4, the proposed project can be implemented in a manner consistent with the San Bernardino County Regional Greenhouse Gas Reduction Plan (Climate Action Plan). Thus, even though the project will generate greenhouse gas emissions, overall reductions can be considered consistent with the regional Climate Action Plan. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		X		
h) 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?		X		

SUBSTANTIATION: Much of the information contained in this section of the Initial Study is abstracted from a Phase 1 Environmental Site Assessment (ESA) titled “Phase 1 Environmental Site Assessment and Limited Site Characterization Arnett Ranch East Highlands Ranch Area, Highland, California” prepared by LOR Geotechnical Group, Inc., July 2005 and a subsequent update in February 2015. Copies of these documents are provided as Appendices 6a and 6b to this document and address the eastern portion of the project site. The western portion of the project site (which encompasses a previous project, the Calvary Chapel Church) also included a Phase 1 ESA titled “Report on Phase I Environ-

mental Assessment of Property Located at 30976 Greenspot Road Highland, California” prepared by Ralph Stone and Company, Inc., March 2004 and an updated document titled “Phase 1 ESA and Limited Site Characterization, Calvary Property 30976 Greenspot Road” prepared by LOR Geotechnical Group, Inc., October 2013. A copy of these documents is provided as Appendices 6c and 6d to this document.

Introduction

The following summary of information regarding the project site is brought forward from the Arnott Ranch ESA in Appendix 6 to provide a basis for evaluating the potential for contamination at the project site. Note that the project site represents a portion of the total 200± acres evaluated in Appendix 6.

The site consists of approximately 200± acres of largely vacant land and citrus groves located in the East Highland Ranch area of Highland, California. The subject property has been largely vacant land and citrus groves throughout its researched history. Structures on the site include two residences, water wells, and irrigation structures. (Note that one of the existing residences is located within the proposed Project area.)

Household trash and debris, old farm equipment, including an above ground diesel tank and water tanks, are located west of the newer residence on this site and in the northwest corner of the property. Located near the center of the site is an area of buried trash and debris. This area currently has about 10 feet of fill over it. The exact composition of this trash and debris is unknown, however, no 55 gallon drums are purported to be present. Because of the depth of fill (10 feet) over the trash, a large piece of equipment, such as an excavator, may be necessary to investigate this dump area. As this equipment becomes available, then the dump area should be investigated to determine if any adverse environmental conditions, such as chemical containers have been buried in the area.

Three groundwater wells are known to be present on the site. If these wells are to be abandoned, they should be abandoned in accordance with current regulatory requirements. Other subsurface structures, such as irrigation lines, septic systems, and underground utilities should be anticipated during site development.

A Limited Site Characterization was conducted during this Phase 1 Environmental Site Assessment in order to determine if the past agricultural use of the site included organochlorine pesticides. The Limited Site Characterization indicated no levels of organochlorine pesticides were found to be above the EPA PRG’s for residential soil at the locations sampled. No pesticide storage facilities, which would be considered “hot spots” for high concentrations of pesticides, were indicated during our site reconnaissance. One sample (C-13) had total DDT above the State level of 1.0 mg/kg, which characterizes the soil as a California Hazardous Waste, and requires that the soil in that location is not exported off-site. Our experience indicates that once grading of the site is finished, all the levels of Organochlorine pesticides will be reduced to well below the 1.0 mg/kg level and unrestricted use of the property appears warranted.

No local or regional groundwater contamination problems are known to exist in the immediate vicinity of the site.

Based on the findings of the Phase 1 Environmental Site Assessment and with consideration given to the recommendations contained herein, (1) the subject property exhibits no evidence of recognized environmental conditions that would prohibit its intended use as a residential development, and (2) no further investigations or tests are recommended, except as expressly stated in this report.

The following summary of information regarding the project site is brought forward from the 2004 ESA published as Appendix J of the City of Highland Initial Study for the Calvary Chapel Church, April 25,

2006. This document is provided as Appendix 6 of this document and provides a basis for evaluating the potential for contamination on the western portion of the project site.

Prior agricultural use as an orange orchard included spraying of pesticides and herbicides. The owner stated he has not used pesticides for a couple of years. The recent pesticide compounds are biodegradable within one year or less after application. Longer lasting pesticides would have been used over 15 years ago which is sufficient time for them to biodegrade to insignificant or undetectable levels. Stone has sampled soil in orange orchards and on farms and found no detectable levels of pesticides or herbicides. California State regulations require soil sampling if property is to be used for a school. If no school is planned then soil sampling is not considered to be necessary.

No records or observations indicated that oil or gas wells, or underground tanks, sumps or clarifiers were previously or are now on the property.

When the smudge pots and other debris items on the property are removed for disposal, the soil underneath should be visually observed for evidence of any significant (larger than 3 square feet in area and over 12 inches deep) soil stains that might indicate spillage of petroleum or chemical products. If any such areas are uncovered it is recommended that the soil be sampled and tested for petroleum products and chemicals.

If used for water supply, the water supply well on the property should be sampled and tested in accordance with drinking water standards applicable to water supply systems. Also, it is recommended that once yearly water samples be tested for pesticides/herbicides for a period of five years unless the area water quality agency recommends differently.

There are potential ACM's in the old house and small work sheds. If these buildings are to be demolished or extensively renovated the PACM's should be sampled and analyzed for asbestos prior to any such work.

No nearby known listed contaminated site is likely to environmentally impact the property. The 2015 Update (Arnott property, eastern portion of the site) did not identify any additional site contamination or other hazards that could adversely impact the proposed site development.

The acronym "ACM's" refers to asbestos containing material. The 2006 Initial Study for the Calvary Chapel Church Project indicated that the soil contaminated in the smudge pot area has been removed and the buildings that may have contained asbestos was removed from the project site.

- a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less Than Significant With Mitigation Incorporated – The Project may create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or may 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. During construction there is a potential for accidental release of petroleum products in sufficient quantity to pose a significant hazard to people and the environment. The following mitigation measure will be incorporated into the Storm Water Pollution Prevention Plan (SWPPP) prepared for the Project and it will reduce such a hazard to a nonsignificant level.

HAZ-1 All spills or leakage of petroleum products during construction activities shall be remediated in compliance with applicable state and local regulations

regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared for the Project development.

The proposed Project will consist of residential uses that do not involve significant potential for routine transport or use of substantial volumes of hazardous materials or routine generation of hazardous wastes beyond those normally encountered in a residential-type setting, typically termed "household hazardous wastes." The generation of such wastes from residential uses is not considered to rise to a level of a significant potential for significant risk of accidental release of hazardous materials or accidental explosion. The City provides a program to accept and dispose of household hazardous wastes. No mitigation is required for the long-term residential use of the site.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact – The Project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No existing or proposed schools are located within this distance of the Project. No impacts are anticipated and no mitigation is required.

d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Less Than Significant With Mitigation Incorporated – According to the available data and an updated review of current site records (<http://www.envirostor.dtsc.ca.gov>) the western portion of the site is not identified as containing any known contaminated sites. No mitigation will be implemented for this area of the project site. Several potential hazardous waste issues were identified that may occur within the eastern portion of the project site (LOR 2015). If the onsite, unauthorized landfill occurs on the site it will have to be excavated, tested and removed to ensure that it will not pose a hazard to future residences. If the three onsite groundwater wells have been abandoned, then they need to be abandoned in accordance with current regulatory requirements. Other subsurface structures, such as irrigation lines or septic systems, may need to be removed. The site may contain DDT concentrations that would exceed the State hazard level and the soil containing concentrations above this level will need to be blended with other onsite soil to ensure that concentrations of DDT in the soil do not pose a hazard for future residents. The following mitigation measures will be implemented to address each of these potential issues at the project site.

HAZ-2 If the landfill is located on the project site, the site developer shall remove it; conduct tests to ensure it does not contain any contamination; relocate the waste to an appropriately licensed landfill; and replace the excavated material with documented clean fill. This shall be completed prior to initiating mass grading of the site and the records of all chemical tests and location of disposal shall be provided to the City.

HAZ-3 If the abandoned wells on the project site have not been properly abandoned, any such wells shall be properly closed using current regulatory requirements. This shall be completed prior to initiating mass grading of the site and records documenting proper closure shall be provided to the City.

HAZ-4 If other subsurface facilities exist within the project site (irrigation pipes, septic tanks, etc.), the site developer shall remove these facilities; conduct

any required tests to ensure they do not harbor contamination; properly dispose of the structural waste at an appropriately licensed landfill; and replace the excavated material with documented clean fill. This shall be completed prior to or concurrent with mass grading of the site and records documenting proper closure shall be provided to the City.

HAZ-5 The area containing DDT concentrations above the State hazard level shall be documented, including the exact dimensions and volume. A report verifying that the DDT contaminated soil can be effectively blended (and how this will be accomplished on the project site) with other uncontaminated onsite soil shall be provided to the City. (LOR 2015) If there is insufficient soil for blending at the site, the DDT contaminated soil shall be collected and disposed of at a properly licensed facility. This shall be completed prior to initiating mass grading of the site and records documenting proper management of the DDT contaminated soil shall be provided to the City.

Implementation of these measures will ensure that the project site is not exposed to any onsite hazardous materials that could harm future residents of the project site.

The proposed project is in the vicinity of power lines that emit electromagnetic radiation (EMR). The types of power lines found in the vicinity of the proposed project operate at 66 kilovolts (kV). Detailed data are not available for a 66 kV transmission line, but health hazard data are available for a 115 kV power line. The electromagnetic field of a 115 kV power line decreases with distance; for instance, at 15 meters or 50 feet the electric field, which is measured in kilovolts per meter (kV/m), is .5 kV/m. Magnetic fields are measured in milligauss (mG), and the mean (average) magnetic field, is 6.5 (mG). However, at 91 meters or 300 feet the electric field is .003, and the mean magnetic field is .2 mG. While Southern California Edison hasn't designated a setback guideline for the power lines on the proposed property, most of the lots in the proposed project will be set back from the power lines between 60-70 feet. At a distance of 300 feet and at average electricity demand, the amount of EMR exposure from power lines would be similar to that of the background levels of in home electricity EMR. At a distance of 60/70 feet the level of EMR exposure would be greater, but still within a safe level because it would not rise to a level sufficient to be harmful. Units closer than 60 feet would also not be exposed to significant levels of EMR from a 66 kV transmission line. According to the World Health Organization (WHO), exposure to EMR from power lines can have varied effects on persons living in residential areas in the vicinity of power lines. The levels of EMR from power lines in the proposed project vicinity don't exceed 33.3-44.4 mG, the levels deemed by WHO to be harmful enough to cause childhood leukemia. WHO addresses the largest concern in EMR—the potential for EMR to cause cancer—by claiming that “there are no accepted biophysical mechanisms that would suggest that low-level exposures are involved in cancer development.” Thus, the proposed project's proximity to power line EMR radiation based on a 66 kV line does not create a health hazard to future potential residents.

"Electromagnetic Fields and Public Health." *World Health Organization*. Backgrounder, June 2007. Web. 25 Mar. 2015. <<http://www.who.int/peh-emf/publications/facts/fs322/en/>>.

National Institute of Environmental Health Services. *EMF Electric and Magnetic Fields Associated with the Use of Electric Power*. N.p.: National Institute of Environmental Health Services, n.d., *Electric and Magnetic Fields*. National Institute of Environmental Health Services, June 2002. Web. 25 Mar. 2015. <[http://www.niehs.nih.gov/health/materials/electric_and_magnetic_fields_associated_with_the_use_of_electric_pwoer_questions_and_answers_english_508.pdf](http://www.niehs.nih.gov/health/materials/electric_and_magnetic_fields_associated_with_the_use_of_electric_power_questions_and_answers_english_508.pdf)>

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

Less Than Significant Impact – The project site is located approximately 4.6 miles east of the San Bernardino International Airport and about 1.8 miles northeast of the Redlands Municipal Airport. Neither airport's land use compatibility zone affects the project site. The area would only be subject to random aircraft overflights. Therefore, a less than significant potential exists for the proposed project to create a safety hazard for future residents.

f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

No Impact – The proposed project is not located in the vicinity of a private airstrip. No potential exists for a safety hazard at the project site from a private airport's operations.

g) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant With Mitigation Incorporated – According to the City of Highland General Plan Safety Element the City has not designated specific evacuation routes, but has indicated that major highways, such as Greenspot Road may be designated on a case-by-case basis in the event of an emergency. In addition Greenspot Road is the only access to the project area so interference with the roadway could cause a conflict with both routine and emergency access to the project area. To prevent such an impact during construction, the following mitigation measure will be implemented. Once construction is completed, the project has no potential to impair implementation with an adopted emergency response plan or evacuation plan.

HAZ-6 *At all times during construction of the site improvements, the site developer shall ensure that emergency fire or medical vehicles are able to access all areas along the Project alignment during construction, particularly along Greenspot Road. The Developer shall submit an acceptable temporary traffic routing/management plan to ensure that adequate circulation capacity is being maintained to serve emergency functions (including emergency response and emergency evacuation plans) along roadways in the vicinity of the project.*

With implementation of the preceding measure, emergency access within the project vicinity can be maintained at all times and the proposed project will have no conflict with any emergency response or evacuation plans.

h) *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?*

Less Than Significant With Mitigation Incorporated – The City of Highland General Plan wildland fire designation for this site is Fire Severity Zone 1. Even though the residential subdivision has been set back from the wildland fire hazard zone, in conjunction with the setbacks to avoid the San Andreas Fault, it is incumbent upon the site developer and future home owners to maintain an adequate buffer zone along the north side of the subdivision between the developed area and native shrub habitat of the adjacent hillsides (wildland fire hazard area). The following mitigation measure shall be implemented to ensure that an adequate wildland fire hazard buffer is installed.

HAZ-7 *The developer shall submit a conceptual fire mitigation plan to the City that identifies the type of buffer that will be maintained between the future residences and the fire prone coastal sage scrub/chaparral habitat on the adjacent hillside to the north of the site. The project developer shall imple-*

ment this plan by installing the buffer and provide a mechanism for long-term maintenance of the buffer area to minimize the wildland fire hazard threat at the project site. This plan shall be approved to the City prior to constructing any structures and implemented prior to occupancy. Alternatively, the City may accept the fire mitigation measures incorporated into the Tentative Tract Map and PD Plan as meeting the requirements of this measure.

With implementation of the preceding measure, wildland fire hazards at the project site can be controlled to a less than significant impact.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) 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)?			X	
c) 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 onsite or offsite?			X	
d) 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 onsite or offsite?			X	
e) 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?			X	
f) Otherwise substantially degrade water quality?			X	
g) 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?			X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X	
i) 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?			X	
j) Inundation by seiche, tsunami, or mudflow?				X

SUBSTANTIATION: The information provided in this section is abstracted from the following report: "Conceptual Water Quality Management Plan for: 119-536 Tract 18893," June 20, 2014, Sitetech Inc. A copy of this technical study is provided as Appendix 7a to this Initial Study.

a) *Violate any water quality standards or waste discharge requirements?*

Less Than Significant Impact – For a residential project such as the proposed project there are normally only two sources of water discharges that could violate any water quality standards or waste discharge requirements (WDR). These are: municipal wastewater generated from future residents; and non-point source storm water runoff from the site, during construction and after development is completed. The municipal wastewater will be collected and under present conditions delivered to the City of San Bernardino regional wastewater treatment plant. As described in Section XVII, this facility has ample treatment capacity available and discharges the treated effluent under a WDR issued by the Santa Ana Regional Water Quality Control Board (Regional Board). The type of wastewater generated by residences does not normally contain any unusual constituents that would cause a violation of the treatment plant's WDR.

The second potential for violation can occur during future rainfall events that generate storm water runoff, either during construction (short-term) or over the long-term after the site is occupied. The City of Highland and San Bernardino County are partners in the effort to comply with the Regional Board's MS-4 waste discharge requirements. The applicant has submitted a conceptual water quality management plan (CWQMP) to the City of Highland (Appendix 7a) that addresses future site runoff during both construction and future occupancy. This CWQMP identifies the specific Best Management Practices (BMPs) that will be considered for use at the site to ensure that implementation of the project will not cause a violation of the regional MS-4 permit. This CWQMP has been reviewed and approved by the City and includes a mix of "Non-Structural" and "Structural" control BMPs that are considered sufficient to control future storm water runoff from the project site to a level of quality that will not violate the regional MS-4 permit requirements. The primary components of this treatment system consists of vegetated swales along the perimeter of each lot and CWQMP infiltration basin that will treat all storm water runoff from the proposed development (up to the 2 year storm volume). Figure 9 shows the location of project infrastructure and utilities, including the undeveloped open space drainage (Hillside Drainage) and the location of the proposed CWQMP infiltration basin.

Based on the mandatory implementation of the CWQMP and Storm Water Pollution Prevention Plan (SWPPP, during construction), the proposed project is not forecast to cause water quality standards or waste discharge requirements to be violated. As this is a mandatory requirement to implement the CWQMP and SWPPP for the project site, a mitigation measure is not required to ensure its implementation in order to achieve a less than significant impact under this evaluation category.

b) *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)?*

Less Than Significant Impact – As in the preceding evaluation, there are three project-related activities that can have an adverse impact on groundwater supplies. First, if the groundwater table is very high on a property, grading could directly intercept the groundwater table and deplete the aquifer. Based on the data in the geology report (Appendix 5), the groundwater table is greater the 50 feet deep and the proposed project will not intercept the aquifer. Therefore, the proposed project will not have a direct adverse impact on the regional groundwater table (Bunker Hill Basin). Second, the project will add impervious surface to the project site which could reduce percolation on the property. According to the CWQMP (Appendix 7a), the project will have 44.8% as impervious surface. However, onsite vegetated swales on each parcel and the CWQMP infiltration basin will offset this impervious surface. Based on the

project design, the net effect on groundwater supplies for this site is considered to be less than significant. Finally, the proposed project will receive water supplies from the East Valley Water District (EVWD or District) and the District obtains almost all of its water supply from the Bunker Hill groundwater aquifer, with limited surface water and imported water supplies to offset demand. The population forecast for the project site is 1,090 persons and EVWD's per capita residential water use is 130 gallons per day (2014 EVWD Water System Master Plan, Section 3, Table 3-10 Future Per Capita Water Use for Service Area). This results in an ultimate project-related demand for water of 141,700 gallons per day (0.435 acre-feet) or about 159 acre-feet per year. East Valley's water consumption forecast for 2015 (Table 7-18, UWMP) was 24,759 acre-feet, but this value was identified prior to the recent drought. As a percentage of annual District water supply, the project's 159 acre-feet per year represents about 0.64% of future demand. However, even this value is higher than actual impact on the groundwater aquifer, because the proposed project will remove about 38 acres of citrus grove, which requires about 114 acre-feet per year (about three acre-feet per acre), leaving a residual impact of 45 acre feet of actual additional pumping impacts on the groundwater aquifer. A copy of the District's will serve letter is provided as a component of Appendix 7b to this document. The increment of additional ground water extraction to support the proposed project, 45 acre-feet per year, is considered a less than significant impact on the groundwater aquifer based on the small net quantity of water to be extracted from the Bunker Hill Basin and EVWD's acknowledgment that it can meet the project's water demand and the this project's water demand per capita is about 40 gallons per day per capita, or about 31% of water demand ($40/130 = .31$) by a standard water customer of the District.

- c) *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 onsite or offsite?*

Less Than Significant Impact – The existing flows from the open space area north of the development will remain within the existing drainage system and will not be increased or altered. There are no streams or channels in the area proposed for development on the project site. However, the runoff from this area and the increase runoff from the site are addressed in the CWQMP. The flows from the developed area will be directed to the CWQMP infiltration basin which has a Design Capture Volume of 155,561 cubic feet or about 3.6 acre-feet of storage capacity before it will direct flows into the regional drainage system in the project area. Through implementation of the CWQMP BMPs and installation of the new drainage system, the alterations in the onsite drainage pattern will not result in substantial erosion or siltation onsite or offsite.

- d) *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 onsite or offsite?*

Less Than Significant Impact – Please refer to the discussion under issue c) for some baseline information. Because the proposed project includes a CWQMP infiltration basin with approximately 3.6 acre-feet of storage capacity prior to release of the site runoff to the regional drainage system, the proposed project will not cause significant flooding and related damage either onsite or offsite. No mitigation is required.

- e) *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?*

Less Than Significant Impact - Please refer to the discussion under issues c) and d) for some baseline information. With the implementation of the drainage plan outlined in the CWQMP, including the CWQMP infiltration basin, the discharge of storm water runoff from the project site will not exceed the capacity of the existing regional drainage system nor will it provide substantial additional sources of polluted runoff. No mitigation is required.

f) *Otherwise substantially degrade water quality?*

Less Than Significant Impact - Please refer to the discussion under issue a) for some baseline information. The evaluation under issue a) indicates that the potential project activities that could degrade water quality will be effectively managed by implementing the CWQMP for the project site. Potential impacts to water quality from project implementation will be less than significant. No mitigation is required.

g) *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?*

Less Than Significant Impact – Based on a review of Figure 6-5 of the City General Plan, the project site is located east and north of any 100-year flood hazard area. The proposed project will not place housing in an identified flood hazard area. No mitigation is required.

h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

Less Than Significant Impact – The project site is not located in a 100-year flood hazard area; thus, the project has no potential to impede or redirect flood flows. Implementation of the CWQMP will control future runoff from the project site in a manner that will not increase flows downstream. No mitigation is required.

i) *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?*

Less Than Significant Impact – According to Figure 6-5 of the City General Plan, the southern-most portion of the project site may be exposed to flood hazards due to failure of the Seven Oaks Dam. The area of inundation assumes dam failure at full pool elevation of 2,580 feet. The area identified that would be subject to inundation under the preceding assumptions would occur only under “events of extremely remote nature.” Based on this finding, the project’s exposure is considered a less than significant impact and no mitigation is required.

j) *Inundation by seiche, tsunami, or mudflow?*

No Impact – The project site is not subject to inundation from any of the identified sources based on the lack of channels onsite (mudflows) and no source of hazard for seiche or tsunami. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?			X	
b) 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?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

SUBSTANTIATION:

a) Physically divide an established community?

Less Than Significant Impact – The project site is presently designated for low density residential use, one to two units per acre. The existing land uses include open space to the north; open space and agriculture (citrus groves) to the east; institutional (EVWD administrative office and yard), major arterial and open space to the south; and low density residential use to the west. The City of Highland (City) received an application from Sunland Communities, LLC for a General Plan Amendment (GPA); Change of Zone (ZC); Planned Development Plan (PD), and Tentative Tract Map (TTM) No. 18893. If approved, the GPA, ZC, Planned Development (PD) and TTM entitlements would allow development of a low density residential development of 200 residential lots, a medium density development of 110 residential units, 5 estate lots, and several lettered lots on approximately 178 gross acres.

Figure 4 provides a draft copy of TTM No. 18893, which also contains a vicinity map and a proposed phasing map for the project. The project would be developed with overall low density residential uses (2.1 - 6.0 du/ac). This would extend the low density residential use from the west onto the project site. Thus, the proposed project would not physically divide any established community in the project area. The impact is considered less than significant and no mitigation is required.

b) 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?

Less Than Significant Impact – The project requires a change in the General Plan Land Use Designation from AG/EQ (low density residential) to Planned Development and a mixture of low density to medium density residential zone classifications that will allow between 0.5 to 12 units per acre. The PD designation is specifically being sought to allow clustering of units on the southern portion of the project site and preservation of open space in the northern portion of the site. The net number of units that would be developed on the project site will not be increased under this scenario, remaining below 356 units (316), which could theoretically be developed on the 178 acre property under the existing AG/EQ land use designation. The development plan compiled by the project applicant contains a detailed discussion of potential conflicts/consistency with the City General Plan. Because this is the key land use issue, the text of the consistency analysis is presented here in whole.

The Mediterra Planned Development Plan provides specific measures for the creation of a desirable residential community with infrastructure improvements, character, design, and amenities by setting the standards and guidelines that implement the City's General Plan goals and objectives. Below is a detailed discussion of the Mediterra Plan's consistency with the applicable goals and objectives of the City of Highland General Plan.

Goal 2.3

Provide a variety of urban, suburban and rural housing opportunities that are adequate to meet the City's share of regional housing needs.

