

5.4 NOISE

5.4.1 Existing Conditions

The following discussion summarizes the Acoustical Report prepared for the project by HELIX Environmental Planning (HELIX 2012a). The complete report is contained in Appendix F of the technical appendices to this Draft EIR.

Noise and Sound Level Descriptors

All noise level or sound level values presented herein are expressed in terms of decibels (dB) with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels of one hour are expressed by the symbol “ L_{EQ} ,” unless a different time period is specified. Some noise level data may be presented as octave-band-filtered and/or A-octave-band-filtered data, which are a series of sound spectra centered about each stated frequency, in which half of the bandwidth is above and half of the bandwidth is below each stated frequency. This type of data is typically used for machinery noise analysis and barrier-effectiveness calculations.

The Community Noise Equivalent Level (CNEL) is a 24-hour sound level average, in which sound levels measured during evening and nighttime hours are weighted. Sound levels measured during the evening hours, which are between 7:00 PM and 10:00 PM, have an added 5 dB weighting. Sound levels measured during the nighttime hours, which are between 10:00 PM and 7:00 AM, have an added 10 dB weighting. The Day-Night Sound Level (L_{DN}) is a 24-hour average, in which sound levels have an added 10 dB weighting for the same nighttime hours as CNEL, but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These data unit metrics are used to express noise levels for measurement, municipal noise ordinances and regulations, land use guidelines, and enforcement of noise ordinances.

Noise emission data are often provided using the industry standard format of Sound Power, which is the total acoustic power radiated from a given sound source as related to a reference power level. Sound Power differs from Sound Pressure, which measures the fluctuations in air pressure caused by the presence of sound waves, and is the format generally used to describe noise levels as heard by the receiver. Sound Pressure is the actual noise experienced by a human or registered by a sound level instrument. When Sound Pressure is used to describe a noise source, the distance from the noise source must be indicated to provide complete information. Sound Power is a specialized analytical method to provide information without the distance requirement, but it may be used to calculate the Sound Pressure at any desired distance.

Noise Standards

City of San Diego General Plan Noise Element

General community noise and land use compatibility guidelines are set forth in the Noise Element in the City of San Diego General Plan as shown in Table 5.4-1, *Land Use – Noise Compatibility Guidelines*. As indicated in this table, office and commercial uses are

conditionally compatible with exterior noise levels up to 75 dBA CNEL and interior noise levels of 50 dBA. Multi-family residential uses are conditionally compatible with exterior noise levels up to 70 dBA and interior noise levels up to 45 dBA.

Table 5.4-1 LAND USE – NOISE COMPATIBILITY GUIDELINES					
Land Use Category	Exterior Noise Exposure (dBA CNEL)				
	>60	60-65	65-70	70-75	75<
Open Space and Parks and Recreational					
Community & Neighborhood Parks; Passive Recreation					
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Outdoor, Spectator Sports, Water Recreational Facilities; Horse Stables; Park Maintenance Facilities					
Agricultural					
Crop Raising & Farming; Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables					
Residential					
Single Units; Mobile Homes; Senior Housing		45			
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations		45	45		
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities		45			
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)		45	45		
Cemeteries					
Sales					
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories			50	50	
Commercial Services					
Building Services; Business Support; Eating & Drinking; Financial Institutions; Assembly & Entertainment; Radio & Television Studios; Golf Course Support			50	50	
Visitor Accommodations		45	45	45	
Offices					
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50	
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking					

Table 5.4-1 (cont.) LAND USE – NOISE COMPATIBILITY GUIDELINES								
Land Use Category				Exterior Noise Exposure (dBA CNEL)				
				>60	60-65	65-70	70-75	75<
Wholesale, Distribution, Storage Use Category								
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution								
Research & Development							50	
	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.					
		Outdoor Uses	Activities associated with the land use may be carried out.					
	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas.					
		Outdoor Uses	Feasible noise mitigate techniques should be analyzed and incorporated to make the outdoor activities acceptable.					
	Incompatible	Indoor Uses	New construction should not be undertaken.					
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.					

Source: City of San Diego 2008a

City of San Diego Municipal Code

Construction Noise

Section 59.5.0404 of the Municipal Code regulates construction noise. This section states the following:

(a) It shall be unlawful for any person, between the hours of 7:00 PM of any day and 7:00 AM of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator. In granting such permit, the Administrator shall consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; whether proposed night work is in the general public interest; and he shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as he deems to be required in the public interest.

(b) Except as provided in subsection C. hereof, it shall be unlawful for any person, including The City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 AM to 7:00 PM.

(c) The provisions of subsection (b) of this section shall not apply to construction equipment used in connection with emergency work, provided the Administrator is notified within 48 hours after commencement of work.

Operational Noise

Fixed source and/or operational noise are governed by City of San Diego Noise Ordinance Section 59.5.0401. The applicable sound level is a function of the time of day and land use zone and sound levels are measured at the property line of the noise source. The limits are given in Table 5.4-2, *City of San Diego Noise Ordinance Limits*. The Noise Ordinance provides that the property line noise limit where two zoning districts meet shall be the arithmetic mean of the respective limits for the two zoning districts; thus, the property line noise limits would be 55/50/45 dB along the project site's northern property line where multi-family is adjacent to multi-family; 60/55/52.5 dB where proposed multi-family is adjacent to commercial to the east and west and internally; 65/60/60 dB along the southern property lines where commercial is adjacent to commercial; and 57.5/52.5/50 dB where commercial is adjacent to a single-family residence to the southeast at 7 AM to 7 PM, 7 PM to 10 PM, and 10 PM to 7 AM, respectively.

Table 5.4-2 CITY OF SAN DIEGO NOISE ORDINANCE LIMITS		
Land Use Zone ¹	Time of Day	1 Hour Average Sound Level (decibels)
Single Family Residential	7 AM to 7 PM	50
	7 PM to 10 PM	45
	10 PM to 7 AM	40
Multi-Family Residential (Up to a maximum density of 1/2000)	7 AM to 7 PM	55
	7 PM to 10 PM	50
	10 PM to 7 AM	45
All other Residential	7 AM to 7 PM	60
	7 PM to 10 PM	55
	10 PM to 7 AM	50
Commercial	7 AM to 7 PM	65
	7 PM to 10 PM	60
	10 PM to 7 AM	60
Industrial or Agricultural	Any time	75

Source: City of San Diego Noise Ordinance Section 59.5.0401

¹ The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

City of San Diego CEQA Significance Determination Thresholds

Transportation Noise

In addition to those standards indicated above, the City's CEQA Significance Determination Thresholds include noise guidelines pertaining to traffic noise. Per the CEQA Significance Determination Thresholds, the maximum traffic noise level at exterior usable areas of multi-family residential uses is 65 dB, with a maximum allowable interior level of 45 dB. Maximum traffic noise levels at exterior usable areas of offices are 70 dB and 75 dB at commercial retail uses.

Existing Noise Environment

Noise Sources

The dominant noise source in the immediate project vicinity is vehicular traffic along El Camino Real, Del Mar Heights Road, and High Bluff Drive. The shopping areas to the east generate negligible noise levels at the project site due to the distance separating the site and existing ambient noise levels. Residential uses in the surrounding areas also are not considered substantial noise generators. While heating and ventilation systems and outdoor parking areas at the adjacent office/research and development (Neurocrine) to the south generate noise, these stationary sources are not considered substantial because of the separating distance.

The nearest airport to the proposed project site is MCAS Miramar, located approximately 10 miles southeast of the project site. The project site is not located within the MCAS Miramar ALUCP noise contour and thus air traffic is not considered an existing noise source in the project vicinity.

Sensitive Noise Receptors

The noise sensitive receptors that may potentially be affected by the proposed project include the multi-family residences to the north of the project site (across Del Mar Heights Road) and a single-family residence to the southwest (on the corner of El Camino Real and Townsgate Drive). Other sensitive noise receptors, such as nearby schools and parks and other multi-family residences in the vicinity, are located too far from the project site to be adversely affected by the project.

Existing Noise Levels

A site visit was conducted on April 3, 2009, and two noise measurements were taken at the site; one approximately in the middle of the project site adjacent to El Camino Real, and the second one approximately in the middle of the project site adjacent to Del Mar Heights Road. Noise Measurement Location 1 (M1) near El Camino Real was 67.4 dBA L_{EQ} and Noise Measurement Location 2 (M2) near Del Mar Heights Road was 66.3 dBA L_{EQ} .

Noise levels were also calculated using the Computer Aided Noise Abatement (CADNA) Version 3.6 model-based computer program. Using CADNA, the noise level at M1 was estimated to be 68.4 dBA L_{EQ} , and the noise level at M2 was estimated to be 66.0 dBA L_{EQ} . Based on the minimal difference between the measured noise level and the calculated noise level, the model was considered to accurately estimate noise at the project site and no adjustments were necessary.¹

5.4.2 Impact

Issue 1: Would the project result in or create a significant increase in the existing ambient noise levels?

Issue 2: Would the project result in the exposure of people to noise levels which exceed the City's adopted noise ordinance or are incompatible with the City's Land Use – Noise Compatibility guidelines?

Impact Thresholds

Noise Ordinance

According to the City's Significance Determination Thresholds, noise impacts may be significant if the project would exceed the following City of San Diego Noise Ordinance property line noise limits:

- Expose the multi-family residential properties to the north to exterior noise levels exceeding 55 dB from 7 AM to 7 PM, 50 dB from 7 PM to 10 PM, or 45 dB at from 10 PM to 7 AM;
- Expose the commercial property to the east and west to exterior noise levels exceeding 60 dB from 7 AM to 7 PM, 55 dB from 7 PM to 10 PM, or 52.5 dB at from 10 PM to 7 AM;
- Expose the commercial property to the south to exterior noise levels exceeding 65 dB from 7 AM to 7 PM, 60 dB from 7 PM to 10 PM, or 60 dB at from 10 PM to 7 AM;
- Expose the single-family residential property to the southeast to exterior noise levels exceeding 57.5 dB from 7 AM to 7 PM, 52.5 dB from 7 PM to 10 PM, or 50 dB at from 10 PM to 7 AM; and/or
- Expose the boundary between the on-site multi-family residential uses and the on-site commercial uses to exterior noise levels exceeding 55 dB from 7 AM to 7 PM, 50 dB from 7 PM to 10 PM, or 45 dB at from 10 PM to 7 AM

Land Use - Noise Compatibility Guidelines

The project would result in potentially significant noise - land use compatibility noise impacts if it places land uses within areas exceeding the following noise levels:

¹ A difference of less than 2 dB is considered sufficiently accurate and does not require any adjustments.

- Passive parks and required open space areas are not compatible with exterior noise levels above 65 CNEL;
- Mixed-use residential uses are not compatible with exterior noise levels above 70 CNEL and interior noise levels above 45 CNEL;
- Hotel uses are not compatible with exterior noise levels above 75 CNEL and interior noise levels above 45 CNEL; and/or
- Commercial office and retail uses are not compatible with exterior noise levels above 75 CNEL and interior noise levels above 50 CNEL.

Impact Analysis

City of San Diego Noise Ordinance - Stationary Source Noise Impacts

The proposed project would introduce several operational stationary noise sources, which would be regulated by the Municipal Code property line noise limits (Section 59.5.0401 of the Municipal Code). The specific noise-generators could include refrigeration and freezer condensers (associated with markets and restaurants), trash compactors, forklifts, delivery trucks, amplification systems (nighttime entertainment), restaurant kitchen fans, HVAC, and parking lot traffic. Site-specific information is not currently available for this equipment; however, equipment examples would include a 100-ton capacity Carrier 30GTN100 (large building cooling system), which has an average sound power rating of 100 dBA, or a backup alarm with a typical 30-second per hour operational time and an approximate sound power of 109 dBA. Pursuant to applicable City requirements, rooftop equipment would be architecturally screened with enclosures or screenwalls. Line-of-sight obstruction due to parapet walls or intervening structures would reduce noise generated by the building cooling system to 45 dBA L_{EQ} at 120 feet. The backup alarm would produce an hourly average sound level of approximately 39 dBA L_{EQ} . As such, these sources would rarely create noise impacts to receivers over 120 feet from the noise source and are highly unlikely to impact any off-site areas across roadways, including the multi-family residential uses to the north (across Del Mar Heights Road), the single-family residence to the east (across El Camino Real), and the commercial retail uses to the east (across El Camino Real). The office/research and development use directly to the south of the project site (Neurocrine) would not be significantly impacted by on-site stationary noise considering (1) the distance from proposed structures that could potentially include stationary noise generators to the property line (i.e., over 120 feet), (2) the types of the closest proposed on-site uses (i.e., closest proposed uses are not typically substantial noise generators), and (3) the adjacent uses are commercial and have higher property line noise limits than residential uses (65/60/60 dBA). Residences are not noise generators, and the proposed parking structure and residences would be approximately 50 feet from the property line. Therefore, stationary source noise impacts to off-site sensitive receptors would be less than significant.

Because the proposed project is a mixed-used development, residential uses would be in close proximity to commercial uses and could be exposed to noise generated by on-site stationary noise sources. Particularly, the residential buildings along Main Street would include ground floor commercial retail uses with residential units above. The proposed residences also would be near other commercial uses that could include markets and/or restaurants that typically contain

the stationary noise sources. Due to the close proximity of these proposed uses, there is potential for on-site stationary sources to exceed the noise limits of the Noise Ordinance. Therefore, stationary source noise impacts to on-site sensitive receptors would be potentially significant.

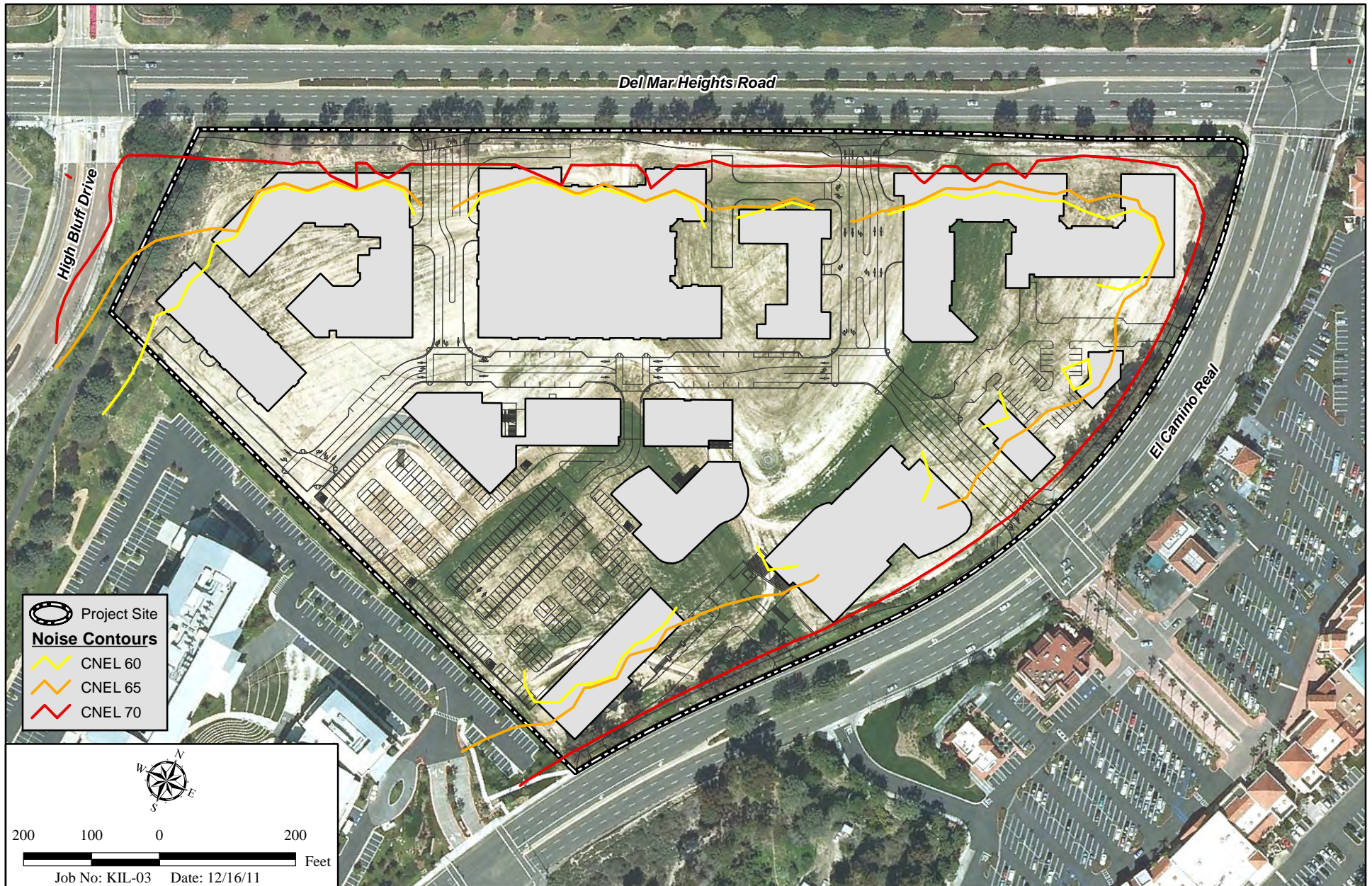
Noise - Land Use Compatibility Impacts

The General Plan Noise Compatibility Guidelines have been set forth to ensure that proposed developments are placed within a noise environment that is compatible with the proposed uses.

Land Use - Noise Compatibility Impacts to Proposed Uses from Off-site Noise Sources

As mentioned under existing conditions, the primary noise source in the project vicinity is vehicular traffic on adjacent roadways. Traffic volumes utilized in the noise model were taken from the project traffic report (USAI 2011). On-site noise levels generated from off-site traffic on adjacent roadways were modeled using CADNA under Existing, Existing Plus Project (project buildout), Near-term Without Project, Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) With Project conditions. The resulting calculated on-site traffic noise contours for each of these conditions are illustrated in Figures 5.4-1 through 5.4-5 (*On-site Traffic Noise Contours – Existing Plus Project [Project Buildout]*, *On-site Traffic Noise Contours – Near-term With Project [Phase 1]*, *On-site Traffic Noise Contours – Near-term With Project [Phases 1 and 2]*, *On-site Traffic Noise Contours – Near-term With Project Buildout*, and *On-site Traffic Noise Contours – Long-term Cumulative [Year 2030] Without Project*). Long-term Cumulative (Year 2030) With Project conditions would experience more traffic on analyzed roadway segments compared to the Existing Plus Project and Near-term With Project traffic scenarios. Therefore, long-term cumulative traffic volumes (Year 2030 With Project) are used in this land use – noise compatibility impact assessment of off-site traffic noise on proposed uses to represent the most conservative and impactful analysis scenario.

To determine the compatibility of proposed on-site uses, 95 noise modeling receivers were identified within the project site and represent locations along proposed residential building facades adjacent to Del Mar Heights Road (the adjacent roadway with the highest traffic volumes). The noise receiver modeling locations were placed at a height of 25 feet above the approximate ground elevation of the buildings to account for an interior first-floor height of 15 feet, 5 feet between stories for HVAC and utilities, and another 5 feet to represent the approximate height of a person standing in a second-floor residence (refer to Figure 5-13 in the Acoustical Report; Draft EIR Appendix F). Table 5.4-3, *Modeled Future Noise Conditions At On-Site Receivers – Long-Term Cumulative (Year 2030) With Project*, identifies the modeled future noise levels at the building façades of the proposed on-site residential buildings that would be exposed to future traffic noise along Del Mar Heights Road under Long-term Cumulative (Year 2030) With Project conditions.

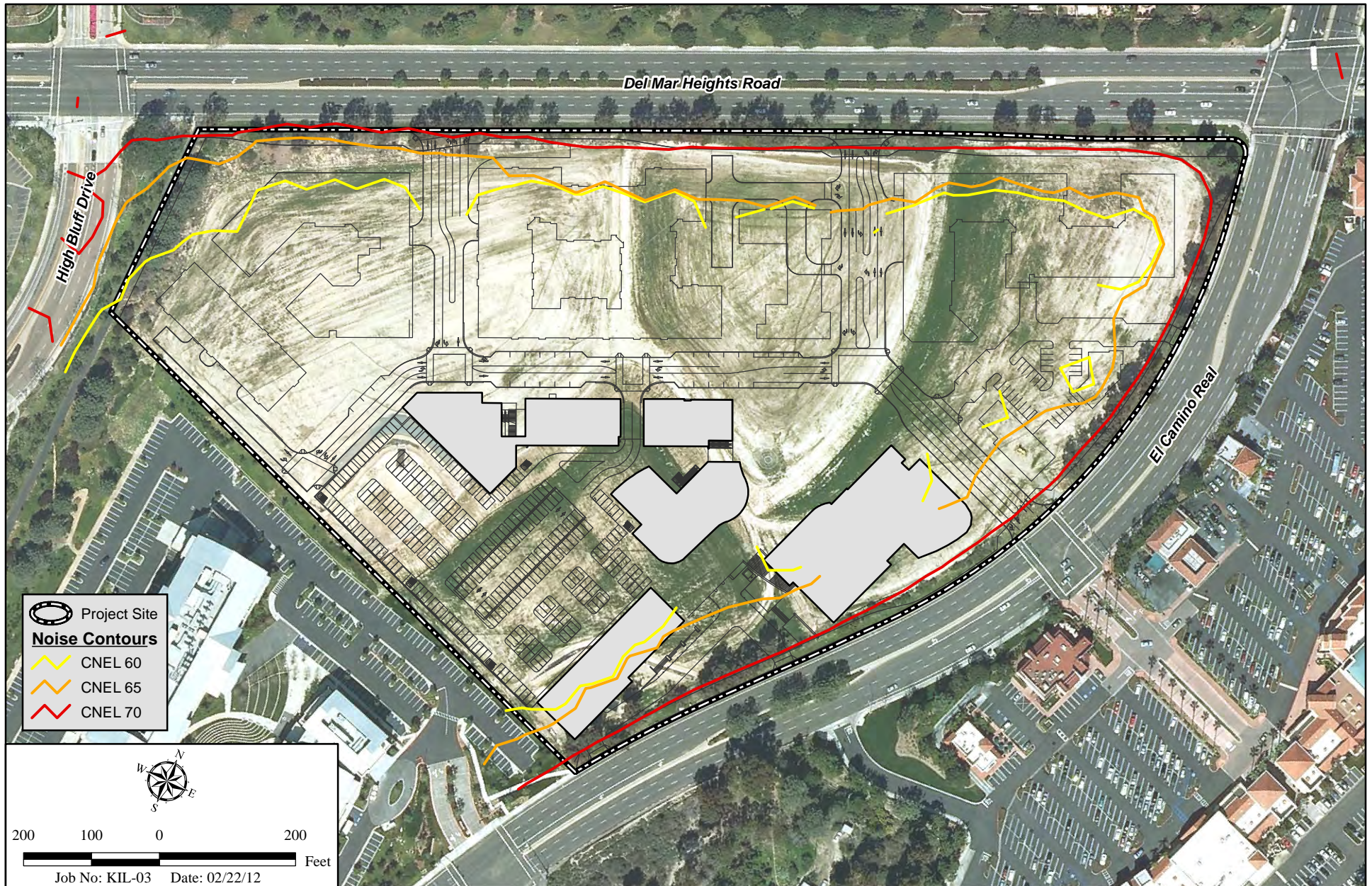


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On-site Traffic Noise Contours - Existing Plus Project (Project Buildout)

ONE PASEO

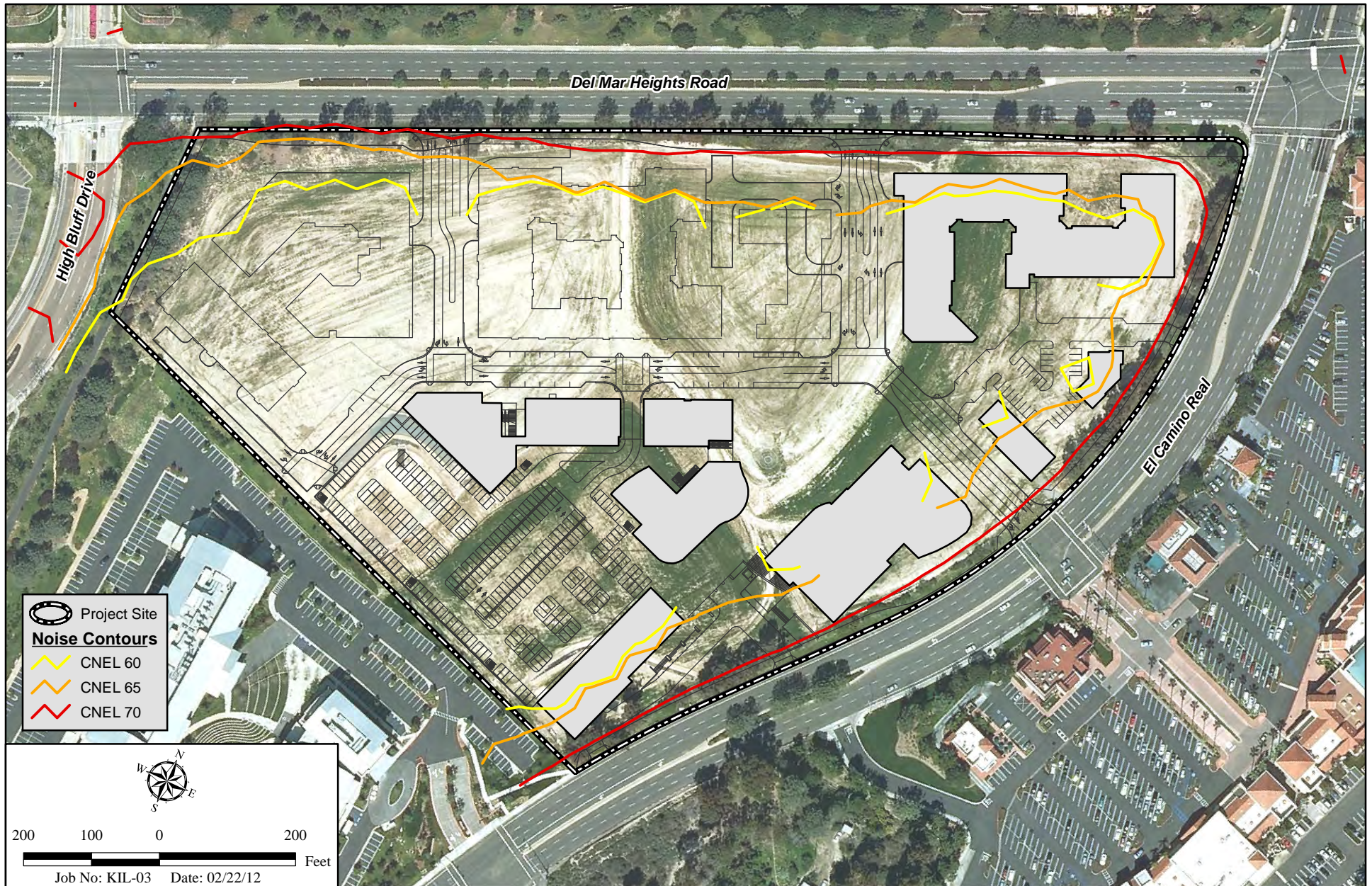
Figure 5.4-1



On-site Traffic Noise Contours – Near-term With Project (Phase 1)

ONE PASEO

Figure 5.4-2

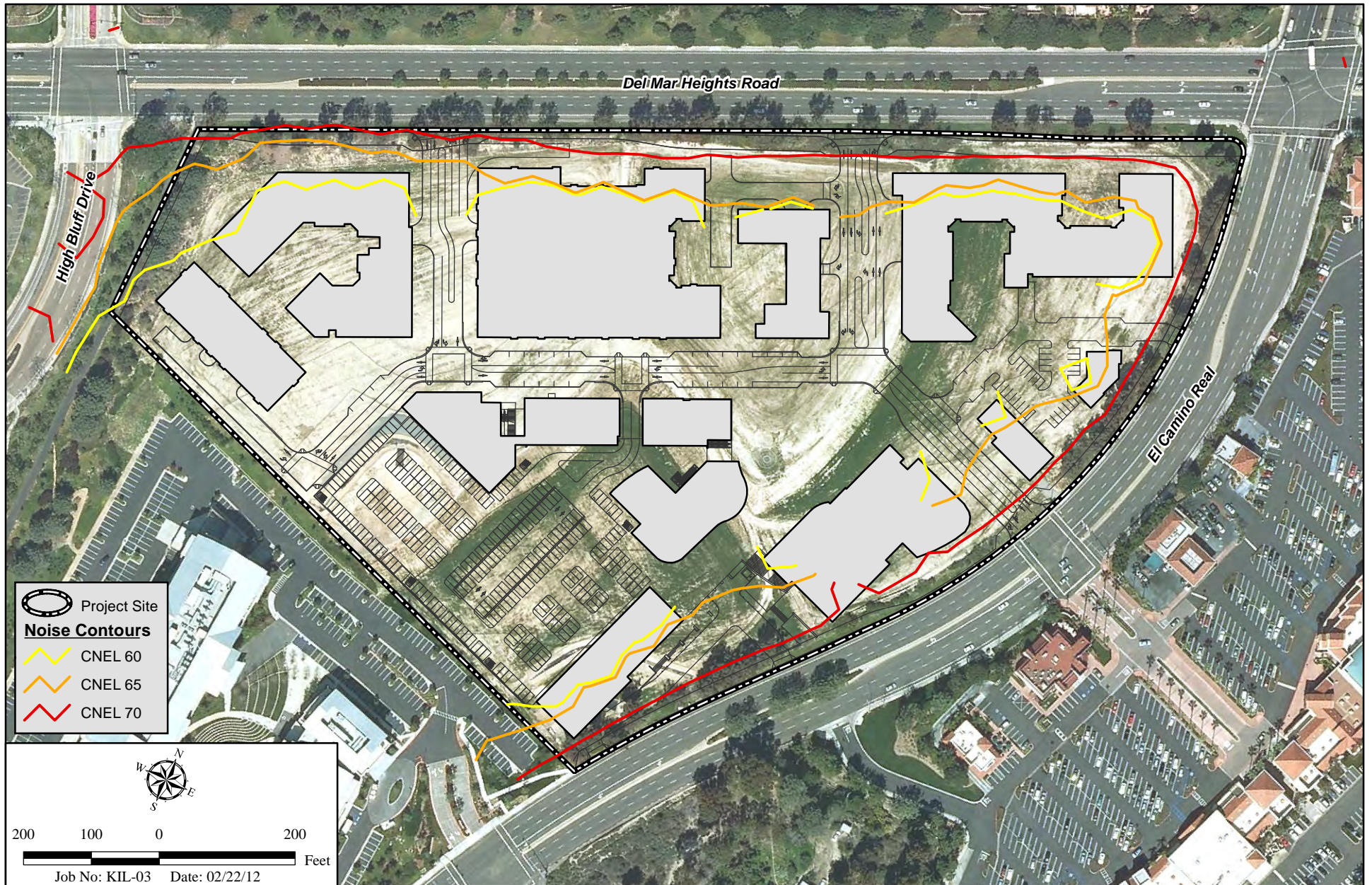


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On-site Traffic Noise Contours – Near-term With Project (Phases 1 and 2)

ONE PASEO

Figure 5.4-3

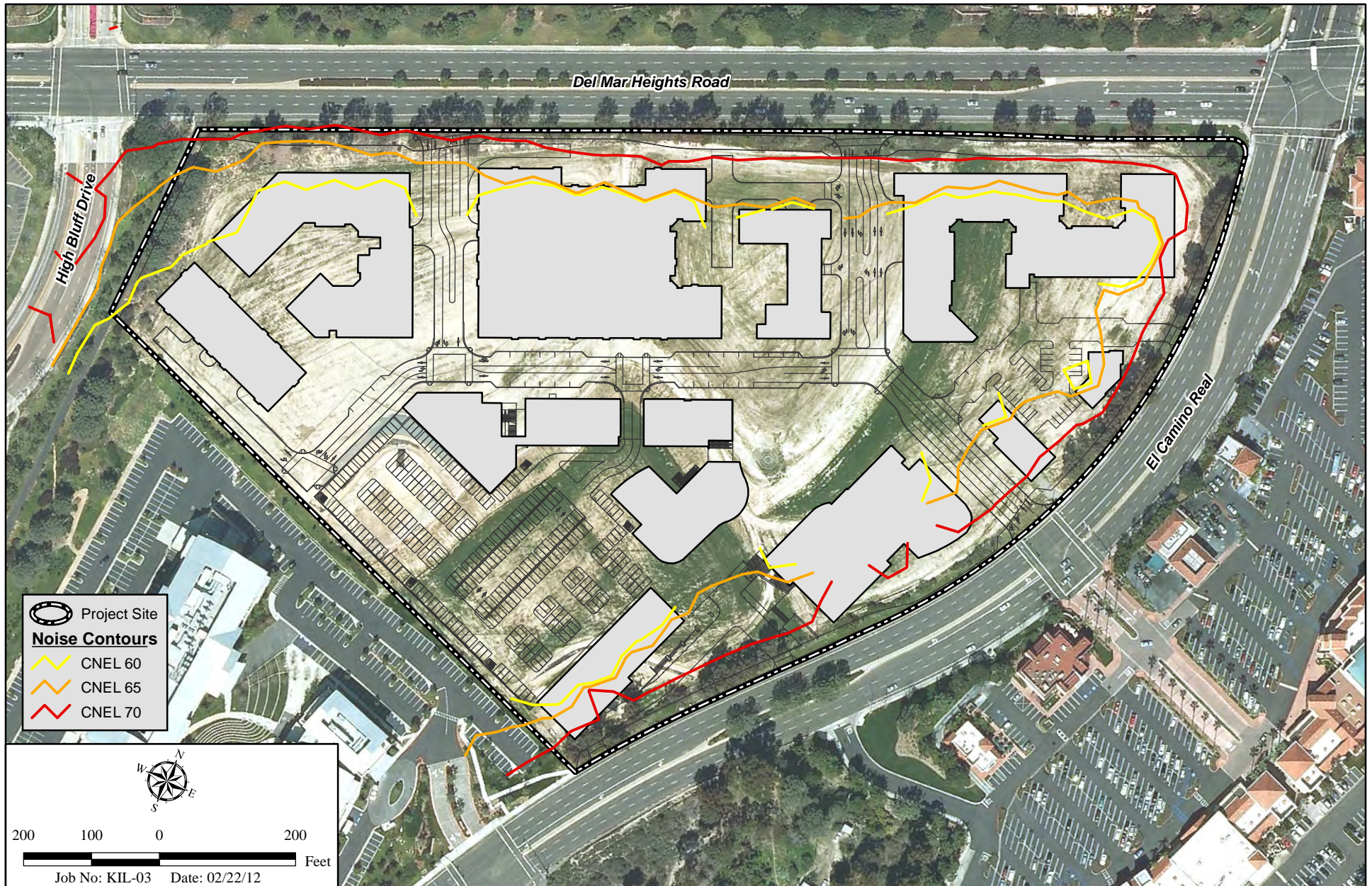


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On-site Traffic Noise Contours – Near-term With Project Buildout

ONE PASEO

Figure 5.4-4



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On-site Traffic Noise Contours – Long-term Cumulative (Year 2030) With Project

ONE PASEO

Figure 5.4-5

**Table 5.4-3
MODELED FUTURE NOISE CONDITIONS AT ON-SITE RECEIVERS –
LONG-TERM CUMULATIVE (YEAR 2030) WITH PROJECT**

Receiver	CNEL (dBA*)	Receiver	CNEL (dBA)	Receiver	CNEL (dBA)	Receiver	CNEL (dBA)
1	52.6	25	56.1	49	53.5	73	69.4
2	53.4	26	60.7	50	49.0	74	69.4
3	56.3	27	67.6	51	38.6	75	67.5
4	61.2	28	69.7	52	35.9	76	64.9
5	62.3	29	69.6	53	48.4	77	62.2
6	61.4	30	67.9	54	59.9	78	62.3
7	53.2	31	65.7	55	64.3	79	62.7
8	47.4	32	67.1	56	66.7	80	63.2
9	59.8	33	64.8	57	67.2	81	67.6
10	63.4	34	68.7	58	64.4	82	67.1
11	68.3	35	67.9	59	62.2	83	69.4
12	69.2	36	69.8	60	49.7	84	69.7
13	67.4	37	66.9	61	56.0	85	66.9
14	60.0	38	67.8	62	58.0	86	69.2
15	56.2	39	64.5	63	58.0	87	68.8
16	57.0	40	56.5	64	56.6	88	69.2
17	57.5	41	60.7	65	59.6	89	68.6
18	59.7	42	37.8	66	61.6	90	69.1
19	68.0	43	54.4	67	61.1	91	66.2
20	69.5	44	55.8	68	65.1	92	63.3
21	69.4	45	55.6	69	66.9	93	60.2
22	68.1	46	56.9	70	66.8	94	59.2
23	60.6	47	55.2	71	69.6	95	58.1
24	56.4	48	54.5	72	69.4	-	-

Bold indicates an exterior noise level that would result in an interior noise level above the 45 CNEL interior residential land use - noise compatibility threshold after the 15 CNEL exterior-to-interior noise reduction.

*Peak free-flowing traffic hourly dBA L_{EQ}

Source: HELIX 2012a

There is potential for the proposed residences and offices along Del Mar Heights Road and El Camino Real to be exposed to interior noise levels above the 45 and 50 CNEL interior compatibility thresholds, respectively. Considering standard construction materials provide a 15-dBA reduction, residential uses that would be exposed to exterior noise levels above 60 CNEL and office uses that would be exposed to exterior noise levels above 65 CNEL could have interior noise levels exceeding 45 and 50 CNEL, respectively. As shown in Table 5.4-3 and Figures 5.4-1 through 5.4-5, portions of the proposed residential uses would be subject to

noise levels above 60 dBA. Figures 5.4-1 through 5.4-5 also show that portions of the proposed office uses would be exposed to noise levels above 65 dBA. Thus, proposed residences and offices may not be consistent with the General Plan Noise Element Land Use – Noise Compatibility Guidelines, resulting in a potentially significant noise impact related to land use – noise compatibility.

Proposed exterior usable areas associated the residences would mostly be located within interior courtyards or in the interior portion of the project site where noise levels would be below 65 CNEL (refer to Figure 5.4-5). There would be one courtyard that opens toward Del Mar Heights Road (in Block A; refer to Figure 5.4-5), but noise levels within this area would be below 65 CNEL. The project does not include exterior usable office or retail space within areas exceeding 70 or 75 CNEL, respectively. Thus, noise impacts related to land use- noise compatibility at exterior usable areas would be less than significant.

On-site Land Use - Noise Compatibility Impacts Between Proposed Uses

As discussed above, the project would include several new noise sources. These new noise sources could pose land use – noise compatibility issues within the project site between residential/hotel uses and commercial uses. Specifically, proposed on-site markets, retail, restaurants, and nighttime entertainment venues may generate noise that could expose proposed residences or hotel uses to levels above the land use – noise compatibility guidelines, particularly where these uses occur adjacent to each other or are stacked residential/hotel over commercial. Potential impacts would likely be from HVAC systems and other types of air movement systems such as restaurant kitchen fans (grease fans). Since building plans and specific uses/tenants have not yet been developed or identified, it is not feasible to accurately analyze the potential noise compatibility issues. There is potential however for the areas with commercial and residential uses stacked or adjacent to each other to experience potentially significant land use – noise compatibility noise impacts.

Significance of Impact

While the project stationary noise impacts to off-site properties would be in compliance with the Noise Ordinance, there is potential for on-site stationary sources to exceed the noise limits of the Noise Ordinance between proposed uses, resulting in a potentially significant noise impact. Proposed residences and offices could be exposed to interior noise levels above those allowed by the General Plan Noise Element Land Use – Noise Compatibility Guidelines, resulting in a potentially significant noise impact related to land use – noise compatibility. In addition, proposed on-site uses could generate noise exposing proposed residences or hotel uses to levels above the General Plan Noise Element Land Use – Noise Compatibility Guidelines, which represents a potentially significant noise impact.

Mitigation, Monitoring, and Reporting

Implementation of the following mitigation measures would reduce land use - noise compatibility impacts to below a level of significance:

Mitigation Measure 5.4-1: Prior to issuance of building permits, a noise analysis shall be completed to assess building-specific stationary noise sources and impacts to on-site uses. Appropriate noise ~~planning and~~ attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the Noise Ordinance noise limits for stationary sources (i.e., interior noise levels of 45 dBA L_{EQ} or less for residential and hotel uses; 50 dBA L_{EQ} or less for commercial uses). Methods for ensuring compliant interior noise levels may include, but would not be limited to, the following:

- Installation of roof-top mechanical ventilation and HVAC units on mounts that isolate the building from vibration caused by the machinery;
- In the floors separating residential uses from non-residential uses, use additional thicknesses of building materials and/or materials designed to isolate the residential spaces from vibration generated by non-residential spaces;
- Commercial air handling ducts shall not be routed in or adjacent to interior living space walls without specific plans to address isolation;
- Commercial HVAC systems shall not be mounted over interior living areas without specific plans to address isolation;
- Clusters of residential HVAC systems shall not be mounted directly over residential areas;
- Coolant or large water lines including HVAC water for commercial services shall not be routed in walls adjacent to living areas without specific plans to address isolation;
- Operable windows shall not be located where they look directly at any rooftop HVAC systems in adjacent buildings;
- Elevator shafts shall not be located directly adjacent to living quarters without specific plans to address isolation; and/or
- Commercial spaces for nighttime entertainment shall not have a common floor ceiling to a living space.

Once the project is constructed and in full operation, the developer shall conduct on-site noise measurements to verify that noise planning and attenuation measures identified in the noise analysis have mitigated project noise to levels below those proscribed by the Noise Ordinance noise limits for stationary sources.

Mitigation Measure 5.4-2: Prior to issuance of building permits, an exterior-to-interior noise analysis shall be completed to assess off-site noise sources and impacts to interior on-site residential and commercial uses. Appropriate noise planning and attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the General Plan Noise Element Land use - Noise Compatibility Guidelines (i.e., interior noise levels of 45 dBA CNEL or less for residential and hotel uses; 50 dBA CNEL or less for commercial uses). Methods for ensuring compliant interior noise levels may include, but would not be limited to, the following:

- Use of window glazing with an increased sound transmission classification;
- Use of additional thicknesses of interior drywall; and/or
- Use of additional thicknesses of exterior building materials.

Once the project is constructed and in full operation, interior noise measurements shall be conducted to verify that exterior-to-interior noise planning has mitigated project noise levels to ensure compliance with the General Plan Noise Element Land use – Noise Compatibility Guidelines.

Mitigation Measure 5.4-3: Prior to issuance of building permits, an interior noise analysis shall be completed to assess on-site noise sources and impacts to interior on-site residential uses. Appropriate noise planning and attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the General Plan Noise Element Land use - Noise Compatibility Guidelines. Potential noise planning and attenuation measures may include, but are not limited to, the following:

- Commercial air handling ducts shall not be routed in or adjacent to interior living space walls without specific plans to address isolation;
- Commercial HVAC systems shall not be mounted over interior living areas without specific plans to address isolation;
- Clusters of residential HVAC systems shall not be mounted directly over residential areas;
- Coolant or large water lines including HVAC water for commercial services shall not be routed in walls adjacent to living areas without specific plans to address isolation;
- Operable windows shall not be located where they look directly at any rooftop HVAC systems in adjacent buildings;
- Elevator shafts shall not be located directly adjacent to living quarters without specific plans to address isolation;
- Commercial spaces for nighttime entertainment shall not have a common floor ceiling to a living space;
- Limitations upon the use of exterior amplified music systems associated with entertainment such as prohibiting exterior amplified music systems in areas directly adjacent to or below on-site residences²; and
- Commercial lease agreements shall include strict enforceable measures to control interior and exterior noise to limit impacts to residential areas.

Once the project is constructed and in full operation, interior noise measurements shall be conducted to verify that interior noise planning has mitigated project noise levels to ensure compliance with the General Plan Noise Element Land use – Noise Compatibility Guidelines.

² This excludes temporary outside amplification systems use for a short-term special event conducted with a separate City special event permit.

5.4.3 Impact

Issue 3: Would the project cause exposure of people to current or future transportation noise levels which exceed standards established in the Transportation Element of the General Plan?

Impact Thresholds

The City's Significance Determination Thresholds contain specific traffic noise significance thresholds that are based on the City of San Diego Progress Guide and General Plan, which has been superseded by the currently adopted 2008 General Plan. Specifically, the Land Use Compatibility Chart (Table K-4) has been updated in the Noise Element of the 2008 General Plan, and the Transportation Element of the 2008 General Plan does not include the traffic noise thresholds contained in Table K-2 of the City's Significance Determination Thresholds. Traffic noise significance thresholds used in this EIR are based on a combination of Table K-2 (from the City's Significance Determination Thresholds) and the Land Use – Noise Compatibility Guidelines in the Noise Element of the 2008 General Plan. Where differences occur between Table K-2 and the Land Use – Noise Compatibility Guidelines, the more restrictive guideline is applied.

Traffic noise impacts may be significant if the project would:

- Expose single-family or multi-family housing to exterior traffic noise levels that exceed 65 dBA CNEL at exterior useable areas and interior traffic noise levels that exceed 45 dBA CNEL;
- Expose office uses to exterior traffic noise levels that exceed 70 dBA CNEL at exterior useable areas and interior traffic noise levels that exceed 50 dBA CNEL;
- Expose commercial retail uses to exterior traffic noise levels that exceed 75 dBA CNEL at exterior useable areas; and/or
- Increase noise levels by at least 3 dBA where noise levels currently exceed the traffic noise thresholds.

Impact Analysis

To determine project traffic noise impacts, traffic noise was evaluated under under Existing, Existing Plus Project (project buildout), Near-term Without Project, Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) With Project conditions. Traffic information used in this analysis was taken from the project traffic report (USAI 2012).

Traffic Noise Impacts to Proposed On-site Uses

As discussed in Section 5.4.2, there is potential for the proposed on-site residences and offices along Del Mar Heights Road and El Camino Real to be exposed to interior noise levels above the 45 and 50 CNEL due to future traffic noise. On-site residential uses that would be exposed to

exterior traffic noise levels above 60 CNEL and on-site office uses that would be exposed to exterior traffic noise levels above 65 CNEL could have interior noise levels exceeding 45 and 50 CNEL, respectively. Figures 5.4-1 through 5.4-5 show on-site traffic noise contours developed using CADNA modeling to show estimated on-site noise levels under Existing Plus Project (project buildout), Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) With Project conditions. As shown in these figures, portions of residential and office buildings would be exposed to exterior traffic noise levels that could result in interior noise levels in excess of significance thresholds. The project therefore would result in a potentially significant traffic noise impact to on-site uses.

Traffic Noise Impacts to Off-site Uses

Off-site traffic noise contours were developed for the Existing Plus Project (project buildout), Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) With Project conditions using CADNA modeling software to show estimated traffic noise levels at off-site locations in the project vicinity (Figures 5.4- 6 through 5.4-10, *Off-Site Traffic Noise Contours – Existing Plus Project [Project Buildout]*, *Off-Site Traffic Noise Contours – Near-term With Project [Phase 1]*, *Off-Site Traffic Noise Contours – Near-term With Project [Phases 1 and 2]*, *Off-Site Traffic Noise Contours – Near-term With Project Buildout*, and *Long-term Cumulative [Year 2030] With Project*). As shown in these figures, traffic noise levels would not exceed the traffic noise significance thresholds under any analyzed scenario at exterior useable areas of off-site noise-sensitive uses in the project vicinity, including the multi-family residential uses to the north and southeast, the single-family residence to the east, and the park to the southeast. Similarly, project traffic noise would not expose office uses to the west and immediate south or commercial retail uses to the east to noise levels above 70 or 75 dBA. Furthermore, based on the forecasted traffic volumes, traffic noise levels would not increase by three dBA at receivers along Del Mar Heights Road or El Camino Real. In order for a three-dBA traffic noise increase to occur, a project would have to double the traffic volume on a roadway maintaining full speed. Project construction and operation would not double traffic volumes on any roadway in the project vicinity. Consequently, traffic noise impacts to off-site uses resulting from the project would be less than significant.

Traffic Noise Impacts from Off-site Traffic Mitigation

Section 5.2, *Transportation/Circulation/Parking*, identifies off-site traffic improvements as mitigation to reduce potentially significant traffic impacts resulting from project implementation. The off-site traffic improvements that are proposed to be implemented by the project (as opposed to payment of a fair-share contribution) would occur within the existing developed right-of-way and some would involve minor road widening (maximum of approximately five feet per side) that could place vehicles closer to residences near the improved intersection with an associated slight increase in traffic noise. However, none would result in increased traffic noise levels that would exceed traffic noise significance thresholds at noise-sensitive uses or exterior useable areas. Associated traffic noise impacts would be less than significant.



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Off-site Traffic Noise Contours – Existing Plus Project (Project Buildout)

ONE PASEO

Figure 5.4-6



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Off-site Traffic Noise Contours – Near-term With Project (Phase 1)

ONE PASEO

Figure 5.4-7



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Off-site Traffic Noise Contours – Near-term With Project (Phases 1 and 2)

ONE PASEO

Figure 5.4-8



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Off-site Traffic Noise Contours – Near-term With Project Buildout

ONE PASEO

Figure 5.4-9



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Long-term Cumulative (Year 2030) With Project

ONE PASEO

Figure 5.4-10

Significance of Impact

Project traffic noise would potentially expose proposed on-site residences and offices to interior noise levels above the traffic noise significance thresholds, resulting in a potentially significant traffic noise impact. Traffic noise impacts to off-site uses resulting from the proposed project would be less than significant.

Mitigation, Monitoring, and Reporting

Implementation of Mitigation Measure 5.4-2 identified in Section 5.4.2 would reduce potentially significant traffic noise impacts to below a level of significance.

5.4.4 Impact

Issue 4 Would the project result in substantial temporary or periodic increases in ambient noise levels in the project vicinity above existing without project conditions?

Impact Thresholds

According to the City's Significance Determination Thresholds, noise impacts may be significant if the project would:

- Result in temporary construction noise which exceeds noise levels identified in Municipal Code 59.0404, including temporary construction noise levels that exceed an average sound level greater than 75 dBA L_{EQ} at a sensitive receptor during the 12-hour period from 7:00 AM to 7:00 PM

Impact Analysis

Construction activities can be roughly divided into seven phases, with these phases potentially exhibiting some overlap depending on specific locations and timing; rough grading, utilities excavation, foundation preparation, building construction, finish grading, paving, and landscaping. Site construction would entail the use of heavy equipment throughout the site for the full term of construction. While specific construction plans are not available, it is assumed that both an excavator (generating average noise levels of 80.7 dBA at 50 feet) and a loader (generating average noise levels of 79.1 dBA at 50 feet) would be used during the initial excavation. Other typical equipment for the proposed type of construction is assumed to include: small dozer, backhoe loader(s), compactor(s), water truck, boom concrete pumper, trencher(s), forklifts, light mobile cranes or sky lifts, grader, paver, compactor, skid steer(s), mini excavator, trencher, and a variety of specific tools including welders, metal shears, and light hand tools. As indicated in the Geotechnical Reports (Appendices O and P), soils underlying the site include clay and silty soils and blasting or breaking would not be necessary to excavate for the underground parking structures. The equipment necessary for the construction phase of the proposed project would be typical of construction equipment used for general office/commercial with residential construction.

Construction hours would be limited to the hours and days indicated in the City of San Diego Municipal Code. Construction noise levels would be loudest during rough site grading where the equipment may have maximum peak noise levels of 85 to 90 dBA at 50 feet. The closest off-site residences across Del Mar Heights Road and El Camino Real are located approximately 200 feet to the north and 130 feet to the east, respectively. Construction noise levels at these adjacent noise sensitive uses would not exceed a 12-hour average of 75 dBA based on the following reasons: (1) the residences are located over 100 feet away across major roadways; (2) construction noise would occur intermittently and not continuously for the 12-hour period between 7:00 AM and 7:00 PM; (3) noise-generating construction vehicles are mobile and would operate throughout the site during the initial grading phase, resulting in greater distances between the vehicles and residences during construction hours; and (4) intervening topography would further attenuate construction noise at the residences. Therefore, construction noise impacts to off-site sensitive receptors would be less than significant.

During construction of Phase 3, construction noise impacts to on-site residences (built in earlier phases) may exceed the 12-hour average of 75 dBA considering less than 100 feet of separation between on-site residences and the impact footprint for Phase 3. If an excavator and a loader (typical construction equipment used for excavation) would be operating in the northeastern corner of Block C for the excavation of the subterranean parking structure, construction noise levels at on-site residences at the northwest end of Block B could exceed 75 dBA, although the approximate level calculated with the FHWA Roadway Construction Noise Model would be 74.7 dBA. Given the small differential of 0.3 dBA between the approximate calculated construction noise level and the Municipal Code limit along with variables of construction operations (i.e., number of equipment and exact distances between the noise source and receivers), noise levels may exceed the 75-dBA threshold at the closest on-site residences. As a result, construction noise impacts during construction of Phase 3 would be potentially significant to on-site sensitive receptors.

Construction Noise Impacts from Off-site Improvements and Traffic Mitigation

The project proposes off-site improvements (as identified in Section 3.2.6 in this EIR), as well as off-site traffic improvements as mitigation to reduce potentially significant traffic impacts resulting from project implementation (refer to Section 5.2, *Transportation/Circulation/Parking*). Most off-site improvements and all traffic mitigation would occur within the existing developed right-of-way and include utilities connections, minor lane widening (up to five feet on each side), reconfigurations of turn lanes, installation of traffic signals, and median modifications. Typical equipment used during this work within the road right-of-way may include a concrete saw, excavator, loader, small dozer, and compaction equipment. The loudest of these is an excavator which has an average noise level of 80.7 dBA L_{EQ} at 50 feet. The closest residential location is at least 75 feet away and has a high berm between the residence and construction locations along roadways. Construction noise levels at this closest residence would not exceed a 12-hour average of 75 dBA due to a combination of the berm and the distance between the construction noise source and residence. Associated construction noise impacts would be less than significant.

Proposed off-site improvements outside of the road right-of-way include: (1) re-grade and landscape/hardscape the parcel adjacent to the southeast corner of the High Bluff Drive/Del Mar Heights Road intersection; (2) a ramp/stairway connecting the project site and the adjacent commercial office use to the south; and (3) possible temporary grading along the southern property line for the proposed above-grade parking structure. Construction of these off-site improvements would not occur adjacent to any residential or other noise-sensitive receptor. The closest residential properties are located to the north across Del Mar Heights Road at least 200 feet away and therefore, would not be exposed to construction noise levels above a 12-hour average of 75 dBA. Associated construction noise impacts would be less than significant.

Significance of Impact

Construction noise levels generated by the project would not exceed limits allowed by the Noise Ordinance at off-site sensitive receptors. Construction during Phase 3 however, may generate noise levels above the 12-hour average of 75 dBA at the adjacent on-site residences that would be constructed in earlier phases. Project noise impacts to on-site sensitive receptors would be considered potentially significant during construction of Phase 3.

Mitigation, Monitoring, and Reporting

Implementation of the following mitigation measure would reduce construction noise impacts to below a level of significance:

Mitigation Measure 5.4-4: During construction of Phase 3, noise attenuation shall be provided sufficient to comply with the Noise Ordinance. Potential attenuation measures include, but are not limited to, use of sound walls, sound blankets, noise attenuation devices/modifications to construction equipment, and use of quieter equipment. As one option, a temporary 12-foot-high noise barrier could be constructed 50 feet in both (north-south) directions along Third Avenue from the point(s) where the proposed subterranean parking garage is within 100 feet of occupied residences.

The minimum noise reduction from a barrier that obstructs the line-of-sight between the noise source and the noise receiver is five dBA. Therefore, with a 12-foot-high temporary noise barrier, noise levels at the on-site residences in Block B would be reduced to below 75 dBA (12-hour) if they would otherwise be slightly above 75 dBA, as discussed above under Impact Analysis.

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5.5 AIR QUALITY

This section provides an evaluation of potential air quality impacts associated with the proposed project. The following discussion is based on the Air Quality and Greenhouse Gas Technical Report prepared by HELIX Environmental Planning (2012b; Draft EIR Appendix G). Global climate change and greenhouse gas emissions are addressed in Section 5.7, *Greenhouse Gas Emissions*.

The information from the original Air Quality and Greenhouse Gas Technical report has been updated pursuant to a memorandum included in Appendix G.1. *Updates to Air Quality and Greenhouse Gas Analysis in the Draft EIR for the One Paseo Project*. The memorandum was prepared in response to comments received on the Draft EIR, and to reflect changes which have occurred with respect to regulations and standards since the original analysis was completed in 2010. In general, the modifications which have been made involve updating the state and federal regulations, standards, and analysis methods governing criteria pollutants which have occurred since the original air quality analysis was completed. Specifically, updated information exists regarding the State Implementation Plan (SIP), toxic air contaminants (TACs) and the federal standards for certain criteria pollutants. The impact calculations were updated, as appropriate, to reflect the updated regulations and standards.

The memorandum in Appendix G.1, concludes that the changes in policies and regulations, and the associated changes in project emissions do not change the basic results or impact conclusions of the air quality analyses in the original Draft EIR, and that air quality impacts would remain less than significant. Furthermore, this memorandum also includes a qualitative discussion of the potential air quality impacts associated with the Revised Project proposed by the applicant to demonstrate that the impacts of the Revised Project would also be less than significant; see discussion in Section 12.9.

5.5.1 Existing Conditions

Meteorology/Climate

The climate in southern California, including the SDAB, is largely controlled by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity. Precipitation is limited to a few storms during the winter season. The climate of San Diego County is characterized by hot, dry summers and mild, wet winters.

MCAS Miramar is the closest meteorological monitoring station to the project site. Average wind speed in the vicinity is approximately 5.8 miles per hour to the west. The annual average temperature in the project area is approximately 50 degrees Fahrenheit (°F) during the winter and approximately 75°F during the summer. Total precipitation in the project area averages approximately 13 inches annually occurring mostly during the winter and relatively infrequently during the summer.

The atmospheric conditions of the SDAB contribute to the region's air quality problems. Temperature inversions (temperature increases as altitude increases) in the SDAB prevents ground-level and higher air from mixing and traps air pollutants near the ground. During the summer, the marine layer prevents air pollutants from dispersing upward. Light and daytime winds predominately from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and nitrogen dioxide (NO₂) emissions. High NO₂ levels usually occur during autumn or winter, on days with summer-like conditions. During mild Santa Ana or breezy conditions, smog is transported from the Los Angeles area to the coastal area of San Diego County or to the inland/mountains (depending on the elevation of the smog).

Regulatory Setting

Criteria Pollutants

Air quality is defined by ambient air concentrations of specific pollutants identified by the EPA to be of concern with respect to health and welfare of the general public. The EPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the EPA to establish NAAQS, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the EPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. Areas that do not meet the NAAQS for a particular pollutant are considered to be "non-attainment areas" for that pollutant.

The EPA established NAAQS for the protection of human health and the public welfare for six criteria pollutants: CO, sulfur dioxide (SO₂), NO₂, ozone (O₃), particulates with an aerodynamic diameter less than 10 micron (PM₁₀), fine particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}), and lead (Pb). Ozone is not emitted directly, but is formed from a complex set of reactions involving ozone precursors such as nitrogen oxides (NO_x) and volatile organic compounds (VOCs). Regulations relating to ozone, therefore, address emissions of NO_x and VOCs.

The federal CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California CAA of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "non-attainment areas" for that pollutant.

On April 30, 2012, the SDAB was classified as a marginal nonattainment area for the 8-hour NAAQS for ozone. ~~On April 15, 2004, the SDAB was classified as a basic non-attainment area for the 8-hour NAAQS for ozone.~~ The SDAB is an attainment area for the NAAQS for all other criteria pollutants. The SDAB currently falls under a national "maintenance plan" for CO,

following a 1998 redesignation as a CO attainment area by the SDAPCD (2008). The SDAB is currently classified as a non-attainment area under the CAAQS for ozone (serious non-attainment), PM₁₀, and PM_{2.5}. As of September 2013, no changes have been made to the information above.

CARB is the state regulatory agency with authority to enforce regulations to achieve and maintain the NAAQS and CAAQS. CARB is responsible for the development, adoption and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. CARB also reviews operations and programs of the local air districts, and requires each air district that is considered a non-attainment area to develop its own strategy for achieving the NAAQS and CAAQS. Each local air district has the primary responsibility for the development and implementation of rules and regulations that reflect the strategy to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. In San Diego County, the attainment planning process is embodied in a regional air quality management plan developed jointly by the SDAPCD and SANDAG.

The following specific descriptions of health effects for each of the criteria pollutants associated with project construction and operations are based on EPA (2007) and CARB.

Ozone

Ozone is considered a photochemical oxidant, which is a chemical that is formed when VOCs and NO_x, both by-products of fuel combustion, react in the presence of ultraviolet light. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Carbon Monoxide

CO is a product of fuel combustion, and the main source of CO in the SDAB is motor vehicle exhaust. CO is an odorless, colorless gas that affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide

NO₂ is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO₂ is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO₂ can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter

Respirable particulate matter, or PM₁₀, refers to particulate matter with an aerodynamic diameter

of 10 microns or less. Fine particulate matter, or PM_{2.5}, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges have been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM₁₀ and PM_{2.5} arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. PM₁₀ and PM_{2.5} can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. PM_{2.5} is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide

SO₂ is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO₂ are found near large industrial sources. SO₂ is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO₂ can cause respiratory illness and aggravate existing cardiovascular disease.

Lead

Lead in the atmosphere occurs as particulate matter. It has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the primary sources of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure and it is also classified as a probable human carcinogen.

Sulfates

Sulfates (SO_x) are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide

H₂S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H₂S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a CARB committee concluded that the ambient standard for H₂S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride

Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

Visibility-Reducing Particles

Visibility-reducing particles consist of suspended particulate matter, which are a complex mixture of tiny particles that consist of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. These particles in the atmosphere can obstruct the range of visibility. Their concentration regulation standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

Table 5.5-1, *Ambient Air Quality Standards*, presents a summary of the NAAQS and CAAQS adopted with the federal and California CAAs.

Table 5.5-1 AMBIENT AIR QUALITY STANDARDS						
Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method ⁴	Primary	Secondary	Method
Ozone (O ₃)	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM ¹⁰)	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		-		
Fine Particulate Matter (PM ^{2.5})	24-Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.05 µg/m ³	<u>15 µg/m³</u>	

Table 5.5-1 (cont.)
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method ⁴	Primary	Secondary	Method
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-	-	-
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (470 µg/m ³)		0.100 ppm (188 µg/m ³)	None	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	-	Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	-	
	3-Hour	-		-	0.5 ppm (1300 µg/m ³)	
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	-	-
Lead	30-Day Average	1.5 µg/m ³	Atomic Absorption	-	-	-
	Calendar Quarter	-		1.5 µg/m ³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m ³		

**Table 5.5-1 (cont.)
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method ⁴	Primary	Secondary	Method
Visibility Reducing Particles	8-Hour	Extinction coefficient of 0.23 kilometers – visibility of 10 miles or more (0.7 kilometers – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape		No Federal Standards		
<u>Sulfates (SO_x)</u>	<u>24-Hour</u>	<u>25 µg/m³</u>	<u>Ion Chromatography</u>			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter

Source: CARB June 4, 2013 HELIX 2012b (<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>)

Applicable Air Quality Plans

In San Diego, the SDAPCD is responsible for attainment planning required by the California CAA. The SDAPCD develops the RAQS to address strategies within the SDAB to attain and maintain air quality standards. The RAQS was initially adopted by the SDAPCD in 1992, and amended in 1993 in response to CARB comments. SDAPCD further updated the RAQS revisions in 1995; 1998; 2001; 2004, and 2009. The local RAQS, in combination with those from all other California non-attainment areas with serious (or worse) air quality problems, is submitted to CARB, which develops the California SIP. ~~The SIP was adopted by the ARB in 1994, and forwarded to the EPA for its approval. After considerable analysis and debate, particularly regarding airsheds with the worst smog problems, the EPA approved the SIP in mid-1996. Since then, SIP revisions have been developed and approved for non-attainment areas throughout the state; however, the SIP for the SDAB was not required to be updated, as it has achieved its attainment goals in a timely manner.~~ In June 2007, the SDAPCD submitted a SIP revision fulfilling the requirements EPA had established for a basic nonattainment area. However, EPA did not take action to approve that 2007 SIP submittal because, also in June 2007, a court ruled that EPA must reconsider its implementation methodology and criteria for foregoing nonattainment classifications in affected regions, including San Diego County. In a rulemaking responding to the court remand, EPA classified San Diego County as a Moderate ozone nonattainment area for the 1997 ozone standard, effective on June 13, 2012. According to the EPA rulemaking, a SIP submittal addressing moderate ozone nonattainment area control requirements would be due in June 2013.

The SDAPCD has requested the redesignation of San Diego County to attainment of the 1997 ozone NAAQS. Because the region attained the standard in 2011, and this request for

redesignation to attainment was submitted prior to the June 2013 SIP submittal due date, those moderate area SIP requirements will not apply after EPA has approved and redesignated San Diego County to attainment for the 1997 ozone NAAQS. Also, the Maintenance Plan included in this SIP redesignated document has fulfilled that SIP submittal requirement (SDAPCD 2012). On December 6, 2012, CARB approved the *Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County* for submittal to U.S. EPA as a SIP revision. On December 20, 2012, the U.S. EPA initiated its adequacy review of the plan and posted the document for a 30-day public review period that closed January 22, 2013. On March 25, 2013, the U.S. EPA approved the redesignation to the 1997 eight hour ozone attainment/maintenance plan.

The SDAPCD has also developed the air basin's input to the State Implementation Plan (SIP), which is required under Federal Clean Air Act for areas that are in nonattainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O₃ NAAQS and is also updated on a triennial basis.

On May 21, 2012, the U.S. EPA designated the San Diego air basin as a non-attainment area for the new 2008 Eight-Hour Ozone standard, and classified it as a marginal area with an attainment date of December 31, 2015. This designation became effective on July 20, 2012.

The RAQS relies on information from CARB and SANDAG, including mobile, off-road, and area source emissions (which also includes construction equipment activities), as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source and off-road equipment emissions projections and SANDAG growth projections are based on population, vehicle trends, equipment usage trends, and land use plans developed by the cities and by the County as part of the development of the City's and County's General Plans. As such, projects that propose development that is consistent with, or less dense than, the growth anticipated by the general plans would be consistent with the RAQS. However, if a project proposes development that is greater than anticipated in the general plan and is greater than the SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from CARB and SANDAG to develop emissions inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O₃.

CARB Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* on April 28, 2005 (the "CARB Handbook"), to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of toxic air contaminants (TACs). The CARB Handbook explicitly states that it is advisory in nature and that local land use decisions do not have to be consistent with its recommendations (CARB 2005). Some examples of CARB's

recommendations include avoiding siting sensitive receptors within: (a) 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (b) 1,000 feet of a transport distribution centers; (c) 300 feet of any dry cleaning operation using perchloroethylene; or, (d) within 500 feet for dry cleaning operation with two or more machines.

Existing Criteria Pollutant Levels

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and so that it can be determined whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the project site are the Del Mar Mira Costa College station, which is located approximately 2 miles north of the project site (ozone only), the Kearny Mesa station, which is located approximately 7 miles to the southeast of the project site (PM_{2.5}, PM₁₀, and NO₂), and the downtown San Diego station, which is located approximately 17 miles south of the site (CO and SO₂). Because of its coastal location similar to the project site, the Del Mar monitoring station ozone levels are considered most representative of the site. Also, because of its proximity to the site and location in an area that is less congested than downtown San Diego, the Kearny Mesa monitoring station concentrations for all other pollutants except CO and SO₂ are considered most representative of the project site. The downtown San Diego monitoring station is the nearest location to the project site where SO₂ concentrations are monitored. Ambient concentrations of pollutants from these stations between 2007 and 2010 are presented in Table 5.5-2, *Ambient Background Concentrations San Diego Monitoring Stations*.

The 1-hour state ozone standard was exceeded one time in 2007, two times in 2008, two times in 2009, and none in 2010 at the Del Mar-Mira Costa College monitoring station during the time period from 2007 through 2010. The 8-hour state ozone standard was exceeded four times in 2007, eleven times in 2008, three times in 2009, and two times in 2010. The 8-hour federal ozone standard was exceeded three times in 2007 and 2008, one time in 2009, and none in 2010. The Kearny Mesa monitoring station measured at least one exceedance of the annual federal PM₁₀ standard during the period from 2007 to 2010; however, one exceedance per year is exempted under NAAQS. The Kearny Mesa monitoring station measured one exceedance of the daily California PM₁₀ standard in 2007, during the period of the October 2007 wildfire season. The data from the monitoring stations indicate that air quality is in attainment of all other federal and state standards. Because of the location of the monitoring station in downtown San Diego, where traffic congestion is prevalent, the station has higher concentrations of CO than are measured elsewhere in San Diego County and the background data are not likely to be representative of background ambient CO concentrations in the project vicinity. Use of downtown San Diego background data therefore provides a conservative estimate of background CO concentrations.

**Table 5.5-2
AMBIENT BACKGROUND CONCENTRATIONS
SAN DIEGO MONITORING STATIONS**

Air Pollutant	2007	2008	2009	2010
Ozone – Del Mar/Mira Costa College				
Max 1 Hour (ppm)	0.110	0.117	0.097	0.085
Days > CAAQS (0.09 ppm)	1	2	2	0
Max 8 Hour (ppm)	0.079	0.078	0.084	0.072
Days > NAAQS (0.075 ppm)	3	3	1	0
Days > CAAQS (0.070 ppm)	4	11	3	2
Particulate Matter (PM₁₀) – Kearny Mesa Overland Avenue				
Max Daily (µg/m ³)	65.0	41.0	50.0	33.0
Days > NAAQS (150 µg/m ³)	0	0	0	0
Days > CAAQS (50 µg/m ³)	1	0	0	0
Annual Max (µg/m ³)	22	24	25	25
Days > NAAQS (20 µg/m ³)	1	1	1	1
Particulate Matter (PM_{2.5}) – Kearny Mesa Overland Avenue				
Max Daily (µg/m ³)	30.6	27.2	25.1	18.7
Days > NAAQS (35 µg/m ³)	0	0	0	0
Annual Max (µg/m ³)	10.44	11.75	10.5	8.7
Days > NAAQS (12 µg/m ³)	0	0	0	0
Days > CAAQS (15 µg/m ³)	0	0	0	0
Nitrogen Dioxide (NO₂) – Kearny Mesa Overland Avenue				
Max 1 Hour (ppm)	0.087	0.077	0.060	0.073
Days > CAAQS (0.18 ppm)	0	0	0	0
Annual Max (ppm)	0.016	0.011	0.014	0.013
Days > NAAQS (0.053 ppm)	0	0	0	0
Days > CAAQS (0.030 ppm)	0	0	0	0
Carbon Monoxide (CO) – Downtown San Diego				
Max 8 Hour (ppm)	5.18	2.24	2.77	2.17
Days > NAAQS (9 ppm)	0	0	0	0
Days > CAAQS (9.0 ppm)	0	0	0	0
Max 1 Hour (ppm)	8.7	2.4	2.5	2.3
Days > NAAQS (35 ppm)	0	0	0	0
Days > CAAQS (20 ppm)	0	0	0	0
Sulfur Dioxide (SO₂) – Downtown San Diego				
Max Daily Measurement (ppm)	0.006	0.007	0.006	0.002
Days > NAAQS (0.14 ppm)	0	0	0	0
Days > NAAQS (0.04 ppm)	0	0	0	0

Abbreviations: > = exceed, ppm = parts per million, µg/m³ = micrograms per cubic meter, Standard Mean = Annual Arithmetic Mean
Source: HELIX 2012b

Toxic Air Contaminants

In addition to the criteria pollutants for which there are NAAQS and CAAQS, EPA and CARB also regulate a list of toxic air contaminants (TAC). Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics identified by the EPA. MSATs are emitted from vehicle and non-road equipment. Some toxic compounds are present

in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as by-products. Metal air toxics result from engine wear or from impurities in oil or gasoline.

The EPA is the lead federal agency for administering the Federal CAA and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources 66 FR 17229 (March 29, 2001). In the 2001 rulemaking, six of the 21 MSATs were identified by EPA as priority MSATs: acetaldehyde, benzene, formaldehyde, diesel exhaust, acrolein, and 1,3-butadiene (66 FR 17230).

In its rule, EPA also examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, the Federal Highway Administration (FHWA) projects that even with a 64 percent increase in vehicle miles traveled (VMT), these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 to 65 percent, and will reduce on-highway diesel particulate matter (DPM) emissions by 87 percent. In 1998, California identified DPM as a toxic air contaminant based on its potential to cause cancer and other adverse health impacts.

Existing Toxic Air Contaminant Levels

Ambient levels of selected TACs are measured by CARB at several locations in southern California. The closest TAC monitoring stations to San Diego are in El Cajon and Chula Vista, approximately 30 miles east and 45 miles south of the project site, respectively. Both of these stations may potentially contain higher, as well as different, TAC concentrations than those near the project site because of the distance from the project site and the myriad land uses in those areas. Because DPM is not collected at the two monitoring stations, background concentrations for this TAC were obtained from the 2009 California Almanac of Emissions and Air Quality (CARB 2009). The annual average concentration for DPM in the SDAB is 1.4 micrograms per cubic meters ($\mu\text{g}/\text{m}^3$) with an estimated cancer risk of 420 chances in one million. Basin-wide inventories of the priority MSATs include 6.2 tons/year of acetaldehyde, 12.7 tons/year of benzene, 45.2 tons/year of formaldehyde, 0.6 tons/year of acrolein, and 0.9 tons/year of 1,3-butadiene. No data are available for diesel exhaust.

Existing Sensitive Receptors

Existing sensitive receptor locations in the project vicinity include schools and parks identified in Table 5.5-3, *Existing Sensitive Receptor Locations in the Project Vicinity*.

Table 5.5-3 EXISTING SENSITIVE RECEPTOR LOCATIONS IN THE PROJECT VICINITY		
Receptor	Address	Approximate Distance from Project Site
Kinder Care Learning Center	3790 Townsgate Drive	0.15 mile
Carmel Valley Recreation Center	3777 Townsgate Drive	0.15 mile
Bridges – A Learning Center	3020 Del Mar Heights Road	0.15 mile
Solana Pacific Elementary	3901 Townsgate Drive	0.19 mile
Solana Highlands Elementary	3520 Long Run Drive	0.22 mile
Del Mar Pines School	3975 Torrington Street	0.45 mile
Carmel Creek Elementary	4210 Carmel Center Road	0.5 mile
Torrey Pines High School	3710 Del Mar Heights Road	0.6 mile

5.5.2 Impact

Issue 1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact Thresholds

According to the City's Significance Determination Thresholds, air quality impacts may be significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

The SDAB is considered to be a basic non-attainment area for the 8-hour NAAQS for ozone and a non-attainment area for the CAAQS for both ozone and PM₁₀. Applicable air quality plans for the SDAB include the San Diego County RAQS and SIP. The SIP is the document that sets forth the state's strategies for attaining and maintaining the NAAQS. SANDAG and the APCD are responsible for developing the San Diego portion of the SIP, and have developed an attainment plan for attaining the 8-hour NAAQS for ozone. The RAQS sets forth the plans and programs designed to meet the state air quality standards. Through the RAQS and SIP planning processes, the APCD adopts rules, regulations, and programs designed to achieve attainment of the ambient air quality standards and maintain air quality in the SDAB.

The RAQS and SIP rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile-source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by jurisdictions (i.e., cities and County). Projects that propose development consistent with the growth anticipated by the applicable general plan(s) would be consistent with the RAQS and applicable portions of the SIP because associated emissions of criteria pollutants in a designated non-attainment area would be accounted for these air quality plans.

The project proposes amendments to the Community Plan and Precise Plan to allow for a mix of residential, commercial, and office uses within an area currently designated for Employment Center uses. This proposed change in land uses would result in additional traffic trips and associated air emissions that were not accounted for in the ozone attainment demonstration within the SIP. The project, however, would not generate operational emissions of ozone precursors (VOCs and NO_x) or PM₁₀ in excess of applicable thresholds (refer to Tables 5.5-8 through 5.5-10 [*Estimated Project Operational Emissions – Phase 1; Estimated Project Operational Emissions – Phases 1 and 2; and Estimated Project Operational Emissions – Project Buildout*] under Issue 2 discussion). Furthermore, the project includes design features that would reduce emissions of criteria pollutants, which would be in compliance with strategies in the RAQS and applicable portions of the SIP for attaining and maintaining air quality standards. Such design features include, but are not limited to: (1) energy efficiency features that would exceed Title 24 standards; and (2) the project is an infill development that proposes residences, retail, restaurants, and employment uses within the same site and in close proximity to existing infrastructure and development, which could reduce vehicle miles traveled in the region through the provision of employment generating uses closer to residential land uses. Because the project would be consistent with strategies in the RAQS and SIP for attaining and maintaining air quality standards, it would not conflict with the RAQS and SIP.

General estimated basin-wide construction-related emissions are included in the SDAPCD emission inventory (which, in part, forms the basis for the air quality plans cited above) and are not expected to prevent attainment or maintenance of the ozone and particulate matter standards within the SDAB. Therefore, construction impacts related to air quality plans for these pollutants from the proposed project would be less than significant, since they are presently estimated and accounted for in the emission inventory.

Significance of Impact

Although the project would require a CPA and PPA to allow for the proposed land uses, construction or operational air emissions generated by the project would not exceed applicable significance thresholds for ozone precursors or PM₁₀. Project design features are proposed to reduce project emissions in compliance with the strategies in the RAQS and SIP for attaining and maintaining air quality standards. The project, therefore, would not conflict with the RAQS or SIP and no associated significant air quality impacts would occur.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

5.5.3 Impact

Issue 2: Would the project cause a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?

Issue 5: Would the project 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)?

Impact Thresholds

According to the City's Significance Determination Thresholds, air quality impacts may be significant if the project would:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation; and/or
- Result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The City has identified screening level thresholds based on SDAPCD criteria that are designed to provide a guideline to be considered on a case-by-case basis with other substantial evidence to determine if a project may have a significant air quality impact. Other substantial evidence may involve factors such as proximity of sensitive receptors, potential for exceedance of the CO standard (CO "hot spots"), or other considerations. Table 5.5-4, *Air Quality Screening Level Thresholds*, provides a summary of the City's screening level thresholds for air quality.

Table 5.5-4 AIR QUALITY SCREENING LEVEL THRESHOLDS			
Pollutant	Lbs/hr	Lbs/day	Tons/yr
Carbon Monoxide (CO)	100	550	100
Oxides of Nitrogen (NO _x)	25	250	40
Particulate Matter (PM ₁₀)	-	100	15
Fine Particulate Matter (PM _{2.5}) ¹	-	55	10
Oxides of Sulfur (SO _x)	25	250	40
Lead (Pb) and Lead Compounds	-	3.2	0.6
Volatile Organic Compounds (VOCs)	-	137	15

¹ Threshold for PM_{2.5} from South Coast Air Quality Management District (SCAQMD)

Source: City of San Diego 2011

Impact Analysis

Evaluation of potential air quality impacts on sensitive receptors includes evaluation of the gaseous emissions from both the construction of the project and operation of the project following construction. Both construction and operational emissions were evaluated based on the City of San Diego's significance criteria discussed above.

Construction Emissions

Construction activities, including soil disturbance dust emissions, combustion pollutants from on-site construction equipment and from off-site trucks hauling dirt, cement, or building materials, would create a temporary addition of pollutants to the local airshed. Construction emissions were evaluated for three different construction phasing scenarios, including:

- Scenario 1: sequential construction of Phases 1, 2, and 3;
- Scenario 2: concurrent construction of Phases 1 and 2 followed by construction of Phase 3; and
- Scenario 3: concurrent construction of Phases 1, 2, and 3.

Based on the construction schedule estimates provided in the project Traffic Impact Analysis (Urban Systems Associates, Inc. [USAI] 2012; Draft EIR Appendix C), Scenario 1 assumes durations of 28 months for construction of Phase 1 (occurring within 3 calendar years), 22 months for Phase 2 (occurring within 2 calendar years), and 31 months for Phase 3 (occurring within 4 calendar years). Under Scenario 2, concurrent construction of Phases 1 and 2 is assumed to take 28 months (occurring within 4 calendar years), and Phase 3 would take 31 months (occurring within 4 calendar years). Scenario 3 assumes a total duration of 40 months to concurrently construct Phases 1, 2, and 3 (occurring within 4 calendar years). The phasing schedule is an estimate only subject to change based upon market conditions.

Each Phase of the proposed project involves grading and/or excavating and the construction of buildings. For the purpose of the air quality analysis, with some exceptions, it was assumed that most of the grading and excavation would occur during the first Phase, so that building construction activities and functions could be moved forward. For conservative purposes, each construction phase was analyzed under heavy construction activity periods to facilitate conservative evaluation of a maximum emission scenario.

Construction emissions were estimated using the URBEMIS Model, Version 9.2.4 and construction equipment estimates based on default values in the model. It was assumed that dust control measures (watering two times daily) would be employed to reduce emissions of fugitive dust during site grading and cut and fill operations. Other detailed assumptions used on the construction emissions analysis and a copy of the URBEMIS model runs are contained in the Air Quality and Greenhouse Gas Technical Report (Draft EIR Appendix G).

Tables 5.5-5 through 5.5-7 (*Construction Scenario 1: Estimated Maximum Daily Construction Emissions Per Year; Construction Scenario 2: Estimated Maximum Daily Construction Emissions Per Year; Construction Scenario 3: Estimated Maximum Daily Construction Emissions Per Year*) summarize the estimated maximum daily construction emissions for each Phase of the three analyzed construction phasing scenarios per calendar year of project construction. To evaluate the maximum daily and total construction emissions, the estimated construction schedule, which provides week-by-week estimates of project construction and equipment requirements, was used to develop calculations of total emissions from the individual components of the project that would be undergoing construction simultaneously. Emission

estimates were prepared to evaluate the maximum daily emissions per Phase based on the project construction schedule for each calendar year of project construction.

Table 5.5-5 CONSTRUCTION SCENARIO 1 ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS PER YEAR (lbs/day)						
Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Year 1 Construction Totals						
Phase 1	7.88	87.73	38.25	0.12	25.13	7.86
Phase 2	--	--	--	--	--	--
Phase 3	--	--	--	--	--	--
Subtotal	7.88	87.73	38.25	0.12	25.13	7.86
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 2 Construction Totals						
Phase 1	9.50	86.16	59.18	0.12	25.57	8.26
Phase 2	--	--	--	--	--	--
Phase 3	--	--	--	--	--	--
Subtotal	9.50	86.16	59.18	0.12	25.57	8.26
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 3 Construction Totals						
Phase 1	79.77	20.40	56.90	0.05	1.90	1.59
Phase 2	--	--	--	--	--	--
Phase 3	--	--	--	--	--	--
Subtotal	79.77	20.40	56.90	0.05	1.90	1.59
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 4 Construction Totals						
Phase 1	3.59	11.73	43.14	0.05	1.04	0.81
Phase 2	11.62	55.62	39.92	0.10	19.86	5.73
Phase 3	--	--	--	--	--	--
Subtotal	15.21	67.35	83.06	0.15	20.90	6.54
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 5 Construction Totals						
Phase 1	--	--	--	--	--	--
Phase 2	9.62	10.40	29.62	0.03	0.84	0.67
Phase 3	5.98	61.19	28.67	0.13	23.25	6.57
Subtotal	15.60	71.59	58.29	0.16	24.09	7.24
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

Table 5.5-5 (cont.) CONSTRUCTION SCENARIO 1 ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS PER YEAR (lbs/day)						
Source	ROG	NO _x	CO	SO _x	PM ₁₀ ¹	PM _{2.5} ¹
Year 6 Construction Totals						
Phase 1	--	--	--	--	--	--
Phase 2	--	--	--	--	--	--
Phase 3	7.38	60.71	44.39	0.13	23.61	6.89
Subtotal	7.38	60.71	44.39	0.13	23.61	6.89
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 7 Construction Totals						
Phase 1	--	--	--	--	--	--
Phase 2	--	--	--	--	--	--
Phase 3	15.89	10.95	33.51	0.05	0.91	0.68
Subtotal	15.89	10.95	33.51	0.05	0.91	0.68
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 8 Construction Totals						
Phase 1	--	--	--	--	--	--
Phase 2	--	--	--	--	--	--
Phase 3	8.38	10.03	31.59	0.05	0.84	0.62
Subtotal	8.38	10.03	31.59	0.05	0.84	0.62
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

Source: HELIX 2012b and 2014

¹ Assumes a maximum grading area at any one time of 1.5 acres.

Table 5-5-6 CONSTRUCTION SCENARIO 2 ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS PER YEAR (lbs/day)						
Source	ROG	NO _x	CO	SO _x	PM ₁₀ ¹	PM _{2.5} ¹
Year 1 Construction Totals						
Phases 1 and 2	8.58	76.21	41.54	0.09	<u>24.87</u> 54.55	<u>7.70</u> 13.89
Phase 3	--	--	--	--	--	--
Subtotal	8.58	76.21	41.54	0.09	24.87 54.55	7.70 13.89
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 2 Construction Totals						
Phases 1 and 2	16.36	105.68	114.69	0.09	<u>29.29</u> 55.17	<u>10.27</u> 14.46
Phase 3	--	--	--	--	--	--
Subtotal	16.36	105.68	114.69	0.09	29.29 55.17	10.27 14.46
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 3 Construction Totals						
Phases 1 and 2	116.16	35.02	83.62	0.08	2.87	2.41
Phase 3	--	--	--	--	--	--
Subtotal	116.16	35.02	83.62	0.08	2.87	2.41
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 4 Construction Totals						
Phases 1 and 2	6.10	23.95	67.38	0.08	1.85	1.48
Phase 3	--	--	--	--	--	--
Subtotal	6.10	23.95	67.38	0.08	1.85	1.48
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 5 Construction Totals						
Phases 1 and 2	--	--	--	--	--	--
Phase 3	5.98	61.19	28.67	0.13	<u>23.25</u> 52.11	<u>6.57</u> 12.60
Subtotal	5.98	61.19	28.67	0.13	23.25	6.57
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 6 Construction Totals						
Phases 1 and 2	--	--	--	--	--	--
Phase 3	7.38	60.71	44.39	0.13	<u>23.64</u> 52.47	<u>6.89</u> 12.92
Subtotal	7.38	60.71	44.39	0.13	23.64	6.89
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 7 Construction Totals						
Phases 1 and 2	--	--	--	--	--	--
Phase 3	15.89	10.95	33.51	0.05	0.91	0.68
Sub-total	15.89	10.95	33.51	0.05	0.91	0.68
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 8 Construction Totals						
Phases 1 and 2	--	--	--	--	--	--
Phase 3	8.38	10.03	31.59	0.05	0.84	0.62
Sub-total	8.38	10.03	31.59	0.05	0.84	0.62
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

Source: HELIX 2012b and 2014

¹ Assumes a maximum grading area at any one time of 3 acres

**Table 5.5-7
CONSTRUCTION SCENARIO 3
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS PER YEAR (lbs/day)**

Source	ROG	NO _x	CO	SO _x	PM ₁₀ ¹	PM _{2.5} ¹
Year 1 Construction Totals						
Phases 1, 2, and 3	12.01	105.92	57.56	0.12	23.20 52.56	8.34 14.44
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 2 Construction Totals						
Phases 1, 2, and 3	28.48	172.39	208.73	0.25	29.04 55.14	11.77 16.42
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 3 Construction Totals						
Phases 1, 2, and 3	33.52	44.76	120.08	0.13	2.86	2.24
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No
Year 4 Construction Totals						
Phases 1, 2, and 3	37.47	40.70	112.56	0.13	2.72	2.10
Daily Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

Source: HELIX 2012b and 2014

¹ Assumes a maximum grading area at any one time of 5.75 acres.

As shown in Tables 5.5-5 through 5.5-7, the emissions associated with all three analyzed construction phasing scenarios would be below the daily thresholds during each construction year. Furthermore, due to the fact that the construction phases of the project are temporary, construction of the proposed project would not result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. Consequently, construction-related air quality impacts under any of the three analyzed construction phasing scenarios would be less than significant.

Operational Emissions

The operational impacts associated with the proposed project would include emissions generated by project-generated vehicular traffic, as well as area sources such as energy use, landscaping, consumer products use, and architectural coatings use. Vehicular emissions are based on traffic data from the project Traffic Impact Analysis (USAI 2012, Draft EIR Appendix C). Phase 1 of the project would generate 9,888 ADT, Phases 1 and 2 would generate 17,812 ADT, and project buildout would generate 26,961 ADT (refer to Tables 5.2-7 through 5.2-9).

The total daily operational emissions associated with project-generated vehicle sources and area sources (including energy use, landscaping, consumer products use, hearth emissions, and architectural coatings use for maintenance purposes) were estimated for the phased project using the URBEMIS model (Version 9.2.4). Motor vehicle trips generated by the project would be the predominant source of long-term project emissions. It should be noted that the URBEMIS model does not contain San Diego-specific emission factors; therefore, emissions are based on California statewide averages. URBEMIS model allows user to select “mitigation measure”

options if one or more measures are applied to the project, as part of the project design features. It was assumed that the mixed use reductions for project traffic were applied as project features in the URBEMIS model. Also, the area source emissions from energy use would be reduced by 20 percent through the implementation of Renewable Portfolio Standards, appliance efficiency, and 2010 Title 24 Green Building designs. The resultant project-related emissions from the URBEMIS model are presented in Tables 5.5-8 through 5.5-10, and shown as a “mitigated” emission category in the URBEMIS output sheets as URBEMIS uses the term “mitigated” with respect to model output that reflects both project features and mitigation.

As shown in Tables 5.5-8 through 5.5-10, daily operational emissions would not exceed the thresholds for all criteria pollutants during Phase 1, Phases 1 and 2, and project buildout operating conditions. No significant operational air quality impacts would occur as a result of the proposed project.

**Table 5.5-8
ESTIMATED PROJECT OPERATIONAL EMISSIONS – PHASE 1**

Emission Source	Maximum Daily Emissions (lbs/day ¹)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources ²	2.89 0	3.67 9	8.06 6.77	0	0.03 2	0.03 2
Vehicular Sources ²	21.94	26.93	209.31	0.25	26.71	5.92
Total	24.83 24.74	30.63 30.62	217.37 216.08	0.25	26.74 26.73	5.95 5.94
Daily Threshold	137	250	550	250	100	55
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Fugitive dust measures were applied to control PM₁₀ and PM_{2.5} dust emissions in the URBEMIS model.

²Maximum pounds per day for summer or winter from URBEMIS model.

Source: HELIX 2012b and 2014

**Table 5.5-9
ESTIMATED PROJECT OPERATIONAL EMISSIONS - PHASES 1 AND 2**

Emission Source	Maximum Daily Emissions (lbs/day ¹)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources ²	13.52 12.06	5.38 5.72	8.92 10.15	0	0.05 3	0.05 3
Vehicular Sources ²	37.80	48.20	371.61	0.43	44.13	12.85
Total	49.86 51.32	53.92 53.58	381.76 380.53	0.43	44.16 46.18	12.89 10.8
Daily Threshold	137	250	550	250	100	55
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Fugitive dust measures were applied to control PM₁₀ and PM_{2.5} dust emissions in the URBEMIS model.

²Maximum pounds per day for summer or winter from URBEMIS model.

Source: HELIX 2012b and 2014

Table 5.5-10
ESTIMATED PROJECT OPERATIONAL EMISSIONS – PROJECT BUILDOUT

Emission Source	Maximum Daily Emissions (lbs/day ¹)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Sources ²	36.6048	9.4411.52	43.7514.02	0	0.1705	0.1705
Vehicular Sources ²	49.97	54.51	462.16	0.72	73.93	14.67
Total	86.5786.46	66.0363.95	476.18475.91	0.72	74.1073.98	14.8414.72
Daily Threshold (lbs/day)	137	250	550	250	100	55
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Fugitive dust measures were applied to control PM₁₀ and PM_{2.5} dust emissions in the URBEMIS model.

²Maximum pounds per day for summer or winter from URBEMIS model.

Source: HELIX 2012b and 2014

Concurrent Construction and Operational Emissions

Because the project would be constructed in three phases, it is likely that operational activities would overlap with construction activities. Therefore, the total proposed project emissions were estimated when construction and operational activities could substantially overlap. Phase 2 construction and Phase 1 operational activities would potentially overlap, and Phase 3 construction would potentially overlap operations of Phases 1 and 2.

Tables 5.5-11 and 5.5-12 (*Combined Phase 2 Construction and Phase 1 Operational Emissions* and *Combined Phase 3 Construction and Phases 1 and 2 Operational Emissions*) present the combined total of peak daily construction and operational emissions. The combined Phase 2 construction and Phase 1 operational emissions would not exceed the daily thresholds for any criteria pollutant. Phase 3 construction emissions combined with operational emissions of Phases 1 and 2 also would not exceed the daily threshold for criteria pollutants. Therefore, air quality impacts associated with concurrent construction and operational emissions due to project phasing would be less than significant.

Table 5.5-11
COMBINED PHASE 2 CONSTRUCTION AND PHASE 1 OPERATIONAL EMISSIONS
(lbs/day¹)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 2 Construction						
Mass Grading Dust	0.00	0.00	0.00	0.00	46.26	9.66
Mass Grading Off-Road Diesel	2.26	10.50	10.40	0	0.641.50	0.561.38
Mass Grading On-Road Diesel	3.23	45.07	15.37	0.01	4.922.28	4.551.91
Mass Grading Worker Trips	0.02	0.04	0.65	0	0.01	0.01
Building Off-Road Diesel	2.40	12.04	9.62	0	0.76	0.70
Building On-Road Diesel	0.26	3.09	2.68	0.01	0.15	0.12
Building Worker Trips	0.53	1.02	16.09	0.02	0.19	0.10
Architectural Coatings Off-Gas	21.25	0	0.00	0	0	0

Table 5.5-11 (cont.) COMBINED PHASE 2 CONSTRUCTION AND PHASE 1 OPERATIONAL EMISSIONS (lbs/day¹)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 2 Construction (cont.)						
Architectural Coatings Worker Trips	0.01	0.01	0.16	0	0	0
Asphalt Off-Gas	0.11	0	0	0	0	0
Asphalt Off-Road Diesel	2.20	13.65	9.82	0	1.11	1.02
Asphalt On-Road Diesel	0.01	0.21	0.07	0	0.01	0.01
Asphalt Worker Trips	0.05	0.09	1.47	0	0.02	0.01
<i>Construction Subtotal</i>	<i>32.33</i>	<i>85.72</i>	<i>66.33</i>	<i>0.04</i>	<i>4.78</i>	<i>52.50</i>
Phase 1 Operations						
Area Sources ²	2.89 2.80	3.79 3.69	8.06 6.77	0.00	0.03 0.02	0.03 0.02
Vehicular Emissions ²	21.94	26.93	209.31	0.25	26.71	5.92
<i>Operation Subtotal</i>	24.83 24.74	30.72 30.62	217.37 216.08	0.25	26.74 26.73	5.95 5.94
Combined Total	57.16 57.07	116.44 116.34	28.37 282.41	0.29	79.24 31.51	10.01 18.9
Daily Threshold	137	250	550	250	100	55
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Fugitive dust measures were applied to control PM₁₀ and PM_{2.5} dust emissions in the URBEMIS model.

²Maximum pounds per day for summer or winter from URBEMIS model.

Source: HELIX 2012b and 2014

Table 5.5-12 COMBINED PHASE 3 CONSTRUCTION AND PHASES 1 AND 2 OPERATIONAL EMISSIONS (lbs/day¹)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phase 3 Construction						
<u>Mass Grading Dust</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>47.32</u>	<u>9.88</u>
Off-Road Diesel	2.13	9.64	10.09	0	0.57 2.10	0.52 1.93
Mass Grading On-Road Diesel	3.83	51.51	17.97	0.13	2.24 3.12	1.78 2.62
Mass Grading Worker Trips	0.02	0.04	0.61	0	0.02	0.01
Building Off-Road Diesel	1.98	6.24	9.21	0	0.45	0.41
Building On-Road Diesel	0.40	4.36	4.15	0.02	0.23	0.17
Building Worker Trips	0.71	1.38	22.06	0.03	0.30	0.16
Architectural Coatings Off-Gas	1.15	0	0	0	0	0
Architectural Coatings Worker Trips	0.01	0.01	0.22	0	0	0
Asphalt Off-Gas	0.12	0	0	0	0	0
Asphalt Off-Road Diesel	1.66	6.11	7.79	0	0.61	0.56
Asphalt On-Road Diesel	0.01	0.18	0.06	0	0.01	0.01
Asphalt Worker Trips	0.04	0.07	1.12	0	0.02	0.01
<i>Construction Subtotal</i>	<i>12.06</i>	<i>79.54</i>	<i>73.28</i>	<i>0.18</i>	<i>4.44</i> 55.14	<i>3.62</i> 16.42

Table 5.5-12 (cont.) COMBINED PHASE 3 CONSTRUCTION AND PHASES 1 AND 2 OPERATIONAL EMISSIONS (lbs/day ¹)						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Phases 1 and 2 Operations						
Area Sources ²	<u>12.06</u> 13.52	<u>5.72</u> 5.38	<u>10.15</u> 8.92	0	<u>0.05</u> 0.03	<u>0.05</u> 0.03
Vehicular Emissions ²	37.80	48.20	371.61	0.43	44.13	12.85
<i>Operation Subtotal</i>	<u>49.86</u> 51.32	<u>53.92</u> 53.5 8	<u>181.76</u> 380.53	0.43	<u>44.18</u> 44.16	<u>12.90</u> 12.88
Combined Total	<u>62.02</u> 63.38	<u>163.46</u> 133.12	<u>255.044</u> 53.81	0.61	<u>99.32</u> 48.6	<u>29.32</u> 16.50
Daily Threshold	137	250	550	250	100	55
<i>Exceeds Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Fugitive dust measures were applied to control PM₁₀ and PM_{2.5} dust emissions in the URBEMIS model.

²Maximum pounds per day for summer or winter from URBEMIS model.

Source: HELIX 2012b and 2014

Operational Carbon Monoxide Hot Spots Impacts

CARB also recommends evaluation of the potential for the formation of locally high concentrations of CO, known as CO “hot spots.” To verify that the project would not cause or contribute to a violation of the 1-hour and 8-hour CO standards, a screening evaluation of the potential for CO “hot spots” was conducted. The project Traffic Impact Analysis (USAI 2012, Draft EIR Appendix C) evaluated whether or not there would be a decrease to LOS E or F at the roadways and/or intersections affected by the proposed project. The Transportation Project-Level Carbon Monoxide Protocol (Protocol, Caltrans 1998) was followed to determine whether a CO “hot spot” is likely to form due to project-generated traffic. In accordance with the Protocol, CO “hot spots” are typically evaluated when (a) the LOS of an intersection or roadway decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, commercial developments, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment.

The Traffic Impact Analysis evaluated 36 intersections (with and without the project) in the project vicinity under Existing Conditions, Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) With Project. Based on the Traffic Impact Analysis (Draft EIR Appendix C), there are a total of five intersections under the analyzed scenarios where project-related traffic would cause the LOS to degrade to E or worse. Table 5.5-13, *Intersection Level of Service Summary*, presents a summary of the LOS for each of the intersections evaluated by scenario.

**Table 5.5-13
INTERSECTION LEVEL OF SERVICE SUMMARY**

Intersection	Existing + Project (Phase 1)		Existing + Project (Phases 1 & 2)		Existing + Project (Buildout)		Near-term With Project (Phase 1)		Near-term With Project (Phases 1 & 2)		Near-term With Project Buildout (Long-term (Year 2030) With Project	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Del Mar Heights Rd / I-5 NB Ramps	D	D	D	D	D	D	D	F	F	D	D	E	F	F
Del Mar Heights Rd / High Bluff Drive	C	C	C	D	C	D	C	E	E	E	C	E	E	F
Del Mar Heights Rd / El Camino Real	C	C	C	D	C	D	C	D	D	E	D	E	D	F
El Camino Real/ SR-56 EB On Ramp	B	C	B	C	B	C	B	C	C	D	B	D	C	F
Carmel Creek Road / Del Mar Trail	E	C	E	C	E	C	E	E	E	C	F	D	E	C

Source: USAI 2012

To evaluate the potential for CO “hot spots,” CALINE4 modeling was conducted for the intersections identified above for the with and without project scenarios. Modeling was conducted based on the guidance in the Protocol to calculate maximum predicted 1-hour CO concentrations. Predicted 1-hour CO concentrations were then scaled to evaluate maximum predicted 8-hour CO concentrations using the recommended scaling factor of 0.7 for urban locations. As recommended in the Protocol, receptors were located at locations that were approximately three meters from the mixing zone, and at a height of 1.8 meters. Emission factors from the EMFAC2007 model were used in the CALINE4 model.

In accordance with the Protocol, it is also necessary to estimate future background CO concentrations in the project vicinity to determine the potential impact plus background and evaluate the potential for CO “hot spots” due to the project. The existing maximum 1-hour and 8-hour background concentrations of CO that were measured at the downtown San Diego monitoring station for the period 2007 – 2009 of 8.7 and 5.2 ppm were used to represent existing plus project and future maximum background 1-hour and 8-hour CO concentrations.

Tables 5.5-14 and 5.5-15 (*CO “Hot Spots” Modeling Results – Existing Plus Project Conditions* and *CO “Hot Spots” Modeling Results – Near-term With Project And Long-Term Cumulative [Year 2030] Conditions*) present a summary of the predicted CO concentrations (impact plus

background) for the affected intersections evaluated under Existing Plus Project, Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) Conditions. As shown, the predicted CO concentrations would be substantially below the 1-hour and 8-hour CAAQS for CO under the analyzed scenarios. Therefore, no exceedances (hot spots) of the CO standard are predicted, and the project would not cause or contribute to a violation of this air quality standard under Existing Plus Project, Near-term With Project (Phase 1), Near-term With Project (Phases 1 and 2), Near-term With Project Buildout, and Long-term Cumulative (Year 2030) conditions.

Table 5.5-14 CO “HOT SPOTS” MODELING RESULTS – EXISTING PLUS PROJECT CONDITIONS			
Intersection	Maximum 1-hour CO Concentration plus Background (ppm)		Maximum 8-hour CO Concentration plus Background (ppm)
	AM	PM	
Existing Plus Project (Phase 1)			
Del Mar Heights Road/I-5 NB Ramps	10.7	10.6	6.6
Del Mar Heights Road/High Bluff Drive	10.3	10.5	6.5
Del Mar Heights Road/El Camino Real	9.9	10.1	6.2
El Camino Real/SR-56 EB On Ramp	10.0	10.3	6.3
Carmel Creek Road/Del Mar Trail	9.3	9.3	5.6
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No
Existing Plus Project (Phases 1 and 2)			
Del Mar Heights Road/I-5 NB Ramps	10.7	10.7	6.6
Del Mar Heights Road/High Bluff Drive	10.4	10.6	6.5
Del Mar Heights Road/El Camino Real	10.0	10.3	6.3
El Camino Real/SR-56 EB On Ramp	10.0	10.3	6.3
Carmel Creek Road/Del Mar Trail	9.3	9.3	5.6
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No
Existing Plus Project Buildout			
Del Mar Heights Road/I-5 NB Ramps	10.7	10.8	6.7
Del Mar Heights Road/High Bluff Drive	10.4	10.8	6.7
Del Mar Heights Road/El Camino Real	10.0	10.4	6.4
El Camino Real/SR-56 EB On Ramp	10.0	10.3	6.3
Carmel Creek Road/Del Mar Trail	9.3	9.3	5.6
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No

Source: HELIX 2012b

Table 5.5-15 CO “HOT SPOTS” MODELING RESULTS – NEAR-TERM WITH PROJECT AND LONG-TERM CUMULATIVE (YEAR 2030) CONDITIONS			
Intersection	Maximum 1-hour CO Concentration plus Background (ppm)		Maximum 8-hour CO Concentration plus Background (ppm)
	AM	PM	
Near-term With Project (Phase 1)			
Del Mar Heights Road/I-5 NB Ramps	10.7	10.7	6.6
Del Mar Heights Road/High Bluff Drive	10.4	10.6	6.5
Del Mar Heights Road/El Camino Real	10.0	10.2	6.3
El Camino Real/SR-56 EB On Ramp	10.4	10.6	6.5
Carmel Creek Road/Del Mar Trail	9.3	9.3	5.6
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No
Near-term With Project (Phases 1 and 2)			
Del Mar Heights Road/I-5 NB Ramps	10.8	10.8	6.7
Del Mar Heights Road/High Bluff Drive	10.5	10.8	6.6
Del Mar Heights Road/El Camino Real	10.0	10.4	6.4
El Camino Real/SR-56 EB On Ramp	10.4	10.6	6.5
Carmel Creek Road/Del Mar Trail	9.3	9.4	5.7
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No
Near-term With Project Buildout			
Del Mar Heights Road/I-5 NB Ramps	10.8	10.9	6.7
Del Mar Heights Road/High Bluff Drive	10.5	10.5	6.5
Del Mar Heights Road/El Camino Real	10.0	10.6	6.5
El Camino Real/SR-56 EB On Ramp	10.4	10.6	6.5
Carmel Creek Road/Del Mar Trail	9.3	9.4	5.7
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No
Long-term Cumulative (Year 2030) With Project			
Del Mar Heights Road/I-5 NB Ramps	9.9	9.9	6.0
Del Mar Heights Road/High Bluff Drive	9.7	9.8	6.0
Del Mar Heights Road/El Camino Real	9.4	9.7	5.9
El Camino Real/SR-56 EB On Ramp	9.6	9.9	6.0
Carmel Creek Road/Del Mar Trail	9.0	9.0	5.4
CAAQS for CO	20.0	20.0	9.0
Exceed CAAQS Standard?	No	No	No

Source: HELIX 2012b

Significance of Impacts

Emissions of criteria pollutants generated by project construction activities would be below applicable thresholds under the analyzed construction phasing scenarios. Therefore, construction-related air quality impacts resulting from the project would be less than significant.

Daily project operational emissions would not exceed the thresholds for criteria pollutants during Phase 1, Phases 1 and 2, or project buildout operating conditions. As such, project impacts resulting from operational air emissions would be less than significant.

Air quality impacts associated with concurrent construction and operational emissions due to project phasing would be less than significant given that emissions of combined construction and operational emissions would not exceed applicable thresholds.

The proposed project would not result in significant air quality impacts associated with CO “hot spots.”

Mitigation, Monitoring, and Reporting

No mitigation would be required.

5.5.4 Impact

Issue 3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact Thresholds

According to the City’s Significance Determination Thresholds, air quality impacts may be significant if the project would:

- Expose sensitive receptors to substantial pollutant concentrations including air toxics such as diesel particulates.

Impact Analysis

Construction Toxic Air Contaminants Emissions

Construction Diesel Particulate Matter

DPM is not included as a criteria pollutant, but it is recognized by the state of California as containing carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Air Pollution Control Officers’ Association (CAPCOA) Air Toxics “Hot Spots” Program Risk Assessment Guidelines (CAPCOA 1993) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. DPM would be emitted from heavy equipment used in the construction process. The construction period for each phase of the project under any of the three analyzed construction phasing scenarios would be much less than the 70-year period used for health risk determination. Based on construction schedule estimates provided in the Project Traffic Impact Analysis (USAI 2012; Draft EIR Appendix C), Scenario 1 (sequential construction of Phases 1, 2, and 3) assumes durations of 28 months for construction of Phase 1, 22 months for Phase 2, and 31 months for Phase 3. Under Scenario 2 (concurrent construction of Phases 1 and 2 followed by construction of Phase 3), concurrent construction of Phases 1 and 2

is assumed to take 28 months, and Phase 3 would take 31 months. Scenario 3 (concurrent construction of Phases 1, 2, and 3) assumes a total duration of 40 months to concurrently construct Phases 1, 2, and 3. Because of the temporary nature of project construction, exposure to diesel exhaust emissions during construction would not be significant.

Construction Naturally Occurring Asbestos

Chrysotile and amphibole asbestos (such as tremolite) occur naturally in certain geologic settings in California, most commonly in association with ultramafic rocks and along associated faults. Asbestos is a known carcinogen, and inhalation of asbestos may result in the development of lung cancer or mesothelioma. Exposing or disturbing rock and soil that contains naturally occurring asbestos can result in the release of fibers to the air and, consequently, public exposure. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos.

Based on a review of the *General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos* (California Division of Mines and Geology 2000), the project site is not located in an area of potential naturally occurring asbestos (NOA). Also, the project Geotechnical Reports (Appendices O and P) indicated that no findings of potential NOA occur at the project site. Therefore, NOA is not expected to be encountered during project construction and no project-related construction impacts associated with NOA would occur.

Operational Toxic Air Contaminants Emissions

Mobile sources of TACs could include proposed land uses that involve the long-term use of heavy-duty diesel trucks. Implementation of the proposed project would include development of commercial land uses, which may include facilities that require the long-term use of heavy duty diesel trucks (e.g., loading docks). The operation of such a source could result in the exposure of sensitive receptors, especially those within close proximity, to toxic air emissions that exceed applicable significance thresholds.

Potential on-site sources of TAC emissions include diesel-fueled engine and possible food service facility operations. Delivery trucks, truck idling, and operation of the emergency back-up power generators are potential emission sources of particulate matter from diesel-fueled engines. Trucks entering and leaving the project site would include deliveries associated with the retail stores and possible food service establishments. Trucks idling would occur in the shipping and receiving delivery dock areas and would be limited to idling times not to exceed five minutes, in accordance with California state law. The loading delivery docks are the only locations where routine truck idling associated with operation of the project would be expected.

While specific tenants that would potentially occupy retail space at the project site are not currently known, it is possible that restaurants could occur on site. Restaurants can emit minor amounts of TACs from the cooking of animal fats and oils. Such TAC emissions would be controlled through an exhaust hood to a roof-top vent. It is also possible that restaurants would require use of trucks equipped with transportation refrigeration storage units (TRUs) to deliver

cold-stored food items. Trucks equipped with TRUs typically result in higher TAC emissions, because they are equipped with diesel generator sets to keep perishable food cold, in addition to diesel engine exhaust from the truck. However, it is not anticipated that the retail establishments would experience high truck volumes (i.e., warehouses with distribution centers that have greater than 100 commercial trucks per day or 40 TRU-equipped trucks per day as defined by CARB as the screening level) delivering materials on a frequent basis.

Therefore, on-site or off-site sensitive receptors would not be exposed to substantial TAC concentrations from these sources.

Significance of Impact

Construction

The project would result in a less than significant construction-phase TAC impact, including DPM and NOA.

Operation

On-site or off-site sensitive receptors would not be exposed to substantial TAC concentrations from area sources. Therefore, operational TAC impacts resulting from the project would be less than significant.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

5.5.5 Impact

Issue 4: Would the project's construction activities exceed 100 pounds per day of Particulate Matter (dust)?

Impact Thresholds

According to the City's Significance Determination Thresholds, air quality impacts related to particulates may be significant if the project would:

- Exceed 100 pounds per day of PM₁₀.

Impact Analysis

As shown in Tables 5.5-5 to 5.5-7, PM₁₀ construction emissions would be below the City's significant thresholds for all of the analyzed construction phasing scenarios of the project. The project would include standard dust control measures, such as watering two times daily during ground work. Thus, the project construction-related dust emissions would be less than significant.

Significance of Impact

The predicted level of emissions of PM₁₀ during all of the analyzed construction phasing scenarios of the proposed project would be below the City of San Diego's significance criteria. Thus, the project construction-related dust emissions would be less than significant.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

5.5.6 Impact

Issue 6: Would the project create objectionable odors affecting a substantial number of people?

Impact Thresholds

According to the City Significance Determination Thresholds, air quality impacts related to odors may be significant if the project would:

- Create objectionable odors affecting a substantial number of people.

Impact Analysis

Construction Odors

The only source of odor anticipated from project construction would be exhaust emissions from the diesel equipment and haul trucks. Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. During construction, diesel equipment operating at various locations on the site may generate some nuisance odors; however, the odors would be temporary and would cease at the completion of construction activity. As such, project construction would not cause a long-term odor nuisance, and associated odor impacts during project construction would be less than significant.

Operational Odor Impacts

Land uses and industrial operations that are associated with offensive odors typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The project site would be developed with commercial (office and retail) and residential land uses, and not land uses that are typically associated with objectionable odors. It is possible that restaurants may be located on site, but restaurants do not emit odors that are generally perceived as unpleasant or a nuisance to sensitive receptors. On-site trash receptacles associated with proposed commercial and residential uses would have the potential to create adverse odors to on- and off-site sensitive receptors. As trash receptacles would be located and maintained in a manner that promotes odor control, such as keeping the receptacles closed and secured, and scheduling regular collections,

no adverse odor impacts are anticipated from the proposed commercial and/or residential land uses. Therefore, project operations would result in less than significant air quality impacts related to objectionable odors.

Significance of Impact

Based on the discussion above, the project would result in less than significant air quality impacts associated with odors.

Mitigation, Monitoring, and Reporting

Because no construction or operational air quality odor impacts would occur, no mitigation is required.

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5.6 ENERGY

This section provides an evaluation of potential energy impacts associated with the proposed project. The following discussion is based in part on State CEQA Guidelines Appendix F, Energy Conservation; the *Air Quality and Greenhouse Gas Technical Report* prepared by HELIX Environmental Planning (2012b; Draft EIR Appendix G); the City of San Diego's *Climate Protection Action Plan* (2005); SANDAG's *Energy 2030: San Diego Regional Energy Strategy* (RES) (SANDAG, 2003); the *California Energy Demand 2006-2016 Staff Energy Demand Forecast* (CEC 2005); and the California Energy Commission's (CEC) 2009 Integrated Energy Policy Report (CEC, 2009).

Units of Measure

The units of energy used in this report are the British thermal unit (BTU), kilowatt hours (kWh), therms, and gallons. A BTU is the quantity of heat required to raise the temperature of 1 pound of water 1°F at sea level. Because the other units of energy can all be converted into equivalent BTUs, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and 1 kWh is equivalent to approximately 10,200 BTUs, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; 1 cubic foot of natural gas is equivalent to approximately 1,050 BTUs, and 1 therm represents 100,000 BTUs. One gallon of gasoline/diesel is equivalent to approximately 125,000/139,000 BTUs, respectively, taking into account energy consumed in the refining process.

5.6.1 Existing Conditions

State Energy Conditions

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers, and community choice aggregators.¹ As of 2008, California in-state generating facilities accounted for about 73 percent of total generation, with the remaining electricity coming from out-of-state imports. In-state generation accounted for approximately 13 percent of the state's natural gas supply, and approximately 38 percent of the state's crude oil supply. The remaining supply comes from other western states and Canada (CEC 2009a). Table 5.6-1, *California Energy Sources 2008*, shows California's energy generation mix as of 2008.

¹ Community choice aggregation is authorized in California by Assembly Bill AB 117 (Chapter 836, Statutes of 2002), which allows cities, counties, and groups of cities and counties to aggregate the electric load of the residents, businesses, and institutions within their jurisdictions to provide them electricity.

**Table 5.6-1
CALIFORNIA ENERGY SOURCES 2008**

Fuel Type	Percent of California Power
Natural Gas	46.50%
Nuclear	14.90%
Large Hydro	9.60%
Coal	15.50%
Renewable	13.50%
Total	100.00%

Source: CEC 2009a

Since deregulation in 1998, the CEC has licensed more than 60 power plants:

- 44 projects representing 15,220 megawatts (MW) are on-line;
- 6 projects totaling 1,578 MW are under construction; and
- 12 projects totaling 6,415 MW are on hold but available for construction.

In addition, as of 2008, the CEC had a historic high level of more than 30 proposed projects under review, totaling more than 12,000 MW, many of which are large-scale solar thermal power plants (CEC 2009b).

On the demand side, Californians consumed 285,574 gigawatt hours (gWh) of electricity in 2008, primarily in the commercial, residential, and industrial sectors. CEC staff forecasts of future electricity demand anticipate that consumption will grow by 1.2 percent per year from 2010–2018, with peak demand growing an average of 1.3 percent annually over the same period. Because of current economic uncertainties surrounding the recession and the timing of potential recovery, the 2009 Integrated Energy Policy Report (IEPR) (CEC 2009b) considered alternative scenarios for economic and demographic growth, finding only small differences in projected electricity demand. Under the optimistic scenario, 2010-2018 rates for electricity consumption and peak demand would increase to 1.3 percent and 1.4 percent, respectively. Under the pessimistic scenario, 2010-2018 rates for electricity consumption and peak demand would fall to 1.1 percent each.

San Diego Regional Energy Conditions

Energy Generation and Consumption

The San Diego Regional Energy Office's (SDREO) *San Diego Regional Energy Infrastructure Study* (SDREIS) provided an integrated and comprehensive analysis of the electricity and natural gas supply and demand inventory and issues (SDREO 2003). The SDREIS found that the San Diego region is unique compared to the rest of the state because of its proximity to Baja California, Mexico and the close integration with respect to trade flows, movement of people, and capital. Currently, there is a growing interdependency between San Diego County and

Northern Baja California in terms of both the supply and demand of energy. Electric power transfers have taken place between California and Northern Baja California, to some extent, for more than 20 years and recently, the bi-national supply and demand interdependencies have increased dramatically. Additionally, while abundant renewable resources are located within the County, the available resources are much greater when the potential of surrounding counties and Baja California are considered. San Diego's economic and energy development future depends on bi-national as well as interregional cooperation and joint problem solving. San Diego County experiences many unique challenges because of its "island-like" geographic situation, bounded by the Pacific Ocean to the west, the Laguna Mountains to the east, the Mexican border to the south and Camp Pendleton to the north. Because of this fact, there are significant supply issues and risks that the region is facing unless additional supply options are made available.

SANDAG's Regional Energy Strategy (RES) (SANDAG 2003), states that the critical energy challenges facing the San Diego region include:

- The prospect of continued higher prices for electricity and natural gas for the next decade;
- Growing demand for energy;
- Highly uncertain market and regulatory design; and
- An aging, inadequate infrastructure for electric generation and transmission, and natural gas transmission.

The RES identified drivers of energy demand and need for energy supply in the San Diego region. The region's population, economic development, housing and land use are the primary drivers of regional energy demand:

- *Population* - Population is the primary driver of increasing demand for new housing, which is a major driver of energy use.
- *Economy* - The performance of the economy is a primary driver of energy demand due to the electricity and natural gas consumption of office/commercial buildings and industrial processes.
- *Housing* - Up until the recent economic recession, employment had been growing faster than population and housing in San Diego, forcing people to live further inland and farther away from their jobs in San Diego County. This placed an increased demand for energy over the last 10 years. More (and larger) homes were being built inland in hotter areas that required energy-intensive air conditioning. The region's year 2000 housing stock of 1,040,149 units is expected to increase by 33 percent to 1,379,644 units by 2030.
- *Land Use* - San Diego County contains 2,726,407 acres, with a substantial portion of military, park, and constrained acreage. The remaining vacant developable acreage, as of the 2003 RES, was approximately 500,000 acres. Forecasts predict that by 2030 most of the vacant land will be developed. As a result, the siting of supporting energy infrastructure will become increasingly difficult.

Electricity

San Diego County has two major steam electric generating units and a number of smaller combustion turbine units, most of which were constructed between 1960 and 1978. Although these units have continued operation with modifications and upgrades, they are quickly nearing technological and economical obsolescence. Reliability must-run units are generation facilities that are necessary during certain operating conditions in order to maintain the security of power systems in a competitive environment. A number of the units that are currently considered “must-run” to meet the regions energy needs have been operating in the three percent capacity range, but need to be operating in the five percent capacity range. Must-run units are more expensive to operate and are only used as operating reserves during peak periods or in times of emergency backup. This is because the outage costs are much higher than the power generating cost (SDREO 2003).

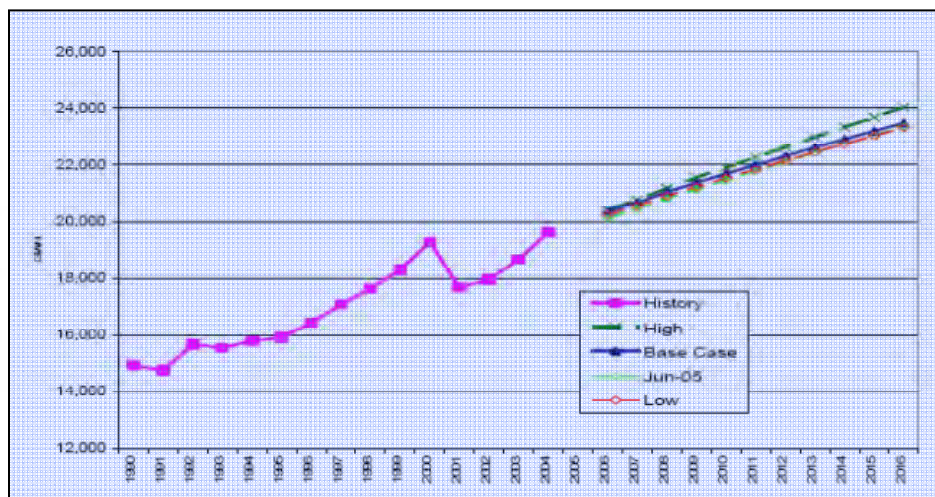
As of 2003 when the SDREIS was completed, San Diego had a total on-system generation capacity of about 2,359 MWs, which was about 55 percent of the region’s summer peak demand. This capacity consists of 1,628-MW base-load plants. Base-load plants are the production facilities used to meet some or all of a given region's continuous energy demand, and produce energy at a constant rate, usually at a low cost relative to other production facilities available to the system. The remaining capacities are small and medium-sized peaking plants and on-site generators (excluding backup generation). All of this generation is not normally available since many of the generators are for emergency use and not available when needed. During peak demand periods, approximately 64-percent of peak demand can be met by in-county electrical generation.

As shown in Table 5.6-2, *San Diego County Electricity Consumption 2006-2008*, the CEC found that electricity consumption within the County of San Diego increased approximately 2.4 percent from 2006 – 2008 (CEC 2010).

Table 5.6-2 SAN DIEGO COUNTY ELECTRICITY CONSUMPTION 2006 - 2008 (in millions of kWh)				
Year	2006	2007	2008	Total Usage
Usage	19,435.01	19,568.84	19,907.89	58,911.73
% Change (Annual)		0.68	1.7	2.38

Notes: kWh = kilowatt hours
Source: CEC 2010

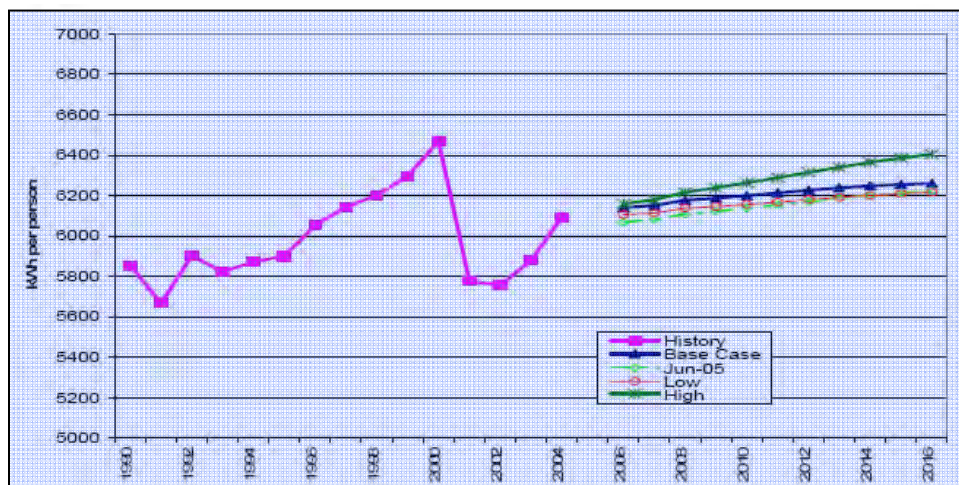
The primary provider of electricity and natural gas in the San Diego region is San Diego Gas and Electric (SDG&E). Figure 5.6-1, *SDG&E Electricity Forecast*, shows the SDG&E planning area’s anticipated electricity forecast through the year 2016.



Source: CEC 2005

SDG&E ELECTRICITY FORECAST
Figure 5.6-1

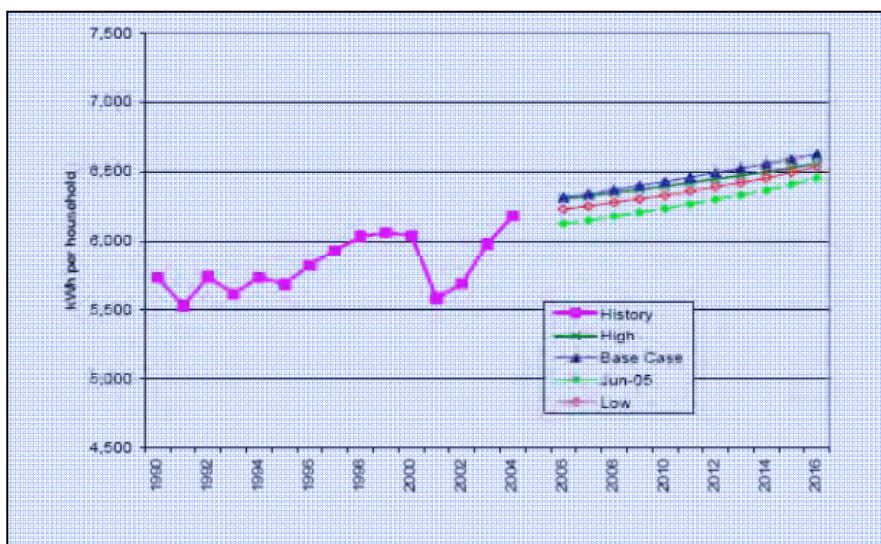
Figure 5.6-2, *SDG&E Forecasted Per Capita Electricity Consumption*, illustrates the per-capita electricity consumption projections within the SDG&E planning area through 2016.



Source: CEC 2005

**SDG&E FORECASTED PER CAPITA
ELECTRICITY CONSUMPTION**
Figure 5.6-2

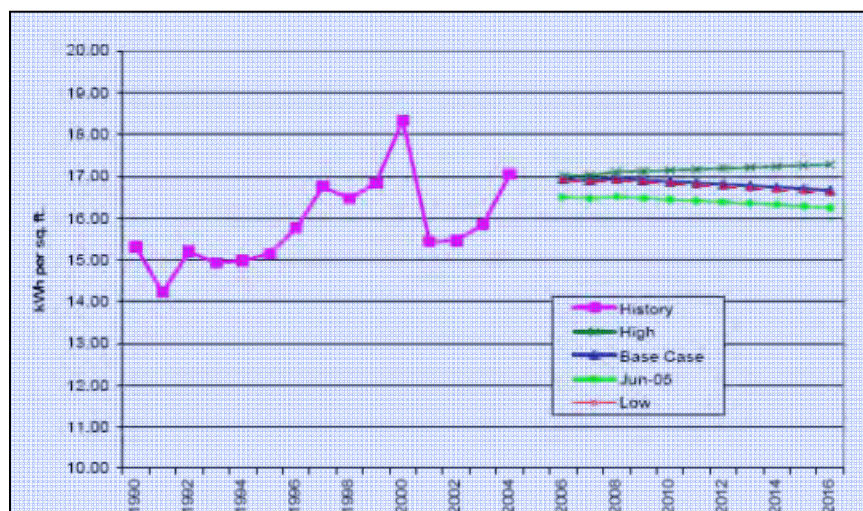
Figure 5.6-3, *SDG&E Electrical Consumption per Household*, shows the 2016 forecast energy consumption within the SDG&E planning area for residential uses. As shown in this table, 2016 residential electricity consumption rates per household are anticipated to range between approximately 6,400 kWh/household and 6,700 kWh/household.



Source: CEC 2005

**SDG&E ELECTRICAL CONSUMPTION
PER HOUSEHOLD**
Figure 5.6-3

Figure 5.6-4, *SDG&E Energy Consumption Forecast – Commercial Uses*, shows the 2016 forecast energy consumption within the SDG&E planning area for commercial uses. As shown in this table, 2016 commercial electricity consumption rates are anticipated to range between 16.2 kWh/sf and 17.2 kWh/sf.



Source: CEC 2005

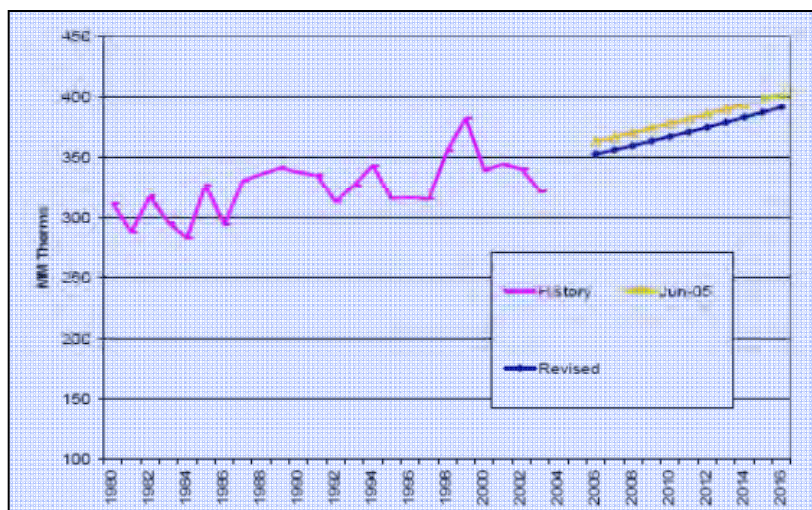
**SDG&E ENERGY CONSUMPTION FORECAST
COMMERCIAL USES**
Figure 5.6-4

Future electricity supply may be affected by SDG&E's proposed 120-mile transmission line, known as the Sunrise Powerlink, to carry renewable energy from the Imperial Valley to San Diego. Construction of the Sunrise Powerlink began in September 2010, and is anticipated to be complete in 2012. It is planned to have a 1,000-megawatt capacity (enough energy for 650,000 homes).

Natural Gas

The western United States, and especially California, is undergoing a substantial increase in demand for natural gas as plans unfold to build several thousand MWs of new natural gas-fired electric generating capacity (SANDAG 2003). Several major generating plants were recently implemented in San Diego County, including the 90-MW Larkspur Energy Facility in Chula Vista in 2001; the 550-MW Palomar Power Plant in Escondido in 2006; and the 513-MW Otay Mesa Center power plant near the U.S.-Mexico border in 2009. In addition, a proposal has been submitted to SDG&E to expand the existing 965-MW Encina Power Plant to at least 1,200 MW for use as a peaking or intermediate power plant.

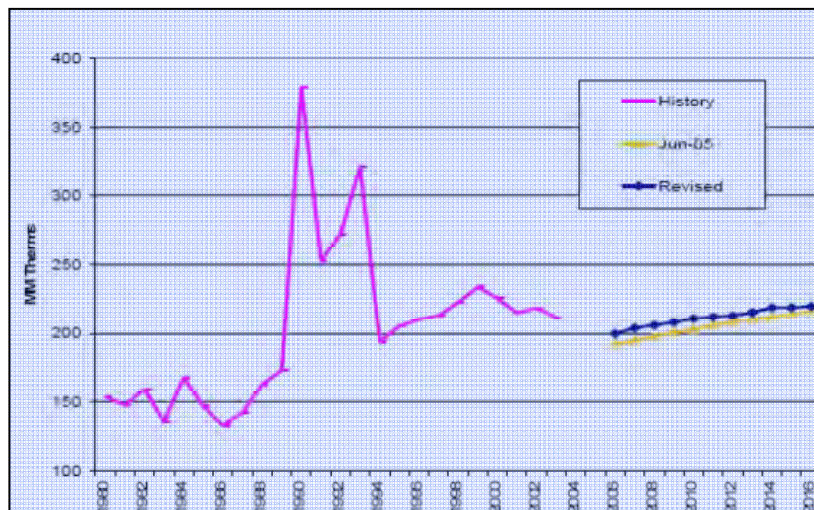
Figure 5.6-5, *SDG&E Residential Natural Gas Consumption Forecast*, shows SDG&E planning area residential gas 2016 consumption forecasts. As shown in this figure, residential natural gas consumption rates are anticipated to reach approximately 390 million (MM) Therms (CEC 2005).



Source: CEC 2005

**SDG&E RESIDENTIAL NATURAL GAS
CONSUMPTION FORECAST**
Figure 5.6-5

Figure 5.6-6, *SDG&E Nonresidential Natural Gas Consumption Forecast*, shows SDG&E planning area non-residential gas 2016 consumption forecasts. As shown in this figure, residential natural gas consumption rates are anticipated to reach approximately 220 MM Therms (CEC 2005).



Source: CEC 2005

**SDG&E NONRESIDENTIAL NATURAL GAS
CONSUMPTION FORECAST**
Figure 5.6-6

However, as shown in Table 5.6-3, *San Diego County Natural Gas Consumption 2006-2008*, the CEC found that natural gas consumption within the County of San Diego decreased approximately six percent from 2006 to 2008 (CEC 2010). This discrepancy in projected rates versus actual rates may be a result of unexpected decreases in consumption associated with the current economic downturn, such as decreased natural gas consumption related to construction activity and income, which both experienced downturns.

Table 5.6-3 SAN DIEGO COUNTY NATURAL GAS CONSUMPTION 2006 – 2008 (in MM Therms)				
Year	2006	2007	2008	Total Usage
Usage	574.25	547.03	541.37	1,662.65
% Change (Annual)		-4.98	-1.05	-6.07

Notes: MM Therms = million therms

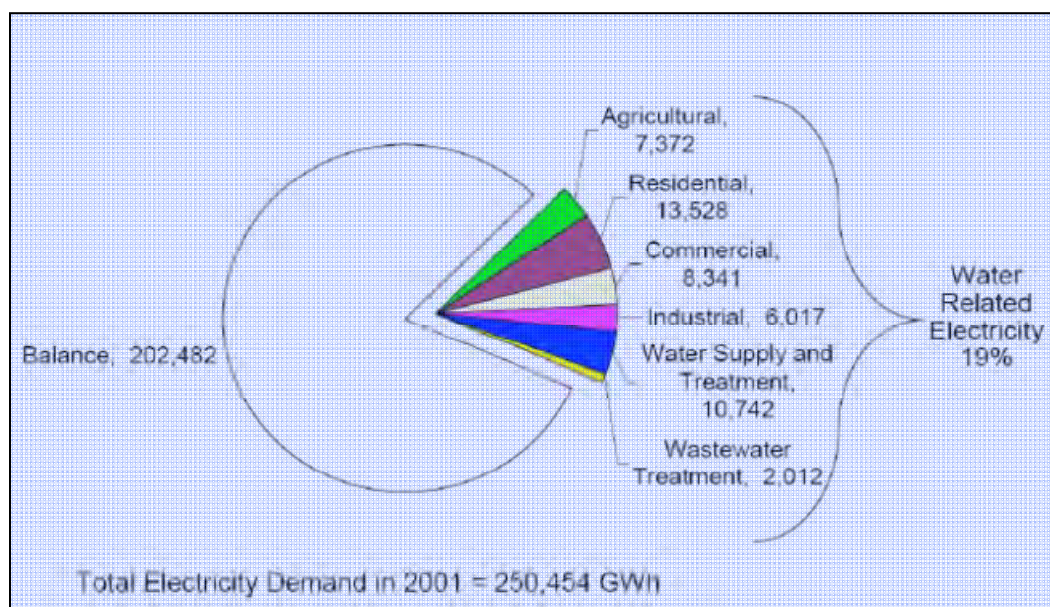
Source: CEC 2010

Water-Related Energy

In California, water-related energy use, which includes the conveyance, storage, treatment, distribution, wastewater collection, treatment, and discharge sectors of the water use cycle, consumes about 19 percent of the state's electricity, 30 percent of its natural gas, and 88 billion gallons of diesel fuel every year. This water related energy use is termed water embedded energy, since each time water is moved or treated using energy, that energy is considered to be embedded in that water or part of the value of that water. As water demand grows in the state, so grows water-related energy demand. Since population growth drives demand for both resources, water and energy demand are growing at about the same rate and, importantly, in many of the same geographic areas (CEC 2007a).

Water supply-related electrical demands exceed 2,000 MW on summer peak days in California. Agricultural groundwater and surface water pumping represent 60 percent of the total water supply related peak day electrical demand, with water agency demands representing the remaining 40 percent. Over 500 MW of water agency electrical demand is used for providing water/sewer services to residential water customers. The State Water Project, used to convey water from Northern California to Southern California, consumes approximately three percent of all the electricity consumed in the state (CEC 2006c).

Figure 5.6-7, *Water-Related Energy Use in California*, shows how and where power is used in the State's water systems. Water-related use of electricity is about 19 percent of California's total electricity use (CEC 2007a). Total water related electrical consumption for the state of California amounts to approximately 52,000 gWh. Electricity to pump water by the water purveyors in the state amounts to 20,278 gWh. The remaining 32,000 gWh represent electricity used on the customer side of the meter, that is, electricity that customers use to move, heat, pressurize, filter, and cool water (CEC 2006c).



Source: CEC 2007a

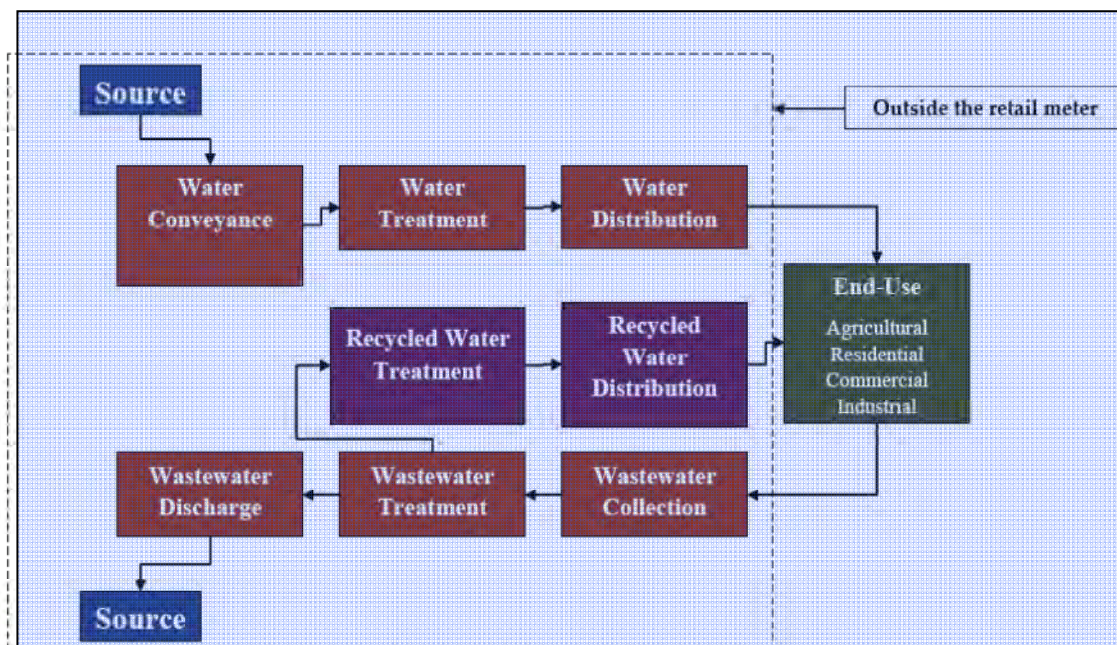
WATER-RELATED ENERGY USE IN CALIFORNIA

Figure 5.6-7

Figure 5.6-8, *Water Embedded Energy Sources*, depicts how energy is embedded in the water-use cycle. Each unit of water may have a different amount of energy embedded in it depending on how much it is processed or conveyed before it is delivered to the user. This energy is quite different if you are in Northern or Southern California, because it depends on pumping requirements related to distance and topography. Treatment and distribution before end use is better defined and fairly consistent across California (CEC 2007a).

The CEC's *Water Supply Related Electricity Demand in California* study (CEC 2006c) examined electrical demand necessary to treat water and get it to the customer, to take the wastewater from the customer and dispose of it, and to provide groundwater pumping and surface water pumping for the agricultural community. The study examined the water supply-related peak day demands of the California investor-owned utilities (IOUs): Pacific Gas & Electric (PG&E), Southern California Edison (SCE), and SDG&E.

Within the SDG&E study area, within which the proposed project is located, the predominant water-related demand is for urban water supply. Approximately 20 percent of the electricity use is due to agricultural pumping, with the remaining 80 percent being provided by the water/sewer agencies. Table 5.6-4, *SDG&E Peak Day Water-Related Demand Characteristics 2005*, shows SDG&E's 2005 peak water-related demand characteristics.



Source: CEC 2006b

WATER EMBEDDED ENERGY SOURCES
Figure 5.6-8

Table 5.6-4 SDG&E PEAK DAY WATER-RELATED DEMAND CHARACTERISTICS 2005		
	Water/Sewer Agency	Total Water Demand
Peak Period		
average MW	26.2	32.9
maximum MW	32.5	40
4pm MW	24.2	30.3
Coincidence with ISO Peak	0.92	0.93
Mid-Peak Period		
average MW	31.4	37.8
maximum MW	35.5	43.2
Off-Peak Period		
average MW	28.3	33.1
maximum MW	31	35.6
TOU Accounts as of Total Demand	28%	0

Source: CEC 2006c

ISO = Independent System Operator; TOU = Time-of-Use rate; MW = megawatts

SDG&E has the lowest embedded residential peak water supply related electrical demand of any of the utility service areas. The San Diego area is at the end of the pipeline. Almost all of its water is treated somewhere else (generally in the SCE service area at the big Metropolitan Water District treatment plants) and shipped to the San Diego area. Residential water demand in the San Diego area results in electrical-demand increases in the SCE area for treatment and shipping. However, collaboration between SDG&E and the region's water agencies has resulted in most of the treatment (fresh water and sewer) facilities in this area having their own self-generation, dramatically reducing electrical demand by the water sector as the treatment facilities produce most of their own electricity (CEC 2006c).

Energy Efficiency Potential

Infrastructure Development

Several challenges exist to siting major energy infrastructure projects in San Diego, including a lack of emissions offsets. In addition, there is a lack of suitable sites away from populous areas and near transmission lines. Power plants are not perceived as ideal neighbors, and in particular, coastal plants that restrict public access to coastal areas. Additionally, the transmission and distribution infrastructure required to support power plants create aesthetic, health, and quality of life concerns with residents in the local community. Lastly, siting is more problematic for water-cooled plants than dry-cooled due to the effects of power plant cooling systems on the ecosystem (SANDAG 2003).

In addition, the SDAB (which encompasses San Diego County) is classified as a nonattainment area for ozone and particulate matter (refer to Section 5.5, *Air Quality*). This means that all new major emission sources of ozone and particulate matter must be mitigated through the purchase of offsets (credits for reduction of emissions) from other sources within the County. The SDAPCD requires emission offsets, and limited availability of emission reduction credits is a barrier to the building of new power plants. Several strategies could be used to create the needed emissions credits. These include repowering existing power plants, allowing mobile offsets to be used for stationary power plants, and creating inter-border pollution offsets.

Energy Demand Reductions

Estimates vary on what level of future energy reductions will be attributed to efficiency programs and standards over the next decade, depending on the assumptions used. The California Public Utilities Commission (CPUC) estimates that in the San Diego region, efficiency programs will achieve gross savings of 1,514 gWh and 52 MM Therms between 2012 and 2020, the largest contributor to energy reductions over this period (University of San Diego [USD] Energy Policy Initiative Center [EPIC] 2009).

A 2009 study intended to determine the remaining potential for energy efficiency programs in California included a detailed, bottom-up study of energy efficiency program potential in San Diego County (USD EPIC 2009). The primary objective of the work underlying this report was to produce estimates of remaining potential energy savings that might be obtainable in the near (2007-2016) and foreseeable (2017-2026) future through publicly funded energy efficiency

programs in the existing and new residential, industrial, and commercial sectors. The purpose of the study was to identify energy savings potential in the residential, commercial, and industrial sectors both for new construction and existing buildings. The study focused on providing a reasonable proxy of the remaining potential for implementation of local government policies to affect energy savings.

Study results show that the residential sector has the highest remaining potential for energy program reductions, representing 49 percent of the total potential, followed by the commercial (34 percent) and industrial (17 percent) sectors. Existing buildings represent 89 percent of the energy reduction estimate, while new construction represents 11 percent.

The existing residential sector represents about 48 percent of the entire efficiency potential identified in the analysis. Existing commercial buildings have the second highest potential for energy reduction at 24 percent of the total, and existing industrial buildings account for about 17 percent of the total.

Table 5.6-5, *Summary of Potential Energy Efficiency Through Local Policies 2020 Forecast*, details the anticipated remaining potential energy efficiency potentials for various land uses in San Diego County through the year 2020.

Table 5.6-5 SUMMARY OF POTENTIAL ENERGY EFFICIENCY THROUGH LOCAL POLICIES 2020 FORECAST, SAN DIEGO COUNTY					
Sector	Natural Gas (MM Therms)	Natural Gas MMT CO₂e	Electric (gWh)	Electric MMT CO₂e	Total MMT CO₂e
Commercial - Existing	0.4	0.002	352	0.1	0.1
Commercial - New Construction	2.0	0.01	108	0.03	0.04
Industrial - Existing	10.2	0.06	69	0.02	0.1
Industrial - New Construction	N/A	N/A	2	0.001	0.001
Residential - Existing	12.0	0.1	505	0.1	0.2
Residential - New Construction	0.2	0.00	9	0.002	0.003
TOTAL	24.8	0.13	1,045	0.28	0.41

Notes: MM Therms = million therms; MMT CO₂e = million metric tons carbon dioxide equivalent; gWh = Gigawatt Hours;

N/A = not available

Source: USD EPIC 2009

Project-Site Energy Conditions

Existing Project Site Energy Needs

The project site does not currently generate an energy demand. Only the perimeter street trees and landscaping within the street ROW are maintained or irrigated.

Electrical Service

The project site is currently served by SDG&E. The SDG&E service area covers 4,100 square miles within San Diego and southern Orange counties. Energy is provided by SDG&E to 1.4 million customers (SDG&E 2008). Forecasting future energy consumption demand is performed on a continual basis by SDG&E, primarily from installation of transmission and distribution lines. In situations where projects with large power loads are planned, this is considered together with other loads in the project vicinity, and electrical substations are upgraded, if required.

SDG&E offers several programs to support local governments in implementing energy efficiency projects, including energy audits, a Tax Exempt Customer Incentive program, an On-Bill Financing program, a Small Business Super Saver program (includes cities and counties), an Express Efficiency program, and a Standard Performance Contract program. SDG&E works with local governments and non-profit organizations to promote energy efficiency, demand response and conservation programs, services and resources, and to provide energy education and outreach to the community.

Water Service

Water service is provided to the site by the City of San Diego Public Utilities Department (PUD). The PUD serves more than 1.3 million people populating more than 200 square miles of developed land. In addition to three water treatment plants, San Diego maintains and operates more than 3,302 miles of water lines, 49 water pump plants, 90-plus pressure zones, and more than 200 million gallons of potable water storage capacity in 32 standpipes, elevated tanks, and concrete and steel reservoirs (City 2010d). The City currently purchases up to 90 percent of its water from San Diego County Water Authority (SDCWA), a wholesale water agency providing imported water to its 23 member agencies in San Diego County. The SDCWA, in turn, purchases 73 percent of its water from the Metropolitan Water District of Southern California (MWD). MWD obtains its water from the Colorado River and northern California, via the State Water Project (SWP) (City 2002b).

Wastewater Service

Wastewater treatment service for the site is provided by the PUD. In the project vicinity, an 18-inch sewer main is located in El Camino Real, which is known as the El Camino Real Trunk Sewer (ECRTS).

Transportation

The project site does not generate any vehicle trips; therefore, no associated energy consumption related to transportation modes occurs.

Regulatory Framework

Federal Energy Efficiency Regulations

Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon (mpg) by 2020. In May 2009, President Obama announced plans to increase CAFE standards to require light duty vehicles to meet an average fuel economy of 35.5 mpg by 2016.

Energy Independence and Security Act of 2007

House of Representatives Bill 6 (HR 6), the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that will be deployed in two phases. First, by 2012-2014 (phasing in over several years), common light bulbs will be required to use about 20-30 percent less energy than present incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than today's bulbs; this requirement will effectively phase out the incandescent light bulb.