Policies

- 1) *Provide a broad range of, and encourage innovation in, housing types that incorporate high quality design and construction.*
- 2) *Maintain residential areas that provide for and protect rural lifestyles, and protect natural resources and hillsides in the rural areas of the City.*
- 3) *Maintain residential areas that provide for a suburban lifestyle, including ownership of single-family housing.*
- 4) *Ensure that new residential development provides appropriate community amenities, including common open space and recreation areas.*
- 5) *Continue the innovative use of land resources and development of a variety of housing types and sizes within the City by using the Planned Development designation.*
- 6) *Require the preparation of a specific plan, planned unit development, conditional use permit or similar mechanism for residential development within areas designated Planned Development.*
- 7) *Require that Planned Development projects provide a greater level of community amenities and cohesiveness, achieve superior design and create a more desirable living environment than could be achieved through conventional subdivision design and requirements.*

Goal 2.6

Maintain an organized pattern of land use that minimizes conflicts between adjacent land uses.

Policies

- 1) *Require that new development be at an appropriate density or intensity based upon compatibility with surrounding existing and planned land uses.*
- 4) *Ensure that land uses develop in accordance with the Land Use Plan and Development Code in an effort to attain land use compatibility.*
- 5) *Promote compatible development through adherence to Community Design Element policies and guidelines.*
- 6) *Require developers to consider and address project impacts upon surrounding neighborhoods during the design and development process.*

Consistency Evaluation

The Mediterra Plan provides the tools for the development of the Plan area and accommodates a diversity of housing products centered around single family, mostly detached, with the potential for an attached product on one Planning Area (PA4). The land use designations allow an array of residential uses from Medium Density with a maximum of 12 dwelling units per acre to the Agricultural / Equestrian designation with a maximum of 0 - 2 dwelling units per acre. The most sought after housing product in the Highland submarket is that of conventional and Medium Density products that typically fall under the Low to Medium density categories. This range of housing accommodates the starter family market and the move-up market in a cohesive and well planned community. The variety of housing products distinguishes the different Planning Areas in lot sizes and consequently home sizes for a wider range of homeowner lifestyle and economic status. All uses are compatible with the surrounding uses and complement the existing housing stock.

As detailed throughout the Plan, the Mediterra community concept, level of amenities, infrastructure, provision for trails and pedestrian mobility, wealth of recreational assets, and other improvements make for a superior residential community and “a more desirable living environment than would be achieved through conventional subdivision design and requirements”. The community includes desirable amenities for the future residents of the community, allowing recreation and gathering opportunities under the open space and recreational uses. The Plan also protects the hillside to the north of the community by avoiding disturbance from development and by preserving the area as open space in perpetuity consistent with the City’s policies for protection of natural resources and hillside.

Goal 3.1

Provide a comprehensive transportation system that facilitates current and long-term circulation in and through the City.

Policies

- 1) *Require new development proposals to ensure that all mid-block street segments operate at LOS “D” or better during the peak hours of traffic.*
- 2) *Ensure that all intersections operate at LOS “D” or better during the peak hours of traffic.*
- 3) *Ensure that the City’s street system be designed and constructed to accommodate the traffic generated by buildout of the General Plan land use designations.*
- 5) *Design and employ traffic control measures (e.g., install traffic signals, provide access restrictions, etc.) to ensure city streets and roads function as intended.*
- 8) *Require development proposals with the potential to generate traffic volumes or other impacts not adequately evaluated in the Circulation Element and the General Plan Program EIR to prepare a traffic analysis consistent and compatible with the City’s Master General Plan Traffic Model.*
- 9) *Restrict the number of access points and intersections along arterials to preserve mid-block and intersection capacities and to maintain public safety.*

Goal 3.4

Provide a safe circulation system.

Policies

- 1) *Establish the local street system within developing neighborhoods through a cooperative public/private planning process.*
- 3) *Promote the principle that streets have multiple uses and users, and protect the safety of all users.*
- 4) *Require new development to provide pedestrian paths and linkages through projects, locating linkages to avoid conflicts with motorized traffic.*
- 5) *Discourage high-speed, through traffic on local streets with appropriate traffic-calming measures (e.g., traffic enforcement, bulb-outs, lane striping, chokers, etc.).*
- 6) *Design access onto major arterial streets in an orderly and controlled manner.*
- 8) *Implement street design features such as the use of medians, bus turnouts and consolidated driveways to minimize mid-block traffic congestion.*
- 10) *Provide adequate sight distances for safe vehicular movement on roadways and at intersections.*
- 13) *Support the planning of sidewalks of appropriate width to allow the provision of buffers to shield non-motorized traffic from vehicles.*
- 14) *Add raised, landscaped medians and bulb-outs, where appropriate, to reduce exposure to cross traffic at street crossings.*

Goal 3.7

Protect and encourage bicycle travel.

Policies

- 1) *Develop a system of continuous and convenient bicycle routes to places of employment, shopping centers, schools, and other high activity areas with potential for increased bicycle use.*
- 2) *Encourage new development to provide reasonable and secure space for bicycle storage.*
- 3) *Provide bicycle racks at all public facilities and along major public streets.*

Consistency Evaluation

The project adheres to the City's goals and objectives of the City's Circulation Element and adopts the standards for the implementation of circulation improvements that meet the City Standards and the specific needs of the Mediterra Community. The Plan employs a vehicular circulation system that distributes traffic across the development in an even and functional manner with a network of local streets with cul-de-sacs and short loops and a local collector that links the different Planning Areas with one another and with the community amenities. The internal circulation system adheres to the traffic circulation and safety standards while it adopts design guidelines specific to the needs of this community. Traffic calming measures are used within the community in an effort to reduce speed and enhance safety. Also, these measures enhance pedestrian mobility, which is further accommodated with pedestrian links, paseos, trails and other pedestrian mobility features. The use of chicanes contributes to the pedestrian safety for crossing local streets, while the design of paseos and trails is inviting for the community residents to get out for a walk, a jog, or a gathering at the local park. Pedestrian and bicycle facilities include Class II Bike Lanes, sidewalks, trails, walkways, crosswalks, and signage, all important to the community's non-motorized transportation system and inviting for the local residents to make shorter walking trips within the community rather than by automobile, reducing the number of vehicular trips from and into the community.

The internal circulation system takes access from Greenspot Road, a major Highway and main transportation corridor for the East Highlands area. The improvements along the frontage of Greenspot Road by the Mediterra Plan follow the City of Highland standards. Also, the Plan calls for a raised and landscaped median for the main entry streets to the community from Greenspot Road as an additional measure of safety and aesthetic enhancement.

The Plan is supported by a Traffic Study that assesses traffic impacts from the Mediterra development and identifies contributions and improvements to mitigate such impacts and to insure an acceptable level of service per the City of Highland standards.

Goal 4.1

Coordinate and balance the provision of public services with development activity to eliminate service gaps, maximize the use of public facilities, provide efficient and economical public services, achieve the equitable and legally defensible sharing of costs of such services and facilities, and maintain adequate service systems capable of meeting the needs of Highland residents.

Policies

- 3) *Ensure that existing residents and businesses are not burdened with the cost of financing infrastructure aimed at supporting new development or the intensification of existing development.*
- 4) *Continue to ensure that public water, sewer, drainage and other facilities needed for a project phase are constructed prior to or concurrent with initial development within that phase, unless otherwise approved by the City.*
- 5) *Continue to make the project sponsor of a proposed development ultimately responsible for ensuring the timely availability of all infrastructure improvements (including system-wide improvements) needed to support the development.*
- 14) *Maintain a development review process that places the ultimate responsibility on the project sponsor for ensuring that necessary infrastructure improvements (including system-wide*

improvements) needed to support new development are, in fact, available at the time they are needed.

- 15) Require the construction of public facilities as a condition of approval for a proposed development if the development exceeds the capacity of existing public facilities to support such development.*
- 16) Continue to require that project applicants provide sufficient information in the application process so that the City may comprehensively determine the potential impacts and/or the need for improvements to existing services and facilities to support project buildout consistent with the City's performance.*
- 17) Continue to require that all new development pay the applicable Development Impact Fees established by the City Council.*
- 18) Maintain flexibility in the collection and application of Development Impact Fees to permit the construction of master planned facilities in lieu of fees when the City determines that it is in the public interest to do so.*
- 19) Continue to require the construction of public facilities as a condition of approval where the value of the services and facilities needed to support buildout of a proposed development exceed established Development Impact Fees, as consistent with the City's performance standards. Require an agreement with the developer for reimbursement from future development fees for the excess costs. Such reimbursements shall be from future fees collected for the specific excess facilities, which the initial developer was required to construct.*
- 22) Continue to require that planned communities participate in the development of public infrastructure, in addition to the payment of development impact fees.*
- 25) Continue to support an assessment district alternative to development impact fees for large-scale developments undergoing urbanization when a single owner or small number of owners is involved, and when it is in the public interest to do so.*
- 26) Continue to allow new development and the intensification of existing development only where and when adequate public services and facilities can be provided.*

Consistency Evaluation

The Plan makes adequate provisions for the implementation of improvements necessary for the safety and wellbeing of the community residents per the City of Highland standards. The Phasing Chapter of the plan demonstrates the sequence and timing of the infrastructure improvements needed within the different Planning Areas of the community. The needed improvements are planned in a manner to rely on existing facilities with adequate capacity for the additional services. The improvements include water quality management provisions, separate drainage facilities for the natural hillside and the development area, and all wet and dry utilities along with the street system and other improvements. Assessment of project impacts and infrastructure improvements have been submitted to the City of Highland through reports addressing the impacts and proposed mitigation, if any, to ensure adequate services. Assessment District financing is a valid option for financing of infrastructure and related fees and costs and will be explored for the Mediterra project with the consent of the City of Highland.

The project also pays its obligation of Development Impact Fees (DIF) adopted by the City of Highland at the time of implementation of the Plan; these fees are set to guarantee the development's contribution to the cost of existing and future community-wide improvements.

The Plan also provides for the construction of a local neighborhood park and other recreational facilities that meet or exceed the requirements of the City of Highland with a sequence and timing that are adequate for use by community residents. The project advocate will seek the waiver of the Park Fee component of the DIF as the project will meet or exceed its park and recreation requirements by providing the various amenities in the community. The adoption of a Development Agreement is typically necessary for Planned Developments to serve as a mechanism for orderly and adequate sequential development such as for Mediterra.

Goal 5.1

Preserve, maintain and create views and vistas throughout the community to enhance the visual experience of Highland.

Policies

- 3) *Enforce hillside development standards that call for natural contour grading, environmentally sensitive design, shape and siting techniques, and fire-retardant building materials.*
- 6) *Require that hillside development be located below ridgelines and that structures themselves and accompanying landscaping conceal cut slopes and grading.*
- 7) *Encourage developers in high slope gradient areas to use raised floor systems and stepped footages to leave slope contours in a more natural state.*
- 11) *Enact provisions in the municipal code to minimize soil erosion, restore natural drainage surfaces, attenuate slope instability and reduce the amount of impermeable surface.*

Goal 5.5

Continue to reduce urban runoff.

Policies:

- 1) *Use water quality best management practices (BMPs) in land planning, project-level site planning and procedural requirements as part of the Storm Water Quality Management Plan.*
- 3) *Require site design practices that capture and channel specified percentages of rainfall and other runoff to permeable surfaces.*
- 6) *Retain water on site through the use of attractively landscaped retention basins and other measures to replenish aquifers.*

Goal 5.10

Maintain a high-quality system of parks that meet the needs of all segments of the community.

Policies

- 2) *Supplement existing development fee program for parkland acquisition with other funding sources, grants and programs (fee sponsors, corporate sponsors, fund raising, for example).*
- 3) *Use the redevelopment process for the selection, acquisition and funding of additional parkland in western portions of the City.*
- 4) *Prepare a phased strategy for developing new facilities.*
- 5) *Assess areas of potential annexation into the City and, if necessary, negotiate an agreement with the County of San Bernardino to provide parks meeting City standards within areas of eventual annexation into the City.*
- 7) *Provide handicap access to all parks.*
- 9) *Provide a variety of activity options, including active and passive uses, within each park.*
- 16) *Continue to implement the local park ordinance through developer dedication of parkland or in-lieu fees.*
- 17) *Require that new specific plans and planned unit developments (PUDs) incorporate sufficient park and recreation facilities along with natural open space areas, where appropriate, to serve the needs of their future residents.*
- 19) *Connect newly developed parks, wherever practical, to the existing and future bicycle and recreational trail system.*
- 21) *Adopt a density bonus program for development that includes usable park and open space lands above the City-required standard.*
- 22) *Develop recreational opportunities within the Greenspot area.*
- 23) *Design parks in accordance with contemporary safety standards and "CPTED" (Crime Prevention Through Environmental Design) principles.*
- 29) *Locate parks and recreation facilities within convenient walking and biking distance of all neighborhoods.*

- 30) *Integrate park and recreation facilities with existing and future trail and bikeways, wherever practical.*
- 31) *Prepare templates for proper on and off-site signage for all parks.*

Goal 5.11

Provide excellent opportunities and facilities for hiking, equestrian and bicycle use through the Multi-Use Trail Master Plan.

Policies

- 1) *Require, where appropriate, that residential, commercial and industrial developments within the City dedicate and construct trail links within their boundaries as part of the Multi-Use Trail Master Plan.*
- 3) *Support the acquisition of trail rights-of-way through dedication in conjunction with development activity or acts of philanthropy that occur prior to adoption of a route plan.*
- 4) *Where possible, locate trail easements within City-required landscaping or other easements.*
- 5) *Preserve, to the extent possible, existing formal and informal trail routes in the City, in particular routes that provide major north- south and east-west access.*
- 6) *Where an established trail is jeopardized by impending development or subdivision activity, require the dedication of trail easements, where appropriate, to establish a planned trail system alignment.*
- 7) *Require proposed development adjacent to trail systems to dedicate land for trailhead access points.*
- 8) *Where feasible, use active and abandoned roads, flood control, utility and railroad rights-of-way, and other easements for potential sites for expanded trail use.*
- 10) *Work with local, state and federal agencies; adjoining cities and jurisdictions; interest groups; and private landowners, in an effort to promote a Citywide trail system, and to secure trail access through purchase, easement, or by other means.*
- 11) *Locate trail linkages to minimize conflicts with motorized traffic.*

Goal 5.12

Develop and maintain trail and bikeway connections to recreational facilities, schools, existing transportation routes, natural features and regional trail systems.

Policies

- 1) *Provide trail connections between and/or along the major city and surrounding regional facilities, sites and features indicated on the Multi-Use Trails Master Plan.*
- 4) *Require the dedication of trail easements, where appropriate, for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.*

Consistency Evaluation

Highland enjoys a beautiful and dramatic backdrop hillside at the base of the San Bernardino Mountains with views and vistas that are most treasured by the community residents. The City has long realized the importance of preservation of such view assets which create and maintain a sense of community. The Mediterra Plan supports the City's tenacity in achieving the conservation and open space goals and takes important steps in implementing these objectives for the community. Preserving the hillside backdrop to the north of Mediterra is an important part of the Plan. While view preservation includes "careful regulation of hillside development by encouraging low profile massing and natural colors and building materials" as stated in the General Plan, the Mediterra Plan takes a deliberate approach in avoiding any development on the hillside as the best measure of preservation. The dedication of this area as open space in perpetuity and as an integral planning and functional component of the community will also

enhance the residents' enjoyment of the open space with the opportunity to experience the various activities such as hiking, riding, and other outdoor uses.

Runoff from the new community is efficiently channeled into a local collection system that leads to a Water Quality Management Plan Basin to control pollutants from the development area. The Conceptual design of the WQMP Basin has been reviewed and approved by the City of Highland designed for control of sediment, trash, fertilizers, pesticides, heavy metals and petroleum products.

Based on current City park standards there is a deficiency in park space, mainly in neighborhood and community-level uses. With the Mediterra Plan the City will not have the burden of acquiring land and designing the parks needed for the new community residents. All recreational facilities will be provided by the development. Highland's population contains a large percentage of residents under the age of 20 with continued future demand for play space and outdoor activities. The Mediterra Plan provides a very inviting park design with uses that will be attractive to a wide range of the community residents. User preferences are carefully addressed with the intent of providing play, gathering, relaxing, and other outdoor opportunities for all community residents. Consistent with City policies, the neighborhood park and other amenities are located within convenient walking and biking distance of all neighborhoods.

The views afforded from the Hillside trail are some of the finest in the region. An accessible trail system not only promotes exercise, but also links community facilities and neighborhoods together. The uses of such trails include any combination of bicycling, hiking, or equestrian uses. While such trails are primarily used for recreation, they can also be used to provide access to community facilities, such as parks, transit stops, or local schools. The Mediterra Plan provides a wealth of such amenities with a wide variation and intensity of uses. The Plan contains the Hillside Trail, the North Fork trail, and the Paseo Ramblas. Each functions as a separate trail link with difference in improvement, experience, grade, accommodating hikers, joggers, bicyclists and equestrians. The local park acts as a trail node as all of the Mediterra trails connect with this frequented community amenity.

Goal 6.1

Minimize the risk to public health and safety and disruption to social, economic, and environmental welfare resulting from seismic and geologic activities

Policies

- 2) *Enforce the requirements of the Alquist-Priolo Earthquake Fault Zoning Act and require the preparation of reports pursuant to the Act as part of the development review process for all new projects.*
- 4) *Continue to evaluate all new development within the Alquist-Priolo Earthquake Fault Zone.*
- 8) *Continue to monitor new building materials used for earthquake stability and fire resistance and incorporate such materials into plan checks when applicable.*
- 9) *Continue to enforce as part of the development review process site-specific analysis of soils and other conditions related to the onsite impact of maximum credible seismic and geologic events.*

Goal 6.3

Reduce the risk to life and minimize physical injury, property damage, and public health hazards from the effects of a 100-year storm or 500-year storm and associated flooding.

Policies

- 1) *Review all proposed development to ensure that structures designed for human occupancy are accessible in the event of a 100-year storm and are protected from the 100-year storm to a point one foot above the floodplain.*
- 3) *Require a drainage study be completed by a qualified engineer prior to all proposed development to certify that the proposed development will be adequately protected and that implementation of the development will not create new downstream flood hazards.*

- 4) *Require all development in the City and its sphere of influence comply with discharge permit requirements established by the Regional Water Quality Control Board.*
- 7) *Utilize flood control methods that are consistent with Regional Water Quality Control Board Policies and Best Management Practices (BMPs).*

Goal 6.5

Protect life and property from wildland–urban interface fires.

Policies

- 1) *Review the vulnerability of new development in areas with the potential for wildland-urban interface fires and incorporate appropriate mitigation measures in the conditions of approval.*
- 2) *Ensure the adequate protection of proposed and existing development in areas subject to wildland-urban interface fires and balance the need for fire prevention measures with the need to preserve significant biological resources.*
- 3) *In areas designated as Fire Hazard Zone I and Fire Hazard Zone II, and as set forth in the Municipal Code, continue to incorporate additional fire safety standards, such as:*
 - *Secondary or alternative access for all new development in a fire safety review area;*
 - *Increased setbacks from fuel modification areas and fire hazard areas;*
 - *Perimeter roads adjacent to development; or*
- 7) *Enforce the Fire Sprinkler ordinance for all newly constructed buildings.*
- 8) *Require all development to meet the emergency water service standards established by the East Valley Water District.*
- 9) *Encourage the use of fire proof construction materials.*

Consistency Evaluation

Consistent with the goals and policies of the City's General Plan for Geology, Seismicity and Liquefaction geologic studies and investigations have been undertaken to confirm the absence of active faults within the development area of the Plan. Fault Trenching and other field investigations such as seismic refraction tests, along with review of existing reports of prior investigations were provided by LOR Geotechnical Group. The review by the San Bernardino County Geologist led to the clearance of certain areas of the Plan for immediate development with guidelines and recommendations for further investigations as the project progresses into implementation. The development area of the Plan occurs immediately to the east of and in line with the existing community to the west; that community was cleared in recent years for a residential development by the applicable reviewing agencies. The Plan will adhere to the recommendations and requirements of the City of Highland and the San Bernardino County Geologist and will continue to implement the applicable policies and provisions for a safe residential community.

The Mediterra community is located within the Fire Hazard Zone I. The City allows residential development within this area provided special precautions are taken, especially along the interface between developed and natural areas. Simply stated, the best fire mitigation measures are those of avoidance. The Mediterra Plan has been crafted to avoid or minimize the fire exposure from the rising hillside to the north. Planning Area 1, 2, and 3 are adjacent to the hillside and the Plan adopts the necessary measures to minimize the fire exposure to these areas. Although relatively low in fuel content, the Mediterra Plan deliberately avoids encroachment into the natural open space for development or for fuel modification purposes. Adequate separations between the residential structures and the hillside along with other fire safety measures have been adopted at the northerly edge of the community. Different planning concepts and edge treatments are implemented in the site plan including setbacks, road frontages, trail placement, and others. These measures greatly minimize exposure to hillside fires. In addition to the avoidance measures the plan provides for easy access along the north edge of the community to the fire Department. That is achieved by the incorporation of a fire road with access from adjacent cul-de-sacs or other public streets. Besides their function as access to the Fire Department the

roads also serve as non-combustible fire buffers between the hillside and the neighborhoods. City consultants and the Fire Department have reviewed the community design and have agreed to its adequacy for avoidance of fire exposure. As such no fuel modification zones are necessary for the Mediterra development as all avoidance measures have been incorporated in the Plan.

Goal 7.1

Protect sensitive land uses and the citizens of Highland from annoying and excessive noise through diligent planning and regulation.

Policies

- 1) *Enforce the City's Noise Control Ordinance consistent with health and quality of life goals and employ effective techniques of noise abatement through such means as a noise ordinance, building codes and subdivision and zoning regulations.*
- 2) *Encourage the use of site planning and architectural techniques such as alternative building orientation and walls combined with landscaping to mitigate noise to levels consistent with interior and exterior noise standards.*
- 3) *Require mitigation where sensitive uses are to be placed along transportation routes to ensure compliance with interior and exterior noise standards.*
- 7) *Require that site-specific noise studies be conducted by a qualified acoustic consultant utilizing acceptable methodologies while reviewing the development of sensitive land uses or development that has the potential to impact sensitive land uses. Also require a site-specific noise study if the proposed development could potentially violate the noise provisions of the General Plan or City ordinance.*

Consistency Evaluation

The project shall implement the applicable standards for noise and vibration reduction set by the City of Highland. A site-specific noise study has been conducted for the project setting noise reduction measures with provisions for noise barriers and berms. The highest level of noise exposure is from Greenspot Road with the anticipated traffic volume. The noise reduction measures are typical to similar existing conditions along Greenspot Road to the west of the Plan and include a combination of berms and grade contouring, masonry walls, and noise barrier view fencing where desired.

Goal 8.2

Facilitate the development of housing suitable for the diverse needs of current and future Highland residents.

Policies

- 3) *Ensure new residential projects are adequately served by park and recreation, libraries, transportation, public safety, and other public services and facilities.*
- 4) *Encourage the development of a range of housing types in targeted areas of the City, such as inventoried vacant residential sites, Planned Development districts, Mixed Use districts, and special Policy Areas identified in the Land Use Element.*

Consistency Evaluation

The Mediterra Plan provides a diverse set of residential products in a community of high quality residential neighborhoods. The lot and home mix ranges over a wide span of sizes to accommodate different homeowner economic and social status, needs, and lifestyles. This approach meets the City of Highland's goals, objectives, and policies for a diverse development and for housing opportunity for various segments of the community. The Mediterra planning approach facilitates the implementation of the City goals and policies with the inclusion of desirable and cost effective recreational opportunities for

the future community residents. This is achieved by the provision of welcoming and safe public places with functional amenities, open space, and neighborhood gathering places.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact – The project site is not covered by any habitat or natural community conservation plan. Therefore, the proposed project has no potential to conflict with such a plan. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

SUBSTANTIATION:

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

Less Than Significant Impact – The project proposes to convert a mix of open space and citrus groves to residential uses. However, the project site is located within an area of the City that is designated by the State of California as a Mineral Resource Zone. The City General Plan, Figure 5-3 identifies the proposed project site as MRZ-3, which encompasses areas that are assumed to contain aggregate mineral deposits whose significance cannot be evaluated from available data. Figure 5-3 also identifies all of the land south of Greenspot Road as MRZ-2, areas with known quantities of sand and gravels resources. Sand and gravel mining is conducted in several areas of the Santa Ana River floodplain (area south of Greenspot) and the City has designated this area as open space which allows for mineral resource extraction activities with appropriate permits.

The project site is presently designated Agriculture/Equestrian, 0-2 dwelling units per acre. This is the lowest residential density designation in the City. The proposed use is residential development under a Planned Development (PD) designation. Although located on the periphery of known mineral resource deposits, the borings at the site (refer to Appendix 5) indicate that any sand and gravel resources are thin at this location and not subject to mining. Given these findings, the proposed project will not result in the loss of availability of an exploitable mineral resource that would result in a significant impact if removed from future mining availability. Thus, the proposed project will not cause a significant loss of an available mineral resource and the project's impact is considered less than significant. No mitigation is required.

b) *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact – The project site is not designated on the City General Plan as a locally important mineral resource recovery site. Based on the analysis under a) above, the proposed project will not result in the loss of availability of any mineral resources and the proposed project will not conflict with the City General Plan. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. NOISE: Would the project result in:				
a) 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?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X		
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

SUBSTANTIATION: The “Noise Impact Analysis Mediterra at East Highlands City of Highland, California,” Giroux & Associates, February 2015 was utilized for the following analysis. A copy of this document is provided as Appendix 8 of this Initial Study.

Background: Noise Setting

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally considered to be unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

Loud or soft, noisy or quiet, high-and-low pitch are all qualitative terms used to describe sound. These terms are relative descriptions. The science of acoustics attempts to quantify the human perception of sound into a quantitative and measurable basis. Amplitude is the measure of the pressure exerted by sound waves. Amplitude may be so small as to be inaudible by humans, or so great as to be painful. Frequency refers to pitch or tone. The unit of measure is in cycles per second called “hertz”. Very low frequency bass tones and ultra-high frequency treble are difficult for humans to detect. Many noise generators in the ambient world are multi-spectral.

The decibel (dB) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity.

Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting," written as dB(A). Any further reference in this discussion to decibels written as "dB" should be understood to be A-weighted.

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The 24-hour noise descriptor with a specified evening and nocturnal penalty is called the Community Noise Equivalent Level (CNEL). CNEL's are a weighted average of hourly Leq's.

For "stationary" noise sources operating on private property, the City does have legal authority to establish noise performance standards designed to not adversely impact adjoining uses. These standards are typically articulated in the City Code.

Planning Standards

The State of California has established guidelines for acceptable community noise levels that are based upon the CNEL rating scale to insure that noise exposure is considered in any development. CNEL-based standards apply to noise sources whose noise generation is preempted from local control (such as from on-road vehicles, trains, airplanes, etc.) and are used to make land use decisions as to the suitability of a given site for its intended use. These CNEL-based standards are typically articulated in the Noise Element of the General Plan.

The City of Highland Noise Element (General Plan adopted in 2006) specifies CNEL-based standards for various land uses. The recommended guidelines for noise and land use compatibility are illustrated in Figure 10, Land Use Compatibility Guidelines for Noise. For residential use the guidelines indicate an exterior noise level of less than 60 dB CNEL to be "normally acceptable" without any special noise insulation requirements. Exterior noise levels up to 70 dB CNEL are considered "conditionally acceptable", such that construction should only occur after a detailed analysis of the noise reduction requirements is made and needed noise attenuation features are included in the project design.

Although the City of Highland guidelines allow residential exterior noise levels of up to 70 dB CNEL, a noise level of 65 dB is the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. The City of Highland General Plan Goal 7.1 recommends an exterior threshold of 65 dBA CNEL as the compatibility guideline for new residential dwellings in Highland and is used as the guideline for this analysis. However, exterior noise attenuation features could include, but are not limited to, setbacks to place structures outside the 65 dB CNEL noise contour, orienting structures so no windows open to the noise source, and /or installing noise barriers such as berms or solid walls.

Exterior standards apply to normally used recreational exterior space (patio, porch, pool/spa, etc.). They are also a guide to likely interior noise exposure based on the structural attenuation normally achievable with various types of construction.

The City of Highland interior noise standard uses a weighted noise exposure of 45 dBA CNEL as the guideline level for single and multi-family dwelling units. Conventional construction with closed windows

and a fresh air supply will normally suffice. Normal noise attenuation within residential structures with closed windows is about 25-30 dB. Therefore, an exterior noise level of up to 70-75 dB CNEL could allow for the interior threshold to be met with no special noise attenuation features.

The City of Highland is pre-empted from regulating on-road traffic noise. However, when traffic noise exceeds the planning standard for an affected land use, CNEL-based standards are the accepted significance threshold for any CEQA environmental analysis. From a planning standpoint, the City attempts to ensure that noise sensitive land uses are not installed adjacent to major roadways or that mitigation (sound walls or sufficient distance) is implemented to protect sensitive uses such as residences.

Noise Ordinance Standards

Section 15.48.030 of the Highland Municipal Code prohibits construction activities to commence any earlier than one-half hour before sunrise or to terminate no later than one-half hour after sunset Monday through Sunday.

Goal 7.3 of the Highland General Plan Noise Element protects residences from the effects of “spill over” of nuisance noise with the following noise mitigation measures:

- Require that construction activities employ feasible and practical techniques to minimize noise impacts on adjacent uses. Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur.
- As a condition of approval, non-emergency construction activities adjacent to existing noise-sensitive uses should be limited to daylight hours between 7:00 a.m. and 6:00 p.m. Construction on weekends or holidays are to be discouraged except in the case of construction proximate to schools where these operations could disturb the classroom environment.
- The use of portable noise barriers for heavy equipment operations performed within 100 feet of existing residences, are to be encouraged, or the applicant shall provide evidence as to why the use of such barriers is infeasible

Although exempt from numerical noise standards, the Noise Element provides the following exterior noise standards for the indicated land uses. Although the metric indicated for exterior noise standards is a CNEL, because by definition CNELs are a 24 hour average and the land use table assigns varying CNEL thresholds based on time of day it is likely that an hourly Leq might be more appropriate. Nevertheless these standards are presented below with the caveat that construction activities are exempt.

CITY OF HIGHLAND EXTERIOR NOISE STANDARDS

Type of Land Use	Time Interval	dB Leq
Residential	10 p.m. – 7 a.m.	55
	7 a.m. – 10 p.m.	60
Agricultural/Equestrian	10 p.m. – 7 a.m.	60
	7 a.m. – 10 p.m.	65
Commercial	10 p.m. – 7 a.m.	65
	7 a.m. – 10 p.m.	70
Manufacturing or Industrial	Anytime	75
Open Space	Anytime	75

CITY OF HIGHLAND INTERIOR NOISE STANDARDS

Type of Land Use	CNEL (dB)
Residential	45
Educational/churches	45
General office	50
Retail, restaurant	65
Agricultural	55
Sand and gravel operations	75

Baseline Noise Levels

Noise measurements were made in order to document existing baseline levels in the area. These help to serve as a basis to determine noise exposure from ambient noise activities upon the proposed project. An on-site short term noise measurement was conducted on Tuesday, November 25, 2014 from 1:30 p.m. to 1:45 p.m. The measurement location is shown in Figure 11 and the monitoring results are summarized below.

MEASURED NOISE LEVELS (dBA)

Leq	Lmax	Lmin	L10	L33	L50	L90
56	62	34	60	51	46	38

Monitoring experience shows that 24-hour weighted CNEL's are approximately equal to mid-afternoon Leq plus 2-3 dB (Caltrans Technical Noise Supplement, 2009). This would equate to an existing CNEL of 58-60 dB along Greenspot Road at 50 feet from centerline. Although traffic noise levels are currently well within recommended compatibility guidelines, with area growth traffic noise from Greenspot Road could increase substantially.

Therefore, an evaluation of existing and future noise levels and examination of possible noise reduction measures to ensure the proposed project residential noise exposure is within recommended compatibility guidelines is required.

Noise Significance Criteria

Noise impacts are considered significant if they result in:

- a. 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.
- b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Noise impacts are considered significant if they expose persons to levels in excess of standards established in local general plans or noise ordinances. The exterior noise standard used in this analysis is 65 dBA CNEL in usable outdoor space with evaluation of noise mitigation. If required, attenuation through setback or project perimeter barriers is anticipated to achieve this goal. However, an inability to achieve this goal through the application of reasonably available mitigation measures would be considered a significant impact.

Impacts may also be significant if they create either a substantial permanent or temporary increase. The term "substantial" is not quantified in CEQA guidelines. In most environmental analyses, "substantial" is taken to mean a level that is clearly perceptible to humans. In practice, this is at least a +3 dB increase. Some agencies, such as Caltrans, require substantial increases to be +10 dB or more if noise standards are not exceeded by the increase. For purposes of this analysis, a +3 dB increase is considered a substantial increase. The following noise impacts due to project-related traffic would be considered significant:

1. If construction activities were to audibly intrude into adjacent sensitive uses.
2. If project traffic noise were to cause an increase by a perceptible amount (+3 dB CNEL) or expose receivers to levels exceeding city compatibility noise standards.
3. If future build-out noise levels were to expose City of Highland sensitive receivers to levels exceeding compatibility standards of 65 dB CNEL exterior at any outdoor uses or 45 dB CNEL interior noise levels in any habitable space.

Construction Noise Impacts

Construction noise impacts vary markedly because the noise strength 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. Figure 12 shows the typical range of construction activity noise generation as a function of equipment used in various building phases. The earth-moving sources are seen to be the noisiest with equipment noise ranging up to about 90 dB(A) at 50 feet from the source. Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, or about 20 dB in 500 feet of propagation. The loudest earth-moving noise sources may therefore sometimes be detectable above the local background beyond 1,000 feet from the construction area. An impact radius of 1,000 feet or more pre-supposes a clear line-of-sight and no other machinery or equipment noise that would mask project construction noise. With buildings and other barriers to interrupt line-of-sight conditions, the potential "noise envelope" around individual construction sites is reduced. Construction noise impacts are, therefore, somewhat less than that predicted under idealized input conditions.

Construction noise exposure can be further worsened when several pieces of equipment operate in close proximity. 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 dB(A), short-term levels from either peak power or from several pieces operating in close proximity can be as high as 90 dB(A). During most intensive heavy equipment operations, the peak hourly average noise level from several pieces of equipment in simultaneous hourly operation is 85 dB Leq at 50 feet from the activity. Even with closed windows at an adjacent residence, such levels could interfere with quiet interior residential activity. However, construction noise is confined to the hours of lesser sensitivity and occurs when many residents would be out of the home. Construction activity noise is exempt from noise standards as long as it occurs during permitted hours.

The Highland General Plan Noise Element protects residences from the effects of “spill over” of nuisance construction noise with the following noise mitigation measures:

- Require that construction activities employ feasible and practical techniques to minimize noise impacts on adjacent uses. Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur.
- As a condition of approval, non-emergency construction activities adjacent to existing noise-sensitive uses should be limited to daylight hours between 7:00 a.m. and 6:00 p.m. Construction on weekends or holidays are to be discouraged except in the case of construction proximate to schools where these operations could disturb the classroom environment.
- The use of portable noise barriers for heavy equipment operations performed within 100 feet of existing residences, are to be encouraged, or the applicant shall provide evidence as to why the use of such barriers is infeasible.

The nearest residential uses west of the site, along La Cresta Street, are closer than 100 feet to the closest project site perimeter. Therefore, in addition to conforming to the recommended hours of construction, erection of a portable noise barrier or a solid subdivision perimeter wall separating the existing and proposed Mediterra homes should be performed as one of the earliest construction tasks. A temporary wall of 12 feet in height or a permanent wall height of 8-feet (either a solid block wall or a mix of a berm and wall) is recommended for construction noise protection.

The existing single family residence will be exposed to high construction noise levels and may require noise attenuation features comparable to the nearest offsite residences during construction. This residence is presently occupied. However, if this residential structure remains occupied during construction, mitigation measures NOS 3, NOS 4 and NOS 5 shall be implemented for grading activities on the project site adjacent to the residence.

Construction Vibration Impacts

Typical background vibration levels in residential areas are usually 50 VdB or lower, and are below the threshold of human perception. Perceptible vibration levels inside residences are typically attributed to the operation of heating and air conditioning systems, door slams or street traffic. Construction activities and street traffic are some of the most common external sources of vibration that can be perceptible inside residences.

Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernable movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Vibration related problems generally occur due to resonances in the structural components of a building because structures amplify groundborne vibration. Within the “soft” sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Groundborne vibration is almost never annoying to people who are outdoors (FTA 2006).

Groundborne vibrations from construction activities rarely reach levels that can damage structures. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance. Vibration is most commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

65 VdB -	threshold of human perception
72 VdB -	annoyance due to frequent events
80 VdB -	annoyance due to infrequent events
94-98 VdB -	minor cosmetic damage

To determine potential impacts of the project's construction activities, estimates of vibration levels induced by the construction equipment at various distances are presented in Table XII-1.

**Table XII-1
APPROXIMATE VIBRATION LEVELS INDUCED BY CONSTRUCTION EQUIPMENT**

Equipment	25 feet	50 feet	75 feet	100 feet
Large Bulldozer	87	81	78	75
Loaded Truck	86	80	77	74
Jackhammer	79	73	70	67
Small Bulldozer	58	52	49	46

* (FTA Transit Noise & Vibration Assessment, Chapter 12, Construction, 2006)

The on-site construction equipment that will create the maximum potential vibration is a large bulldozer. The stated vibration source level in the FTA Handbook for such equipment is 81 VdBA at 50 feet from the source. With typical vibrational energy spreading loss, the vibration annoyance standard is met at 56 feet. Effects of vibration perception such as rattling windows could only occur at the nearest residential structures, though vibration resulting from project construction would not exceed cosmetic damage thresholds.

Regardless, large bulldozers will not likely operate directly at the shared property line with the perimeter homes. Any fine grading at the property line should be performed with small bulldozers which are seen above to have 30 VdB less vibration potential. Therefore, to ensure adequate vibration annoyance protection the mitigation measure NOS-5 is recommended for implementation.

Construction activity vibration impacts are judged as less-than-significant.

Project-Related Vehicular Noise Impacts

Long-term noise concerns from the development of residential and school uses at the project site center primarily on mobile source emissions 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). The model calculates the Leq noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, roadway speeds, or noise barriers.

Table XII-2 summarizes the calculated 24-hour CNEL level at 50 feet from the roadway centerline along project area roadway segments for an assumed 45 mph travel speed. Existing conditions, with and without project, were evaluated as well as opening year and build out conditions with and without project. The noise analysis utilized traffic data obtained from the traffic analysis, prepared in August 2014, by Urban Crossroads for this project.

Table XII-3 presents the calculated project contribution to traffic noise for the indicated time frames. A comparison of the "with project" and "no project" conditions demonstrates a maximum traffic noise increase of +1.2 dB CNEL at 50 feet from roadway centerline on Greenspot Road east of Weaver, closest to the project site. Because all project related traffic noise impacts are much less than the 3.0 dB CNEL

significance threshold, traffic noise attributed to the project is considered to be individually less-than-significant.

The cumulative analysis compares “future with project” to “existing” conditions. As seen in Table XII-3, the largest cumulative impact is +7.5 dB CNEL at 50 feet from roadway centerline again along Greenspot Road east of Weaver. Although this impact exceeds the +3 dB significance threshold, the project only contributes +0.3 dB CNEL in 2035 and the impact would occur even without project development. Although several roadway segments along Greenspot Road are predicted to incur traffic noise impacts greater than +3 dB CNEL, the maximum project impact along any of these segments is +0.3 dB CNEL (in 2035) and therefore the project only and cumulative traffic noise impacts are considered to be less-than-significant.

**Table XII-2
NEAR-TERM TRAFFIC NOISE IMPACT ANALYSIS
(CNEL in dB at 50 feet from Centerline)**

<i>Road Segment</i>		<i>Existing No Project</i>	<i>Existing W Project</i>	<i>2018 No Project</i>	<i>2018 W Project</i>	<i>2035 No Project</i>	<i>2035 W Project</i>
Greenspot Rd/	E of Weaver	67.1	68.3	72.4	72.8	74.3	74.6
	W of Weaver	68.6	69.4	72.9	73.2	74.5	74.7
	E of Chuch	69.9	70.5	73.5	73.8	75.0	75.2
	W of Church	70.8	71.3	74.0	74.2	75.5	75.6
	E of Boulder	71.5	71.9	74.5	74.7	75.7	75.9
	W of Boulder	70.5	70.9	74.1	74.2	74.8	74.9
	E of 210	71.7	71.9	76.0	76.1	76.3	76.4
	W of 210	70.9	71.0	73.4	73.5	73.8	73.8
Weaver/	N of Greenspot	64.0	64.1	65.8	65.9	66.8	66.8
Church/	S of Greenspot	56.3	56.3	57.4	57.4	59.6	59.6
	N of Greenspot	66.4	66.5	67.8	67.9	68.8	68.9
Boulder/	S of Greenspot	71.0	71.1	72.5	72.6	72.4	72.4
	N of Greenspot	67.4	67.6	70.6	70.7	71.0	71.1
Pioneer/	E of Orange	65.8	65.8	66.5	66.5	68.2	68.2
	W of Orange	65.8	65.8	66.4	66.4	68.3	68.3
Orange/	S of Pioneer	68.7	68.9	69.9	70.0	71.2	71.2
	N of Pioneer	70.2	70.3	71.2	71.3	72.6	72.6

**Table XII-3
PROJECT ONLY AND CUMULATIVE IMPACTS
(CNEL in dB at 50 feet from Centerline)**

Road Segment		Project Only vs Existing	Project Only vs 2018	Project Only vs 2035	Cumulative
Greenspot Rd/	E of Weaver	1.2	0.4	0.3	7.5
	W of Weaver	0.8	0.3	0.2	6.1
	E of Chuch	0.6	0.3	0.2	5.3
	W of Church	0.5	0.2	0.1	4.8
	E of Boulder	0.4	0.2	0.2	4.4
	W of Boulder	0.4	0.1	0.1	4.4
	E of 210	0.2	0.1	0.1	4.7
	W of 210	0.1	0.1	0.0	2.9
Weaver/	N of Greenspot	0.1	0.1	0.0	2.8
Church/	S of Greenspot	0.0	0.0	0.0	3.3
	N of Greenspot	0.1	0.1	0.1	2.5
Boulder/	S of Greenspot	0.1	0.1	0.0	1.4
	N of Greenspot	0.2	0.1	0.1	3.7
Pioneer/	E of Orange	0.0	0.0	0.0	2.4
	W of Orange	0.0	0.0	0.0	2.5
Orange/	S of Pioneer	0.2	0.1	0.0	2.5
	N of Pioneer	0.1	0.1	0.0	2.4

Onsite Noise Exposure

As discussed, a 65 dB CNEL exterior noise threshold is used as the compatibility guideline for this analysis. Several project residences would have rear yards backing up to Greenspot Road. Future noise levels at these lots were analyzed to determine possible mitigation to ensure residential uses are not exposed to a noise level greater than the 65 dB CNEL guideline.

At area build-out, traffic noise levels along Greenspot Road adjacent to the project site are predicted to reach almost 75 dB CNEL at 50 feet from roadway centerline. The project traffic report predicts the following traffic volumes from which the associated noise levels are derived.

Roadway Segment		Project 2035 Traffic Volume (ADT)	2035 W Project Noise Level (dB at 50 feet from centerline)
Greenspot Road/	West of Drive1	47,100	74.6
Greenspot Road/	Drive 1 to 2	45,900	74.5
Greenspot Road/	East of Drive 2	44,700	74.3

Exterior noise levels in rear yards at homes abutting Greenspot Road could exceed the residential use noise standard of 65 dB CNEL by 8-9 dB in the absence of any mitigation.

An acceptable outdoor noise exposure is typically achieved by an adequate set-back or by inclusion of physical noise shielding (or some combination thereof). Setback distance necessary to achieve the recommended 65 dB CNEL without the need for noise walls was calculated and the indicated contours are as follows for area-wide build-out at intensities indicated in the project traffic report (assuming acoustically "soft" surfaces):

NOISE CONTOURS WITHIN THE PROJECT SITE

Roadway	Centerline to 65 dB (feet)	Centerline to 70 dB (feet)
Greenspot Road	220	100

If the indicated setbacks as measured from roadway centerline were met, no additional mitigation would be necessary to achieve the exterior threshold. However, if residential units were to be located closer to Greenspot Road than these distances, barriers (noise wall or a berm/wall combination) may be needed. Generally speaking, a 6-foot high wall would provide for 6 dB of noise reduction and an 8-foot wall would provide 8 dB of attenuation.

For this project, there are many lots along the Greenspot Road perimeter that are close to 50 feet from roadway centerline. Therefore, in the absence of sufficient attenuation setbacks, it is recommended that all units immediately adjacent to Greenspot Road be equipped with an 8-foot noise/privacy wall. Such an enclosure would provide at least -8 dB of noise attenuation and reduce exterior recreational noise exposure in yards along the Greenspot Road frontage to 65 dB CNEL. The location of these proposed walls is shown in Figure 4 of Appendix 8.

Several lots (129, 134 and 135) have a direct line of sight to Greenspot Road but have a minimal 200 foot separation distance. As shown in Figure 4 (Appendix 8), for these lots a 6-foot noise/privacy wall is recommended.

Therefore, future noise levels could be attenuated to significance thresholds with one of the following mitigation measures:

- Construct 6-8 foot high perimeter walls or berm at homes backing up to or abutting Greenspot Road; or
- Homes adjacent to Greenspot Road may achieve the 65 dB CNEL noise contour by setting homes further than the setback distances indicated above.

An acoustical report is typically required for any noise sensitive development in an area of potentially excessive noise to document that adequate mitigation is included in project design. With the recommended perimeter walls or setback, the recreational threshold of 65 dB CNEL will be met at all project lots exposed to General Plan build-out traffic noise levels for the Greenspot Road at the adjacent residences in the Mediterra development.

Airport Noise Exposure

For development planning near airports, state law requires that the airport and its associated impacts be considered in all land use decisions. Noise is one planning consideration. Airports are generally considered to have an "airport influence area boundary", or AIAB. This boundary extends, a minimum of two miles on each side of the airport runway.

The project site is approximately 1.6 miles from the nearest airport, Redlands Municipal Airport, runway. Noise contours for the Redlands Municipal Airport were adopted in May of 2003 and are shown in

Figure 5 of Appendix 8. The project site is well past the 60 dB CNEL noise contour and will not be within the airport influence zone.

- a) 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?

Less Than Significant With Mitigation Incorporated – The noise analysis in the preceding text and in Appendix 8 finds that the proposed project will generate substantial noise during construction and during future occupancy. Adjacent to the existing residential subdivision to the west, a potential exists for significant noise impacts during construction. To control noise impacts during construction, the following mitigation measures shall be implemented by the future site developer or contractor.

- NOS-1** *Construction activities shall employ feasible and practical techniques to minimize noise impacts on adjacent uses. Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur.*
- NOS-2** *Non-emergency construction activities adjacent to existing noise-sensitive uses shall be limited to daylight hours between 7:00 a.m. and 6:00 p.m. Construction on weekends or holidays is prohibited.*
- NOS-3** *A 12-foot temporary noise barrier or an 8-foot solid barrier (wall or combination wall/berm) shall be constructed along the west project boundary and adjacent to the onsite residence if occupied prior to the start of onsite grading or clearing.*
- NOS-4** *If the existing residence is occupied during site grading activities and the occupant concludes these daytime construction activities are too intrusive after implementation of measure NOS-3, the developer shall offer to relocate the resident(s) at the developer's expense until grading immediately adjacent to the site is completed and exterior noise levels are reduced to 70 dB at the exterior of the existing residence.*
- NOS-5** *Only small bulldozers shall be permitted to operate within 56 feet of the nearest off-site residential structures or the existing residence located within the project site. As noted above, the property occupant may choose to leave the site during immediately adjacent construction activities. The project developer shall fund the relocation.*

Future onsite exposure to noise due to future traffic noise levels along Greenspot Road will expose those residences nearest the roadway to unacceptable noise levels, exterior and interior. To control noise impacts at these parcels, the following mitigation measures shall be implemented by the future site developer.