Energy Improvement and Extension Act of 2008

The formerly entitled “Renewable Energy and Job Creation Act of 2008,” or Division B of HR 1424, was signed into law by President Bush in October 2008. The signed bill contains 18 billion dollars in incentives for clean and renewable energy technologies, as well as for energy efficiency improvements as follows:

Solar:

- Extends the tax credits for investment in commercial and residential solar projects for eight years
- Allows a new energy tax credit for combined heat and power system property
- Removes the \$2,000 cap on investments in residential solar electric installations
- Adds utilities as eligible recipients of tax credits

Wind:

- Extends the tax credit for the production of energy from wind for one year
- Allows a new energy tax credit for 30 percent of expenditures for wind turbines used to generate electricity in a residence and for geothermal heat pump systems

Miscellaneous Renewable/Non-Renewable Generation:

- Allows offsets of tax credit amounts against alternative minimum tax liabilities
- Extends tax credit for other facilities, including closed and open-loop biomass, solar energy, small irrigation power, landfill gas, trash combustion, and hydropower for two years
- Allows a new tax credit for investment in new clean renewable energy bonds for capital investment in renewable energy facilities
- Extends the tax credit for microturbine property for eight years
- Extends the tax credits for investment in commercial fuel cells for eight years and increases the credit limitation for fuel cell property to \$1,500

Vehicles:

- Allows a new tax credit for new qualified plug-in electric drive motor vehicles
- Extends the excise tax credit for alternative fuel and fuel mixtures for one year
- Requires such fuels to include compressed or liquefied biomass gas and to meet certain carbon capture requirements.

California Energy Efficiency Regulations

Assembly Bill 1007

This 2005 bill required the CEC to prepare, jointly with CARB, a plan to increase the production and use of alternative and renewable fuels in California based on a full fuel-cycle assessment of the environmental and health impacts of each fuel option. The *State Alternative Fuels Plan* was adopted by the two agencies in December 2007. The plan highlights the need for state government incentive investments of more than 100 million dollars per year for 15 years and recommends that the state adopt alternative and renewable fuel use goals of 9 percent by 2012, 11 percent by 2017, and 26 percent by 2022.

Assembly Bill 1969

This 2006 bill authorized feed-in tariffs for small renewable generators of less than 1 MW at public water and wastewater treatment facilities. A feed-in tariff is a policy mechanism designed to encourage the adoption of renewable energy sources and to help accelerate the move toward grid parity, the point at which alternative means of generating electricity is equal in cost, or cheaper than grid power. In July 2007, the CPUC (D. 07-07-027) implemented AB 1969, expanded the feed-in tariffs to 1.5 MW, and included non-water customers in the PG&E and SCE territories (See Figure 5.6-4). The power sold to the utilities under feed-in tariffs can be applied toward the state's renewable portfolio standard (RPS) targets. Senate Bill (SB) 380 (2008) codified the CPUC expanded feed-in tariff to include all RPS-eligible generators 1.5 MW and below. The program cap was also expanded from 250 MW to 500 MW. As of August 2009, 14.5 MW of contracted capacity had resulted from the tariff.

Assembly Bill 2021

This 2006 bill requires the CEC, in consultation with the CPUC and publicly owned utilities, to develop a statewide estimate of all potentially achievable cost-effective electricity and natural gas efficiency savings and establish statewide annual targets for energy efficiency savings and demand reduction over 10 years.

Assembly Bill 32 – Global Warming Solution Act of 2006

In 2006 Governor Schwarzenegger signed California Assembly Bill (AB) 32, the global warming bill, into law. AB 32 required that by January 1, 2008, CARB determine what the statewide greenhouse gas (GHG) emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020.

AB 32 related to energy in that, according to the CEC, transportation accounted for approximately 41 percent of California's year 2004 GHG emissions. Growth in California has resulted in Vehicle Miles Traveled (VMT) by California residents increasing three-fold during the period from 1975 to 2004. To reduce the use of carbon-based fuels, the Governor signed Executive Order (EO) S-01-07, calling for a 10 percent reduction in carbon intensity in fuels by year 2020. In addition, fuel efficiency standards (CAFE standards) were signed that would increase vehicle mileage. All of these measures are designed to reduce GHG emissions, and also relate to project-related energy-efficiency analysis. Additional discussion of GHG emissions can be found in Section 5.7, *Greenhouse Gas Emissions*, of this EIR.

Assembly Bill 118 and Assembly Bill 109

This 2007 bill created the Alternative and Renewable Fuel and Vehicle Technology Program. The statute, subsequently amended by AB 109 (2008), authorizes the CEC to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. The CEC has an annual program budget of approximately 100 million dollars and is required to adopt and update annually an investment plan that determines the funding priorities.

Assembly Bill 1613

Also known as the Waste Heat and Carbon Emissions Reduction Act, this 2007 bill was designed to encourage the development of new Combined Heat and Power systems in California with a generating capacity of up to 20 MW, resulting in more efficient use of natural gas and reduced GHG emissions. The bill requires the CPUC and the CEC to establish policies and procedures for the purchase of electricity from eligible CHP systems.

Assembly Bill 758

This 2009 bill requires the CEC to establish a regulatory proceeding by March 1, 2010, to develop a comprehensive program to achieve greater energy savings in existing residential and non-residential buildings.

Assembly Bill 811

AB 811 is a property tax bill that gives all California cities and counties the ability to offer low-interest loans for energy-efficiency projects and solar panels to homeowners and small businesses.

California Code of Regulations, Title 24, Part 6: California Energy Code

California Code of Regulations, Title 24, California Building Code (CBC), Part 6 is the California Energy Code (Energy Code). This code, originally enacted in 1978 in response to legislative mandates, establishes energy efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Code is updated periodically to incorporate and consider new energy efficiency technologies and methodologies as they become available. By reducing California's energy consumptions, GHG emissions may also be reduced. The current version of the Energy Code was updated by the California Buildings Standards Commission in 2007 (CBSC 2007). The Energy Code, part of the *California Building Standards Code* provides building standards related to energy conservation under the following subchapters:

- All occupancies – general provisions
- All occupancies – mandatory requirements for the manufacture, construction and installation of systems, equipment and building components
- Non-residential, high-rise residential and hotel/motel occupancies – mandatory requirements for space-conditioning and service water-heating systems and equipment
- Non-residential, high-rise residential and hotel/motel occupancies – mandatory requirements for lighting systems and equipment
- Non-residential, high-rise residential and hotel/motel occupancies – performance and prescriptive compliance approaches for achieving energy efficiency
- Non-residential, high-rise residential and hotel/motel occupancies – additions, alterations and repairs
- Low-rise residential buildings – mandatory features and devices
- Low-rise residential buildings – performance and prescriptive compliance approaches
- Low-rise residential buildings – additions and alterations in existing low-rise residential buildings

California's Electricity Loading Order

The loading order, adopted by the CEC in 2003, calls for California's electricity needs to be met with (1) increased energy efficiency and demand response; (2) new generation from renewable energy and distributed generation resources; and (3) clean fossil-fueled generation and infrastructure improvements.

CEC Tier II Energy Efficiency Goals

Under state law, the CEC is required to establish eligibility criteria, conditions for incentives, and rating standards to qualify for ratepayer-funded solar energy system incentives in California. As part of this effort, the CEC establishes energy efficiency standards for homes and commercial structures, and requires new buildings to exceed current building standards by meeting Tier Energy Efficiency goals. CEC Tier II Energy Efficiency goals will continue to be updated to achieve energy efficiency best practices, and are consistent with what is needed to meet the California Public Utilities Commission Strategic Plan goals of zero net-energy buildings. Currently, CEC proposed guidelines for the solar energy incentive program recommend a Tier II goal for residential and commercial projects of a 30 percent reduction in building combined space heating, cooling, and water-heating energy, compared to the 2008 Title 24 Standards.

Executive Order D-16-00

This EO signed by Governor Gray Davis on August 2, 2000, established a state sustainable building goal. The sustainable building goal is to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water, and materials efficiency; while providing healthy, productive, and comfortable indoor environments and long term benefits to Californians. As with the Energy Code, reductions in energy usage provided by sustainable building design would result in reduced GHG emissions.

Executive Order S-06-06

This 2006 EO established a biomass target of 20 percent within the established RPS goals for 2010 and 2020 and charged the CEC, along with other commissions and departments, to identify and secure funding for research and development projects to advance the use of biofuels for transportation.

Executive Order S-01-07

This 2007 EO established a Low Carbon Fuel Standard (LCFS) for transportation fuels sold in California. By 2020, the standard will reduce the carbon intensity of California's passenger vehicle fuels by at least 10 percent. The EO directs the secretary for the California EPA (Cal/EPA) to coordinate the actions of the CEC, CARB, the University of California, and other agencies to assess the "life-cycle carbon intensity" of transportation fuels. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in 2010. On December 29, 2011, District Judge Lawrence O'Neill in the Eastern District of California issued a preliminary injunction blocking CARB from implementing LCFS for the remainder of the *Rocky Mountain Farmers Union* litigation.

Executive Orders S-14-08 and S-21-09

Governor Arnold Schwarzenegger signed EO S-14-08 in November 2008, directing CARB to adopt regulations increasing California's RPS from 20 percent to 33 percent by 2020.

On September 15, 2009, Governor Schwarzenegger signed EO S-21-09, requiring that CARB, under its AB 32 authority, adopt a regulation consistent with the 33 percent renewable energy target established in EO S-14-08 by July 31, 2010. The order requires that CARB establish the highest priority for those resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health that can be developed most quickly and that support reliable, efficient, cost-effective electricity system operations including resources and facilities located throughout the Western Interconnection. The Western Interconnection is one of the two major alternating current power grids in North America, stretching from western Canada on the north to Baja California, Mexico on the south, and from the Pacific Ocean on the west, to the east over the Rocky Mountains to the Great Plains.

Senate Bill 1078 and Senate Bill 107

SB 1078 (2002) revised CPUC sections 399.11-399.17 to require that in order to attain a target of 20 percent renewable energy for the State of California, and for the purposes of “increasing the diversity, reliability, public health and environmental benefits of the energy mix,” the CPUC and the State Energy Resources Conservation and Development Commission implement the California RPS program. This legislation required electricity providers to increase their procurement of renewable energy resources to 20 percent no later than December 31, 2017. In 2007, Governor Schwarzenegger called for an acceleration of the RPS, and signed SB 107 requiring investor owned utilities to have 20 percent of their electricity come from renewable sources by 2010.

Senate Bill 1

This 2006 bill enacted the Governor’s Million Solar Roofs program with the overall goal of installing 3,000 MW of solar photovoltaic systems.

Senate Bill 1368

In 2006, the California Legislature passed SB 1368, which requires the CPUC to develop and adopt a “GHGs emission performance standard” by February 1, 2007, for the private electric utilities under its regulation. The CPUC adopted an interim standard on January 25, 2007, but has formally requested a delay for the local publicly owned electric utilities under its regulation. These standards apply to all long-term financial commitments entered into by electric utilities. The CEC was required to adopt a consistent standard by June 30, 2007. However, this date was missed, and the CEC will address the concerns of the Office of Administrative Law (OAL) and resubmit the rulemaking as soon as possible. The rulemaking then must be approved by the OAL before it can take effect.

In the meantime, the CPUC and CEC adopted a preferred loading order to meet goals for satisfying the state’s growing demand for electricity while reducing GHG emissions. The preferred loading order places top priority on first increasing energy efficiency and demand response, then providing new generation from renewable and distributed generation resources, and, lastly, providing clean fossil-fueled generation and infrastructure improvements.

Senate Bill 97 – CEQA: Greenhouse Gas Emissions

In August 2007, Governor Schwarzenegger signed into law SB 97 – CEQA: Greenhouse Gas Emissions. SB 97 requires the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption. The Natural Resources Agency certified and adopted the guidelines on December 31, 2009. The OAL has adopted the guidelines and they became effective on March 18, 2010.

Senate Bill 375

This 2008 bill requires CARB to develop, in consultation with metropolitan planning organizations, passenger vehicle GHG emission reduction targets for 2020 and 2035 by September 30, 2010. Through the SB 375 process, regions will work to integrate development patterns, the transportation network, and other transportation measures and policies in a way that achieves GHG emission reductions while meeting regional planning objectives.

Senate Bill 17

This 2009 bill requires the CPUC (in consultation with the CEC, the California Independent System Operator Corporation (ISO), and other key stakeholders) to determine the requirements for a smart grid deployment plan consistent with the policies set forth in the bill and federal law by July 1, 2010. The bill requires the smart grid to improve overall efficiency, reliability, and cost-effectiveness of electrical system operations, planning, and maintenance. Each electrical corporation must develop and submit a smart grid deployment plan to the CPUC for approval by July 1, 2011.

Senate Bill 32

This 2009 bill requires each local publicly owned electric utility with 75,000 or more retail customers to offer a feed-in tariff for eligible renewable energy facilities up to 3 MW in size until the utility meets its proportionate share of a total statewide cumulative cap of 750 MW. The feed-in tariff price is to reflect the value of every kWh of electricity generated based on the time of delivery. The price may be adjusted based on other attributes of renewable generation. SB 32 also requires IOUs to expand their current feed-in tariffs for eligible renewable energy facilities from 1.5 MW to three MW until the utility meets its proportionate share of a total statewide cumulative cap of 750 MW. Prior to this bill, the statewide cap was 500 MW. The feed-in tariff shall provide performance guarantees for any generator greater than one MW.

State CEQA Guidelines – Appendix F

Section 15126.4 (a)(1) of the State CEQA Guidelines states that an EIR shall describe feasible measures which could minimize significant adverse impacts, including, where relevant, inefficient and unnecessary consumption of energy.

State CEQA Guidelines Appendix F, Energy Conservation, provides guidance for EIRs regarding potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing the inefficient, wasteful, and unnecessary consumption of energy. In addition, though not described as thresholds for determining the significance of impacts, Appendix F seeks inclusion of information in the EIR addressing the following environmental impacts:

- The project's energy requirements and its energy-use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

California Energy Programs and Plans

California Energy Commission: New Solar Homes Partnership

The New Solar Homes Partnership (NSHP) is a component of the California Solar Initiative and has a goal to produce 400 MWs of solar electricity on approximately 160,000 homes by year 2017. To qualify for the program, a new home must achieve energy efficiency levels greater than the requirements of the year 2005 Building Title 24 Standards. The builder can choose to comply with either of two tiers of energy efficiency measures: Tier I requires a 15 percent reduction from Title 24 Standards; or Tier II, which requires a 35 percent reduction overall and 40 percent in the building's space cooling (air conditioning) energy compared to Title 24. In addition, all appliances must have an Energy Star rating, which indicates that the appliance is consistent with the international standard for energy efficient consumer products.

California Air Resources Board: Interim Significance Thresholds

In October 2008, CARB released interim guidance on significance thresholds for GHG emissions for industrial, commercial and residential projects. The draft proposal for residential and commercial projects states that a project would not be significant if it complies with a previously approved plan that addresses GHG emissions, or meets an energy use performance standard defined as CEC's Tier II Energy Efficiency goal (specified as 35 percent above Title 24 requirements) along with "as yet to be defined" performance standards for water, waste and transportation or is below an "as yet to be developed" threshold for GHG emissions tons per year. As such, CARB did not establish a threshold of significance.

California Air Resources Board: Scoping Plan

In 2008, CARB adopted the Scoping Plan, as directed by AB 32 that proposed a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. The measures in the Scoping Plan approved by CARB will be in place by year 2012, with further implementation details and regulations to be developed, followed by the rulemaking process to meet the 2012 deadline. Measures applicable to development projects include the following:

- Maximum energy efficiency building and appliance standards, including more stringent building codes and appliance efficiency standards, and solar water heating;
- Use of renewable sources for electricity generation, such as photovoltaic solar associated with the Million Solar Roofs program;
- Regional transportation targets, including integration of development patterns and the transportation network to reduce vehicle travel, as identified in SB 375; and
- Green Building strategy, including siting near transit or mixed use areas; zero-net-energy buildings; “beyond-code” building efficiency requirements; and the use of the CEC’s Tier II Energy Efficiency goal.

Relative to transportation, the Scoping Plan includes nine measures or recommended actions. One of these is measure T-3, Regional Transportation-Related Greenhouse Gas Targets, which relies on SB 375 implementation to reduce GHG emissions from passenger vehicles through reducing vehicle miles traveled. The other measures are related to vehicle GHG, fuel and efficiency measures and would be implemented statewide rather than on a project-by-project basis.

Regional Policies and Regulations

SANDAG: Climate Action Strategy

The SANDAG Climate Action Strategy serves as a guide to help policymakers address climate change as they make decisions to meet the needs of our growing population, maintain and enhance our quality of life, and promote economic stability. The purpose of the strategy is to identify land use, transportation, and other related policy measures that could reduce GHG emissions from passenger cars and light-duty trucks as part of the development of the Sustainable Communities Strategy for the 2050 Regional Transportation Plan in compliance with SB 375. Other policy measures are also identified for buildings and energy use, protecting transportation and energy infrastructures from climate impacts, and to help SANDAG and other local agencies reduce GHG from their operations.

SANDAG: 2003 San Diego Regional Energy Strategy

The RES is an important and integral part of the larger San Diego Regional Comprehensive Plan, intended to contain an integrated set of public policies, strategies and action plans to promote a smarter, more sustainable growth for the San Diego region. The following public policy goals were set forth by the RES:

1. Public Policy

GOAL 1: Achieve and represent regional consensus on energy issues at the state and federal levels.

2. Electricity Supply and Infrastructure Capacity

GOAL 2: Achieve and maintain capacity to generate 65 percent of summer peak demand with in-county generation by 2010 and 75 percent by 2020.

GOAL 3A: Increase the total electricity supply from renewable resources to 15 percent by 2010 (~740 MW), 25 percent by 2020 (~1,520 MW) and 40 percent by 2030 (~2,965 MW).

GOAL 3B: Of these renewable resources, achieve 50 percent of total renewable resources from resources located within the County (~370 MW by 2010, ~760 MW by 2020, and ~1,483 MW by 2030).

GOAL 4: Increase the total contribution of clean distributed generation resources (nonrenewable) to 12 percent of peak demand by 2010 (~590 MW), 18 percent by 2020 (~1,100 MW) and 30 percent (~2,225 MW) by 2030.

GOAL 5: Increase the transmission system capacity as necessary to maintain required reliability and to promote better access to renewable resources and low-cost supply.

3. Electricity Demand

GOAL 6: Reduce per capita electricity peak demand and per capita electricity consumption back to 1980 levels.

4. Natural Gas Supply, Infrastructure Capacity and Costs

GOAL 7: Develop policies to insure an adequate, secure and reasonably priced supply of natural gas to the region.

GOAL 8: Reduce regional natural gas per capita consumption by the following targets: 5 percent by 2010 (70 MM therms), 10 percent by 2020 (190 MM therms), 15 percent by 2030 (387 MM therms).

5. Transportation Energy Supply and Demand

GOAL 9: Complete a transportation energy study by June 2004 to evaluate the potential savings through more efficient use of transportation technology and fuels.

Local Policies and Regulations

United States Mayors Climate Protection Agreement

The City of San Diego participates in the Cool Cities Program. The Cool Cities Program, in partnership with the International Council on Local Environment Initiatives (ICLEI), adopted a voluntary program that strives to meet sustainable goals by reducing GHG emissions and increasing energy efficiency. The participating cities make commitments to stop global warming by signing the United States Mayors Climate Protection Agreement, and also strive to meet the 2030 Challenge (refer to next section for a detailed description of this program). The Cool Cities Program also encourages its members to gradually achieve and complete five milestones: (1) establish a Cool Cities campaign, (2) engage the community to participate, (3) sign the United States Mayors Climate Protection Agreement, (4) take initial solution steps (initiation of early implementation actions), and (5) ultimately perform a global warming audit by adopting milestone, “Advanced Smart Energy Solutions.” The City of San Diego is currently at Milestone 3 of the possible five milestones by being a signatory to United States Mayors Climate Protection Agreement.

The United States Mayors Climate Protection Agreement attempts to enact policies and programs that would reduce global warming pollution levels to 7 percent below year 1990 levels by year 2012, including efforts for conservation, methane (CH₄) recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels. The Agreement also aims to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking the following 12 actions in participating communities:

1. Inventory global warming emissions in City operations and in the community, set reduction targets, and create an action plan.
2. Adopt and enforce land use policies that reduce sprawl; preserve open space; and create compact, walkable urban communities.
3. Promote transportation options such as bicycle trails, commute-trip reduction programs, incentives for carpooling, and public transit.
4. Increase the use of clean, alternative energy by, for example, investing in “green tags,” advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste-to-energy technology.
5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting, and urging employees to conserve energy and save money.
6. Purchase only Energy Star rated equipment and appliances for City use.
7. Practice and promote sustainable building practices using the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) program or a similar system.

8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel.
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production.
10. Increase recycling rates in city operations and in the community.
11. Maintain healthy urban forests; promote tree planting to increase shading and to absorb Carbon dioxide (CO₂).
12. Help educate the public, schools, other jurisdictions, professional associations, business, and industry about reducing global warming pollution.

City of San Diego Adopted Sustainable Community Program Indicators

The City of San Diego adopted a Sustainable Communities Program in year 2002 and, in year 2004, published and adopted numerous sustainable indicators that would measure and, ultimately, improve the following areas of concern: traffic congestion, beach and bay clean up, sustainable and safe communities, adoption of “living wages,” pursuit of energy independence, adoption of water conservation measures, energy efficiency, and adoption of species conservation plans. These indicators are being implemented by the Climate Protection Action Plan of 2005.

City of San Diego: The Climate Protection Action Plan 2005

In 2005, the City of San Diego adopted its cornerstone document for climate change, the Climate Protection Action Plan 2005 (CPAP). The plan is loosely based on the criteria set by the Cities for Climate Protection Campaign prepared by the ICLEI. The City, a partner of ICLEI, prepared and implemented the program that aims to achieve sustainable development goals. The Plan addresses both GHG from emissions from communities (commercial, industrial, residential, and other) and from operation of the City as a government. The Plan consists of five major elements and depicts their relationship to climate change: Transportation, Energy, Waste, Urban Heat Island Effect, and Environmentally Preferable Purchasing. The City is currently in the progress of updating the CPAP.

City of San Diego Resolution R-298412 (R-2004-227), 50-Megawatt Renewable Energy Goal

This resolution establishes the goal for adding 50- MW of renewable energy for City operations by 2013. The City must track and report compliance with this resolution on a quarterly basis.

City of San Diego General Plan Conservation Element

The Conservation Element of the City of San Diego’s General Plan establishes a series of goals and objectives which are intended to help reduce energy-use impacts of development. While many of these goals and objectives apply to actions to be taken by City government, others represent actions that can be taken by private development such as the proposed project. The

project's consistency with all applicable General Plan goals and policies is discussed in Table 5.1-1. Applicable energy-related goals and policies include:

Climate Change and Sustainable Development Goals:

Goal: To reduce the City's overall carbon dioxide footprint by promoting energy efficiency, alternative modes of transportation, sustainable planning and design, and waste management.

Policies:

CE-A.5. Employ sustainable or “green” building techniques for the construction and operation of buildings.

- a. Develop and implement sustainable building standards for new and significant remodels of residential and commercial buildings to maximize energy efficiency, and to achieve overall net zero energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings. This can be accomplished through factors including, but not limited to:
 - Designing mechanical and electrical systems that achieve greater energy efficiency with currently available technology;
 - Minimizing energy use through innovative site design and building orientation that addresses factors such as sun-shade patterns, prevailing winds, landscape, and sun-screens;
 - Employing self generation of energy using renewable technologies;
 - Combining energy efficient measures that have longer payback periods with measures that have shorter payback periods;
 - Reducing levels of non-essential lighting, heating and cooling; and
 - Using energy efficient appliances and lighting.
- b. Provide technical services for “green” buildings in partnership with other agencies and organizations.

CE-A.7. Construct and operate buildings using materials, methods, and mechanical and electrical systems that ensure a healthful indoor air quality. Avoid contamination by carcinogens, volatile organic compounds, fungi, molds, bacteria, and other known toxins.

- a. Eliminate the use of chlorofluorocarbon-based refrigerants in newly constructed facilities and major building renovations and retrofits for all heating, ventilation, air conditioning, and refrigerant-based building systems.
- b. Reduce the quantity of indoor air contaminants that are odorous or potentially irritating to protect installers and occupants' health and comfort. Where feasible, select low-emitting adhesives, paints, coatings, carpet systems, composite wood, agri-fiber products, and others.

CE-A.8. Reduce construction and demolition waste in accordance with Public Facilities Element, Policy PF-I.2, or by renovating or adding on to existing buildings, rather than constructing new buildings.

CE-A.9. Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible, through factors including:

- Scheduling time for deconstruction and recycling activities to take place during project demolition and construction phases;
- Using life cycle costing in decision-making for materials and construction techniques. Life cycle costing analyzes the costs and benefits over the life of a particular product, technology, or system;
- Removing code obstacles to using recycled materials in buildings and for construction; and
- Implementing effective economic incentives to recycle construction and demolition debris.

CE-A.10. Include features in buildings to facilitate recycling of waste generated by building occupants and associated refuse storage areas.

- a. Provide permanent, adequate, and convenient space for individual building occupants to collect refuse and recyclable material.
- b. Provide a recyclables collection area that serves the entire building or project. The space should allow for the separation, collection and storage of paper, glass, plastic, metals, yard waste, and other materials as needed.

CE-A.11. Implement sustainable landscape design and maintenance.

- a. Use integrated pest management techniques, where feasible, to delay, reduce, or eliminate dependence on the use of pesticides, herbicides, and synthetic fertilizers.
- b. Encourage composting efforts through education, incentives, and other activities.
- c. Decrease the amount of impervious surfaces in developments, especially where public places, plazas, and amenities are proposed to serve as recreation opportunities (see also Recreation Element, Policy RE-A.6 and A.7).
- d. Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate, to contribute to sustainable development goals.
- e. Reduce use of lawn types that require high levels of irrigation.
- f. Strive to incorporate existing mature trees and native vegetation into site designs.
- g. Minimize the use of landscape equipment powered by fossil fuels.
- h. Implement water conservation measures in site/building design and landscaping.
- i. Encourage the use of high efficiency irrigation technology, and recycled site water to reduce the use of potable water for irrigation. Use recycled water to meet the needs of development projects to the maximum extent feasible (see Policy CE-A.12).

CE-A.12: Reduce the San Diego Urban Heat Island, through actions such as:

- Using cool roofing materials, such as reflective, low heat retention tiles, membranes and coatings, or vegetated eco-roofs to reduce heat build-up;
- Planting trees and other vegetation, to provide shade and cool air temperatures. In particular, properly position trees to shade buildings, air conditioning units, and parking lots; and
- Reducing heat build-up in parking lots through increased shading or use of cool paving materials as feasible (see also Urban Design Element, Policy UD-A.12).

Sustainable Energy Goals:

Goal: An increase in local energy independence through conservation, efficient community design, reduced consumption, and efficient production and development of energy supplies that are diverse, efficient, environmentally-sound, sustainable, and reliable.

Policies:

CE-I.4: Maintain and promote water conservation and waste diversion programs to conserve energy.

CE-I.7: Pursue investments in energy efficiency and direct sustained efforts towards eliminating inefficient energy use.

5.6.2 Impact

Issue 1: Would the construction and operation of the proposed project result in the use of excessive amounts of electrical power?

Issue 2: Would the proposed project result in the use of excessive amounts of fuel or other forms of energy (including natural gas, oil, etc.)?

Impact Threshold

Neither State CEQA Guidelines Appendix G nor the City of San Diego's CEQA Significance Determination Thresholds contain specific thresholds to identify when a significant energy-use impact has occurred. State CEQA Guidelines Appendix F, Energy Conservation, provides direction as to the type of information, analysis, and mitigation that should be considered in evaluating a proposed project, but also does not provide specific energy conservation thresholds.

Other guidance on the content and standards for EIR energy evaluations has come from recent case law. On August 27, 2009, the California Court of Appeal, Third Appellate District issued the first ever CEQA decision on the requirements of an energy conservation impacts analysis in the case of *Tracy First v. City of Tracy* (2009) 177 Cal. App. 4th 912. The court ruled it was appropriate for the EIR to rely upon the CBC Energy Efficiency Standards, which are part of the State's Title 24 Building Code, to determine that the project's energy impacts would be less than

significant. The Court also held that CEQA does not require that an EIR discuss “every possible energy impact or conservation measure” listed in Appendix F of the State CEQA Guidelines. For the purposes of this EIR, and in accordance with Appendix F of the State CEQA Guidelines and recent case law, the proposed project would result in a significant impact to energy conservation if it would:

- Cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance; and/or
- Conflict with or exceed the CBC Energy Efficiency Standards; the *2003 San Diego Regional Energy Strategy* renewable energy goals; City of San Diego *General Plan Conservation Element* goals; the CARB passenger vehicle GHG emission reduction targets for 2020 and 2035, or any other applicable energy conservation regulations.

Impact Analysis

Per Appendix F of the State CEQA Guidelines, energy conservation impacts were analyzed by estimating project energy requirements by amount and fuel type, along with project compliance with regulatory requirements. These data were used to evaluate the project’s effects on energy resources and the degree to which the project complies with existing energy standards.

Construction Impacts

Project construction would require the use of construction equipment for grading, hauling, and building activities. Construction equipment would require the use of gasoline, oil, and other possible fuel sources to operate. This increased fuel consumption would be temporary, and would not have a residual requirement for additional energy input. The marginal increases in fossil fuel use resulting from project construction are not expected to have an appreciable impact on energy resources.

Energy Consumption

Grading of the site would be minimized to reduce energy use, costs, and land disruption due to construction. Excavation would be required for subterranean parking and building foundations. Because the proposed project is in the planning stages and detailed construction information, such as the number of equipment, materials, and labor hours, is not available, detailed quantitative assessment of construction energy impact is not possible. Instead, an estimate of the energy that would be consumed for construction proposed under the project scenarios has been made by applying the estimated construction data used in the URBEMIS2007 model (see Section 5.5, *Air Quality*, for details). Construction energy is calculated based on the fuel consumption rates from the SCAQMD CEQA Air Quality Handbook for each off-road heavy-duty equipment and on-road vehicle (SCAQMD 1993). Fuel economy (i.e., gasoline and diesel) for all off-road equipment and on-road vehicles was also determined using values provided in the CARB’s OFFROAD2007 and EMFAC2007 models. This analysis does not assume increases in fleet fuel economy due to changes in technology, as the data on the average fuel economy of the equipment remain unavailable at time of analysis. This analysis also does not account for possible changes between alternative scenarios in construction activity due to changes in

schedule. Table 5.6-6, *Estimated Energy Consumption from Construction Equipment and Vehicles*, presents the amount of energy in BTUs required for the construction of Phase 1, Phase 2, and Phase 3 of the proposed project. The total estimated amount of energy consumption required to build the project is approximately 300 billion BTUs.

Table 5.6-6 ESTIMATED ENERGY CONSUMPTION FROM CONSTRUCTION EQUIPMENT AND VEHICLES					
Equipment	Fuel Rate (gallons per Hp per hr)	Qty	Diesel Fuel (gallons)	Gasoline Fuel (gallons)	BTUs
Grader	0.066	1	42.03	--	5,842,370
Rubber Tired Dozers	0.066	1	83.41	--	11,593,918
Tractor/Loader/Backhoe	0.066	1	23.52	--	3,269,614
Cement and Mortar Mixer	0.066	4	8.87	--	1,232,986
Paver	0.066	1	24.55	--	3,412,728
Paving Equipment	0.066	2	50.93	--	7,079,392
Rollers	0.066	1	24.58	--	3,416,398
Crane	0.066	1	67.94	--	9,443,899
Forklift	0.066	2	34.45	--	4,788,828
Generator Sets	0.066	1	42.20	--	5,865,489
Welders	0.066	3	32.08	--	4,458,564
Water Trucks (Light Heavy Duty Trucks)	10	300	180.00	--	25,020,000
Haul Trucks (Heavy-Duty Trucks)	8	210	525.00	--	72,975,000
Worker Commute (Light-Duty Auto)	15	25	--	33.33	4,166,667
Daily Total					
			gallons	gallons	BTUs
Maximum Daily Construction Duration = 1 day			1,139.56	33.33	162,565,851
Project Phase Total					
			gallons	gallons	BTUs
Phase 1 Construction Duration = 28 months			721,115	21,093	102,871,670, 757
Phase 2 Construction Duration = 22 months			566,590	16,573	80,827,741,3 09
Phase 3 Construction Duration = 31 months			918,881	23,353	113,893,635, 481
Total one-time construction energy expenditure = 297,593,047,548 BTU					

Construction of the project would incorporate on-site energy conservation and demand-side management features, including the limiting of trucks and construction equipment idle times to reduce fuel consumption and pollutant emissions. The following practices would be implemented during the project construction to reduce waste and energy consumption:

- Limit the number of on-site parking spaces to help promote carpooling which will reduce emissions and consumption of fuel;

- Utilize permanent power for the office trailer as long as possible in lieu of running a less efficient generator;
- Promote the use of high-efficiency light bulbs for temporary lighting and task lighting;
- Establish and maintain a recycling program through the waste management company for construction debris;
- Ensure HVAC equipment for the construction office trailer is maintained and serviced frequently for efficient operation;
- Use of non-toxic cleaning supplies bottled in recycled or recyclable containers;
- Implement a recycling program in the office trailer for paper, newspaper, cardboard, aluminum cans, glass, etc.;
- Use rechargeable batteries where practicable;
- Use on-site electricity to power equipment, where feasible;
- Follow maintenance schedules to maintain equipment in optimal working order and rated energy efficiency, which include, but not be limited to, regular replacement of filters, cleaning of compressor coils, burner tune-ups, lubrication of pumps and motors, proper vehicle maintenance, etc.;
- Reduce on-site vehicle idling; and
- Recycle waste and solvents, and use biodegradable lubricants and hydraulic fluids.

Upon implementation of these practices, the project's construction-phase impacts to unnecessary consumption of energy would be less than significant.

CBC and Regulatory Compliance

The proposed project, like all projects within the City of San Diego, would be required to comply with CBC Energy Efficiency Standards, in addition to all other city, state, and federal energy conservation measures during the construction phase. Therefore, the proposed project would not conflict with the CBC, and no impact would occur.

Operational Impacts

Energy Consumption

The project site does not currently generate any electric, natural gas, water, wastewater, or other energy demands, as it is a vacant, graded lot. Therefore, the baseline demand for these energy uses is zero in this analysis.

Electric Energy

As discussed above, the CEC's Revised 2005 California Energy Demand 2006-2016 Staff Energy Demand Forecast (CEC 2005) provided maximum energy-demand estimates by development type as follows:

- Residential: 6,700 kWh/household
- Commercial: 17.2 kWh/sf

Utilizing these projections, the project's estimated electricity demand can be approximated as shown below in Table 5.6-7, *Estimated Project Electricity Demand Generation By Land Use Type*.

Table 5.6-7 ESTIMATED PROJECT ELECTRICITY DEMAND GENERATION BY LAND USE TYPE (kWh)				
Generation Rate	Residential (households)	Commercial (gross sf¹)	Hotel (gross sf)	TOTAL
6,700 kWh/household	608	--	--	--
17.2 kWh/sf	--	1,014,200	100,000	--
Total	4,073,600	17,444,240	1,720,000	23,237,840

Source: CEC 2005

kWh = kilowatt hours; sf = square feet

¹ Includes parking garages

Future electrical energy demand at project buildout is estimated at 23,237,840 kWh/yr.

Natural Gas

The proposed project's natural gas usage was calculated based on South Coast Air Quality Management District (SCAQMD) estimated usage of 2.9 cubic feet (cf) of natural gas per sf per month (cf/sf) for commercial, 2.0 cf/sf per month for retail, and 4,012 cf per dwelling unit for residential units (see Section 5.7). As shown above in Table 5.6-6, the gross area of proposed commercial uses, including office, retail, and parking garages is 1,014,200 sf. However, because natural gas generation rates vary between commercial and retail uses, the proposed area of retail uses was subtracted from the gross commercial area to estimate natural gas usage. Utilizing these projections, the project's estimated natural gas demand can be approximated as presented in Table 5.6-8, *Estimated Project Natural Gas Demand Generations by Land Use Type*.

Table 5.6-8
ESTIMATED PROJECT NATURAL GAS DEMAND GENERATION
BY LAND USE TYPE
(cf per month)

Generation Rate	Residential (dwelling unit)	Commercial (gross sf¹)	Retail (gross sf)	TOTAL (cf/sf/month)
4,012 cf/month	608	--	--	--
2.9 cf/sf/month	--	744,200	--	--
2.0 cf/sf/month	--	--	270,000	--
Total	2,439,296	2,158,180	540,000	5,137,476

Source: HELIX 2012b

cf = cubic feet; sf = square feet

¹ Includes parking garages

Future natural gas demand at project buildout is estimated at 5,137,476 cf/month, or 61,639,712 cf/year.

Water

Energy is used in the conveyance, treatment, and distribution of water. Therefore, there is a certain amount of energy use in every unit of water utilized by a project. This is known as the embedded energy for various water uses. The CEC established a benchmark for evaluating the relative values of proxy energy use values per water use, estimating the amount of energy needed for each segment of the water use cycle in terms of the number of kWh needed to collect, extract, convey, treat, and distribute one million gallons (MG) of water, and the number of kWh needed to treat and dispose of the same quantity of wastewater.

Table 5.6-9 shows the CEC's recommended water-energy proxies for southern California:

Table 5.6-9
CEC-RECOMMENDED WATER ENERGY PROXIES FOR
SOUTHERN CALIFORNIA

Water-Use Cycle	Indoor Uses kWh/MG	Outdoor Uses kWh/MG
Water Supply and Conveyance	9,727	9,727
Water Treatment	111	111
Water Distribution	1,272	1,272
Wastewater Treatment	1,911	0
Regional Total	13,021	11,110

Source: CEC 2006b

Based on the projected water demand of 208,138 gallons per day (City 2011c) for the project, the proposed project would require approximately 75,970,370 gallons per year of water. Applying the typical embedded energy factor given by the CEC (12,700 kWh per million gallons), future water-related energy demand at project buildout is estimated at 964,819 kWh/year, or 964.8 megawatt-hours (MWh)/year.

Transportation

Energy is also used for transportation, in the form of fuel for vehicular trips. At project buildout, a total of 26,961 ADT would be generated by the project, with 1,538 trips in the AM peak period and 2,932 trips in the PM peak period (accounting for mixed-use development reductions) (see Table 5.2-9, *Trip Generation Of Proposed Project At Buildout*, of Section 5.2, *Transportation/Circulation/Parking*).

Vehicle travel at speeds other than the most fuel-efficient speed can lead to dramatic increases in fuel consumption. Although a precise relation for the entire fleet of vehicles is not known, the effect of a reduction of average speed in the region can be estimated. Based on the information from the CARB's most recent version of its Mobile Source Emission Inventory and Emission Factors model (EMFAC2007), vehicle speeds from approximately 30 mph to approximately 35 mph would be operating at their full fuel economy potential. The estimated fuel economy associated with this speed range is 27.4 mpg for gasoline and 7.3 mpg for diesel. This analysis does not assume increases in vehicle fuel economy due to changes in technology, as the effects on the average fuel economy of the future years' vehicle fleet remain uncertain. With the estimated 26,961 ADT, the daily total number of vehicle miles traveled (VMT) was estimated in the URBEMIS2007 model (refer to Draft EIR Appendix G) to be approximately 146,178 miles per day. Based on the CARB EMFAC2007 vehicle fleet types breakdown for San Diego County, approximately 84.7 percent of the VMT is gasoline-powered vehicles and approximately 15.3 percent is diesel-powered trucks. The energy consumption rates for gasoline- and diesel-powered vehicles are 4,562 and 19,015 BTU per VMT, respectively. Table 5.6-10, *Fuel Economy and Energy Consumption Rates For Autos and Trucks*, presents the fuel economy and energy consumption rates for the project-related automobile and trucks.

Table 5.6-10 FUEL ECONOMY AND ENERGY CONSUMPTION RATES FOR AUTOS AND TRUCKS				
Vehicle Type	Fuel Economy (mpg)	VMT per day	Energy Consumption Factor (BTU/Vehicle Mile)	BTU per day
Passenger vehicles	27.4	130,390	4,562	594,846,396
Heavy trucks	7.3	22,014	19,015	418,595,572
Total Daily BTUs				1,013,441,968

Source: USAI 2012 and CARB's EMFAC2007

As shown in Table 5.6-10, the estimated total annual energy consumption for direct energy usage from the project-related automobile and trucks (both gasoline and diesel combined) would be approximately 1.013 billion BTUs per day. Vehicles used and vehicle trips associated with the proposed project would be subject to state and federal regulatory requirements addressing fuel efficiency, which would be expected to increase fuel efficiency over time. As discussed above under Regulatory Framework, the federal CAFE standards, EO S-1-07 LCFS, and AB 1493 fuel efficiency standard (analogous to the federal CAFE standard), as well as light/heavy vehicle efficiency/hybridization programs, all contribute to increased fuel efficiency, and therefore will reduce vehicle fuel energy consumption rates over time. As all vehicles utilized as a part of the proposed project would be subject to compliance with all applicable local, state, and federal regulatory requirements regarding vehicle fuel efficiency, the project's vehicle-fuel related impacts to energy would be less than significant.

Project Design Features

Actual future energy use is projected to be less than the estimated amounts for project buildout discussed above, due to energy conservation design features integrated into the proposed project, which are discussed below.

The project is seeking a LEED® Silver certification under the LEED® for Neighborhood Development™ rating system. On August 27, 2010, the project was registered with the Green Building Certification Institute with a certification goal of LEED® Silver under the LEED® for Neighborhood Development™ rating system. The project number associated with this registration is 1000008984. In January 2011, the project achieved Smart Location and Linkages Prerequisite review approval, the first certification level, from the Green Buildings Certification Institute. LEED®-certified buildings are designed to lower operating costs, reduce waste, conserve energy and water, and reduce greenhouse gas emissions. LEED® is a rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design. The system is credit-based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building. It is anticipated that the proposed buildings will use at least 10 percent less energy than comparable buildings, which will reduce their dependence on power that produces carbon emissions.

In addition, the project has identified the following specific design features to promote operational-phase energy efficiency:

Transportation/Fuel Energy Efficiency:

- The project would prepare and implement a Transportation Demand Management (TDM) program considering vehicle trip reduction measures such as provision of shuttle stops and carpool-only parking spaces.
- The mix of uses would offer opportunities for residents and employees to find living and working spaces within close proximity to each other, which could result in a reduction in vehicle trips.

- The project concept, in its provision of a variety of uses, promotes walkability by facilitating access to a variety of trip destinations in one geographic area.
- The project includes shorter blocks, open space, and landscaping to promote pedestrian activity.
- The project promotes bicycle transportation by providing safe bicycle routes through the site, which also connect to existing off-site bicycle routes.
- To encourage bicycle use on site and as a transportation mode for commuting, short-term bicycle parking would be provided via bike racks throughout the project site to accommodate cyclists accessing the site as their trip destination, or utilizing the bicycle routes as part of the larger bikeway network. Long-term bicycle parking and storage would also be provided in residential areas and employment centers.
- Project streets are designed to connect with other existing and planned streets to increase efficient circulation throughout the project area.
- Require prompt offloading of trucks to prevent idling for longer than five minutes, in compliance with state law.
- Provision of electric vehicle charging stations, to encourage the use of zero emission vehicles.

Water/Wastewater Energy Efficiency:

- The proposed development shall adhere to International Building Code (IBC) requirements for water-conserving plumbing.
- The proposed PPA calls for sustainable landscaping practices and techniques promoting water conservation and energy efficiency (e.g., through provision of shade trees).
- Landscaping shall be designed to enhance structures and public spaces, including outdoor plaza space, pedestrian walkways, and bicycle routes.
- Landscaping shall be designed, installed and maintained in accordance with General Plan Policy UD-A.8.
- Surface parking areas shall be landscaped in accordance with the City Landscape Regulations of the Municipal Code.
- All landscape and irrigation shall conform to the standards set forth in the City of San Diego Land Development Manual and other applicable City and regional standards.
- All plant material would be grouped according to similar water use and maintenance requirements, and conform to American Nursery and Landscape Association (ANLA) standards.
- Irrigation systems for all landscaped areas shall utilize controllers that respond to local climactic conditions and monitor potential breakages to prevent wasted water.

Solid Waste Energy Efficiency:

- The project would implement a Waste Management Plan (WMP) that targets a 75-percent diversion rate to reduce waste deposited in landfills.
- In compliance with the City's Recycling Ordinance, the project shall provide dedicated areas for the collection of refuse and recyclable materials and would ensure a collection service be provided for project operation.

Sustainable Design Energy Efficiency:

- Proposed buildings would exceed Title 24 energy standards by a minimum of 20 percent;
- The proposed site design is compact and walkable, and bicycle storage facilities would be available for residents and employees with connectivity to surrounding bike routes;
- All lighting systems and infrastructure, such as traffic lights, parking meters, and street lamps, would use energy efficient technology such as light-emitting diode (LED) bulbs;
- Proposed buildings would use energy-efficient heating and cooling systems, equipment, and lights, and have sophisticated controls to monitor ongoing energy consumption;
- The site would limit the hours of operation of outdoor lighting to conserve energy, while maintaining the level of light required for security and safety;
- The site would feature water-efficient landscaping and irrigation systems;
- All site buildings would employ high-performance "cool roof" materials, and the sidewalks and streets will use "cool" paving materials to reduce building cooling loads; canopy shading along sidewalks and roadways would also contribute to cooling load reduction;
- The proposed office buildings would target reducing their water use by 35 percent compared to standard office buildings by installing water-efficient fixtures in restrooms and kitchens; and
- The site would feature a comprehensive recycling plan with a hazardous waste drop-off point, and several easy-to-access recycling bins.

The proposed project design features were designed to be consistent with the Conservation Element of the General Plan and the Community Plan. As noted in Section 5.7, *Greenhouse Gas Emissions*, the project would exceed 2008 California Title 24 Energy Efficiency Requirements by a minimum of twenty percent. Like all projects within the City, the project would be required to comply with all other city, state, and federal energy conservation measures, during the operational phase. A policy-by-policy analysis of the project's consistency with applicable General Plan and Community Plan policies is located in Table 5.1-1 of this EIR. Other project impacts related to greenhouse gases are discussed in Section 5.7 of this EIR.

Natural gas, electricity, water, and vehicle fuel would be used for the operation of the proposed development. The project would utilize building materials and insulation in accordance with the IBC requirements, reducing the unnecessary loss of energy. The project would include energy-conserving project design features related to transportation and fuel energy efficiency, water and wastewater energy efficiency, solid waste energy efficiency, and energy efficiency

through sustainable design, as listed above. Development would not require the use of new sources of energy, and would not conflict with any adopted energy conservation plans. Therefore, energy impacts related to project operations would be less than significant.

Significance of Impact

Construction of the project would incorporate on-site energy conservation and demand-side management features as described above, including the limiting of trucks and construction equipment idle times to reduce fuel consumption and pollutant emissions. Project construction would be required to comply with all applicable local, state, and federal regulatory requirements regarding energy conservation. Therefore, construction-phase impacts related to energy conservation would be less than significant.

Upon implementation of the proposed energy-related project design features, the proposed project would reduce its energy demand in compliance with local, state, and federal regulations. The project would not conflict with any adopted energy conservation plans, and development would not require new sources of energy. Therefore, operational-phase impacts related to energy conservation would be less than significant.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

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5.7 GREENHOUSE GAS EMISSIONS

This section provides an evaluation of potential climate change impacts associated with the proposed project's generation of greenhouse gas (GHG) emissions. The following discussion is based on the Air Quality and Greenhouse Gas Technical Report prepared by HELIX Environmental Planning (2012b; Draft EIR Appendix G).

The information from the original Air Quality and Greenhouse Gas Technical report has been updated pursuant to a memorandum included in Appendix G.1. *Updates to Air Quality and Greenhouse Gas Analysis in the Draft EIR for the One Paseo Project*. The memorandum was prepared in response to comments received on the Draft EIR, and to reflect changes which have occurred with respect to regulations and standards since the original analysis was completed in 2010. In general, the modifications which have been made involve updating the state and federal regulations, standards, and analysis methods governing GHG emissions which have occurred since the original air quality analysis was completed. The impact calculations were updated, as appropriate, to reflect the updated regulations and standards.

The memorandum in Appendix G.1, concludes that the changes in policies and regulations, and the associated changes in project GHG emissions do not change the basic results or impact conclusions in the original Draft EIR, and that GHG impacts would remain less than significant. Furthermore, this memorandum also includes a qualitative discussion of the potential GHG impacts associated with the Revised Project proposed by the applicant to demonstrate that the impacts of the Revised Project would also be less than significant; see discussion in Section 12.9.

5.7.1 Existing Conditions

Greenhouse Gas Background

Global climate change refers to changes in average climatic conditions on Earth, as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases that include water vapor, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). In addition to the naturally occurring gases, man-made compounds such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) also act as GHG. These compounds are the result of a number of activities including vehicular use, energy consumption/production, manufacturing and cattle farming and increase the natural concentration of GHG in the atmosphere. GHG allows solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

GHG has varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere, and is defined as the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas" (EPA 2006). The reference gas for GWP is CO₂; therefore, CO₂ has a GWP of 1. The other main GHG that has been attributed to human activity includes CH₄, which has a GWP of 21, and N₂O, which has a GWP of 310.

Types of Greenhouse Gases

A summary of the different types of GHG is provided below.

Water Vapor

Water vapor is the most abundant and variable GHG in the atmosphere. It is not considered a pollutant; it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves.

Carbon Dioxide

CO₂ is an odorless, colorless GHG. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO₂ include burning fuels, such as coal, oil, natural gas, and wood. CO₂ concentrations are currently around 379 ppm of the total earth's atmosphere, and some scientists forecast that concentrations may increase to 1,130 CO₂ equivalent (CO₂e) ppm by the year 2100 as a direct result of anthropogenic sources, which could result in an average global temperature rise of at least 7.2°F.

Methane

CH₄ is a gas and is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide

N₂O, also known as laughing gas, is a colorless gas. N₂O is produced by microbial processes in soil and water, including reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N₂O. It is used in rocket engines, as an aerosol spray propellant, and in race cars. During combustion, NO_x (NO_x is a generic term for mono-nitrogen oxides, NO and NO₂) is produced as a criteria pollutant and is not the same as N₂O. Very small quantities of N₂O may be formed during fuel combustion by nitrogen and oxygen.

Hydrofluorocarbons

HFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the

Montreal Protocol. Today, HFCs replaces the CFCs. HFC compounds have a GWP of between 140 and 11,700, with the lower end being for HFC-152a and the higher end being for HFC-23.

Sulfur Hexafluoride

SF₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest GWP of any gas – 23,900. SF₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Ozone

Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere (i.e., the lowest portion of the earth's atmosphere, up to 12 miles from the surface of the earth) is relatively short-lived and therefore is not global in nature. According to CARB, it is difficult to make an accurate determination of the contribution of ozone precursors (NO_x and VOCs) to global warming.

Current Climate Change Effects

Many researchers studying California's climate believe that changes in the earth's climate have already affected California, and will continue to do so. Projected future climate change may affect California in a variety of ways. Public health may suffer due to greater temperature extremes and more frequent extreme weather events, increases in transmission of infectious disease, and increases in air pollution. Agriculture is especially vulnerable to altered temperature and rainfall patterns and related pest problems. Forest ecosystems would face increased fire hazards and would be more susceptible to pests and diseases. The Sierra snowpack that functions as the state's largest reservoir could shrink by a third by the year 2060, and to half its historic size by the year 2090. Runoff that fills reservoirs is expected to start in midwinter, not spring, and rain falling on snow is expected to trigger more flooding. The California coast is likely to face a rise in sea level that could threaten the shorelines. Sea-level rise and storm surges could lead to flooding of low-lying property, loss of coastal wetlands, erosion of cliffs and beaches, saltwater contamination of drinking water, and damage to roads, causeways, and bridges.

Greenhouse Gas Regulations

International Greenhouse Gas Legislation

The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol is a treaty made under the UNFCCC, and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments.

In December 2009 the United Nations representatives met in Copenhagen to attempt to develop a framework for addressing global climate change issues in the future. The Copenhagen Accord was not, however, ratified, and no further measures were adopted at that meeting.

Federal Greenhouse Gas Regulations

In the past, the EPA has not regulated GHGs under the CAA. However, the U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO₂ is an air pollutant, as defined under the CAA, and that EPA has the authority to regulate GHG emissions. After a thorough examination of the scientific evidence and careful consideration of public comments, the EPA announced on December 7, 2009 that GHG emissions threaten the public health and welfare of the American people.

Endangerment Finding: The EPA Administrator finds that the current and projected concentrations of the six key well-mixed GHG – CO₂, CH₄, N₂O, HFC, PFC, and SF₆ – in the atmosphere threaten the public health and welfare of current and future generations.

Cause or Contribute Finding: The EPA Administrator finds that the combined emissions of these well-mixed GHG from motor vehicles and motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

The endangerment findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed GHG emissions standards for light duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.

Mandatory Reporting Rule of Greenhouse Gas Emissions

On January 1, 2010, the EPA started, for the first time, requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. This new program will cover approximately 85 percent of the nation's GHG emissions and apply to roughly 10,000 facilities. Fossil fuel and industrial GHG suppliers, motor vehicle and engine manufacturers, and facilities that emit 25,000 metric tons (MT) or more of CO₂e per year will be required to report GHG emissions data to EPA annually. This reporting threshold is equivalent to about the annual GHG emissions from 4,600 passenger vehicles. Vehicle and engine manufacturers outside of the light-duty sector have begun phasing in GHG reporting with vehicle/engine model year 2011.

Corporate Average Fuel Economy Standards

The federal CAFE standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. In May 2009, President Obama announced plans to increase CAFE standards to require light duty vehicles to meet an average fuel economy of 35.5 miles per gallons by 2016.

California Greenhouse Gas Regulations

California Code of Regulations, Title 24, Part 6

California Code of Regulations, Title 24, Part 6 is the Energy Code. This code, originally enacted in 1978 in response to legislative mandates, establishes energy efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy efficiency technologies and methodologies as they become available. By reducing California's energy consumptions, GHG emissions may also be reduced.

Executive Order D-16-00

This EO signed by Governor Gray Davis on August 2, 2000, established a state sustainable building goal. The sustainable building goal is to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water, and materials efficiency; while providing healthy, productive and comfortable indoor environments and long term benefits to Californians." As with the California Energy Code, reductions in energy usage provided by sustainable building design would result in reduced GHG emissions.

Senate Bill 1771

Senate Bill (SB) 1771, enacted on September 30, 2000, requires the Secretary of the Resources Agency to establish a nonprofit public benefit corporation, to be known as the "California Climate Action Registry," for the purpose of administering a voluntary GHG emission registry. The State Energy Resources Conservation and Development Commission (commonly called the California Energy Commission [CEC]) was required to develop metrics for use by the Registry and to compile the State's inventory of GHG emissions by January 1, 2002, and to update the inventory every five years thereafter.

Executive Order S-7-04

The executive order signed by Governor Schwarzenegger in 2004, designated California's 21 interstate freeways as the "California Hydrogen Highway Network" and directs the California EPA (Cal EPA) and all other relevant state agencies to:

...plan and build a network of hydrogen fueling stations along these roadways and in urban centers that they connect, so that by 2010, every Californian will have access to hydrogen fuel, with a significant and increasing percentage from clean, renewable sources.

The executive order also directs CalEPA in concert with State Legislature, and in consultation with the CEC and other relevant state and local agencies to develop California Hydrogen Economy Blueprint Plan by January 1, 2005 "for the rapid transition to a hydrogen economy in California". The Plan is to be updated biannually. Recommendations to the Governor and State Legislature are to include among others:

Promoting environmental benefits (including global climate change) and economic development opportunities resulting from increased utilization of hydrogen for stationary and mobile applications; policy strategies to ensure hydrogen generation results in the lowest possible emissions of GHG and other air pollutants.

Executive Order S-3-05

Executive Order S-3-05, signed by Governor Schwarzenegger in 2005, calls for a reduction in GHG emissions to year 1990 levels by year 2020, and for an 80 percent reduction in GHG emissions by year 2050. Executive Order S-3-05 also calls for the CalEPA to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy. The first of these reports, “Scenarios of Climate Change in California: An Overview,” was published in February 2006.

The report uses a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.5°F); medium warming range (5.5-8.0°F); and higher warming range (8.0-10.5°F). The report then presents analysis of future climate in California under each warming range. As shown above, each emissions scenario would result in substantial temperature increases for California. According to the report, substantial temperature increases would result in a variety of impacts to the people, economy and environment of California associated with a projected increase in extreme conditions; the severity of the impacts would depend upon actual future GHG emissions and associated warming. Under the report’s emissions scenarios, the impacts of global warming in California are anticipated to include, but are not limited to, public health, biology, rising sea levels, hydrology and water quality, and water supply.

Assembly Bill 32 – Global Warming Solution Act of 2006

Governor Schwarzenegger signed California AB 32, the global warming bill, into law in 2006. AB 32 required that by January 1, 2008, CARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. Key AB 32 milestones are as follows:

- June 20, 2007 – Identification of “discrete early action greenhouse gas emission reduction measures.”
- January 1, 2008 – Identification of the year 1990 baseline GHG emission levels and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions.
- January 1, 2009 – Adoption of a scoping plan for achieving GHG emission reductions.
- January 1, 2010 – Adoption and enforcement of regulations to implement the “discrete” actions.
- January 1, 2011 – Adoption of GHG emission limits and reduction measures by regulations.

- January 1, 2012 – GHG emission limits and reduction measures adopted in 2011 become enforceable.

Since the passage of AB 32, CARB published *Proposed Early Actions to Mitigate Climate Change in California*. There are no early action measures specific to new land use development projects included in the list of 36 measures identified for CARB to pursue during previous calendar years 2007, 2008, 2009, and 2010. Also, this publication indicated that the issue of GHG emissions in CEQA and General Plans was being deferred for later action, so the publication did not discuss any early action measures generally related to CEQA or to land use decisions. CARB adopted its Scoping Plan in December 2008, which provided estimates of the year 1990 GHG emissions level, and identified sectors for the reduction of GHG emissions.

CARB has determined that the year 1990 level of GHG emissions was 427 million metric tons (MMT) of CO₂e emissions. CARB estimates that a reduction of 169 to 174 MMT net CO₂e emissions below business-as-usual (BAU) would be required by year 2020 to meet the year 1990 levels. This amounts to a 15-percent reduction from today's levels and a 28.3-percent reduction from projected BAU levels in year 2020.

~~According to the CEC, transportation accounted for approximately 41 percent of California's 2004 GHG emissions. Growth in California has resulted in VMT by California residents increasing three fold during the period from 1975 to 2004. To reduce the use of carbon based fuels, the Governor of California signed EO S-01-07, calling for a 10 percent reduction in carbon intensity in fuels by year 2020. In addition, fuel efficiency standards (CAFE standards) were signed that would increase vehicle mileage. All of these measures are designed to reduce GHG emissions.~~

Assembly Bill 1493— (Pavley) – Vehicular Emissions of Greenhouse Gases

AB 1493 (also referred to as Pavley or the California Light-Duty Vehicle Greenhouse Gas Standards), enacted in 2002, requires CARB to set GHG emission standards for passenger vehicles, light duty trucks (and other vehicles determined to be vehicles whose primary use is noncommercial personal transportation) in the state, manufactured in year 2009 and all subsequent model years. In setting these standards, CARB considered cost effectiveness, technological feasibility, and economic impacts. CARB adopted the standards in September 2004. When fully phased in, the near-term (years 2009 to 2012) standards would result in a reduction of approximately 22 percent in GHG emissions compared to the emissions from the year 2002 fleet, while the midterm (years 2013 to 2016) standards would result in a reduction of approximately 30 percent. Some currently used technologies that achieve GHG reductions include small engines with superchargers, continuously variable transmissions, and hybrid electric drives. To set its own GHG emissions limits on motor vehicles, California needed to receive a waiver from the EPA. The EPA approved the waiver in June 2009. With this action, it was expected that the regulations (Pavley I and II) would reduce GHG emissions from California passenger vehicles by about 18.22 percent statewide by year 2020.

Assembly Bill 75

AB 75 was passed in 1999, and mandates state agencies to develop and implement an integrated waste management plan to reduce GHG emissions related to solid waste disposal. In addition, the bill mandates that community service districts providing solid waste services report the disposal and diversion information to the appropriate city, county, or regional jurisdiction. Since 2004, the bill requires diversion of at least 50 percent of the solid waste from landfills and transformation facilities, and submission to the California Integrated Waste Management Board (CIWMB) of an annual report describing the diversion rates.

Senate Bill 1368

In 2006, the California Legislature passed SB 1368, which requires the ~~Public Utilities Commission (PUC)~~ California Energy Commission to develop and adopt a “GHGs emission performance standard” by February 1, 2007, for the private electric utilities under its regulation. ~~The PUC adopted an interim standard on January 25, 2007, but has formally requested a delay for the local publicly owned electric utilities under its regulation. These standards apply to all long-term financial commitments entered into by electric utilities (CPUC 2006). The CEC was required to adopt a consistent standard by June 30, 2007. However, this date was missed, and the CEC will address the concerns of the OAL and resubmit the rulemaking as soon as possible. The rulemaking then must be approved by the OAL before it can take effect. On November 14, 2011, the Natural Resources Defense Council (NRDC) and Sierra Club jointly filed a Petition requesting the CEC initiate a rulemaking proceeding to ensure the current practices of California publicly owned utilities (POUs) meet the requirements of Senate Bill 1368 and California's Emission Performance Standard. On January 12, 2012, the CEC adopted the Emission Performance Standard. These standards apply to all long-term financial commitments (five years or longer) entered into by electric utilities and the emissions must be limited to 1,100 pounds of CO₂ per megawatt-hour of electricity delivered (California SB 2006).~~ In the meantime, the PUC and CEC adopted a preferred loading order to meet goals for satisfying the state's growing demand for electricity while reducing GHG emissions. The preferred loading order places top priority on first increasing energy efficiency and demand response, then providing new generation from renewable and distributed generation resources, and, lastly, providing clean fossil-fueled generation and infrastructure improvements.

Senate Bill 1505

Largely in response to EO S-7-04, SB 1505, passed by the legislature and signed by the governor on September 30, 2006, requires CARB to adopt regulations by July 1, 2008 that ensure the production and use of hydrogen for transportation purposes contributes to the reduction of GHG emissions, criteria air pollutants, and toxic air contaminants. There have been no new updates to this regulation since 2010. Currently, California has 13 research hydrogen fueling stations, 9 public stations and an additional 18 that have been funded and are expected to be operational in the next few years.

Executive Order S-01-07 – Low Carbon Fuel Standard

This EO, signed by Governor Schwarzenegger in 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and direct CARB to determine if a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in 2010. It was expected to result in a reduction of 15 MMTCO₂E by 2020 (based on the original 2008 Scoping Plan estimates). On December 29, 2011, District Judge Lawrence O'Neill in the Eastern District of California issued a preliminary injunction blocking CARB from implementing LCFS for the remainder of the *Rocky Mountain Farmers Union* litigation. Plaintiffs argued that the LCFS is unconstitutional because it violates the interstate commerce clause, which was intended to stop states from introducing laws that would discriminate against businesses located in other states.

However, in January 2012, CARB appealed that decision to the Ninth Circuit Court of Appeals (Ninth Circuit), and then moved to stay the injunction pending resolution of the appeal. On April 23, 2012, the Ninth Circuit granted CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision. Consequently, the LCFS enforcement injunction is lifted, and CARB is continuing to implement the LCFS statewide.

Senate Bill 97 – CEQA: Greenhouse Gas Emissions

In August 2007, Governor Schwarzenegger signed into law SB 97 – CEQA: Greenhouse Gas Emissions, stating, "This bill advances a coordinated policy for reducing GHG emissions by directing the OPR and the Resources Agency to develop CEQA guidelines on how state and local agencies should analyze, and when necessary, mitigate GHG emissions." Specifically, SB 97 requires OPR to prepare, develop, and transmit to the Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption. The Natural Resources Agency certified and adopted the guidelines on December 31, 2009. The Office of Administrative Law has adopted the guidelines and it became effective on March 18, 2010. The new CEQA guidelines provide the lead agency with broad discretion in determining significance thresholds and the methodology used in assessing the impacts of GHG emissions in the context of a particular project. This guidance is provided because the methodology for assessing GHG emission is expected to evolve over time. The OPR guidance also states that the lead agency can rely on qualitative or other performance based standards for estimating the significance of GHG emissions.

Senate Bill 375

SB 375 was signed and passed into law on September 30, 2008. SB 375 enhances CARB's ability to reach AB 32 goals. Specifically, SB 375 requires CARB to set regional targets for the purpose of reducing GHG emissions from passenger vehicles for years 2020 and 2035. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain review requirements of CEQA.

The targets apply to the regions in the state covered by 18 Metropolitan Planning Organizations (MPOs).

Per SB 375, CARB appointed a Regional Targets Advisory Committee (RTAC) on January 23, 2009 to provide recommendations on factors to be considered and methodologies to be used in CARB's target setting process. The RTAC provided its recommendations in a report to CARB on September 29, 2009. CARB released their draft targets on June 30, 2010, and adopted their final targets on September 23, 2010. For the San Diego area, CARB and SANDAG agreed to adopt 7 percent and 13 percent in per capita GHG emission reductions from passenger vehicles by the years 2020 and 2035, respectively. If a Metropolitan Planning Organization (MPO) does not meet the GHG reduction targets, transportation projects with the purview of that MPO would not be eligible for funding programmed after January 1, 2012.

The San Diego Association of Governments (SANDAG) is the local MPO. SANDAG developed its first Regional Transportation Plan (RTP) subject to the provisions of SB 375, which requires that MPOs prepare a Sustainable Communities Strategy (SCS) as part of the RTP. The SCS must demonstrate how development patterns and the transportation network, policies, and programs can work together to achieve the GHG emission reduction targets for cars and light trucks that will be established by CARB, if there is a feasible way to do so. The SANDAG Board of Directors released the Draft 2050 RTP and its SCS for public review and comment at its April 22, 2011, meeting. The release of the Draft 2050 RTP began the public comment period through June 30, 2011. The Draft 2050 RTP and its SCS were developed following more than two years of planning, technical development, outreach, and public input. The 2050 RTP was approved by the SANDAG Board of Directors on October 28, 2011.

On December 4, 2012, Superior Court ruled that the SANDAG violated state law by failing to fully account for, and take steps to reduce, climate change in its environmental review of the region's long-term transportation plan. At the time of this writing, the plan is being revised.

Executive Order S-13-08

EO S-13-08, signed by Governor Schwarzenegger on November 14, 2008, enhances the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. One key benefit of EO S-13-08 is that it has facilitated California's first comprehensive climate adaptation strategy. This strategy will improve coordination within state government so that better planning can more effectively address climate impacts to human health, the environment, the state's water supply and the economy. Another benefit of EO S-13-08 includes providing consistency and clarity to state agencies on how to address sea level rise in current planning efforts, reducing time and resources unnecessarily spent on developing different policies using different scientific information.

California Greenhouse Gas Programs and Plans

California Energy Commission: New Solar Homes Partnership

The NSHP is a component of the California Solar Initiative and has a goal to produce 400 megawatts of solar electricity on approximately 160,000 homes by year 2017. To qualify for the program, a new home must achieve energy efficiency levels greater than the requirements of the year 2005 Building Title 24 Standards. The builder can choose to comply with either of two tiers of energy efficiency measures: Tier I requires a 15 percent reduction from Title 24 Standards; or Tier II, which requires a 35 percent reduction overall and 40 percent in the building's space cooling (air conditioning) energy compared to Title 24. In addition, all appliances must have an Energy Star rating, which indicates that the appliance is consistent with the international standard for energy efficient consumer products.

California Air Resources Board: Interim Significance Thresholds

In October 2008, CARB released interim guidance on significance thresholds for industrial, commercial and residential projects. The draft proposal for residential and commercial projects states that a project would not be significant if it complies with a previously approved plan that addresses GHG emissions, or meets an energy use performance standard defined as CEC's Tier II Energy Efficiency goal (specified as 35 percent above Title 24 requirements) along with "as yet to be defined" performance standards for water, waste and transportation or is below an "as yet to be developed" threshold for GHG emissions tons per year. As such, CARB did not establish a threshold of significance.

California Air Resources Board: Scoping Plan

On December 11, 2008, CARB adopted the Scoping Plan, as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. The measures in the Scoping Plan approved by the Board will be in place by year 2012, with further implementation details and regulations to be developed, followed by the rulemaking process. Measures applicable to development projects include the following:

- Maximum energy efficiency building and appliance standards, including more stringent building codes and appliance efficiency standards, and solar water heating;
- Use of renewable sources for electricity generation, such as photovoltaic solar associated with the Million Solar Roofs program;
- Regional transportation targets, including integration of development patterns and the transportation network to reduce vehicle travel, as identified in SB 375; and
- Green Building strategy, including siting near transit or mixed use areas; zero-net-energy buildings; "beyond-code" building efficiency requirements; and the use of the CEC's Tier II Energy Efficiency goal.

Relative to transportation, the Scoping Plan includes nine measures or recommended actions. One of these is measure T-3, Regional Transportation-Related Greenhouse Gas Targets, which relies on SB 375 implementation to reduce GHG emissions from passenger vehicles through reducing vehicle miles traveled. The other measures are related to vehicle GHG, fuel and efficiency measures and would be implemented statewide rather than on a project-by-project basis.

In order to assess the scope of the reductions needed to return to 1990 emissions levels, CARB first estimated 2020 BAU GHG emissions in 2008. These are the GHG emissions that would be expected to occur in the absence of any state GHG reduction measures. In 2008, after estimating that statewide 2020 BAU GHG emissions would be 596 metric tons, CARB developed a Scoping Plan that identified measures to reduce BAU emissions by approximately 174 metric tons (an approximate 29 percent reduction) by 2020. As indicated in Table 5.7-1, the majority of reductions are directed at the sectors with the largest GHG emissions contributions (transportation and electricity generation) and involve statutory mandates affecting vehicle or fuel manufacture, public transit, and public utilities.

<u>TABLE 5.7-1</u> <u>CARB 2008 SCOPING PLAN RECOMMENDED GHG REDUCTION MEASURES</u>		
<u>Recommended Reduction Measures</u>	<u>Reductions Counted Towards 2020 Target In MMTCO₂E</u>	
	<u>MMT</u>	<u>% of Total</u>
<u>California Light-Duty Vehicle Greenhouse Gas Standards</u>	<u>31.7</u>	<u>18.22</u>
<ul style="list-style-type: none"> <u>Implement Pavley I Standards</u> <u>Develop Pavley II light-duty vehicle standards</u> 		
<u>Energy Efficiency</u>	<u>26.3</u>	<u>15.11</u>
<ul style="list-style-type: none"> <u>Building/appliance efficiency, new programs, etc.</u> <u>Increase CHP generation by 30,000 GWh</u> <u>Solar Water Heating (AB 1470 goal)</u> 		
<u>Renewables Portfolio Standard (33% by 2020)</u>	<u>21.3</u>	<u>12.24</u>
<u>Low Carbon Fuel Standard</u>	<u>15</u>	<u>8.62</u>
<u>Regional Transportation-Related GHG Targets¹</u>	<u>5</u>	<u>2.87</u>
<u>Vehicle Efficiency Measures</u>	<u>4.5</u>	<u>2.59</u>
<u>Goods Movement</u>	<u>3.7</u>	<u>2.13</u>
<ul style="list-style-type: none"> <u>Ship Electrification at Ports</u> <u>System-Wide Efficiency Improvements</u> 		
<u>Million Solar Roofs</u>	<u>2.1</u>	<u>1.21</u>
<u>Medium/Heavy Duty Trucks</u>	<u>1.4</u>	<u>0.80</u>
<ul style="list-style-type: none"> <u>Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction (Aerodynamic Efficiency)</u> <u>Medium- and Heavy-Duty Vehicle Hybridization</u> 		

TABLE 5.7-1 (cont.) CARB 2008 SCOPING PLAN RECOMMENDED GHG REDUCTION MEASURES		
Recommended Reduction Measures	Reductions Counted Towards 2020 Target In MMTCO ₂ E	
	MMT	% of Total
High Speed Rail	1.0	<1.0
Industrial Measures (for sources covered under cap & trade program) <ul style="list-style-type: none"> Refinery Measures Energy Efficiency and Co-Benefits Audits 	0.3	<0.5
Additional Reductions Necessary to Achieve the Cap	34.4	20.0
Industrial Measures (for sources not covered under cap & trade program) <ul style="list-style-type: none"> Oil and Gas Extraction and Transmission 	1.1	<1.0
High Global Warming Potential Gas Measures	20.2	12.0
Sustainable Forests	5.0	3.0
Recycling and Waste (landfill methane capture)	1.0	0.60
TOTAL ESTIMATED REDUCTIONS COUNTED TOWARDS 2020 TARGET³	174	100 ²
Other Recommended Measures	Estimated 2020 Reductions (MMTCO₂E)	
State Government Operations	1	2.0
Local Government Operations	TBD	TBD
Green Building	26	14.94
Recycling and Waste	9	5.17
Water Sector Measures	4.8	2.76
Methane Capture at Large Dairies	1.0	<1.0

Source: CARB 2008

1. This number represents an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target. CARB will establish regional targets for each Metropolitan Planning Organization following input of the Regional Targets Advisory Committee and a public stakeholders consultation process per SB 375.
- 1-2. Percentages are relative to the total of 174 MMTCO₂E, and may not total 100 due to rounding.

In August 2011, CARB revised its 2020 BAU projections to account for the economic downturn and other factors in their *Supplement to the AB 32 Scoping Plan Functional Equivalent Document* (CARB 2011). As previously mentioned in Section 3.3.7, CARB's revised estimate calculated that BAU 2020 emissions would be approximately 507 MMTCO₂E per year. Thus, in order to reach the 1990 emissions level of 427 MMTCO₂E, an 80 MMTCO₂E (16 percent) reduction was determined to be needed by 2020 (CARB 2011).

It was expected that the new regulations (Pavley I) would reduce GHG emissions from California passenger vehicles by about 31.7 MMT CO₂e (or 18 percent) counted toward the total statewide reduction target (CARB 2008). However, the revised 2011 projections estimate that

Pavley I will reduce GHG emissions from passenger vehicles by about 29.9 MMT CO₂e (or 17 percent), for 37 percent of the total 80 MMT CO₂e reduction target.