- NOS-6** *An 8-foot solid noise wall (or combination wall/berm) shall be constructed along the Greenspot Road frontage, to provide an outdoor noise level of 65 dB CNEL for all units adjacent to Greenspot Road.*
- NOS-7** *All Greenspot Road perimeter homes shall have central air conditioning as a standard feature to allow for window closure during warmer weather while maintaining interior comfort. Supplemental ventilation shall be required for any habitable rooms facing Greenspot Road. Assuming a 5-person household, 75 cfm (5x15 cfm/person) of fresh make-up should be supplied to*

such rooms. The make-up air intake shall be installed on the side of the house away from the adjacent arterial roadway.

With implementation of the preceding measures noise impacts related to project implementation can be controlled to meet the City of Highland's noise requirement and no significant adverse noise impacts will result.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant With Mitigation Incorporated – Vibration levels from heavy equipment may be noticeable at times at the nearest sensitive use to the west and the NAP single-family residence of the project site, but will not cause any structural damage or exceed the vibration damage threshold. Nevertheless, to ensure adequate vibration protection the mitigation measure NOS-5 shall be implemented.

Implementation of this measure will ensure that no significant vibration impacts will affect the nearest residences to the west including the NAP residence.

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant With Mitigation Incorporated – Please refer to the findings under a) above. The project will contribute to an increase in permanent noise levels, but is not forecast to cause a substantial adverse impact with implementation of mitigation measures.

d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Less Than Significant With Mitigation Incorporated – Please refer to the findings under a) above. The project will contribute to an increase in temporary or periodic noise levels, but is not forecast to cause a substantial adverse impact with implementation of mitigation measures.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

Less Than Significant Impact – Based on the analysis of noise generated by aircraft operation at the nearest airport (Redlands Airport), the project site will not be exposed to excessive noise levels and no mitigation is required.

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact – The project site is not located within the vicinity of a private airstrip. Thus, the proposed project has no potential to expose future residents to any noise from such a facility. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

SUBSTANTIATION:

a) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

Less Than Significant Impact – The project site is presently designated Agriculture/Equestrian, 0-2 dwelling units per acre. This is the lowest residential density designation in the City. The proposed use is residential development under a Planned Development (PD) designation. The project site is approximately 178.73 acres in area (or 180.65 acres under Development Scenario 2). Assuming development at two units per acre, this site could support 354 residential units. The project proposes to cluster development in the least sensitive areas of the project site which would result in a maximum of 316 units within the development footprint. Residential occupancy within the City of Highland is estimated to be approximately 3.45 persons per residential unit, or approximately 1,092 persons on the site after full development. Although this is a slightly higher occupancy rate per acre (1.75 units per acre) when compared to the residential buildout estimates in the City General Plan (Table 2.1), it is consistent with development under either land use designation. Therefore, the proposed project (GPA, ZC and TTM) would not induce substantial population growth based on maintaining the number of residential units under the current AG/EQ residential designation. Project impact on population and housing is considered less than significant and no mitigation is required.

b) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

Less Than Significant Impact – There are two existing residences on the property and one will be demolished while the other will be retained within the proposed subdivision. New residences will be developed around this residence and new access will be provided with the implementation of the proposed project. One house will be displaced (not occupied) and the proposed project will expand the City's overall housing stock. No mitigation is required.

c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact – The proposed project will provide housing onsite if approved and no residents will be displaced because one existing occupied residence will remain and one vacant residence will be demolished. Therefore, no adverse impact to housing or residents will result from project implementation. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?		X		
b) Police protection?			X	
c) Schools?			X	
d) Recreation/Parks?			X	
e) Other public facilities?			X	

SUBSTANTIATION:

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) *Fire protection?*

Less Than Significant With Mitigation Incorporated – The City of Highland General Plan wildland fire designation for this site is Fire Severity Zone 1. Even though the residential subdivision has been set back from the wildland fire hazard zone, in conjunction with the setbacks to avoid the San Andreas Fault, it is incumbent upon the site developer and future home owners to maintain an adequate buffer zone along the north side of the subdivision between the developed area and native shrub habitat of the adjacent hillsides (wildland fire hazard area). Mitigation is provided under the Hazards section (Measure HAZ-7) to ensure an adequate long-term buffer zone is maintained. The proposed project will be served by the City of Highland Fire Department (CalFire), specifically Station 2 at 29507 Baseline Street, Highland, CA 92346. Project related fire protection demand impacts are mitigated through the mandatory payment of Development Impact Fees (DIF), and construction of the new residences in accordance with current Uniform Building and Fire Code requirements. Based on these findings and requirements, the proposed project is not forecast to cause or contribute to significant new demand for fire protection services. The project will not cause substantial adverse impacts through provision of new or altered

government facilities or its contribution to cumulative demand for fire/emergency response. No additional mitigation is required.

b) Police protection?

Less than Significant Impact – The proposed project would have law enforcement services available from the San Bernardino County Sheriff Department contracted with the City of Highland. The Sheriff Department operating in Highland currently serves a population of around 53,900 persons with 22 patrol deputies, which is a level of staffing that equals approximately 1 deputy per 2,450 residents. The City of Highland General Plan maintains that as the number of law enforcement personnel has grown to meet the demands of a growing community, deputies have more time to interact with the community. The project will add incrementally to the existing demand for law enforcement services, but the City recently installed a new Department station and does not anticipate the need for new facilities in the immediate future. The project is forecast to generate approximately 1,092 new residents, or slightly less than the demand for one-half of a deputy at the current population/deputy ratio. This incremental demand is offset through the mandatory payment of DIF for law enforcement protection services. Though the project will add a new population of around 1,092 persons, the proposed project will not significantly impact the City's law enforcement objectives and thus, will not significantly impact the demand for police protection. No mitigation is required.

c) Schools?

Less than Significant Impact – The project area is served by Redlands Unified School District, which currently consists of a total of 16 elementary schools, 4 middle schools, and 4 high schools. The proposed project location would be served by Mentone Elementary School, Beattie Middle School, and Redlands East Valley High School. The impact to schools from the proposed project is a maximum increase of up to 316 residential units which could generate approximately 178 students based on Redlands Unified School District's student generation rates. As a result, the project will directly add to the existing demand on existing schools and may contribute to the need for additional facilities. These impacts must be mitigated through the payment of the School Mitigation Fee to Redlands Unified School District, which is currently set at \$3.51 per square foot for a residential development. Through payment of the mandatory School Mitigation Fee, implementation of the proposed project is forecast to result in a less than significant impact to schools.

d) Recreation/Parks?

Less than Significant Impact – The proposed project is a low/medium density residential development. The project includes a number of open space and recreational uses for the project and the community. The project will permanently conserve the natural hillside in the northern portion of the Mediterra Plan area. This area contains fire protection roads which can be used as hiking trails. Multiuse trails will be incorporated into the project design in accordance with the facility map in Figure 13. This map shows recreation areas that include a neighborhood park, pocket park, trails, paseos and other amenities. The City General Plan establishes an open space ratio of 2.5 acres per 1,000 residents. Given the onsite permanent open space and approximately three acres of park, trails and recreational amenities, the project will fulfill this General Plan objective. Although the proposed project is expected to incrementally increase the demand on park and recreation resources within the City, the proposed project is not forecast to have a significant impact on local parks or recreational facilities. The developer may seek to offset DIF fees with the recreation/park amenities incorporated into the project design. No mitigation is required.

e) *Other public facilities?*

Less Than Significant Impact – The project will require expansion of the City’s area infrastructure (storm water runoff (drainage) and roads); expansion of East Valley Water District (EVWD) facilities (water and wastewater pipeline connections); and private utility facilities, such as natural gas and electricity connections. The latter are obviously not public facilities but they are part of the infrastructure required to serve a residential community. All of these infrastructure facilities are funded by fees, installation of required infrastructure improvements by the developer, or new property taxes from the proposed development. The City, EVWD and the utilities companies negotiate these fees (such as connection fees) and through this process, the proposed project is not forecast to create a significant impact on other facility systems. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. RECREATION:				
a) Would the project increase 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?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

SUBSTANTIATION:

a) *Would the project increase 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?*

Less Than Significant Impact – Please refer to the discussion in the parks section of Public Services (XIV.d). The proposed project will install new trails, parks and other facilities that will offset the project demand for such facilities. Demand for offsite park and recreational facilities is not forecast to increase substantially because open space and recreational resources onsite will meet the neighborhoods needs based on the City’s standard park to population ratio. No mitigation is required.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Less Than Significant Impact – The recreation facilities proposed by the project will be installed within the footprint of the site development (except for trails within the open space area) and the evaluation of impacts in this Initial Study indicate that the overall effect of the development, which includes the recreation facilities, will not cause a significant adverse impact on the environment. The existing roadway(s) in the open space area are already used by area residents and minimal improvements are proposed for this existing trail. No additional significant effect on the environment will result from continued and expanded use of this roadway/trail. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. TRANSPORTATION / TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		X		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		X		
c) 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?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?		X		
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	

SUBSTANTIATION: The “Mediterra at East Highlands Traffic Impact Analysis City of Highland,” Urban Crossroads, December 29, 2014 (Revised) was utilized for the following analysis. A copy of this document is provided as Appendix 9a of this Initial Study. As indicated in the preceding discussions, the project has been modified from a total of 277 units to 316 units. However, because the total number of condominium units has been increased, the project will actually generate about 37 fewer average daily trips. This finding is based on the updated trip generation analysis provided by Urban Crossroads (July 9, 2015), a copy of which is provided in Appendix 9b. Thus, the net daily traffic from this increase in units (277 to 316) results in a slight reduction in daily trips and a similar slight reduction in the effects on the area circulation system if the proposed project is implemented.

Background Traffic Information

A detailed traffic impact analysis was prepared to address the project’s potential impacts on the area circulation system. This study is titled “Mediterra at East Highlands Traffic Impact Analysis City of Highland” (TIA), and the following information is abstracted and summarized here to provide the reader with the information necessary to understand the project’s impacts. The detailed information regarding the TIA can be reviewed in Appendix 9a.

The project evaluated in the TIA is 277 single family dwelling units with access to Greenspot Road. The TIA forecasts that the project will generate 2,637 trip-ends per day, with 208 vehicles per hour (VPH) during the AM peak hour and 277 VPH in the PM peak hour. The July 9, 2015 letter from Urban Crossroads identifies 2,630 trip-ends per day. The following analysis scenarios were examined in the TIA to forecast potential impacts to traffic and circulation have been assessed for each of the following conditions:

- Existing (2014) Conditions (1 scenario)
- Existing plus Project Conditions (1 scenario)
- Opening Year Cumulative (2018), Without and With Project (2 scenarios)
- Horizon Year (2035), Without and With Project (2 scenarios)

The intersections analyzed in the TIA are shown on Figure 14 and listed on Table XVI-1. Vehicular access to and from the Project site is assumed to be provided via Driveway 1 and Driveway 2 (noted as #7 and #8 on Figure 14) on Greenspot Road. Both Driveways 1 and 2 are proposed to allow for full access. The Project will construct improvements on the site adjacent roadway of Greenspot Road. Roadway improvements necessary to provide site access and on-site circulation are assumed to be constructed in conjunction with site development and are described below. These improvements should be in place prior to occupancy of the associated Phase/PA.

**Table XVI-1
INTERSECTION ANALYSIS LOCATIONS**

ID	Intersection Location	Jurisdiction
1	SR-210 EB Ramps / 5th Street	Caltrans
2	SR-210 WB Ramps / Greenspot Road	Caltrans
3	Boulder Avenue / Greenspot Road	Highland
4	Orange Street / Pioneer Avenue	Redlands
5	Church Street / Greenspot Road	Highland
6	Weaver Street / Greenspot Road	Highland
7	Driveway 1 / Greenspot Road – Future Intersection	Highland
8	Driveway 2 / Greenspot Road – Future Intersection	Highland

The recommended site-adjacent roadway improvements for the Project are shown on Figure 15. These improvements will be incorporated into the Project description prior to Project approval and imposed as part of the Project’s conditions of approval. Figure 15 illustrates the site access and site-adjacent roadway improvement recommendations. Detailed discussion of the improvements onsite are provided in Section 1.6 of the TIA.

The detailed methodologies used in compiling the project impacts in the TIA are provided in Chapter 2 of the TIA. Generally, the acceptable levels of service (LOS) for each jurisdiction without significant impact

(see Tables XVI-2 and XVI-3 for LOS definitions) are LOS “D” for the City of Highland, LOS “C” for the City of Redlands, and Caltrans LOS “D.”

Chapter 3 of the TIA describes the existing circulation network and current conditions of this network (existing or 2014 intersection operations analysis). In 2014 the existing study area intersections were operating at acceptable LOS during peak hours. This chapter also includes a description of alternative modes of circulation, including bus, bicycling and walking. Figure 16 shows these alternatives as they currently exist from the project site west to the Interstate 210 Freeway. Figure 17 shows the existing traffic volumes of the affected circulations system.

**Table XVI-2
SIGNALIZED INTERSECTION LOS THRESHOLDS**

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up

Source: HCM 2010, Chapter 18, Exhibit 18-4

**Table XVI-3
UNSIGNALIZED INTERSECTION LOS THRESHOLDS**

Level of Service	Description	Average Control Delay Per Vehicle(Seconds)
A	Little or no delays.	0 to 10.00
B	Short traffic delays.	10.01 to 15.00
C	Average traffic delays.	15.01 to 25.00
D	Long traffic delays.	25.01 to 35.00
E	Very long traffic delays.	35.01 to 50.00
F	Extreme traffic delays with intersection capacity exceeded.	> 50.00

Source: HCM 2010, Chapters 19 and 20, Exhibits 19-1 and 20-1

Of all the environmental issues, traffic impacts are the most classically “cumulative” in nature. As a result, traffic impact analyses must address not only project-related trip generation on the area circulation

system, but also all other projects that may come on line with their traffic in the same impact area. Cumulative development contributing to area circulation system impacts are shown on Figure 18 and listed in Table XVI-4. Project trip distribution is shown on Figure 19. Detailed discussion of the cumulative impacts and impact forecasting are provided in Appendix 9a.

For the Existing Plus Project Traffic Conditions (E+P), the following roadway improvements are anticipated to be in place. No other off-site improvements are assumed beyond those that currently exist with the exception of the intersections and roadways that would be improved by the Project for access. In addition, analysis has been provided with the following improvements which are planned or under construction:

- Traffic signal at the intersection of Orange Street / Pioneer Avenue (planned per discussion with City of Redlands staff)
- Traffic signal at the intersection of Weaver Street / Greenspot Road (signal heads were in place during a field visit in July 2014)
- Eastbound right turn lane at the intersection of Boulder Avenue / Greenspot Road (under construction during a field visit in July 2014)

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.0 of Appendix 9a. The intersection analysis results are summarized in Table XVI-5, which indicates that the study area intersections are anticipated to operate at acceptable levels of service. No additional improvements to the circulation system are required under this analysis scenario.

Opening Year Cumulative (2018), Without and With Project (2 scenarios) are evaluated in Chapter 6 of the TIA (Appendix 9a). The only additional roadway improvement assumed to be in place are the project driveways and those facilities assumed to be constructed by the Project to provide site access. Refer to Figure 15. The LOS calculations are compiled on Table XVI-6 for both opening year scenarios. The study area intersections are anticipated to operate at acceptable LOS under both scenarios with the exception of the following intersections:

ID	Intersection Location
1	SR-210 EB Ramps / 5th Street – LOS “F” AM and PM peak hours
2	SR-210 WB Ramps / Greenspot Road – LOS “F” AM peak hour and PM peak hours
3	Boulder Avenue / Greenspot Road– LOS “E” during the AM peak hour; LOS “F” during the PM peak hour

Table XVI-4 (page 1 of 2)
CUMULATIVE DEVELOPMENT LAND USE SUMMARY

#	Project/Location	Land Use ¹	Quantity	Units ²
1	Orange New Jersey Pro	Industrial	126,900	TSF
2	CT Realty Corporation	Business Park	85,000	TSF
3	CT Realty Corporation	Business Park	85,000	TSF
4	Pepito's	Restaurant / Commercial	Remodel	
5	Hispano Investors	Residential	17	DU
6	South Terminus of Lillian Lane	Single Family-Detached	13	DU
7	Jack Lanphere	General Light Industrial	25,000	TSF
8	Berry St. Peters	General Light Industrial	8,600	TSF
9	Industrial Center on Palm	Industrial	39,750	TSF
10	Town Center Retail (Family Dollar) Fresh & Easy	Shopping Center	101,300	TSF
		Retail	14,250	TSF
11	KZ Holdings (Mixed use)	Residential	64	DU
		General Office	13,100	TSF
12	Baseline Commercial	Specialty Retail	17,200	TSF
		Sit-Down Restaurants	4,800	TSF
13	Randal Brank	Medical-Dental Office	25,000	TSF
14	NW corner of Baseline and Boulder	Bank	5,200	TSF
15	Immanuel Baptist Church	Church	90,000	TSF
16	North American Residential	Single Family-Detached	8	DU
17	Assisted Living Facility	Senior Adult Housing-Attached	88	DU
18	Peter Le	Single Family-Detached	8	DU
19	Chong Homes	Residential	5	DU
20	Ross Jones	Single Family-Detached	4	DU
21	121 SFDR Housing Gated Community	SFDR	121	DU
22	Greenspot Village & Marketplace	<u>Planning Area 1 (Commercial)</u>		
		Superstore	200,000	TSF
		Anchor Retail	355,000	TSF
		Gas Station w/ Convenience Market	3,600	TSF
		Bank with Drive-Thru	10,000	TSF
		Fast-Food Restaurant with Drive-Thru	12,000	TSF
		High-Turnover (Sit-Down) Restaurant	25,000	TSF
		Sit-Down Restaurants	40,000	TSF
		<u>Planning Area 2 (Residential)</u>		
		Apartments	378	DU
		Condo/Townhomes	172	DU
		<u>Planning Area 3 (Village Center - Mixed Use)</u>		
		Daycare	7,000	TSF
		Shopping Center	80,000	TSF
		Sit-Down Restaurants	7,000	TSF
		Hotel (Includes 20 TSF Conference Center)	240	RMS
		General Office	60,000	TSF
Apartments	172	DU		
Condo/Townhomes	78	DU		
23	Regency Center	Fast-Food Restaurant with Drive-Thru	3,417	TSF
		Shopping Center	42,840	TSF
24	Retail Center	Fast-Food Restaurant with Drive-Thru	6,280	TSF
		Shopping Center	7,065	TSF
		Retail	13,771	TSF
25	133 SFD Housing (SE corner of Orange St. & Greenspot Rd.)	SFDR	133	DU
26	Blossom Trails	SFDR	14	DU
		Condo/Townhomes	306	DU
27	Greenspot Retail Office	Retail	5,000	TSF
28	Wright, Alta Vista and Santa Ana	Residential	117	DU
29	TTM 18988	Residential	82	DU

Table XVI-4 (page 2 of 2)
CUMULATIVE DEVELOPMENT LAND USE SUMMARY

#	Project/Location	Land Use ¹	Quantity	Units ²
30	Northwest of Tennessee and San Bernardino Ave.	Shopping Center	275,000	TSF
31	NE corner of Texas St. & Pioneer Av.	SFDR	12	DU
32	East of Deanna Wy., between San Bernardino Av. & Pioneer Av.	SFDR	26	DU
33	North of San Bernardino Av., west of Judson St.	SFDR	74	DU
34	Harmony Specific Plan	Residential	3466	DU
		Commercial Retail Center	225,000	TSF
35	San Manuel Village-Partially Built	Restaurant with Drive through	8,500	TSF
		Restaurant	5,800	TSF
		Bank with Drive Through	5,200	TSF
36	Santa Ana River Wash	Cement Plant		
37	Southeast Corner of Bas Line and Seine Avenue	Retail	23,500	TSF
38	St Adelaide's Academy Expansion - New Ministry Offices	General Office	9,000	TSF

¹ SFDR = Single Family Detached Residential

² DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Position; RMS = Rooms

Table XVI-5
E+P CONDITIONS INTERSECTION ANALYSIS

#	Intersection	Traffic Control ²	Existing (2014)				E+P				Acceptable LOS
			Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-210 EB Ramps / 5th St.	TS	14.8	17.1	B	B	14.9	17.9	B	B	D
2	SR-210 WB Ramps / Greenspot Rd.	TS	21.3	17.9	C	B	21.9	18.1	C	B	D
3	Boulder Av. / Greenspot Rd.	TS	33.2	51.2	C	D	35.2	59.5	D	E	D
	Boulder Av. / Greenspot Rd. ³	TS	32.3	40.8	C	D	34.1	45.8	C	D	D
4	Orange St. / Pioneer Av.	AWS	17.5	23.9	C	C	18.5	25.1	C	D	C
	Orange St. / Pioneer Av. ⁴	TS	18.2	19.7	B	B	18.4	19.8	B	B	C
5	Church St. / Greenspot Rd.	TS	17.5	16.4	B	B	18.4	16.4	B	B	D
6	Weaver St. / Greenspot Rd.	CSS	19.9	27.3	C	D	25.9	40.6	D	E	D
	Weaver St. / Greenspot Rd. ⁵	TS	19.3	13.5	B	B	20.2	13.9	C	B	D
7	Driveway 1 / Greenspot Rd.	CSS	--	--	--	--	10.4	9.9	B	A	D
8	Driveway 2 / Greenspot Rd.	CSS	--	--	--	--	10.1	9.8	B	A	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ 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. All analysis locations have been analyzed using the Traffix Software (Version 8.0.R1) with the exception of the SR-210 Ramps at Greenspot Road, which have been analyzed using Synchro (Version 8)

² AWS = All-Way Stop; CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

³ An eastbound right turn lane is currently under construction at the time of data collection for the preparation of this report. This intersection was also evaluated with an eastbound right turn lane.

⁴ A traffic signal is planned to be installed at Orange St. / Pioneer Av. Per City of Redlands staff. The intersection was also evaluated with a traffic signal.

⁵ The installation of traffic signal control was observed to be under construction at the time of data collection for the preparation of this report. The intersection was also evaluated with a traffic signal.

Measures to address (mitigate) the cumulatively considerable impacts for Opening year Cumulative With Project traffic conditions are provided in mitigation measures presented below. For opening year Cumulative Without and With Project conditions no additional intersections appear to warrant a traffic signal. The TIA further determined that there are potential queuing issues forecast to occur during the PM peak hour 95th percentile traffic flows for this scenario at the SR-210 westbound ramps at Greenspot Road. The queuing issues are based on existing lane configurations and are anticipated to no longer exist with the completion of improvements that are currently being constructed at the SR-210 ramps at 5th Street/Greenspot Road.

As a result of implementing the mitigation measures identified below, the potential project impacts at Opening Year Cumulative With Project (2018) can be reduced to a less than significant impact.