CARB has adopted a second, more stringent, phase of the Pavley regulations, termed “Pavley II” [now known as “Low Emission Vehicle (LEV) III”], that covers model years 2017 to 2025. Pavley II was estimated in 2008 to add an additional 4.0 MMT CO₂e for 2 percent of the then-estimated 174 MMT CO₂e reduction total. The revised 2010 projections estimate that Pavley II will reduce GHG emissions from passenger vehicles by 3.8 MMT CO₂e, for 5 percent of the total 80 MMT CO₂e reduction target (per CARB’s 2010 revised projections). These reductions are to come from improved vehicle technologies such as small engines with superchargers, continuously variable transmissions, and hybrid electric drives.

The 18 percent reduction in the intensity of transportation fuels is expected to equate to a reduction of 16.5 MMT CO₂e in 2020 (based on the original 2008 Scoping Plan estimates). However, in order to account for possible overlap of benefits between LCFS and the Pavley GHG standards, CARB has discounted the contribution of LCFS to 15 MMT CO₂e (CARB 2008).

In May 2014, CARB adopted an update to the AB 32 Scoping Plan. The 2014 Update includes both a 2020 element and a post-2020 element. The 2020 element focuses on State, regional, and local initiatives that are currently being implemented to assist the state of California in meeting the 2020 goal. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals.

California Green Building Standards Code

The 2013 updates to the 2010 California Green Building Standards Code referred to as CalGreen will become ~~went~~ into effective in January-July 2014⁴¹. CalGreen is the first-in-the-nation statewide mandatory green building code. California now requires new buildings to reduce its water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and to install low pollutant-emitting finish materials. CalGreen has approximately 52 mandatory measures and additional measures designed to allow local cities to adopt codes that go beyond the state mandatory provisions. Some key mandatory measures for commercial buildings include specified parking for clean air vehicles, a 20-percent reduction of potable water use within buildings (in compliance with the reduced flow-rate table), a 50-percent construction waste diversion from landfills, use of building finish materials that emit low volatile organic compounds, and building commissioning. Other key components include increased reduction in energy usage by up to 30 percent and increased reduction in potable water use, parking for clean air vehicles, cool roofs, construction waste diversion, use of recycled materials, and use of low-emitting resilient flooring and thermal insulation. The CalGreen code includes the critical issue of compliance verification by utilizing the existing building code enforcement infrastructure, and allows local public agencies to incorporate the CalGreen code provisions into their construction field inspections. The mandatory CalGreen measures will be inspected and verified by local building departments.

Local Policies and Regulations

SANDAG: Climate Action Strategy

The SANDAG Climate Action Strategy serves as a guide to help policymakers address climate change as they make decisions to meet the needs of our growing population, maintain and enhance our quality of life, and promote economic stability. The purpose of the strategy is to identify land use, transportation, and other related policy measures that could reduce GHG emissions from passenger cars and light-duty trucks as part of the development of the Sustainable Communities Strategy for the 2050 Regional Transportation Plan in compliance with SB 375. Other policy measures are also identified for buildings and energy use, protecting transportation and energy infrastructures from climate impacts, and to help SANDAG and other local agencies reduce GHG from their operations.

United States Mayors Climate Protection Agreement

The City of San Diego participates in the Cool Cities Program. The Cool Cities Program, in partnership with ICLEI, adopted a voluntary program that strives to meet sustainable goals by reducing GHG emissions and increasing energy efficiency. The participating cities make commitments to stop global warming by signing the United States Mayors Climate Protection Agreement, and also strive to meet the 2030 Challenge (refer to next section for a detailed description of this program). The Cool Cities Program also encourages its members to gradually achieve and complete five milestones: (1) establish a Cool Cities campaign, (2) engage the community to participate, (3) sign the United States Mayors Climate Protection Agreement, (4) take initial solution steps (initiation of early implementation actions), and (5) ultimately perform a global warming audit by adopting milestone, “Advanced Smart Energy Solutions.” The City of San Diego is currently at Milestone 3 of the possible five milestones by being a signatory to United States Mayors Climate Protection Agreement.

The United States Mayors Climate Protection Agreement attempts to enact policies and programs that would reduce global warming pollution levels to 7 percent below year 1990 levels by year 2012, including efforts for conservation, CH₄ recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels. The Agreement also aims to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking the following 12 actions in participating communities:

1. Inventory global warming emissions in City operations and in the community, set reduction targets, and create an action plan.
2. Adopt and enforce land use policies that reduce sprawl; preserve open space; and create compact, walkable urban communities.
3. Promote transportation options such as bicycle trails, commute-trip reduction programs, incentives for carpooling, and public transit.
4. Increase the use of clean, alternative energy by, for example, investing in “green tags,” advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste-to-energy technology.

5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting, and urging employees to conserve energy and save money.
6. Purchase only Energy Star rated equipment and appliances for City use.
7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system.
8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel.
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production.
10. Increase recycling rates in city operations and in the community.
11. Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO₂.
12. Help educate the public, schools, other jurisdictions, professional associations, business, and industry about reducing global warming pollution.

City of San Diego Policies

General Plan Conservation Element. The Conservation Element of the City of San Diego's General Plan establishes a series of goals and objectives which are intended to help reduce climate change impacts of development. While many of these goals and objectives apply to actions to be taken by City government, others represent actions that can be taken by private development such as the proposed project. These applicable goals and policies¹ include:

- CE-A.5. Employ sustainable or "green" building techniques for the construction and operation of buildings.
- a. Develop and implement sustainable building standards for new and significant remodels of residential and commercial buildings to maximize energy efficiency, and to achieve overall net zero energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings. This can be accomplished through factors including, but not limited to:
 - Designing mechanical and electrical systems that achieve greater energy efficiency with currently available technology;
 - Minimizing energy use through innovative site design and building orientation that addresses factors such as sun-shade patterns, prevailing winds, landscape, and sun-screens;
 - Employing self generation of energy using renewable technologies;
 - Combining energy efficient measures that have longer payback periods with measures that have shorter payback periods;
 - Reducing levels of non-essential lighting, heating and cooling; and
 - Using energy efficient appliances and lighting.

¹ Policy numbers correspond to those in the Conservation Element.

- b. Provide technical services for “green” buildings in partnership with other agencies and organizations.
- CE-A.7. Construct and operate buildings using materials, methods, and mechanical and electrical systems that ensure a healthful indoor air quality. Avoid contamination by carcinogens, volatile organic compounds, fungi, molds, bacteria, and other known toxins.
- a. Eliminate the use of chlorofluorocarbon-based refrigerants in newly constructed facilities and major building renovations and retrofits for all heating, ventilation, air conditioning, and refrigerant-based building systems.
 - b. Reduce the quantity of indoor air contaminants that are odorous or potentially irritating to protect installers and occupants’ health and comfort. Where feasible, select low-emitting adhesives, paints, coatings, carpet systems, composite wood, agri-fiber products, and others.
- CE-A.8. Reduce construction and demolition waste in accordance with Public Facilities Element, Policy PF-I.2, or by renovating or adding on to existing buildings, rather than constructing new buildings.
- CE-A.9. Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible, through factors including:
- Scheduling time for deconstruction and recycling activities to take place during project demolition and construction phases;
 - Using life cycle costing in decision-making for materials and construction techniques. Life cycle costing analyzes the costs and benefits over the life of a particular product, technology, or system;
 - Removing code obstacles to using recycled materials in buildings and for construction; and
 - Implementing effective economic incentives to recycle construction and demolition debris.
- CE-A.10. Include features in buildings to facilitate recycling of waste generated by building occupants and associated refuse storage areas.
- a. Provide permanent, adequate, and convenient space for individual building occupants to collect refuse and recyclable material.
 - b. Provide a recyclables collection area that serves the entire building or project. The space should allow for the separation, collection and storage of paper, glass, plastic, metals, yard waste, and other materials as needed.

CE-A.11. Implement sustainable landscape design and maintenance.

- a. Use integrated pest management techniques, where feasible, to delay, reduce, or eliminate dependence on the use of pesticides, herbicides, and synthetic fertilizers.
- b. Encourage composting efforts through education, incentives, and other activities.
- c. Decrease the amount of impervious surfaces in developments, especially where public places, plazas, and amenities are proposed to serve as recreation opportunities (see also Recreation Element, Policy RE-A.6 and A.7).
- d. Strategically plant deciduous shade trees, evergreen trees, and drought tolerant native vegetation, as appropriate, to contribute to sustainable development goals.
- e. Reduce use of lawn types that require high levels of irrigation.
- f. Strive to incorporate existing mature trees and native vegetation into site designs.
- g. Minimize the use of landscape equipment powered by fossil fuels.
- h. Implement water conservation measures in site/building design and landscaping.
- i. Encourage the use of high efficiency irrigation technology, and recycled site water to reduce the use of potable water for irrigation. Use recycled water to meet the needs of development projects to the maximum extent feasible (see Policy CE-A.12).

CE-A.12. Reduce the San Diego Urban Heat Island, through actions such as:

- Using cool roofing materials, such as reflective, low heat retention tiles, membranes and coatings, or vegetated eco-roofs to reduce heat build-up;
- Planting trees and other vegetation, to provide shade and cool air temperatures. In particular, properly position trees to shade buildings, air conditioning units, and parking lots; and
- Reducing heat buildup in parking lots through increased shading or use of cool paving materials as feasible (see also Urban Design Element, Policy UD-A.12).

Existing Greenhouse Gas Levels

Global, National, State, and Local Levels

The United Nations IPCC constructed several emission trajectories of GHG emissions needed to stabilize global temperatures and climate change impacts. The IPCC concluded that a stabilization of GHG at 400 to 450 ppm CO₂e concentration is required to keep global mean warming below 3.6° F (2 degrees Celsius [°C]), which is assumed to be necessary to avoid dangerous climate change.

In year 2004, total GHG emissions worldwide were estimated at 20,135 MMT of CO₂e emissions. The United States contributed the largest portion of greenhouse gas emissions at 35 percent of global emissions. In California, according to the CEC (2006), CO₂ accounts for approximately 84 percent of statewide greenhouse gas emissions, with CH₄ accounting for approximately 5.7 percent, and N₂O accounting for 6.8 percent. Other pollutants account for approximately 2.9 percent of greenhouse gas emissions in California. The transportation sector accounts for 41 percent of emissions statewide. CARB estimates that the year 1990 statewide CO₂e emissions level was 427 MMT. In year 2004, California produced 492 MMT of total

CO₂ equivalent emissions. The total GHG emissions of the entire U.S. were 7,260 MMT of CO₂e emissions in 2005, of which 84 percent was CO₂ emission (EPA 2006). On a national level, approximately 33 percent of GHG emissions were associated with transportation and about 41 percent were associated with electricity generation.

According to the San Diego County GHG Inventory that was prepared by the USD School of Law EPIC in 2008, San Diego County emitted 34 MMT of CO₂e emissions in 2006. The largest contributor of GHG in San Diego County was the on-road transportation category, which comprised 46 percent (16 MMT CO₂e) of the total amount. The second highest contributor was the electricity category, which contributed 9 MMT CO₂e, or 25 percent of the total. Together the on-road transportation and electricity categories comprised 71 percent of the total GHG emissions for the County. The remaining amount was contributed by natural gas consumption, civil aviation, industrial processes, off-road equipment, waste, agriculture, rail, water-borne navigation, and other fuels. By 2020, under the BAU scenario, regional GHG emissions are expected to be 43 MMT of CO₂e emissions.

Existing Levels at the Project Site

In its vacant state, the project site is not a source of GHG emissions. Natural vegetation and soils temporarily store carbon as part of the terrestrial carbon cycle. Carbon is assimilated into plants as they grow, and then dispersed back into the environment when they die. Soil carbon accumulates from inputs of plants, roots, and other living components of the soil ecosystem (i.e., bacteria, worms, etc.). Soil carbon is lost through biological respiration, erosion, and other forms of disturbance.

5.7.2 Impact

Issue 1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Thresholds

~~To date, there are no local, regional, state, or federal regulation establishing a threshold of significance to determine project-specific impacts of GHG emissions on global warming.~~ The recently amended State CEQA Guidelines allow lead agencies to develop significance thresholds for GHG impacts. However, given the small levels of emissions generated by development in relationship to the total amount of GHG emissions discussed above, emissions from typical development projects would not constitute a direct, significant impact. On the other hand, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change.

In order to serve as a guide for determining when a project triggers the need for a GHG significance determination, the City of San Diego has established an interim screening threshold for GHG emission analysis. Based on guidance in the CAPCOA report “CEQA & Climate Change,” dated January 2008, the City is using an annual generation rate of 900 MT of GHG emissions to determine when further GHG analysis is required.

The City of San Diego (City) released an updated memorandum dated August 18, 2010, titled Addressing Greenhouse Gas Emissions from Projects Subject to CEQA. As provided in the memorandum, the City is using an annual generation rate of ~~The CAPCOA report references~~ 900 MT as a conservative screening threshold for requiring further GHG analysis and mitigation. This emission level is based on the amount of vehicle trips, typical energy and water use, and other factors associated with projects. Table 5.7-42, *Project Types that Require a GHG Analysis and Mitigation*, identifies project types and sizes that are expected to emit approximately 900 MT or more of GHG emissions.

Table 5.7-42 PROJECT TYPES THAT REQUIRE A GHG ANALYSIS AND MITIGATION	
Project Type	Project Size that Generates Approximately 900 MT of GHG Emissions per Year
Single-Family Residential	50 units
Apartments/Condominiums	70 units
General Commercial Office Space	35,000 sf
Retail Space	11,000 sf
Supermarket/Grocery Space	6,300 sf

Note: For project types that do not fit the categories in this table, a determination on the need for a GHG analysis will be made on a case-by-case basis, based on whether the project could generate 900 MT or more of GHG emissions.

According to CARB's 2008 Scoping Plan, AB 32's goal of reducing GHGs to year 1990 levels by year 2020 would amount to a 28.3 percent reduction in emissions below BAU levels, accounting for growth in the state of California. BAU condition is defined as the emissions that would have occurred in the absence of reductions mandated under AB 32 (based on 2005 Building Code standards)². Although in 2011, CARB prepared a *Final Supplement to AB 32 Scoping Plan Functional Equivalent Document*, which reduced the BAU 2020 projections from 507 to 80 MMTCO₂E, based on the recent economic downturn and incorporation of Pavley I and 33% RPS, the City believes that it is more appropriate to rely on the more conservative BAU estimate and the 28.3 percent reduction goal contained in the 2008 Scoping Plan.

Based on this guidance from State CEQA Guidelines, the City, CAPCOA, and CARB, if the project would generate GHG emissions in excess of 900 MT per year, additional GHG analysis and mitigation/emissions reduction measures are required. A reduction of the project's GHG emissions by at least 28.3 percent over that which would have been expected to occur in the BAU condition will result in a conclusion of no significant impact. Absent a reduction of GHG emissions of at least 28.3 percent, the impact is considered significant.

² 2005 Building Code standards are used because they were the adopted standards at the time AB 32 was adopted.

Impact Analysis

Because the size and/or number of proposed uses of the project would be larger than those identified in Table 5.7-2, the proposed project would generate more than 900 MT of GHG per year. Consequently, a quantitative analysis of project GHG emissions was conducted to determine potential impacts related to GHG emissions (HELIX 2012b).

The proposed project would generate GHG emissions during construction and operation of the project. Short-term emissions would be generated during project construction. Operational emissions would be generated by energy use, water consumption, solid waste generation, and traffic generated by the project. Potential impacts associated with GHG construction and operational emissions and the methodology used to calculate project GHG emissions is discussed below.

Methodology

GHG emissions were calculated using URBEMIS 2007. URBEMIS, which stands for “Urban Emissions,” is an air quality computer modeling program that estimates air pollution emissions for various land uses, area sources, construction projects, and project operations. The URBEMIS 2007 model uses the CARB EMFAC2007 model for on-road vehicle emissions and the OFFROAD2007 model for off-road vehicle emissions. URBEMIS 2007 includes ROG, NO_x, CO, SO_x, PM₁₀, PM_{2.5}, and CO₂ emissions factors.

Emissions are classified as direct and indirect. Direct emissions are associated with the production of emissions at the site. These would include the combustion of natural gas in heaters or stoves, the combustion of fuel in engines or construction vehicles, and fugitive emissions from valves and connections, which include methane as a component. Indirect emissions include the emissions from vehicles (both gasoline and diesel) delivering materials and equipment to the project site or the use of electricity. Electricity produces emissions because of the common use of fossil fuels for the generation of electricity, especially in Southern California. Indirect GHG emissions are also associated with water use, as electricity is required to pump and treat water that would be used at the project site. Indirect GHG emission associated with trash services, and other services that might visit the project site are accounted for in the URBEMIS calculations, which incorporate the vehicle travel of diesel trucks that would visit and service the project site.

CAPCOA acknowledged that there is currently not one model that is capable of estimating all of a project’s direct and indirect GHG emissions (CAPCOA 2008). However, CAPCOA has determined that the URBEMIS model is the best available model designed to model emissions associated with development of urban land uses. URBEMIS is publicly available and already widely used by CEQA practitioners and air districts. The decision to continue using the URBEMIS or CalEEMod model is up to the lead agency. Since the NOP was released in May 2010, the City of San Diego has approved the use of URBEMIS model for this project.

Construction Greenhouse Gas Emissions

GHG emissions would be associated with project construction through use of heavy equipment and vehicle trips. GHG emissions generated during project construction would be temporary and limited to the construction phases of the project. Emissions of CO₂ during construction of the

proposed project were calculated using the URBEMIS 2007 computer program. The URBEMIS model does not provide estimates of emissions of other GHG from construction (such as N₂O and CH₄); however, these emissions would be negligible in comparison with emissions of CO₂ and would not considerably contribute to the total GHG construction emissions.

Construction emissions were calculated for three different construction phasing scenarios, including:

- Scenario 1: sequential construction of Phases 1, 2, and 3;
- Scenario 2: concurrent construction of Phases 1 and 2 followed by construction of Phase 3; and
- Scenario 3: concurrent construction of Phases 1, 2, and 3.

Based on construction schedule estimates provided in the project Traffic Impact Analysis (USAI 2012; Draft EIR Appendix C), Scenario 1 assumes durations of 28 months for construction of Phase 1 (occurring within 3 calendar years), 22 months for Phase 2 (occurring within 2 calendar years), and 31 months for Phase 3 (occurring within 4 calendar years). Under Scenario 2, concurrent construction of Phases 1 and 2 is assumed to take 28 months (occurring within 4 calendar years), and Phase 3 would take 31 months (occurring within 4 calendar years). Scenario 3 assumes a total duration of 40 months to concurrently construct Phases 1, 2, and 3 (occurring within 4 calendar years). The phasing schedule is an estimate only subject to change based upon market conditions.

Tables 5.7-3 through 5.7-5 (*Construction Scenario 1 - Total Construction GHG Emissions; Construction Scenario 2 - Total Annual Construction GHG Emissions; and Construction Scenario 3 - Total Annual Construction GHG Emissions*) present a summary of total construction GHG emissions for each of the three analyzed construction phasing scenarios per calendar year of project construction. GHG emission estimates were prepared to evaluate the total annual emissions per phase based on the project construction schedule for each calendar year of project construction.

Table 5.7-3 CONSTRUCTION SCENARIO 1 - TOTAL CONSTRUCTION GHG EMISSIONS			
Construction Year	Phase 1	Phase 2	Phase 3
Year 1 Construction Totals	83.45	--	--
Year 2 Construction Totals	1,198.58	--	--
Year 3 Construction Totals	1,069.97	--	--
Year 4 Construction Totals	17.05	944.05	--
Year 5 Construction Totals	--	335.47	274.56
Year 6 Construction Totals	--	--	515.06
Year 7 Construction Totals	--	--	917.44
Year 8 Construction Totals	--	--	407.74
TOTAL per Phase (tons)	2,369.05	1,279.52	2,114.80
TOTAL per Phase (metric tons)	2,149.16	1,160.76	1,918.51
TOTAL for entire Construction (metric tons)			5,228.43

Source: HELIX 2012b

Table 5.7-4 CONSTRUCTION SCENARIO 2 - TOTAL CONSTRUCTION GHG EMISSIONS		
Construction Year	Phases 1 and 2	Phase 3
Year 1 Construction Totals	72.35	--
Year 2 Construction Totals	1,788.07	--
Year 3 Construction Totals	1,718.29	--
Year 4 Construction Totals	29.22	--
Year 5 Construction Totals	--	274.56
Year 6 Construction Totals	--	515.06
Year 7 Construction Totals	--	917.44
Year 8 Construction Totals	--	407.74
TOTAL per Phase (tons)	3,607.93	2,114.80
TOTAL per Phase (metric tons)	3,273.06	1,918.51
TOTAL for entire Construction (metric tons)		5,191.57

Source: HELIX 2012b

Table 5.7-5 CONSTRUCTION SCENARIO 3 - TOTAL CONSTRUCTION GHG EMISSIONS	
Construction Year	Phases 1, 2, and 3
Year 1 Construction Totals	100.74
Year 2 Construction Totals	3,215.27
Year 3 Construction Totals	2,480.21
Year 4 Construction Totals	2,200.97
TOTAL entire Construction (tons)	7,997.19
TOTAL for entire Construction (metric tons)	7,254.92

Source: HELIX 2012b

As shown in Tables 5.7-3 through 5.7-5, total construction GHG emissions associated with construction Scenario 1 would be approximately 5,228 MT, approximately 5,192 MT for construction Scenario 2, and approximately 7,255 MT for construction Scenario 3. For the construction emissions, the interim City guidance recommends amortizing construction GHG emissions over a 30-year period to account for their contribution to project lifetime GHG emissions. Amortized over 30 years, the proposed construction activities for construction Scenarios 1, 2, and 3 would contribute a total of approximately 174 MT, 173 MT, and , 242 MT per year, respectively. The GHG emissions associated with all three analyzed construction phasing scenarios would be less than the 900 MT screening threshold. Project construction under any of the analyzed construction phasing scenarios, therefore, would result in less than significant impacts related to GHG emissions.

Operational Greenhouse Gas Emissions

Operation of the proposed project would result in GHG emissions generated by energy use, water consumption, solid waste generation, and traffic generated by the project.

Energy Use

Emissions associated with energy use would be generated from the combustion of fossil fuels to provide energy for the proposed project. The proposed project is assumed to use purchased electricity for cooling, appliances and plug-loads, and natural gas for cooking and water heating. GHG emissions from the proposed project were estimated based on an annual energy use of 13.55 kilowatt-hours (kWh) per sf for commercial and 5,627 kWh per dwelling unit for residential units. Emissions were estimated based on factors from the California Climate Action Registry General Reporting Protocol (Protocol), which assumes that energy use (electricity) would have emissions of 724.12 ~~804.54~~ pounds per MWh (lbs/MWh) of CO₂, 0.0302067 lbs/MWh of CH₄, and 0.008137 lbs/MWh of N₂O. As shown in Table 5.7-6, *Total Estimated Operational GHG Emissions Under BAU Conditions*, the resultant GHG emissions would be approximately 6,293 ~~5,576~~ MT per year of CO₂e from electricity usage associated with the proposed project.

Emissions associated with natural gas usage were calculated based on South Coast Air Quality Management District (SCAQMD) estimated natural gas usage of 2.9 cf of natural gas per sf per month (cf/sf) for commercial, 2.0 cf/sf per month for retail, and 4,012 cf per dwelling unit for residential units. The Protocol assumes that natural gas combustion would have emissions of 53.05 kg/million British thermal units (MMBTU) of CO₂, 0.0059 kg/MMBTU of CH₄, and 0.0001 kg/MMBTU of N₂O. As shown in Table 5.7-6, the resultant GHG emissions would be approximately 2,887 ~~2,889~~ MT per year of CO₂e emissions from natural gas usage associated with the proposed project.

Water Consumption

Water use and energy use are often closely linked. The provision of potable water to commercial and residential consumers requires large amounts of energy associated with five stages: (1) source and conveyance, (2) treatment, (3) distribution, (4) end use, and (5) wastewater treatment. According to the *Water Supply Assessment Report for the San Diego Corporate Center* (City of San Diego 2011c), the potable water demand for the proposed project would be approximately 208,138 gallons per day or 0.64 acre-feet (AF)³. Based on this, it is anticipated that the proposed project would require approximately 75,970,370 gallons per year or 233 AF per year (AFY).

The CEC estimates that in southern California, water usage will have an embodied energy of 12,700 kWh per million gallons. CO₂ emissions were calculated on the maximum basis of an additional 75.97 million gallons annually times 12,700 kWh per million gallons. Thus, the proposed project would indirectly produce a net increase of approximately 964.8 MWh of electricity requirements for water supply and distribution. GHG emissions were calculated based on the Protocol, which assumes that energy use (electricity) would have emissions of 724.12 ~~804.54~~ lbs/MWh of CO₂, 0.0302067 lbs/MWh of CH₄, and 0.008137 lbs/MWh of N₂O. As shown in Table 5.7-6, the resultant GHG emissions would be approximately 450 ~~353~~ MT per year of CO₂e from water consumption associated with the proposed project.

³ One acre foot of water is 325,851 gallons (enough water to cover a one-acre area one foot deep in water).

Solid Waste Generation

The proposed project would also generate solid waste during the operation of the project. The solid waste emissions in some disposal methods are released slowly over a period of years. Different types of organic matter have different methane generation potentials based on carbon content of the wastes. Waste generated is generally the gross amount of waste produced by the proposed project. Solid waste disposed is the net amount of waste following the effects of any diversion efforts (e.g., recycling or reuse), and must be the quantity used for GHG calculations.

Solid waste generation rates were estimated from the CIWMB's *Solid Waste Characterization: Guidelines for Preparation of Environmental Assessment for Solid Waste Management* (CIWMB 2010). Based on data from the CIWMB, the residential/commercial mixed uses were assumed to generate 0.0108 tons/sf/year. Waste collection trucks are accounted for in the URBEMIS2007 model, which incorporates diesel trucks that would visit and service the proposed project site. As shown in Table 5.7-6, it is estimated that the combined GHG emissions from solid waste produced by the project and the trucks hauling it to the local landfill would equate to approximately 90 MT per year of GHG emissions would be generated from the waste collection activities at the project site.

Vehicle Use

Mobile-source GHG emissions were estimated based on the projected ADTs from the Traffic Impact Analysis (USAI 2011). Emissions of CO₂ and CH₄ were obtained from the EMFAC2007 model. Emissions of N₂O were estimated based on the Protocol (CCAR 2009), which is based on current CARB vehicle emission standards. Based on the maximum of approximately 26,961 ADT projected for the proposed project, emissions of CO₂e vehicle GHG emissions were estimated at 13,816 MT per year.

As shown in Table 5.7-6, the total estimated project-related operational GHG emissions under BAU conditions are 22,849 MT of CO₂e emissions per year.

Table 5.7-6 TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS UNDER BAU CONDITIONS				
Emission Source	Annual Net Emissions (MT/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ Equivalents
Electricity Use Emissions	6,2665,567	0.026140.0475	0.07020.0263	6,2935,576
Natural Gas Use Emissions	2,88078	0.3203	0.0054	2,8897
Water Consumption Emissions	448352	0.0187029	0.005016	450353
Solid Waste Emissions	90	0.0003	0.0002	90
Vehicular Use Emissions	12,604	3.5657	3.6674	13,816
Global Warming Potential Factor	1	21	310	--
TOTAL CO₂ Equivalent Emissions	22,72223,538			

Source: HELIX 2012b and 2014

Total Project Greenhouse Gas Emissions

The total GHG emissions that would be generated by the project are the sum of amortized construction GHG emissions plus the total operational emissions. As discussed above, construction GHG emissions were calculated for three construction phasing scenarios. The total project GHG emissions accounting for each of the analyzed construction phasing scenarios are summarized in Table 5.7-7, *Total Project GHG Emissions*.

Table 5.7-7 TOTAL PROJECT GHG EMISSIONS (MT Per Year)			
Emissions Source	Construction Scenario 1	Construction Scenario 2	Construction Scenario 3
Amortized Construction	174	173	242
Operations	22,72223,538	22,72223,538	22,72223,538
TOTAL	23,71222,896	23,71122,895	23,78022,964

Source: HELIX 2012b and 2014

Greenhouse Gas Emissions Reduction Measures

As discussed earlier, achieving the goal of AB 32 to reduce GHG emissions by the year 2020 is expected to require each new project to reduce its GHG emissions by at least 28.3 percent over

the BAU condition, based on the more conservative GHG reduction goals 2008 Scoping Plan. For the proposed project, this reduction is expected to be achieved through a combination of state and federal reduction measures, and GHG-reducing measures that can be incorporated into the proposed project. As outlined above, project reduction of GHG emissions by 28.3 percent below BAU levels is consistent with the goals of AB 32 and would not result in potentially significant GHG impacts. Specific project design features and GHG reduction measures have been incorporated into the project design. These project design features and GHG reduction measures, described below, would reduce emissions of GHG by implementing energy efficiency measures, water conservation measures, and programs to reduce VMT.

Existing State Reduction Measures

As discussed in CARB's *Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit*, vehicular emissions are the greatest contributor to GHG emissions. As identified in Table 5.7-8, implementation of state GHG reduction measures will reduce mobile-source GHG emissions related to the proposed project. As shown in Table 5.7-5, and as discussed in the ARB's *Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit*, vehicular emissions are the greatest contributor to GHG emissions. Because the applicant does not have direct control over the types of vehicles or emission/fuel standards, the effect of California programs to reduce GHG emissions from vehicles was evaluated. In addition, the difference between cumulative trips and driveway trips was considered in the analysis to account for the placement of mixed office and retail in the vicinity of residential and commercial uses, which would allow for internal trips.

Based on the San Diego County GHG Inventory (SDCGHGI) Table 2, *Recommended Greenhouse Gas Reduction Measures*, in the adopted 2008 Scoping Plan, as shown on Table 5.7-1, the percent reductions in GHG emissions anticipated through implementation of the Federal CAFE standards, LCFS, and AB 1493 fuel efficiency standard (analogous to the Federal CAFE standard), as well as the effect of light/heavy vehicle efficiency/hybridization programs can be estimated. Based on state standards, emissions from vehicles would be reduced by 18.22 percent through implementation of the Pavley standards, 8.62 percent through LCFS, 2.87 percent through regional transportation-related GHG targets, 2.59% vehicle efficiency measures, and 0.80 percent by the light/heavy vehicle aerodynamic efficiency/hybridization standard. Based on that study, emissions from vehicles would be reduced by 14.06 percent through implementation of the Federal CAFE standard/AB 1493 standard, 6.6 percent through LCFS, and 0.62 percent by the light/heavy vehicle aerodynamic efficiency/hybridization standard. Emissions from vehicles would therefore be reduced by as much as 33 percent from state and federal programs by the year 2020. It should be noted that on December 29, 2011, District Judge Lawrence O'Neill in the Eastern District of California issued a preliminary injunction blocking ARB from implementing LCFS for the remainder of the *Rocky Mountain Farmers Union* litigation. there currently is some uncertainty of relying on the 6.68.62 percent reduction of the LCFS. It is included in the GHG emissions reductions calculations provided in this section, but the determination of whether the project would meet the 28.3 percent reduction target is evaluated both with and without the LCFS.

In addition to the AB 1493 fuel efficiency standards and the LCFS, included in the ARB's Scoping Plan are strategies to reduce emissions by increasing efficiency, optimizing

aerodynamics, and converting combustion only vehicles to hybrids. According to the SDCGHGI, although these on-road emissions reduction measures are intended for implementation at the state level, several on-road transportation strategies were scaled down to San Diego County using data related to CO₂e emissions, vehicle population, and vehicle type. Based on the information in the 2008 Scoping Plan, presented in Table 5.7-1, emissions from energy use would be reduced by 12.24 percent through Renewable Portfolio Standards, 15.11 percent through energy efficiency (building/appliance efficiency, increase HP generation, and solar water heating), 14.94 percent through Green Buildings, and 1.21% through million solar roof programs. Emissions from energy use would, therefore, be reduced by as much as 44 percent by the year 2020. According to the SDCGHGI, implementation of the 20 percent RPS goal by 2010 would reduce GHG emissions by a further 14 percent from 2006 levels; the inventory estimated that SDG&E was providing 5 percent of its electricity from renewable resource in 2006. To account for the implementation of the 20 percent RPS, a 15 percent reduction in GHG emissions was assumed. While implementation of EO S-21-09 (i.e., the 33 percent RPS) will result in additional GHG reductions of 27 percent below 2006 levels, no additional credit was taken for these reductions because they have not yet been promulgated or adopted by the ARB.

Table 5.7-8, *Existing State Measures for Greenhouse Gas Emissions Reductions*, presents the GHG emissions reductions due to existing state measures. As identified, a total reduction of approximately 5,947,742 MT per year of GHG emissions would occur from implementation of the state measures (including the LCFS reduction). Without the LCFS reduction, a total reduction of approximately 5,035-6,551 MT per year would occur.

Table 5.7-8 EXISTING STATE MEASURES FOR GREENHOUSE GAS EMISSIONS REDUCTIONS (MT Per Year)				
Measure	Sector	Percent Reduction from BAU (Sector Specific) ¹	BAU CO ₂ e/Sector ²	CO ₂ e Reduced ³
Renewable Portfolio Standard (20% by 2020)	Energy Use	8.10%	5,576	451.66
Million Solar Roof	Energy Use	1.21%	6,293	76.15
Electricity Energy Efficiency (AB 32)	Energy Use	15.11%11.67%	6,2935,576	950.87650.72
Renewable Portfolio Standard (33% by 2020)	Energy Use	12.24%13.00%	6,2935,576	770.26724.88
2008 Title 24 Energy Code Requirements (Green Buildings)	Natural Gas/Energy Use	14.94%15.00%	9,1827,863	1,371.791,179.45
Assembly Bill 1493 (Payley Standards)	Transportation	18.22%14.06%	13,816	2,517.281,942.53
Executive Order S-1-07 (Low Carbon Fuel Standard)	Transportation	8.62%6.6%	13,816	1,190.94911.86

Table 5.7-8 (cont.) EXISTING STATE MEASURES FOR GREENHOUSE GAS EMISSIONS REDUCTIONS (MT Per Year)				
Measure	Sector	Percent Reduction from BAU (Sector Specific)¹	BAU CO₂e/Sector²	CO₂e Reduced³
Medium/Heavy Duty Vehicles (Aerodynamic Efficiency and Vehicle Hybridization)	Transportation	<u>0.80%</u> 0.62%	13,816	<u>110.53</u> 85.66
<u>Regional Transportation-related GHG Targets</u>	<u>Transportation</u>	<u>2.87%</u>	<u>13,816</u>	<u>396.52</u>
<u>Vehicle Efficiency Measures</u>	<u>Transportation</u>	<u>2.59%</u>	<u>13,816</u>	<u>357.83</u>
Subtotal – MT of CO₂e Reduced				<u>5,946.76</u>7,742.17

¹ Percent Reduction from BAU calculated based on the CARB Scoping Plan reductions for sector-specific activity (e.g., LCFS Reductions Counted Towards 2020 Target is 15 MMT CO₂e and Projected 2020 BAU Transportation emissions are ~~225.4174~~ MMT CO₂e, therefore 15 MMT CO₂e ÷ ~~174225.4~~ MMT CO₂e = ~~8.6266%~~ 8.6266%). CARB Scoping Plan, December 2008

² Emissions available from Table 10, by sector: Total Greenhouse Gas Emissions (Annual) BAU without Consideration of Project Design Features and/or State and Federal Mandates.

³ CO₂e Reduction is quantified by multiplying the Percent Reduction from BAU (Sector Specific) by the BAU CO₂e/Sector mtpy value.
Source: HELIX 2012b and 2014

Project Design GHG Reduction Features

Although building and landscape plans have not been prepared for the proposed project. It is anticipated that future development within the proposed project will incorporate a number of design features which would reduce the GHG emissions generated by the project. These features would be incorporated in response to state regulations like the Cal Green Building Code, which mandates specific energy reduction which would in-turn serve to reduce GHG emissions. Other features would be expected to be incorporated to meet the goals of the City's Conservation Element. The proposed project would incorporate design features intended to reduce estimated GHG emissions generated by a mixed-used development. GHG Emissions reductions for mixed-use land uses can be achieved through a combination of existing technologies and project design features. Below is a list of possible features that can be combined to achieve the specified targets for each source category. These design feature options would be combined as necessary according to whole-building energy simulations. However, not all of the listed measures are suitable for all of the building types. The list represents only a sampling of many possible design features, and over time, it is likely that new technologies and building techniques may provide alternative strategies to reach the same performance levels. That is, this list is meant to be illustrative of the ways in which the proposed project can achieve the specified performance targets relative to the pre-2005 building and other municipal codes. CAPCOA's GHG document explains that the listed "measures can be included as design features of a project, "but emphasizes that they "should not be considered in isolation, but as part of a larger set of measures that, working together, will reduce GHG emissions and the effects of global warming" (CAPCOA 2010). These GHG reduction feature options and the respective GHG emissions reductions are discussed below. Each source category, the reduction percentage associated with

implementing the GHG reduction features listed below, and the estimated quantitative GHG emissions reduction are summarized in Table 5.7-9, *GHG Reduction Features for Greenhouse Gas Emissions Reductions*. As identified in the table, incorporation of design features would result in GHG emissions reductions of approximately 2,542,038 MT per year. The assumptions for the project design features were obtained from CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*, (CAPCOA 2010). The GHG reduction feature numbers correspond to the CAPCOA measure numbers listed in the referenced CAPCOA report.

Project Design Building Energy GHG Reduction Feature BE-1: The CalGreen building code currently requires new construction to exceed Title 24 (2008) energy conservation requirements by 25 percent. The project proponent must demonstrate compliance with the code by documenting that sufficient conservation measures have been incorporated into the project to achieve the mandated 25 percent reduction. Energy conservation features which would help achieve the additional 20 percent reductions include: ~~Construction of new buildings shall exceed Title 24 (2005) energy requirements by 20 percent. In the event Title 24 is amended such that the energy conservation requirements exceed Title 24 (2005) by more than 20 percent, the project shall comply with the amended Title 24. The proposed project could include, but are not limited to, the following energy saving and emission reducing features that would be implemented during the design and construction of each new building (other than sets/façades):~~

- Installing energy efficient heating and cooling systems, equipment, and control systems;
- Installing consumption feedback modules to provide real-time and historical feedback to residents on their homes' energy consumption;
- Installing energy efficient appliances (e.g., ENERGY STAR refrigerators, clothes washers, clothes dryers, dishwashers, ventilation fans, and ceiling fans);
- Installing efficient lighting and lighting control systems;
- Installing efficient pumps and motors for pools and spas;
- Installing light-emitting diodes for traffic and street lighting;
- Installing light-colored cool roofs;
- Providing education on energy efficiency, waste diversion, and recycling services to employees through new employee orientation materials and three times annually through company website, exhibits, or meetings on energy conservation;
- Prohibit HVAC, refrigeration, and fire suppression equipment that contains banned chlorofluorocarbons;
- For mechanically or naturally ventilated spaces in the building, meet the minimum requirements of Section 121 of the California Energy Code or the applicable local code, whichever is more stringent;
- Adhesives, paints, stains, coatings, and carpet shall be low volatile organic compound; and
- Minimum Efficiency Reporting Value 6 or higher filters are installed on central air and heating systems.

Incorporation of the following features into subterranean parking garages would also reduce GHG emissions from energy consumption:

- Demand control ventilation (ventilation provided in response to actual number of occupants and activity); and
- Efficient lighting with emphasis on energy conservation.

CalGreen building standards estimates that incorporation of combinations of these features could reduce GHG emissions related to energy consumption by as much as 20 percent. Thus, as shown in Table 5.7-9, implementation of a combination of the features could result in a 20-percent reduction from BAU (sector specific) and an annual reduction in GHG emissions by approximately ~~1,573~~1,836 MT CO₂e.

Water Use GHG Reduction Project Design Feature WUW-1: The proposed project can achieve energy savings and emissions reduction through indoor and outdoor water conservation measures including: ~~By specifying the indoor and outdoor water conserving fixtures below, the proposed project would reduce potable water consumption by approximately 30 percent (equivalent to the performance level required to receive water efficiency credit under the US Green Building Council Leadership in Energy and Environmental Design for New Construction (version 2.2) (Water Efficiency credit 3.1). Installation of new water features shall exceed the water conservation requirements by 30 percent. The proposed project could include, but are not limited to, the following indoor and outdoor water conservation project design features:~~

Outdoor:

- Water efficient landscaping; e.g., proper hydro-zoning, turf minimization, and use of native/drought tolerant plant materials;
- Use of available reclaimed water for landscape irrigation;
- Installation of the infrastructure to deliver and use reclaimed water;
- Expanded use of high efficiency irrigation systems, including weather-based irrigation controllers with rain shutoff technology or smart irrigation controllers for any area that is either landscaped or designated for future landscaping; and
- Provide education on water conservation to employees through new employee orientation materials and three times annually through company website, exhibits, or meetings on energy conservation.

Indoor:

- High efficiency toilets: 1.28 gallons/flush or less (All Applications);
- High efficiency urinals: 0.5 gallons/flush or less (Commercial Applications);
- Restroom faucets: 1.5 gallons/minute or less (All Applications);
- Pre-rinse spray valve: 1.6 gallons per minute or less for commercial kitchens;
- Kitchen faucets: 2.0 gallons/minute or less for residential applications;

- Shower heads: 2.0 gallons/minute or less (Residential Applications);
- Public restrooms: self-closing faucets (Commercial Applications);
- High efficiency clothes washers (water factor of 6.0 or less) (Residential Applications); and
- High efficiency dishwashers (Energy-Star rated or equivalent) (Residential Applications).

CalGreen building standards estimates that incorporation of combinations of these features could reduce GHG emissions related to water consumption by as much as 30 percent. Thus, As shown in Table 5.7-9, implementation of a combination of these water conservation features could result in a 30-percent reduction from BAU (sector specific) and an annual reduction in GHG emissions by 406-135 MT CO₂e.

Solid Waste GHG Reduction Features ~~*Project Design Feature SW-1 and SW-2:*~~ The proposed project shall implement the following:

- Work with City to establish a solid waste diversion target of up to 65 percent for non-hazardous operational waste;
- During construction, a minimum of 65 percent of non-hazardous demolition and construction debris by weight from construction of new project buildings would be recycled and/or salvaged for reuse; and
- Recycling centers: provide readily accessible areas to serve the entire building for depositing, storage, and collection of non-hazardous materials for recycling.

City of San Diego's Draft CMAP estimates that incorporation of combinations of these features could reduce GHG emissions related to solid waste management by up to 13 percent. Thus, as shown in Table 5.7-9, implementation of a combination of these waste management practices could result in a five-percent reduction from BAU (sector specific) and an annual reduction in GHG emissions by 4.5 MT CO₂e.

Land Use and Transportation GHG Reduction ~~*Project Design Feature LUT-3:*~~ The land uses and transportation related GHG emissions reductions from the proposed project can be evaluated in three respects: (1) they can be considered with respect to the goals of applicable climate action plans; (2) they can be considered with respect to reductions anticipated through implementation of the Transportation Demand Management program; and (3) different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be accommodated by non-automobile modes of transport. The following components of the mixed-use development and Transportation Demand Management programs have been evaluated with respect to their potential impact on GHG emissions: The proposed project includes the following land use and transportation features which would reduce GHG emissions by reducing vehicle miles travelled (VMT) or increasing net miles per gallon.

- Mixed-used development:
 - Reduce VMT;
- Bicycle and pedestrian-friendly environment:
 - Reduce VMT;

- Ride Link/Rideshare/carpool/vanpool promotion and support:
 - Increase (net) miles per gallon;
- TDM Association / Coordinator for the tenants of One Paseo:
 - Reduce VMT, potentially increase net miles per gallon (e.g., rideshare/carpool/vanpool);
- Rideshare Program:
 - Reduce VMT, potentially increase net miles per gallon (e.g., rideshare/carpool/vanpool);
- ~~Rapid Bus Route 473:~~
 - ~~Reduce VMT, potentially increase net miles per gallon (e.g., rideshare/carpool/vanpool);~~
- Transit Passes for employees and tenants:
 - Increase (net) miles per gallon.
- Flexible work schedules and telecommuting programs:
 - Reduce VMT;
- Alternative work schedules:
 - Reduce VMT;

~~The TIA for the proposed project (USAI 2011) concludes that the mixed use trip reduction of 1,404 ADT (five percent) and Transportation Demand Management program (one percent) can be credited with a six percent reduction in transportation related GHG emissions, and an annual reduction in GHG emissions by 828.96 MT CO₂e. In order to more accurately estimate the GHG reductions related to the land use and transportation features associated with the project, potential reductions were determined using the percent VMT reduction method from the CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* guidance for LUT-3. These calculations are presented in Appendix G and G.1.~~

CAPCOA estimates that the GHG reductions from mixed use projects are expected to range between 9 and 30 percent. As indicated in the analysis contained in Appendix G and, as shown in Table 5.7-9, the mixed use character of the proposed project maximizes the reductions identified by CAPCOA and would result in a 29.4 percent reduction from BAU (sector specific) and an annual reduction in GHG emissions by 4,062 MT CO₂e.

Table 5.7-9 PROJECT-LEVEL DESIGN GHG REDUCTION FEATURES FOR GREENHOUSE GAS EMISSIONS REDUCTIONS (MT Per Year)					
Category - Feature	Sector	2010 CAPCOA Report Measure	Percent Reduction from BAU (Sector Specific)	BAU CO ₂ e/Sector	CO ₂ e Reduced
Building Energy Use – Energy efficient features	Natural Gas/Energy Use	BE-1	20%	<u>9,182</u> 7,863	<u>1,572.60</u> <u>1,836.40</u>
Water Use – Water conservation features	Water Use Related Emissions	WUW-1	30%	<u>353</u> <u>450</u>	<u>135.00</u> <u>105.90</u>
Solid Waste Generation – Waste management practices	Municipal Solid Waste Generation	SW-1 and SW-2	5%	90	4.50
Mixed-use Developments – Reduced VMT	Transportation	LUT-3	<u>29.4%</u> 6%	13,816	<u>4,061.90</u> 28.96
Subtotal – MT of CO₂e Reduced					<u>6,037.80</u> <u>2,511.96</u>

Note: CO₂e Reduction is quantified by multiplying the Percent Reduction from BAU (Sector Specific) after the implementation of the state measure BAU CO₂e/Sector mtpy value found in Table 5.7-8.

Source: HELIX 2012b and 2014

Summary of GHG Emissions Reductions

Accounting for the state reduction measures and potential project design GHG reduction features, a total reduction of approximately 8,459~~13,780~~ MT per year of CO₂e emissions would occur (including the LCFS reduction). ~~Absent the LCFS reduction, a total of 7,546 MT per year of CO₂e emissions would occur.~~ As shown in Table 5.7-10, *Summary of Estimated Total Project Greenhouse Gas Emissions with GHG Reductions*, this equates to a 58.11~~36.9~~-percent reduction in emissions below BAU levels, for construction Scenarios 1 and 2 ~~(including the LCFS reduction and a 46.91~~33.0 percent reduction without it), and 36.85~~7.95~~ percent for construction Scenario 3 ~~(including the LCFS reduction and a 32.9 percent reduction without it)~~. Because reductions would be at least 28.3 percent ~~with or without the LCFS reduction~~, no significant GHG emissions impacts would occur as a result of the project regardless of the construction phasing scenario.

Table 5.7-10 SUMMARY OF ESTIMATED TOTAL PROJECT GREENHOUSE GAS EMISSIONS WITH GHG REDUCTIONS (MT Per Year)			
	Construction Scenario 1 (%)	Construction Scenario 2 (%)	Construction Scenario 3 (%)
BAU Total Project Emissions	22,89623,712	22,89523,711	22,96423,780
State Measures Emissions Reductions	-7,7422,511	-7,7422,511	-7,7422,511
Project Design GHG Reduction Features Emissions Reductions	-6,0385,947	-6,0385,947	-6,0385,947
Total Reduced Emissions	9,93214,438	9,93114,437	10,00014,506
Percent Reduction	58.1136.9	58.1136.9	57.9536.8

Source: HELIX 2012b and 2014

Significance of Impact

GHG emissions were quantified for both construction and operation of the proposed project. GHG emissions generated during project construction would be temporary and limited to the construction phases of the project. Amortized over 30 years, the proposed construction activities under all three analyzed construction phasing scenarios would be less than the 900 MT screening threshold. Project construction, therefore, would result in less than significant GHG emissions impacts.

Operational GHG emissions were calculated for BAU conditions and conditions considering GHG emissions reduction strategies (i.e., state measures and project design features). With these reduction strategies, project GHG emissions (combining construction and operations) would be reduced to a level that would be consistent with the goals of AB 32 and regulations adopted by CARB pursuant to AB 32. Therefore, project operations would result in less than significant GHG emissions impacts.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

5.7.3 Impact

Issue 2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases?

Impact Thresholds

As discussed above under Issue 1, to date, there is no local, regional, state, or federal regulation establishing a threshold of significance to determine project-specific impacts of GHG emissions on global warming.

Impact Analysis

The project would be required to comply with the applicable goals and objectives of the Conservation Element outlined earlier in Section 5.7.1. As discussed above under Issue 1, the project is expected to include project design features intended to comply with Conservation Element policies applicable to GHG emissions. These features would help implement the climate change goals and objectives by reducing the number and length of automobile trips, and reducing energy consumption through energy- and water-efficient design. The anticipated project features and the applicable Conservation Element Goals are listed below:

- Install energy efficient lighting and lighting control systems (Policy CE-A.5);
- Install energy-efficient heating and cooling systems, appliances and equipment, and control systems (Policy CE-A.5);
- Limit the hours of operation of outdoor lighting (Policy CE-A.5);
- Use thermal-efficient glazing/fenestration systems (Policy CE-A.5);
- Use “cool” roof material (Policy CE-A.12);
- Create water-efficient landscapes (Policy CE-A.11);
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls (Policy CE-A.11); and
- Buildings materials would be partially made from recyclable materials (Policy CE-A.9).

In addition, the project applicant would be required to prepare a Refuse and Recyclable Materials Storage Regulations, Construction and Demolition Debris Diversion Deposit Program, in accordance with Chapter 6, Article 6, Division 6 of the Municipal Code. This would help implement Goals CE-A.8 and 9 by reducing construction waste and promoting recycling.

Significance of Impact

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The proposed project is expected to include project features that are encouraged by the Conservation Element policies in the City's General Plan. No significant associated GHG emissions impacts would occur as a result of the proposed project.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

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5.8 PALEONTOLOGICAL RESOURCES

5.8.1 Existing Conditions

Paleontological resources (fossils) are the remains and/or traces of prehistoric animal and plant life, exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and leaves are often found in the geologic deposits (rock formations) within which they were originally buried. Because of this, the potential for fossil remains at a given location can be predicted based on known correlations between fossil occurrence and the geologic formations with which they are associated. To evaluate paleontological resources within the project site, the presence and distribution of geologic formations and their respective potential for containing paleontological resources were reviewed. Geological studies show that the proposed project consists of fill soils overlying the Torrey Sandstone formation (Draft EIR Appendices O and P). The following is a summary of on-site geologic conditions and the associated paleontological resource potential.

The City of San Diego's Significance Determination Thresholds were used to determine the potential for fossil remains within given geologic formations and the respective sensitivity of those fossil remains. Paleontological resource sensitivity is generally defined as follows:

- High Sensitivity - These formations contain a large number of known fossil localities, and generally either produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- Moderate Sensitivity - These formations have a moderate number of known fossil localities and typically yield either invertebrate fossil remains in high abundance or vertebrate fossil remains in low abundance.
- Low or Unknown Sensitivity - These formations contain only a small number of known fossil localities and typically produce invertebrate fossil remains in low abundance. Unknown sensitivity is assigned to formations from which there are presently no known paleontological resources, but which have the potential for producing such remains based on their sedimentary origin.
- Very Low Sensitivity - Very low sensitivity is assigned to geologic formations that, based on their relative youthful age or high-energy depositional history, are judged unlikely to produce any fossil remains.

Fill Soils

Fill deposits cover much of project site, and are comprised primarily of medium dense clayey and silty sands. Fill was encountered in on-site geotechnical borings, and extends to depths of between 12.5 to 35 feet. This fill was placed on site between 1986 and 1990, and was used to replace older fill, alluvium, and colluvium. Based on the fact that fill materials are artificially produced and deposited, they are considered to have no paleontological resource potential.

Torrey Sandstone

The Torrey Sandstone underlies the on-site fill deposits, and was observed at depths of between 12 and 27 feet. This formation is Eocene in age and is comprised of dense to very dense, natural, clayey and silty sands. The Torrey Sandstone is assigned a high paleontological sensitivity rating in the Carmel Valley region (City of San Diego 2011a). This formation is assigned a high paleontological sensitivity in the Carmel Valley region because it has produced important remains of fossil plants and marine invertebrates. Many of the plant remains are from taxa related to species that today live in brackish-water marsh and/or riparian woodland environments in subtropical regions of Southeast Asia and the southeastern US. Their occurrence in the Torrey Sandstone suggests that Eocene climate in this area was warmer and wetter than modern climate (City of San Diego 2008b).

5.8.2 Impact

Issue 1: Would the proposed project result in the loss of significant paleontological resources?

Impact Thresholds

According to the City's Significance Determination Thresholds, impacts to paleontological resources may be significant if the project would:

- Excavate over 1,000 cubic yards of material to a depth of 10 or more feet below the ground's surface for formations with a high sensitivity rating; and/or
- Excavate over 2,000 cubic yards of material to a depth of 10 or more feet below the ground's surface for formations with a moderate sensitivity rating.

Impact Analysis

As noted above, the Torrey Sandstone is considered a high sensitivity formation for fossil localities. As described in Section 3.2.2 of this EIR, the proposed project grading would cover approximately 23 acres of the site, and would include approximately 30,400 cy of fill and 528,800 cy of cut. The proposed underground parking structures would involve a significant amount of excavation to a maximum cut depth of 49 feet. The proposed grading quantities would exceed 1,000 cy of cut and would have a cut depth greater than 10 feet in areas encompassing the Torrey Sandstone. Therefore, the proposed project may result in significant impacts to paleontological resources.

Significance of Impact

Implementation of the proposed project grading and excavation could have a potentially significant impact on paleontological resources.

Mitigation, Monitoring, and Reporting

Potential impacts to paleontological resources would be reduced to below a level of significance through implementation of the following mitigation measure:

Mitigation Measure 5.8-1: The following shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction (precon) meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any

grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.

- a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Identify Areas to be Monitored

Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

- a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances Occupational Safety and Health Administration (OSHA) safety requirements may necessitate modification of the PME.**
2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
3. The monitor shall document field activity via the Consultant Site Visit Record (CSVr). The CSVrs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring**

Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
 - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.
 - c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
 - d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

IV. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.
2. The following procedures shall be followed.
 - a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSV and submit to MMC via fax by 8 AM on the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

d. The PI shall immediately contact MMC, or by 8 AM on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

V. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,
 - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
 - b. Recording Sites with the San Diego Natural History Museum

The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.

5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Fossil Remains
1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
 2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate
- C. Curation of fossil remains: Deed of Gift and Acceptance Verification
1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
 2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

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5.9 BIOLOGICAL RESOURCES

5.9.1 Existing Conditions

Habitat

The project site consists of graded vacant land and is surrounded by existing development. The site was previously graded and is regularly maintained and cleared as part of the SWPPP for the Employment Center with the exception of streetscape trees, including mature eucalyptus and pine trees, along the site perimeter. No sensitive or wetland habitat exists on site. The project site is not located within the City's designated biological preserve (Multi-Habitat Planning Area [MHPA]), nor are there resources on site under the jurisdiction of the United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (Corps), or California Department of Fish and Game (CDFG).

Sensitive Species

Sensitive plant species are not expected to occur due to a lack of appropriate habitat. No sensitive animal species are expected to occur because of the site's lack of habitat and surrounding urbanized conditions, with the exception of bird species. Raptors and migratory birds could utilize the trees located along the perimeter of the site.

Raptors are protected by the California Fish and Game Code 3503.5, which states it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized. Many raptor species prefer to nest in eucalyptus trees, which are located along the perimeter of the site. No foraging habitat is located on site or in the immediate vicinity due to the developed urban neighborhood.

All migratory bird species that are native to the United States or its territories are protected under the Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127; U.S. Fish and Wildlife Service [USFWS] 2004). The MBTA is generally protective of migratory birds, but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to July 30). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests. Construction activities are commonly precluded within 500 feet of an active bird nest (at a minimum).

Wildlife Corridors

Since the project site does not contain native habitats and is not connected to undeveloped land, it does not function as a wildlife corridor. In addition, the project site is not adjacent to the City's MHPA or a designated wildlife corridor. The nearest wildlife corridor and MHPA land, the San Dieguito River Valley, is located over 0.5 mile to the north.

Multiple Species Conservation Program and Multi-Habitat Planning Area

The Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation program that addresses multiple species habitats and preserves native vegetation communities within a 900-square-mile (582,243 acres) area in San Diego County. The MSCP was established pursuant to the federal and state Endangered Species Acts and the California Natural Community Conservation Planning Act of 1992, and has been developed cooperatively by participating jurisdictions/ special districts in partnership with federal and state wildlife agencies, property owners, and representatives of the development industry and environmental groups. One of the primary objectives of the MSCP is to maintain a preserve system that allows plants and animals to maintain their existence at both local and regional levels. This preserve system is a network composed of core biological resource areas (large blocks of habitat) and linkages/wildlife corridors. The City of San Diego MSCP Subarea Plan ensures the implementation of the City's portion of the MSCP preserve, the MHPA.

The MHPA is the land designated by the City of San Diego's MSCP Subarea Plan for habitat conservation. As mentioned above, the site is located outside the MHPA but is within the MSCP. As such, "there is no limit on the encroachment into sensitive biological resources, with the exception of wetlands, and listed non-covered species' habitat (which are regulated by state and federal agencies) and narrow endemic species." However, "impacts to sensitive biological resources must be assessed and mitigation, where necessary, must be provided in conformance" to the City's Land Development Manual Biological Guidelines (City 2004).

5.9.2 Impact

Issue 1: Would the project directly or indirectly impact any species identified as a candidate, sensitive, or special-status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFG or USFWS?

According to the City's Significance Determination Thresholds, biology impacts may be significant if the project would:

- Cause a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the CDFG or USFWS.

Impact Analysis

As discussed under existing conditions, this site has been graded and is surrounded by existing urban uses. No sensitive plant or animal species exist or are expected to occur on site. The project site is not located within the City's MHPA, nor are there resources on site or adjacent to the project site under the jurisdiction of the USFWS, Corps, or CDFG. In addition, none are known to occur at off-site locations where mitigation for project traffic impacts is proposed (refer to Section 5.2, *Transportation/Circulation/Parking*). The off-site traffic improvements that are proposed to be implemented by the project (as opposed to payment of a fair-share contribution) would occur within the existing developed right-of-way and would not directly or

indirectly affect biological resources. Therefore, no direct or indirect impacts to listed sensitive plant or animal species are expected to occur.

Sensitive raptor and migratory bird species have potential to occur on site. No raptor foraging habitat exists on site; however, the site contains eucalyptus and other mature trees that could provide suitable nesting habitat for sensitive raptor species. Nesting raptors are protected by California Fish and Game Code 3503.5, which prohibits impacts to active raptor nests. Nesting migratory birds protected by the MBTA could also be present in the trees on site. The project would remove most of the existing trees on site, which could potentially cause a significant, direct impact to nesting raptors and migratory birds. Proposed construction activities would generate noise and could indirectly impact nesting raptors and migratory birds in the remaining trees. Migratory bird impact avoidance is required by law, and thus it is assumed that the project would be required to comply and no significant impact to migratory birds would occur. However, potential impacts to nesting raptors are considered significant.

Significance of Impact

The proposed project would not impact listed sensitive plant or animal species. The removal of on-site trees and construction activities would potentially cause a significant impact to nesting raptors and migratory birds.

Mitigation, Monitoring, and Reporting

The following mitigation measure would reduce potential impacts to nesting raptors to below a level of significance:

Mitigation Measure 5.9-1: Prior to the issuance of any authorization to proceed, the ADD Environmental designee shall ensure that the following measures are included as notes in the construction plans and grading plans:

1. If project grading/brush management is proposed in or adjacent to native habitat during the typical bird breeding season (i.e. February 1 - September 15), or an active nest is confirmed, the project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to MMC prior to the preconstruction meeting.
 - A. If active nests are confirmed, the report shall include mitigation in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) to the satisfaction of the Assistant Deputy Director (ADD) of the Entitlements Division. Mitigation requirements determined by the project biologist and the ADD shall be incorporated into the project's Biological Construction Monitoring Exhibit (BCME) and monitoring results incorporated in to the final biological construction monitoring report.
 - B. If ~~no nesting birds~~ active nests are confirmed per "A" above, mitigation under "A" is not required.

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5.10 HYDROLOGY/WATER QUALITY

A Drainage Study and a Water Quality Technical Report (WQTR) have been prepared for the proposed project by Leppert Engineering Corporation (Leppert, 2011c and 2012a). These studies are summarized in the following analysis along with other applicable information, with the complete reports included as Appendices H and I.

5.10.1 Existing Conditions

Watershed and Drainage Characteristics

The project site is within the Peñasquitos Hydrologic Unit (HU 906.10), 1 of 11 major drainage areas identified in the 1994 (as amended) RWQCB Basin Plan. The Peñasquitos HU is a triangular-shaped area of approximately 170 square miles, and extends generally from Poway on the east to La Jolla/Solana Beach along the coast. The HU is divided into a number of hydrologic areas (HAs) based on local drainage characteristics, with the project site located in the Miramar Reservoir HA (Figure 5.10-1, *Project Location Within Local Hydrologic Designations*). Surface drainage in the Peñasquitos HU is through a number of small to moderate size streams, including Peñasquitos, Carmel Valley and Carroll Canyon creeks. Surface flows in the Miramar Reservoir HA (including the project site) ultimately drain to Peñasquitos Lagoon and the Pacific Ocean. Average precipitation in the project site vicinity (City of San Diego, 92130) is approximately 12 inches per year, with much of this (over 82 percent) occurring during the period of November through March (Weather.com 2010).

The project site has been graded and is vacant, with a number of streetscape trees planted along the site perimeter on Del Mar Heights Road and El Camino Real. Surface drainage within the site occurs in two distinct drainage basins (the East and West basins), both discharging to existing storm drain facilities within El Camino Real. The East Basin includes the easternmost approximately 9.8 acres of the site, with associated drainage moving generally south and southwest via a temporary (private) storm drain system. This drainage enters two existing sediment basins in the southern portion of the site, and is eventually discharged into an existing 66-inch diameter public storm drain in El Camino Real (refer to the Pre-project Drainage Study Map in Map Pocket 1 of Draft EIR Appendix H). The West Basin includes the westernmost approximately 12.7 acres of the site, with associated drainage moving generally south through the noted private storm drain system and entering two existing sediment basins in the southwest corner of the site. These basins discharge into the existing 66-inch diameter public storm drain in El Camino Real as noted for the East Basin. Flows in the El Camino Real storm drain continue to the southwest and enter a regional detention basin near the intersection of El Camino Real and High Bluff Drive (approximately 0.4 mile south of the project site). Flows from the detention basin outlet back into the El Camino Real storm drain, and ultimately discharge into Peñasquitos Lagoon from an existing storm drain in Carmel Mountain Road. All of the described downstream drainage facilities were master planned for ultimate buildout within the associated watershed, as described in the Drainage Study for the North City West Employment Center, Entire Precise Plan Area (Leppert 2011b, refer to Section 1.3 of Draft EIR Appendix H).

Flood Hazards

The project site and vicinity have been mapped for flood hazards by the Federal Emergency Management Agency (FEMA). The entire project site and adjacent areas are mapped as Zone X, or areas outside the 500- and 100-year floodplains (FEMA 1997). The closest mapped 100-year floodplain is located along Carmel Valley Creek, approximately 1.1 miles southeast of the project site.

Groundwater

No regional groundwater basins are mapped within the project site vicinity, with the closest such basin located along San Dieguito Creek approximately one mile to the north (California Department of Water Resources [DWR] 2003). A series of on-site borings and trenches were excavated to depths of between approximately 12 and 37 feet during the project Geotechnical Investigation conducted in 2007 and 2008, with no groundwater encountered. An additional Geotechnical Investigation was conducted for the project in 2011, with this effort including 16 on-site borings extending to depths of between approximately 16 and 67 feet. Shallow groundwater observed during the 2011 investigation was limited to one occurrence of “seepage” at a depth of approximately 61 feet in the northeastern-most corner of the site (Boring B-16; refer to Sections IV and V of Geotechnical Explorations, Inc. 2011 and 2008 in Draft EIR Appendices O and P). The Geotechnical Investigations also note that “[f]luctuations in the level of groundwater may occur due to variations in ground surface topography, subsurface stratification, rainfall and other possible factors which may not have been evident at the time of our field examination.”

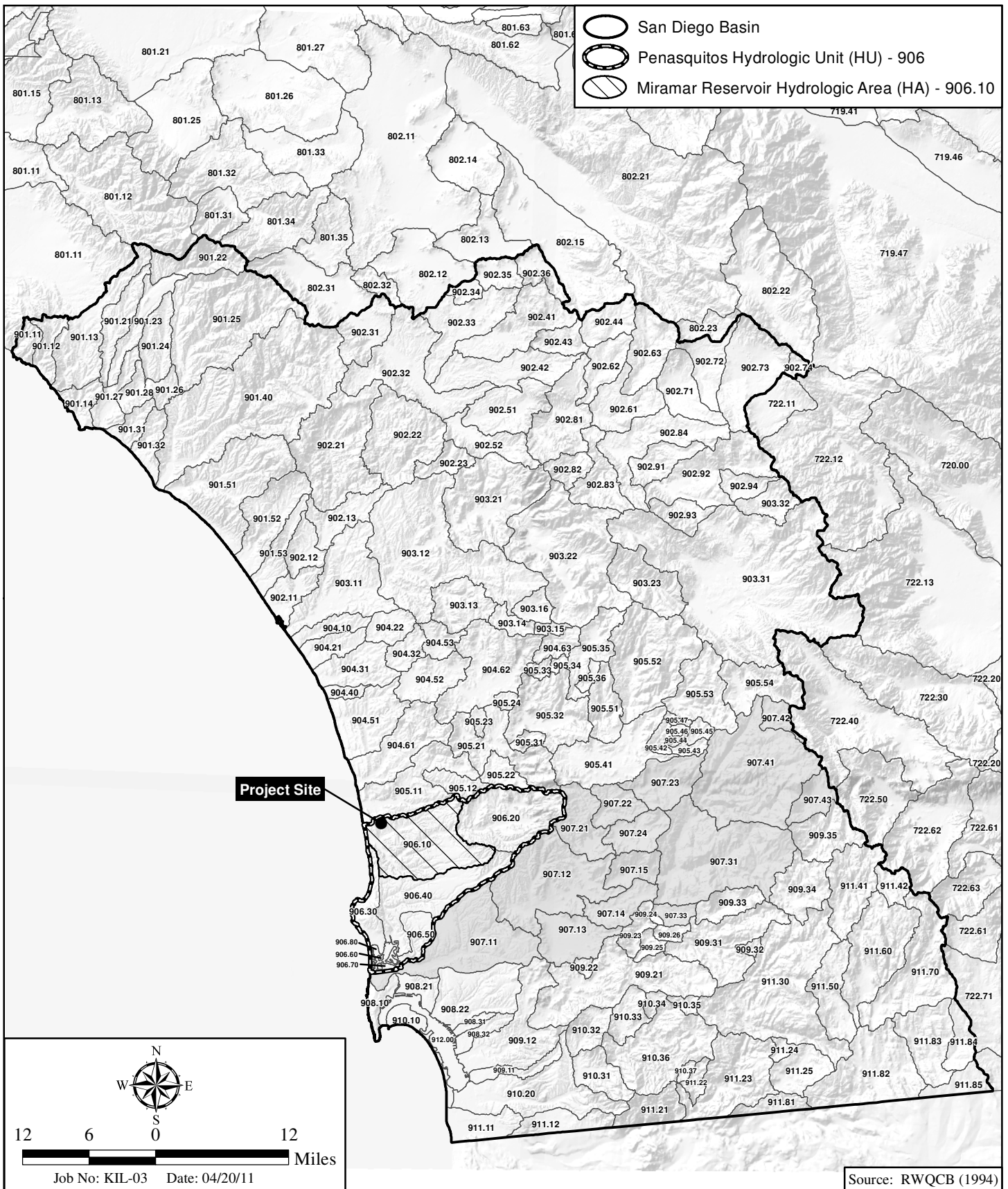
Water Quality

Surface Water

Surface water in the project site consists of intermittent flows from storm events and (potentially) landscape irrigation runoff. As described above, the site was previously graded and drains into four on-site sediment basins before entering a public storm drain in El Camino Real. This storm drain system continues southwest to a regional detention basin and discharges into Peñasquitos Lagoon and the Pacific Ocean. Accordingly, downstream receiving waters do not include any inland surface streams or other drainages/impoundments, and are limited to the noted coastal waters.

No known water quality data are available for the site or immediate vicinity, with storm flows subject to variations in water quality due to local conditions such as runoff volume/velocity and land use. A summary of typical contaminant sources and loadings for various land use types is provided in Tables 5.10-1, *Summary of Typical Contaminant Sources for Urban Storm Water Runoff*, and 5.10-2, *Typical Contaminant Loadings in Runoff for Various Land Uses*.

Current known data for downstream receiving waters is associated with the Southern California Bight 2008 Regional Monitoring Survey. The NPDES Municipal Permit copermittees participated in this program (including the City of San Diego), with related data for Peñasquitos



Project Location within Local Hydrologic Designations

ONE PASEO

Figure 5.10-1

Lagoon derived from five sample locations tested in July 2008. Specific testing involved both sediment and water quality assessments, with the following conclusions provided for Peñasquitos Lagoon (Weston Solutions, 2010): (1) observed data suggest that conditions are generally protective of beneficial uses, although low dissolved oxygen concentrations were noted; (2) sediment chemistry and toxicity scores were generally interpreted as exhibiting low impact levels; (3) benthic conditions exhibited either low or moderate impact levels; and (4) sources of sedimentation in the lagoon include watershed sites, local drainages, erosion, and tidal influx.

**Table 5.10-1
SUMMARY OF TYPICAL CONTAMINANT SOURCES
FOR URBAN STORM WATER RUNOFF**

Contaminant	Typical Contaminant Sources
Sediment and Floatables	Streets, driveways, landscaping, construction, atmospheric deposition, erosion
Pesticides and Herbicides	Landscaping, roadsides, utility right-of-ways, soil wash-off
Organic Materials	Landscaping, trash collection/disposal areas, animal wastes
Oxygen-demanding Substances	Landscaping, animal wastes, trash collection/disposal areas, leaky sanitary sewer lines or septic systems
Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, corroding metal surfaces, combustion processes
Oil and Grease/Hydrocarbons	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains
Bacteria and Viruses	Landscaping, roads, leaky sanitary sewer lines or septic systems, sanitary sewer cross-connections, animal wastes
Nitrogen and Phosphorus	Landscaping fertilizers, atmospheric deposition, automobile exhaust, soil erosion, animal wastes, detergents

Source: EPA 1999

**Table 5.10-2
TYPICAL CONTAMINANT LOADINGS IN RUNOFF
FOR VARIOUS LAND USES (lbs/acre/yr)**

Land Use	TSS	TP	TKN	NH ₃ – N	NO ₂ + NO ₃ – N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.5	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: EPA 1999

HDR = High density residential; MDR = Medium density residential; LDR = Low density residential.

N/A = Not available; insufficient data to characterize. TSS = Total suspended solids; TP = Total phosphorus;

TKN = Total Kjeldahl nitrogen; NH₃ – N = Ammonia – Nitrogen;

NO₂ + NO₃ – N = Nitrite + Nitrate minus Nitrogen; BOD = Biochemical oxygen demand;

COD = Chemical oxygen demand; Pb = Lead; Zn = Zinc; Cu = Copper

Ambient bay/lagoon monitoring was also conducted under NPDES Municipal Permit requirements for a number of coastal waters between 2002 and 2005, including Peñasquitos Lagoon (2003 to 2005). The intent of this program was to document conditions including sediment chemistry, toxicity, and ecological community structure, as well as to assess the overall status of marine life and determine priorities for additional investigations and remedial actions. Samples from Peñasquitos Lagoon exhibited generally similar results as noted for the Southern California Bight 2008 monitoring, including relatively high rankings for sediment chemistry and toxicity, and low to moderate rankings for benthic community structure (Weston Solutions 2007).

The State Water Resources Control Board (SWRCB) and RWQCBs produce bi-annual qualitative assessments of statewide and regional water quality conditions. These assessments are focused on Clean Water Act (CWA) Section 303(d) impaired water listings and scheduling for assignment of total maximum daily load (TMDL) requirements. States are required to identify and document any and all polluted surface water bodies, with the resulting documentation referred to as the *Clean Water Act Section 303(d) List of Water Quality Limited Segments*, or more commonly the 303(d) list. This list of water bodies identifies information including the associated pollutants and TMDLs, as well as projected TMDL implementation schedules and status. A TMDL establishes the maximum amount of an impairing substance or stressor that a water body can assimilate and still meet water quality standards, and allocates that load among pollution contributors. TMDLs are quantitative tools for implementing state water quality standards, based on the relationship between pollution sources and water quality conditions. The most current (2008-2010) approved 303(d) list identifies Peñasquitos Lagoon as the only impaired water located downstream of the project site, with the lagoon impaired for

sedimentation/siltation and the “expected TMDL completion date” listed as January 1, 2019 (SWRCB 2010).

Groundwater

No known data are available regarding groundwater quality in the project site or vicinity. As previously described, groundwater observed during on-site during geotechnical investigations was limited to seepage in one boring at an approximate depth of 61 feet , although aquifer levels may fluctuate with conditions including seasonal precipitation. The quality of shallow local groundwater is likely influenced by factors such as the percolation of surface water in larger drainages or other potential recharge areas.

Water Quality Summary

Based on the above information, surface water quality within the project site and vicinity is assumed to be generally moderate to poor. This conclusion is based primarily on the fact that associated watersheds encompass extensive high-density urban development. Similarly, shallow groundwater in the project site vicinity likely exhibits generally moderate to poor quality.

Regulatory Setting

The project is subject to a number of federal, state and local regulatory requirements related to hydrology and water quality. These guidelines are intended to avoid or reduce associated adverse effects through efforts such as maintaining pre-development conditions, providing adequate post-development drainage conditions/facilities, avoiding/minimizing contaminant discharge and treating post-development runoff. Summary descriptions of these regulatory requirements are provided below, with specific applications to the project discussed below in Sections 5.10.2 through 5.10.5.

National Pollutant Discharge Elimination System Requirements

The proposed project is subject to applicable elements of the CWA, including the NPDES. Specific NPDES requirements associated with the proposed project include conformance with the following: (1) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit, NPDES No. CAS000002, SWRCB Order 2009-0009-DWQ); (2) General Permit for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay (Groundwater Permit, RWQCB Order No. R9-2008-0002, NPDES No. CAG919002); (3) NPDES Municipal Storm Water Permit (Municipal Permit, NPDES CAS 0108758, RWQCB Order No. 2007-0001); and (4) related City standards as outlined below.

General Construction Activity Storm Water Permit

Conformance with the Construction General Permit is required prior to development of applicable sites exceeding one acre, with this permit issued by the SWRCB under an agreement with the EPA. Specific conformance requirements include implementing a SWPPP and an

associated Construction Site Monitoring Program (CSMP), as well as a Rain Event Action Plan (REAP) for applicable projects (i.e., those exhibiting certain risk categories or involving potential discharge of non-visible pollutants that may exceed water quality objectives). The Construction General Permit also includes a number of requirements regarding technology-based effluent limitations and action levels, risk-based assessment, minimum BMP requirements, enhanced monitoring and reporting, and mandatory training. These requirements identify detailed measures to prevent and control the off-site discharge of pollutants in storm water runoff. Specific pollution control measures require the use of best available technology economically achievable (BAT) for toxic and non-conventional pollutants, and best conventional pollutant control technology (BCT) for conventional pollutants. While site-specific requirements generally vary somewhat with conditions such as proposed grading, slope, and soil characteristics, detailed guidance for implementing construction-related BMPs is provided in the permit and related City standards (as outlined below), as well as additional sources including the *EPA National Menu of Best Management Practices for Storm Water Phase II* (EPA 2010), and *Storm Water Best Management Practices Handbooks* (California Stormwater Quality Association 2009). Specific Construction General Permit requirements for the proposed project would be determined during SWPPP development, after completion of project plans and application submittal to the SWRCB.

General Groundwater Extraction Waste Discharge Permit

Conformance with the noted Groundwater Permit is generally applicable to all groundwater discharge into associated receiving waters, regardless of volume, with certain exceptions as noted in the permit text. Specific requirements for permit conformance include:

- (1) implementing an appropriate sampling, analysis and monitoring program; (2) providing at least 30 days notification to the appropriate local agency prior to discharging to a municipal storm drain system; (3) conforming with applicable water quality standards, including (but not limited to) the Basin Plan, CWA, and State Porter-Cologne Water Quality Control Act; and (4) submittal of applicable documentation to the RWQCB.

Municipal Storm Water Permit

This permit identifies waste discharge requirements for urban runoff related to applicable new development, redevelopment, and existing development sites under the jurisdiction of co-permittees (e.g., the City of San Diego). The intent of these requirements is to protect environmentally sensitive areas and provide conformance with pertinent water quality standards, including the CWA and the RWQCB Basin Plan. Identified requirements involve using a number of planning, design, operation, treatment and enforcement measures to reduce pollutant discharges from individual development projects (and the municipal storm drain system as a whole) to the maximum extent practicable (MEP). Specifically, these measures include: (1) using jurisdictional planning efforts (such as discretionary general plan approvals) to provide water quality protection; (2) requiring coordination between individual jurisdictions to provide watershed-based water quality protection; (3) implementing applicable low impact development (LID), source control, priority project, and/or volume- or flow-based (as defined in the permit text) treatment control BMPs to avoid, reduce and/or mitigate effects including increased erosion

and sedimentation, hydromodification¹ and the discharge of pollutants in urban runoff; and (4) using appropriate monitoring, reporting and enforcement efforts to ensure proper implementation, documentation and (as appropriate) modification of measures to ensure permit conformance.

Pursuant to the Municipal Permit requirements, the City (along with other applicable co-permittees) developed guidelines to address related hydrology and water quality issues (as described below under City Requirements). These guidelines provide direction for project applicants to determine if and how they are subject to regulatory standards, and identify requirements for the inclusion of appropriate measures to ensure conformance.

Basin Plan Requirements

The San Diego Basin Plan establishes a number of beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are generally defined in the Basin Plan as “the uses of water necessary for the survival or well being of man, plus plants and wildlife.” Because drainage from the proposed project site would be contained in engineered storm drain facilities until discharged into Peñasquitos Lagoon, beneficial uses for local inland surface waters are not applicable (refer to the discussion of drainage in Section 5.10.2 for additional information). Identified existing beneficial uses for Peñasquitos Lagoon include; contact water recreation (REC-1, limited to fishing from shore or boat only); non-contact water recreation (REC-2); biological habitats of special significance (BIOL); estuarine habitat (EST); wildlife habitat (WILD); rare, threatened or endangered species (RARE); marine habitat (MAR); migration of aquatic organisms (MIGR); spawning, reproduction and/or early development (SPWN), and shellfish harvesting (SHELL). Existing beneficial uses for groundwater in the Miramar Reservoir HA include municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND).

Water quality objectives identified in the Basin Plan are based on established beneficial uses, and are defined as “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses.” Water quality objectives can include both narrative requirements and specific numeric objectives for identified waters. Surface water quality objectives are not applicable to the proposed project for similar drainage-related reasons as noted above for beneficial uses. Identified groundwater objectives for the Miramar Reservoir HA are summarized in Table 5.10-3, *Groundwater Quality Objectives for the Miramar Reservoir Hydrologic Area*.

¹ Hydromodification is defined in the Municipal Permit as the change in natural watershed hydrologic processes and runoff characteristics (infiltration and overland flow) caused by urbanization or other land use changes that result in increased stream flows, sediment transport, and morphological changes in the channels receiving the runoff.

**Table 5.10-3
GROUNDWATER QUALITY OBJECTIVES FOR THE
MIRAMAR RESERVOIR HYDROLOGIC AREA¹**

Constituent (mg/l or as noted)												
TDS	Cl	SO ₄	% Na	NO ₃	Fe	Mn	MBAS	B	Odor	Turb (NTU)	Color Units	F
1,200	500	500	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0

Source: RWQCB 1994

¹ Concentrations not to be exceeded more than 10 percent of the time during any one-year period, refer to Figure 5.10-1 for the location of local hydrologic designations.

TDS = Total dissolved solids; Cl = Chlorides; SO₄ = Sulfate; Na = Sodium; NO₃ = Nitrate; Fe = Iron; Mn = Manganese; MBAS = Methylene Blue Activated Substances (e.g., commercial detergent); B = Boron; Turb = Turbidity (measured in Nephelometric Turbidity Units [NTU]); F = Fluoride.

City of San Diego Requirements

City hydrologic standards include conformance with the City's *Drainage Design Manual* (1984), which provides specifications for hydrologic considerations such as runoff calculations, storm drain system design and drainage/hydraulic studies.

Pursuant to the City Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code §43.03 et seq.), all new development in the City is required to comply with the storm water pollution prevention measures identified in Chapter 14, Article 2, Divisions 1 (grading) and 2 (storm water runoff control and drainage) of the Land Development Code. These measures require that development projects prevent erosion, sedimentation and pollutant discharge to the MEP. Both temporary (construction) and permanent erosion, sedimentation and water pollution control measures are required to be implemented (as appropriate) to the satisfaction of the City Manager, including efforts such as erosion prevention; sediment control; phased grading; LID, source control, priority project and treatment control BMPs; hydromodification avoidance/control; and monitoring, maintenance and (as necessary) modification of adopted measures. These requirements are implemented through conformance with applicable water quality standards including pertinent elements of the City Grading Ordinance, City Storm Water Standards, Urban Runoff Management Programs (URMPs) and the Standard Urban Storm Water Mitigation Plan (SUSMP), as outlined below.

In addition to the above requirements, the project is also subject to applicable provisions of related City planning documents, including the General Plan, the Carmel Valley Community Plan, and the Carmel Valley Employment Center Precise Plan. Pertinent elements of these documents are summarized below.

City Grading Ordinance

The City Grading Ordinance (San Diego Municipal Code §142.0101 et seq.) incorporates a number of requirements related to hydrology and water quality, including BMPs necessary to control storm water pollution from sources including erosion/sedimentation and construction

materials during project construction and operation. Specifically, these include elements related to slope design, erosion/sediment control and revegetation requirements.

City Storm Water Standards

The Storm Water Standards Manual (City of San Diego 2012) provides detailed information regarding compliance with permanent and construction storm water requirements for all new development projects in the City of San Diego. The Manual was most recently updated in January 2012, and reflects applicable requirements in the previously described NPDES Municipal and Construction General permits, as well as related documents such as the URMPs and SUSMP described below. Specific guidelines in the Storm Water Standards Manual include requirements for completing and submitting a *Storm Water Requirements Applicability Checklist*; identifying pollutants of concern; determining appropriate BMP categories, types, locations and design; and establishing BMP implementation and maintenance requirements. The identification and analysis of project-related pollutants, BMPs and implementation/maintenance criteria is conducted as part of the required WQTR. The principal goals of the WQTR are to identify and describe the permanent BMPs required to address identified pollutants and related impacts to water quality, and to assess project conformance with City Storm Water Standards and associated NPDES requirements.

Urban Runoff Management Plans

The NPDES Municipal Permit requires co-permittees to fund and implement URMPs to reduce runoff and contaminant discharges to the MEP. The URMPs were conducted on a jurisdictional basis for the first two years and (as required) have included a watershed-based approach for subsequent efforts. The watershed-based approach is being implemented for the study area through the current Peñasquitos Watershed URMP (WURMP, City of Poway et.al 2008). The City of San Diego also adopted a Jurisdictional URMP (JURMP) on March 20, 2008 to document local efforts related to improving water quality (City of San Diego 2008c). The referenced Peñasquitos WURMP and the City of San Diego JURMP have both been prepared and implemented in compliance with the 2007 NPDES Municipal Permit. Specific requirements addressed in the City of San Diego JURMP include efforts to identify and incorporate water quality control measures related to TMDL, development/redevelopment, construction, existing development, illicit discharges, public education/participation, effectiveness evaluations and fiscal analyses. Similarly, the Peñasquitos WURMP identifies a number of monitoring, assessment and implementation strategies to provide a collective watershed-based approach to meet applicable City and Municipal Permit requirements. These strategies are intended to meet the overall WURMP goal of linking identified pollutant problems and potential sources, and include efforts such as: (1) collecting and evaluating receiving water quality data; (2) identifying and addressing contaminant discharge sources; (3) selecting and implementing appropriate measures to address identified issues; and (4) evaluating the effectiveness of adopted measures and implementing modifications as appropriate. The Peñasquitos WURMP also includes a five-year strategic plan, which prioritizes prevention/control of bacterial pollutants and sediment, through a series public education and participation programs (e.g., distribution of educational materials, conducting educational workshops, and implementing public cleanup efforts). Annual reports are also prepared to document the ongoing progress and goals of the WURMP process,

with the following results and recommendations documented in the most current (January 2011) Peñasquitos WURMP Annual Report:

- Progress was observed in the overall condition of water quality in the Peñasquitos watershed, through efforts including copermittee collaboration, monitoring/data assessment, identification of high priority water quality problems, pollutant source assessment, and implementation of activities such as public information/participation programs.
- The effectiveness of specific changes in water quality for discharges and receiving waters was difficult to assess, due to the lack of a substantial quantitative data base, as well as inherent technical and logistical problems in establishing connections between observed pollutants and sources.
- Specific recommendations identified to meet the WURMP goals include: (1) developing activities to assess and improve water quality; (2) integrating watershed principles into land use planning; (3) enhancing public understanding of pollutant sources; and (4) encouraging and developing stakeholder participation.

Standard Urban Storm Water Mitigation Plan

The Model SUSMP (City of San Diego 2002a) was developed by the co-permittees (including the City) as a requirement under the previous (2001) NPDES Municipal Permit to reduce negative impacts to receiving waters from development runoff. Specifically, the SUSMP identifies a number of permanent BMP requirements for applicable public and private development/redevelopment projects, with these measures intended to protect and enhance local and regional surface water quality. The Model SUSMP was used as the basis for developing the City Storm Water Standards described above. An updated Countywide Model SUSMP was adopted by the copermittees on February 9, 2010 to reflect the revised 2007 Municipal Permit (Project Clean Water 2010).

General Plan

Applicable goals related to hydrology and water quality in the General Plan include: (1) protecting beneficial water resources through pollution prevention and interception efforts; (2) reducing pollutants in urban runoff to the MEP; (3) protecting/restoring water bodies; and (4) preserving the natural attributes of floodplains and floodways without endangering life and property.

Carmel Valley Community Plan/Carmel; Valley Employment Center Precise Plan

Specific applicable hydrology/water quality goals identified in the Carmel Valley Community Plan and Carmel Valley Employment Center Precise Plan include addressing drainage and siltation issues (e.g., sedimentation in Peñasquitos Lagoon) through efforts such as designing community drainage and detention facilities to accommodate ultimate planned development.

5.10.2 Impact

Issue 1: Would the project cause a substantial increase in impervious surfaces and associated increased runoff?

Impact Thresholds

According to the City of San Diego's Significance Determination Thresholds, hydrology impacts may be significant if the project would:

- Result in substantial changes to stream-flow velocities or quantities.

Impact Analysis

Implementation of the proposed project would increase the on-site impervious surface area through the construction of pavement and structures. In addition, proposed off-site improvements along Del Mar Heights Road would also increase the associated impervious areas, with the resulting runoff to be routed through the project site. The addition of impervious surfaces would, in turn, increase the rate and amount of runoff both within and from the site. The proposed project storm drain system would include a series of inlets, pipelines and related structures designed to accommodate a 100-year storm event (per applicable City guidelines), with on-site flows to be directed to two outlet points along El Camino Real. These outlets would be associated with the two proposed post-development drainage basins, with additional discussion provided below under Issue 2. The proposed drainage system would discharge into the existing 66-inch public storm drain in El Camino Real, which continues southwest to a regional detention facility and ultimately drains to Peñasquitos Lagoon. Flows from off-site drainage areas would be collected through proposed curb inlets and conveyed through the on-site storm drain system, discharging into the same public system downstream of the original location. This would reduce flows within the existing system upstream of the proposed points of connection. As described in Section 5.10.1 (and in Draft EIR Appendix H), the existing public storm drain system was designed for ultimate build out, including development of the project site and the noted off-site areas. Accordingly, both the proposed project storm drain system and the described downstream drainage facilities would have adequate capacity to accommodate post-development (100-year) flows, with no associated issues related to capacity shortfalls or flooding hazards. The off-site traffic improvements that are proposed to be implemented by the project (as opposed to payment of a fair-share contribution) would occur within the existing developed right-of-way, and would therefore not result in substantial hydrological changes (or impacts) related to flow velocities or quantities.

Significance of Impact

Based on the above described conditions and the fact that flows from the site (and other associated watershed areas) would be contained in engineered storm drain facilities designed for ultimate flow prior to reaching Peñasquitos Lagoon, no significant impacts related to increases in impervious surfaces and runoff rates/amounts would result from the proposed project.

Mitigation, Monitoring, and Reporting

Because no significant impacts were identified, mitigation is not required.

5.10.3 Impact

Issue 2: Would the project cause substantial alteration to on- and off-site drainage patterns due to changes in runoff flow rates or volume?

Impact Thresholds

According to the City of San Diego's Significance Determination Thresholds, hydrology impacts may be significant if the project would:

- Modify existing drainage patterns such that environmental resources, such as biological communities or archaeological sites, would be adversely affected.

Impact Analysis

Project implementation would alter existing drainage patterns through development of proposed on- and off-site facilities. Post-development drainage would encompass two distinct basins totaling 23.1 acres, including the 10.8-acre West Basin and the 12.3-acre East Basin (refer to the Post-project Drainage Study Map in Map Pocket 2 of Draft EIR Appendix H). The total watershed area for the two basins (23.1 acres) is slightly larger than the existing watershed described in Section 5.10.1 (22.5 acres), due to the inclusion of off-site areas along Del Mar Heights Road and El Camino Real. As previously noted, drainage from the off-site road improvement areas would be directed into and through the project site, with a corresponding alteration of drainage patterns and a reduction of both area and flow in the associated off-site drainage basin. Alteration of existing drainage patterns and directions would also occur within the site, to accommodate proposed development and the associated storm drain system. All of the drainage alterations would be minor, however, based on the following considerations (refer also to Draft EIR Appendix H): (1) existing drainage from the off-site areas along Del Mar Heights Road is ultimately conveyed to the existing 66-inch storm drain in El Camino Real (albeit at a location further downstream), with the proposed redirection of these off-site flows thus not representing a major change to existing drainage patterns; (2) drainage within the project site would continue to flow generally south to the 66-inch storm drain in El Camino Real, similar to the existing condition; (3) while the westernmost outlet point from the site would be located approximately 60 feet east of the current outlet, flows would continue to enter the 66-inch storm drain in El Camino Real with no major alteration of drainage patterns; and (4) all flows leaving the project site would continue southwest in the 66-inch storm drain to the regional detention facility, and would ultimately discharge to Peñasquitos Lagoon as described for the existing condition. As noted above, the off-site traffic improvements that are proposed to be implemented by the project would occur within the existing developed right-of-way, and would therefore not result in significant hydrological changes (or impacts) related to drainage alteration.

It should also be noted that the proposed project would be subject to the hydromodification requirements outlined in the City Storm Water Standards Manual. The project would use the “vault” method to meet the hydromodification standards. The site drains into three drainage basins; a separate vault would be provided in each drainage basin, because the project application was deemed complete by the City prior to adoption of the January 2011 City Storm Water Standards Manual (which reflects the current regional Hydromodification Management Plan, Leppert 2011d). In addition, flows from the project site would be contained within an engineered storm drain system designed for ultimate flow (including a regional detention basin) until discharged into Peñasquitos Lagoon, as previously described (Leppert 2011c in Draft Final EIR Appendix I). The site operator would enter into a Storm Water Management and Discharge Control Maintenance Agreement (SWMDCMA) with the City to ensure maintenance of permanent BMPs for the project. The SWMDCMA will be prepared upon final design of the project.

Significance of Impact

Based on the above discussion, the proposed project would maintain the existing overall drainage patterns and directions both on and off the site. Accordingly, no significant impacts related to on- or off-site drainage alteration (including effects from changes in runoff rates or amounts) would result from the proposed project.

Mitigation, Monitoring, and Reporting

Because no significant impacts were identified, mitigation is not required.

5.10.4 Impact

Issue 3: Would the project result in an increase in pollutant discharge to receiving waters during construction or operation?

Issue 4: Would the project violate any water quality standards or waste discharge requirements?

Impact Thresholds

Compliance with the Water Quality Standards is assured through permit conditions provided by LDR Engineering. Adherence to the City Storm Water Standards is considered adequate to mitigate water quality impacts. Accordingly, conformance with the City Storm Water Standards is the Water Quality threshold.

Impact Analysis

Water Quality Impacts

Potential water quality impacts associated with the proposed project (including off-site roadway modifications) would involve both short-term (construction) and long-term (operation) issues as described below. Project-related activities would not result in direct potential effects to groundwater quality through activities such as the use of underground storage tanks for

hazardous materials. Accordingly, potential impacts to groundwater quality would be limited to the percolation of surface runoff and associated contaminants generated within the site, and the following assessment of potential water quality impacts is therefore applicable to both surface and groundwater resources.

Short-term Construction

Potential water quality impacts related to project construction include erosion/sedimentation, the on-site use and storage of construction-related hazardous materials (e.g., fuels, etc.), the generation of debris or other contaminants from demolition activities, and the disposal of extracted groundwater (if required).

Erosion/Sedimentation. Surficial materials within the project site and applicable off-site areas include extensive fill deposits associated with previous grading and development (refer to Geotechnical Explorations 2008, Draft EIR Appendix O). Fill is typically composed of sandy materials with moderate to high erosion potential. Proposed excavation, grading and related activities would increase the potential for erosion and off-site sediment transport. The influx of sediment into downstream receiving waters could result in direct water quality effects such as turbidity, as well as providing a transport mechanism for other contaminants that tend to adhere to sediment particles (e.g., hydrocarbons). Potential short-term water quality effects from project-related erosion and sedimentation could potentially affect Peñasquitos Lagoon, which is identified as impaired for sedimentation/siltation on the CWA 303(d) list. Accordingly, project implementation could potentially result in significant water quality impacts related to erosion and sedimentation, although construction activities would be required to comply with related regulatory standards. Specifically, this would include applicable elements of the NPDES Construction General Permit, as well as the City Storm Water Standards. Specific conformance requirements would include implementing a SWPPP and associated erosion/sedimentation BMPs, as described in Section 5.10.1 under Regulatory Setting. Conformance with the noted standards would effectively preclude potentially significant construction-related water quality impacts from erosion/sedimentation. While specific erosion/sedimentation control BMPs would be determined during the SWPPP process, they would include the following types of standard industry measures.

- Comply with grading restrictions during the rainy season (October 1 to April 30) for applicable locations/conditions.
- Prepare and implement a CSMP to ensure appropriate monitoring, testing, BMP effectiveness, and conformance with applicable discharge requirements.
- Prepare and implement a REAP, if applicable (i.e., depending on risk level), to ensure that active construction areas/activities have adequate erosion and sediment controls in place within 48 hours of the onset of any likely precipitation event (i.e., 50 percent or greater probability of producing precipitation, per National Oceanic and Atmospheric Administration projections).
- Preserve existing vegetation wherever feasible, and use phased grading schedules to limit the area subject to erosion at any given time.
- Properly manage storm water and non-storm water flows to minimize runoff.
- Install erosion control/stabilizing measures such as geotextiles, mulching, mats, plastic sheets/tarps, fiber rolls, soil binders, compost blankets, soil roughening, or temporary

hydroseeding (or other plantings) prior to October 1 in appropriate areas (e.g., disturbed areas and graded slopes).

- Use sediment controls to protect the construction site perimeter and prevent off-site sediment transport, including measures such as temporary inlet filters, silt fence, fiber rolls, silt dikes, biofilter bags, gravel bags, compost socks/berms, temporary sediment basins, check dams, street sweeping/vacuuming, active treatment systems, energy dissipators, stabilized construction access points/sediment stockpiles, and properly fitted covers for sediment transport vehicles.
- Store BMP materials on-site to provide “standby” capacity adequate to provide complete protection of exposed areas and prevent off-site sediment transport.
- Provide full erosion control for disturbed areas not actively worked for 7 or more consecutive calendar days during the rainy season (or 14 or more days in the non-rainy season).
- Provide appropriate training for the personnel responsible for BMP installation and maintenance.
- Use solid waste management efforts such as proper containment and disposal of construction debris.
- Comply with local dust control requirements.
- Install permanent landscaping as soon as feasible after construction.
- Implement appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency.
- Implement sampling/analysis, monitoring/reporting and post-construction management programs per NPDES and/or City requirements.
- Implement additional BMPs as necessary to ensure adequate erosion and sediment control (e.g., enhanced treatment, effluent testing, and/or more detailed monitoring/reporting).

Construction-related Hazardous Materials. Project construction would involve the on-site use and/or storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint and portable septic system wastes. The accidental discharge of such materials during construction activities could potentially result in significant impacts if pollutants reach downstream receiving waters, particularly materials such as petroleum compounds that are potentially toxic to aquatic species in low concentrations. As noted above for erosion/sedimentation (and in Section 5.10.1 under Regulatory Setting), implementation of a SWPPP would be required under NPDES and City guidelines, and would include detailed measures to avoid or address potential impacts related to the use and potential discharge of construction-related hazardous materials. While specific BMPs would be determined as part of the regulatory process based on individual project characteristics, they would likely include the following types of standard industry measures from the Construction General Permit, City Storm Water Standards Manual and additional sources referenced in Section 5.10.1.

- Minimize the amount of hazardous materials used and stored on site, and restrict storage/use locations to areas at least 50 feet from storm drains.
- Use raised (e.g., on pallets), covered, and/or enclosed storage facilities for all hazardous materials.
- Maintain accurate and up-to-date written inventories and labels for all stored hazardous materials.
- Use berms, ditches, and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill.
- Place warning signs in areas of hazardous material use or storage and near storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal.
- Properly maintain all construction equipment and vehicles.
- Restrict paving operations during wet weather, and properly contain and dispose of wastes and/or slurry from sources including concrete, dry wall and paint, by using properly designed and contained washout areas.
- Implement proper controls for concrete and finishing compounds, such as avoiding overuse, containing runoff, and protecting storm drain inlets.
- Use appropriate measures to control non-storm water and non-groundwater dewatering wastes, such as containment and treatment.
- Provide training for applicable employees in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill.
- Store absorbent and clean-up materials in readily accessible on-site locations.
- Properly locate, maintain and contain portable wastewater facilities.
- Post regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous on-site location at or near the job site trailer.
- Regularly (at least weekly) monitor and maintain hazardous material use/storage facilities and operations to ensure proper working order.

Demolition-related Debris Generation. Project development would involve the demolition of existing pavement and related facilities in off-site areas along Del Mar Heights Road and El Camino Real. These activities could potentially generate contaminants such as particulates from concrete dust. Project construction would require the implementation of a SWPPP that would include measures to address potential effects associated with contaminant generation from demolition activities, with detailed requirements to be determined as part of the SWPPP process. A number of standard BMPs would likely be applicable, however, including the following:

- Restrict construction debris storage areas to appropriate locations at least 50 feet from storm drain inlets.

- Use appropriate storage facilities for applicable construction debris, including adequately sized watertight dumpsters, covers to preclude rain from contacting waste materials, impervious liners and surface containment features such as berms, dikes or ditches to prevent run-on, runoff and infiltration.
- Employ a licensed waste disposal operator to regularly remove and dispose of construction debris in an authorized off-site location.
- Use dust-control measures such as watering to reduce particulate generation for pertinent locations/activities (e.g., concrete removal).
- Implement appropriate controls for concrete sawing or grinding activities, such as slurry and debris containment.
- Use sediment control devices downstream of all demolition activities.

Disposal of Extracted Groundwater. As previously described, shallow groundwater is generally not expected to be encountered during proposed development, although groundwater levels may vary with factors such as seasonal precipitation levels. If required, groundwater extraction/disposal could potentially generate significant water quality impacts through erosion and sedimentation (e.g., if discharged onto graded areas), as well as the possible occurrence of contaminants in local aquifers. Groundwater extraction/disposal would require conformance with applicable NPDES criteria, as outlined in Section 5.10.1 under Regulatory Setting. While specific BMPs to address potential water quality concerns from groundwater extraction/disposal would be determined based on site-specific parameters, they would likely include the use of erosion prevention and sediment control devices similar to those described above; as well as testing, filtering and/or treatment of extracted groundwater prior to discharge.

Long-term Operation and Maintenance

Potential long-term water quality impacts from the project would be associated primarily with the generation of contaminants from sources such as vehicle operation, residential/commercial uses, and landscape maintenance activities. Erosion and sedimentation are not considered to represent substantial long-term concerns due to the proposed installation of stabilizing pavement, structures and landscaping (although several proposed long-term BMPs described below would help to avoid erosion or remove sediment from site runoff). As previously described, flows from the project site would be contained within an engineered storm drain system until discharged into Peñasquitos Lagoon, with all associated facilities designed to accommodate ultimate development (including the proposed project). Accordingly, the project WQTR concludes that the proposed increase in on-site impervious surfaces and runoff would not constitute "conditions of concern" as identified in the City Storm Water Standards Manual (Draft EIR Appendix I). The project is identified as a Priority Development Project, however, based on the proposed development of residential, commercial (including restaurant uses) and roadway/parking facilities. Anticipated pollutants from these uses identified in the project WQTR include sediment, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides. Based on the described conditions and the impaired status of downstream receiving waters (i.e., Peñasquitos Lagoon, refer to the discussion of water quality in Section 5.10.1), all of the anticipated pollutants are considered "pollutants of concern" for the proposed project. As a result, the project would be

required to implement a “treatment train” of appropriate LID, source control, priority development project, and treatment control BMPs in conformance with applicable City and NPDES standards. Proposed BMPs are summarized below followed by an outline of related maintenance requirements/responsibilities, with additional information provided in Sections 3 and 4 and Appendix D of the project WQTR (Draft EIR Appendix I).

Low Impact Development BMPs. The use of LID measures is intended to mimic predevelopment hydrologic conditions by effectively capturing, filtering, storing, evaporating, detaining and/or infiltrating runoff close to its source. Specific LID BMPs identified in the project WQTR include the following measures:

- Optimize the site layout by utilizing: (1) existing topography to minimize grading, (2) the site’s natural drainage pattern, and (3) flatter areas of the site.
- ~~Minimize the impervious footprint through: (1) utilizing multi-story structures to increase building density, (2) minimizing street width and parking areas, (3) shared driveways, and (4) underground parking. efforts such as the use of landscaping and subsurface parking structures.~~
- Reduce runoff by Minimize directly connected impervious areas wherever feasible, through efforts including: (1) use of appropriately placed landscaping; (2) directing rooftop runoff into vegetated areas prior to entering the storm drain system; (3) not compacting soil and avoiding the use of soil amendments in landscape areas, and (4) directing runoff into vaults. directing flows from impervious areas into LID vegetated swales located along the north, northeast and southwest site boundaries prior to entering the project treatment control BMPs (as described below).
- ~~Design landscaped areas in conformance with the Landscape Regulations in the City’s Land Development Code (Section 142.0401) and the Landscape Standards in the City’s Land Development Manual.~~
- ~~Use splash pads and/or landscape rock at on-site roof drain outlets to minimize erosion.~~

Source Control BMPs. Source control BMPs are intended to avoid or minimize the introduction of contaminants into the storm drain and natural drainage systems by reducing the potential generation of contaminants at the point of origin to the MEP. Specific source control BMPs identified in the project WQTR include the following:

- Trash storage areas shall be: (1) paved with an impervious surface, designed not to allow run-on from adjoining areas, and screened or walled to prevent off-site transport of trash; and (2) contain attached lids on all trash containers that exclude rain, or contain a roof or awning to minimize direct precipitation (excludes detached residential homes). Design trash storage areas in conformance with applicable City guidelines, including the use of: (1) impervious (paved) surface areas designed to preclude infiltration and run-on from adjacent areas (e.g., through appropriate grades and/or berms); (2) perimeter screens or walls to prevent off-site transport of trash; and (3) attached lids on trash containers, and roofs or awnings over storage areas to avoid direct precipitation contact.

Employ integrated pest management (IPM) measures wherever feasible to avoid/reduce the use of chemical pesticides and fertilizers, including efforts such as: (1) eliminate and/or reduce the need for pesticide use in the project design by: (a) planting pest-resistant or well-adapted plant varieties such as native plants, and (b) discouraging pests by modifying the site and landscaping design; and (2) distribute IPM educational materials to future site residents/tenants which address the following topics: (a) keeping pests out of buildings and landscaping using barriers, screens, and caulking, (b) physical pest elimination techniques, such as, weeding squashing, trapping, washing, or pruning out pests, (c) relying on natural enemies to eat pests, and (d) proper use of pesticides as a last line of defense.

~~pest-resistant and well-adapted (e.g., native) plant varieties; (2) hand weed removal; (3) physical pest control techniques (squashing, trapping, washing or pruning); (4) physical pest barriers such as screens or caulking to keep pests out of buildings and landscaping; (5) natural pest predators and organic fertilizers (e.g., compost); (6) limiting the use of chemical pesticides, herbicides, and fertilizers in landscaped areas to a "last resort" measure, and employing professional pest control specialists for chemical pesticide/herbicide applications when necessary; and (7) providing informational materials to project maintenance personnel, residents and tenants to increase awareness and implementation of IPM measures.~~

- Implement efficient irrigation and landscape design techniques (per City guidelines), including the use of: (1) employ rain shutoff devises to prevent irrigation during and after precipitation in accordance with City of San Diego landscape requirements; and (2) use flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.)~~tailored irrigation schedules to match site-specific needs (i.e., to prevent over-watering; (2) rain shutoff devices to prevent irrigation during and after precipitation events; and (3) flow reducers/shutoff valves triggered by pressure reductions to control water loss in the event of broken sprinkler heads or lines.~~
- Install storm drain stencils, stamping and/or tiles with prohibitive language (e.g., "no dumping") that meet current City criteria at appropriate locations such as storm drain inlets and catch basins to discourage illicit discharges.
- Design fire sprinkler systems such that discharges from operational maintenance and testing are contained and discharged to the sanitary sewer system.
- Direct air conditioning condensate to the sanitary sewer system and/or landscape areas.
- Use non-toxic roofing material, where feasible.
- Require implementation of post-construction soil stabilization practices, such as the revegetation of construction sites, in conformance with the approved landscaping and grading plans.
- Provide for pet waste collection dispensers where applicable.

Priority Development Project BMPs. Based on the identification of the proposed development as a priority project in the WQTR, the following BMPs are proposed:

- Design roadways to implement applicable measures from the City Storm Water Standards Manual and Street Design Manual wherever feasible, potentially including efforts such as directing runoff from roadways into vegetated swales or landscaping prior to discharge into storm drains or treatment BMPs.

- Provide covered parking areas (e.g., subsurface parking structures) for residents, tenants and guests.
- Incorporate landscaping into the drainage design for surface parking areas.

Treatment Control BMPs. Treatment control BMPs are intended to mitigate (infiltrate, filter or treat) runoff from developed areas, and are required to incorporate (at a minimum) either volume- or flow-based treatment control design criteria (as described in NPDES and City standards). Treatment control BMPs are required to be implemented as part of a "treatment train" system as previously noted, including the identified LID, source control and priority development project BMPs. In addition, treatment control BMPs are required to provide minimum pollutant control efficiencies of "medium" or "high" for all pollutants of concern (per City Storm Water Standard Manual criteria), and to maximize the removal of any pollutants for which downstream receiving waters are identified as impaired on the CWA 303(d) list.

Based on the noted considerations, proposed treatment control BMPs identified in the project WQTR include three Imbrium Jellyfish® Filter Systems, or equivalent. These filter ~~two~~ BaySaver Bayfilter™ units (including pretreatment BaySeparators), which typically include a vault containing filter cartridges with layered filter fabric and a mixed silica/sand media. Bayfilter™ units provide a high level of removal efficiency for sediment, trash, heavy metals, oil and grease, and organic materials; and a medium level of removal efficiency for bacteria and oxygen demanding substances (refer to Appendix D of the project WQTR for additional information). The proposed Bayfilter™ filter units would be located at the ~~two~~ three drainage outlets from the site, and would thus treat all runoff from the project site. The use of these treatment control BMPs, in concert with other "treatment train" elements (including IPM measures to minimize nutrient and pesticide discharge), would ensure that potential project-related long-term water quality impacts are addressed to the MEP in conformance with applicable regulatory requirements and standards.

Post-construction BMP Monitoring/Maintenance Schedules and Responsibilities. Identified post-construction BMPs include physical facilities such as "no dumping" stencils/tiles/stamping and Bayfilter™ units, as well as programs/activities including landscape/irrigation management and distribution of educational/informational materials. The project owner would be responsible for all project-related BMP implementation, funding, monitoring, maintenance and recordkeeping, and would enter into a Storm Water Management and Discharge Control Maintenance Agreement with the City to document related requirements. Identified monitoring and maintenance activities for applicable post-construction BMPs are summarized below, with additional information provided in Section 4 of the project WQTR (Draft EIR Appendix I).

- No Dumping Stencils/Tiles/Stamping. Monitoring and maintenance for storm drain inlet stencils/tiles/stamping would include annual inspections and as-need maintenance, repair or replacement to maintain legibility.
- Landscaping. Inspection of landscaped areas would be conducted monthly by the landscape maintenance contractor, and would include routine efforts such as mowing, trimming, weeding, and removal of trash and debris. Associated maintenance would

include as-needed repair of eroded areas or animal burrows, removal of ponded water, and replacement of vegetation to maintain appropriate cover.

- **Irrigation Systems.** Irrigation systems/operations would be inspected monthly by the landscape maintenance contractor, with related maintenance activities to include as-needed adjustment of irrigation coverage/schedules (e.g., to avoid runoff); repair of eroded areas; removal of ponded water; and repair/replacement of damaged sprinkler heads, pipes or other facilities.
- **Bayfilter™ Units.** The project Bayfilter™ units (including the pretreatment facilities) would be inspected annually, and after major storm events, by properly trained and qualified personnel (e.g., certified BaySaver Bayfilter™ contractors). Specific maintenance activities would include routine removal of accumulated materials and annual replacement of media cartridges (on or before September 30th), as well as as-needed repair/replacement of system components.

Significance of Impact

Based on the above discussion, the proposed project would conform to all applicable regulatory criteria, water quality standards and waste discharge requirements. Accordingly, project implementation would not result in any significant construction or post-construction water quality impacts.

Mitigation, Monitoring, and Reporting

Because no significant impacts were identified, mitigation is not required.

5.10.5 Impact

Issue 5: Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (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)?

Impact Thresholds

According to the City of San Diego's Significance Determination Thresholds, hydrology impacts related to groundwater may be significant if the project would:

- Extract groundwater or decrease aquifer recharge.

Impact Analysis

Groundwater Extraction

The proposed development would utilize municipal water service for all project-related water needs, with no associated impacts related to long-term groundwater extraction. As previously described, shallow groundwater observed during on-site geotechnical excavations was limited to seepage in one boring at an approximate depth of 61 feet, and is not expected to be encountered during project construction. Some potential exists for the occurrence of more shallow aquifers within the site, however, depending on factors such as seasonal precipitation levels. In the event that shallow groundwater extraction/disposal is required, any associated impacts are anticipated to be minor based on the following considerations: (1) any project-related groundwater extraction required during construction would be short-term, and would be expected to be limited to relatively minor quantities; and (2) temporary project-related groundwater extraction and disposal would be subject to applicable regulatory requirements, including the previously described NPDES Groundwater Permit.

Groundwater Recharge

The proposed project would entail the installation of impervious surfaces, which would reduce the infiltration and groundwater recharge capacity of the site. Associated impacts are anticipated to be minor, however, based on the following considerations: (1) the relatively small area of proposed new impervious surface area and the related minor reduction of infiltration/recharge capacity; (2) the proposed use of extensive landscaping and unlined drainage facilities (e.g., vegetated swales); (3) the fact that shallow groundwater is not expected to be encountered during project development; and (4) the entire project site vicinity and downstream areas are served by municipal water, with no known current use of groundwater in these areas.

Significance of Impact

Based on the above discussion, no significant impacts related the potential depletion of groundwater supplies or interference with groundwater recharge would result from implementation of the proposed project.

Mitigation, Monitoring, and Reporting

Because no significant impacts were identified, mitigation is not required.

5.11 PUBLIC UTILITIES

5.11.1 Existing Conditions

Public utilities technical studies prepared for the proposed project include a Water Supply Assessment and Verification Report (City 2011b and Atkins 2013), Water Study (Atkins 2011a), Sewer Study (Atkins 2011b), and Waste Management Plan (WMP; Leppert Engineering 2011a). The listed technical studies and letter reports are summarized below along with other applicable information, with the complete documents included in Appendices J, J.1, K, L, and M, respectively.

Water Supply and Conservation

Water service to the site is provided by the City of San Diego PUD. The PUD serves more than 1.3 million people populating more than 200 square miles of developed land. The City currently purchases most of its potable water from SDCWA, a wholesale water agency providing imported water to its 24 member agencies in San Diego County (City 2010d). The SDCWA, in turn, purchases water from MWD.

Potential water supply offsets such as conservation and water reclamation have only recently entered the water supply picture, but even the most optimistic projections credit those offsets with no more than 20 to 25 percent of total demand. San Diego will therefore continue to rely heavily upon imported water far into the foreseeable future (City 2010d). Below is a summary of these water supply sources. In addition, a description of events affecting the water supply sources and site-specific historical water usage are provided.

Metropolitan Water District of Southern California

MWD is a consortium of 26 cities and water districts that provides drinking water to nearly 19 million people in parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino, and Ventura counties. MWD currently delivers an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area (MWD 2010). MWD imports its water from two sources: the Colorado River (via the Colorado River Aqueduct [CRA]) and the State Water Project (SWP). The CRA is owned and operated by MWD, and extends approximately 242 miles from the Colorado River at Lake Havasu to Lake Matthews in Riverside County. From there, a series of canals, siphons, pipelines and pump stations moves water west to several MWD reservoirs for local distribution (MWD 2010b). The principal structure conveying water south in the SWP, the California Aqueduct, extends approximately 444 miles south from the Sacramento-San Joaquin Delta (along with a series of related dams/reservoirs, pumping plants, canals and siphons, MWD 2008a).

The California Aqueduct conveys SWP water into northern San Diego County via two aqueducts encompassing five large-diameter pipelines, with a sixth pipeline currently under evaluation. The SDCWA takes ownership of these facilities just south of the County line, and conveys SWP water further south for distribution to member agencies. Additional water sources currently or potentially available to MWD include local supplies, groundwater banking, water transfers, and

seawater desalination, with all MWD water sources supplemented by conservation efforts such as public education programs and rebates for high efficiency appliances and landscaping.

Through its 2010 Integrated Resources Plan (IRP), MWD identifies a mix of imported and local resources to provide long-term water supplies, including a planning buffer intended to address potential future supply and demand fluctuations.

San Diego County Water Authority

The SDCWA is a wholesale water supplier to its 24 member agencies and supplies the majority of the water to the western third of San Diego County, encompassing 1,488 square miles that includes the project area. The City, with 210,726 acres, is the largest service area within the SDCWA service area. Water supplies utilized within the SDCWA service area primarily originate from water purchased by the SDCWA from MWD. The SDCWA has actively pursued a strategy of supply diversification that includes the acquisition and importation of additional water supplies, the development of additional local water supply projects, and augmentation of its water supply via local and regional water storage capacity. Since 1990, local supply sources such as groundwater, local surface water, recycled water, and conservation have increased to constitute 15 percent of the SDCWA's water supply (City 2010e). The SDCWA maintains and operates several pipelines extending approximately 300 miles that comprise the First and Second San Diego Aqueducts, as well as pumping stations and a water treatment plant. In fiscal year 2007, water demand in the SDCWA's service area reached a record level of 741,893 acre feet per year (AFY), and dropped 24 percent to 566,443 AFY by fiscal year 2010 as a result of climate conditions (cooler temperatures and more normal rainfall amounts), mandatory water use restrictions, and a growing conservation ethic (SDCWA 2011).

City of San Diego Public Utilities Department

The PUD treats and delivers more than 200,000 AFY of water to nearly 1.3 million residents. While the PUD purchases approximately 85 to 90 percent of its water from the SDCWA, it uses three local supply sources to meet or offset potable demands: local surface water, conservation, and recycled water. In addition to delivering potable water, the City has a recycled water use program and associated infrastructure; however, this program and related facilities are not available in the project area.

The PUD maintains and operates nine local raw water storage reservoirs with over 408,000 acre feet of storage capacity, three water treatment plants with a combined total rated capacity of 294.4 mgd, more than 3,213 miles of water lines, 49 water pump stations, 127 pressure zones, and more than 200 million gallons of potable water storage capacity in 31 treated water storage facilities, including steel tanks, standpipes, concrete tanks, and concrete reservoirs. In addition to supplying approximately 274,000 metered service connections within its own incorporated boundaries, the PUD conveys and sells potable water to the City of Del Mar, Santa Fe Irrigation District, San Dieguito Water District, and the California American Water Company, which, in turn, serves the Cities of Coronado and Imperial Beach and portions of south San Diego. The City has agreements to sell surplus water to the Otay Water District and exchange water to Ramona Municipal Water District. The City also maintains several emergency connections to

and from neighboring water agencies, including the Santa Fe Irrigation District, Poway Municipal Water District, Otay Water District, the California American Water Company, and the Sweetwater Authority (City 2010e).

The PUD also implements a conservation program aimed at reducing water use, through the Water Conservation Program which accounts for over 34,000 AF of potable water savings per year (City 2011c). Water savings have been achieved by creating a water conservation ethic, adopting programs and policies designed to promote water conservation practices, and implementing comprehensive public information and educational campaigns.

In September 2011, the City issued its 2010 UWMP (City 2010e) that concludes that the PUD will have sufficient water supplies to serve the City under average, single-dry, and multiple-dry year conditions through the year 2035 (City 2010e).

Events Affecting Water Supply and Conservation

Several recent events may affect water supplies to the San Diego region, including a December 2007 Record of Decision on the operation of the Colorado River, several federal district court decisions regarding the operation of the SWP with respect to the Delta smelt and Delta salmon (i.e., *Natural Resources Defense Council, et al. v. Kempthorne, et al. [NRDC]*), and developing understanding of the potential for global climate change to impact California water supplies.

In addition, there has been litigation associated with the 2003 approval by numerous Southern California water agencies, including the San Diego County Water Authority, of various agreements collectively referred to as the Quantification Settlement Agreement (QSA). Among other terms, the QSA includes the transfer of conserved water from the Imperial Irrigation District to the Water Authority. The Water Authority is a wholesale water supplier to 24 member agencies, including the City.

The QSA litigation involves alleged violations of the California Environmental Quality Act, the California Water Code, and other laws related to the approval of the QSA, the water transfer, and related agreements. In January 2010, a Superior Court judge ruled that the QSA and related agreements were invalid because one of the agreements created an open-end financial obligation for the State of California in violation of the California Constitution. This ruling was reversed by the California Court of Appeal and the case remanded to the Superior Court. (See Quantification Settlement Agreement Cases (2011) 201 Cal.App.4th 758.) On June 4, 2013, the Sacramento Superior Court upheld the validity of the QSA in its entirety and rejected all legal challenges. The judgment has been appealed.

In December 2007, the MWD Board of Directors authorized a series of four agreements that allowed for the implementation of federal guidelines for how water shortages are to be shared amongst the seven states that rely upon the Colorado River for water supplies. Despite the noted uncertainties, MWD and SDCWA have concluded that water supplies are anticipated to be available to meet projected demand under normal, dry-year, and multiple-dry year conditions during a 20-year planning horizon.

The City of San Diego officially declared a Level 2 Drought Alert on June 1, 2009. A Level 2 Alert includes a number of mandatory water restrictions related to uses such as landscape irrigation, vehicle washing, leak repairs, and ornamental water features. In addition, all voluntary Level 1 conservation practices became mandatory (City 2010e). The Level 2 Drought Alert was rescinded by the City Council in May 2011, although the Council also retained (and made permanent) a number of related water-waste restrictions as part of the same action. Specifically, these restrictions include requirements related to watering times, excessive irrigation/leaks, wet-washing paved areas, swimming pools/fountains, car washing, cooling systems, conveyer car wash/commercial laundries, and restaurants/hotels (City 2011d).

Water Supply Regulatory Framework

California Senate Bill 610

The California Water Code (Water Code) Sections 10910 through 10915 were amended by the enactment of Senate Bill 610 (SB 610) in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA. For the purposes of SB 610, “project” means any of the following:

1. A proposed residential development of more than 500 dwelling units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 sf of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 sf of floor space.
4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area.
6. A mixed-use project that includes one or more of the projects specified in this subdivision.
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The proposed project, with 608 proposed residential units plus mixed-uses consisting of 270,000 sf gross leasable area (gla) of commercial/retail, 536,000 sf gla of office, and a 150-room hotel, would meet the criteria as a “project” under SB 610 for categories 1, 2, 3, 6, and 7. Based on this conclusion, a Water Supply Assessment (WSA; Draft EIR Appendix J) has been prepared by PUD for the project in conformance with SB 610 requirements.

California Senate Bill 221

Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. SB 221 prohibits a city or county from approving a residential subdivision of more than 500 units unless there is written verification that a sufficient water supply is, or will be, available for the development. SB 221 is intended as a “fail safe” mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs when it should – before construction begins.

The project, with 608 proposed residential units, is subject to SB 221 water supply verification requirements. Accordingly a Water Verification Report (WVR; Draft EIR Appendix J) has been prepared by PUD for the project in conformance with SB 221 requirements.

California Assembly Bill 1881

AB 1881, the Water Conservation in Landscaping Act of 2006, requires the California Department of Water Resources to prepare an updated Model Water Efficient Landscaping Ordinance (Model Ordinance) in accordance with specified requirements to conserve water through efficient irrigation and landscaping. By January 1, 2010, local agencies were to adopt either the updated Model Ordinance or a local landscape ordinance that is at least as effective in conserving water as the Model Ordinance. In response to this, the City amended its Landscape Regulations (Municipal Code Chapter 14, Article 2, Division 4) and Landscape Standards in November 2009. The Landscape Standards implement the requirements of the Landscape Regulations. All landscape plans and installations are required to be in compliance with the Landscape Standards.

San Diego Municipal Code Section 147.04

San Diego Municipal Code Section 147.04 requires that all buildings, prior to a change in ownership, are required to be certified as having water-conserving plumbing fixtures in place.

The project site does not contain any existing buildings, and does not propose the change of ownership of any buildings. Therefore, this ordinance will not be further discussed in this EIR.

City of San Diego Ordinance 0-17327 (“Mandatory Reuse Ordinance”)

This ordinance, adopted by the City Council in 1989, requires that “recycled water shall be used within the City where feasible and consistent with the legal requirements, preservation of public health, safety, and welfare, and the environment.” Compliance with this ordinance for new development is made a condition of tentative maps, land use permits, etc, based on the project’s location within an existing or proposed recycled water service area.

The project site is not located within a recycled water service area.

Water Infrastructure

As mentioned above, the PUD provides water service to the project site. The water infrastructure in the City's service area includes nine surface raw water storage reservoirs (Barrett, El Capitan, San Vicente, Hodges, Miramar, Murray, Lower Otay, Upper Otay, and Sutherland), pipeline connections to SDCWA aqueducts, three water treatment plants (Alvarado, Miramar, and Otay), 31 treated water storage facilities, 3,213 miles of water transmission and distribution pipelines, and 49 water pump stations. Since much of the City's water system was constructed 100 years ago, many deficiencies exist. The City developed a Strategic Plan for Water Supply (1997b) to address this infrastructure issue. The strategic plan outlines needed repairs, replacements, and upgrades to the City's water infrastructure system. An outcome of the City's 1997 Strategic Plan for Water Supply, which focused mainly on the development of a CIP, was the realization that the City should become more engaged in the planning and development of its own water supply in order to become less reliant on imported water. Prior to the strategic planning process, the City had relied almost entirely on the SDCWA to plan for, and acquire necessary water supplies (City 2002b). Many of the planned improvements have been completed or are currently under construction.

The City produces reclaimed water at the North City Water Reclamation Plant (NCWRP). This reclaimed water is distributed throughout the northern region of San Diego via an extensive reclaimed water pipeline. More than 79 miles of distribution pipelines are installed in the communities of Mira Mesa, Miramar Ranch North, Scripps Ranch, University City, Torrey Pines, Santaluz, and Black Mountain Ranch to provide reclaimed water for irrigation, landscaping and industrial use. Reclaimed pipelines, sprinkler heads, meter boxes and other irrigation equipment are color-coded purple to distinguish reclaimed water pipes from drinking water systems. The project site is not within the recycled water system service area (City 2010c).

The water infrastructure in the vicinity of the project site includes a 16-inch main in El Camino Real and a 30-inch main and a 12-inch main in Del Mar Heights Road (Atkins 2011a).

Wastewater Infrastructure

Wastewater treatment service to the site is provided by the PUD. In the project vicinity, an 18-inch sewer main is located in El Camino Real, which is known as the ECRTS. This sewer main is comprised of PVC piping and vitrified clay pipe (VCP). Due to cracking, a portion of the VCP pipe was recently relined. This sewer line directs flows to a meter on Carmel Valley Road and ultimately to the NCWRP (Atkins 2011b).

The NCWRP is the first large-scale water reclamation plant in San Diego's history and part of the single largest sewerage system expansion in the area in more than 35 years. This facility can treat up to 30 MGD, which is generated by northern San Diego communities. Wastewater entering the plant undergoes a series of treatment and purifying steps using the latest technologies to supplement the water supply of the region (City, 2010c).

Storm Water Drainage

According to the drainage report (Leppert 2011b) prepared for the project, the project site has two separate drainage basin areas; the east basin and the west basin. Both on-site basins drain in a southerly direction toward El Camino Real. Each basin is further subdivided approximately in half and designed to drain into two temporary sediment basins that outlet at separate points of connection via a temporary private storm drain system into the 66-inch El Camino Real public storm drain system. Refer to Section 5.10, *Hydrology and Water Quality*, and Draft EIR Appendix H, Drainage Study, for further details.

Solid Waste Disposal

Solid waste disposal in the project area is provided by the combined services of the City of San Diego Environmental Services Department (ESD) and private collectors. The City provides refuse collection for residences that are located on dedicated public streets, provide adequate safe space and access for storage and collection, and comply with regulations set forth in the Municipal Code and Waste Management Guidelines. Other customers pay for service by private hauling companies that are franchised by the City. Refuse collected from the area is generally taken to the Miramar Landfill.

According to the Solid Waste Information System (SWIS) database maintained by the California Department of Resources Recycling and Recovery (CalRecycle), the Miramar Landfill has a remaining capacity of approximately 16,473,000 cy of solid waste as of July 30, 2007. The Miramar Landfill has been expected to close on January 31, 2017 (CalRecycle 2011), but that date may be extended until 2022 due to the reduction in waste disposal from the City's recycling efforts and reduced waste volumes from the recent economic downturn.

Two other landfills, Republic's Sycamore Landfill and Otay Landfill, provide disposal capacity within the urbanized region. The Sycamore Landfill is located to the east of Miramar within the City's boundaries. The Otay Landfill is located within an unincorporated island within the City of Chula Vista. The SWIS database indicates that the Sycamore Landfill has a remaining capacity of 47,388,428 cy as of September 30, 2006. Also, the Otay Landfill has a remaining capacity of 33,070,879 cy as of November 30, 2006. Based on the remaining capacity and disposal rates, the Sycamore Landfill is expected to close December 31, 2031 and the Otay Landfill is expected to close April 30, 2021 (CalRecycle 2011). Similar to the Miramar Landfill, the closure dates for Sycamore and Otay Landfills may be extended due to the reduction in solid waste disposal from recycling and waste reduction efforts and recent economic downturn.

The California Public Resources Code requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal through source reduction, recycling, composting, and transformation. The City has enacted codes and policies aimed at helping the City to exceed this diversion level, including the Refuse and Recyclable Materials Storage Regulations (Municipal Code Chapter 14, Article 2 Division 8), the Recycling Ordinance (Municipal Code Chapter 6, Article 6 Division 7), and the Construction and Demolition (C&D) Debris Deposit Ordinance (Municipal Code Chapter 6, Article 6 Division 6). Recently chaptered Assembly Bill 341 has set a new diversion target at 75 percent.

The Recycling Ordinance requires all single-family, multi-family, and commercial uses to participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the approved recycling containers. The C&D Debris Deposit Ordinance requires project applicants to submit a Waste Management Form with the building permit or demolition/removal permit, to provide a general estimate of the total waste generated by the project including how much will be recycled. The code requires a minimum diversion rate of 50 percent for building permits or demolition/removal permits issued within 180 calendar days of the effective date of the ordinance, and a minimum diversion rate of 75 percent for building permits or demolition/removal permits issued after 180 calendar days from the effective date of the ordinance, provided that a certified recycling facility which accepts mixed construction and demolition debris is operating within 25 miles of the City Administrative Building.

The City's Environmental Services Department requires all new development projects that propose to construct, demolish, and/or renovate at least 40,000 sf of building space to prepare a WMP that addresses disposal of waste generated during short-term project construction and long-term post-construction operation. The WMP is required to identify how the project would reduce waste and achieve target reduction goals and must include:

- Projected waste generation calculations and identification of the types of waste materials generated;
- Description of how materials would be reused on-site;
- Identification of source separation techniques for recycling; and
- Identification of recycling and reuse facilities where waste would be taken if not reused on-site.

5.11.2 **Impact**

Issue 1: Would the proposed project result in the need for new systems or require substantial alterations to existing utilities including those necessary for water, sewer, storm drains, and solid waste disposal? If so, what physical impacts would result from the construction of these facilities?

Impact Thresholds

According to the City's Significance Determination Thresholds, public utility impacts may be significant if the project would:

- Use excessive amounts of potable water;
- Use predominantly non-drought resistant landscaping and excessive water usage for irrigation and other purposes;
- Cause a significant increase in demand for public utilities;
- Result in direct impacts from the construction of new or expanded public utilities needed to serve the proposed project; and/or

- Construct, demolish, and/or renovate 1,000,000 sf or more of building space, which would generate approximately 1,500 tons or more of waste. For projects over 1,000,000 sf, a significant direct solid waste impact would result if compliance with the City's ordinances and the WMP fails to reduce the impacts of such projects to below a level of significance and/or if a WMP for the project is not prepared and conceptually approved by the Environmental Services Department prior to distribution of the draft environmental document for public review.

In addition, the City's Significance Determination Thresholds note the following guidance should be considered in determining whether utility work could have significant environmental effects.

Would removal, construction, and/or relocation of the utility:

- Be compatible with existing and adjacent land uses? (See Section 5.1, *Land Use*)
- Change drainage or affect water quality/runoff? (See Section 5.10, *Hydrology/Water Quality*)
- Affect air quality? (See Section 5.5, *Air Quality*)
- Affect biological resources including habitat? (See Section 5.9, *Biological Resources*)
- Have a negative aesthetic affect? (See Section 5.3, *Visual Quality/Neighborhood Character*)
- Increase noise levels to existing receptors? (See Section 5.4, *Noise*)

It should be noted here that the City's Significance Determination Thresholds call for a discussion of electrical power, natural gas, and solar energy under the Public Utilities section of EIRs. However, pursuant to the passage of SB 97 and recent amendments to the State CEQA Guidelines, a thorough energy analysis is now required in EIRs. Therefore, potential energy impacts resulting from the proposed project are discussed in Section 5.6, *Energy*.

Impact Analysis

Water Supply and Conservation

Water Supply and Demand

As previously described, a WSA/WVR was prepared for the proposed project, which is contained in Draft EIR Appendix J, to determine if there is sufficient water supply to serve existing demands, projected demands of the project, and future water demands within the PUD's service area in normal and dry year forecasts during a 20-year projection. PUD water demand projections are based on the SANDAG Series 12 Regional Growth Forecast and are incorporated into the City's 2010 UWMP. The projections are then utilized by the SDCWA for use in preparation of their UWMP, which is further incorporated into MWD's UWMP to calculate regional water demands.

The projected water demands of the project compared to the planned water demands of the project site per the City's 2010 UMWP and SDCWA's 2010 UWMP are identified in Table 5.11-1, *Projected Versus Planned Water Demands For The Project*, below. As shown, the total projected water demand for the project is 208,138 gpd (233 AFY), and the planned demand is 76,800 gpd (86 AFY). The WSA notes that the difference (131,338 gpd or 147 AFY) is accounted for through the Accelerated Forecasted Growth demand increment of the SDCWA's 2010 UWMP. As documented in the 2010 UWMP, the SDCWA utilizes the Accelerated Forecasted Growth demand increment to demonstrate adequate supplies for future and existing development. Therefore, based on the City's 2010 UWMP and the SDCWA's 2010 UWMP, the project would not result in unanticipated water demands and there would be sufficient water planned to supply the project's estimated annual average usage. In addition, the next update of the demand forecast for the SDCWA's 2015 UWMP will be based on SANDAG's most recently updated forecast, which will include the project.

Table 5.11-1 PROJECTED VERSUS PLANNED WATER DEMANDS FOR THE PROJECT		
Water Demands	Amount	
	gpd	AFY
Projected Demands	208,138	233
Planned Demands – City's 2010 UWMP	76,800	86
Planned Demands – SDCWA's 2010 UWMP	131,338	147
Net Unanticipated Demands	0	0

gpd = gallons per day; AFY = acre feet per year
Source: City 2011c.

The project WSA also concludes that MWD, SDCWA, and PUD will have adequate water supplies to meet long-term future demands, including those associated with the proposed project (City 2011c). Summary assessments of projected water supply and demand conditions in the City (including the proposed project) under normal, single-dry year, and multiple-dry year conditions are provided in Tables 5.11-2 (*Projected Water Supply and Demand - Normal Year Conditions*), 5.11-3 (*Projected Water Supply and Demand – Single-Dry Year Conditions*), and 5.11-4 (*Projected Water Supply and Demand – Multiple-Dry Year Conditions*).

Table 5.11-2 PROJECTED WATER SUPPLY AND DEMAND - NORMAL YEAR CONDITIONS (AFY)					
	2015	2020	2025	2030	2035
Total Supply	240,472	260,211	276,375	288,481	298,860
Total Demand	240,472	260,211	276,375	288,481	298,860
Difference	0	0	0	0	0

Source: City 2011c.

Table 5.11-3
PROJECTED WATER SUPPLY AND DEMAND – SINGLE-DRY YEAR CONDITIONS
(AFY)

	2015	2020	2025	2030	2035
Total Supply	255,040	276,526	293,895	307,230	318,586
Total Demand	255,040	276,526	293,895	307,230	318,586
Difference	0	0	0	0	0

Source: City 2011c.

Table 5.11-4
PROJECTED WATER SUPPLY AND DEMAND – MULTIPLE-DRY YEAR
CONDITIONS (AFY)

	2015	2020	2025	2030	2035
<i>Multiple Dry Year - First Year Supply</i>					
Total Supply	257,587	278,451	296,319	309,230	320,382
Total Demand	257,587	278,451	296,319	309,230	320,382
Difference	0	0	0	0	0
<i>Multiple Dry Year - Second Year Supply</i>					
Total Supply	267,323	288,723	306,726	320,467	332,038
Total Demand	267,323	288,723	306,726	320,467	332,038
Difference	0	0	0	0	0
<i>Multiple Dry Year - Third Year Supply</i>					
Total Supply	281,466	303,004	322,166	334,720	346,823
Total Demand	281,466	303,004	322,166	334,720	346,823
Difference	0	0	0	0	0

Source: City 2011c.

Pursuant to the WSA conditions and assumptions outlined above, the proposed project would be consistent with MWD/SDCWA supply/demand projections. Therefore, there will be sufficient water supply over a 20-year planning horizon to meet the projected demands of the project, as well as other existing and planned development projects within the PUD service area in normal, single-dry year, and multiple-dry year forecasts. Accordingly, no associated significant impacts related to potable water supplies and demand would result from project implementation.

Compliance with Water Supply Regulations

As discussed above and demonstrated in the project WSA/WSV, the project would comply with SB 610 and SB 221. The project also would be in compliance with AB 1881, which requires water efficient landscapes in new developments. A water budget, known as the maximum applied water allowance (MAWA), is calculated for proposed landscapes in new developments that defines an annual water allowance based on the project's landscape area and local

evapotranspiration¹ rate. The calculated MAWA for the project (at full buildout) is 10,925,993 gallons per year, and the total estimated applied water use associated with the proposed landscape irrigation plan is 7,632,798 gallons per year (Nowell and Associates 2011). Because the estimated applied water usage is less than the MAWA, the project complies with AB-881.

Water Infrastructure

There is no existing on-site water infrastructure. The project proposes connections to existing water infrastructure located within Del Mar Heights Road and El Camino Real. The City's planning and design criteria for potable water system sizing and service conditions were used to analyze and layout the proposed facilities. Also, the project proposes vacating an existing, undeveloped water easement, as it would not meet the needs of the proposed project.

Hydraulic analysis in the project's water study (Atkins 2011a, Draft EIR Appendix K) utilized a hydraulic model (H₂ONET version 7.0) to assess whether the proposed water infrastructure system would adequately serve the project. Analyses consisted of subjecting the proposed system to specified demand conditions, and then comparing that demand to the City's design criteria. The hydraulic model simulated projected maximum day, peak hour, and maximum day plus fire flow demand conditions, at critical nodes throughout the project site (Atkins 2011a). In all cases, minimum pressures and maximum pipeline velocities remained within City design criteria requirements. Thus, no additional off-site water facilities would be required.

The project includes a network of 12-inch mains that would connect through Main Street, Third Avenue, and First Avenue to the existing mains within El Camino Real (16-inch main) and Del Mar Heights Road (12-inch and 30-inch mains). The project would relocate/realign portions of the existing water mains within Del Mar Heights Road. The proposed on-site water infrastructure system would provide potable water service in conformance with the City of San Diego requirements (Atkins 2011a). Therefore, project impacts related to water infrastructure would be less than significant.

Wastewater Infrastructure (Sewer)

This discussion is based on a sewer study prepared for the proposed project (Atkins 2011b), which is contained in Draft EIR Appendix L. Wastewater generated from the project site would drain into the City's ECRTS, and continue to a permanent flow meter (FM SDT8-101) located on Carmel Valley Road. From there, the sewage would be conveyed to the NCWRP via a system of trunk and interceptor sewers and pumping stations.

The sewer study utilized hydraulic model results, provided by the City's Wastewater Modeling Department, from the City's 2009 Capacity Report for the ECRTS. The hydraulic modeling results include dry weather and wet weather capacities for 2010 and 2020 buildout of the system. The results for the ECRTS model extended from upstream of the project site down El Camino Real to FM SDT8-101. Available downstream capacity was also analyzed to FM SDT8-101, assuming existing facilities downstream of this location are part of the regional collection and

¹ Evapotranspiration is the sum of evaporation and plant transpiration from land surface to the atmosphere.

disposal system, and as such are not adversely affected by the proportionally small increase in flows from the project (Atkins 2011b).

Table 5.11-5, *Estimated Average Wastewater Generation*, summarizes the wastewater generation for the project. Sewer generation estimates apply the City's equivalent population factors to commercial and office space, and a unit generation rate of 80 gpd per capita, per the City's design standards. Residential wastewater generation rates assume 1.83 people per household, per SANDAG's census data report for the Carmel Valley Planning Area. According to the sewer study, the project would generate a sewer demand of approximately 0.162 mgd on average (Table 5.11-5). The peak dry-weather flow would be 0.37 mgd and the peak wet-weather flow was calculated to be 0.41 mgd.

Table 5.11-5 ESTIMATED AVERAGE WASTEWATER GENERATION					
Project Component	Area or Units	Population Density (people/acre or unit)	Equivalent on-site Population	Unit Rate (gpd/person)	Average Sewer Demand Generation (mgd)
Retail/Commercial	6.20 acres	43.7	271	80	0.022
Hotel	2.30 acre	43.7	100	80	0.008
Office	12.30 acres	43.7	538	80	0.043
Residential	608 units	1.83	1,113	80	0.089
Total	--	--	2,022	--	0.162

Source: Atkins 2011b

The sewer study included a conservatively estimated capacity analysis that determined the existing area collection system has capacity to accommodate the proposed project based on the City's 2009 Capacity Report for the ECRTS (Sewer Study; Draft EIR Appendix L). The 2020 wet-weather condition was conservatively used to determine available capacity since flows would be highest under that condition. The capacity analysis concluded that the ECRTS has an available wet-weather capacity of approximately 1.18 mgd at 2020 buildout. As stated above, peak wet-weather flows for the project were calculated at 0.41 mgd and therefore, the existing collection system has capacity to serve the project. Thus, no additional off-site sewer facilities would be required.

On-site sewer facilities, designed to meet the demands of the project, would be provided throughout all phases of project implementation in accordance with applicable standards. The proposed on-site private sewer system includes a network of six- and eight-inch diameter gravity sewer pipelines that would connect to the ECRTS. There are no existing on-site sewer facilities, so none would be adversely affected. The project proposes to vacate an existing, undeveloped

sewer easement, as it would not be necessary or practical for project implementation. Therefore, no significant impacts related to wastewater facilities would occur.

Storm Water Drainage

As discussed in Section 5.10 and Draft EIR Appendix H, Drainage Study, the project would retain the eastern and western drainage basins. Post-project outlet points and contributing drainage areas were designed to approximately match pre-project conditions. As such, the project proposes two major drainage basins (eastern and western) that outlet into the public storm drain along El Camino Real via separate points of connection.

The project would increase the impervious area on site and would increase site runoff rates. The proposed on-site drainage basins and outlets would be designed to accommodate on-site storm water. In addition, the entire Precise Plan area, within which the proposed project site falls, was master planned and constructed for ultimate buildout, including the existing 66-inch storm drain system in El Camino Real and an existing regional detention basin located downstream. The existing downstream system is engineered until it outfalls into the Los Peñasquitos Lagoon, and therefore, the drainage study indicates there are no conditions of concern for downstream erosion (i.e. the two-year and 10-year storm events), or for the capacity of the downstream system (i.e. the 100-year storm event), upon project implementation (Leppert 2011b). Therefore, project impacts related to drainage systems would be less than significant.

Solid Waste Disposal

As discussed above, City significance thresholds note that a project that would construct, demolish, or renovate 1,000,000 sf or more of building space may generate approximately 1,500 annual tons or more of waste and is considered to result in direct impacts to solid waste facilities. The project proposes construction of 1,857,440 gross sf and is estimated to generate 662,635.59 tons of solid waste during project construction and 3,356 annual tons of solid waste upon project buildout. Because the estimated solid waste generated by the project exceeds the threshold, a WMP was prepared for the project by Leppert Engineering Corporation (Leppert 2011a). The purpose of the WMP is to identify the potential waste generated and diverted from the project, and reduce solid waste generated by the project, as mandated by the City. The WMP addresses the grading and construction phase, as well as the post-construction, or occupancy phase of the proposed project and identifies the types and projected amount of waste that would be generated by the project and the recommended source separation and reduction techniques to achieve waste reduction. The WMP is contained in Draft EIR Appendix M and summarized in this EIR section.

Grading and Construction Waste Management

Table 5.11-6, *Estimated Solid Waste Generation and Diversion*, summarizes the estimated solid waste generation and diversion associated with project grading, building and infrastructure construction, and occupancy.

Table 5.11-6 ESTIMATED SOLID WASTE GENERATION AND DIVERSION				
Waste Type	Tons Generated	Tons Diverted	Tons Disposed	Diversion Target
<i>Grading Phase</i>				
Dirt	647,920	647,920	0	100%
Greenery	0.78	0.78	0	100%
Subtotal	647,920.78	647,920.78	0	--
<i>Construction Phase</i>				
Asphalt	1,323.2	992.4	330.8	75%
Concrete	727.6	545.7	181.9	75%
Spoil Dirt	7,788	5,841	1,947	75%
Greenery	0.11	0.11	0	100%
Building Materials	4,875.9	3,657	1,218.9	75%
Subtotal	14,714.81	11,036.21	3,678.6	--
<i>Occupancy Phase</i>				
Residential Waste	729.6 tons/year	364.8 547.2	364.8 182.4	50% - current 75% by 2020
Non-residential Waste	2,626.4 tons/year	1,313.2 1,969.8	1,313.2 656.6	50% - current 75% by 2020
Subtotal	3,356 tons/year	1,678 2,517	1,678 839	50% - current 75% by 2020

Source: Leppert 2011a

Project Grading

The total estimated amount of solid waste that would be generated during project grading would be 647,920.78 tons. Approximately 23 acres of the 23.6-acre site would be graded. Site grading would require a total of approximately 30,400 cy of fill and 528,800 cy of cut, resulting in a total net export quantity of approximately 498,400 cy. Based on this export quantity, the project would generate 647,920 tons of dirt waste. The grading contractor would be required to find suitable sites for reuse of the exported dirt. Any dirt that cannot be reused would be recycled at the Vulcan Carroll Canyon Recycle Site. Additional waste generated during project grading would include greenery due to the removal of ornamental landscaping along the project frontages of perimeter streets (i.e., Del Mar Heights Road, El Camino Real, and High Bluff Drive). It is estimated that 0.78 ton of greenery waste would be generated and recycled at the Miramar Greenery. Additionally, a negligible amount of trash would be generated by contractors working on site during the grading process. This trash would be collected by a commercial trash collection company and taken to Miramar Landfill. The diversion goal target for project grading is 100 percent.

Source separation techniques that would be implemented during the project grading phase include the following:

- Designated bins for collection of miscellaneous trash and greenery;
- Dirt would be trucked off site for recycling or reuse; and
- Greenery would be trucked off site for recycling.

Building and Infrastructure Construction

The total estimated quantity of solid waste that would be generated during the construction period would be 14,714.81 tons. Asphalt, concrete, greenery, and soils waste would be generated during project construction. These types of waste would be the result of off-site roadway improvements (as detailed in Section 5.2, *Transportation/Circulation/Parking*) and utility connections/relocations along Del Mar Heights Road, El Camino Real, and High Bluff Drive. Asphalt, concrete, and soils would be recycled at the Vulcan Carroll Canyon Recycle Site. Greenery waste would be recycled at the Miramar Greenery

Waste would also be generated from building construction materials, including dry wall, lumber, brick, metal, glass, roofing, insulation, concrete, and miscellaneous trash. Construction debris would be separated on site into material-specific containers to facilitate reuse and recycling of these materials. The diversion target for project construction is 75 percent.

Occupancy Waste Management

The total estimated waste generated by project occupancy would be 3,356 tons annually. During occupancy and after buildout the project, the estimated annual waste that would be generated by the proposed 608 residential units would be 729.6 tons based on a multi-family residential waste generation rate of 1.2 tons/year/unit. Waste generated by proposed non-residential uses would be 2,626.4 tons annually. On-site recycling services would be provided, including recycling bins, refuse and recyclable material storage areas, and private haulers. Education regarding the recycling program would be provided for tenants of non-residential uses. While the California Public Resources Code requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal, the City strives to exceed this goal and achieve a 75-percent reduction, pursuant to AB 341. As such, the initial diversion target for the project is 50 percent, but ultimately will be 75 percent.

Significance of Impact

Water Supply and Conservation

The proposed project would be consistent with MWD/SDCWA supply/demand projections and applicable water supply regulations. There will be sufficient water supply over a 20-year planning horizon to meet the projected demands of the project, as well as other existing and planned development projects within the PUD service area in normal, single-dry year, and multiple-dry year forecasts. Based on these conditions, no associated significant impacts related to potable water supplies/demand would result from project implementation.