Horizon Year (2035), Without and With Project (2 scenarios), are evaluated in Chapter 7 of the TIA (Appendix 9a). The specific roadway improvements assumed to be in place in 2035 include the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year conditions.
- Traffic signal at the intersection of Orange Street / Pioneer Avenue. Urban Crossroads was directed by City of Redlands Traffic Engineer to assume a traffic signal at this intersection for all future scenarios for other traffic studies in City of Redlands.
- Traffic signal at the intersection of Weaver Street / Greenspot Road (signal heads were in place during field visit in July 2014)
- Configurations based on City's master plan have been used for the SR-210 Ramps at 5th Street/Greenspot Road interchange and Boulder Avenue / Greenspot Road as directed by the City. The master plan provided by the City of Highland is included in Appendix 9a of this report.
- LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2035) Without Project conditions with roadway and intersection geometrics consistent with roadway configurations described above. As shown on Table XVI-6, the study area intersections are anticipated to operate at acceptable levels of service under Horizon Year (2035) Without Project conditions with the exception of the following intersections:

ID	Intersection Location
3	Boulder Avenue / Greenspot Road – LOS "F" PM peak hour only
4	Orange Street / Pioneer Avenue – LOS "F" PM peak hour only
5	Church Street / Greenspot Road – LOS "F" AM and PM peak hours

**Table XVI-6
HORIZON YEAR (2035) CONDITIONS INTERSECTION ANALYSIS**

#	Intersection	Traffic Control ²	HY (2035) Without Project				HY (2035) With Project				Acceptable LOS
			Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	SR-210 EB Ramps / 5th St.	TS	30.6	47.8	C	D	30.6	50.0	C	D	D
2	SR-210 WB Ramps / Greenspot Rd.	TS	23.4	29.9	C	C	24.0	30.9	C	C	D
3	Boulder Av. / Greenspot Rd.	TS	51.3	85.9	D	F	55.9	98.7	E	F	D
4	Orange St. / Pioneer Av.	TS	30.6	52.4	C	F ³	31.5	53.7	C	F ^{3,4}	C
5	Church St. / Greenspot Rd.	TS	98.5	68.0	F	F ³	112.6	81.0	F	F	D
6	Weaver St. / Greenspot Rd.	TS	33.9	17.3	C	B	40.6	19.7	D	B	D
7	Driveway 1 / Greenspot Rd.	CSS	--	--	--	--	34.7	23.2	D	C	D
8	Driveway 2 / Greenspot Rd.	CSS	--	--	--	--	32.0	25.5	D	D	D

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ 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. All analysis locations have been analyzed using the Traffic Software (Version 8.0 R1) with the exception of the SR-210 Ramps at Greenspot Road, which have been analyzed using Synchro (Version 8).

² CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

³ Volume-to-capacity ratio is greater than 1.00; Intersection unstable; Level of Service "F"

⁴ Delay does not meet the applicable jurisdictional standards of a deficiency.

Also, as shown on Table XVI-6, the addition of Project traffic is not anticipated to result in any additional intersections to operate at an unacceptable LOS as compared to those identified previously for Horizon Year Without Project traffic conditions with the exception of the following intersection:

ID	Intersection Location
7	Driveway 1 / Greenspot Road – LOS "E" AM peak hour only

Measures to address (mitigate) the cumulatively considerable impacts for Horizon Year 2035 traffic conditions with the project are provided in mitigation measures presented below. For Horizon Year Without and With Project conditions no additional intersections appear to warrant a traffic signal. The TIA further determined that there are no potential queuing issues anticipated during the AM and PM peak hour 95th percentile traffic flows for 2035 conditions at the SR-210 Ramps at 5th Street/Greenspot Road. With implementation of the recommended mitigation measures the local circulation system affected by the proposed project will operate at acceptable LOS for all three jurisdictions.

- a) *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

Less Than Significant With Mitigation Incorporated – The TIA, summarized above and included as Appendix 9a of this document, provides substantiation that with implementation of recommended mitigation measures the proposed project will not cause a significant adverse impact to the local affected circulation system as depicted on Figure 14. The following onsite and offsite improvements must be installed to allow traffic to flow at an acceptable LOS through the affected circulation system.

The following roadway improvements are needed to provide adequate site access and on-site circulation. These improvements are shown on Figure 8-1 of the TIA (Appendix 9a) and they must be in place prior to occupancy of the project.

TRA-1 Onsite Roadway Improvements

Construct Greenspot Road from Project's western boundary to 600 feet east of Driveway 2 at its ultimate half-section width as a Major Highway (104-foot right-of-way) in compliance with applicable City of Highland standards. Provide median improvements on the north side of Greenspot Road as required by the final conditions of approval for the proposed Project and applicable City of Highland standards. Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections shall be constructed to be consistent with the recommended roadway classifications and respective cross-sections in the City of Highland General Plan Circulation Element.

The improvements to Greenspot Road along the Project's frontage shall extend at least 600 feet west and east of the Project driveways in order to provide acceptable storage for the westbound shared through-right turn lanes, as noted in the CMP Appendix C (1).

The storage length recommendations for the turning lanes on Greenspot Road at Driveway 1 and Driveway 2 are shown on Exhibit 8-1 of the TIA (Appendix 9a). The storage length recommendations for turn lanes are based on Opening Year Cumulative With Project HCM 95th percentile queues from Traffic which shows expected average queues of less than 1 passenger vehicle length for the westbound left turns. However a minimum storage length of 150 feet has been recommended to accommodate traffic from East Valley Water District's headquarters heading west on Greenspot Road. The East Valley Water District's existing driveway is located in between Project's proposed Driveway 1 and Driveway 2 and would be restricted to right-in-right-out access only. Vehicles heading west on Greenspot Road out of the East Valley Water District headquarters would either make a U-turn at Driveway 2 or make a left into the Project and head out after making a U-turn at the proposed roundabout at the end of Driveway 2 within the Project.

TRA-2 Site Access Improvements

Construction of on-site and site adjacent improvements shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Driveway 1 at Greenspot Road (#7) – A stop control shall be installed on the southbound approach and the intersection shall be constructed with the following geometrics:

Northbound Approach: N/A.

Southbound Approach: One shared left-right turn lane.

Eastbound Approach: One left turn lane with a minimum of 150-feet of storage and one through lane.

Westbound Approach: One through lane and one shared through-right turn lane.

Driveway 2 at Greenspot Road (#8) – A stop control shall be installed on the southbound approach and the intersection shall be constructed with the following geometrics:

Northbound Approach: N/A.

Southbound Approach: One shared left-right turn lane.

Eastbound Approach: One left turn lane with a minimum of 150-feet of storage and one through lane.

Westbound Approach: One through lane and one shared through-right turn lane.

On-site traffic signing and striping will be implemented in conjunction with detailed construction plans for the Project site. Sight distance at each Project access point will be reviewed with respect to standard Caltrans and City of Highland sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

The following intersections were found to be cumulatively impacted for Opening Year and Horizon Year 2035 Cumulative Without and With Project traffic conditions. Improvement strategies have been recommended at impacted intersections to reduce each location's peak hour delay to "less than significant."

TRA-3 Opening Year Cumulative Without and With Project Mitigation

The Project will contribute its proportional share of this cumulative improvement need through its payment of the City of Highland Development Impact Fee (DIF) and/or fair share as directed by the City.

Horizon Year Cumulative Without and With Project Mitigation

The Project will contribute its proportional share of this cumulative improvement need through its payment of the City of Highland Development Impact Fee (DIF) and/or fair share as directed by the City.

Implementation of these measures can reduce the project's contribution to cumulatively considerable impacts on the above circulation facilities to a less than cumulatively considerable level, i.e., a less than significant impact.

- b) *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?*

Less Than Significant With Mitigation Incorporated – The TIA, summarized above and included as Appendix 9a of this document, provides substantiation that with implementation of recommended mitigation measures the proposed project will not cause a significant conflict with any applicable congestion management program. This includes payment of Development Impact Fees identified in mitigation measure TRA 3. The preceding onsite and offsite improvements must be installed to allow traffic to flow at an acceptable LOS through the affected circulation system and eliminate any conflicts with such programs.

- c) *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?*

No Impact – The proposed project is identified as being approximately 1.8 miles from the nearest airport (Redlands) and implementation of the project has no potential to alter air traffic pattern traffic levels or to create safety hazards for either residents or aircraft operations at this airport. No mitigation is required.

- d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less Than Significant Impact – The TIA evaluates the improvements needed to provide adequate access to the site and from the site to the area circulation system. This includes specific recommendations to

ensure that the design features of all of the improvements do not create a substantial hazard to the circulation system. No mitigation is required.

e) *Result in inadequate emergency access?*

Less Than Significant With Mitigation Incorporated – Emergency access to the site will be improved after development based on the improvements to the area circulation system and the project's contributions to these improvements. However, during construction emergency access along Greenspot could be reduced by the project, and mitigation measure HAZ-6 will be implemented to ensure that adequate emergency access is maintained until all roadway improvements are installed by the project. No additional mitigation is required.

f) *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

Less Than Significant Impact – The alternative modes of transportation (bus, bicycle, and pedestrian) facilities are shown on Figure 16. The proposed project will incorporate both pedestrian and bicycle circulation system improvements along Greenspot Road and will provide internal walking trails and connection to regional trails in the northern portion of the site. Thus, the proposed project will be in conformance with adopted City policies for alternative modes of circulation. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

SUBSTANTIATION: The information provided in this section is abstracted from the following report: "Conceptual Water Quality Management Plan for: 119-536 Tract 18893," June 20, 2014, Sitetech Inc. A copy of this technical study is provided as Appendix 7a to this Initial Study.

a) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Less Than Significant Impact – The issue of water quality and Regional Board treatment requirements is addressed in the Hydrology Section under issue IX.a). The proposed project will deliver wastewater generated from the residences to the regional treatment plant in the City of San Bernardino. Residential wastewater rarely contains constituents that would cause a wastewater treatment plant to exceed Regional Board requirements as established in a WDR. No adverse impact from generation of wastewater onsite is forecast to result from project implementation. Although not considered "wastewater" the Regional Board through the regional MS-4 permit requires management of stormwater runoff to prevent indirect source contamination of surface runoff in the Santa Ana River Basin. As described in Section

IX.a), the proposed project is implementing storm water quality controls that will meet the requirements of the Regional Board.

- b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less Than Significant Impact – Implementation of the project will result in incremental system capacity demand for wastewater treatment capacity. According to the Highland General Plan, the San Bernardino Water Reclamation Plant operated by the San Bernardino Municipal Water District has a capacity of 33 million gallons per day (MGD), and the current sewage generation is between 26 to 27 MGD. The current population within the city of Highland is estimated to be 53,900. The proposed project is forecast to increase the population by about 1,092 persons. The proposed project is not forecast to require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

- c) *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Less Than Significant Impact – Please refer to the discussion of stormwater management in the Hydrology and Water Quality section of this document (IX). The project will not alter existing stormwater management for the open space portion of the project. The existing system will continue to deliver flows from this area to the regional drainage system. The developed area of the project will be served by a collection system that will flow to a proposed WQMP infiltration basin that will detain increased storm water runoff from the project site and deliver flows into the regional system at approximately the same rate as existing. Therefore, no significant adverse impact to stormwater drainage facilities will result from project implementation. No mitigation is required.

- d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Less Than Significant Impact – Please refer to the discussion of water supply adequacy in the Hydrology and Water Quality section of this document (IX.b). With removal of the irrigated citrus grove within the project boundary, the proposed project is forecast to create a demand for an additional six acre-feet of potable water. A review of the EVWD section of the 2010 San Bernardino Valley Regional Urban Water Management Plan indicates that this demand will not exceed the water supply available to the District to meet water supply requirements of its customers. A will serve letter has been provided for the project and a copy is included in Appendix 7b of this document. No mitigation is required.

- e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less Than Significant Impact – The wastewater provider for the project area is EVWD/San Bernardino Municipal Water District. The proposed project will tie into the existing sewer main and wastewater will be treated at the existing San Bernardino regional wastewater treatment plant. This plant has substantial excess wastewater treatment capacity, several million gallons. Assuming generation of 170 gallons of wastewater per household, the project will generate about 51,000 gallons of wastewater per day. The regional plan has sufficient capacity to treat this additional wastewater with no new or expanded capacity requirement. This impact is less than significant and no mitigation is required.

- f) *Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Less Than Significant Impact – The proposed project is served by the San Timoteo Sanitary Landfill in Redlands, California. According to the California Department of Resources Recycling and Recovery (CalRecycle), over 66 percent of the San Timoteo Sanitary Landfill's 20,400,000 cubic yard capacity has been used. The average inflow to the landfill each day is 854 tons, while the maximum permitted inflow is 2,000 tons per day. The San Timoteo Sanitary Landfill's estimated closure date is 2043.

The proposed project is a residential development that is forecast to increase the local population by about 1,092 persons in a maximum of 316 dwelling units. With an estimated waste generation rate of approximately 12.23 pounds of waste per household per day, in accordance with the California Integrated Waste Management Board, the proposed project is forecast to generate approximately 3,865 lbs of waste per day, or approximately 705 tons per year, thus the San Timoteo Sanitary Landfill has the capacity to accept waste from the proposed project.

The proposed project is subject to Assembly Bill 1327, Chapter 18, Solid Waste Reuse and Recycling Access Act of 1991 (Act). The Act requires that adequate areas be provided for collecting and loading recyclable materials such as paper products, glass, and other recyclables. The project must conform to the City's requirements to ensure compliance with the Act. Based on these factors, it is anticipated that the project will have a less than significant impact from solid waste resources.

- g) *Comply with federal, state, and local statutes and regulations related to solid waste?*

Less Than Significant Impact – The proposed project is subject to Assembly Bill 1327, Chapter 18, Solid Waste Reuse and Recycling Access Act of 1991 (Act). The Act requires that adequate areas be provided for collecting and loading recyclable materials such as paper products, glass, and other recyclables. The project must conform to the City's requirements to ensure compliance with the Act. Based on these factors, it is anticipated that the project will have a less than significant impact from solid waste resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

SUBSTANTIATION:

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*
- b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*
- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant With Mitigation Incorporated – The proposed Project will require a General Plan Amendment in order to be consistent with the City's General Plan. It can be implemented without causing significant adverse environmental effects with implementation of mitigation measures outlined in the preceding analysis. The City will require the implementation of mitigation to ensure that potentially significant impacts do not occur to any of the following resource values or physical conditions that occur within the proposed improvements area: aesthetics, agriculture, air quality, biology, cultural, geology and soils, hazards and hazardous emissions, noise, public services (fire), and transportation/traffic. Some of

the potentially significant impacts are temporary in nature as they are associated with the construction phase only of the proposed Project.

Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with all 18 issues evaluated in this Initial Study. The required mitigation has been included in this Initial Study to reduce impacts for potentially significant impacts to a less than significant impact level.

Based on the findings in this Initial Study, the City of Highland proposes to adopt a Mitigated Negative Declaration (MND) for the Mediterra Project. A Notice of Intent to Adopt a Mitigation Negative Declaration (NOI) will be issued for this project by the City. The Initial Study and NOI will be circulated for 30 days of public review and comment. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed by the City for possible adoption at a future City Council meeting, the date for which has yet to be determined. If you or your agency comments on the MND/NOI for this project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

SUMMARY OF MITIGATION MEASURES

Aesthetics

AES-1 The landscape plan approved for the north side of Greenspot Road along the proposed project shall incorporate native trees and plants that can buffer the visual appearance of the residential development adjacent to the roadway.

Agriculture and Forestry Resources

AGR-1 The project developer shall fund acquisition of farmland or farmland conservation easements at a ratio of 0.50/1. The developer shall quantify the area of the site that is considered Farmland of Statewide Importance and Unique Farmland through a site survey. Based on the approximate 38-acre area of the project site in Important Farmland, a total of 17 acres of prime agricultural land or conservation easements over 17 acres of prime agricultural land shall be acquired and permanently protected. This acreage value may be adjusted with more specific information in the future, but the 0.50/1 ratio shall be preserved in determining the final acreage value. The prime agricultural land or the conservation easement shall be acquired and made available to an existing farmland trust or comparable organization within one year of occupancy of Phase 1 of the project site, or a farmland trust or comparable organization shall verify that it has received sufficient funds to acquire prime agricultural land or a conservation easement over such lands. The City concludes that implementation of this measure provides reasonable mitigation based on the magnitude of the impact pursuant State CEQA Guidelines Section 15370.

Air Quality

AIR-1 The proposed Project and its contractors shall utilize the following Best Management Practices as outlined by SCAQMD Rule 403.

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least three times daily.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Install and maintain track-out control devices in effective condition at all access points where paved and unpaved access or travel routes intersect (e.g. Install wheel shakers, wheel washers, and limit site access).
- All streets shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers utilizing reclaimed water trucks if visible soil materials are carried to adjacent streets.
- The builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary to prevent transport of dust offsite
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours.
- All stockpiles of debris, dirt or other dust generating material shall be covered or watered three times daily.
- Suspend use of all construction equipment operations during second stage smog alerts.

- AIR-2 The proposed Project and its contractors shall ensure that, during construction, contractors shall turn off all diesel-powered construction vehicles when vehicles are not in use and contractors shall prohibit idling of vehicles for longer than three minutes.
- AIR-3 The proposed Project shall implement the following additional construction equipment exhaust controls:
- Utilize well-tuned off-road construction equipment.
 - Establish a preference for contractors using Tier 3 or better heavy equipment.

Biological Resources

BIO-1 Burrowing Owl. Preconstruction presence/absence surveys for burrowing owl shall be conducted within 30 days prior to any onsite ground disturbing activity. The burrowing owl survey shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife. In the event this species is not identified within the project limits, no further mitigation is required. If during the preconstruction survey, the burrowing owl is found to occupy the site, Mitigation Measure BIO-2 shall be required.

BIO-2 If burrowing owls are identified during the survey period, the City shall require the project applicant to take the following actions to offset impacts prior to ground disturbance:

Active nests within the areas scheduled for disturbance or degradation shall be avoided from February 1 through August 31, and a minimum of 250-foot buffer shall be provided until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.

If impacts on occupied burrows in the non-nesting period are unavoidable, onsite passive relocation techniques may be used if approved by the CDFW to encourage owls to move to alternative burrows outside of the impact area.

If relocation of the owls is approved for the site by the CDFW, the City shall require the developer to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site. The relocation plan must include all of the following:

- The location of the nest and owls proposed for relocation.
- The location of the proposed relocation site.
- The number of owls involved and the time of year when the relocation is proposed to take place.
- The name and credentials of the biologist who will be retained to supervise the relocation.
- The proposed method of capture and transport for the owls to the new site.
- A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control).

BIO-3 Western Spadefoot. If construction is to occur in winter or spring (i.e., between November 1 and May 31), focused pre-construction surveys shall be conducted following rain events for the western spadefoot within a 1,200-foot buffer of potential breeding pools. The buffer is consistent with literature values for average terrestrial use by amphibians (Semlitsch and Brodie 2003).

Appropriate survey methods shall be employed to maximize the possibility of detecting the western spadefoot, such as time of day and specific locations searched. The survey shall be phased into specific areas where construction will be taking place. A survey of the rain pool(s)

for eggs, tadpoles, and toadlets (i.e., metamorphs) by a qualified biologist familiar with all life stages of the western spadefoot shall also be necessary to identify and translocate western spadefoot tadpoles to adjacent pool sites known to support this species. If western spadefoot are determined present in rain pools during survey, land disturbing activities within rain pools and the associated 1,200-foot buffer will be avoided while the pools are wet during the western spadefoot breeding season (March 1 through May 31).

BIO-4 California Glossy Snake. The subject property encompasses 178 acres in the eastern portion of the City of Highland, San Bernardino County, California. The development envelope, or land disturbing footprint, associated with the proposed project includes less than 10 acres of disturbance area that is suitable glossy snake habitat, located south of Greenspot Road. Therefore, a qualified biological monitor familiar with glossy snake shall be present during land disturbing activities within the suitable habitat area for glossy snake, to monitor for this species and if possible translocate any glossy snakes found during grubbing and grading.

BIO-5 Nesting Birds. A migratory nesting bird survey of the Project's impact footprint shall be conducted by a qualified biologist within 2 weeks and 3 days prior to initiating vegetation clearing or ground disturbance. If active nests are found during the pre-construction nesting bird surveys, a Nesting Bird Plan (NBP) will be prepared and implemented. At a minimum the NBP will include guidelines for addressing active nests, establishing buffers, monitoring, and reporting. The NBP will include a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be determined by the biologist in consultation with the CDFW, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be visually marked in the field, which no vegetation clearing or ground disturbance shall commence until the qualified biologist has determined the nest in question has become inactive (failed or successful with fledged young birds) and a monitoring report has been submitted to the CDFW for review and approval. Construction within the designated buffer area shall not proceed until approved by the site biologist.

Cultural Resources

CUL-1 If subsurface prehistoric or historic resources over 50 years of age are encountered during land modification activities, then activities in the immediate area of the find shall be halted so that a qualified professional archaeologist can assess the find, determine its significance, and make recommendations for appropriate mitigation measures consistent with the provisions of Public Resources Code section 21083.2 (b), (c) and (d). The developer shall fund recommended management requirements for accidentally exposed archaeological materials.

CUL-2 If human remains and/or "grave goods" (i.e., funerary objects) are found within the Project area, the City or its designee shall notify the San Bernardino County coroner as soon as possible, in any event not later than 24 hours after the time of discovery. The coroner shall determine whether or not the circumstances, manner, and cause of death require further investigation as a crime scene. If not, the coroner shall endeavor to determine if the remains are Native American. This shall be accomplished in consultation with a physical anthropologist, human osteologist, or other qualified specialist.

If the coroner determines that the remains are Native American and not evidence of a crime, he/she shall contact the Native American Heritage Commission (NAHC) per CH&SC §7050.5(b). The NAHC would then immediately identify the persons or Tribe it believes to be to be most likely descended from the deceased Native American. With the permission of the

landowner, the most likely descendant (MLD) may inspect the site of the discovery and recommend means for treating or disposing of the human remains and any associated grave goods with appropriate dignity. The MLD shall complete the inspection and make a recommendation within 48 hours of notification by the NAHC.

If the NAHC is unable to identify an MLD, or if the MLD fails to make a recommendation, or if the landowner rejects the MLD's recommendation and mediation by the NAHC fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and any associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC §5097.98).

If the human remains are not those of a Native American, the City shall consult with the coroner, a biological anthropologist or human osteologist, and a qualified historical archaeologist to develop an appropriate plan for treatment and to determine if historical research, further archaeological excavations, and/or other studies may be necessary before a treatment plan can be finalized. Also, if the remains are those of an identifiable individual and not evidence of a crime, the City shall notify the next-of-kin, who may wish to influence or control the subsequent disposition of the remains.

If the next-of-kin (for non-Indian remains) or MLD so requests, the City shall coordinate discussions among concerned parties to determine if reburial at or near the original site in a location not subject to further disturbance is feasible. If a proximate reburial location is not feasible, then the City may continue to coordinate discussions until a final disposition of the remains is decided upon.

Following the initial discovery and identification of any human remains, funerary objects, sacred objects, or objects of cultural patrimony within the Project area, no further archaeological excavation, recording, or analysis of such remains and/or objects shall occur until after the MLD has made a recommendation to the landowner with respect to the disposition of the remains and/or objects. Thereafter, the City shall take into account the recommendation of the MLD, and shall decide on the nature of any archaeological excavation, recording, or analysis to be done of the discovered remains and/or funerary objects.

- CUL-3 If subsurface paleontologic resources are encountered during land modification activities, then activities in the immediate area of the find shall be halted so that a qualified professional archaeologist can assess the find, determine its significance, and make recommendations for appropriate mitigation measures consistent with the professional management standards for paleontological resources. The developer shall fund recommended management requirements for accidentally exposed paleontological materials.

Geology and Soils

- GEO-1 Based on findings of the geotechnical investigation report, all structures for human occupancy shall be setback from the toe of the hillside along the northern side of the proposed development area a minimum distance of 50 feet. Additional trenching is required prior to finalizing the design of Phases 2-4 and the trenching and a report of findings shall be reviewed and approved prior to approval of the designs in these phases. This measure addresses both slope stability and will increase the Restricted Use Zone width established for possible fault hazards in virtually all areas.
- GEO-2 Based upon the comprehensive geotechnical investigation all inhabited structures shall be designed to do the following:

- a. Resist minor earthquakes without damage;
- b. Resist moderate earthquakes without structural damage, but with some nonstructural damage; and
- c. Resist major earthquakes, of the intensity or severity of the strongest forecast to occur within the City of Highland, without collapse, but with some structural, as well as nonstructural damage.

GEO-3 The applicant shall be required to include a Soil Erosion Control Plan as part of the Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP) for the project site. This section of the SWPPP/WQMP shall include measures designed to control wind and water erosion on the site during and after construction. These Best Management Practices (BMPs) shall include measures including landscaping, hardscaping and incorporation of site retention facilities to reduce the volume of stormwater runoff, minimize soil exposed to concentrated runoff and infiltrate surface runoff on the project site in accordance with the City's Stormwater Management ordinance (Section 15.54.160 of the Municipal Code). These best management practices shall be monitored by the Municipal Utilities and Engineering Services Department and the Building & Safety Division of the Development Services Department to verify effectiveness during construction and future occupancy.