Water Infrastructure

The proposed project would connect to existing water lines adjacent to the project site, and would not require any off-site pipeline upsizing or new water facilities. On-site water infrastructure would be designed and sized to meet the project's water needs in conformance

with City standards. Therefore, project impacts to water infrastructure would be less than significant.

Wastewater Infrastructure

Wastewater service would be adequately provided by existing City wastewater facilities and would not require off-site pipeline upsizing or new wastewater facilities. On-site wastewater infrastructure would be designed and sized to meet the project's wastewater needs in conformance with City standards. Therefore, project impacts to wastewater infrastructure would be less than significant.

Storm Water Drainage

The project would connect to the existing City of San Diego storm drain system, which was constructed to accommodate the buildout of the Employment Center (which includes the project site). On-site drainage facilities would be designed and sized to meet the project's stormwater drainage needs in conformance with City standards. Therefore, project impacts related to storm water drainage would be less than significant.

Solid Waste Disposal

A WMP (Draft EIR Appendix M) was prepared and approved by the Environmental Services Department for the project. Implementation of the approved WMP would be made a condition of the SDP approval to ensure that direct solid waste project impacts would be less than significant.

Mitigation, Monitoring, and Reporting

No mitigation measures would be required.

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5.12 PUBLIC SERVICES AND FACILITIES/RECREATION

5.12.1 Existing Conditions

Fire and Emergency Medical Services

The project site is located within the San Diego Fire-Rescue Department service area. The Fire-Rescue Department uses the National Fire Protection Association 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, for the initial response of fire suppression recourse, a four-person engine company within four minutes and an effective fire force of 15 firefighters within eight minutes. Additionally, the General Plan calls for a response time of five minutes (one minute chute + four minute travel) 90 percent of the time for the first-in engine or emergency vehicle, and a response time of nine minutes (one minute chute plus eight minute travel) 90 percent of the time for full alarm and advanced life-support services. The City Fire Rescue Department's goal is one firefighter per 1,000 citizens; however the ratio is currently 0.23 firefighter per 1,000 residents, which is below the department's goal. The Fire Rescue Department includes one paramedic on each engine or truck at all times; therefore, response times from stations for trucks and engines are the same for emergency response personnel. The City's ambulance standard is 12 minutes.

As shown in Figure 5.12-1, *Project Area Public Service and Recreational Facilities*, the closest fire station to the project site is Station 24, located at the intersection of Del Mar Heights Road and Hartfield Avenue approximately 0.3 mile to the northeast of the project site. Equipment at this station includes one engine, one brush engine, and one medic/rescue rig. The Fire-Rescue Department has Automatic Aid agreements with the surrounding communities of Del Mar, Solana Beach, and Rancho Santa Fe. Under these agreements, the nearest fire companies respond to fire or medical emergencies regardless of jurisdictional boundaries. Other stations in the project vicinity are the Del Mar Fire Station located at 2200 Jimmy Durante Boulevard approximately 3.6 miles from the site, and the Solana Beach Fire Station located at 500 Lomas Santa Fe Drive approximately 4.2 miles from the site. The estimated engine response time from Fire Station 24 to the project site is 1.7 minutes.¹

Police Protection Services

The project site is located within the City of SDPD Northwestern Division service area. The General Plan identifies the Police Facilities Plan as the resources document for SDPD standards. The Police Facilities Plan identifies a goal of seven minutes as the average response time. The City presently maintains a City-wide ratio of 1.5 sworn personnel per 1,000 residents. The SDPD currently utilizes a five-level priority dispatch system, with priority E (Emergency), One, Two, Three, and Four (lowest priority) calls. The calls are prioritized by the phone dispatcher. Priority E and One calls involve serious crimes in progress or those with a potential for injury. Priority Two calls include vandalism and property crimes. Priority Three includes calls after a crime has been committed, such as burglaries and noise calls (e.g., loud music and dogs barking).

¹ Response time calculated using the San Diego Fire-Rescue Department's 911 Computer Aided Dispatch system (CAD) point to point routing (correspondence with Ronald Carter, San Diego Fire-Rescue Department 2010).

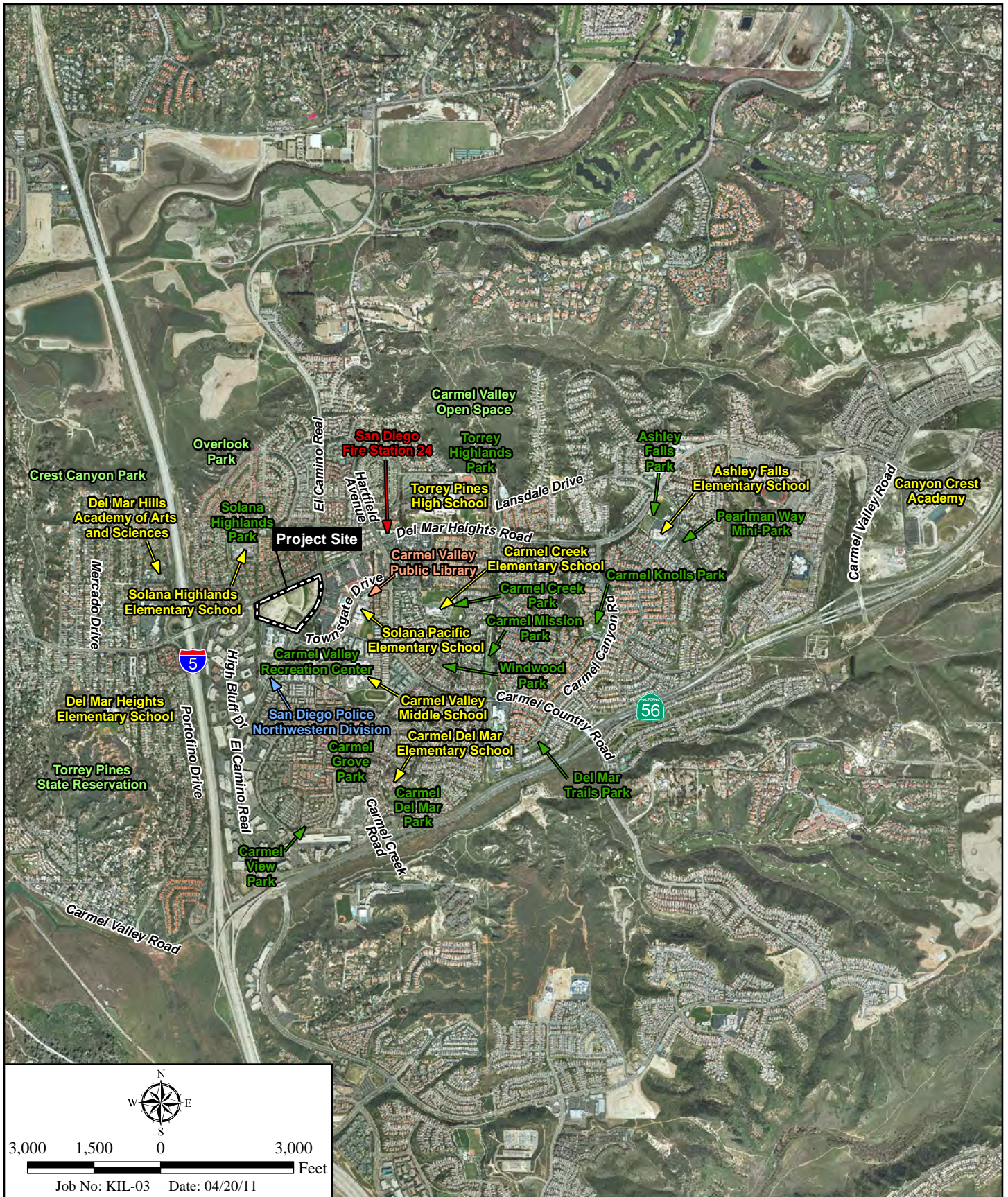
Priority Four calls include nuisance calls, such as children playing in the street or lost and found reports.

The average response times in Northwestern Division for 2009 were 7.9 minutes for Priority E, 13.9 minutes for Priority One calls, 18.4 minutes for Priority Two calls, 46.3 minutes for Priority Three calls, and 64.2 minutes for Priority Four calls. The average response times for the Carmel Valley Community Planning Area (Beat 934) for 2009 were 6.8 minutes for Priority E, 12.4 minutes for Priority One calls, 17.9 minutes for Priority Two calls, 43.6 minutes for Priority Three calls, and 64.3 minutes for Priority Four calls. The nearest police substation that serves the project site (Northwestern Division) is located approximately 0.5 mile to the south at 12592 El Camino Real (refer to Figure 5.12-1). Headquarters is located at 1401 Broadway, approximately 20 miles from the project site.

Schools

The project site is located within the jurisdiction of the Solana Beach School District (SBSD) for elementary school and the San Dieguito Union High School District (SDUHSD) for middle and high school. The schools in the vicinity of the project site are shown in Table 5.12-1, *Project Area Schools*, and Figure 5.12-1. In the SBSBD, the schools which would serve the project site are Solana Highlands Elementary School (grades K-4), located approximately 0.2 mile north of the site, and Solana Pacific Elementary School (grades 5-6), located approximately 0.2 mile east of the site. In the SDUHSD, the middle and high schools which would serve the project site are Carmel Valley Middle School (grades 7-8), Torrey Pines High School (grades 9-12) and Canyon Crest Academy (grades 9-12), located less than 0.2 mile south, approximately 0.5 mile east, and approximately 2.7 miles east of the site, respectively.

Table 5.12-1 PROJECT AREA SCHOOLS			
School Name	Grades	District	Location and Approximate Distance from Project Site
Ashley Falls Elementary School	K-6	Del Mar Union School District	13030 Ashley Falls Drive, 1.4 miles east of the site
Carmel Creek Elementary School	K-4	Solana Beach School District	4210 Carmel Center Road, 0.5 mile east of the site
Carmel Del Mar Elementary School	K-6	Del Mar Union School District	12345 Carmel Park Drive, 0.8 mile southeast of the site
<u>Canyon Crest Academy</u>	<u>9-12</u>	<u>San Dieguito Union High School District</u>	<u>5951 Village Center Loop Rd., 2.7 miles east of the site</u>
Carmel Valley Middle School	7-8	San Dieguito Union High School District	3800 Mykonos Lane, less than 0.2 mile south of the site
Del Mar Heights Elementary School	K-6	Del Mar Union School District	13555 Boquita Drive, 0.7 mile southwest of the site
Del Mar Hills Academy of Arts and Sciences	K-6	Del Mar Union School District	14085 Mango Drive, 0.4 mile northwest of the site



Project Area Public Service and Recreational Facilities

ONE PASEO

Figure 5.12-1

**Table 5.12-1 (cont.)
PROJECT AREA SCHOOLS**

School Name	Grades	District	Location and Approximate Distance from Project Site
Solana Highlands Elementary School	K-4	Solana Beach School District	3520 Long Run Drive, 0.2 mile north of the site
Solana Pacific Elementary School	5-6	Solana Beach School District	3901 Townsgate Drive, 0.2 mile east of the site
Torrey Pines High School	9-12	San Dieguito Union High School District	3710 Del Mar Heights Road, 0.5 mile east of the site

~~SB 50, also known as the “Class Size Reduction Bill,” was enacted in 1998, and significantly revised developer fee and mitigation procedures for school facilities. SB 50 requires schools to have smaller class sizes for some grade levels in exchange for certain funding from the State of California. The SBSD and SDUHSD comply with SB 50 by having smaller class sizes and therefore receive SB 50 funding from the State of California.~~

SB 50 authorizes the collection of developer fees for school facilities construction (see Government Code, § 65995 (b)). The fee could increase every even-numbered year based on an adjustment index. Developer fees collected pursuant to SB 50 are “deemed to be full and complete mitigation” for impacts related to the provision of adequate school facilities (see Government Code, § 65995 (h)). SB 50 also prohibits local agencies from denying land use approvals on the basis of inadequate school facilities, so long as the project proponent, if required to do so, pays the statutory developer fees (see Government Code, § 65995 (i)).

Libraries

As shown in Figure 5.12-1, the closest library to the project site is the City of San Diego Carmel Valley Branch, located at 3919 Townsgate Drive, approximately 0.2 mile to the east. Other libraries in the vicinity of the project are the County of San Diego Del Mar Branch, located at 1309 Camino Del Mar approximately 2.1 miles from the site, and the Rancho Santa Fe Branch, located at 17040 Avenida de Acacias approximately 5.0 miles northeast of the site.

Recreational Facilities

The General Plan guides development of park and recreational facilities in the project area. The General Plan provides guidelines and standards for population-based parks and facilities; specifically identified are neighborhood parks, community parks, and resource-based parks. The guidelines and standards are designed to adapt to changing community needs and/or desires. The project also would be subject to the Community Plan and Carmel Valley Public Facilities Financing Plan (PFFP).

The Recreational Facilities Guidelines in the Recreation Element of the General Plan recommend a minimum 2.8 acres of population-based park land per 1,000 residents. This results in

Neighborhood Parks of 3 to 13 acres, serving a population of 5,000 within an approximately 1-mile radius, and Community Parks of a minimum 13 acres, serving a population of 25,000. The guidelines also recommend a minimum 17,000 square foot recreation center for every 25,000 residents or within 3 miles, whichever is less, and a community swimming pool complex, for every 50,000 residents, or within 6 miles whichever is less.

As illustrated in Table 5.12-2, buildout of the existing community per the current approved Community Plan will require a total of 107.87 acres to meet the 2.8 standard. As illustrated in Table 5.12-3, there are 94.02 acres of parkland that currently exists and 4 acres planned in the future for a total of 98.02 acres within the Carmel Valley Community Plan area at buildout. Thus, the community has a current deficit of 11.62 acres.

<u>Table 5.12-2</u> <u>ACREAGE REQUIRED TO MEET GENERAL PLAN</u> <u>PARKLAND STANDARD</u> <u>WITHIN THE CARMEL VALLEY COMMUNITY PLAN</u>		
<u>Dwelling Units</u>	<u>Carmel Valley Community Plan Area Population</u>	<u>Recommended Parkland Acreage¹</u>
Existing	<u>37,727²</u> (<u>13,769 du x 2.74</u>)	<u>105.64</u>
Remaining	<u>795</u> (<u>278 du x 2.86³</u>)	<u>2.23</u>
Total	<u>38,522</u>	<u>107.87</u>

¹ Calculated at a ratio of 2.8 acres per 1,000 population

² Based on 2010 Census population per household ratio of 2.74.

³ Based on 2030 SANDAG forecast population per household ratio of 2.86

<u>Table 5.12-3</u> <u>PARKLAND WITHIN THE CARMEL VALLEY COMMUNITY PLAN</u>			
<u>PFFP¹ Project Number</u>	<u>Project Name</u>	<u>Acreage²</u>	<u>Net-Useable Acreage</u>
<u>C P/R-1</u>	<u>Solana Highlands Neighborhood Park</u>	<u>12.00</u>	<u>8.99</u>
<u>C P/R-2</u>	<u>Carmel Del Mar Neighborhood Park</u>	<u>12.00</u>	<u>6.05</u>
<u>C P/R-3</u>	<u>Carmel Grove Mini-Park</u>	<u>3.00</u>	<u>3.00</u>
<u>C P/R-4</u>	<u>Torrey Highlands Park</u>	<u>7.00</u>	<u>5.95</u>
<u>C P/R-5</u>	<u>Windwood II Mini-Park</u>	<u>1.10</u>	<u>1.10</u>
<u>C P/R-6</u>	<u>Del Mar Trails Park</u>	<u>3.00</u>	<u>2.50</u>

Table 5.12-3 (cont.)			
<u>PARKLAND WITHIN THE CARMEL VALLEY COMMUNITY PLAN</u>			
<u>PFFP¹ Project</u>			<u>Net-Useable</u>
<u>Number</u>	<u>Project Name</u>	<u>Acreage²</u>	<u>Acreage</u>
<u>C P/R-7</u>	<u>Carmel Creek Neighborhood Park</u>	<u>12.00</u>	<u>11.50</u>
<u>C P/R-8</u>	<u>Carmel View Mini-Park</u>	<u>1.00</u>	<u>0.79</u>
<u>C P/R-9</u>	<u>Ashley Falls Neighborhood Park</u>	<u>12.00</u>	<u>9.36</u>
<u>C P/R-10</u>	<u>Torrey Highlands Park (Dog Off-Leash Area)</u>	<u>---</u>	<u>---</u>
<u>C P/R-11</u>	<u>Carmel Knolls Renaissance Park</u>	<u>5.00</u>	<u>2.85</u>
<u>C P/R-12</u>	<u>Sage Canyon Neighborhood Park</u>	<u>12.00</u>	<u>10.00</u>
<u>C P/R-13</u>	<u>Carmel Del Mar Neighborhood Park Upgrades</u>	<u>---</u>	<u>---</u>
<u>C P/R-14</u>	<u>Solana Highlands Neighborhood Park Upgrades</u>	<u>---</u>	<u>---</u>
<u>C P/R-15</u>	<u>Linear Park (Deleted)</u>	<u>---</u>	<u>---</u>
<u>C P/R-16</u>	<u>Carmel Valley Multi-Use Trail-Shaw Valley</u>	<u>---</u>	<u>---</u>
<u>C P/R-17</u>	<u>Carmel Valley Community Park</u>	<u>17.00</u>	<u>13.10</u>
<u>C P/R-18</u>	<u>Carmel Valley Park South-Neighborhood 8A</u>	<u>15.00</u>	<u>15.00</u>
<u>C P/R-19</u>	<u>Carmel Valley Community Park South Recreation Building</u>	<u>---</u>	<u>---</u>
<u>C P/R-20</u>	<u>Carmel Valley Skate Park</u>	<u>0.60</u>	<u>0.60</u>
<u>C P/R-21</u>	<u>Recreation Facilities Study (Deleted)</u>	<u>---</u>	<u>---</u>
<u>P/R 22</u>	<u>Carmel Valley Neighborhood Park (Neighborhood 8)³</u>	<u>4.00</u>	<u>4.00</u>
<u>P/R 23</u>	<u>Carmel Valley Multi-Use Trail-N. 10</u>	<u>---</u>	<u>---</u>
<u>P/R-24</u>	<u>Carmel Grove Mini-Park Upgrades</u>	<u>---</u>	<u>---</u>
<u>P/R-25</u>	<u>Del Mar Trails Play Area Upgrade</u>	<u>---</u>	<u>---</u>
<u>P/R-26</u>	<u>Torrey Highlands Park Upgrades</u>	<u>---</u>	<u>---</u>
<u>P/R-27</u>	<u>Windwood II Park Upgrades</u>	<u>---</u>	<u>---</u>
<u>P/R-28</u>	<u>Park and Recreation Improvements</u>	<u>---</u>	<u>---</u>
<u>P/R-29</u>	<u>Additional Park and Recreational Facilities</u>	<u>---</u>	<u>---</u>
<u>P/R-30</u>	<u>Carmel Valley Community Parkland and Recreational Facilities</u>	<u>---</u>	<u>---</u>
<u>P/R-31</u>	<u>Accessibility Compliance at Existing Park and Recreation Facilities</u>	<u>---</u>	<u>---</u>
<u>n/a</u>	<u>Carmel Mission Park</u>	<u>---</u>	<u>2.93</u>
<u>n/a</u>	<u>Pearlman Way</u>		<u>0.30</u>
	Total	116.7	98.02

¹ Carmel Valley Public Facilities Financing Plan

² Per Carmel Valley PFFP

³ Future park

Parks and recreational facilities located within a 1.5-mile radius of the project site are shown in Table 5.12-2, *Project Area Recreational Facilities*, and Figure 5.12-1. The City of San Diego operates 13 population-based parks within this vicinity. The two closest neighborhood parks to the project site are the 11.98-acre Solana Highlands Park located on Long Run Drive

approximately 0.2 mile north of the site, and the 11.5-acre Carmel Creek Park located at the corner of Carmel Creek Road and McGuire Drive approximately 0.5 mile east of the site. A portion of both of these parks operate under a joint use agreement with the Solana Beach School District. The Carmel Valley Recreation Center is located at 3777 Townsgate Drive less than 0.2 mile southeast of the project site. This 18.7-acre community recreation center has approximately 13.1 useable acres. Figure 5.12-1 also displays the open space parks in the project vicinity, including Carmel Valley Open Space, Crest Canyon Park, and Torrey Pines State Reserve. These parks are included for reference, but not analyzed further.

**Table 5.12-2
PROJECT AREA RECREATIONAL FACILITIES**

Park Name	Amenities	Location & Approximate Distance from Project Site	Size (acres)	Useabl e Area (acres)
Recreation Centers				
Carmel Valley Recreation Center	Outdoor courts, tot lot, playground, picnic areas, multi-purpose athletic field, tennis courts, gymnasium, meeting room, game room, craft room, kitchen, swimming pool	3777 Townsgate Drive, less than 0.2 mile southeast of the site	18.72	13.10
Neighborhood Parks				
Ashley Falls Park	Multi-purpose athletic fields, hardcourt area (ball- wall, basketball courts)	Ashley Falls Drive and Del Mar Heights Road, 1.5 miles northeast of the site	11.69	9.36
Carmel Creek Park	Multi-purpose athletic fields, hardcourt area (ball- wall, basketball courts), play structures, comfort station, volleyball court, picnic areas	Carmel Creek Road and McGuire Drive, 0.5 mile east of the site	11.50	11.50
Carmel Del Mar Park	Multi-purpose athletic field, t-ball field, grass play area, hardcourt area (ball- wall, basketball courts), play structures, tot lot, picnic areas	Carmel Grove Road and Carmel Park Drive, 0.8 mile southeast of the site	12.09	12.09
Carmel Grove Park	Walking path, tot lot, grass play area, picnic area	Carmel Grove and Carmel Creek Road, 0.6 mile southeast of the site	3.50	3.50
Carmel Knolls Park	Grass play area, tot lots, half-court basketball, 3- hole Frisbee golf course,	Carmel Knolls Drive and Carmel Canyon Road, 1.2 miles east of the site	3.71	2.85

	picnic areas, walking path			
Carmel Mission Park (a.k.a. Powerline Park)	Grass play areas, walking path, equestrian trail	Carmel Mission Road and Carmel Country Road, 0.8 mile east of the site	2.93	2.93
Del Mar Trails Park	Grass play area, tot lot, half-court basketball, picnic areas, walking path	Del Mar Trails Road and Mona Lisa Street, 1.1 miles southeast of the site	2.99	2.50
Solana Highlands Park	Multi-purpose athletic field, hardcourt area (ball wall, basketball courts), tot lot, open grass play area, picnic areas	Long Run Drive and Windhaven Drive, 0.2 mile north of the site	11.98	8.99
Torrey Highlands Park	Grass play area, tot lots, comfort station, picnic areas, walking path (leads to nature trail at north end of park)	Del Mar Heights Road and Lansdale Drive, 0.8 mile northeast of the site	7.10	5.95
Winwood Park	Tot lot, walking path, picnic areas	Carmel Creek Road and Paseo Montanas, 0.6 mile east of the site	1.10	1.10
Carmel View	Grass play area, sidewalks, benches	Carmel View Road and Valley Centre Drive	0.79	0.79
Pearlman Way Mini Park	Tot lot, grass play area	Pearlman Way and Carmel Knolls Drive, 1.6 miles east of the site	0.30	0.30

5.12.2 Impact

Issue 1: Would the proposed project result in the need for new or expanded public facilities, including fire protection, police protection, emergency medical, libraries, schools and parks? If so, what physical impacts would result from construction of these facilities?

Issue 2: 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?

Issue 3: Does the project include recreational facilities or require the construction of or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Impact Thresholds

According to the City's Significance Determination Thresholds, public services and facilities/recreation impacts may be significant if the project would:

- Conflict with the Community Plan in terms of the number, size, and location of public service facilities; and/or
- Result in direct impacts from construction of proposed new public service facilities needed to serve the project.

In accordance with Sections 15126.2(a) and 15382 of the State CEQA Guidelines, impacts related to public services are evaluated in light of whether the impact would result in a physical change in the environment. For instance, the need to add staff or equipment to meet a future need would only be considered a significant environmental impact if it would precipitate the need to construct a new facility which could result in a physical change in the environment. If the additional staff and equipment can be housed within existing buildings, no physical change would result and no environmental impact would occur. Where additional facilities may be required but the location or extent of such a facility is unknown, Section 15145 of the State CEQA Guidelines states that potential impacts need not be specifically addressed in an EIR if the assumptions needed to analyze potential effects are too speculative.

Impact Analysis

The project would be required to pay a variety of fees (e.g., FBA fees, school facility fees) in accordance with applicable state and local regulations. These fees are specifically intended to fund facilities that are needed in association with new development, as described below.

Fire and Emergency Medical Services

Although the proposed project may result in minimal increases in fire calls for service, no new facilities or improvements to existing facilities would be required as a result of the project. The San Diego Fire-Rescue Department has facilities and staffing in the project area to adequately serve the proposed project (pers. comm., Ronald Carter, San Diego Fire-Rescue Department 2010). Fire Station 24 is located 0.3 mile to the northeast and would serve the project site. There are eight additional fire stations within an approximately 10-mile radius of the project site that could provide backup services. As long as the project is built to the standards of the 2007 California Building and Fire codes and applicable National Fire Protection Agency codes, no additional fire protection requirements or development fees would be imposed beyond normal and customary fees. Therefore, project impacts to community fire protection services would be less than significant.

Police Protection Services

The proposed project may result in minimal increases in police calls for service, but no new facilities or improvements to existing facilities would be required as a result of the project. The SDPD's current facilities and staffing ratio of 1.5 sworn personnel per 1,000 residents is considered adequate to handle demand for police services, including an average Priority E response time to the project area (Carmel Valley Community Planning Area) of 6.8 minutes. An increase in the City population may incrementally impact the ratio and require additional police officers; however, that impact would not be substantial and would not require construction of new facilities. New employees of the proposed project (e.g., employees of the commercial

retail/office and hotel uses) would likely already reside locally or regionally and would already be included in the projected City population figures. The new residential units would increase the area's population by up to 1,666 persons, per SANDAG's forecasted density factor of 2.74 persons per household unit (2010). Some residents of the proposed multi-family residential dwelling units may also be relocating from other communities in the City. Development is not expected to decrease the City's ability to service the area, and project impacts to police protection services would be less than significant.

Schools

The proposed project would increase the population in the Carmel Valley area due to construction of 608 multi-family residential dwelling units, which would also house a number of school-age children. The project would result in an estimated population increase of approximately 1,666 persons; the number of school-age children anticipated to live in the proposed residential units would not be substantial. Additionally, school district planning involves conservative projections of student population increases and, thus, project-generated students would not over-burden school capacity.

~~The project would not impact the SBSD and SDUHSD's ability to comply with SB 50 because the money from the State of California is based on the number of students; therefore, an increase in the number of students would increase the amount of funding available to comply with SB 50.~~ The proposed project would be required to pay state-mandated school facility fees to offset any impacts, including payment both for commercial and residential development. Payment of development fees would provide full and complete mitigation for impacts to school facilities in accordance with state law. Therefore, the proposed project would not result in significant impacts to schools.

Libraries

The 13,000-sf Carmel Valley Branch Library currently has adequate floor area to accommodate the needs of existing residents and any new residents and employees who relocate to the Carmel Valley community. The project's population increase would not necessitate the need to construct new library facilities. Therefore, the project would not result in significant impacts to library facilities.

Parks and Recreational Facilities

Implementation of the proposed project would create an additional demand for parkland within the Carmel Valley Community Plan area given the fact that residential development was not anticipated on the site. Based on a ratio of 2.74 persons per household, the 608 units associated with the proposed development would generate an estimated 1,666 people. Based on the General Plan standard of 2.8 acres of parkland per 1,000 population, the population associated with the proposed project would generate a demand for 4.67 acres of parkland. When the demand from the proposed project (4.67 acres) is added to the currently projected demand at buildout (107.87 acres), the total demand for parkland including the proposed project at buildout would be

112.54 acres. This would exceed the amount of parkland expected to be available (98.02 acres) by 14.52 acres by community buildout.

Development must only address the park requirements of the project. While the proposed development would create a demand for an additional 4.67 acres of parkland in the community, the project applicant would be required to pay an estimated \$13.7 million Facilities Benefit Assessment (FBA) fee to the Carmel Valley PFFP. The City considers payment of FBA fees as fulfilling a project's park requirement. FBA fees are then used for acquisition of parkland or intensification of recreational uses at existing parks that would expand use of those parks. Thus, payment of this FBA fee is an adequate means of offsetting the impacts of a proposed development on public facilities, including parks, within communities with PFFPs.

~~As indicated earlier, the City bases the need for park land on population based park requirements, calculated based on SANDAG's forecasted density factor of 2.74 persons per household unit (2010). According to the forecasted density factor, the 608 units would generate approximately 1,666 residents. At the General Plan standard of 2.8 acres per 1,000 residents, buildout of the proposed residential component of the project (608 units) would generate the need for 4.7 acres of useable park land to serve the proposed population. Adequate public parks currently exist to serve the proposed project population increase. The project would be conditioned to pay applicable FBA fees to fund its park obligations. Based on the payment of FBA fees, the project would fulfill the City's population based park requirements and would result in less than significant impacts. In addition to the FBA fees, the project would provide approximately 7.6 acres of useable open space areas within the project site to serve on-site residents, employees, and patrons.~~

~~Construction of the proposed project would not have any short or long term impacts to access of any of the parks within the project vicinity because the location of the project would not interfere with access routes to park facilities. In addition, the project does not propose public recreational facilities or require new public recreational facilities that might otherwise result in environmental impacts.~~

Significance of Impacts

Fire and Emergency Medical Services

The proposed project may result in minimal increases in fire calls for service, but no new facilities or improvements to existing facilities would be required as a result of the project. Project impacts to community fire protection services would be less than significant.

Police Protection Services

The proposed project may result in minimal increases in police calls for service, but no new facilities or improvements to existing facilities would be required as a result of the project. Project impacts to police protection services would be less than significant.

Schools

Although the project would generate a number of school-age children, no significant impact is identified because the project applicant would pay school fees. By law (Government Code 65996) payment of school fees constitutes full mitigation.

Libraries

Since there are adequate library facilities within the project vicinity to accommodate the needs of any new residents and employees who relocate to the project area, the project would not significantly impact existing library facilities.

Parks and Recreational Facilities

Since the project applicant would pay ~~an FBA~~ FBA fee for the project's population-based park requirements specifically intended to offset development impacts on public facilities, including recreation, no associated significant impacts would occur with respect to parks and recreation facilities.

Mitigation, Monitoring, and Reporting

As impacts to public facilities and services/recreation would be less than significant, no mitigation is required.

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5.13 HEALTH AND SAFETY

A Phase I Environmental Site Assessment (ESA; Ardent Environmental Group, Inc. 2007) was prepared for the project and is included as Appendix N to this Draft EIR. Also, an Air Quality and Greenhouse Gas Technical Report (HELIX 2011b) was prepared for the proposed project and is included as Appendix G to this Draft EIR. Portions of this section are based on these reports.

5.13.1 Existing Conditions

On-site Conditions

On-site conditions were assessed through review of historical documents and a site reconnaissance. As determined by a review of historic aerial photographs and topographic maps, as well as an interview with a property owner representative, the site and surrounding area consisted of vacant land with some sparse residential or ranch properties from before 1939 until the 1980s, at which time the project site was graded and construction of the current improvements began. Between 1990 and 2002, the project site and adjacent properties to the south were still vacant and graded; however, the properties to the west and southwest had been developed with commercial offices. Properties to the north, across Del Mar Heights Road, were developed with residences. The property to the east, across El Camino Real, was partially graded in 1990 and developed with a shopping center. No facilities of potential environmental concern were identified within the project site during historical land use research.

A site reconnaissance was conducted on October 24, 2007 to further evaluate potential environmental concerns on site. As the site has been historically vacant, site characteristics associated with development, such as solid waste disposal areas, sewage discharge/disposal, heating and cooling systems, wells, cisterns and wastewater systems were not observed. Surface water drainage at the site is via sheet flow into temporary silt and storm water catch basins at each of the three terraced areas. There was no debris or evidence of dumping in the catch basins. Additionally, no hazardous or regulated substances, wastes or petroleum products were observed to be used or stored on site, nor was there any evidence of releases, such as stained soil, pools of liquid, or distressed vegetation.

Database Search

A computerized search of federal, state, regional, and local environmental regulatory agency databases was performed by Track Info on October 19, 2007 (refer to Appendix N of this Draft EIR for a detailed discussion of the databases searched and the search results). The databases document facilities permitted to use or store hazardous materials or generate hazardous wastes, and properties documented as being associated with unauthorized releases of hazardous materials or wastes (i.e., contaminated properties). The databases search did not identify any listings on the project site. Depending upon the specified radius of each database, the review was conducted for facilities located within one-quarter mile, one-half mile, or one mile from the site. Facilities in the project vicinity that were identified in the database search are presented in Table 5.13-1, *Facilities in the Project Vicinity Identified in the Database Search*.

Table 5.13-1 FACILITIES IN THE PROJECT VICINITY IDENTIFIED IN THE DATABASE SEARCH			
Facility	Location	Database	Potential Concern
Del Mar Highlands Car Wash	12889 El Camino Real	LUST, UST, Permits	LUST – cases closed; handles hazardous materials
Ogden’s Cleaners	3485 Del Mar Heights Road	RCRA Gen	Hazardous waste generator
Neurocrine Biosciences	12780 El Camino Real	RCRA Gen	Hazardous waste generator
Rite Aid	3515 Del Mar Heights Road	RCRA Gen	Hazardous waste generator
Carmel Valley Pool	3777 Townsgate Drive	Permits	Handles hazardous materials
Laser Power Optics	12777 High Bluff Drive	Permits	Handles hazardous materials
Foto Finish	3525 Del Mar Height Road	RCRA Gen	Hazardous waste generator
Ralph’s	3455 Del Mar Heights Road	Permits	Handles hazardous materials
Texaco	3015 Del Mar Heights Road	LUST	LUST – case closed
Torrey Pines High School	3710 Del Mar Heights Road	State	Potential contamination –no further action determination

LUST = leaking underground storage tank; UST = underground storage tank; RCRA Gen = Resource Conservation and Recovery Act Generator; Permits = San Diego County HE17; State = State/Tribal Sites

Sensitive Receptors

The following sensitive receptors to hazardous materials/waste impacts, such as schools or hospitals, are located within approximately one-quarter mile of the project site:

- Solana Highlands Elementary School is located approximately 0.23 mile northwest of the site;
- Kinder Care Learning Center is located approximately 0.11 mile southeast of the site;
- Solana Pacific Elementary is located approximately 0.15 mile southeast of the site; and
- Carmel Valley Middle School is approximately 0.25 mile southeast of the site.

Multi-Jurisdictional Hazard Mitigation Plan

The County of San Diego has prepared a Multi-Jurisdictional Hazard Mitigation Plan (2010), which discusses the goals and objectives of the City of San Diego with regard to potential public safety hazards, such as coastal storms, erosion, and tsunamis; dam failures; earthquakes; floods; rain-induced landslides; liquefaction; structure/wildlife hazards; and human-made hazards. This

2010 plan is an update to the finalized 2004 plan. The City has developed the following six goals with regard to hazards:

- Goal 1: Promote public understanding, support, and demand for hazard mitigation.
- Goal 2: Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.
- Goal 3: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and state-owned facilities, due to structural fire/wildfire, coastal storms/erosion/tsunami, earthquake, dam failure, flood, landslide, and other human-made hazards.
- Goal 4: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure and state-owned facilities due to severe weather (e.g., El Niño storms, thunderstorms, lightning, tsunami, and extreme temperature).
- Goal 5: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure and state-owned facilities due to geological hazards.
- Goal 6: Reduce the high probability of damage and losses to existing assets, particularly people, critical facilities/infrastructure and state-owned facilities due to floods.

5.13.2 Impact

Issue 1: Would the project result in hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter-mile of an existing or proposed school?

Impact Thresholds

In accordance with the City Significance Determination Thresholds, hazardous materials/public safety impacts may be significant if the project would:

- Result in hazardous emissions or the handling of hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school, in non-compliance with existing hazardous substance regulations.

Impact Analysis

As noted above, four schools are located within one-quarter mile of the proposed project site. Potential impacts to these sensitive receptors, as well as on-site receptors, related to hazardous materials would include short-term, construction-related and long-term operational use and storage of potentially hazardous materials.

Construction

Project construction would involve the on-site use and/or storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint, and portable septic system wastes. The location of material storage and construction staging areas would be dictated by the project SWPPP, which includes such measures as regular maintenance of construction equipment, and storage criteria for oil, gasoline, and other potential contaminants that commonly occur during construction activities. Based on compliance with such regulatory requirements, potential impacts from construction-related hazardous materials would be effectively avoided or addressed.

Construction activities that could result in the accidental release of hazardous materials would include refueling and maintenance of on-site construction equipment, which could lead to minor fuel and oil spills, posing risks to receptors on- and off-site that would be considered potentially significant.

In addition to the potential hazards discussed above, the project could result in increased emissions of TACs during the construction period. As discussed in Section 5.5, *Air Quality*, diesel particulate matter (DPM) is recognized by the state of California as containing carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined as 24 hours per day, seven days per week, 365 days per year, for 70 years. DPM would be emitted from heavy equipment used in the construction process. The proposed construction period of less than two years for each phase would be much less than the 70-year period used for health risk determination. Because of the short-term nature of project construction and the fact that heavy equipment exhaust emissions are not significant, exposure to diesel exhaust emissions during construction would not be significant.

Operation

While proposed on-site uses would not typically require large-scale handling of hazardous materials, chemicals for routine maintenance and operation of the project will be used intermittently and stored and transported on-site in limited amounts. These chemicals may include cleaning and maintenance chemicals (e.g., paints, solvents, and polishes) that could be stored in residential, office, and commercial/retail areas and materials used for general maintenance of the grounds (e.g., pesticides, fuels used for landscape equipment, and pool chemicals) that could be kept in maintenance storage areas. The routine handling and transport of these and other materials as a result of the project may represent a safety hazard for people residing or working in the project area. However, any routine use and handling of hazardous material would be regulated by local, state, and federal standards associated with the handling of hazardous materials, including California Occupational Health and Safety Administration (CalOSHA) requirements. Based on compliance with these regulatory requirements, potential exposure of people to impacts from on-site hazardous materials would likely be effectively avoided or addressed.

As discussed in Section 5.5, *Air Quality*, project operations could result in emissions of TACs from both mobile and on-site sources that could result in the exposure of sensitive receptors, especially those within close proximity, to toxic air emissions that exceed applicable significance

thresholds. Mobile sources of TACs could include proposed land uses that involve the long-term use of heavy-duty diesel trucks (e.g., loading docks). Trucks entering and leaving the project site would include deliveries associated with the retail stores, markets, and restaurants. Idling delivery trucks would occur in the shipping and receiving delivery dock areas and would be limited to idling times not to exceed five minutes, in accordance with California state law. The loading delivery docks are the only locations where routine truck idling associated with project operations would be expected. Additionally, restaurants could emit minor amounts of TACs from the cooking of animal fats and oils; however, such TAC emissions would be controlled through an exhaust hood to a roof-top vent. It is also possible that restaurants would require use of trucks equipped with transportation refrigeration storage units (TRUs) which typically result in higher TAC emissions because they are equipped with diesel generator sets to keep perishable food cold, in addition to diesel engine exhaust from the truck. Despite the potential for these sources to occur on site, it is not anticipated that the retail establishments would experience high truck volumes (i.e., warehouses with distribution centers that have greater than 100 commercial trucks per day or 40 TRU-equipped trucks per day as defined by CARB as the screening level) delivering materials on a frequent basis. Therefore, on-site or off-site sensitive receptors would not be exposed to substantial TAC concentrations from these sources. Associated operational impacts related to hazardous materials would be less than significant.

Significance of Impact

Potentially significant impacts could occur during construction activities, including accidental releases of hazardous materials such as oil and gasoline from construction equipment. Although hazardous materials would be handled and stored on site for routine maintenance and operation, such use would occur in compliance with applicable regulatory requirements for hazardous materials. Therefore, exposure of people to impacts from on-site hazardous materials would be less than significant. Impacts associated with TAC emissions also would be less than significant during both project construction and operation.

Mitigation, Monitoring, and Reporting

The following mitigation measures would reduce impacts from hazardous materials to public safety and the environment to less than significant levels:

Mitigation Measure 5.13-1: Construction permits shall designate staging areas where fueling and oil-changing activities are permitted. No fueling and oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, and schools. Staging areas shall not be located near any stream channels or wetlands. The proposed staging areas shall be identified in the construction site plans, which shall be submitted to the Regional Water Quality Control Board as part of the Notice of Intent to File under the NPDES permit process.

Mitigation Measure 5.13-2: Prior to construction, a Health and Safety Plan shall be prepared and worker training shall be implemented to manage potential health and safety hazards to workers and the public.

5.13.3 Impact

Issue 2: Would the proposed project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or environment and would the project expose people to potential health hazards?

Issue 3: Would the project expose people to toxic substances?

Impact Thresholds

In accordance with the City Significance Determination Thresholds, hazardous materials/public safety impacts may be significant if the project would:

- Be located within 1,000 feet of a known contamination site and, as a result, create a significant hazard to the public or environment;
- Be located within 2,000 feet of a known “border zone property” (also known as a “Superfund” site) or a hazardous waste property subject to corrective action pursuant to the Health and Safety Code;
- Excavate in an area with an opened or closed County of San Diego Department of Environmental Health (DEH) site file which would disturb contaminated soils; and/or
- Be located on a site presently or previously used for agricultural purposes.

Impact Analysis

The project site is located adjacent to commercial, retail, and research and development uses, which may routinely transport, use, store, and dispose of hazardous materials. The project ESA (Arden Environmental 2007) determined that the facilities in the project vicinity that were identified in the database search would not be considered facilities of potential environmental concern due to the regulatory status, type of listing, and distance and/or direction (i.e., down gradient) from the project site. Based on this conclusion, the project site is not located within 1,000 feet of a known contamination site that would create a significant hazard. In addition, the project site is not located within 2,000 feet of a Superfund site or on the State Department of Toxic Substances Control Cortese List, pursuant to Section 65962.5 of the California Government Code.

Project construction would involve excavation within an area with a recorded LUST case. As discussed in Existing Conditions, two facilities have recorded cases of unauthorized releases of fuels in the underlying soils, including the Del Mar Highlands Car Wash (located across the street to the southeast within the Del Mar Highlands Town Center) and a Texaco gas station (located approximately 0.14 mile to the west on Del Mar Heights Road). All cases have been issued a closed status by the regulatory agencies, which indicates that remedial activities (where applicable) have been completed and these facilities are not considered a significant threat to the environment. Given the distance and intervening development between the project site and both of these facilities, it is expected that on-site soils are not contaminated as a result of the releases

at nearby properties. Therefore, the project would not be exposed to health hazards as a result of its proximity to known contamination sites.

There are neither existing agricultural operations nor potential for farming operations within or near the project site. Aerial photographs from as far back as 1939 do not show evidence of farming operations that occurred within the project vicinity. Ranch operations were previously located within the project area and portions of the project site were used for pastureland; however, no agricultural crop production associated with pesticide/herbicide application is known to occur. Accordingly, no associated health or hazards impacts would occur.

Significance of Impact

No significant impacts associated with proximity to known contamination sites or agricultural operations would occur as a result of the proposed project.

Mitigation, Monitoring, and Reporting

No significant impacts have been identified; therefore, no mitigation is required.

5.13.4 Impact

Issue 4: Would the proposed project impair implementation of, or physically interfere with an adopted emergency response plan?

Impact Thresholds

There is no specified significance threshold within the City Significance Determination Thresholds for the issue relating to emergency response/evacuation plans; however, this document contains an Initial Study Checklist question related to such. Under the following Initial Study Checklist question, public safety impacts would be significant if the project would:

- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Impact Analysis

Construction and operation of the proposed project would not impair or physically interfere with the implementation of any adopted emergency response plans or emergency evacuation plans, as discussed below.

Construction of the project could require temporary detours and/or lane closures that could temporarily disrupt travel along existing roadways within for periods of time within the construction zone. Emergency access to all surrounding properties, however, would be maintained throughout the construction period. In addition, a traffic control plan and haul route plan would be prepared and implemented during project construction, as discussed in Section 5.2, *Transportation/Circulation/Parking*. With implementation of these plans, the

project would not impede access to publicly or privately owned land and would not interfere with emergency response during construction. Therefore, no significant public safety impacts related to emergency services would occur during construction.

The project would provide adequate emergency access within the site. A fire access plan has been prepared for the project (Firesafe Planning Solutions 2011) and is illustrated in Figure 5.2-9. Primary access for emergency vehicles would be provided at the El Camino Real/Market Street intersection. Internal fire access routes and fire lanes would be provided along the internal roadways, and fire lane signage would be posted along the roadways. Additional emergency requirements, such as fire hydrants, fire hydrant markers (i.e., blue reflectors installed in the roadway), knox box systems, adequate vertical clearances, adequate turning radii, and fire ladder clearances, would be provided in accordance with City requirements. In addition, the signalized access driveways (at Del Mar Heights Road/First Avenue, Del Mar Heights Road/Third Avenue, and El Camino Real/Market Street) would be equipped with signal pre-emption devices to assist emergency vehicles.

Significance of Impact

No significant impacts associated with implementation of any adopted emergency response or evacuation plans or emergency access would occur during or following construction of the project.

Mitigation, Monitoring, and Reporting

No significant impacts have been identified; therefore, no mitigation is required.

5.14 HISTORICAL RESOURCES

5.14.1 Existing Conditions

As discussed in Section 2.0, *Environmental Setting*, the project site was previously graded between 1986 and 1990 as part of the North City West Development Unit 2 mass grading and has remained vacant since the site was graded with the exception of a number of streetscape trees planted along the site perimeter on Del Mar Heights Road and El Camino Real. As indicated in the Phase I ESA prepared for the project (Draft EIR Appendix N), historical photographs of the project site show it was previously used for pasture land as a part of a ranch between 1939 and 1953. The ranch house was located to the south of the project site and a previous alignment of El Camino Real was located to the east of the project site. Between 1953 and 1963, Del Mar Heights Road was constructed to the north of the project site and additional ranch structures were constructed to the east of the site. The project site remained as pasture land until at least 1980.

No Historical Landmarks on the San Diego Register of Designated Places are located within a mile of the project site. The nearest Historical Landmark is Mount Carmel Ranch (11410 Carmel Country Road) located over a mile to the southeast. In addition, the project site is not located within a designated local historic district by the San Diego Historical Resources Board.

5.14.2 Impact

Issue 1: Would the project result in an alteration, including adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, object, or site?

Impact Thresholds

According to the City's Significance Determination Thresholds, historical resource impacts may be significant if the project would affect any of the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Resources Code, § 5024.1.).
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a Lead Agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the Lead Agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the Lead Agency to be "historically

significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1) including the following:

- a. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - b. Is associated with the lives of persons important in our past;
 - c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - d. Has yielded, or may be likely to yield, information important in prehistory or history.
- An archaeological site consisting of at least three associated artifacts/ecofacts (within a 40 square meter area) or a single feature.

Impact Analysis

The project site was previously graded between 1986 and 1990 as a part of the North City West Development Unit 2 (i.e., Employment Center) mass grading under TPM 86-0276. On-site grading included removal and replacement of previously existing surface materials with compactable fill soils. These fill deposits currently cover much of project site and extend to depths between 12.5 to 35 feet below surface level (refer to Appendices O and P). Torrey Sandstone underlies the on-site fill deposits (Appendices O and P).

Proposed grading activities for the project would cover approximately 23 acres of the project site and would include a total of approximately 30,400 cy of fill and 528,800 cy of cut. The proposed underground parking structures would involve a substantial amount of excavation to a maximum cut depth of 49 feet.

No historical resources are expected to be located in the fill areas due to prior grading activities. There are no above-ground structures on site which could potentially be historical resources. Previous cultural resources studies were prepared for the project site and vicinity to support the 1980 EIR for the North City West Employment Center Precise Plan (EQD No. 80-05-35; City of San Diego 1981b), the 1983 Addendum to the EIR for the North City West Employment Center Precise Plan (EQD No. 83-0191), and the 1986 Addendum to the North City West Employment Center Precise Plan (EQD No. 86-0276). The 1983 Addendum concluded that impacts to all but one of the previously identified archeological sites within the Precise Plan area (SDM-W-19) were mitigated prior to January 1983 (City of San Diego 1983). An excavation program was undertaken pursuant to State CEQA Guidelines Section 21083, which determined that SDM-W-19 was not considered a unique archaeological resource and therefore, no further consideration of the archaeological site was required under CEQA. The 1986 Addendum concluded that required archeological surveys were completed and all impacts to cultural resources were mitigated (City of San Diego 1986). Based on the results of previous cultural resources studies, no impacts to known historical resources would occur as a result of the proposed project.

Section 5.2, *Transportation/Circulation/Parking*, identifies off-site traffic improvements as mitigation to reduce potentially significant traffic impacts to below a level of significance resulting from project implementation. These off-site traffic improvements that are proposed to be implemented by the project (as opposed to payment of a fair-share contribution) would occur within the existing developed right-of-way and would not encroach into previously undisturbed areas or impact any historical structures. No impacts to known historical resources would occur as a result of the proposed project.

In addition, the Native American Heritage Commission (NAHC) conducted a search of their Sacred Lands files to determine if any traditional cultural properties or Native American heritage site are located within the project area. No Native American cultural sites are recorded in the project area (refer to NOP response letter from the NAHC in Draft EIR Appendix A).

However, as with any project requiring grading and/or excavation activities, there remains a possibility that unknown subsurface historical resources associated with past ranching activities, unknown prehistoric archaeological resources, or unknown subsurface Native American resources may be present on site in the underlying formations. Given the depth and extent of project grading and excavation, it is possible that unknown subsurface historical and/or archaeological resources could be impacted.

Significance of Impact

The proposed project could result in potentially significant impacts to unknown subsurface prehistoric, ethnohistoric (including Native American resources and remains), or historic cultural resources.

Mitigation, Monitoring, and Reporting

The following mitigation measure would avoid or reduce potentially significant impacts to unknown buried historical and/or cultural resources to below a level of significance.

Mitigation Measure 5.14-1: The following measures shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the ADD Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project.
3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coast Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4 mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
 - a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate

construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.

- b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

- a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor(s) Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**
2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSV). The CSV's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
 - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**
 - c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the

California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
 - a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;

- b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN,
- c. In order to protect these sites, the Landowner shall do one or more of the following:
 - (1) Record the site with the NAHC;
 - (2) Record an open space or conservation easement on the site;
 - (3) Record a document with the County.
- d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and artifacts buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT Native American**

- 1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
- 2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
- 3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

V. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

- 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
- 2. The following procedures shall be followed.
 - a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVr and submit to MMC via fax by 8 AM of the next business day.
 - b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

- d. The PI shall immediately contact MMC, or by 8 AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**
 - a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.

- b. Recording Sites with State of California Department of Parks and Recreation
The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
 2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
 3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
 4. MMC shall provide written verification to the PI of the approved report.
 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
 2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
 3. The cost for curation is the responsibility of the property owner.
- C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
 2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
 3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

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Section 6.0

CUMULATIVE IMPACTS



6.0 CUMULATIVE IMPACTS

Section 15130 of the State CEQA Guidelines requires that an EIR address cumulative impacts of a project when its incremental effect would be cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project would be considerable when viewed in connection with the effects of past, current, or probable future projects.

According to Section 15130 of the State CEQA Guidelines, the discussion of cumulative effects “... need not provide as great a detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness.” The evaluation of cumulative impacts is to be based on either: “(A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative effect. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.”

The basis and geographic area for the analysis of cumulative impacts is dependent on the nature of the issue and the project. For analysis of cumulative impacts which are localized (e.g., noise and public services), a list of past, approved, and pending projects was identified. The location of these projects is illustrated in Figure 6-1, *General Location of Cumulative Projects*. A brief description of these projects is presented in Table 6-1, *Cumulative Projects*; the numbers correspond to the locations shown on Figure 6-1.

Table 6-1 CUMULATIVE PROJECTS			
No. ¹	Project Name	Location	Description
1	Flower Hill Promenade	North side of Via de la Valle between I-5 and San Andres Drive	Approved expansion includes 28,930 sf of office, 8,750 sf of a community shopping center, 35,000 sf of market, and 2,300 sf of storage. The 600-seat cinema has been demolished.
2	Via de la Valle Townhomes	North of Via de la Valle between San Andres Drive and El Camino Real	Proposed development of 22 townhomes on an 18.8-acre site.
3	Via de la Valle Widening ²	Between El Camino Real (west) and San Andres Drive	Widen roadway with an additional two travel lanes.
4	El Camino Real Widening ²	Between Via de la Valle and San Dieguito Road	Reconstruction and widening of the existing two-lane bridge to a four-lane bridge and widening of the existing two-lane El Camino Real roadway to a modified four-lane major road and includes improvements on eastbound Via de la Valle and northbound El Camino Real. Modified signals and turn lanes at the Via de la Valle/El Camino Real West Intersection. May involve relocation of the intersection.
5	Rancho Del Mar	Southeast of the El Camino Real (West) and Via de la Valle intersection.	Proposed senior citizen development that includes 225 senior citizen housing units.

**Table 6-1 (cont.)
CUMULATIVE PROJECTS**

No. ¹	Project Name	Location	Description
6	The Heights at Del Mar	West side of El Camino Real between Townsgate Drive and Elijah Court	66,108 sf of commercial office in Building 1 and 80,513 sf of commercial office in Building 3.
7	Carmel Valley Residence Inn	Southwest corner of El Camino Real and Valley Centre Drive	Six-story, 117 room hotel with a two level basement garage with 117 parking spaces, and other support improvements on a 0.87-acre site.
8	Torrey Reserve	East side of El Camino Real north of Arroyo Sorrento Road	Construction of 38,400 sf of office building to an existing office development.
9	Torrey Reserve Phase IV	West side of El Camino Real north of the existing Torrey Reserve signalized driveway	Construction of add two 20,000 square feet office buildings to an existing office development.
10	Torrey Hills ³	Bounded by Calle Mar de Mariposa to the north, Vista Sorrento Parkway to the west, West Ocean Air Drive to the east, and an existing office building to the south.	Construction of 484 condominium dwelling units and approximately 4,000 sf of commercial uses.
11	Gables	East side of Carmel Creek Road south of SR 56	Construction of 92 multi-family dwelling units.
12	Seabreeze Carmel View	Southwest corner of Shaw Ridge Road and Carmel Creek Road	Construction of 125,000 sf of medical office.
13	Pepper Tree Point	Carmel Creek Road south of Shaw Ridge Road	Construction 150 multi-family dwelling units.
14	Caltrans I-5 Widening ²	30 mile stretch of I-5 between San Diego and Oceanside	Improvements would include widening to provide a carpool lane in both the north and south directions from Genesee Avenue to Manchester Avenue and two carpool lanes from Manchester Avenue to Vandergrift Boulevard/Harbor Drive and potentially one general-purpose lane in each direction from Del Mar Heights Road to SR 78.
15	The 22 nd District Agricultural Association Master Plan Update	Del Mar Fairgrounds/Racetrack	Proposed expansion of existing facility, including 26,200-sf Flat Floor exhibit buildings, a 330-room conference hotel, a 60,000-sf health club/sports training facility, and an east parking lot improvement.

¹ Number corresponds to location shown on Figure 6-1.

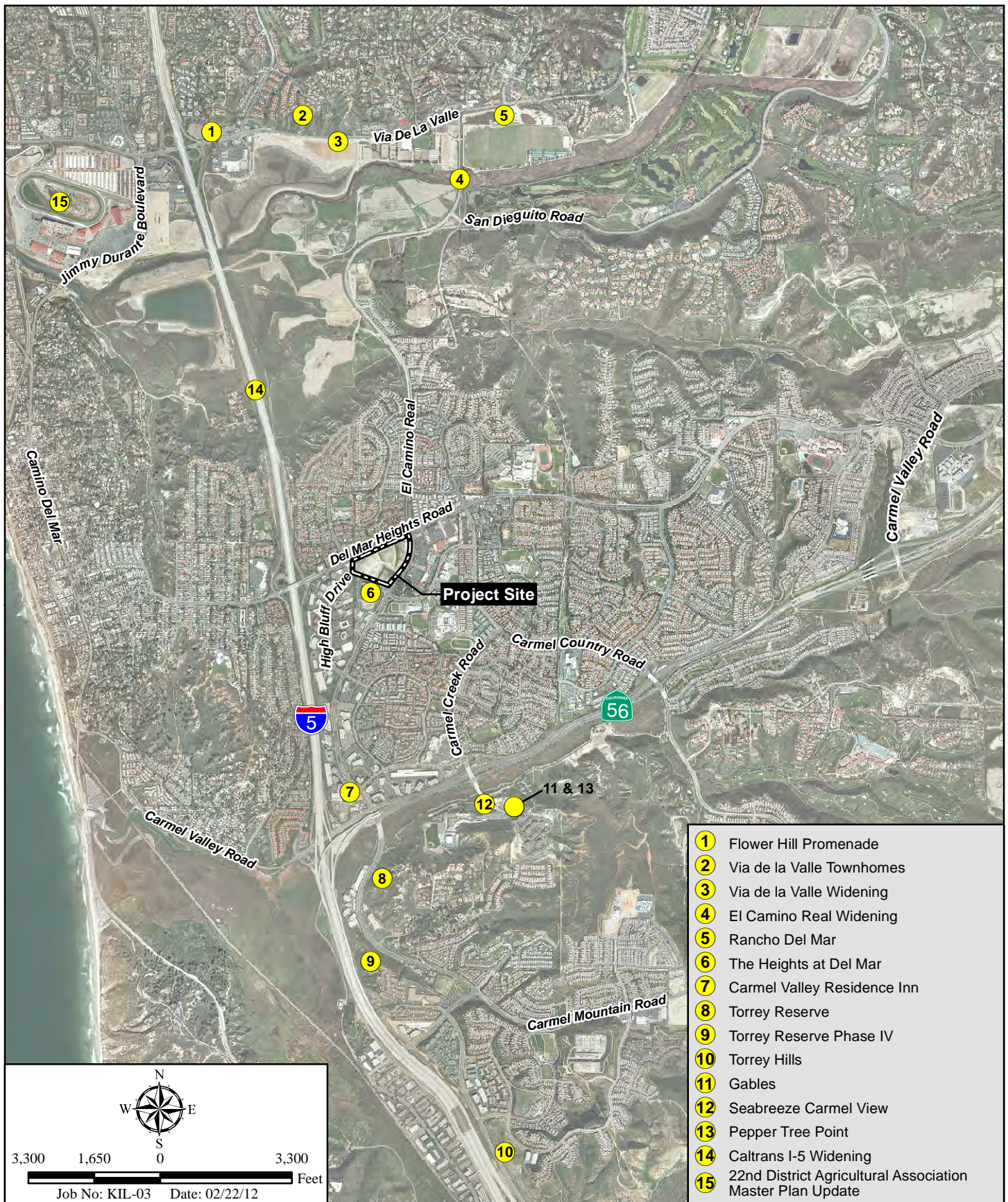
² These roadway improvements are not listed in the project Traffic Impact Analysis (USAI 2012) as cumulative projects because they are assumed to be part of the future transportation network in the SANDAG Series 11 transportation model for the Year 2030 and do not generate traffic trips.

³ This project is not listed in the project Traffic Impact Analysis (USAI 2012) as a cumulative project because the traffic generated by the project would not affect the roadway facilities within the project traffic study area.

6.1 CUMULATIVE EFFECTS FOUND TO BE SIGNIFICANT

6.1.1 Traffic/Circulation/Parking

Section 5.2, *Transportation/Circulation/Parking*, contains the detailed cumulative traffic and circulation analysis for the proposed project. The Long-term Cumulative (Year 2030) scenario represents traffic conditions in the year 2030 and comprises the basis of cumulative traffic impact determinations in this analysis. As detailed in Section 5.2, the proposed project would significantly contribute to cumulatively considerable impacts at the roadway segments, intersections, and ramp meters identified below.



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General Location of Cumulative Projects

ONE PASEO

Figure 6-1

Roadway Segments

Del Mar Heights Road from Interstate 5 Northbound Ramps to High Bluff Drive

With project traffic, the LOS along Del Mar Heights Road from the I-5 NB ramps to High Bluff Drive would decrease from D to F under Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-34). Therefore, the project would result in a potentially significant cumulative impact to Del Mar Heights Road from I-5 NB ramps to High Bluff Drive.

Mitigation is proposed for cumulative impacts to the segment of Del Mar Heights Road between the I-5 NB ramps to High Bluff Drive, which would entail lengthening the WB right-turn pocket (Mitigation Measure 5.2-2). Cumulative impacts would remain potentially significant following installation of the improvements, which are outside the control of the City.

El Camino Real from Via de la Valle to San Dieguito Road

El Camino Real from Via de la Valle would continue to operate at LOS F with the addition of the project traffic under Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-34). The addition of project traffic would result in a change in V/C of more than the City's threshold of 0.01. Thus, the project would result in a potentially significant cumulative impact to El Camino Real from Via de la Valle.

Mitigation for cumulative project impacts to El Camino Real between Via de la Valle and San Dieguito Road would involve payment of fair-share fees by the project applicant that would contribute to the planned widening of this segment of El Camino Real (Mitigation Measure 5.2-3). The segment of El Camino Real (between Via de la Valle and San Dieguito Road) is planned to be widened (by others and not part of this project) to a four-lane Major as a City CIP and is programmed and funded in the City of San Diego Facilities Financing Program as project T-12.3. Cumulative impacts to this segment of El Camino Real would be reduced to below a level of significance with the fair-share contribution to the planned CIP improvement (in accordance with Section 15130(a)(3) of the State CEQA Guidelines).

Via de la Valle from San Andres Drive to El Camino Real (West)

Via de la Valle from San Andres Drive to El Camino Real (West) would continue to operate at LOS F with the addition of the project traffic under Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-34). The addition of project traffic would result in a change in V/C of more than the City's threshold of 0.01. Thus, the project would result in a potentially significant cumulative impact to Via de la Valle from San Andres Drive to El Camino Real (West).

Mitigation for cumulative project impacts to Via de la Valle (between San Andres Drive and El Camino Real [West]) would involve payment of fair-share fees by the project applicant and others that would contribute to the unfunded portion of planned road widening improvements (Mitigation Measure 5.2-4). Improvements are identified in the Black Mountain Ranch Public Facilities Financing Plan (City 2006) as Project No. T-32.1 and would entail widening the

segment of Via de la Valle between San Andres Drive and El Camino Real West to four-lane major street standards. Improvements are identified in the Black Mountain Ranch Public Facilities Financing Plan (City 2006) as Project No. T-32.1 and would entail widening the segment of Via de la Valle between San Andres Drive and El Camino Real West to four-lane major street standards. Black Mountain Ranch is required to complete the roadway improvements and has posted a bond for the improvements. Advance funding for the roadway widening has been received from Black Mountain Ranch. Additional funding is expected to be borne by the fronting property owners or others with development contributing to traffic impacts to Via de la Valle. The developer of the Flower Hill Promenade project (located just east of the I-5/Via de la Valle interchange) is obligated to fund the remaining portion of the cost for the improvements and form a cost reimbursement district to collect funds necessary to complete Project No. T-32.1. Cumulative impacts would be reduced to below a level of significance with the fair-share contribution to the planned improvement.

Intersections

Carmel Creek Road/Del Mar Trail

The project would result in a potentially significant cumulative impact at the Carmel Creek Road/Del Mar Trail intersection during the AM peak period because project traffic would increase the delay at this intersection that is forecasted to operate at LOS E or F by more than the City's threshold of 0.01 or 0.02 under Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-35). Mitigation is identified in Section 5.2 (Mitigation Measure 5.2-5) that would involve installation of a traffic signal at this intersection. Implementation of Mitigation Measure 5.2-5 would reduce this cumulative project impact to below a level of significance because the LOS would improve from E or F to B and mitigate the project's impact.

Del Mar Heights Road/Interstate 5 Northbound Ramps

The project would result in a potentially significant cumulative impact at the intersection of Del Mar Heights Road/I-5 NB ramps during the AM and PM peak period because project traffic would decrease the LOS to E or F, or in the case where the LOS would continue to operate at E or F, the increase in delay would exceed the City's threshold of 0.01 or 0.02 Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-35).

Mitigation is proposed for cumulative impacts to the intersection of Del Mar Heights Road/I-5 NB ramps, which consists of specific intersection improvements (Mitigation Measure 5.2-10) that would reduce delays. Cumulative impacts would remain potentially significant following installation of the improvements, which are outside the control of the City.

Del Mar Heights Road/High Bluff Drive

During the AM and/or PM peak periods, project traffic would decrease the LOS to E or F, or in the case where the LOS would continue to operate at E or F, the increase in delay would exceed the City's threshold of 1.0 or 2.0 seconds at the Del Mar Heights Road/High Bluff Drive intersection under Long-term Cumulative (Year 2030) With Project conditions (refer to

Table 5.2-35). This results in a potentially significant cumulative impact. Mitigation is identified in Section 5.2 (Mitigation Measures 5.2-6 and 5.2-7) that would involve intersection improvements, including the addition of NB right-turn lane, widening Del Mar Heights Road on the north side receiving lanes and re-striping to provide NB triple left-turn lanes, modifying the EB and WB left-turn lanes to dual left-turn lanes and widening the EB right-turn lane by 2 feet. Implementation of Mitigation Measures 5.2-6 and 5.2-7 would reduce this cumulative project impact to below a level of significance because the LOS would improve from E or F to D and mitigate the project's impact.

Del Mar Heights Road/El Camino Real

Project traffic would decrease the LOS at the Del Mar Heights Road/El Camino Real intersection to E or F during the PM peak period under Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-35), which would result in a potentially significant cumulative impact. Mitigation is identified in Section 5.2 (Mitigation Measure 5.2-8) that would involve an additional turn lane. Implementation of Mitigation Measure 5.2-8 would reduce this cumulative project impact to below a level of significance because the LOS would improve from E or F to D and mitigate the project's impact.

El Camino Real/State Route 56 Eastbound On-ramp

The intersection of El Camino Real/SR 56 EB on-ramp would continue to operate at LOS F during the PM peak period with the addition of the project traffic under Long-term Cumulative (Year 2030) With Project conditions. Project traffic would result in an increase in delay of 8.6 seconds (refer to Table 5.2-35), which would exceed the City's threshold of greater than 1.0. Thus, the project would result in a potentially significant cumulative impact at this intersection.

Mitigation is proposed for cumulative impacts to the intersection of El Camino Real/SR 56 EB on-ramp (Mitigation Measure 5.2-9), which would involve payment of a fair-share fee by the project applicant towards specific improvements at this intersection. Although the identified improvements would fully mitigate cumulative impacts because the LOS would improve from F to C and mitigate the project's impact, the project's cumulative impact to this intersection is considered potentially significant until the identified improvements are installed, which are outside the control of the City.

Ramp Meters

Del Mar Heights Road/Interstate 5 Northbound and Southbound On-ramps

The ramp meter at Del Mar Heights Road/I-5 SB on-ramp (WB) would experience a delay of 47.61 minutes during the AM peak period and 29.84 minutes during the PM peak period under Long-term Cumulative (Year 2030) With Project conditions (refer to Table 5.2-37). Del Mar Heights Road/I-5 NB Ramp would experience a delay of 16.04 minutes in the PM peak hour (refer to Table 5.2-37). Impacts to the Del Mar Heights Road/I-5 SB on-ramp (WB) and Del Mar Heights Road/I-5 NB on-ramp would be considered potentially significant because the ramp delays would be more than 15 minutes.

Mitigation is proposed for cumulative impacts to the Del Mar Heights Road/I-5 SB ramp meter. Mitigation Measures 5.2-11 would require the project applicant to make a contribution equal to the full cost of construction of an HOV lane on the I-5 SB on-ramp. Mitigation Measure 5.2-12 would require the project applicant to widen and re-stripe the I-5 NB on-ramp to add an HOV lane. While the migration measures would fully mitigate cumulative impacts, the project's cumulative impacts to these ramp meters are considered potentially significant until the identified improvements are completed, which are within Caltrans jurisdiction and outside the control of the City.

6.1.2 Noise

As discussed in Section 5.4, *Noise*, proposed on-site residences and offices along Del Mar Heights Road and El Camino Real could potentially be exposed to noise levels that exceed the General Plan Noise Element Land Use- Noise Compatibility Guidelines under Long-term Cumulative (Year 2030) conditions (refer to Figure 5.4-5). As a result, cumulative traffic noise impacts to on-site uses would be potentially significant. Mitigation is proposed for cumulative noise impacts to on-site uses (Mitigation Measure 5.4-2) that would require completion of an exterior-to-interior noise analysis to assess off-site noise sources (including traffic) and impacts to on-site uses and if necessary incorporate noise planning and attenuation measures into the project design. Implementation of Mitigation Measure 5.4-2 would reduce cumulative noise impacts to on-site uses to below a level of significance.

6.2 CUMULATIVE EFFECTS FOUND NOT TO BE SIGNIFICANT

Based on analyses contained in Section 5.0, *Environmental Analysis*, of this EIR, the project would not contribute to impacts, in combination with other cumulative projects, with respect to land use, visual effects and neighborhood character, air quality, energy, greenhouse gas emissions, paleontological resources, biological resources, hydrology/water quality, public utilities, public services and facilities/recreation, geologic conditions, health and safety, and historical resources. The basis for this conclusion follows.

6.2.1 Land Use

As discussed in Section 5.1, *Land Use*, the effect of the project on land use would not be cumulatively considerable as the project seeks approval of General Plan, Community Plan, and Precise Plan amendments and a Rezone. Should these discretionary land use approvals be approved, the project would be consistent with land use designations and associated density. The project would also be compatible with surrounding land uses. Considering that the surrounding area is generally built out per the Community Plan and Precise Plan and the project site would be compatible with surrounding uses, the project would not combine with cumulative projects to result in a significant cumulative land use impact.

6.2.2 Visual Effects and Neighborhood Character

The cumulative study area for visual impacts consists of the project site's viewshed. A viewshed is the area within which the project site would be visible. Only one project, The Heights at

Del Mar, is within the same viewshed as the project. The proposed project entails the conversion of the existing four graded pads with trees along the perimeter to a mixed-use commercial/residential development with multi-story structures interspersed with internal roadways, pedestrian areas, and landscaping. The Heights at Del Mar would convert a single graded pad void of vegetation on a parcel that currently contains an existing commercial office development into a three-story commercial development with landscaping. These two projects are situated within the portion of Carmel Valley that has been planned for the most intense form of development within the community. Carmel Valley includes a diversity of architectural styles, building materials and colors, landscaping, lighting and signage; both projects have been designed to be consistent with existing community character and applicable development regulations. The cumulative impacts of these two projects on the viewshed would be considered less than significant given (1) the project and The Heights at Del Mar do not contain significant scenic resources; (2) these projects are not within a state scenic highway or other designated scenic vista; (3) the cumulative development would be consistent with the viewshed character of urbanized, large multi-story employment center and multi-family structures with landscaping; and (4) future projects and existing development would comply with the City Outdoor Lighting Regulations to avoid glare and nighttime lighting impacts.

6.2.3 Air Quality

Air quality impacts could be considered cumulatively considerable if (1) a project's contribution of air emissions would exceed the NAAQS or CAAQS thresholds for a criteria pollutant that the air basin is in nonattainment for; (2) emissions from project traffic combined with other traffic emissions would create a CO hotspot; or (3) project construction emissions combined with construction emissions from other projects would exceed NAAQS or CAAQS thresholds for a criteria pollutants.

The SDAB is considered to be a basic nonattainment area for the 8-hour NAAQS for ozone and a nonattainment area for the CAAQS for both ozone and PM10. Section 5.5, Air Quality, analyzed operational air quality impacts under buildout conditions. Based on the analysis in that section, the project would not generate operational emissions that would exceed the thresholds for criteria pollutants, including ozone precursors (VOCs and NOx) and PM10 (refer to Table 5.5-10). Therefore, the project's contribution to the increase of these criteria pollutants, in combination with the cumulative projects, would not be cumulatively considerable.

A CO hotspot analysis was conducted that considered cumulative traffic conditions. This analysis, shown in Table 5.5-15, determined that the project would not cause or contribute to a CO hotspot under buildout conditions. Therefore, associated cumulative CO impacts would not be significant.

It is possible that construction of the proposed project (Phase 1 or subsequent phases) could coincide with construction of the cumulative projects in the project area. Even if construction activities were concurrent, the project's contribution to short-term, construction-related air emissions would not be cumulatively considerable. As discussed in Section 5.5, air emissions generated during all phases of project construction would be below the screening level thresholds (refer to Tables 5.5-4 through 5.5-7). Additionally, the cumulative projects would be subject to

the same air quality thresholds and would be required to implement mitigation measures during construction, as required, to ensure that short-term air emissions would not be significant. Project construction, therefore, would not result in significant cumulative air quality impacts.

6.2.4 Energy

The cumulative impacts of past, present, and probable future-related projects would result in an increase in local energy consumption. Increase in electricity demand would be partially offset by energy efficiency design elements incorporated into the proposed project and other cumulative projects. Unless the project generates and procures enough renewable energy to satisfy 100 percent of its energy demand, the project would result in an incremental increase in the depletion of non-renewable energy resources, including coal and natural gas. Because the energy to be used by the proposed project would meet the City's energy conservation requirements, and since other new projects in the City must also meet these requirements, impacts of this energy use would not be cumulatively considerable. Therefore, cumulative impacts on energy conservation and sustainability related to the project would be less than significant.

6.2.5 Greenhouse Gas Emissions

GHG emissions generated by development affect climate conditions on a global scale since the effects occur within the upper atmosphere. Thus, no defined study area is feasible for identifying other projects with which the proposed project could combine to cause cumulatively considerable impacts on global climate.

As discussed in Section 5.7, *Greenhouse Gas Emissions*, the City of San Diego is using an annual GHG emission level of 900 MT as a screening threshold to determine when further GHG analysis is required. This screening threshold is also suggested by CAPCOA. Based on guidance from State CEQA Guidelines, the City, CAPCOA, and CARB, if the project would generate GHG emissions in excess of 900 MT per year, additional GHG analysis and mitigation/emissions reduction measures are required. A reduction of the project's GHG emissions by at least 28.3 percent over that which would have been expected to occur in the BAU condition will result in a conclusion of no significant cumulative impact. Absent a reduction of GHG emissions of at least 28.3 percent, cumulative impacts would be considered significant. As shown in Table 5.7-6, the total estimated project-related GHG emissions under BAU conditions would range from 22,895 to 22,964 MT per year (depending on the construction phasing scenario). Thus, project GHG emissions would surpass this screening threshold and additional GHG analysis and emissions reductions measures are required.