GEO-4 All permanent landscaping shall be installed prior to final occupancy, and, following construction, disturbed soils shall be landscaped, or otherwise treated (covered with gravel, mulch or hardscape, to protect soils from wind and water erosion; to be monitored by the Development Services Department, Planning Division, and satisfied prior to occupancy of the project.

Hazards and Hazardous Materials

HAZ-1 All spills or leakage of petroleum products during construction activities shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared for the Project development.

HAZ-2 If the landfill is located on the project site, the site developer shall remove it; conduct tests to ensure it does not contain any contamination; relocate the waste to an appropriately licensed landfill; and replace the excavated material with documented clean fill. This shall be completed prior to initiating mass grading of the site and the records of all chemical tests and location of disposal shall be provided to the City.

HAZ-3 If the abandoned wells on the project site have not been properly abandoned, any such wells shall be properly closed using current regulatory requirements. This shall be completed prior to initiating mass grading of the site and records documenting proper closure shall be provided to the City.

HAZ-4 If other subsurface facilities exist within the project site (irrigation pipes, septic tanks, etc.), the site developer shall remove these facilities; conduct any required tests to ensure they do not harbor contamination; properly dispose of the structural waste at an appropriately licensed landfill; and replace the excavated material with documented clean fill. This shall be completed prior to or concurrent with mass grading of the site and records documenting proper closure shall be provided to the City.

- HAZ-5 The area containing DDT concentrations above the State hazard level shall be documented, including the exact dimensions and volume. A report verifying that the DDT contaminated soil can be effectively blended (and how this will be accomplished on the project site) with other uncontaminated onsite soil shall be provided to the City. If there is insufficient soil for blending at the site, the DDT contaminated soil shall be collected and disposed of at a properly licensed facility. This shall be completed prior to initiating mass grading of the site and records documenting proper management of the DDT contaminated soil shall be provided to the City.
- HAZ-6 At all times during construction of the site improvements, the site developer shall ensure that emergency fire or medical vehicles are able to access all areas along the Project alignment during construction, particularly along Greenspot Road. The Developer shall submit an acceptable temporary traffic routing/management plan to ensure that adequate circulation capacity is being maintained to serve emergency functions (including emergency response and emergency evacuation plans) along roadways in the vicinity of the project.
- HAZ-7 The developer shall submit a conceptual fire mitigation plan to the City that identifies the type of buffer that will be maintained between the future residences and the fire prone coastal sage scrub/chaparral habitat on the adjacent hillside to the north of the site. The project developer shall implement this plan by installing the buffer and provide a mechanism for long-term maintenance of the buffer area to minimize the wildland fire hazard threat at the project site. This plan shall be approved to the City prior to constructing any structures and implemented prior to occupancy. Alternatively, the City may accept the fire mitigation measures incorporated into the Tentative Tract Map and PD Plan as meeting the requirements of this measure.

Noise

- NOS-1 Construction activities shall employ feasible and practical techniques to minimize noise impacts on adjacent uses. Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur.
- NOS-2 Non-emergency construction activities adjacent to existing noise-sensitive uses shall be limited to daylight hours between 7:00 a.m. and 6:00 p.m. Construction on weekends or holidays is prohibited.
- NOS-3 A 12-foot temporary noise barrier or an 8-foot solid barrier (wall or combination wall/berm) shall be constructed along the west project boundary and adjacent to the onsite residence if occupied prior to the start of onsite grading or clearing.
- NOS-4 If the existing residence is occupied during site grading activities and the occupant concludes these daytime construction activities are too intrusive after implementation of measure NOS-3, the developer shall offer to relocate the resident(s) at the developer's expense until grading immediately adjacent to the site is completed and exterior noise levels are reduced to 70 dB at the exterior of the existing residence.
- NOS-5 Only small bulldozers shall be permitted to operate within 56 feet of the nearest off-site residential structures or the existing residence located within the project site. As noted above, the property occupant may choose to leave the site during immediately adjacent construction activities. The project developer shall fund the relocation.
- NOS-6 An 8-foot solid noise wall (or combination wall/berm) shall be constructed along the Greenspot Road frontage, to provide an outdoor noise level of 65 dB CNEL for all units adjacent to Greenspot Road.

NOS-7 All Greenspot Road perimeter homes shall have central air conditioning as a standard feature to allow for window closure during warmer weather while maintaining interior comfort. Supplemental ventilation shall be required for any habitable rooms facing Greenspot Road. Assuming a 5-person household, 75 cfm (5x15 cfm/person) of fresh make-up should be supplied to such rooms. The make-up air intake shall be installed on the side of the house away from the adjacent arterial roadway.

Transportation / Traffic

TRA-1 Onsite Roadway Improvements

Construct Greenspot Road from Project's western boundary to 600 feet east of Driveway 2 at its ultimate half-section width as a Major Highway (104-foot right-of-way) in compliance with applicable City of Highland standards. Provide median improvements on the north side of Greenspot Road as required by the final conditions of approval for the proposed Project and applicable City of Highland standards. Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections shall be constructed to be consistent with the recommended roadway classifications and respective cross-sections in the City of Highland General Plan Circulation Element.

TRA-2 Site Access Improvements

Construction of on-site and site adjacent improvements shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Driveway 1 at Greenspot Road (#7) – A stop control shall be installed on the southbound approach and the intersection shall be constructed with the following geometrics:

Northbound Approach: N/A.

Southbound Approach: One shared left-right turn lane.

Eastbound Approach: One left turn lane with a minimum of 150-feet of storage and one through lane.

Westbound Approach: One through lane and one shared through-right turn lane.

Driveway 2 at Greenspot Road (#8) – A stop control shall be installed on the southbound approach and the intersection shall be constructed with the following geometrics:

Northbound Approach: N/A.

Southbound Approach: One shared left-right turn lane.

Eastbound Approach: One left turn lane with a minimum of 150-feet of storage and one through lane.

Westbound Approach: One through lane and one shared through-right turn lane.

TRA-3 Opening Year Cumulative Without and With Project Mitigation

The Project will contribute its proportional share of this cumulative improvement need through its payment of the City of Highland Development Impact Fee (DIF) and/or fair share as directed by the City.

Horizon Year Cumulative Without and With Project Mitigation

The Project will contribute its proportional share of this cumulative improvement need through its payment of the City of Highland Development Impact Fee (DIF) and/or fair share as directed by the City.

REFERENCES

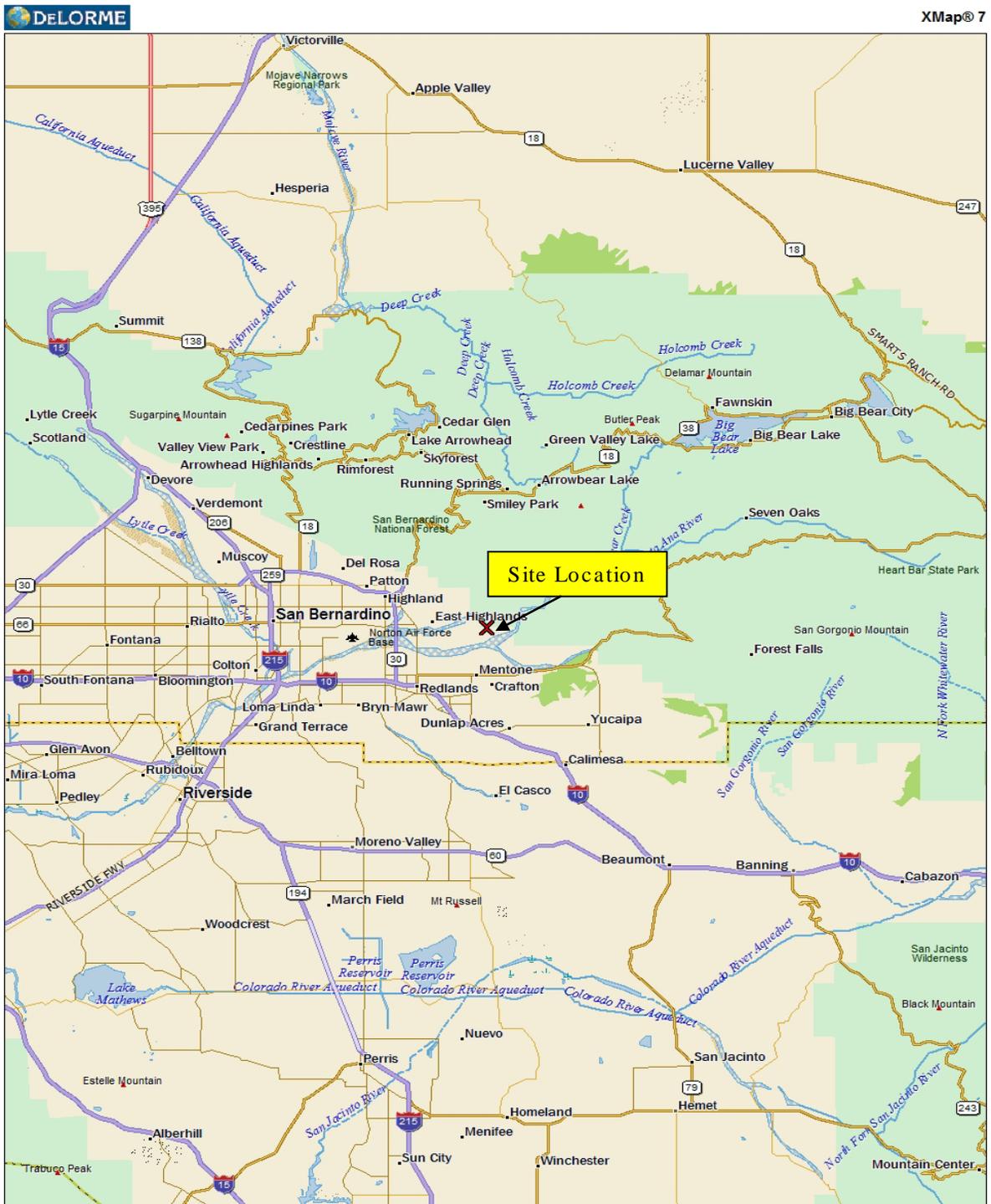
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FIGURES

FIGURE 1 Regional Location



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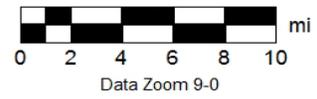
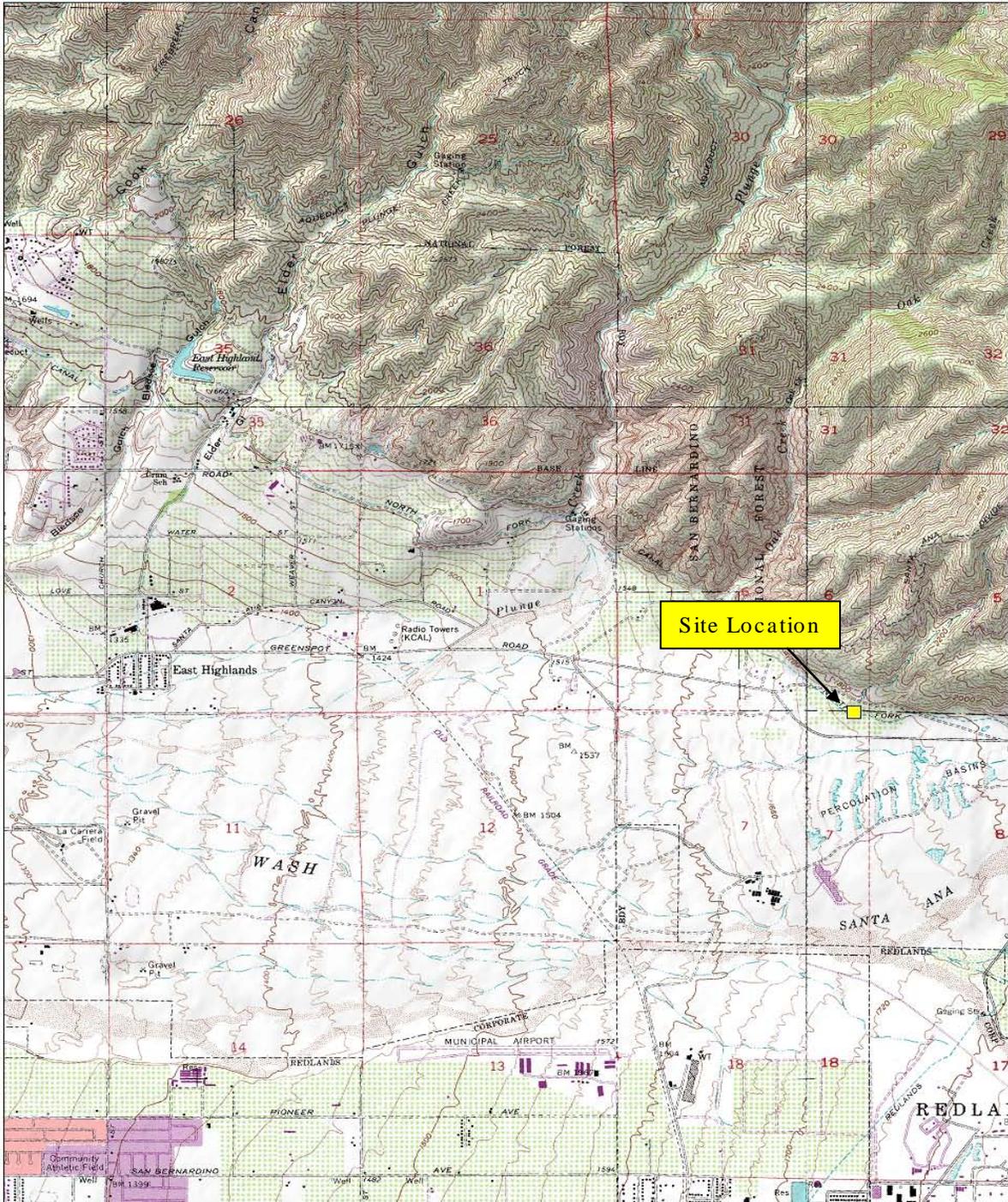


FIGURE 2 Site Location

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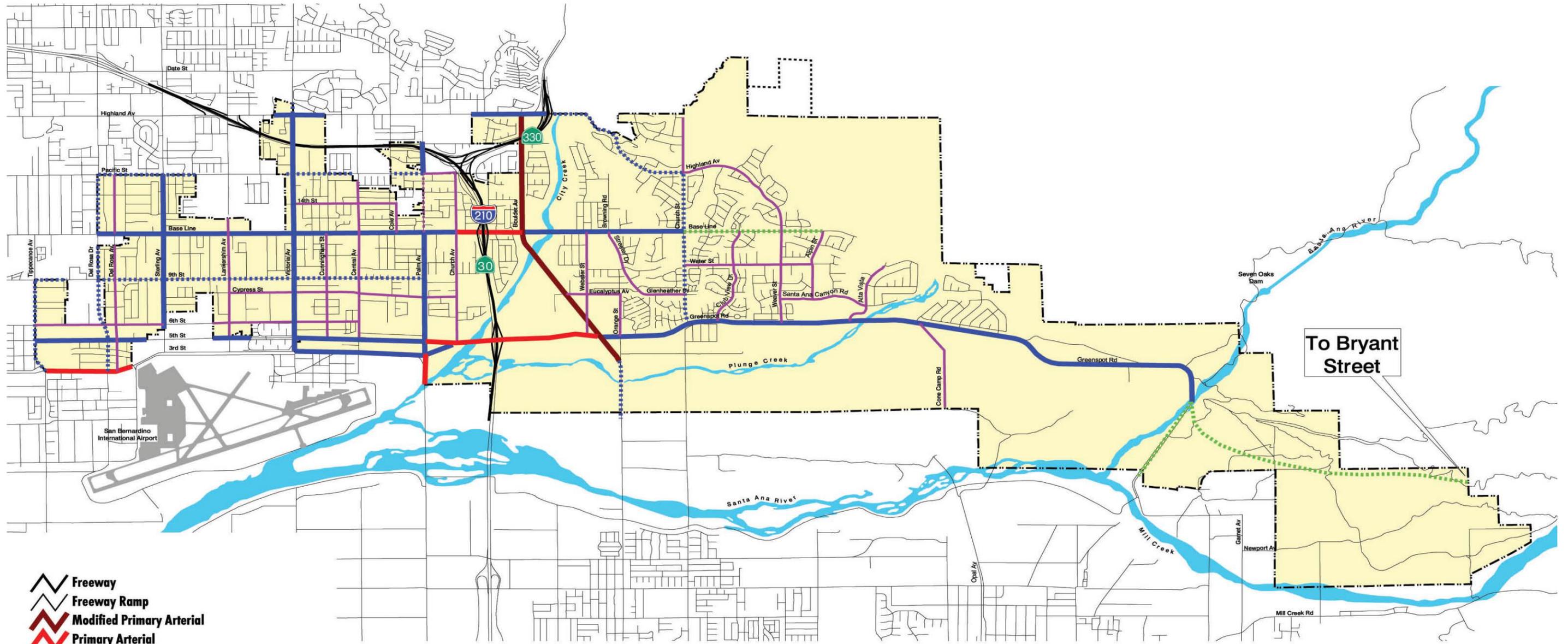
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Data Zoom 12-5

FIGURE 3
Circulation Map



-  Freeway
-  Freeway Ramp
-  Modified Primary Arterial
-  Primary Arterial
-  Major Highway
-  Secondary Highway
-  Special Secondary Highway
-  Collector Street
-  Special Collector Street
-  City Boundary
-  Sphere of Influence

City of Highland General Plan

Source: Urban Crossroads



IN THE CITY OF HIGHLAND
TENTATIVE
TRACT MAP NO. 18893

BEING A SUBDIVISION OF A PORTION OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, SAN BERNARDINO BASE & MERIDIAN, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

SITETECH, INC. MAY, 2015

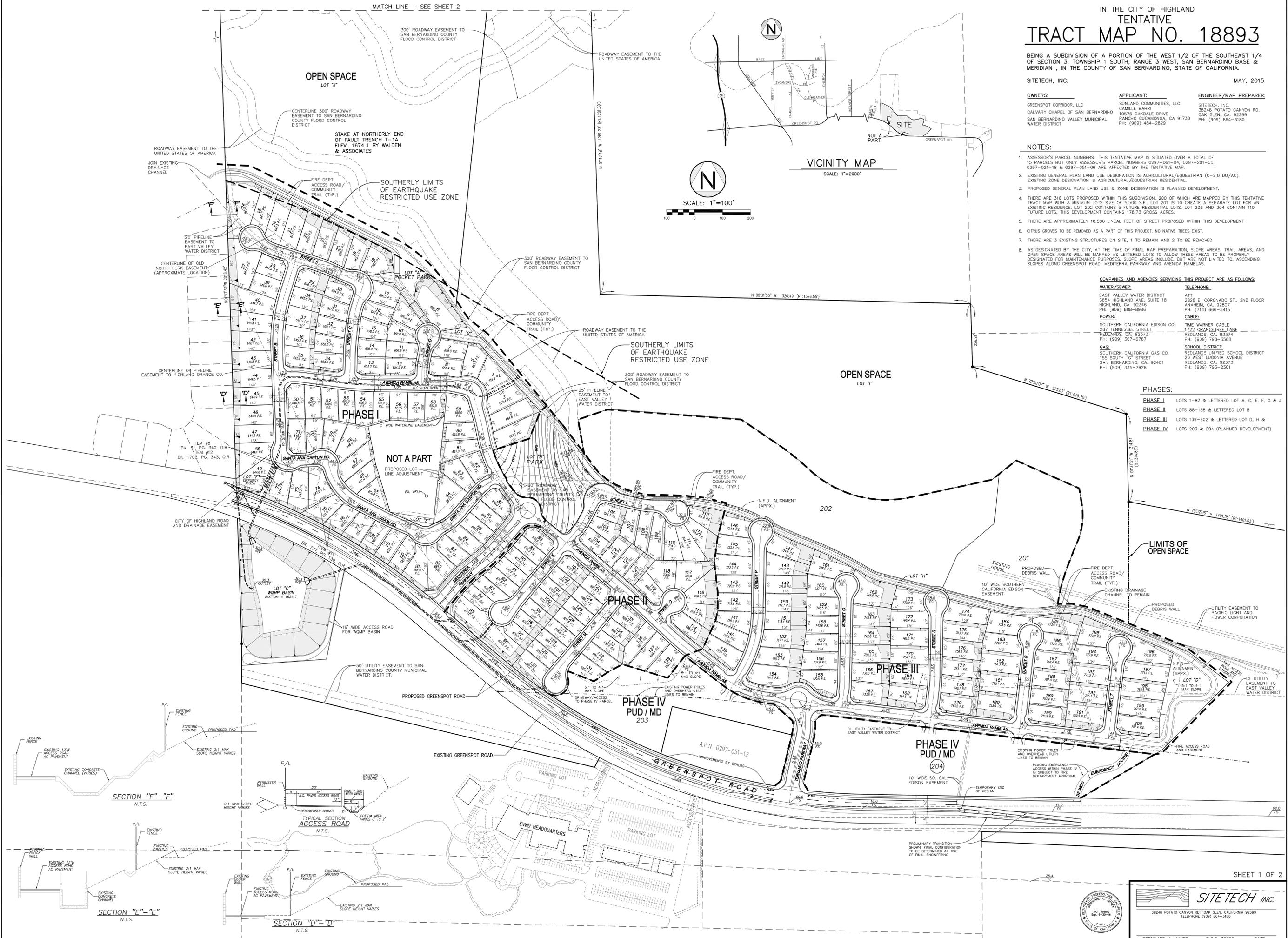
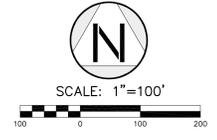
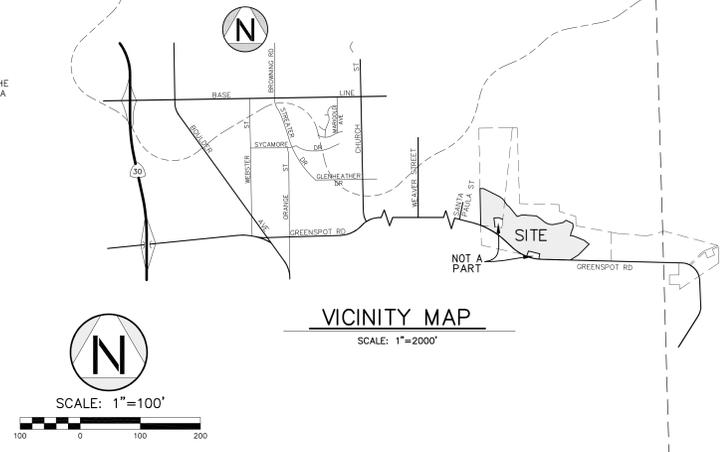
OWNERS: GREENSPOT CORRIDOR, LLC; CALVARY CHAPEL OF SAN BERNARDINO; SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
 APPLICANT: CAMILLE BAHR; 10575 DAKDALE DRIVE; RANCHO CUCUMONGA, CA 91730; PH: (909) 484-2829
 ENGINEER/MAP PREPARER: SITETECH, INC.; 38248 POTATO CANYON RD.; DAK GLEN, CA. 92399; PH: (909) 864-3180

- NOTES:**
- ASSESSOR'S PARCEL NUMBERS: THIS TENTATIVE MAP IS SITUATED OVER A TOTAL OF 15 PARCELS BUT ONLY ASSESSOR'S PARCEL NUMBERS 0297-061-04, 0297-201-05, 0297-021-18 & 0297-051-06 ARE AFFECTED BY THE TENTATIVE MAP.
 - EXISTING GENERAL PLAN LAND USE DESIGNATION IS AGRICULTURAL/EQUESTRIAN (0-2.0 DU/AC). EXISTING ZONE DESIGNATION IS AGRICULTURAL/EQUESTRIAN RESIDENTIAL.
 - PROPOSED GENERAL PLAN LAND USE & ZONE DESIGNATION IS PLANNED DEVELOPMENT.
 - THERE ARE 316 LOTS PROPOSED WITHIN THIS SUBDIVISION, 200 OF WHICH ARE MAPPED BY THIS TENTATIVE TRACT MAP WITH A MINIMUM LOTS SIZE OF 5,500 S.F. LOT 201 IS TO CREATE A SEPARATE LOT FOR AN EXISTING RESIDENCE. LOT 202 CONTAINS 5 FUTURE RESIDENTIAL LOTS. LOT 203 AND 204 CONTAIN 110 FUTURE LOTS. THIS DEVELOPMENT CONTAINS 178.73 GROSS ACRES.
 - THERE ARE APPROXIMATELY 10,500 LINEAL FEET OF STREET PROPOSED WITHIN THIS DEVELOPMENT
 - CITRUS GROVES TO BE REMOVED AS A PART OF THIS PROJECT. NO NATIVE TREES EXIST.
 - THERE ARE 3 EXISTING STRUCTURES ON SITE, 1 TO REMAIN AND 2 TO BE REMOVED.
 - AS DESIGNATED BY THE CITY, AT THE TIME OF FINAL MAP PREPARATION, SLOPE AREAS, TRAIL AREAS, AND OPEN SPACE AREAS WILL BE MAPPED AS LETTERED LOTS TO ALLOW THESE AREAS TO BE PROPERLY DESIGNATED FOR MAINTENANCE PURPOSES. SLOPE AREAS INCLUDE, BUT ARE NOT LIMITED TO, ASCENDING SLOPES ALONG GREENSPOT ROAD, MEDITERRA PARKWAY AND AVENIDA RAMBLAS.