In order to avoid cumulatively considerable GHG emissions impacts, the project must reduce its GHG emissions by at least 28.3 percent over those levels that would have been generated in the BAU condition. With adherence to state and federal regulations and project design features identified in Section 5.7, the project would achieve up to a 58.11~~36.9~~-percent reduction. Thus, the project would not result in a cumulatively considerable GHG emissions impact. Refer to Section 5.7 for more information.

6.2.6 Paleontological Resources

The cumulative projects that were previously graded and developed and projects that propose improvements with minimal grading would have little potential to impact paleontological resources. The pre-graded sites would have already been required to mitigate for paleontological resources through monitoring and salvage of significant fossil material encountered. As with the proposed project, other cumulative projects would also be required to include mitigation to avoid significant paleontological resources. Thus, cumulatively significant paleontological resource impacts would be avoided.

6.2.7 Biological Resources

As discussed in Section 5.9, *Biological Resources*, the project site and off-site improvement areas lack sensitive habitat and would not be suitable for sensitive plant or animal species except raptors. Raptors have potential to nest in the mature trees along the site perimeter. In addition, other birds that are covered by the MBTA may nest within these trees. The removal of trees during construction and construction activities may lead to direct and indirect impacts to nesting raptors and migratory birds.

Migratory bird impact avoidance is required by law, and thus the project and all cumulative projects would be required to comply and no significant impact to migratory birds would occur. Potential project impacts to nesting raptors would be mitigated through Mitigation Measure 5.9-1 in conformance with the City Biology Guidelines. Considering that all other cumulative projects would be subject to California Fish and Game Code Section 3503.5 and would be required to implement similar mitigation, the project's contribution to cumulative impacts to raptors would not be considerable.

6.2.8 Hydrology/Water Quality

Hydrology

Based on the discussion in Section 5.10, *Hydrology/Water Quality*, the proposed project would not result in any significant project-specific impacts from considerations including increased impervious surfaces or runoff, drainage alteration, or related concerns such as on- or off-site storm drain capacity and associated flooding hazards. These conclusions are based on the proposed design of on-site storm drain facilities to accommodate 100-year flow (i.e., in conformance with applicable City standards), as well as the fact that all applicable downstream facilities have been designed for ultimate buildout. Specifically, flows from the project site would be conveyed directly to Peñasquitos Lagoon through a number of existing trunk storm drains and a regional detention basin, all of which were designed to accommodate 100-year flows from buildout within the associated watershed (which includes the project site). Accordingly, the existing engineered storm drain system would also accommodate buildout flows from any of the identified cumulative projects located within the same watershed, and no significant hydrology-related cumulative impacts would result.

Water Quality

Development of the identified cumulative projects (including the proposed project) could potentially result in significant cumulative water quality impacts, from effects such as increased erosion/sedimentation and the downstream transport of water-borne contaminants. A comprehensive regional water quality control program is now in place, however, in the form of the RWQCB NPDES Municipal Storm Water Permit and related City requirements including the Storm Water Standards (refer to the discussion of Regulatory Setting in Section 5.10.1). These requirements are intended to protect receiving water beneficial uses by implementing site-specific and watershed-based requirements to meet related water quality objectives on a regional scale.

Implementation of the project would result in the generation of short- and long-term contaminants, and would potentially contribute to cumulative water quality impacts in downstream waters including Peñasquitos Lagoon and the Pacific Ocean. As described in Section 5.10, *Hydrology/ Water Quality*, implementation of the Project would require conformance with a number of regulatory requirements related to water quality, including applicable elements of the CWA, City Storm Water Standards, NPDES and RWQCB Basin Plan. Based on such conformance (including the measures described in Section 5.10 and Appendix H of this Draft EIR), all identified project-level water quality impacts would be avoided or reduced to below a level of significance. Because these described efforts would not (and cannot) completely eliminate the generation of contaminants, the project would incrementally contribute to cumulative water quality impacts. These cumulative impacts are considered less than significant, however, based on the following considerations: (1) all identified project-level water quality impacts would be avoided or reduced below a level of significance through site-specific measures and conformance with existing regulatory requirements; and (2) the identified cumulative projects would be also subject to the identified water quality standards, with these requirements implemented through the referenced NPDES Municipal Permit, City Storm Water Standards, and related requirements. As previously described, these requirements are specifically intended to limit urban runoff contaminants, conform to Basin Plan water quality objectives and beneficial uses, and address regional (i.e., cumulative) water quality impacts on a watershed-wide basis within the San Diego Basin.

Groundwater Extraction and Recharge

The proposed project does not include any long-term extraction or other use of groundwater, and would therefore not contribute to any such groundwater use related to the identified cumulative projects (if applicable). It should be noted that any such long-term groundwater use by the identified cumulative projects is considered unlikely, based on considerations including the widespread availability of municipal water in the cumulative project area, and the likelihood that local groundwater exhibits generally moderate to poor quality (and thus would require treatment for most uses). The proposed project could potentially involve short-term groundwater extraction in association with construction dewatering, although related effects would not be cumulatively considerable due to their temporary nature and relatively minor extent.

The proposed project would contribute to the cumulative loss of local groundwater recharge capacity through the proposed construction of impervious surfaces such as buildings and pavement. These impacts are considered less than significant, however, for the following reasons: (1) shallow permanent groundwater is generally not expected to occur in the project site and vicinity; (2) a number of the identified cumulative projects are located in areas with known groundwater aquifers that have no connection to the proposed project (e.g., the San Dieguito Creek Groundwater Basin); and (3) the potential use of groundwater in project site vicinity is considered unlikely, due to the widespread availability of municipal water and the anticipated low quality of local aquifers.

6.2.9 Public Utilities

As discussed in Section 5.11, *Public Utilities*, the project would not result in significant impacts to water supply, or utility (e.g., water, wastewater, and storm drain) infrastructure. Pending and future projects would be required to analyze project water demand and supply and to avoid conflicts with conservation plans. Also, projects would be required to provide upgrades or developer impact fees towards new infrastructure facilities, as needed. Therefore, the project would not result in water supply or utility infrastructure impacts that would be cumulatively considerable.

According to the City's Significance Determination Thresholds, construction, demolition, or renovation of projects greater than 40,000 sf are expected to generate 60 or more tons of solid waste annually and are considered to have cumulative impacts on solid waste facilities. Because the project would construct a maximum of 1,857,440 gross sf of mixed-use development, a WMP was prepared (Leppert 2011a) and approved by Environmental Service Department. The purpose of the WMP is to identify the potential waste generated and diverted from the project, and reduce solid waste generated by the project, as mandated by the state and City. The WMP is contained in Draft EIR Appendix M and summarized in Section 5.11. In addition, cumulative projects also would be required to prepare WMPs demonstrating similar waste reduction. Implementation of the approved WMP would be made a condition of the SDP approval to ensure that the project's contribution to cumulative solid waste impacts would be less than significant.

6.2.10 Public Services and Facilities/Recreation

The City provides fire, police, library, and recreation services to the project site. The project and other cumulative development would increase the demand for these public services by increasing the population in the area and through increased calls for emergency services. As indicated in Section 5.12, *Public Services and Facilities/Recreation*, the fire and police facilities would be adequate to service the needs of the Carmel Valley community. The existing library also is considered adequate to meet the needs of the Carmel Valley community. As discussed in Section 5.12, the demand for parks generated by the proposed project would exceed the parkland anticipated to be available in the Carmel Valley community. In accordance with City policy, the project applicant will be required to make a payment of \$13.7 million into the Carmel Valley Public Facilities Financing Plan (PFFP) fund. The payment of PFFP fees is an adequate means of offsetting the impacts of a proposed development on public facilities, including parks, within communities with PFFPs. Thus, payment of FBA fees would be considered adequate to offset

the additional recreation demand associated with the project. FBA fees are used for acquisition of parkland or intensification of recreational uses at existing parks that will expand use of those parks. Thus, the proposed project would not result in cumulatively significant impacts to these public services.

Schools are provided through SBSD and SDUHSD. The project and other residential projects listed above would increase residents in the area that would lead to an increased demand on schools. As indicated in Section 5.12, the project and other projects would be required to pay state-mandated school facility fees that would be provided to the schools for improvements based on the number of students. Thus, the proposed project would not result in cumulatively significant impacts to schools.

6.2.11 Health and Safety

As indicated in Section 5.13, *Health and Safety*, various properties of potential environmental concern occur in the vicinity of the project site such as contaminated soil, USTs, and hazardous materials within existing infrastructure. Although the proposed project could potentially result in significant direct impacts with regard to health and public safety, implementation of Mitigation Measures 5.13-1 and 5.13-2 identified in Section 5.13 would reduce such impacts to less than significant levels. Cumulative projects also may result in similar impacts; however, these projects would be subject to similar mitigation measures and abatement requirements, as required by regulatory requirements. With implementation of project-level mitigation, the project would not contribute to cumulatively considerable health and public safety impacts.

6.2.12 Historical Resources

The project site and surrounding areas were historically associated with ranching activities. The project site and other cumulative project sites that were previously graded are not expected to have historical resources in the fill areas. However, there is a possibility unknown subsurface historical and/or archaeological resources could be present in undisturbed areas. In addition, there is also a possibility of unknown subsurface Native American resources to be present. Since the project and some of the other cumulative projects include excavation and grading (the project site presently is in a fully graded condition) in previously undisturbed areas, there would be potential for impacts to unknown subsurface historical and/or prehistoric archaeological resources. The project and all other cumulative projects would be required to implement mitigation similar to Mitigation Measure 5.14-1 that would require earthwork monitoring and proper handling of potential historical resources so that resources within the project area would not be adversely affected. Consequently, the proposed project would not result in cumulative impacts to historical resources.



Section 7.0

MITIGATION, MONITORING, AND REPORTING PROGRAM FOR THE REVISED PROJECT



7.0 MITIGATION, MONITORING, AND REPORTING PROGRAM FOR THE REVISED PROJECT

7.1 GENERAL REQUIREMENTS

As Lead Agency for the proposed project under CEQA, the City of San Diego will administer the Mitigation, Monitoring, and Reporting Program (MMRP) for the following environmental issue areas as identified in the One Paseo Project EIR: Transportation/ Circulation/Parking, Visual Effects and Neighborhood Character, Noise, Paleontological Resources, Biological Resources, Health and Safety, and Historical Resources. The mitigation measures identified below include all applicable measures from the One Paseo Project EIR (Project No. 193036; SCH No. 2010051073). All mitigation measures identified for the Originally Proposed Project would be required to be implemented for the Revised Project. In addition, Mitigation Measure 12.9-1 that addresses noise impacts would be required for the Revised Project. This MMRP shall be made a requirement of project approval.

Section 21081.6 to the State of California PRC requires a Lead or Responsible Agency that approves or carries out a project where an EIR has identified significant environmental effects to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City of San Diego is the Lead Agency for the San Diego Corporate Center Project EIR, and therefore must ensure the enforceability of the MMRP. An EIR has been prepared for this project that addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, an MMRP is required to ensure that adopted mitigation measures are implemented. Therefore the following general measures are included in this MMRP:

A. GENERAL REQUIREMENTS – PART I Plan Check Phase (prior to permit issuance)

1. Prior to the issuance of a Notice To Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director’s Environmental Designee (ED) shall review and approve all Construction Documents (CD), (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.
2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, **“ENVIRONMENTAL/MITIGATION REQUIREMENTS.”**
3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website:

<http://www.sandiego.gov/development-services/industry/standtemp.shtml>

4. The **TITLE INDEX SHEET** must also show on which pages the “Environmental/Mitigation Requirements” notes are provided.
5. **SURETY AND COST RECOVERY** – The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II

Post Plan Check (After permit issuance/Prior to start of construction)

1. **PRE CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT.** The PERMIT HOLDER/OWNER is responsible to arrange and perform this meeting by contacting the CITY RESIDENT ENGINEER (RE) of the Field Engineering Division and City staff from MITIGATION MONITORING COORDINATION (MMC). Attendees must also include the Permit holder’s Representative(s) and Job Site Superintendent.

Note:

Failure of all responsible Permit Holder’s representatives and consultants to attend shall require an additional meeting with all parties present.

CONTACT INFORMATION:

- a) The PRIMARY POINT OF CONTACT is the **RE** at the **Field Engineering Division – 858-627-3200**
 - b) For Clarification of ENVIRONMENTAL REQUIREMENTS, it is also required to call **RE and MMC at 858-627-3360**
2. **MMRP COMPLIANCE:** This Project, Project Tracking System (PTS) #193036 shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD’s Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc)

Note:

Permit Holder’s Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. **OTHER AGENCY REQUIREMENTS:** Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.
4. **MONITORING EXHIBITS:** All consultants are required to submit, to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the **LIMIT OF WORK**, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

NOTE:

Surety and Cost Recovery – When deemed necessary by the Development Services Director or City Manager, additional surety instruments or bonds from the private Permit Holder may be required to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

5. **OTHER SUBMITTALS AND INSPECTIONS:** The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

<u>Issue Area</u>	<u>Document Submittal</u>	<u>Assoc Inspection/Approvals</u>
General	Consultant Qualification Letters	Prior to Pre-con Meeting
General	Consultant Const. Monitoring Exhibits	Prior to or at the Pre-con Meeting
Geology	As Graded Soils Report	Geotechnical/fault inspection
Paleontology	Paleontology Reports	Paleontology site observation
Archaeology	Archaeology Reports	Archaeology/Historic site observation
Biology	Biology Reports	Biology inspection
Noise	Acoustical Reports	Noise mitigation features inspection
Traffic	Traffic Reports	Traffic features site observation
Waste Management	Waste Management Reports	Waste management inspections
Bond Release	Request for Bond Release letter	Final MMRP inspections prior to Bond Release Letter

7.2 SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

7.2.1 Transportation/Circulation/Parking

Mitigation Measure 5.2-1: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure reconfiguration of the median on the Del Mar Heights Road bridge to extend the EB to NB dual left-turn pocket to 400 feet to the satisfaction of the City Engineer and Caltrans. Prior to issuance of the first certificate of occupancy in Phase 1, the median reconfiguration shall be completed and accepted by the City Engineer or Caltrans.

Mitigation Measure 5.2-1.1: Prior to issuance of the first building permit for Phase 1, the project applicant shall contribute to Caltrans \$1,500,000 toward the provision of a third eastbound through lane on the Del Mar Heights Road bridge to the satisfaction of the City Engineer.

Mitigation Measure 5.2-2: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure the widening of the segment to extend the WB right-turn pocket at the Del Mar Heights Road/I-5 NB ramps by 845 feet and the modification of the raised median to the satisfaction of the City Engineer and Caltrans. Prior to issuance of the first certificate of occupancy in Phase 1, the widening shall be completed and accepted by the City Engineer and Caltrans.

Mitigation Measure 5.2-3: Prior to issuance of the first building permit for Phase 1, the project applicant shall make a fair-share contribution (4.9 percent) towards the widening of El Camino Real from Via de la Valle to San Dieguito Road to a four-lane Major to the satisfaction of the City Engineer.

Mitigation Measure 5.2-4: Prior to issuance of the first building permit for Phase 1, the project applicant shall make a fair-share contribution (19.4 percent) towards the widening of Via de la Valle from San Andres Drive to El Camino Real (West) to a four-lane Major to the satisfaction of the City Engineer.

Mitigation Measure 5.2-5: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure by permit and bond installation of a traffic signal at the Carmel Creek Road/Del Mar Trail intersection, to the satisfaction of the City Engineer. Prior to issuance of the first certificate of occupancy in Phase 1, the traffic signal shall be completed and accepted by the City Engineer.

Mitigation Measure 5.2-6: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure by permit and bond construction of a dedicated NB right-turn lane at the Del Mar Heights Road and High Bluff Drive intersection to the satisfaction of the City Engineer. Prior to issuance of the first certificate of occupancy in Phase 1, the dedicated NB right-turn lane shall be completed and accepted by the City Engineer.

Mitigation Measure 5.2-7: Prior to issuance of the first building permit for Phase 2, the project applicant shall assure by permit and bond construction of the following improvements at the

Del Mar Heights Road/High Bluff Drive intersection to the satisfaction of the City Engineer: (1) widen Del Mar Heights Road on the north side receiving lanes and re-stripe the NB left and re-phase the signal to provide NB triple left-turn lanes; and (2) modify the EB and WB left-turn lanes to dual left-turn lanes and widen the EB approach by 2 feet on the south side to accommodate the EB and WB dual left-turn lanes. Prior to issuance of the first certificate of occupancy in Phase 2, all improvements in this mitigation measure shall be completed and accepted by the City Engineer.

Mitigation Measure 5.2-8: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure by permit and bond construction of a 365-foot long EB right-turn lane at the Del Mar Heights Road/El Camino Real intersection, to the satisfaction of the City Engineer. Prior to issuance of the first certificate of occupancy in Phase 1, the 365-foot long EB right-turn lane shall be completed and accepted by the City Engineer.

Mitigation Measure 5.2-9: Prior to issuance of the first building permit for Phase 3, the project applicant shall make a fair-share contribution (3.5 percent) towards the widening and re-striping of the EB approach to provide one left, one shared through/left-turn, one through, and two right-turn lanes at the El Camino Real/SR 56 EB on-ramp intersection to the satisfaction of the City Engineer.

Mitigation Measure 5.2-10: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure construction of the following improvements at the Del Mar Heights Road/I-5 NB ramps to the satisfaction of the City Engineer and Caltrans: (1) widen/re-stripe the I-5 NB off-ramp to include dual left, one shared through/right, and one right-turn lane; (2) extend the WB right-turn pocket by 845 feet and modify the raised median; and (3) reconfigure the median on the Del Mar Heights Road bridge to extend the EB dual left-turn pocket to 400 feet. Prior to issuance of the first certificate of occupancy in Phase 1, all improvements in this mitigation measure shall be completed and accepted by the City Engineer and Caltrans.

Mitigation Measure 5.2-11: Prior to issuance of the first building permit for Phase 3, the project applicant shall make a fair-share contribution (34.8 percent) towards adding an HOV lane to the I-5 SB loop on-ramp to the satisfaction of the City Engineer.

Mitigation Measure 5.2-12: Prior to issuance of the first building permit for Phase 1, the project applicant shall assure the widening and re-striping of the I-5 NB on-ramp to add an HOV lane to the satisfaction of the City Engineer and Caltrans. Prior to issuance of the first certificate of occupancy in Phase 1, the NB on ramp additional HOV lane shall be completed and accepted by the City Engineer or Caltrans.

Mitigation Measure 5.2-13: The VTM shall require that project construction be phased such that concurrent construction of Phases 1, 2, and 3 shall be prohibited, although phases may overlap.

7.2.2 Noise

Mitigation Measure 5.4-1: Prior to issuance of building permits, a noise analysis shall be completed to assess building-specific stationary noise sources and impacts to on-site uses. Appropriate noise ~~planning and~~ attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the Noise Ordinance noise limits for stationary sources (i.e., interior noise levels of 45 dBA L_{EQ} or less for residential and hotel uses; 50 dBA L_{EQ} or less for commercial uses). Methods for ensuring compliant interior noise levels may include, but would not be limited to, the following:

- Installation of roof-top mechanical ventilation and HVAC units on mounts that isolate the building from vibration caused by the machinery;
- In the floors separating residential uses from non-residential uses, use additional thicknesses of building materials and/or materials designed to isolate the residential spaces from vibration generated by non-residential spaces;
- Commercial air handling ducts shall not be routed in or adjacent to interior living space walls without specific plans to address isolation;
- Commercial HVAC systems shall not be mounted over interior living areas without specific plans to address isolation;
- Clusters of residential HVAC systems shall not be mounted directly over residential areas;
- Coolant or large water lines including HVAC water for commercial services shall not be routed in walls adjacent to living areas without specific plans to address isolation;
- Operable windows shall not be located where they look directly at any rooftop HVAC systems in adjacent buildings;
- Elevator shafts shall not be located directly adjacent to living quarters without specific plans to address isolation; and/or
- Commercial spaces for nighttime entertainment shall not have a common floor ceiling to a living space.

Once the project is constructed and in full operation, the developer shall conduct on-site noise measurements to verify that noise planning and attenuation measures identified in the noise analysis have mitigated project noise to levels below those proscribed by the Noise Ordinance noise limits for stationary sources.

Mitigation Measure 5.4-2: Prior to issuance of building permits, an exterior-to-interior noise analysis shall be completed to assess off-site noise sources and impacts to interior on-site residential and commercial uses. Appropriate noise planning and attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the General Plan Noise Element Land use - Noise Compatibility Guidelines (i.e., interior noise levels of 45 dBA CNEL or less for residential and hotel uses; 50 dBA CNEL or less for commercial uses). Methods for ensuring compliant interior noise levels may include, but would not be limited to, the following:

- Use of window glazing with an increased sound transmission classification;
- Use of additional thicknesses of interior drywall; and/or
- Use of additional thicknesses of exterior building materials.

Once the project is constructed and in full operation, interior noise measurements shall be conducted to verify that exterior-to-interior noise planning has mitigated project noise levels to ensure compliance with the General Plan Noise Element Land use – Noise Compatibility Guidelines.

Mitigation Measure 5.4-3: Prior to issuance of building permits, an interior noise analysis shall be completed to assess on-site noise sources and impacts to interior on-site residential uses. Appropriate noise planning and attenuation measures identified in the noise analysis shall be incorporated into the project design to ensure compliance with the General Plan Noise Element Land use - Noise Compatibility Guidelines. Potential noise planning and attenuation measures may include, but are not limited to, the following:

- Commercial air handling ducts shall not be routed in or adjacent to interior living space walls without specific plans to address isolation;
- Commercial HVAC systems shall not be mounted over interior living areas without specific plans to address isolation;
- Clusters of residential HVAC systems shall not be mounted directly over residential areas;
- Coolant or large water lines including HVAC water for commercial services shall not be routed in walls adjacent to living areas without specific plans to address isolation;
- Operable windows shall not be located where they look directly at any rooftop HVAC systems in adjacent buildings;
- Elevator shafts shall not be located directly adjacent to living quarters without specific plans to address isolation;
- Commercial spaces for nighttime entertainment shall not have a common floor ceiling to a living space;
- Limitations upon the use of exterior amplified music systems associated with entertainment such as prohibiting exterior amplified music systems in areas directly adjacent to or below on-site residences,¹ and
- Commercial lease agreements shall include strict enforceable measures to control interior and exterior noise to limit impacts to residential areas.

Once the project is constructed and in full operation, interior noise measurements shall be conducted to verify that interior noise planning has mitigated project noise levels to ensure compliance with the General Plan Noise Element Land use – Noise Compatibility Guidelines.

¹ This excludes temporary outside amplification systems use for a short-term special event conducted with a separate City special event permit.

Mitigation Measure 5.4-4: During construction of Phase 3, noise attenuation shall be provided sufficient to comply with the Noise Ordinance (i.e., a 12-hour average of greater than 75 dBA L_{EQ}). Potential attenuation measures include, but are not limited to, use of sound walls, sound blankets, noise attenuation devices/modifications to construction equipment, and use of quieter equipment. As one option, a temporary 12-foot-high noise barrier could be constructed 50 feet in both (north-south) directions along Third Avenue from the point(s) where the proposed subterranean parking garage is within 100 feet of occupied residences.

The minimum noise reduction from a barrier that obstructs the line-of-sight between the noise source and the noise receiver is five dBA. Therefore, with a 12-foot-high temporary noise barrier, noise levels at the on-site residences in Block B would be reduced to below 75 dBA (12-hour) if they would otherwise be slightly above 75 dBA, as discussed above under Impact Analysis.

Mitigation Measure 12.9-1: Prior to issuance of building permits, a noise analysis shall be completed to determine the location and construction materials for noise attenuation features shown on the development plans needed to protect usable recreation areas from noise levels in excess of 65 CNEL. Barriers shall consist of a single, solid sound wall with a height based on the finished grade of the noise source. The sound attenuation barrier shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it may be tongue and groove and must be at least one-inch thick or have a surface density of at least 3.5 pounds per square foot. Glass or clear plastic may be used on the upper portion. Sheet metal of 18-gauge (minimum) may be used, if it meets the other criteria, and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Any doors or gates shall be designed with overlapping closures on the bottom and sides and meet the minimum specifications of the wall materials described above.

7.2.3 Paleontological Resources

Mitigation Measure 5.8-1: The following shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the ADD Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the paleontological

monitoring program, as defined in the City of San Diego Paleontology Guidelines.

2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Identify Areas to be Monitored

Prior to the start of any work that requires monitoring, the PI shall submit a PME based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).

3. When Monitoring Will Occur

- a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final

construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**
2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
3. The monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
 - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to

significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.

- c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
- d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

IV. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.
2. The following procedures shall be followed.

a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSV and submit to MMC via fax by 8 AM on the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

- d. The PI shall immediately contact MMC, or by 8 AM on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

V. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,
 - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
 - b. Recording Sites with the San Diego Natural History Museum

The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains

1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate

C. Curation of fossil remains: Deed of Gift and Acceptance Verification

1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

7.2.4 Biological Resources

Mitigation Measure 5.9-1: Prior to the issuance of any authorization to proceed, the ADD Environmental designee shall ensure that the following measures are included as notes in the construction plans and grading plans:

1. If project grading/brush management is proposed in or adjacent to native habitat during the typical bird breeding season (i.e. February 1 - September 15), or an active nest is confirmed, the project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to MMC prior to the preconstruction meeting.
 - A. If active nests are confirmed, the report shall include mitigation in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) to the satisfaction of the Assistant Deputy Director (ADD) of the Entitlements Division. Mitigation requirements determined by the project biologist and the ADD shall be incorporated into the project's Biological Construction Monitoring Exhibit (BCME) and monitoring results incorporated in to the final biological construction monitoring report.
 - B. If no ~~active nests~~ ~~nesting birds~~ are confirmed per "A" above, mitigation under "A" is not required.

7.2.5 Health and Safety

Mitigation Measure 5.13-1: Construction permits shall designate staging areas where fueling and oil-changing activities are permitted. No fueling and oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, and schools. Staging areas shall not be located near any stream channels or wetlands. The proposed staging areas shall be identified in the construction site plans, which shall be submitted to the Regional Water Quality Control Board as part of the Notice of Intent to File under the NPDES permit process.

Mitigation Measure 5.13-2: Prior to construction, a Health and Safety Plan shall be prepared and worker training shall be implemented to manage potential health and safety hazards to workers and the public.

7.2.6 Historical Resources

Mitigation Measure 5.14-1: The following measures shall be implemented:

I. Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to issuance of any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the ADD Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego HRG. If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project.
3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coast Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4 mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified Archaeologist and Native American

Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.

- a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
 - a. Prior to the start of any work that requires monitoring, the PI shall submit an AME based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
 - b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
3. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
 - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

III. During Construction

A. Monitor(s) Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**
2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of

fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.

4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVSR). The CSVSR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
 - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) which has been reviewed by the Native American consultant/monitor, and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**
 - c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

IV. **Discovery of Human Remains**

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Section 7050.5) shall be undertaken:

A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenance of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenance.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:

- a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
- b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN,
- c. In order to protect these sites, the Landowner shall do one or more of the following:
 - (1) Record the site with the NAHC;
 - (2) Record an open space or conservation easement on the site;
 - (3) Record a document with the County.
- d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried artifacts with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT Native American**

1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/ landowner, any known descendant group, and the San Diego Museum of Man.

VI. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.
2. The following procedures shall be followed.
 - a. No Discoveries

In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVr and submit to MMC via fax by 8AM of the next business day.

b. Discoveries

All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains.

c. Potentially Significant Discoveries

If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe resulting from delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**

- a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
- b. Recording Sites with State of California Department of Parks and Recreation

The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
 3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
 4. MMC shall provide written verification to the PI of the approved report.
 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
 2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
 3. The cost for curation is the responsibility of the property owner.
- C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
 2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
 3. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection 5.
- D. Final Monitoring Report(s)
1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
 2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.



Section 8.0

EFFECTS FOUND NOT TO BE SIGNIFICANT



8.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

Based upon initial environmental review, the City has determined that the project would not have the potential to cause significant impacts associated with the following issue areas:

- Agriculture and Forestry Resources;
- Geologic and Soils;
- Mineral Resources; and
- Population and Housing.

These topics are briefly addressed below.

8.1 AGRICULTURE AND FORESTRY RESOURCES

The proposed project would not result in impacts to agriculture or forestry resources. The project site neither contains nor is immediately adjacent to land designated as grazing land, prime farmland, unique farmland, or farmland of local or statewide importance, as designated by the California Department of Conservation. Also, the project site does not contain designated or zoned forest land or forest resources. Furthermore, the project site is on and surrounded by urban and built-up land and has been graded and contains fill material. Thus, no impacts to agriculture or forestry resources would occur.

8.2 GEOLOGY AND SOILS

Site-specific geotechnical reports were prepared for the project (Geotechnical Explorations, Inc. 2008 and 2011) and are contained in Draft EIR Appendices O and P. No soil or geologic conditions within the project site would result in significant impacts. The project site was previously graded between 1986 and 1990 as part of the North City West Development Unit 2 mass grading. The project geotechnical reports indicated that, prior to grading, the site was underlain at variable depths by dense sands of the Torrey Sandstone formation. The sandstone materials were overlain in a large portion of the site by undocumented (non-engineered) fill, alluvium, and colluvium. The soil investigation report recommended that these materials be removed and replaced with properly compacted structural (engineered) fill. Evaluations conducted for the geotechnical investigation (2008 and 2011) indicate that the soil engineering and engineering geologic aspects of site grading are in compliance with the 1986 geotechnical report and grading plans. With implementation of soil preparation and foundation recommendations in accordance with Appendices O and P, no significant impacts related to soil stability would occur.

Project implementation would not be subject to significant impacts related to seismic fault rupture and landslides (or related hazards as noted), based on the location and physical characteristics of the site. The site could be subject to moderate to severe ground shaking, however, in the event of a major earthquake. Site-specific seismic design criteria for proposed structures in accordance with the geotechnical reports (Appendices O and P), and required earthquake design in accordance with the California Building Code would reduce potential impacts of earthquake ground motion to an acceptable level.

The proposed project is also not anticipated to be subject to significant impacts from liquefaction, expansive soils, and related effects due to the nature of on-site materials and the lack of shallow groundwater.

As such, overall potential for geology and soils impacts associated with the project would be less than significant.

8.3 MINERAL RESOURCES

The project would not result in significant impacts to mineral resources. The City of San Diego CEQA Significance Determination Thresholds (2007) indicate that impacts to mineral resources are considered significant only in areas with identified mineral resource significance, classified Mineral Resource Zone (MRZ) 2. The project site is not located in an area mapped by the California Department of Conservation, Division of Mines and Geology for concrete-grade aggregate deposits (Open-File Report 96-04, 1996). Since the project site has been planned for development since the 1980s and is located within an urbanized area near residences, it is unlikely that the site would be approved for quarry activities or quarried. The potential impacts to any deposits in this area are therefore considered not significant.

8.4 POPULATION AND HOUSING

No adverse impacts to population or housing are anticipated from development of the proposed project. The project would not displace any existing housing because the project site is graded and vacant.

During project construction, demand for various construction trade skills and labor would increase. It is anticipated that this demand would be met by the local labor force within San Diego County and would not require importation of a substantial number of workers that could cause an increased demand for temporary or permanent housing in this area. The completed development would create additional part-time and full-time employment, involving a wide variety of jobs ranging from low to high-wage scales. The proposed hotel, market, retail, and/or office uses are not expected to require the importation of a specialized work force. While the project would foster economic growth for the City through expanded sales, property, and transient occupancy tax revenues (Kosmont 2012b and 2013), the retail and office components are expected to have a negligible effect on regional population growth and the need for new housing because it is anticipated that these proposed uses would draw from the San Diego labor pool to fill jobs.

Furthermore, based on a retail market analysis that was prepared for the project (Kosmont 2012a and 2013), the project would accommodate forecasted demand for retail uses commensurate with population growth within the project area. The retail demand analysis evaluated existing and projected demand for retail services within a 10-mile radius of the project site (defined as the Trade Area). The analysis concluded that with the project, there will continue to be a net demand for retail uses within the Trade Area. This means that future retail demand within the community is sufficient to support the project plus existing and additional retail uses, and that the project would provide these uses to serve the forecasted population within the community.

The project would provide additional housing within the Carmel Valley community. While residential uses were not anticipated for the project site in adopted land use plans, the project would contribute additional housing to the regional housing supply in the central part of San Diego County. The Regional Housing Needs Assessment calls for 88,096 new housing units (over half of the needed regional supply) to be provided in the City between 2010 and 2020 (SANDAG 2011). Among the policies contained in the current version of the General Plan Housing Element (City of San Diego 2006a) is, “Through the community plan update process, the City shall designate land for a variety of residential densities sufficient to meet its housing needs for a variety of household sizes, with higher densities being focused in the vicinity of major employment centers and best transit service.” It goes on to state:

Future modifications to community plans will be focused on creating more pedestrian and transit-oriented mixed-use environments in specific locations. It is expected that over the five years of this Housing Element cycle a number of locations will be identified for mixed-use development throughout the City. The larger ones will be designated as urban villages. These are where opportunities for new housing construction will be concentrated in the future.

In initiating the proposed CPA for the project site, the Planning Commission provided specific direction to evaluate a mixed-use village designation including a residential component. This project would construct 608 multi-family residential dwelling units equating to approximately 1,666 new residents based on SANDAG’s forecasted density factor of 2.74 persons per household unit (2010). It is anticipated that most of the new housing units would be absorbed by existing residents of the San Diego area. The number of additional housing units and the corresponding forecasted number of new residents is not substantial and would contribute to the housing provision goals of the City’s Housing Element by helping to accommodate regional growth projected for the project area, the City, and the region as a whole. Therefore, the residential component of the project is not anticipated to result in overall regional population growth.

Based on the discussion above, population and housing related impacts associated with the project would not be significant.

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Section 9.0

SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED



9.0 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Based on the analysis contained in Section 5.0, *Environmental Analysis*, the proposed project would result in potentially significant impacts to Transportation/Circulation/Parking, Visual Effects and Neighborhood Character, Noise, Paleontological Resources, Biological Resources, Health and Safety, and Historical Resources. All project impacts would be mitigated to below a level of significance through implementation of mitigation measures identified in this EIR, except for Transportation/Circulation/Parking and Visual Effects and Neighborhood Character. Specific significant impacts which cannot be avoided if the proposed project is implemented are discussed below.

9.1 TRANSPORTATION/CIRCULATION/PARKING

Project impacts and mitigation related to Transportation/Circulation/Parking are discussed in Section 5.2, *Transportation/Circulation/Parking*, (refer to Table 5.2-40 and Table 5.2-41). As identified in Section 5.2, some traffic impacts would remain significant even though in some cases, mitigation or planned improvements (by others) are identified that would fully mitigate direct and/or cumulative impacts resulting from the proposed project. Project impacts that would remain significant are detailed below.

Mitigation is proposed for direct impacts to the segment of Del Mar Heights Road between the I-5 SB ramps and the I-5 NB ramps (Mitigation Measures 5.2-1). This segment of Del Mar Heights Road is located on the bridge that crosses over I-5. The proposed mitigation entails reconfiguring the median on the bridge to extend the EB to NB dual left-turn pocket. Direct impacts are considered significant because the roadway segment would continue to operate at LOS E even with implementation of ~~this proposed improvement~~ Mitigation Measure 5.2-1. If a new bridge is constructed adding a third eastbound through lane, the project's impacts would be fully mitigated. However, such improvements are within the jurisdiction of Caltrans and not the City. Therefore, direct impacts would remain significant.

Mitigation is proposed for direct and cumulative impacts to the segment of Del Mar Heights Road between the I-5 NB ramps to High Bluff Drive, which would entail extending the WB right-turn pocket and modifying the raised median (Mitigation Measure 5.2-2). This proposed improvement would require coordination and Traffic Mitigation Agreement with Caltrans since the proposed improvement would extend outside of the City's jurisdiction and into Caltrans right-of-way. Direct and cumulative impacts are considered significant because (1) the identified improvement is not within the City's jurisdiction and requires a Traffic Mitigation Agreement with Caltrans to connect to the I-5 NB ramp, and (2) the roadway segment would continue to operate at LOS F even with implementation of this proposed improvement. Therefore, direct and cumulative impacts would remain significant. As discussed in Section 5.2, adding a third, eastbound lane to the Del Mar Heights Road bridge over I-5 and other mitigation would mitigate project impacts to Del Mar Heights Road from I-5 NB ramps to High Bluff Drive. As noted above, adding a third, eastbound lane to the bridge is within the jurisdiction of Caltrans and its implementation cannot be assured.

Mitigation for direct and cumulative project impacts to El Camino Real (between Via de la Valle and San Dieguito Road) would involve payment of fair-share contributions by the project applicant that would contribute to the planned widening of this segment of El Camino Real (Mitigation Measure 5.2-3). The segment of El Camino Real (between Via de la Valle and San Dieguito Road) is planned to be widened (by others and not part of this project) to a four-lane Major as a City capital improvement project (CIP) and is programmed and funded in the City of San Diego Facilities Financing Program as project T-12.3. Although the fair-share contribution would provide full mitigation for cumulative impacts to El Camino Real (in accordance with Section 15130(a)(3) of the State CEQA Guidelines), direct impacts to this roadway segment would remain significant because there is no assurance of when the planned road widening improvements would occur. It is possible that one or more Phases of the proposed project could be constructed before the planned improvements to El Camino Real. In that case, the roadway segment would continue to operate at LOS F with the project, and project traffic would exceed the City's significance thresholds. Therefore, direct project impacts would remain significant until the roadway is widened.

Mitigation for direct and cumulative project impacts to Via de la Valle (between San Andres Drive and El Camino Real [West]) would involve payment of fair-share contributions by the project applicant and others that would contribute to the unfunded portion of planned road widening improvements (Mitigation Measure 5.2-4). Improvements are identified as a City capital improvement project (CIP) in the Black Mountain Ranch Facilities Financing Plan (City 2006) as project T-32.1 and would entail widening the segment of Via de la Valle between San Andres Drive and El Camino Real West to four-lane major street standards. Although the fair-share contribution would provide full mitigation for cumulative impacts to Via de la Valle (in accordance with Section 15130(a)(3) of the State CEQA Guidelines), direct impacts to this roadway segment would remain significant because there is no assurance of when the planned road widening improvements would occur. It is possible that one or more Phases of the proposed project could be constructed before the planned improvements to Via de la Valle. In that case, the roadway segment would continue to operate at LOS F with the project, and the project traffic would exceed the City's significance thresholds. Therefore, direct project impacts would remain significant until the roadway is widened.

Mitigation is proposed for cumulative impacts to the intersection of El Camino Real/SR 56 EB on-ramp (Mitigation Measure 5.2-9), which would involve payment of a fair-share contribution by the project applicant towards specific improvements at this intersection. Although the identified improvements would fully mitigate cumulative impacts, the project's cumulative impact to this intersection is considered significant because some of the identified improvements are not within the City's jurisdiction.

Mitigation is proposed for direct and cumulative impacts to the intersection of Del Mar Heights Road/I-5 NB ramps, which consists of specific intersection improvements (Mitigation Measure 5.2-10). The project's direct and cumulative impact to this intersection are considered significant because the intersection would continue to operate at LOS E or F even with the proposed improvements. Therefore, direct and cumulative impacts would remain significant.

Mitigation is proposed for cumulative impacts to the Del Mar Heights Road/I-5 SB ramp meter. Mitigation Measures 5.2-11 would require the project applicant to make a fair-share payment toward an HOV lane on the I-5 SB on-ramp. Mitigation Measure 5.2-12 would require the project applicant to widen and re-stripe the I-5 NB on-ramp to add an HOV lane. While the fair-share contribution and identified improvements would fully mitigate the project's contribution to the cumulative impacts on ramp meters, the project's cumulative impacts to these ramp meters would remain potentially significant until the identified improvements are completed, which are outside the control of the City. Thus, cumulative impacts to the Del Mar Heights Road/I-5 SB ramp meter and the Del Mar Heights Road/I-5 NB ramp meter would remain significant.

9.2 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Project impacts related to Visual Effects and Neighborhood Character are discussed in Section 5.3, *Visual Effects and Neighborhood Character*. The project proposes a mixed-use community village that would be consistent with General Plan policies and implements the City of Villages strategy. The project would integrate land uses on a single site and introduce building forms that are characteristic of a village that would be unique and distinctive to Carmel Valley. The project site is located at a highly visible and prominent location within Carmel Valley and despite incorporation of project design features to minimize apparent height, bulk, and scale of proposed buildings, the bulk and scale of the proposed buildings would be greater than and different from existing surrounding development, resulting in a significant community character impact. There is no feasible mitigation to reduce community character impacts to below a level of significance. Therefore, community character impacts resulting from the proposed project would remain significant and unmitigable.

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Section 10.0

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES



10.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126(c) of the State CEQA Guidelines requires an evaluation of significant irreversible environmental changes which would occur should the proposed project be implemented. Irreversible environmental changes typically fall into three categories: (1) primary impacts, such as the use of nonrenewable resources (i.e. biological habitat, agricultural land, mineral deposits, water bodies, energy resources and cultural resources); (2) secondary impacts, such as highway improvements which provide access to previously inaccessible areas; and (3) environmental accidents potentially associated with the proposed project. Section 15126.2(c) of the State CEQA Guidelines states that irretrievable commitments of resources should be evaluated to assure that current consumption of such resources is justified.

Implementation of the proposed project would not result in significant irreversible impacts to biological, agricultural, forestry, mineral, or cultural resources. The project site is currently vacant, graded, and designated for employment center uses, and therefore, contains no natural vegetation or agricultural or forestry resources. No significant mineral deposits underlie the site, nor are there any known significant cultural resources present on site. In addition, no water bodies are located on the project site or within the project vicinity.

The project would entail the commitment of energy and non-renewable resources, such as energy in the form of electricity, energy derived from fossil fuels, construction materials (i.e. concrete, asphalt, sand and gravel, petrochemicals, steel, and lumber and forest products), and labor during the construction phases. Use of these resources would have an incremental effect on the regional consumption of these commodities, and therefore result in long-term, irretrievable losses of non-renewable resources such as fuel and energy.

An incremental increase in energy demand would also occur during post-construction activities including lighting, heating, and cooling of the proposed structures. Section 5.6, *Energy*, contains additional discussion of energy impacts.

The project would not involve any kind of road or highway improvements that would provide access to previously inaccessible areas. Further, no major environmental accidents or hazards are anticipated to occur as a result of project implementation, as discussed in Section 5.13, *Health and Safety*.

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Section 11.0

GROWTH INDUCEMENT

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11.0 GROWTH INDUCEMENT

In accordance with Section 15126(d) of the State CEQA Guidelines, an EIR must include an analysis of the growth-inducing impact of the proposed project. The growth inducement analysis must address: (1) the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment; and (2) the potential for the project to encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. This second issue involves the potential for the project to induce further growth by the expansion or extension of existing services, utilities, or infrastructure. The State CEQA Guidelines Section 15126.2(d) further states that “[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

The project entails the phased construction in an existing urbanized area of a mixed-use development encompassing a maximum of 1,857,440 gross square feet (sf) consisting of approximately 270,000 gross sf of commercial retail (all 270,000 sf comprises the gla), approximately 557,440 gross sf of commercial office (536,000 sf gla), approximately 100,000 gross sf consisting of a 150-room hotel, and approximately 930,000 gross sf consisting of a maximum of 608 multi-family residential units. The project also would include public space areas, internal roadways, landscaping, hardscape treatments, and utility improvements to support these uses.

During project construction, demand for various construction trade skills and labor would increase. It is anticipated that this demand would be met by the local labor force and would not require importation of a substantial number of workers that could cause an increased demand for temporary or permanent housing in this area.

The area surrounding the project is generally built out. Thus, the proposed infill development would not result in a new use that would attract new development in addition to that proposed by the project itself.

The completed development would create additional part-time and full-time employment, involving a wide variety of jobs ranging from low to high-wage scales. The existing land use designation for the proposed project site is “Employment Center.” As such, long-term utility, transportation, parks, and other infrastructure plans for the Carmel Valley area were developed in anticipation that the proposed project area would be built out with similar “employment center” uses. None of the anticipated hotel, market, retail, and/or office uses are expected to require the importation of a specialized work force. The labor pool within the San Diego area is adequate. While the project has the potential to foster economic growth for the City through expanded sales and property tax revenues, it is expected to have a limited effect on regional population growth because it would draw from the local population for jobs.

The project proposes a General Plan Amendment, Community Plan Amendment, Precise Plan Amendment, and a Rezone to allow for residential uses that are currently not allowed on the site. If the proposed amendments and Rezone are approved, the completed development would result in the addition of 608 new residential units which were unaccounted for under the existing Community Plan and Precise Plan land use projections. The addition of housing to a given area can result in growth in two ways: (1) an increase in the regional population of an area as a result

of increased housing inventory where housing was previously not available; and/or (2) increased demand for public services, utilities, and facilities within particular neighborhoods, communities, or planning districts, which, as these needs are accommodated, therefore result in growth. Based on SANDAG's forecasted density factor of 2.74 persons per household unit (2010), the proposed project could result in an increase in population to the immediate project vicinity of approximately 1,666 persons. In the case of the proposed project, the majority of the new housing units are anticipated to be absorbed by existing residents of the San Diego area. Therefore, the project is not anticipated to result in overall regional population growth. Rather, as described in Section 8.4, *Population and Housing*, the proposed project would help to accommodate regional housing demand within a mixed-use, infill development, in accordance with the policies of the City's Housing Element.

The project would not require extension of existing roads in order to provide access to the proposed project site, as the site is surrounded by urban development and served by existing roadways around the site perimeter. Internal circulation roadways would be developed to City-required buildout standards, and would be constructed specifically to serve the proposed on-site uses. Furthermore, the project would be conditioned to pay applicable Facilities Benefit Assessment (FBA) fees to fund programmed public facilities identified in the Carmel Valley Public Facilities Financing Plan and Facilities Benefit Assessment (City 2008e). Therefore, proposed roadway improvements would not result in growth beyond that already planned.

As detailed in Section 5.11, *Public Utilities*, existing off-site infrastructure is more than adequate to accommodate the proposed project. The infrastructure (e.g., roads, water, sewer, and electrical lines) needed by the proposed project are also readily accessible to the project site, so that the proposed project would not require the extension or expansion of public services, utilities, or infrastructure to an area not already serviced by local utilities or services. The project would include replacement of temporary storm water drainage features with permanent storm water and sewer drainage features. However, the proposed drainage features would be located in approximately the same location as the temporary features, and would be specifically sized and designed to accommodate the level of development proposed by the project. The project would also extend electrical, water, and sewer lines through the project site. The proposed extensions would occur off of existing utility lines in the roadways surrounding the project site, and similar to the drainage facilities, be specifically sized and designed and sized to meet the needs of the proposed project. Therefore, proposed infrastructure improvements would not result in growth beyond that already planned.

As detailed in Section 5.12, *Public Services and Facilities/Recreation*, the surrounding community contains public services such as schools, libraries, and police and fire service to accommodate the project, such that the project would not contribute to significant demand for growth of these services. The project would also include on-site, public active and passive recreational areas, which, while they would tie into regional parks and recreational facilities, would also serve the proposed on-site uses in such a way as to avoid demand for the growth of off-site recreational facilities.

In addition, development of the proposed project would not remove any existing physical barriers to growth. Therefore, growth inducement would not likely occur as a result of the proposed project.

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Section 12.0

ALTERNATIVES



12.0 ALTERNATIVES

12.1 INTRODUCTION

In considering the appropriateness of a project, CEQA mandates that alternatives to its implementation be discussed. Section 15126.6(a) of the State CEQA Guidelines requires the discussion of “a range of reasonable alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Section 15126.6(f) further states that “the range of alternatives in an EIR is governed by the ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” Thus, the following discussion focuses on those alternatives that are capable of reducing or eliminating significant environmental impacts, even if they would impede the attainment of some project objectives, or would be more costly. In accordance with Section 15126(f)(1) of the State CEQA Guidelines, among the factors that may be taken into account when addressing the feasibility of alternatives are (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the proponent can reasonably acquire, control, or otherwise have access to an alternative site.

This EIR section presents potential alternatives to the project and evaluates them as required by CEQA. In accordance with State CEQA Guidelines Section 15126.6(d), “the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.” The State CEQA Guidelines also require EIRs to identify the Environmentally Superior Alternative from among the alternatives (including the proposed project). The Environmentally Superior Alternative is identified in Section 12.12 of this section.

12.2 SUMMARY OF PROJECT OBJECTIVES AND SIGNIFICANT EFFECTS

In developing the alternatives to be addressed in this section, consideration was given to their ability to meet most of the basic objectives of the project. These objectives were identified in Chapter 3.0 of this EIR and include the goals to:

- Develop a mixed-use village consistent with the goals of the General Plan.
- Develop a mixed-use project to serve the community that is consistent with the goals of the Community Plan.
- Provide additional housing types and employment opportunities within the Carmel Valley community.
- Provide a mix of land uses within close proximity to major roads and regional freeways and existing community amenities, such as libraries, schools, recreational facilities, parks, and shopping centers.
- Provide the community with a place for public gathering and social interaction, reinforcing the sense of community and pride.
- Promote sustainable development principles and smart growth by providing a mix of employment, housing, dining, and shopping within the same development.

Based on the analysis contained in Section 5.0, *Environmental Analysis*, the project, without mitigation, would result in significant impacts to Transportation/Circulation/Parking, Visual Effects and Neighborhood Character, Noise, Paleontological Resources, Biological Resources, Health and Safety, and Historical Resources. With mitigation, remaining significant direct and cumulative impacts occur with respect to Transportation/Circulation/ Parking and Visual Effects and Neighborhood Character. The alternatives that were developed and evaluated in this section are intended to reduce or avoid the potentially significant impacts of the project, particularly traffic impacts and neighborhood character.

12.3 ALTERNATIVES CONSIDERED BUT REJECTED

12.3.1 Alternative Location

Off-site alternatives should be considered if another site is feasible and would reduce or avoid the significant impacts of the proposed project. Factors to be considered when identifying an off-site alternative include project objectives, the size of the site, its location, the General Plan and/or Community Plan land use designation, and availability of infrastructure. Because no other vacant approximately 23.6-acre site exists in the Carmel Valley area that is suitable for the project, constructing the proposed project at another location is not feasible. Therefore, an off-site location is not considered as an alternative for further analysis.

12.4 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

12.4.1 Description

Pursuant to Section 15126.6(e)(3)(B) of the State CEQA Guidelines, the No Project Alternative is the “circumstances under which the project does not proceed.” For purposes of this EIR, the No Project/No Development Alternative assumes that the site would remain in its current vacant, graded condition and would not be developed with the proposed mixed uses. In addition, the proposed General Plan, Community Plan, and Precise Plan amendments, as well as the Rezone would not occur. Impacts associated with this alternative, as compared to the proposed project, are described below.

12.4.2 Environmental Analysis

Transportation/Circulation/Parking

The No Project/No Development Alternative would not generate additional traffic, as the site would remain vacant. Traffic conditions would remain the same as the Existing, Near-term Without the Project, and Long-term Cumulative (Year 2030) Without Project conditions presented in Section 5.2, *Transportation/Circulation/Parking*, with a number of roadways and intersections forecasted to operate at LOS E or F. Although traffic congestion would still occur in the community without the project, this alternative would avoid the significant traffic impacts resulting from the proposed project.

Visual Effects and Neighborhood Character

Under the No Project/No Development Alternative, the project site would continue to consist of vacant, graded building pads that contrast with the surrounding development. Because no development of any structures would occur under this alternative, the site would remain generally inconsistent with surrounding development, as well as development in the broader Community Plan Area. Although this alternative would avoid the significant neighborhood character impacts of the proposed project related to height and bulk, retaining the vacant condition would result in the continuation of a contrasting and conflicting condition on the project site with surrounding development.

Noise

Under the No Project/No Development Alternative, the project site would continue to experience noise levels generated primarily by vehicular traffic on surrounding roadways. Future noise levels would increase due to the increased vehicular traffic generated by the buildout of the community. This alternative would not contribute to any noise increases, as no land uses or development would occur. Since the project would remain vacant under this alternative, no significant noise impacts related to land use – noise compatibility would occur. Because construction would not occur, potentially significant construction noise impacts identified for the proposed project would be avoided by the No Project/No Development Alternative.

Paleontological Resources

Under the No Project/No Development Alternative, no earthwork would occur at the project site. Thus, any existing on-site paleontological resources would remain intact and not impacted. Potentially significant impacts related to paleontological resource resulting from the proposed project would be avoided by the No Project/No Development Alternative.

Biological Resources

Under the No Project/No Development Alternative, the site would remain in its present state. Thus, no trees along the perimeter would be removed and no additional noise or lighting impacts would occur. No direct or indirect impact to nesting raptors or migratory birds would occur. The identified biological resource impact (nesting raptor) resulting from the proposed project would be avoided by the No Project/No Development Alternative.

Health and Safety

Under the No Project/No Development Alternative, no construction activities would occur at the site. Thus, there would be no potential for accidental releases of construction-related hazardous materials and associated health and public safety impacts to on- and off-site receptors. The No Project/No Development Alternative would not result in health and public safety impacts.

Historical Resources

Under the No Project/No Development Alternative, no earthwork would occur at the project site. Thus, any unknown subsurface historical resources would remain intact and not impacted. Potentially significant impacts related to unknown subsurface historical resources impact resulting from the proposed project would be avoided by the No Project/No Development Alternative.

12.4.3 Conclusion

Implementation of the No Project/No Development Alternative would avoid all identified significant project-related impacts, including significant and unavoidable transportation/circulation/parking and neighborhood character impacts associated with the proposed project. ~~However, this alternative would not meet the identified project objectives.~~

~~This alternative is not being pursued by the project applicant because it would not fail to meet the basic objectives of the project. It would fail to develop a mixed-use project to serve the community, provide additional housing types in Carmel Valley, provide a place for public gathering and social interaction, or promote sustainable development principles and smart growth.~~

~~12.5 NO PROJECT/DEVELOPMENT UNDER EXISTING PLANS~~ ALTERNATIVE EMPLOYMENT CENTER ALTERNATIVE

12.5.1 Description

The No Project/Employment Center Alternative evaluates the most likely use of the project site in the event the proposed project is not approved. An employment center would be consistent with the current land use and zoning designations of the Community Plan, Precise Plan, and the Carmel Valley PDO. Buildout under the existing zoning would allow for approximately 510,000 sf of multi-tenant and/or corporate office uses and associated parking. Due to the size of development under this alternative compared to the size of the project site and existing parking facilities in the Employment Center, it is assumed that parking would be provided primarily with surface parking lots. The amount of earthwork, therefore, would be greatly reduced from the proposed project since subsurface parking would not be constructed. No General Plan, Community Plan, or Precise Plan amendments or Rezone would be required under this alternative.

12.5.2 Environmental Analysis

Transportation/Circulation/Parking

The No Project/Employment Center Alternative would generate 6,497 ADT with 895 AM peak hour trips and 935 PM peak hour trips (USAI 2012). Compared to the proposed project, this represents an approximately 76-percent reduction in daily traffic trips with a 42 percent reduction in AM peak hour trips and a 68-percent reduction in PM peak hour trips. Traffic

impacts resulting from this alternative under Existing Plus Project, Near-term With Project, and Long-term Cumulative (Year 2030) With Project conditions are discussed below.

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along two roadway segments and one intersection under the No Project/Employment Center Alternative (as shown in Attachments 2 and 3 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same two roadway segments and intersection listed above. The delay at the Carmel Creek/Del Mar Trail intersection would decrease under this alternative, but the impact would remain significant. Additionally, the No Project/Employment Center would avoid impacts to the following two segments of Del Mar Heights Road: I-5 SB ramps to I-5 NB ramps, and I-5 NB ramps to High Bluff Drive. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the No Project/Employment Center Alternative.

Near-term With Project

In the Near-term condition, potentially significant direct impacts would occur along three roadway segments and three intersections under the No Project/Employment Center Alternative (as shown in Attachments 4 and 5 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/High Bluff Drive (LOS E in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS E in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS F in the AM peak hour).

In comparison to the proposed project, this alternative would result in the same potentially significant traffic impacts to roadway segments, except for Del Mar Highlands Road between the I-5 SB ramps to NB ramps, and intersections under Near-term With Project conditions, although delays at the intersections would be reduced, but not to below a level of significance. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the No Project/Employment Center Alternative.

Long-term Cumulative (Year 2030) With Project

In the Long-term Cumulative (Year 2030) With Project condition, potentially significant direct impacts would occur along two roadway segments, five intersections, and two freeway ramp meters under the No Project/Employment Center Alternative (as shown in Attachments 6, 7, and 8 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB Ramps (LOS F in the AM and PM peak hours);
- Del Mar Heights Road/High Bluff Drive (LOS E in the AM peak hour and LOS F in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS F in the PM peak hour);
- El Camino Real/SR 56 EB on-ramp (LOS F in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS F in the AM peak hour).

Freeway Ramps

- Del Mar Heights Road/I-5 SB on-ramp (WB); and
- Del Mar Heights Road/I-5 NB on-ramp.

In comparison to the proposed project, this alternative would avoid the impact of the proposed project on the Via de la Valle from San Andres Drive to El Camino Real (West). However, as with the proposed project, it would result in potentially significant traffic impacts to the two roadway segments, five intersections, and two freeway ramp meters listed above. Delays at the intersections would be reduced, but not to below a level of significance. Additionally, the No Project/Employment Center Alternative would not avoid impacts to the segment of Del Mar Heights Road from I-5 NB ramps to High Bluff Drive under Near-term With Project conditions. As with the project, impacts to freeway segments would be less than significant under the No Project/Employment Center Alternative.

Visual Effects and Neighborhood Character

Development of the site under the existing land use designations and zoning classification in the existing Community Plan, Precise Plan, and Carmel Valley PDO/LDC would allow for

approximately 510,000 sf of office uses and associated parking. Development on the project site according to the existing regulations would entail one or more office buildings (depending on the design associated with the total allowable building space, maximum FAR of 0.5, and other development regulations, such as setbacks and no building height limit) surrounded by surface parking lots, parking structures and a landscaped buffer. As development regulations for the project site specify no height limit, construction of 510,000 sf of office uses on the project site could occur as multiple buildings between five and eight stories. This alternative would generally continue the single-use development pattern within the immediate vicinity of the project site. However, structures developed under this alternative would remain taller than some existing surrounding development. Nevertheless, the low intensity and large quantity of surface parking of this development pattern would remain generally consistent with the relatively low intensity of existing development immediately adjacent to the project site, and would represent a reduction in both height and intensity of development proposed under the project. This alternative would therefore generally avoid the project's significant impact to the character of adjacent development relative to bulk and scale.

Noise

Employment center uses would be compatible with exterior noise levels up to 75 CNEL and interior noise levels up to 50 CNEL. Outdoor useable spaces provided on site would not be exposed to noise levels greater than 75 dBA since the calculated 75 dBA noise contour would not extend onto the project site (refer to Figures 5.4-1 through 5.4-5). Considering standard construction materials provide a 15-dBA reduction and the calculated noise contours (refer to Figures 5.4-1 through 5.4-5), on-site uses within 50-feet of the Del Mar Heights Road and El Camino Real may experience interior noise levels above 50 CNEL. If offices are located within 50 feet of either roadway, potentially significant land use-noise compatibility impacts would occur.

The No Project/Employment Center Alternative would entail office uses that do not include the stationary noise sources of the proposed project (such as restaurant kitchen fans, amplified music systems, or refrigeration condensers) or residential uses. Therefore, this alternative would avoid potentially significant on-site land use – noise compatibility impacts that could occur under the proposed project.

As no residences are proposed on site and existing surrounding residences are located over 100 feet from the project site, the No Project/Employment Center Alternative would result in less than significant construction noise impacts.

Paleontological Resources

As indicated in Section 5.8, *Paleontological Resources*, the project site is underlain by fill and Torrey Sandstone (between 12 and 27 feet below surface), which has a high paleontological sensitivity rating in the Carmel Valley region. Grading required for the No Project/ Employment Center Alternative would be minimized and mainly limited to the area already disturbed by past grading. Excavation for utilities may occur in some areas containing Torrey Sandstone, but this alternative is assumed to require excavation of less than 1,000 cubic yards of Torrey Sandstone given the depth of existing fill material and graded nature of the project site. Thus, the

No Project/Employment Center Alternative would result in less than significant paleontological resource impacts and would avoid potentially significant impacts to paleontological resources resulting from the proposed project.

Biological Resources

As indicated in Section 5.9, *Biological Resources*, the project site is not located within or adjacent to the MHPA, and does not contain sensitive habitat. As with the project, the No Project/Employment Center Alternative would remove mature trees along Del Mar Heights Road, which could provide suitable nesting habitat for raptors resulting in potentially significant impacts. Thus, the No Project/Employment Center Alternative would result in the same impacts to biological resources as the proposed project.

Health and Safety

Similar to the proposed project, construction of the No Project/Employment Center Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could pose a risk to off-site receptors in the event of an accidental spill. Long-term operations associated with corporate office uses typically do not involve the transport, use, or storage of hazardous materials, but limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, and pesticides for landscape maintenance) may be stored on site. Associated impacts would be the same as the proposed project.

Historical Resources

As indicated in Section 5.14, *Historical Resources*, there is potential for unknown subsurface historical resources to be present on the project site within areas not disturbed by past grading. Because parking would be provided on surface lots under this alternative and no deep exactions for footings or utilities would be necessary, grading to construct the No Project/Employment Center Alternative would likely be limited to the areas already disturbed by past grading. Excavation for utilities may occur in some areas undisturbed by past grading, but the overall potential to encounter unknown subsurface historical resources is considered low. Thus, the No Project/Employment Center Alternative would result in less than significant impacts related to historical resources and would avoid potentially significant impacts identified for the proposed project.

12.5.3 Conclusion

Implementation of the No Project/Employment Center Alternative would avoid or reduce identified significant project-related neighborhood character impacts, on-site land use – noise compatibility and construction noise impacts, and paleontological and historical resource impacts below a level of significance. Identified significant impacts to transportation/circulation/parking, off-site land use – noise compatibility, biological resources, paleontological resources, and health and safety from the proposed project would remain under this alternative; however, two significant traffic impacts associated with the proposed project would be avoided. ~~This alternative would not meet identified project objectives because it would fail to develop a mixed-~~

~~use project to serve the community, provide additional housing types in Carmel Valley, provide a place for public gathering and social interaction, or promote sustainable development principles and smart growth.~~

~~This alternative is not being pursued by the project applicant because it would not fail to meet the basic objectives of the project. It would fail to develop a mixed-use project to serve the community, provide additional housing types in Carmel Valley, provide a place for public gathering and social interaction, or promote sustainable development principles and smart growth.~~

12.6 COMMERCIAL ONLY ALTERNATIVE

12.6.1 Description

The Commercial Only Alternative would be a mixed-use development consisting of the commercial elements of the proposed project. Development under this alternative would include 510,000 sf (gla) of corporate office, 21,000 sf (gla) of professional office, and 270,000 sf (gla) of retail, for a total of 806,000 sf (gla). No residential uses or the hotel would be constructed. Similar to the proposed project, General Plan, Community Plan, and Precise Plan amendments would be required, as well as a Rezone. Parking for the proposed uses would be provided through surface parking lots and/or above-grade parking structures; no subsurface parking garages would be constructed ~~because it is assumed that all required on-site parking would be accommodated in surface lots and/or above-grade parking structures.~~ As a result, the amount of earthwork would be reduced from the proposed project.

This alternative was developed to (1) reduce project-generated traffic and (2) lessen or avoid neighborhood character impacts relating to the bulk and scale of some of the proposed structures, by removing the residential and hotel uses of the proposed project, yet providing retail uses to satisfy unmet demand and office uses consistent with adjacent development.

12.6.2 Environmental Analysis

Transportation/Circulation/Parking

The Commercial Only Alternative would generate 22,843 ADT (USAI 2012) with 1,217 AM peak hour trips and 2,544 PM peak hour trips. This represents a net ADT reduction of approximately 15 percent with a 21-percent reduction in AM peak hour trips and a 13-percent reduction in PM peak hour trips compared to the proposed project. Existing Plus Project, Near-term With Project, and Long-term Cumulative (Year 2030) With Project conditions are discussed below.

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along three roadway segments and one intersection under the Commercial Only Alternative (as shown

in Attachments 10, 11, 12, and 13 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same three roadway segments and intersection listed above. The V/C ratio would decrease along the roadway segments and the delay at the Carmel Creek/Del Mar Trail intersection would decrease under this alternative, but the impacts would remain significant. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the Commercial Only Alternative.

Near-term With Project

In the Near-term With Project condition, potentially significant direct impacts would occur along three roadway segments and three intersections under the Commercial Only Alternative (as shown in Attachments 14 and 16 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/High Bluff Drive (LOS E in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS E in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS F in the AM peak hour).

In comparison to the proposed project, this alternative would result in the same potentially significant traffic impacts to roadway segments and intersections under Near-term With Project conditions. The V/C ratio along the roadway segments and the delays at the intersections would slightly decrease under this alternative, but the impacts would remain significant. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the Commercial Only Alternative.

Long-term Cumulative (Year 2030) With Project

In the Long-term Cumulative (Year 2030) With Project condition, potentially significant direct impacts would occur along three roadway segments, five intersections, and two freeway ramp meters under the Commercial Only Alternative (as shown in Attachments 15, 17, and 18 in Appendix Q of the TIA):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB Ramps (LOS F in the AM and PM peak hours);
- Del Mar Heights Road/High Bluff Drive (LOS E in the AM peak hour and LOS F in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS F in the PM peak hour);
- El Camino Real/SR 56 EB on-ramp (LOS F in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

Freeway Ramps

- Del Mar Heights Road/I-5 SB on-ramp (WB); and
- Del Mar Heights Road/I-5 NB on-ramp.

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same three roadway segments, five intersections, and two freeway ramp meters listed above. The V/C ratio at roadway segments and delays at the intersections and ramp meters would be reduced, but not to below a level of significance. As with the project, impacts to freeway segments would be less than significant under the Commercial Only Alternative.

Visual Effects and Neighborhood Character

Development under the Commercial Only Alternative would represent an approximately 57-percent reduction in gross leasable square footage. Further, building heights under this alternative would likely be reduced to a maximum of six levels, as buildings containing residential and hotel uses would be replaced with office and other commercial uses. This alternative would still exceed existing development regulations (specifically the 0.5 FAR) and would, like the proposed project, require a Rezone and amendments to the General Plan, Community Plan, and Precise Plan. This alternative would exceed the currently permitted FAR to a lesser degree than the proposed project, and would be similar in overall development intensity to existing development in the immediate vicinity of the project site. Because this alternative would not provide underground parking, it would require more parking structures to minimize surface parking and allow reductions in the height of the commercial structures. These

would not contribute building area to the FAR calculation for this alternative, but would nonetheless substantially reduce the amount of open space in comparison to the proposed project, contributing to an overall feeling of a greater development intensity than its reduced FAR (relative to the proposed project) would suggest. Nonetheless, the proposed development intensity under this alternative would remain generally consistent with existing adjacent development.

The maximum height of structures proposed under this alternative would be more consistent with the four-story office buildings adjacent to the project site on the south and west, though still substantially taller than the one- to -two story commercial and multi-family residential buildings to the east and north. As with the proposed project, the topography of the site and surrounding area, as well as setbacks and the existing rights-of-way, would reduce the apparent height of these structures relative to surrounding development and in comparison to the proposed project. Nevertheless, the structures under this alternative would, like the proposed project, represent enough of a height differential to create a potential inconsistency with lower-scale commercial and residential development proximate to the project site. As described in Section 5.3, *Visual Effects and Neighborhood Character*, the General Plan EIR recognizes that intensification associated with development of Community Villages that implement the City of Villages strategy has the potential to cause adverse impacts to the existing character of a neighborhood in which a Community Village site is located. As with the proposed project, this alternative would implement policies enunciated in the General Plan to reduce the potential for that impact. These include use of topography to reduce apparent height and massing; sensitivity to the scale, form and proportions of surrounding development; and provision of a specific function (commercial center) for the development. However, despite implementation of these policies, the bulk and scale associated with development under this alternative would still conflict with neighboring low-scale, low-intensity commercial and residential development, though to a lesser degree than the proposed project.

Noise

Office uses would be compatible with exterior noise levels up to 75 CNEL and interior noise levels up to 50 CNEL. As with the project, exterior usable space associated with the office uses would not be exposed to noise levels greater than 75 dBA because the project site would not be exposed to traffic noise levels above 70 CNEL (refer to Figures 5.4-1 through 5.4-5).

Considering standard construction materials provide a 15-dBA reduction and the calculated noise contours (refer to Figures 5.4-1 through 5.4-5), offices proposed along the perimeter of the project site, and within approximately 100 feet from Del Mar Heights Road and El Camino Real, may experience interior noise levels in excess of the above-stated thresholds. As with the proposed project, the Commercial Only Alternative would result in potentially significant land use-noise compatibility impacts.

Because the Commercial Only Alternative would not include residential uses, there would be no noise compatibility impacts between proposed on-site uses. While the proposed project would include commercial and residential uses, this alternative would only include commercial uses and therefore, there would be no land use – noise compatibility issues within the project site

between uses. Noise generated from stationary sources associated with commercial uses (i.e., truck deliveries and HVAC equipment) would not expose noise-sensitive receptors to levels in excess of the General Plan Noise Element guidelines. The Commercial Only Alternative therefore would avoid potentially significant land use – noise compatibility impacts associated with stationary noise sources from commercial uses.

In addition, the Commercial Only Alternative would avoid potentially significant construction noise impacts resulting from the proposed project. Since no residential uses are proposed under this alternative, phased construction would not expose sensitive receptors to construction noise levels in excess of allowable levels set forth in the Municipal Code (Section 59.5.0404).

Paleontological Resources

As indicated in Section 5.8, *Paleontological Resources*, the project site is underlain by fill and Torrey Sandstone (between 12 and 27 feet below surface). Torrey Sandstone exhibits a high paleontological sensitivity rating in the Carmel Valley region. Grading required for the Commercial Only Alternative would be less compared to the proposed project and mainly limited to the area already disturbed by past grading. Excavation for utilities may occur in some areas containing Torrey Sandstone, but this alternative is assumed to require excavation of less than 1,000 cubic yards of Torrey Sandstone given the depth of existing fill material and graded nature of the project site. Therefore, the Commercial Only Alternative would result in less than significant paleontological resource impacts, and would avoid potentially significant impacts to paleontological resources resulting from the proposed project.

Biological Resources

As indicated in Section 5.9, *Biological Resources*, the project site is not located within or adjacent to the MHPA and does not contain sensitive habitat. As with the project, the Commercial Only Alternative would remove mature trees along Del Mar Heights Road, which could provide suitable nesting habitat for raptors resulting in potentially significant impacts. Thus, the Commercial Only Alternative would result in the same impacts to biological resources as the proposed project.

Health and Safety

Similar to the proposed project, construction of the Commercial Only Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could pose a risk to off-site receptors in the event of an accidental spill.

Long-term operations associated with uses under this alternative would not typically involve large amounts or types of hazardous materials. Limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, chlorine, and pesticides for landscape maintenance) may be stored on site. The routine handling and transport of these and other materials may represent a safety hazard for people working in the project area. However, the routine use and handling of hazardous materials would be regulated by local, state, and federal standards. Associated impacts would be the same as the proposed project (less than significant).

Historical Resources

As indicated in Section 5.14, *Historical Resources*, there is potential for unknown subsurface historical resources to be present on the project site within areas not disturbed by past grading. Because parking would be provided on surface lots and/or above-ground structures under this alternative, grading activities would likely be limited to the areas already disturbed by past grading. Excavation for utilities may occur in some areas undisturbed by past grading, but the overall potential to encounter unknown subsurface historical resources is considered low. Therefore, the Commercial Only Alternative would result in less than significant impacts related to historical resources and would avoid potentially significant impacts identified for the proposed project.

12.6.3 Conclusion

Implementation of the Commercial Only Alternative would reduce project-generated traffic by removing hotel and residential uses of the proposed project. It would avoid or reduce identified significant project-related on-site land use – noise compatibility and construction noise impacts, and paleontological and historical resource impacts below a level of significance. Identified significant impacts to transportation/circulation/parking, neighborhood character, off-site land use – noise compatibility, biological resources, and health and safety from the proposed project would remain under this alternative. ~~This alternative would fail to provide additional housing types in Carmel Valley, or promote sustainable development principles and smart growth to the same degree as the proposed project, and would not meet these identified project objectives.~~

This alternative would not meet the basic objectives of the project. It would fail to develop a mixed-use project to serve the community, provide additional housing types in Carmel Valley, provide a place for public gathering and social interaction, or promote sustainable development principles and smart growth.

12.7 MEDICAL OFFICE/SENIOR HOUSING ALTERNATIVE

12.7.1 Description

The Medical Office/Senior Housing Alternative would be mixed-use development ~~consisting but~~ would be limited to medical and senior housing components. It would consist of approximately 425,000 sf of medical office and 600 senior housing units. Similar to the proposed project, General Plan, Community Plan, and Precise Plan amendments would be required, as well as a Rezone. Parking for the proposed uses would be provided through surface parking lots and/or above-grade parking structures, but no subsurface parking garages would be constructed because it is assumed that all required on-site parking would be accommodated in surface lots and/or above-grade parking structures. As a result, the amount of earthwork would be greatly reduced from the proposed project.

The Medical Office/Senior Housing Alternative was developed to reduce the bulk and scale of development relative to the proposed project, as well as to reduce project-generated traffic and to respond to the growing need for senior housing and medical facilities in the region. According

to Census Bureau statistics, the number of Americans over the age of 85 is expected to reach 15 million by the year 2050. Developers have been trying to meet this demand by focusing development and rehabilitation efforts on three primary senior housing options: congregate living facilities, assisted living facilities, and continuing care retirement communities. Senior housing facilities are ideally located in or near village or town centers because they would provide seniors with easier access to essential services, such as a pharmacy, food market, shops, banks and general merchandise within a close distance to their home. The market demand for such facilities is justified given the trend of an aging population, barriers to enter new geographic markets and slow delivery of senior housing and medical facilities to match increasing demand.