COMPANIES AND AGENCIES SERVING THIS PROJECT ARE AS FOLLOWS:

WATER/SEWER:	TELEPHONE:
EAST VALLEY WATER DISTRICT 3654 HIGHLAND AVE. SUITE 18 HIGHLAND, CA. 92346 PH: (909) 888-8986	2828 E. CORONADO ST., 2ND FLOOR ANAHEIM, CA. 92807 PH: (714) 666-5415
SOUTHERN CALIFORNIA EDISON CO. 287 TENNESSEE STREET REDLANDS, CA. 92373 PH: (909) 307-6767	1722 OSBANGTREE LANE REDLANDS, CA. 92374 PH: (909) 798-3588
SOUTHERN CALIFORNIA GAS CO. 155 SOUTH "G" STREET SAN BERNARDINO, CA. 92401 PH: (909) 335-7928	TIME WARNER CABLE 1722 OSBANGTREE LANE REDLANDS, CA. 92374 PH: (909) 798-3588
	SCHOOL DISTRICT: REDLANDS UNIFIED SCHOOL DISTRICT 20 WEST LUGGONA AVENUE REDLANDS, CA. 92373 PH: (909) 793-2301

- PHASES:**
- PHASE I** LOTS 1-87 & LETTERED LOT A, C, E, F, G & J
 - PHASE II** LOTS 88-138 & LETTERED LOT B
 - PHASE III** LOTS 139-202 & LETTERED LOT D, H & I
 - PHASE IV** LOTS 203 & 204 (PLANNED DEVELOPMENT)



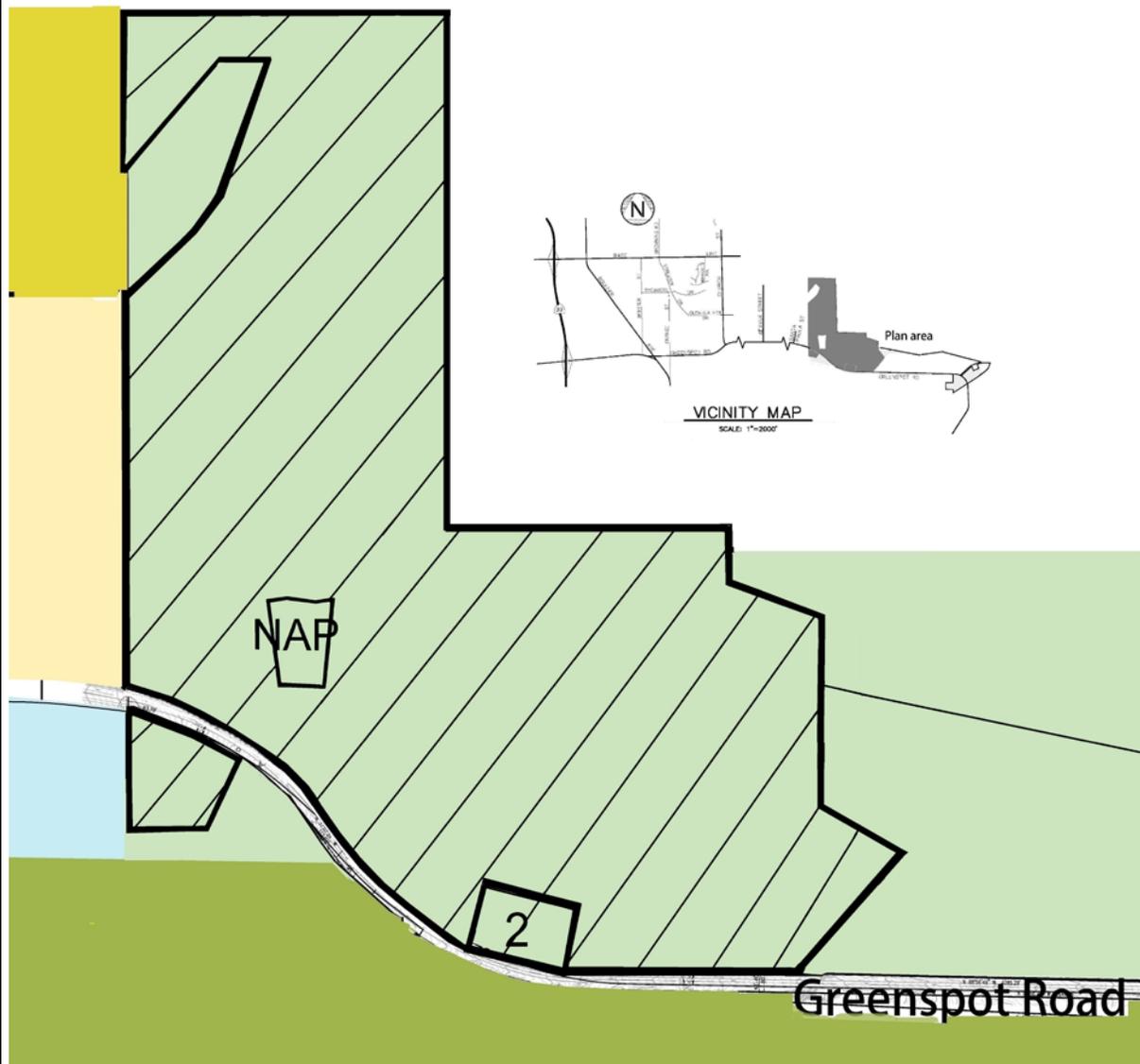
SHEET 1 OF 2

SITETECH INC.
38248 POTATO CANYON RD., DAK GLEN, CALIFORNIA 92399
TELEPHONE (909) 864-3180

BERNHARD K. MAYER R.C.E. 36866 DATE 5.23.15

FIGURE 4

FIGURE 5
Existing Land Use Designations



LEGEND

Mediterra Plan

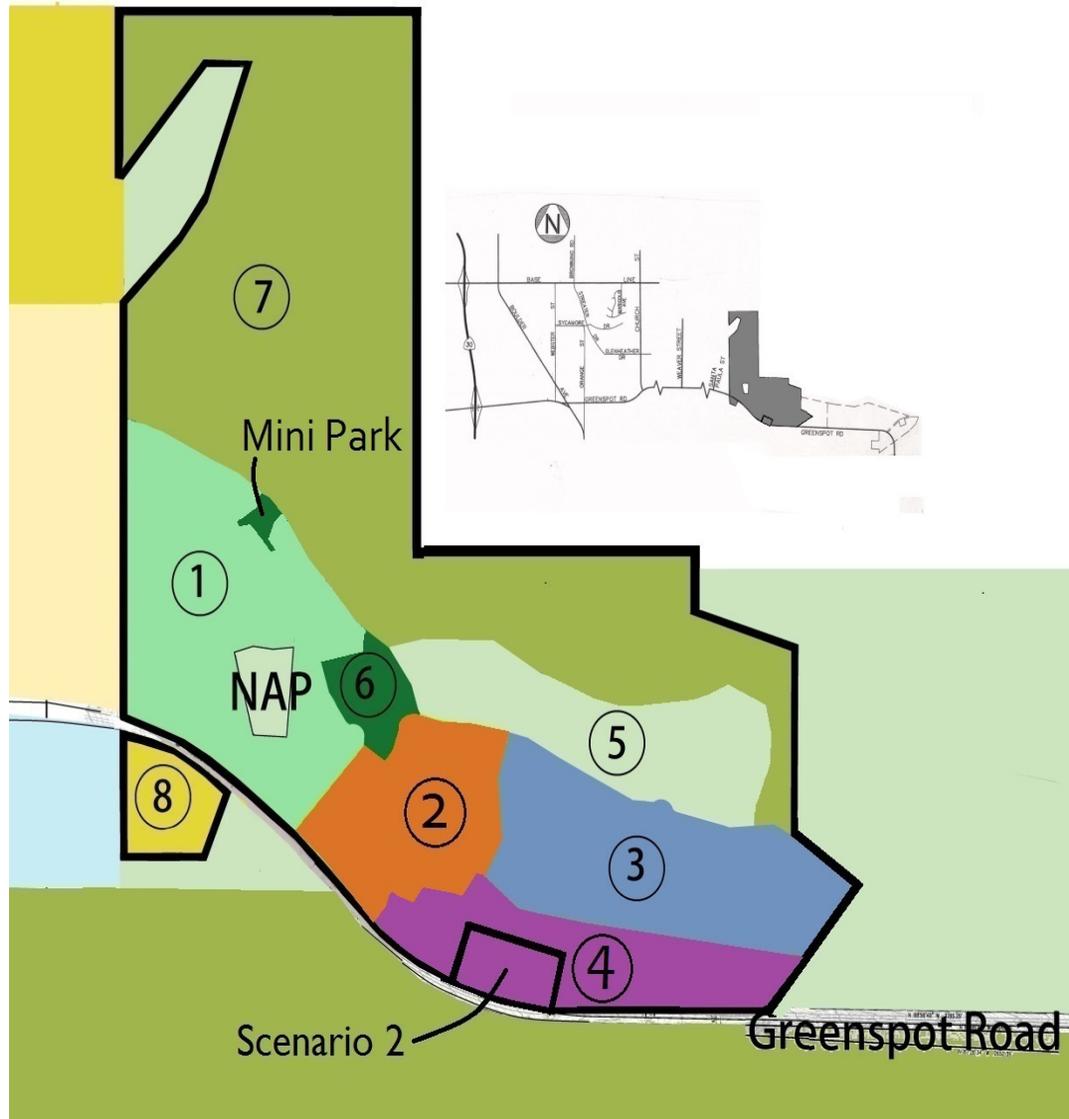
-  Agriculture / Equestrian (0 - 2.0 du/ac)
-  Scenario 2

Surrounding

-  Agriculture / Equestrian (0 - 2.0 du/ac)
-  Planned Development (PD)
-  Low Density (2.1 - 6.0 du/ac)
-  Public Institutional
-  Open Space (OS)

Source: Mediterra Planned Development Plan

FIGURE 6
Land Use Plan



LEGEND

Mediterra Plan

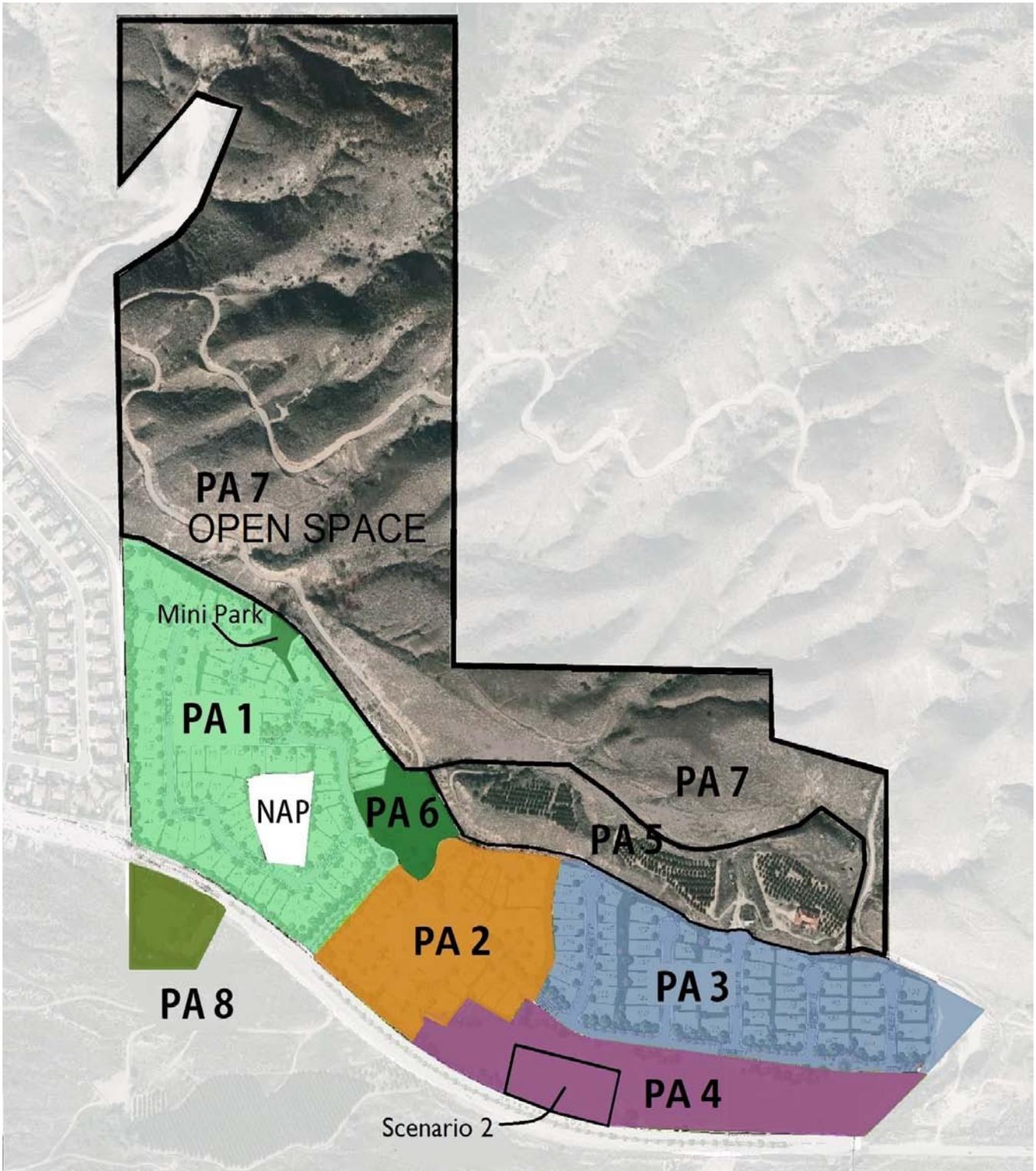
- ① PA 1 - SFD1 Low Density - LD (2.1 - 6.0 du/ac)
- ② PA 2 - SDF2 Low Density - LD (2.1 - 6.0 du/ac)
- ③ PA 3 - SFD3 Low Density - LD (2.1 - 6.0 du/ac)
- ④ PA 4 - Medium Density - MD (6.1 - 12.0 du/ac)
- ⑤ Agriculture / Equestrian - A/Eq (0 - 2.0 du/ac)
- ⑥ Park (P)
- ⑦ Open Space (OS)
- ⑧ Planned Development (PD)

Surrounding

- Agriculture / Equestrian (0 - 2.0 du/ac)
- Planned Development (PD)
- Low Density (2.1 - 6.0 du/ac)
- Public Institutional
- Open Space (OS)

Source: Mediterra Planned Development Plan

FIGURE 7
Planning Areas



Source: Mediterra Planned Development Plan

FIGURE 8
California Important Farmland Finder Map

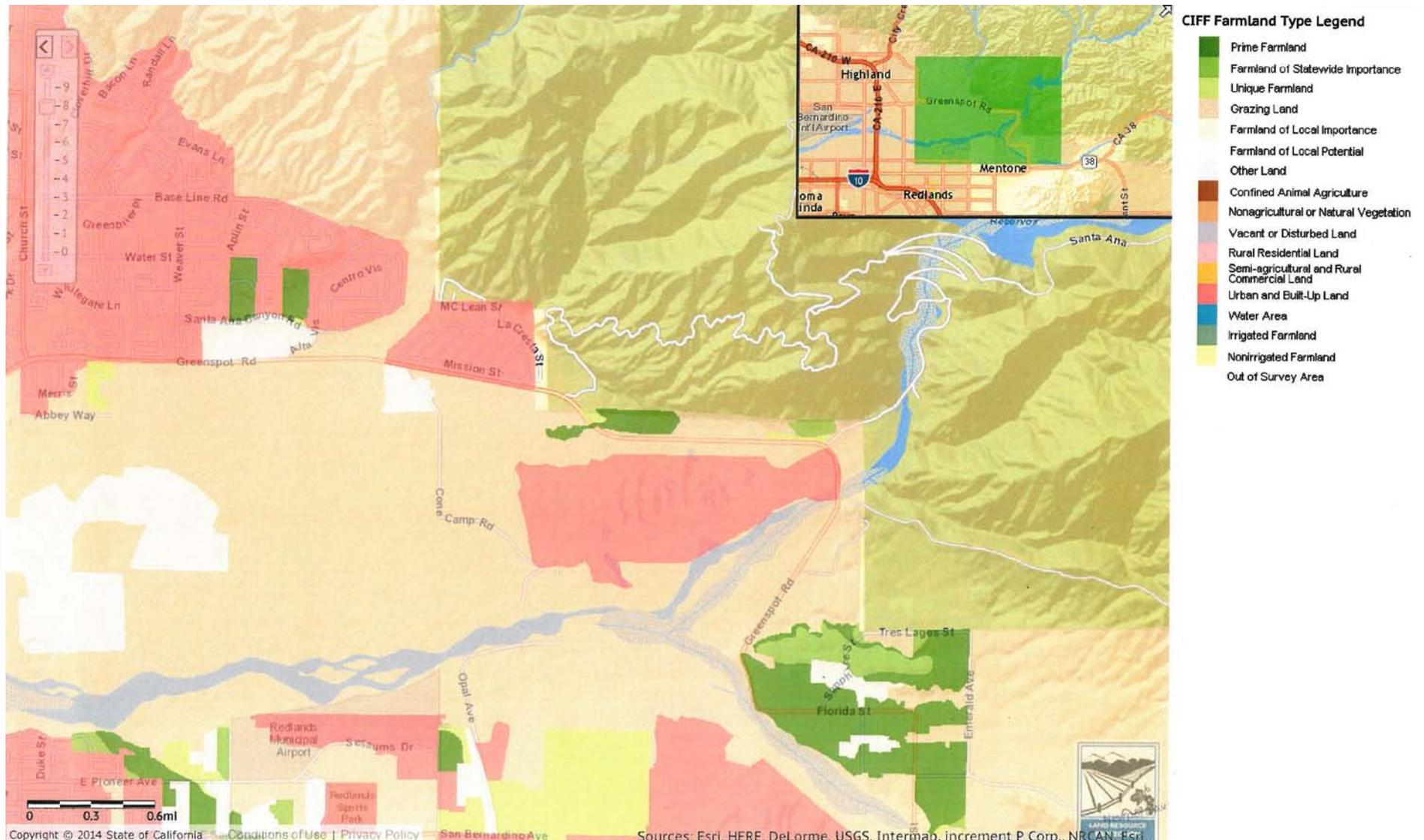
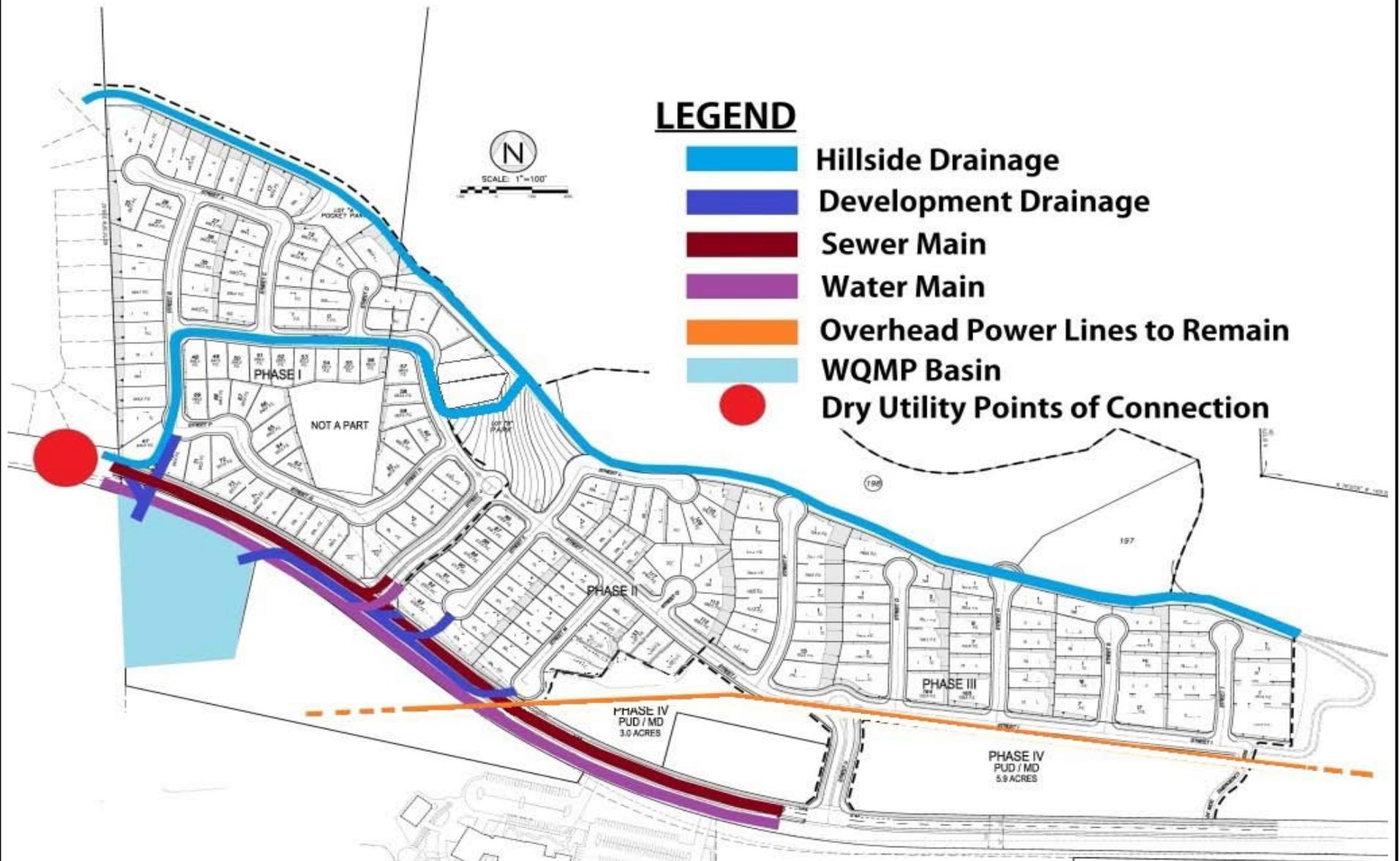
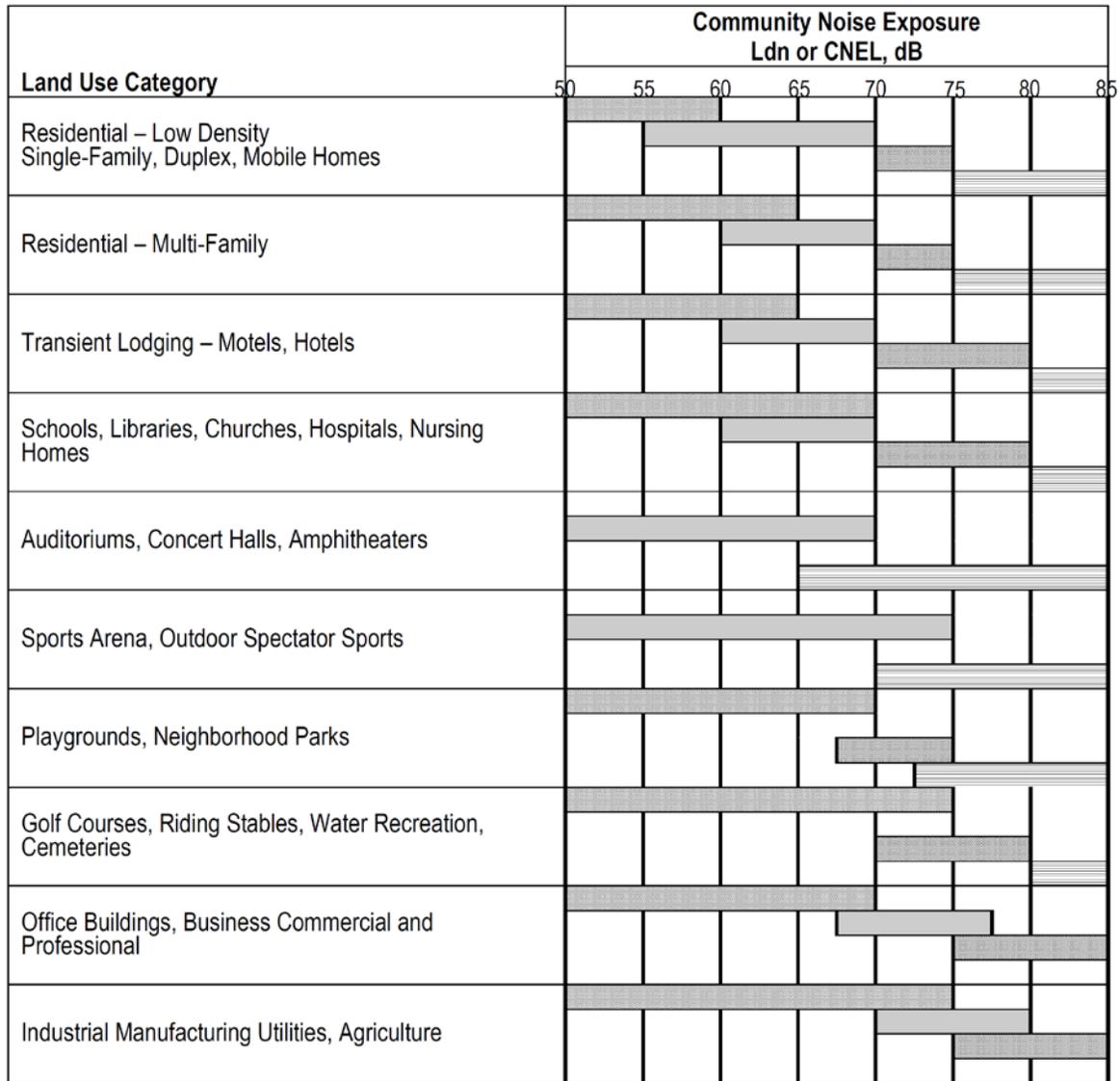


FIGURE 9
Infrastructure and Utilities



Source: Mediterra Project Description

FIGURE 10
City of Highland Noise Element
Noise Land Use Compatibility Criteria



INTERPRETATION

-  **Normally Acceptable:** Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  **Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
-  **Normally Unacceptable:** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
-  **Clearly Unacceptable:** New construction or development should generally not be undertaken.

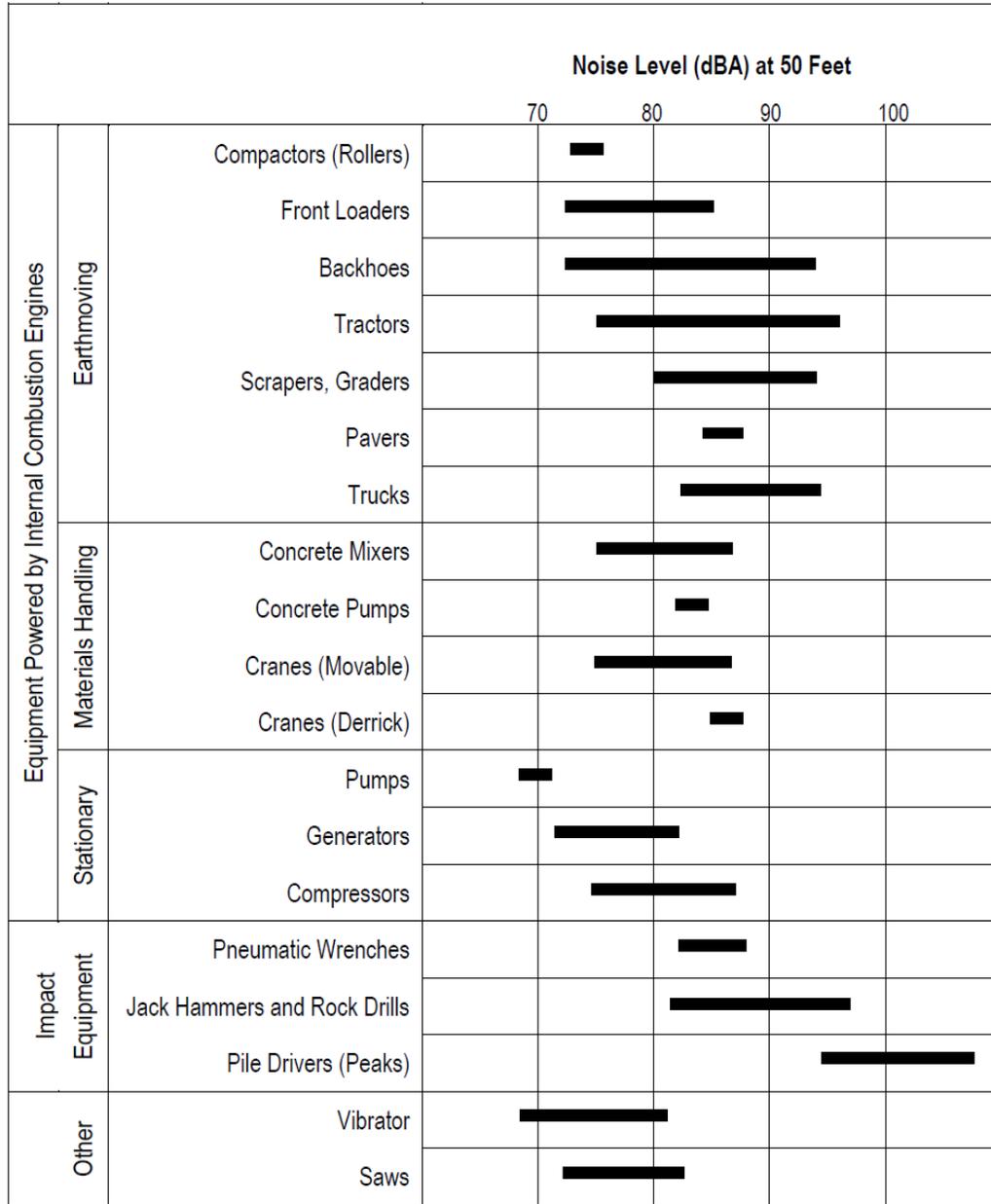
FIGURE 11 Noise Monitor Locations



Meter Location: About 50 feet from Greenspot Road

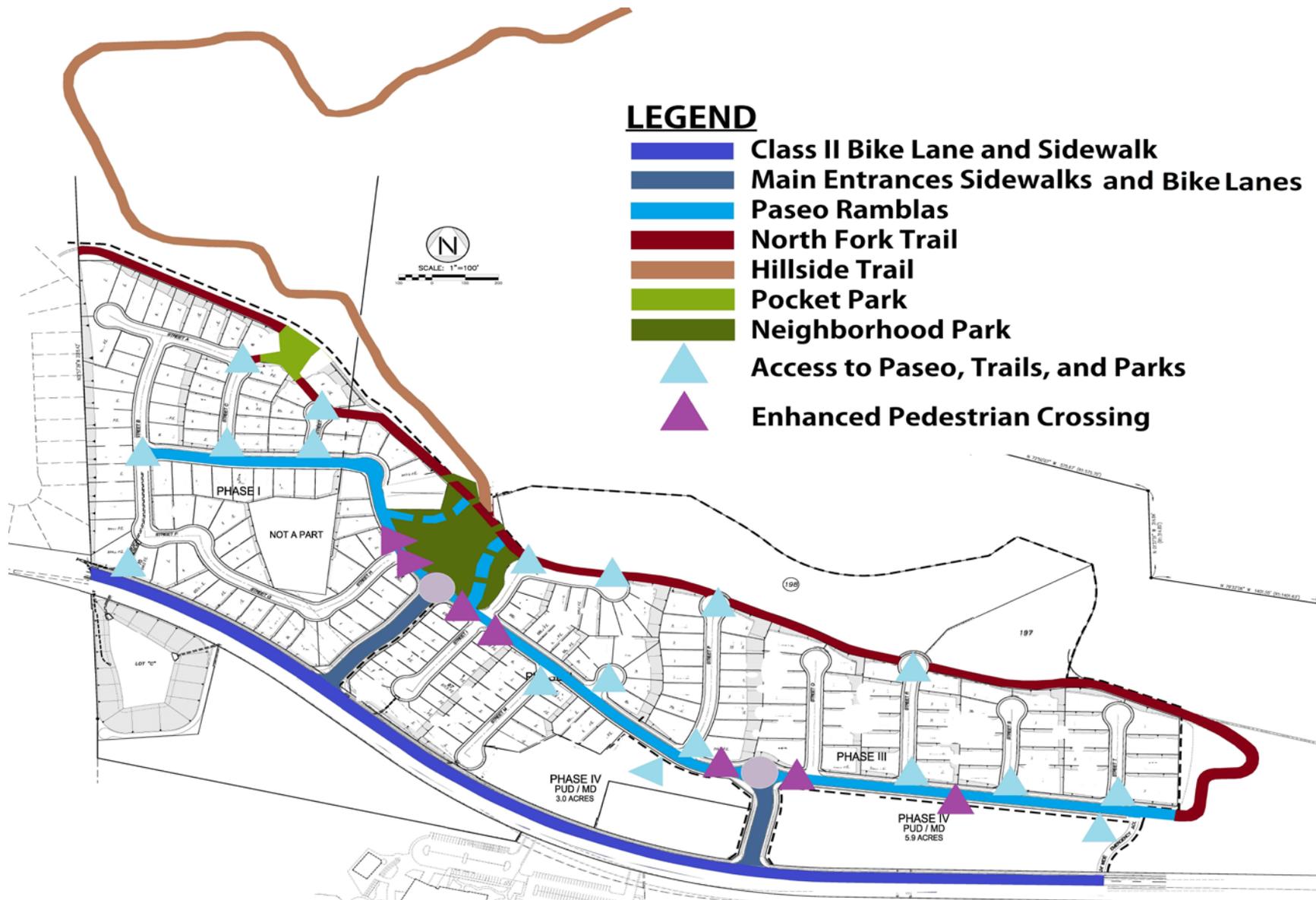
FIGURE 12

**Typical Construction Equipment
Noise Generation Levels**



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

FIGURE 13
Trails / Park and Recreation



Source: Mediterra Project Description

FIGURE 14
Location Map

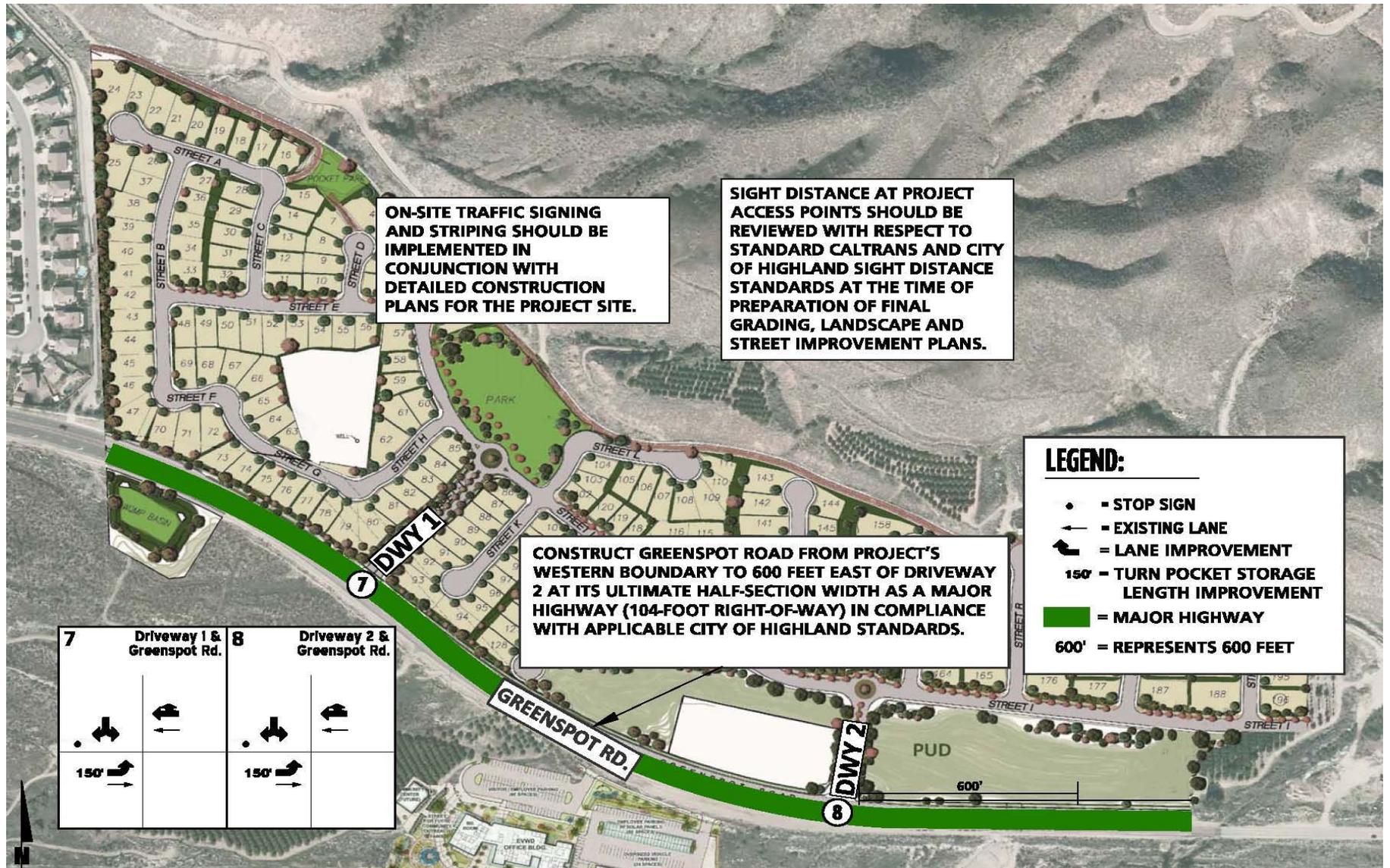


LEGEND:

- ①** - EXISTING INTERSECTION ANALYSIS LOCATION
- ②** - FUTURE INTERSECTION ANALYSIS LOCATION

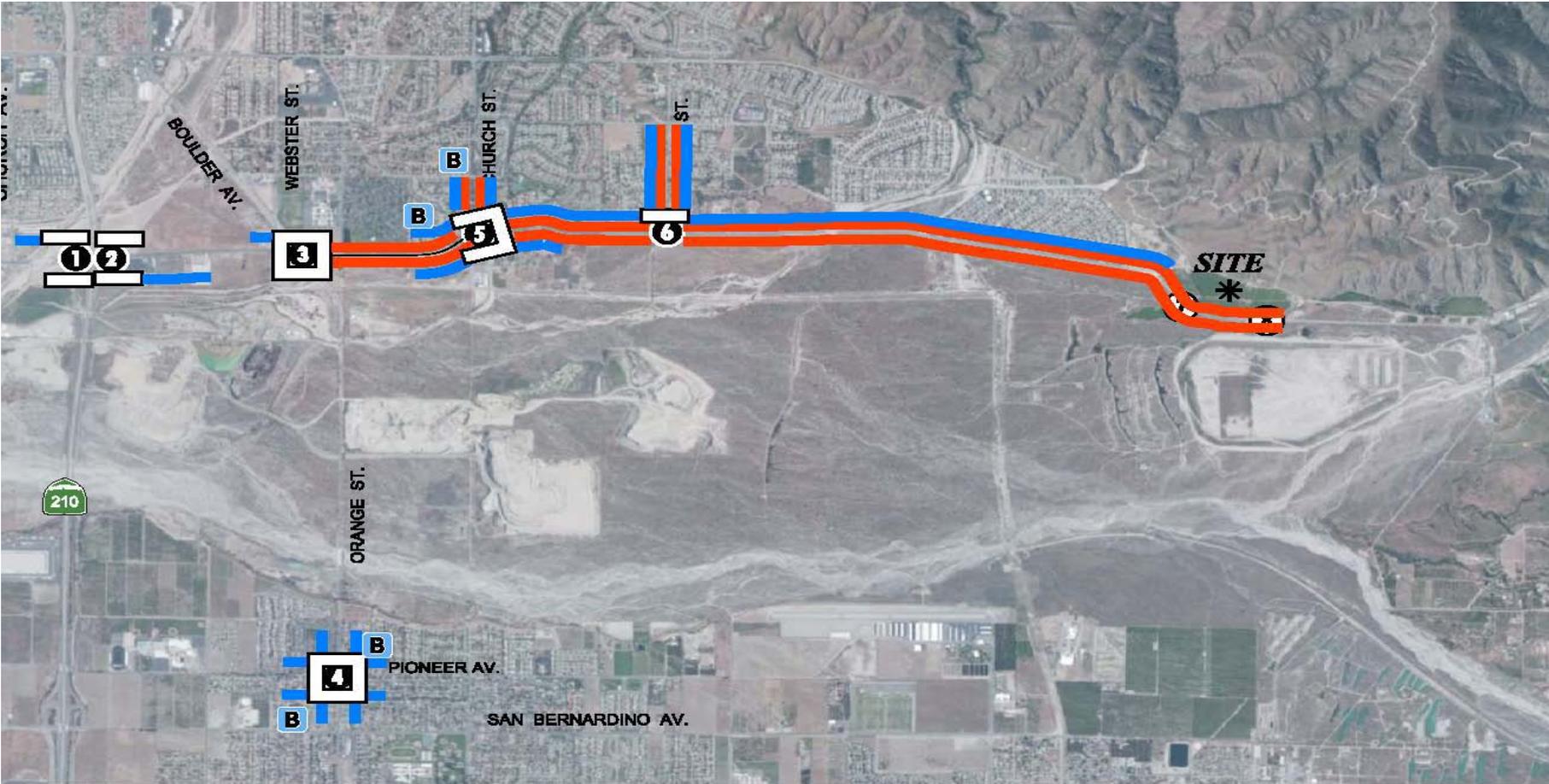
Source: Traffic Impact Analysis prepared by Urban Crossroads, December 2014 (revised)

FIGURE 15
Site Access and Site Adjacent Roadway Recommendations



Source: Traffic Impact Analysis prepared by Urban Crossroads, December 2014 (revised)

FIGURE 16
Existing Pedestrian Facilities



LEGEND:

-  - BUS STOP
-  - CROSSWALK
-  - SIDEWALK
-  - CLASS II BIKE LANE

Source: Traffic Impact Analysis prepared by Urban Crossroads, December 2014 (revised)

FIGURE 17
Existing (2014) Traffic Volumes

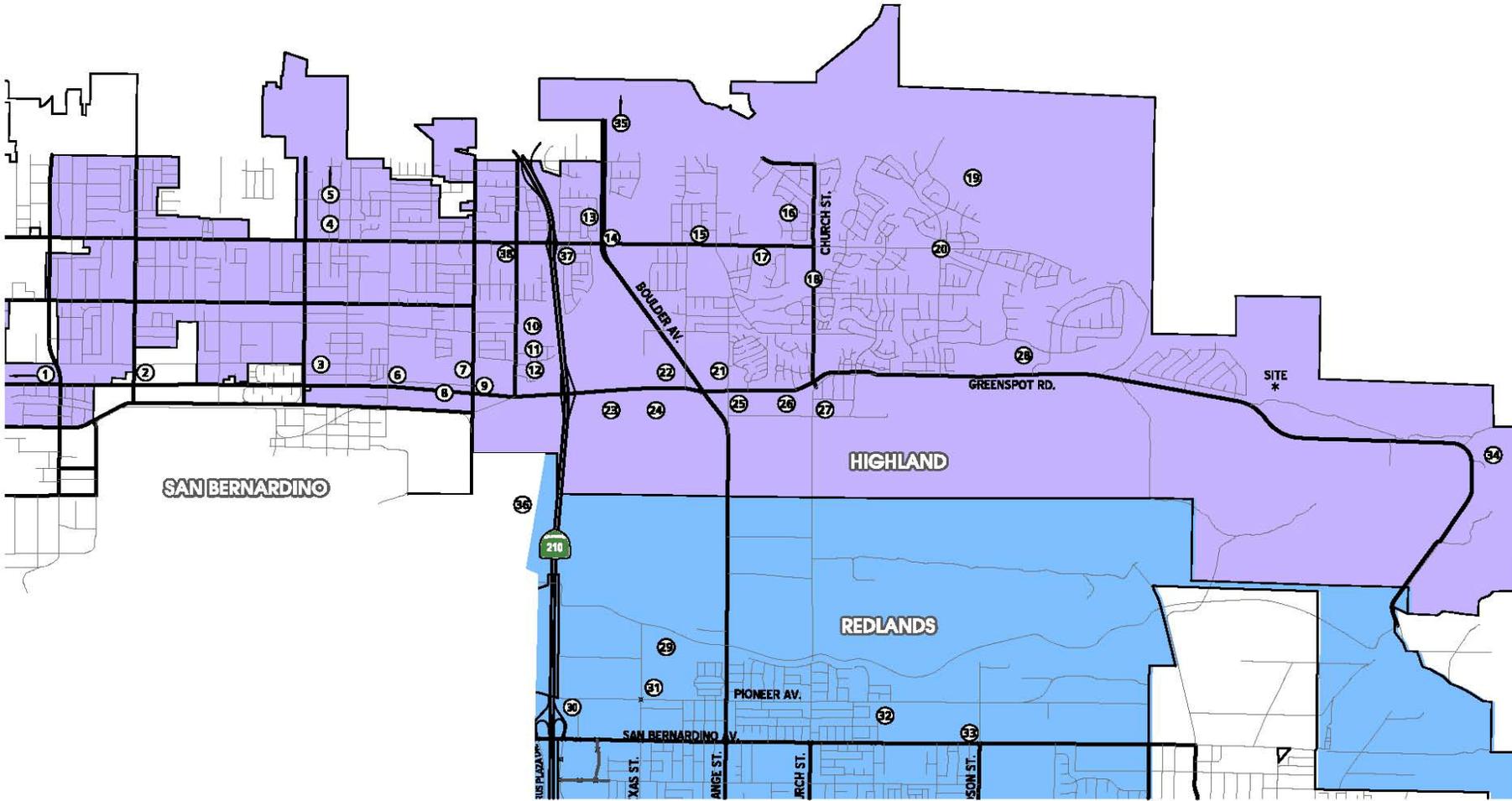


1 SR-210 EB Ramps & 5th St.	2 SR-210 WB Ramps & Greenspot Rd.	3 Boulder Av. & Greenspot Rd.	4 Orange St. & Pioneer Av.
		<p align="center">Future Intersection</p>	<p align="center">Future Intersection</p>

LEGEND:
 10.0 = VEHICLES PER DAY (1000'S)
 10(10) = AM(PM) PEAK HOUR VOLUMES

Source: Traffic Impact Analysis prepared by Urban Crossroads, December 2014 (revised)

FIGURE 18
Cumulative Development Location Map



Source: Traffic Impact Analysis prepared by Urban Crossroads, December 2014 (revised)

FIGURE 19
Project Trip Distribution (AM Peak Inbound, PM Peak)



LEGEND:

10 - PERCENT TO/FROM PROJECT

Source: Traffic Impact Analysis prepared by Urban Crossroads, December 2014 (revised)