12.7.2 Environmental Analysis

Transportation/Circulation/Parking

The Medical Office/Senior Housing Alternative would generate 23,650 ADT with 1,467 AM peak hour trips and 2,365 PM peak hour trips (USAI 2012), which represents approximately 88 percent of net new trips generated by the proposed project, or an ADT reduction of approximately 12 percent with a 5-percent reduction in AM peak trips and a 19-percent reduction in PM peak trips compared to the proposed project. Existing Plus Project, Near-term With Project, and Long-term Cumulative (Year 2030) With Project conditions are discussed below.

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along three roadway segments and one intersection under the Medical Office/Senior Housing Alternative (as shown in Attachments 20, 21, 22, and 23 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E for Phases 1 and 2 and LOS F for Project Buildout);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same three roadway segments and intersection listed above. The V/C ratio would slightly decrease along the roadway segments and the delay at the Carmel Creek/Del Mar Trail intersection would decrease under this alternative, but the impacts would remain significant. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the Medical Office/Senior Housing Alternative.

Near-term With Project

In the Near-term With Project condition, potentially significant direct impacts would occur along three roadway segments and three intersections under the Medical Office/Senior Housing Alternative (as shown in Attachments 24 and 26 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/High Bluff Drive (LOS E in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS E in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS F in the AM peak hour).

In comparison to the proposed project, this alternative would result in the same potentially significant traffic impacts to roadway segments and intersections under Near-term With Project conditions. The V/C ratio along the roadway segments and the delays at the intersections would slightly decrease under this alternative, but the impacts would remain significant. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the Medical Office/Senior Housing Alternative.

Long-term Cumulative (Year 2030) With Project

In the Long-term Cumulative (Year 2030) With Project condition, potentially significant direct impacts would occur along three roadway segments, five intersections, and two freeway ramp meters under the Medical Office/Senior Housing Alternative (as shown in Attachments 25, 27, and 28 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB Ramps (LOS F in the AM and PM peak hours);
- Del Mar Heights Road/High Bluff Drive (LOS E in the AM peak hour and LOS F in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS F in the PM peak hour);
- El Camino Real/SR 56 EB on-ramp (LOS F in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

Freeway Ramps

- Del Mar Heights Road/I-5 SB on-ramp (WB); and
- Del Mar Heights Road/I-5 NB on-ramp.

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same three roadway segments, five intersections, and two freeway ramp meters listed above. The V/C ratio along roadway segments and delays at the intersections and freeway ramp meters would be reduced, but not to below a level of significance. As with the project, impacts to freeway segments would be less than significant under the Medical Office/Senior Housing Alternative.

Visual Effects and Neighborhood Character

Development under the Medical Office/Senior Housing Alternative would represent an approximately 27-percent (502,080 sf) reduction in gross square footage. Building heights under this alternative would likely be reduced to a maximum of seven to eight levels, as buildings containing various retail, cinema, and hotel uses would be replaced with a smaller amount of professional office uses. This alternative would still exceed existing development regulations (specifically the 0.5 FAR limitation) and would, like the proposed project, require a Rezone and amendments to the General Plan, Community Plan, and Precise Plan. This alternative would exceed the currently permitted FAR to a lesser degree than the proposed project, and generally would be more similar in overall development intensity to existing development in the immediate vicinity of the project site. However, because this alternative would not provide underground parking, it would require more parking structures to minimize surface parking and allow reductions in the height of the commercial structures. These would not contribute building area to the FAR calculation for this alternative, but would nonetheless substantially reduce the amount of open space in comparison to the proposed project, contributing to an overall feeling of a greater development intensity than its reduced FAR (relative to the proposed project) would suggest.

The maximum height of structures proposed under this alternative would be generally consistent with the up to four-story office buildings adjacent to the project site on the south and west, though still substantially taller than the one- to -two story commercial and multi-family residential buildings to the east and north, as well as four-story office uses to the south. As with the proposed project, the topography of the site and surrounding area, as well as setbacks and the existing rights-of-way, would reduce the apparent height of these structures relative to surrounding development and in comparison to the proposed project. Nevertheless, the bulk and scale of the structures under this alternative would, like the proposed project, represent enough of a differential to create a potential inconsistency with lower-scale commercial and residential development proximate to the project site.

As described in Section 5.3, *Visual Effects and Neighborhood Character*, the General Plan EIR recognizes that intensification associated with development of Community Villages that implement the City of Villages strategy has the potential to cause adverse impacts to the existing character of a neighborhood in which a Community Village site is located. As with the proposed

project, this alternative implements policies contained in the General Plan to reduce the potential for that impact. These include use of topography to reduce apparent height and massing; sensitivity to the scale, form and proportions of surrounding development; and provision of a specific function (senior residential and medical care center) for the development. However, despite implementation of these policies, development under this alternative would still conflict with neighboring low-scale, low-intensity commercial and residential development, though to a lesser degree than the proposed project. Thus, neighborhood character impacts would be less under the Medical Office/Senior Housing Alternative compared to the proposed project, but would remain significant.

Noise

Medical office uses would be compatible with exterior noise levels up to 75 CNEL and interior noise levels up to 50 CNEL. Senior housing would be compatible with exterior noise levels up to 65 CNEL and interior noise levels up to 45 CNEL. As with the project, exterior usable space associated with the office uses would not be exposed to noise levels greater than 75 dBA because the project site would not be exposed to noise levels above 70 CNEL (refer to Figures 5.4-1 through 5.4-5). Noise levels at exterior usable space associated with the senior housing also are not expected to exceed applicable thresholds. The calculated 65 CNEL noise contour (refer to Figures 5.4-1 through 5.4-5) generally occurs within 100 feet of the northern and eastern site boundary (except for a couple of locations along the eastern site boundary). Similar to the residential uses of the proposed project, the senior housing outdoor areas would be located within the interior of the site outside of the 65 CNEL noise contour. Additionally, these areas could be shielded by proposed buildings, which would further attenuate noise.

Considering standard construction materials provide a 15-dBA reduction and the calculated noise contours (refer to Figures 5.4-1 through 5.4-5), offices and senior housing proposed along the perimeter of the project site, and within approximately 100 feet from Del Mar Heights Road and El Camino Real, may experience interior noise levels in exceedance of the above-stated thresholds. As with the proposed project, the Medical Office/Senior Housing Alternative would result in potentially significant land use-noise compatibility impacts.

The Medical Office/Senior Housing Alternative would not include stationary noise sources associated with the proposed project from restaurants, larger retail uses, and a public plaza (such as restaurant kitchen fans, amplified music systems, or refrigeration condensers), but would include residential uses. Because of the mix of uses (i.e., residential with office), it is possible that delivery trucks and HVAC associated with the office uses could expose on-site residents to noise levels in excess of City noise criteria (pursuant to the Section 59.5.0401 of the City of San Diego Noise Ordinance). Thus, although this alternative would result in potentially significant on-site land use – noise compatibility impacts, the potential for such impacts would be less than that of the proposed project given the reduced density of commercial office uses and elimination of retail uses.

In addition, the Medical Office/Senior Housing Alternative could potentially result in on-site construction noise impacts if this alternative were to be constructed in phases. If construction activities would occur after the proposed senior housing is occupied, then construction noise

impacts to on-site residents would be potentially significant. Construction noise impacts under the Medical Office/Senior Housing Alternative would be similar to the proposed project.

Paleontological Resources

The project site is underlain by fill and Torrey Sandstone (between 12 and 27 feet below surface) and Torrey Sandstone exhibits a high paleontological sensitivity rating in the Carmel Valley region. Grading required for the Medical Office/Senior Housing Alternative would be minimized and mainly limited to the area already disturbed by past grading. Excavation for utilities may occur in some areas containing Torrey Sandstone, but this alternative is assumed to require excavation of less than 1,000 cubic yards of Torrey Sandstone given the depth of existing fill material and graded nature of the project site. Thus, the Medical Office/Senior Housing Alternative would result in less than significant paleontological resource impacts and would avoid potentially significant impacts to paleontological resources resulting from the proposed project.

Biological Resources

The project site is not located within or adjacent to the MHPA and does not contain sensitive habitat. As with the project, the Medical Office/Senior Housing Alternative would remove mature trees along Del Mar Heights Road, which could provide suitable nesting habitat for raptors resulting in potentially significant impacts. Thus, impacts to biological resources resulting from the Medical Office/Senior Housing Alternative would be the same as the proposed project.

Health and Safety

Similar to the proposed project, construction of the Medical Office/Senior Housing Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could pose a risk to off-site receptors in the event of an accidental spill.

Long-term operations associated with uses under this alternative would involve medical-related waste and limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, chlorine, and pesticides for landscape maintenance) may be stored on site. The routine handling, transport, and disposal of these and other waste/materials may represent a safety hazard for people residing or working in the project area. However, the routine use, handling, and disposal of hazardous waste/materials would be regulated by local, state, and federal standards. Associated impacts would be the same as the proposed project (less than significant).

Historical Resources

As indicated in Section 5.14, *Historical Resources*, there is potential for unknown subsurface historical resources to be present on the project site within areas not disturbed by past grading. Because parking would be provided on surface lots under this alternative, grading activities to construct the Medical Office/Senior Housing Alternative would likely be limited to the areas already disturbed by past grading. Excavation for utilities may occur in some areas undisturbed

by past grading, but the overall potential to encounter unknown subsurface historical resources is considered low. Thus, the Medical Office/Senior Housing Alternative would result in less than significant impacts related to historical resources and would avoid potentially significant impacts identified for the proposed project.

12.7.3 Conclusion

Implementation of the Medical Office/Senior Housing Alternative would avoid or reduce identified significant project-related on paleontological and historical resource impacts below a level of significance. Identified significant impacts to transportation/circulation/parking, neighborhood character, noise, biological resources, and health and safety from the proposed project would remain under this alternative. This alternative would reduce peak hour traffic trips and would slightly reduce the scale and bulk of development when compared to the proposed project.

While this alternative would provide a medical office and senior housing uses within close proximity to major roads, freeways, and existing community amenities, the alternative would not meet identified project objectives because it would fail to ~~develop a mixed-use project that would adequately serve the community (which would include retail/commercial uses)~~ or provide a place for public gathering and social interaction. This alternative also would not promote sustainable development principles and smart growth to the same degree as the project, as it would not combine residential uses integrated with retail/commercial uses.

12.8 NO RETAIL ALTERNATIVE

12.8.1 Description

The No Retail Alternative would include all of the basic elements of the proposed project with the exception of the retail uses. This alternative would consist of 510,000 sf of office, a 150-room hotel, and 608 multi-family residences. The Main Street component and ground floor retail uses in the office buildings would not be constructed. As a result, the office buildings would be reduced by one level compared to the proposed project. Parking would be provided in subsurface garages and an above-ground structure.

This alternative was developed to reduce project-generated traffic by removing the commercial retail uses of the proposed project. Retail uses have a higher average daily traffic trip generation rate than commercial or residential uses, and therefore, an alternative that does not include the proposed retail uses is considered. This alternative would also provide a slight reduction in development intensity relative to the proposed project.

12.8.2 Environmental Analysis

Transportation/Circulation/Parking

The No Retail Alternative would generate 10,480 ADT with 1,142 AM peak hour trips and 1,270 PM peak hour trips (USAI 2012). Compared to the proposed project, this represents an

approximately 61-percent reduction in daily traffic trips with a 26-percent reduction in AM peak hour trips and a 57-percent reduction in PM peak hour trips. Traffic impacts resulting from this alternative under Existing Plus Project, Near-term With Project, and Long-term Cumulative (Year 2030) With Project conditions are discussed below.

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along three roadway segments and one intersection under the No Retail Alternative (as shown in Attachments 30, 31, 32, and 33 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E for Phases 1 and 2 and LOS F for Project Buildout);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same three roadway segments and intersection listed above. The V/C ratio would slightly decrease along the roadway segments and the delay at the Carmel Creek/Del Mar Trail intersection would decrease under this alternative, but the impacts would remain significant. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the No Retail Alternative.

Near-term With Project

In Near-term With Project condition, potentially significant direct impacts would occur along three roadway segments and three intersections under the No Retail Alternative (as shown in Attachments 34 and 36 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/High Bluff Drive (LOS E in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS E in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS F in the AM peak hour).

Compared to the proposed project, this alternative would result in the same potentially significant traffic impacts to roadway segments and intersections under Near-term With Project conditions. The V/C ratio along the roadway segments and the delays at the intersections would slightly decrease under this alternative, but the impacts would remain significant. As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the No Retail Alternative.

Long-term Cumulative (Year 2030) With Project

In the Long-term Cumulative (Year 2030) With Project condition, potentially significant direct impacts would occur along three roadway segments, five intersections, and two freeway ramp meters under the No Retail Alternative (as shown in Attachments 35, 37, and 38 in Appendix Q of the TIA included in Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB Ramps (LOS F in the AM and PM peak hours);
- Del Mar Heights Road/High Bluff Drive (LOS E in the AM peak hour and LOS F in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS F in the PM peak hour);
- El Camino Real/SR 56 EB on-ramp (LOS F in the PM peak hour); and
- Carmel Creek Drive/Del Mar Trail (LOS E in the AM peak hour).

Freeway Ramps

- Del Mar Heights Road/I-5 SB on-ramp (WB); and
- Del Mar Heights Road/I-5 NB on-ramp.

In comparison to the proposed project, this alternative would result in potentially significant traffic impacts to the same three roadway segments, five intersections, and two freeway ramp meters listed above. The V/C ratio along roadway segments and delays at the intersections and freeway ramp meters would be reduced, but not to below a level of significance. As with the project, impacts to freeway segments would be less than significant under the No Retail Alternative.

Visual Effects and Neighborhood Character

Development under the No Retail Alternative would represent an approximately 12-percent (220,000 sf) reduction in gross leasable square footage. Building heights under this alternative would likely be reduced to a maximum of eight stories, as the elimination of ground-level retail

uses would reduce the height of several project structures. This alternative would still exceed existing development regulations (specifically the 0.5 FAR limitation) and would, like the proposed project, require a Rezone and amendments to the General Plan, Community Plan, and Precise Plan. This alternative would exceed the currently permitted FAR to a slightly lower degree than the proposed project, but this reduction would provide only marginal relief from the building intensities proposed under the project. Thus, development intensity, in terms of FAR, would exceed the low development intensity that characterizes existing development in the immediate vicinity of the project site, creating a potential inconsistency with surrounding development.

The maximum height of structures proposed under this alternative would, as with the proposed project, be generally consistent with development in the Community Plan area, but would represent an increase in size in comparison to the four-story office buildings adjacent to the project site on the south and west, as well as the one- to -two story commercial and multi-family residential buildings to the east and north, and the four-story office uses to the south. As with the proposed project, the topography of the site and surrounding area, as well as setbacks and the existing rights-of-way, would reduce the apparent height of these structures relative to surrounding development and in comparison to the proposed project. Nevertheless, the structures under this alternative would, like the proposed project, represent enough of a scale and bulk differential to create a potential inconsistency with lower-scale commercial and residential development proximate to the project site.

As described in section 5.3, *Visual Effects and Neighborhood Character*, the City's 2008 General Plan EIR recognizes that intensification associated with development of Community Villages that implement the City of Villages strategy has the potential to cause adverse impacts to the existing character of a neighborhood in which a Community Village site is located. As with the proposed project, this alternative implements policies contained in the General Plan to reduce the potential for that impact. These include use of topography to reduce apparent height and massing; and sensitivity to the scale, form and proportions of surrounding development. However, despite implementation of these policies, development under this alternative would still conflict with neighboring low-scale, low-intensity commercial and residential development, though to a slightly lesser degree than the proposed project. Thus, neighborhood character impacts would be less under the No Retail Alternative compared to the proposed project, but would remain significant.

Noise

Office uses would be compatible with exterior noise levels up to 75 CNEL and interior noise levels up to 50 CNEL. Hotel and residential uses would be compatible with exterior noise levels up to 65 CNEL and interior noise levels up to 45 CNEL. As with the project, exterior usable space associated with the office uses would not be exposed to noise levels greater than 75 dBA because the project site would not be exposed to noise levels above 70 CNEL (refer to Figures 5.4-1 through 5.4-5). Noise levels at exterior usable space associated with the hotel and residential uses also are not expected to exceed applicable thresholds. The calculated 65 CNEL noise contour (refer to Figures 5.4-1 through 5.4-5) generally occurs within 100 feet of the northern and eastern site boundary (except for a couple of locations along the eastern site

boundary). Similar to the residential uses of the proposed project, the outdoor areas of the residences would be located within the interior of the site, beyond the 65 CNEL noise contour. Additionally, these areas could be shielded by proposed buildings, which would further attenuate noise.

Considering standard construction materials providing a 15-dBA reduction and the calculated noise contours (refer to Figures 5.4-1 through 5.4-5), the offices, hotel, and residences proposed along the perimeter of the project site, and within approximately 100 feet from Del Mar Heights Road and El Camino Real, may experience interior noise levels in exceedance of the above-stated thresholds. As with the proposed project, the No Retail Alternative would result in potentially significant land use-noise compatibility impacts.

The No Retail Alternative would not include stationary noise sources associated with the proposed project from restaurants, larger retail uses, and a public plaza (such as restaurant kitchen fans, amplified music systems, or refrigeration condensers), but would include residential uses. Because of the mix of uses, it is possible that delivery trucks and HVAC associated with the office and hotel uses could expose on-site residents to noise levels in excess of City noise criteria (pursuant to the Section 59.5.0401 of the City of San Diego Noise Ordinance). Thus, although this alternative would result in potentially significant on-site land use – noise compatibility impacts, the potential for such impacts would be less than that of the proposed project given the reduced density of commercial office uses and elimination of retail uses.

In addition, the No Retail Alternative could potentially result in on-site construction noise impacts if this alternative were to be constructed in phases. If construction activities would occur after the proposed residences are occupied, then construction noise impacts to on-site residents would be potentially significant. Construction noise impacts under the No Retail Alternative would be similar to the proposed project.

Paleontological Resources

The project site is underlain by fill and Torrey Sandstone (between 12 and 27 feet below surface) and Torrey Sandstone exhibits a high paleontological sensitivity rating in the Carmel Valley region (City 2011a). Grading required for the No Retail Alternative would be similar to the proposed project since subsurface parking would be constructed under this Alternative, but less on-site parking would be needed because there would be no retail component. Impacts to paleontological resources resulting from the No Retail Alternative would be the same as the proposed project.

Biological Resources

The project site is not located within or adjacent to the MHPA and does not contain sensitive habitat. As with the project, the No Retail Alternative would remove mature trees along Del Mar Heights Road, which could provide suitable nesting habitat for raptors resulting in potentially significant impacts. Thus, impacts to biological resources resulting from the No Retail Alternative would be the same as the proposed project.

Health and Safety

Similar to the proposed project, construction of the No Retail Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could pose a risk to off-site receptors in the event of an accidental spill.

Long-term operations associated with uses under this alternative do not typically involve large amounts or types of hazardous materials. Limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, chlorine, and pesticides for landscape maintenance) may be stored on site. The routine handling and transport of these and other materials may represent a safety hazard for people working in the project area. However, the routine use and handling of hazardous materials would be regulated by local, state, and federal standards. Associated impacts would be the same as the proposed project (less than significant).

Historical Resources

As indicated in Section 5.14, *Historical Resources*, there is potential for unknown subsurface historical resources to be present on the project site within areas not disturbed by past grading. Because subsurface parking would be provided under this alternative, grading activities could potentially encroach into previously undisturbed formations. Therefore, impacts to historical resources resulting from the No Retail Alternative would be the same as the proposed project.

12.8.3 Conclusion

Implementation of the No Retail Alternative would not avoid or reduce identified significant project-related impacts below a level of significance, although it would reduce overall impacts to V/C ratio along roadway segments and delay at intersections and freeway ramps, and would reduce the scale and bulk of development in comparison to the proposed project. Identified significant impacts to transportation/ circulation/parking, neighborhood character, noise, biological resources, paleontological resources, and health and safety from the proposed project would remain under this alternative.

While this alternative would provide offices, a hotel, and multi-family residences within close proximity to major roads, freeways, and existing community amenities, ~~the alternative it lacks the retail component needed to achieve the project's Main Street concept. Furthermore, without the retail, this alternative would fail to develop a project to serve the immediate needs of the community (which would include retail/commercial uses) or and would not provide a place for public gathering and social interaction.~~ Additionally, while this alternative would promote sustainable development principles and smart growth to a certain extent with proposed office, hotel, and residential uses, it would not provide shopping or dining opportunities within the development.

12.9 REDUCED MAIN STREET ALTERNATIVE

12.9.1 Description

Land Use

This alternative would include all of the land use components of the proposed project, as described in Section 3.0 of the DEIR, with the exception of the hotel. In addition, it would include a 1.1-acre passive recreation area at the corner of Del Mar Heights Road and High Bluff Drive. Figure 12.9-1 illustrates the major elements of this alternative. Table 12.9.1 illustrates the land uses and corresponding phasing associated with the Reduced Main Street Alternative. Table 12.9-1 identifies the square footage in terms of gross leasable area (GLA). In general, GLA is equivalent to gross floor area (GFA), which is used by the City to determine the Floor Area Ratio (FAR). The City uses FAR to determine a development's consistency with the requirements of the zone, as defined in the Land Development Code (LDC). The square footages of the Reduced Main Street Alternative in terms of GFA are presented in Table 12.9-2.

The primary difference between GFA and GLA is how parking structures are counted. Parking structures are included in GFA but not GLA. As a result, the traffic analysis for the proposed project as well as this alternative is based on GLA for determining traffic generated by commercial office and retail space to provide the most accurate representation of the potential traffic impacts.

Table 12.9-1 Development Summary of the Reduced Main Street Alternative (Gross Leasable Area)						
Phase/Block	Commercial Retail (Square Feet)		Commercial Office (Square Feet)		Multi-family Residential (Dwelling Units)	Total
	Retail	Cinema ¹	Corporate ²	Professional ³		
Phase 1						
Block D	70,100	48,000	221,000	21,000	---	360,100
Block E	30,254	---	242,000	---	---	272,254
Subtotal	100,354	48,000	463,000	21,000	---	632,354
Phase 2						
Block A	47,535	---	---	---	165	47,535 + 165 MF units
Subtotal	47,535	---	---	---	165	47,535 + 165 MF units
Phase 3						
Block B	38,000	---	---	---	337	38,000 + 337 MF units
Block C	12,611	---	---	---	106	12,611 + 106 MF units
Subtotal	50,611	---	---	---	443	50,611 + 443 MF units
Total	198,500	48,000	463,000 ⁴	21,000 ⁵	608	730,500 + 608 MF units

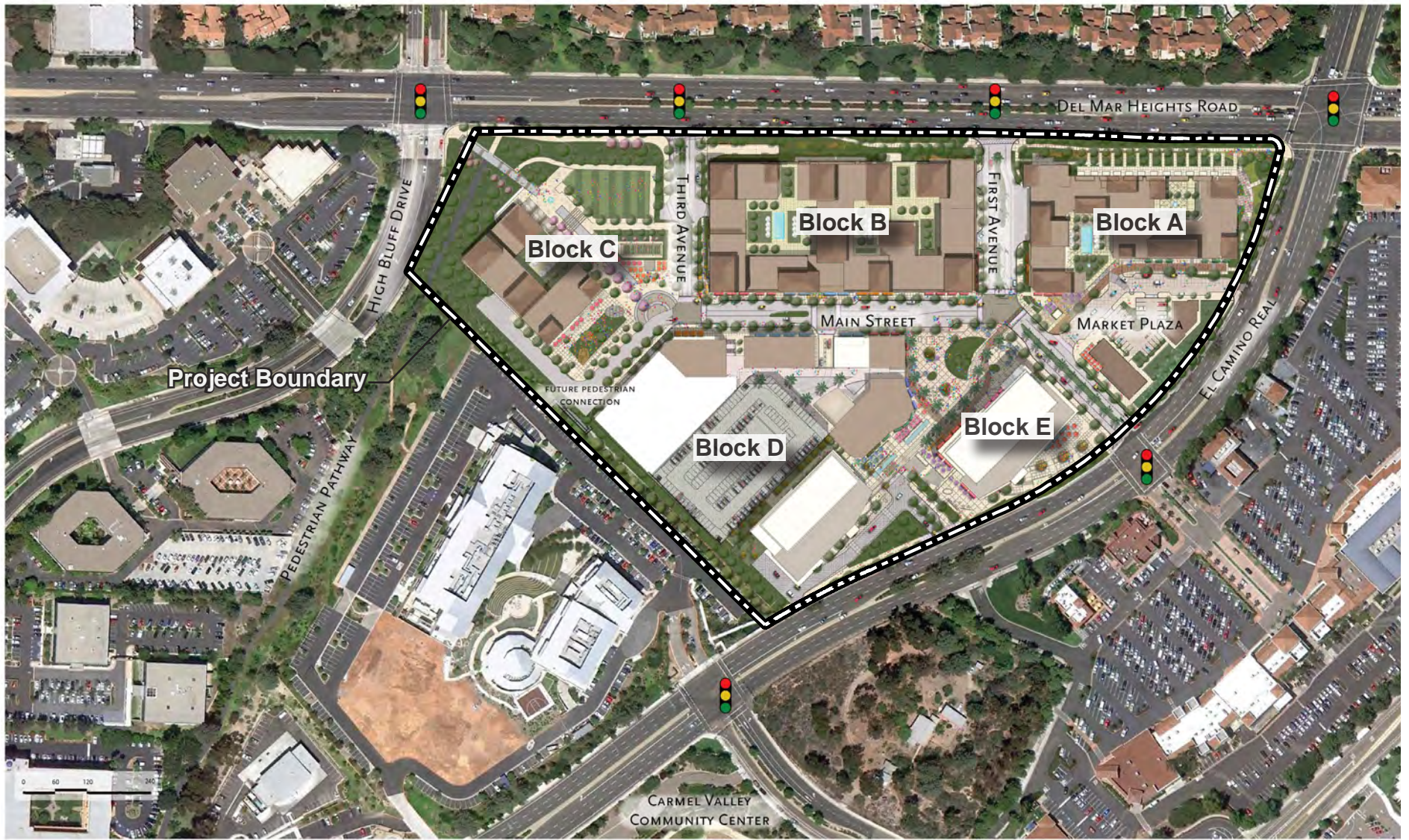
¹ Cinema consists of up to 1,200 seats with 400 seats in Phase 1 & 2 and 800 seats in Phase 3.

² Includes multi-tenant and corporate office uses.

³ Indicates multi-tenant office uses located on Main Street.

⁴ GFA = 471,000 square feet.

⁵ GFA = 21,480 square feet.



Illustrative Plan - Reduced Main Street Alternative

ONE PASEO

Figure 12.9-1

Table 12.9-2 Development Summary of the Reduced Main Street Alternative (Gross Floor Area)								
Commercial Retail (Square Feet)		Commercial Office (Square Feet)		150-room Hotel (sf)	Multi-Family Residential (Dwelling Units)		Total	
Retail	Cinema	Corporate ¹	Professional ²		Units	sf		
198,500	48,000	471,000	21,840	0	608	714,729	1,454,069	1.4

¹ Includes multi-tenant and corporate office uses.

² Indicates multi-tenant office uses located on Main Street.

In comparison with the proposed project, the Reduced Main Street Alternative would reduce the overall GLA by approximately nine percent (75,500 sf) from 806,000 sf to 730,500 sf. As illustrated in Table 12.9-2, the overall GFA would be reduced by 403,371 (22 percent) from 1,857,440 sf to 1,454,069 sf. The reduction in GFA would reduce the 1.8 FAR associated with the proposed project to 1.4.

As shown in Table 12.9-3, the most substantial land use differences between the Reduced Main Street Alternative and the proposed project include elimination of the proposed 150-room, 100,000 square-foot hotel, and a nearly 22 percent reduction in the commercial GFA, including the hotel, from 930,000 GFA to 714,729 GFA. The reduction in the total commercial square footage would include a 14 percent reduction in the amount of office space and a 10 percent reduction in the amount of retail. Although the size of the cinema would decrease by 2,000 sf, it would still include 1,200 seats. Although the number of residential units would remain at 608 multi-family units, the overall square footage devoted to residential uses would be reduced by approximately 215,000 GFA.

Table 12.9-3 Comparison of Reduced Main Street Alternative with Proposed Project (Gross Floor Area)									
Scenario	Commercial Retail (Square Feet)		Commercial Office (Square Feet)		150- room Hotel	Multi-Family Residential (Dwelling Units)		Total	
	Retail	Cinema	Corporate ¹	Professional ²	(sf)	Units	sf		
Proposed Project	220,000	50,000	535,600	21,840	100,000	608	930,000	1,857,440	1.8
Reduced Main Street Alternative	198,500	48,000	471,000	21,840	0	608	714,729	1,454,069	1.4
Net Change	-21,500	-2,000	-64,600	0	-100,000	0	-215,271	-403,371	-0.4

¹ Includes multi-tenant and corporate office uses.

² Indicates multi-tenant office uses located on Main Street.

In addition to the reductions in the density and intensity, this alternative would reduce the number of stories associated with many of the buildings in comparison with the proposed project (see discussion of visual effects and neighborhood character in Section 12.9.2 for more information on building heights). Under this alternative, the buildings would range between one and nine stories: only two buildings would reach the nine-story maximum. Within Block A, the single residential building would range between three and four stories; the two retail buildings would consist of one story. Within Block B, the two residential buildings would be comprised of five stories. Within Block C, the single residential building would be comprised of six stories; the single retail building would consist of one story. The office building in Block D would include nine stories; the four, mixed-use buildings would range between two and four stories. The office building in Block E would consist of nine stories.

Parking

The Reduced Main Street Alternative would provide approximately 3,688 parking spaces throughout the site upon buildout of the project. Parking facilities would include underground garages beneath the site, a multi-level, above-ground parking structure, and some surface parking. As with the proposed project, shared parking opportunities would be provided among all the proposed on-site uses except residential. Residents of the project would have reserved parking spaces, but all other uses would share parking spaces. Table 12.9-4 summarizes proposed on-site parking per phase and block.

Table 12.9-4 Parking Summary	
Phase/Block	Number of Parking Spaces
Phase 1	
Block D	1,198
Block E	1,000
<i>Subtotal</i>	<i>2,198</i>
Phase 2	
Block A	481
<i>Subtotal</i>	<i>481</i>
Phase 3	
Block B	736
Block C	273
Block D	--
<i>Subtotal</i>	<i>1,009</i>
Total	3,688

Source: Walker Parking Study 2012

Circulation/Access

Vehicular Circulation

Access into the Reduced Main Street Alternative would occur at the same locations as with the proposed project. As with the proposed project, access to Del Mar Heights Road would be via proposed First and Third Avenues, while access from El Camino Real would be via proposed Market Street (originally called One Paseo) by adding a fourth leg to the signalized access into the Del Mar Highlands Town Center from El Camino Real. In addition to these primary access points, two driveways off El Camino Real would connect with on-site parking structures and dropoff/loading areas. Traffic signals would be installed at First Avenue and Third Avenue. The internal street system would also be essentially unchanged from the proposed project. As illustrated in Figure 12.9-1, the Reduced Main Street Alternative also proposes internal private drives, including First Avenue and Third Avenue that would extend from Del Mar Heights Road, and Market Street and Market Plaza that would extend from El Camino Real.

Pedestrian/Bicycle Circulation

As with the proposed project, the Reduced Main Street Alternative would provide for pedestrian and bicycle access. Pedestrian circulation would be encouraged throughout the site by a network of paseos, sidewalks, pathways, plazas, and public spaces. Class III bicycle routes would be provided along Third Avenue, Main Street, First Avenue, and Market Street. These bicycle routes would connect to existing Class II bicycle lanes along Del Mar Heights Road and El Camino Real. The Reduced Main Street Alternative also would include on-site bicycle racks.

Transportation Demand Management Plan

The Transportation Demand Management (TDM) Plan associated with the Originally Proposed Project was updated to respond to comments received during the public review period for the Draft EIR. An updated TDM Plan is included as Appendix Q.

Landscape and Open Space

The open space included with the Reduced Main Street Alternative would amount to 10.7 acres, of which 6.6 acres would be useable; the remaining 4.1 acres of open space would be comprised of ground-level open space that is not technically considered usable because traffic noise levels are anticipated to exceed 65 CNEL. Of the 6.6 acres of usable open space, 1.5 acres would be devoted to recreational use, including a 1.1-acre passive recreation area and a nearby 0.4-acre children's play area; both areas would be privately owned, but open and available for public use. These 1.5 acres of public recreation area would be a project feature, and would be provided above and beyond the project's satisfaction of the population-based park requirement. Additional open space available to the public would include greenbelts along Del Mar Heights Road and El Camino Real as well as plazas, paseos, gardens, and pocket parks.

The 1.1-acre passive recreation park would consist of an open turf area in the northwest corner of the proposed project which would connect with the greenbelt along Del Mar Heights Road. The

park is intended for passive forms of recreation including picnicking, sunbathing, and reading. It would also accommodate informal athletic activities such as playing catch and throwing frisbee.

Utilities

Utility services would be provided in the same manner as described for the proposed project.

Off-site Improvements

As with the proposed project, the Reduced Main Street Alternative would include the following off-site improvements:

- Regrading and landscaping of a parcel adjacent to the southeast corner of the High Bluff Drive/Del Mar Heights Road intersection;
- Construction of a ramp and stairway between the project site (Block C) and the adjacent commercial office development to the south;
- Possible temporary grading along the southern property line for the proposed parking garage in Block D;
- Utility realignments and extensions along the project frontage of the Del Mar Heights Road and El Camino Real rights-of-way;
- Installation of traffic signals at the intersections of Third Avenue and First Avenue with Del Mar Heights Road as well as the intersection of Carmel Creek Road and Del Mar Trail;
- Addition of a fourth leg at the existing intersection of El Camino Real and the Highlands Town Center driveway;
- Extension of the westbound right-turn lane from Del Mar Heights Road to the northbound on-ramp of I-5;
- Improvements to the intersection of Del Mar Heights Road and High Bluff Drive including roadway widening and restriping;
- Construction of an eastbound right-turn lane at the intersection of Del Mar Heights Road and El Camino Real; and
- Reconfiguration of the medians within the Del Mar Heights Road and El Camino Real rights-of-way along the project frontage.

Grading

The Reduced Main Street Alternative would require less grading than the proposed project. The total amount of cut would be reduced from 528,000 cubic yards (cy) to 481,500 cy while the amount of fill would be decreased from 30,400 cy to 28,900 cy. As a result of the reduced grading, the offsite export would be reduced from 498,400 cy to 452,600 cy.

Sustainable Design Features

The Reduced Main Street Alternative would include the same sustainable design features as the proposed project, as described on page 3-11 of the Draft EIR

Discretionary Actions

The same discretionary actions associated with the proposed project (as depicted in Table 3-5 of the Draft EIR) would be necessary to implement the Reduced Main Street Alternative.

12.9.2 Environmental Analysis

Transportation/Circulation/Parking

A traffic analysis was conducted to evaluate the traffic impacts of the Reduced Main Street Alternative (USAI 2013a). The analysis evaluated the reduced intensity and density using the same assumptions as the traffic study completed for the proposed project. This analysis is included in Appendix C.1 of the Draft EIR.

The analysis in Appendix C.1 determined that this alternative would generate 23,854 ADT at buildout, with 1,377 AM peak hour trips and 2,568 PM peak hour trips. Although the Phase 1, and the combination of Phases 1 and 2 of this alternative would generate more trips than the proposed project, at buildout, this alternative would represent a net ADT reduction of approximately 10.5 percent, with an 12.4-percent reduction in AM peak hour trips and a 12.5 percent reduction in PM peak hour trips. Table 12.9-5 compares the peak hour traffic conditions related to the Reduced Main Street Alternative with the proposed project.

Table 12.9-5 Traffic Generation Comparison of Reduced Main Street Alternative with Proposed Project			
Scenario	ADT		
	Total	AM Peak Hour (In/Out)	PM Peak Hour (In/Out)
Proposed Project	26,961	1,538 (1,057/481)	2,932 (1,231/1,701)
Reduced Main Street Alternative	23,854	1,377 (944/433)	2,568 1,111/1,457
Difference	-3,107	-161 (-113/-48)	-364 (-120/-245)

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along four roadway segments and one intersection under this alternative with implementation of Phases 1 - 3 (as shown in Attachments 32 and 34 in Appendix C.1):

Segments

- Del Mar Heights Road from the I-5 SB ramps to the I-5 NB ramps;
- Del Mar Heights Road from the I-5 NB ramps to High Bluff Drive;
- El Camino Real from Via de la Valle to San Dieguito Road; and
- Via de la Valle from San Andres Drive to El Camino Real.

Intersections

- Carmel Creek Road/Del Mar Trail in the AM peak hour.

Freeways

As with the proposed project, impacts to freeway segments and metered freeway ramps would be less than significant under this alternative in the existing plus project condition scenario.

Near-term With Project

As with the proposed project, in the Near-term With Project condition with all three development phases, potentially significant direct impacts would occur along four roadway segments and four intersections under the this alternative (as shown in Attachments 50 and 52 in Appendix C.1):

Segments

- Del Mar Heights Road from the I-5 SB ramps to the I-5 NB ramps;
- Del Mar Heights Road from the I-5 NB ramps to High Bluff Drive;
- El Camino Real from Via de la Valle to San Dieguito Road; and
- Via de la Valle from San Andres Drive to El Camino Real.

Intersections

- Del Mar Heights Road/I-5 NB ramps in the PM peak hour;
- Del Mar Heights Road/High Bluff Drive in the PM peak hour;
- Del Mar Heights Road/El Camino Real in the PM peak hour; and
- Carmel Creek Road/Del Mar Trail in the AM peak hour.

Freeways

As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under this alternative in the near-term condition scenario.

Long-term Cumulative (Year 2030) With Project

As with the proposed project, in the Long-term Cumulative (Year 2030) With Project condition, potentially significant cumulative impacts would occur along three roadway segments, five

intersections, and two freeway ramp meters under this alternative (as shown in Attachments 56, 58 and 59 in Appendix C.1):

Segments

- Del Mar Heights Road from the I-5 NB ramps to High Bluff Drive;
- El Camino Real from Via de la Valle to San Dieguito Road; and
- Via de la Valle from San Andres Drive to El Camino Real.

Intersections

- Del Mar Heights Road/I-5 NB ramps in the AM/PM peak hours;
- Del Mar Heights Road/High Bluff Drive in the AM/PM peak hours;
- Del Mar Heights Road/El Camino Real in the PM peak hour;
- El Camino Real/SR 56 EB on-ramp in the PM peak hour; and
- Carmel Creek Road/Del Mar Trail in the AM peak hour.

Freeways

As with the Proposed Project, the addition of traffic from the Reduced Main Street Alternative to traffic on I-5 and SR-56 would not result in significant freeway segment impacts.

As with the Proposed Project, the addition of traffic from the Reduced Main Street Alternative would have a significant impact to the following ramp meters.

- Del Mar Heights Road/I-5 SB on-ramp meter (WB) in the AM/PM peak hours; and
- Del Mar Heights Road/I-5 NB on-ramp meter in the PM peak hour.

In summary, the Reduced Main Street Alternative would impact the same transportation facilities as the proposed project. As with the proposed project, the mitigation measures identified in Table 5.2 12 of the Draft EIR would reduce traffic impacts, but not to less than significant.

Visual Effects and Neighborhood Character

This alternative would reduce the overall bulk and scale and building height in comparison with the proposed project. In addition to the overall 22 percent reduction in GFA, none of the proposed buildings would exceed a height of nine stories versus a maximum of eleven stories in the proposed project.

Overall, five of the buildings included in the proposed project would be reduced in height. Table 12.9-6 illustrates the change in height of these five buildings in terms of the number of stories as well as the overall building height. The height is measured from the lowest point of the building that would be visible above grade and includes roof-top equipment. The location of the buildings associated with the Reduced Main Street Alternative is depicted in Figure 12.9-2; the buildings which would be reduced in height are highlighted in orange.

As illustrated in Table 12.9-6, the building heights would be reduced by as much as 40 feet, in the case of Building 7. In addition to a height reduction, several building footprints would be reduced in area with the Reduced Main Street Alternative. The footprint of Building 6 would be substantially reduced to accommodate the proposed park, and Building 11 would be split into two separate buildings (11A and 11B).

Table 12.9-6 Building Height Changes with Reduced Main Street Alternative in Comparison with the Proposed Project						
Building No.	Total Stories			Total Height ^{1,2} (feet)		
	Proposed Project	Reduced Main Street	Net Change	Proposed Project	Reduced Main Street	Net Change
3	5	4 to 5	-1	77	67-35	-10 to -25
4	7	5	-2	100	90	-10
6	5	1	-4	72	30	-42
7	10	6	-4	125	85	-40
9	11	9	-2	199	170	-29

¹ Height is based on the lowest point of the building above grade and includes roof-top mechanical equipment.

² Heights for Buildings 3, 4, 6 and 7 are based on conceptual plans prepared for the purposes of environmental analysis. Final building heights may vary, but would not exceed the height limits imposed by the applicable zone.

As illustrated in Table 12.9-6, Building 7 on Block C would be reduced from ten to six stories. The other originally proposed five-story residential building (Building 6) would be replaced by a one-story retail building. The rest of Block C would be devoted to open space including a 1.1 acre passive recreational area.

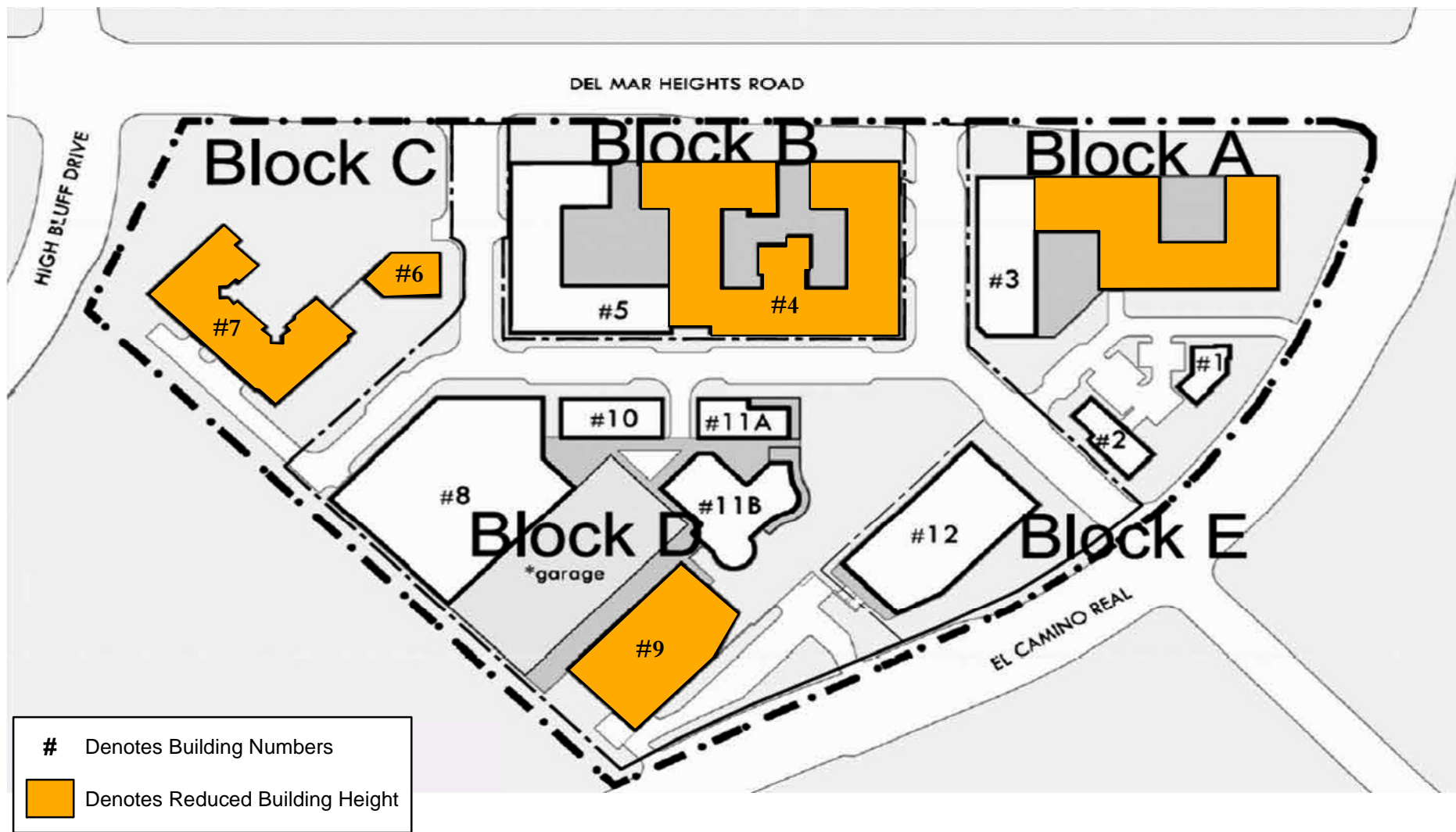
The hotel (Building 4) would be converted to residential in Block B. Buildings 3 and 4 would be reduced by one to two stories from the proposed project, and would not exceed five stories. Furthermore, due to topography considerations, the number of stories visible from Del Mar Heights Road in Blocks A, B and C would not exceed four.

One of the office buildings (Building 9) in Block D would be reduced from 11 to nine stories.

Overall, the Reduced Main Street Alternative would contain seven buildings which would range between 1 and 4 stories, three buildings which would range between 5 and 6 stories, and two buildings which would have 9 stories.

The greenbelt along Del Mar Heights Road would be increased on Block C (see Figure 12.9-1) with the proposed 1.1-acre recreation area, and generally enhanced between the street and the residential component of the proposed development. For example, the residential development in Block A, fronting Del Mar Heights Road, would include ground-floor entrances facing the street to create a more residential neighborhood appearance when viewed from Del Mar Heights Road (see Figure 12.9-1).

Despite the revisions to some of the buildings, the building heights and intensity of use associated with the Reduced Main Street Alternative, as a whole, would be out of character with



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Building Locations - Reduced Main Street Alternative

ONE PASEO

Figure 12.9-2

the bulk and scale of the surrounding neighborhood. Therefore, as with the proposed project, this alternative would have a significant impact on neighborhood character. As with the proposed project, feasible mitigation measures are not available to reduce this impact to below a level of significance.

As the 1.1-acre recreational area would be included in an area that would be adversely impacted by traffic noise, a sound wall would be required to assure that persons using the recreational areas would not be exposed to unacceptable noise levels. In order to attenuate traffic noise to acceptable levels, a sound barrier would be required. Based on preliminary acoustical analysis, a sound wall of up to six feet would be required to be constructed between the recreational area and Del Mar Heights Road. The location and illustrative representations of the sound wall are illustrated in Figures 12.9-3a through 3c. As illustrated in Figures 12.9-3b and 3c, the height of the sound wall would generally range between three and six feet. In addition, the upper portions of the sound wall would be constructed of transparent material to reduce the visual effect of the wall. In addition, landscaping would be included on both sides of the wall to further reduce its visual impact. With the transparent wall material and landscaping, it is determined that the sound wall required as part of the Reduced Main Street Alternative would not result in a significant visual impact.

Noise

On-site Noise Sources

As with the proposed project, on-site noise sources would be associated with the proposed retail activities and construction activities.

The retail uses associated with this alternative would include stationary noise sources related to restaurants (such as kitchen fans, amplified music systems, or refrigeration condensers), larger retail uses, and a public plaza. Consequently, this alternative would include the use of delivery trucks and HVAC equipment. Although the precise nature and placement of these uses, as with the proposed project, remain unknown and does not allow specific modeling with respect to onsite development, these uses could expose on-site residents to noise levels in excess of City noise criteria (pursuant to the Section 59.5.0401 of the City of San Diego Noise Ordinance). Application of Mitigation Measures 5.4-1 and 5.4-3, defined for the proposed project, would provide adequate mitigation for the potential impacts from onsite retail activities under this alternative.

In addition, this alternative could potentially result in on-site construction noise impacts, if constructed in phases. If construction activities would occur after the proposed residences are occupied, then construction noise impacts to on-site residents would be potentially significant. Thus, construction noise impacts under this alternative would be similar to the proposed project. Application of Mitigation Measure 5.4-4, defined for the proposed project, would provide adequate mitigation for the potential impacts from onsite construction activities under this alternative.

Off-site Noise Sources

As with the proposed project, this alternative would include land uses that would be sensitive to noise associated with construction and operation of the proposed development as well as traffic noise. Noise-sensitive receptors would include habitable rooms within residential units, usable public and private outdoor recreation areas, and office buildings. Greenbelt areas and residential front porches are not considered noise sensitive because they are not occupied for prolonged periods of time.

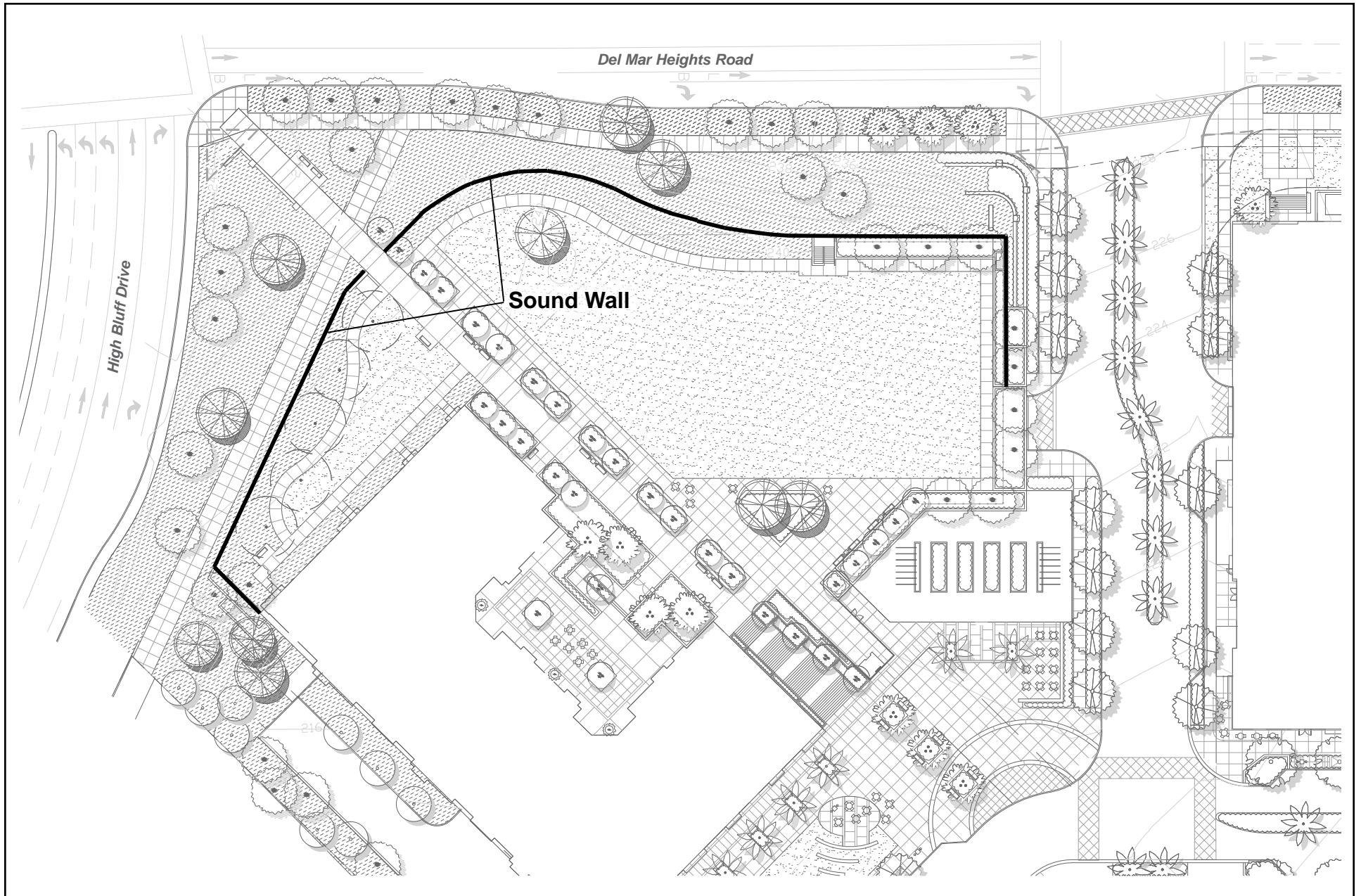
As with the proposed project, traffic noise along Del Mar Heights Road and El Camino Real would exceed 65 CNEL. As a result, proposed residences and office uses along these roadways would be adversely impacted by traffic noise. Unlike the proposed project, this alternative would include public and private usable outdoor areas that would be exposed to unacceptable traffic noise. Usable public areas would include the recreation area in the northwest corner of Block C. Private usable areas would include a pool area between Buildings 4 and 5 in Block B and a second-floor gathering area in Building 3 of Block A.

While Mitigation Measures 5.4-2, associated with the proposed project, would assure that traffic noise would not significantly impact habitable residential and office areas associated with this alternative, it would not assure acceptable noise levels in the public and private usable open space. The following noise mitigation measure would be required to assure that the public and private recreation uses along Del Mar Heights Road associated with the Reduced Main Street Alternative would not be exposed to unacceptable noise levels.

Mitigation Measure 12.9-1: Prior to issuance of building permits, a noise analysis shall be completed to determine the location and construction materials for noise attenuation features shown on the development plans needed to protect usable recreation areas from noise levels in excess of 65 CNEL. Barriers shall consist of a single, solid sound wall with a height based on the finished grade of the noise source. The sound attenuation barrier shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it may be tongue and groove and must be at least one-inch thick or have a surface density of at least 3.5 pounds per square foot. Glass or clear plastic may be used on the upper portion. Sheet metal of 18-gauge (minimum) may be used, if it meets the other criteria, and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Any doors or gates shall be designed with overlapping closures on the bottom and sides and meet the minimum specifications of the wall materials described above.

Paleontological Resources

As with the proposed project, grading required for the Reduced Main Street Alternative could encroach into geologic formations containing significant paleontological resources. Therefore, this alternative could also result significant paleontological resource impacts. As with the proposed project, application of Mitigation Measure 5.8-1 would avoid in potentially significant impacts to paleontological resources.



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Sound Wall Location

ONE PASEO

Figure 12.9-3a



SOUND ATTENUATION WALL NOTES

1. SHALL BE DESIGNED TO MITIGATE SOUND BELOW 65 CNEL.
2. MITIGATION FOR SOUND SHALL BE ACHIEVED WITH A COMBINATION OF EARTHEN TOPOGRAPHY (BERMS) AND PHYSICAL SOUND WALLS.
3. WALL HEIGHT VARIES WITH THE SLOPING TOPOGRAPHY.
4. EXPOSED PORTION OF THE SOUND WALL SHALL BE 6' IN HEIGHT OR LESS.
5. WALL MATERIALS WILL BE CONSISTENT WITH THE MATERIALS USED ON PROJECT MONUMENT WALLS.
6. WALL MATERIALS SUCH AS PLASTER, STONE VENEER, BRICK AND TEMPERED SAFETY GLASS MAY BE USED AND MAY ALSO INCLUDE DECORATIVE METAL FINISHES SUCH AS WROUGHT IRON OR STAINLESS STEEL.
7. THE SURFACE SQUARE FOOTAGE OF SOUND WALLS TALLER THAN 3' IN HEIGHT (AS SEEN FROM THE STREET) WILL ACHIEVE A 50% OPENNESS WITH TEMPERED SAFETY GLASS.
8. WALL DESIGNS TO MEET SAN DIEGO MUNICIPAL CODE FENCE REGULATIONS.

EARTHEN BERM

GARAGE BELOW



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Sound Wall at Entry Paseo

ONE PASEO

Figure 12.9-3c

Biological Resources

As with the proposed project, the Reduced Main Street Alternative would remove mature trees along Del Mar Heights Road, which could provide suitable nesting habitat for raptors resulting in potentially significant impacts. Thus, this alternative would result in the same impacts to biological resources as the proposed project. As with the proposed project, application of Mitigation Measure 5.9-1 would avoid potentially significant impacts to biological resources.

Health and Safety

Similar to the proposed project, construction of the Reduced Main Street Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could result in a significant health and safety risk to off-site receptors in the event of an accidental spill. However, implementation of Mitigation Measures 5.13-1 and 5.13-2, associated with the proposed project, would reduce potentially significant health and safety impacts from this alternative a level less than significant.

Long-term operations associated with uses under this alternative would not be expected to involve large amounts or types of hazardous materials. Limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, chlorine, and pesticides for landscape maintenance) may be stored on site. The routine handling and transport of these and other materials may represent a safety hazard for people working in the project area. However, the routine use and handling of hazardous materials would be regulated by local, state, and federal standards. Thus, as with the proposed project, health and safety impacts would not be significant.

Historical Resources

Although containing a lower density, the Reduced Main Street Alternative is expected to involve grading which could encroach into buried historical resources which may exist on the site. Thus, as with the proposed project, this alternative could result in a significant impact on buried historical resources. As with the proposed project, application of Mitigation Measure 5.14-1 would avoid potentially significant impacts to historical resources.

12.9.3 Conclusion

Implementation of the Reduced Main Street Alternative would reduce, but not altogether eliminate, significant impacts associated with the proposed project. The most notable changes would be related to traffic and neighborhood character.

While the reduction in development intensity would be accompanied by a reduction in building heights and mass, the reduced scale of the Reduced Main Street Alternative would still result in significant neighborhood character impacts.

Similarly, while the number of trips would be reduced with this alternative, it would result in the same significant impacts to the roadways and intersections as the proposed project.

Significant impacts related to noise, biological resources, paleontological resources, and health and safety would remain under this alternative. However, as with the proposed project, implementation of identified mitigation measures would reduce these impacts to less than significant.

The Reduced Main Street Alternative would meet the basic objectives of the proposed project including the advancement of sustainable development principals, and is considered a feasible alternative.

12.10 REDUCED MIXED-USE ALTERNATIVE

12.10.1 Description

The Reduced Mixed-use Alternative would retain all of the land use components of the proposed project, with the exception of the hotel. However, this alternative would further reduce the amount of commercial development. Unlike the Reduced Main Street Alternative, this alternative would reduce the number of residential units. As illustrated in Table 12.10.1, this alternative would consist of 140,000 sf (GFA) of retail, 267,800 sf (GFA) of commercial office, and 304 multi-family residential units. As with the Reduced Main Street Alternative, this alternative could include recreational open space accessible to the public.

The overall GFA of this alternative would be reduced by 1.04 million sf (50 percent) from 1,857,440 sf to 817,800 sf. The FAR would be reduced from 1.8 to 0.8. The square footages of the Reduced Mixed-use Alternative in comparison with the proposed project are illustrated in Table 12.10-1.

Table 12.10-1 Comparison of Reduced Mixed-use Alternative with Proposed Project (Gross Floor Area)									
	Commercial Retail (Square Feet)		Commercial Office (Square Feet)		150-room Hotel	Multi-Family Residential (Dwelling Units) Total		Total	
	Retail	Cinema ¹	Corporate ²	Professional ³	(sf)	Units	sf	sf	FAR
Proposed Project	220,000	50,000	535,600	21,840	100,000	608	930,000	1,857,440	1.8
Reduced Mixed-use Alternative	110,000	30,000	267,800	0	0	304	410,000	817,800	0.8
Net Change	-110,000	-20,000	-267,800	-21,840	-100,000	-304	-520,000	-1,039,640	-1.0

¹ Up to 1,200 seats.

² Includes multi-tenant and corporate office uses.

³ Indicates multi-tenant office uses located on Main Street.

~~Although the land use elements of this alternative would be generally similar to those associated with the proposed project, with the exception of the hotel, the design characteristics of the~~

development would change. The significant reduction in retail would preclude the ability to locate residential development over retail uses on the ground floor, which would eliminate the vertical mix of uses included in the proposed project.

The Reduced Mixed-use Alternative would not have commercial and residential uses located within the same buildings and, thus, would have a different character than the proposed project. The retail area would resemble a traditional neighborhood shopping center, with single-story strip retail or stand-alone buildings serviced by surface parking lots, rather than gathering spaces distributed on the interior of the project.

The reduction in retail would eliminate the critical mass necessary to implement the "Main Street" concept. The proposed project, as well as the Reduced Main Street Alternative, contemplate a retail tenant and merchandise mix consistent with lifestyle centers, which are generally defined as a retail development between 150,000–500,000 square feet that includes upscale national chain specialty stores with dining and entertainment in an outdoor setting. Such high-quality specialty retailers typically locate in projects with similar quality retailers and require a volume of shoppers to sustain their operations not generated by smaller, neighborhood-oriented shopping centers. The 50 percent reduction in retail proposed by the Reduced Mixed-use Alternative would not generate the number of shoppers necessary to sustain and attract the desired class of retailers.

Similar to the proposed project, General Plan, Community Plan, and Precise Plan amendments and a Rezone would be required.

The Reduced Mixed-use Alternative is intended to reduce traffic and neighborhood character impacts while retaining the basic elements of the proposed project, with the exception of the hotel, albeit at a reduced scale. Thus, this alternative would reduce the commercial uses and residential uses associated with the proposed project by 50 percent; however, such reductions would be at the expense of the vibrant critical mass created with the vertical mixed-use.

12.10.2 Environmental Analysis

Transportation/Circulation/Parking

The traffic effects of the Reduced Mixed-use Alternative were evaluated in a separate analysis included in Appendix C.2 of the Draft EIR (USAI 2013b).

The Reduced Mixed-use Alternative would generate 11,001 ADT with 676 AM peak hour trips and 1,144 PM peak hour trips. This represents a net ADT reduction of approximately 59 percent, including a 56-percent reduction in AM peak hour trips, and a 61 percent reduction in PM peak hour trips compared to the proposed project. Existing Plus Project, Near-term With Project, and Long-term Cumulative (Year 2030) With Project conditions are discussed below. Table 12.10-2 compares the peak hour traffic conditions related to the Reduced Mixed-use Alternative with the proposed project and would, therefore, also require the mitigation of signalization in the near-term. .

Table 12.10-2 Traffic Generation Comparison of Reduced Mixed-Use Alternative with Proposed Project			
Scenario	ADT		
	Total	AM Peak Hour (In/Out)	PM Peak Hour (In/Out)
Proposed Project	26,961	1,538 (1,057/481)	2,932 (1,231/1,701)
Reduced Mixed-use Alternative	11,001	676 (480/196)	1,144 (493/651)
Difference	-15,960	-863 (-577/-285)	-1,788 (738/-1,050)

As indicated below, the Reduced Mixed-use Alternative would reduce traffic volumes, and result in a proportionate reduction in the congestion related to project traffic. The Reduced Mixed-use Alternative would have significant impacts on the same segments, intersections and freeway ramps as the proposed project in the long-term scenario. However, in the existing and near-term conditions with this alternative, the Reduced Mixed-use Alternative would avoid the significant impact associated with the proposed project on the Del Mar Heights Road bridge, between the I-5 NB and SB ramps. In addition, although Del Mar Heights Road, between the I-5 NB ramp and High Bluff Drive, would continue to be significantly impacted by the Reduced Mixed-use Alternative, the LOS would be E rather than F (with the proposed project) in the existing and near-term scenarios. As with the proposed project, the LOS on this road segment would be F with the Reduced Mixed-use Alternative in the long-term condition. The significant impact of the proposed project on the Carmel Creek Road/Del Mar Trail intersection in the existing plus project condition would be avoided. However, the Reduced Mixed-use Alternative would have a significant impact on this intersection in the near-term and buildout condition like the proposed project, and would therefore also require the mitigation of signalization in the near-term condition.

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along three roadway segments and one intersection under the Reduced Mixed-use Alternative with implementation of Phases 1 - 3 (as shown in Attachments 3 and 8 in Appendix C.2):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Carmel Creek Road/Del Mar Trail (LOS F in the AM peak hour).

Freeways

As with the proposed project, impacts to freeway segments and metered freeway ramps would be less than significant under the Reduced Mixed-use Alternative in the existing plus project scenario.

In comparison to the proposed project, this alternative would avoid the significant impact (assuming all three phases) on the Del Mar Heights Road bridge, between the freeway ramps in the existing plus project condition scenario. The Reduced Mixed-use Alternative would continue to significantly impact the segment of Del Mar Heights Road, between the I-5 NB onramp and High Bluff Drive, but the LOS would be E rather than F. The LOS on segments of El Camino Real, between Via de la Valle and San Dieguito Road, and on Via de la Valle, between San Andres Drive and El Camino Real, would operate at LOS F as with the proposed project.

Although the delay would decrease in comparison with the proposed project, the Reduced Mixed-use Alternative would significantly impact the same intersection as the proposed project in the near-term scenario.

Near-term With Project

In the Near-term With Project condition, potentially significant direct impacts would occur along three roadway segments and four intersections under the Reduced Mixed-use Alternative (as shown in Attachments 5 and 10 in Appendix C.2):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB ramps (LOS E in the PM peak hour);
- Del Mar Heights Road/High Bluff Drive (LOS E in PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS E in the PM peak hour); and
- Carmel Creek Road/Del Mar Trail (LOS F in the AM peak hour).

Freeways

As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the Reduced Mixed-use Alternative in the near-term condition scenario.

In comparison to the proposed project, this alternative would avoid the significant impact (assuming implementation of all three phases) on the Del Mar Heights Road bridge, between the freeway ramps in near-term condition. The Mixed-use Alternative would continue to significantly impact the segment of Del Mar Heights Road, between the I-5 NB onramp and High Bluff Drive, but the LOS would be E rather than F. The LOS on segments of El Camino Real, between Via de la Valle and San Dieguito Road, and on Via de la Valle, between San Andres Drive and El Camino Real, would operate at LOS F, as with the proposed project.

Although the delay would decrease in comparison with the proposed project, the Reduced Mixed-use Alternative would significantly impact the same four intersections as the proposed project in the near-term scenario.

Long-term Cumulative (Year 2030) With Project

In the Long-term Cumulative (Year 2030) With Project condition, potentially significant cumulative impacts would occur along three roadway segments, five intersections, and two freeway ramp meters under the Reduced Mixed-use Alternative (as shown in Attachments 6, 11 and 12 in Appendix C.2):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS F);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB ramps (LOS F in the AM and PM peak hour);
- Del Mar Heights Road/High Bluff Drive (LOS E in the AM peak hour and LOS F in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS F in the PM peak hour);
- El Camino Real/SR 56 EB on-ramp (LOS F in the PM peak hour); and
- Carmel Creek Road/Del Mar Trail (LOS E in the AM peak hour).

Freeways

As with the Proposed Project, the addition of traffic from the Reduced Mixed-use Alternative to traffic on I-5 and SR-56 would not result in significant segment impacts.

As with the Proposed Project, the addition of traffic from the Reduced Mixed-use Alternative would have a significant impact to the following ramp meters.

- Del Mar Heights Road/I-5 SB on-ramp meter (WB) in the AM/PM peak hours; and
- Del Mar Heights Road/I-5 NB on-ramp meter in the PM peak hour.

The Reduced Mixed-use Alternative would impact the same transportation facilities as the proposed project. As with the proposed project, the mitigation measures identified in Table 5.2-12 of the Draft EIR would reduce traffic impacts, but not to a level less than significant.

Visual Effects and Neighborhood Character

Development under the Reduced Mixed-use Alternative would represent an approximately 50 percent reduction in GFA. Further, building heights under this alternative would likely be reduced to a maximum of six stories associated with the office development. Despite these reductions, this alternative would exceed existing development regulations (specifically the 0.5 FAR), and would, like the proposed project, require a Rezone and amendments to the General Plan, Community Plan, and Precise Plan. This alternative would exceed the currently permitted FAR to a lesser degree than the proposed project, and would be more similar in overall development intensity to existing development in the immediate vicinity of the project site.

With a maximum height of 6 stories, the buildings would create less height differential with surrounding development than the Proposed Project. However, the buildings would still exceed the existing 2- to 4-story office buildings to the south and west by as much as 4 stories. The 6-story buildings would exceed the height of the one- to two-story commercial and multi-family residential buildings to the east and north by as much as 5 stories. Thus, like the proposed project, development of the site pursuant to the Reduced Mixed-use Alternative would conflict with lower-scale commercial and residential development proximate to the project site, and result in a significant impact on neighborhood character.

Noise

On-site Noise Sources

As with the proposed project, on-site noise sources would be associated with the proposed retail activities and construction activities.

The retail uses associated with this alternative would include stationary noise sources associated with restaurants (such as restaurant kitchen fans, amplified music systems, or refrigeration condensers), larger retail uses, and a public plaza. Consequently, this alternative would involve delivery trucks and HVAC which could expose on-site residents to noise levels in excess of City noise criteria (pursuant to the Section 59.5.0401 of the City of San Diego Noise Ordinance).

In addition, this alternative could potentially result in on-site construction noise impacts, if constructed in phases. If construction activities would occur after the proposed residences are occupied, then construction noise impacts to on-site residents would be potentially significant. Thus, construction noise impacts under this alternative would be similar to the proposed project.

Off-site Noise Sources

As with the proposed project, this alternative would include land uses that would be sensitive to noise associated with construction and operation of the proposed development as well as traffic noise. Noise-sensitive receptors would include habitable rooms within residential units, usable public and private outdoor recreation areas, and office buildings.

As with the proposed project, traffic noise along Del Mar Heights Road and El Camino Real would exceed 65 CNEL. As a result, proposed residences, usable open space and office uses along these roadways could be adversely impacted by traffic noise.

Paleontological Resources

As with the proposed project, grading required for the Reduced Mixed-use Alternative could encroach into geologic formations containing significant paleontological resources. Therefore, the Reduced Mixed-use Alternative would also result significant paleontological resource impacts.

Biological Resources

As with the proposed project, the Reduced Mixed-use Alternative would remove mature trees along Del Mar Heights Road, which could provide suitable nesting habitat for raptors resulting in potentially significant impacts. Thus, the Reduced Mixed-use Alternative would result in the same impacts to biological resources as the proposed project.

Health and Safety

Similar to the proposed project, construction of the Reduced Mixed-use Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could have a significant impact on off-site receptors in the event of an accidental spill.

Long-term operations associated with uses under this alternative do not typically involve large amounts or types of hazardous materials. Limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, chlorine, and pesticides for landscape maintenance) may be stored on site. The routine handling and transport of these and other materials may represent a safety hazard for people working in the project area. However, the routine use and handling of hazardous materials would be regulated by local, state, and federal standards. Associated impacts would be the same as the proposed project (less than significant).

Historical Resources

Although containing a lower density, the Reduced Mixed-use Alternative is expected to involve grading which could encroach into buried historical resources which may exist on the site. Thus, as with the proposed project, the Reduced Mixed-use Alternative could result in a significant impact on buried historical resources.

12.10.3 Conclusion

Implementation of the Reduced Mixed-use Alternative would reduce, but not eliminate, significant impacts associated with the proposed project. The most notable reduction in impacts would be related to traffic, and to visual effects and neighborhood character.

Although this alternative would not eliminate the significant traffic impacts in the horizon year, it would reduce the magnitude of the traffic impacts in the interim. In the existing and near-term condition, the Reduced Mixed-use Alternative would avoid the significant impact associated with the proposed project on the Del Mar Heights Road bridge, between the I-5 NB and SB ramps. In addition, although Del Mar Heights Road, between the I-5 NB ramp and High Bluff Drive, would continue to be significantly impacted by the Reduced Mixed-use Alternative, the LOS would be E rather than F (with the proposed project) in the existing and near-term scenarios. However, as with the proposed project, the LOS on this segment would be F with the Reduced Mixed-use Alternative in the long-term condition. In the existing plus project condition, this alternative would avoid the impact to the Carmel Creek Road/Del Mar Trail intersection.

The reduction in development intensity would be accompanied by a reduction in building heights and mass, the scale of the Reduced Mixed-use Alternative would lessen significant neighborhood character impacts. However, those impacts would remain significant and unmitigated.

Significant impacts related to noise, biological resources, paleontological resources, and health and safety would remain under this alternative.

~~As outlined above, the significant reduction in retail square footage would result in a more traditional suburban shopping center design, and preclude the vertically integrated "Main Street" concept envisioned by the proposed project. The Reduced Mixed-use Alternative would not create a vibrant, pedestrian-oriented gathering place which would promote social interaction, nor would this alternative provide the "village" amenities and experience offered by the proposed project. This alternative would not advance sustainable development principles, and would instead result in an automobile-oriented destination inconsistent with the project objectives and smart-growth development goals. As a result, this alternative is not considered feasible.~~

The Reduced Mixed-use Alternative would not provide the required critical mass mix of uses necessary to attract sufficient shoppers and different market retailers currently lacking in the Carmel Valley area, and would not achieve key goals and policies of the General Plan to create a vibrant, pedestrian-oriented gathering place which would promote social interaction, nor would this alternative provide the "village" amenities and experience offered by the proposed project. While a vertical mixed-use design is theoretically possible, and could approximate a Main Street concept, the City of Villages Strategy requires higher residential and retail densities to feasibly achieve the benefits of a village. While the development pattern of the Reduced Mixed-use Alternative may theoretically be consistent with the Main Street concept, it would not provide sufficient density to provide a robust, vibrant Main Street experience or feasibly achieve other goals and policies of the General Plan. More specifically, the Reduced Mixed-use Alternative would not contain enough retail space to succeed as a high-quality, mixed-use "lifestyle center" that characterizes the kind of Main Street described in the General Plan "City of Villages" policy

framework (see General Plan EP-13). As discussed in a memo entitled “Retail Market Analysis and Retail Critical Mass Associated with a Reduced Project Alternative” prepared by The London Group, and included as Appendix B.3, lifestyle centers are characterized by higher quality “specialty” retail tenants. The 140,000 square feet of retail included in the Reduced Mixed-use Alternative would be insufficient to support a lifestyle retail center which is important to the fulfillment of the village concept by providing a broader range of shopping experiences and emphasizing entertainment activities such as theaters and restaurants to “activate” the center and provide a greater range of activities that promotes public gathering and social interaction and reinforcing the sense of community. The density associated with such development also allows for more efficient transit services. The lifestyle centers analyzed in the memo ranged between 150,000 and 500,000 square feet; though such centers with below 200,000 square feet are typically associated with other attractions such as a tourist destination or with an already strong mixed-use environment, both of which can substitute for critical mass. Moreover, the lack of critical mass, by not attracting different retail centers, would essentially duplicate the uses in the Del Mar Highlands Town Center, rather than fill a void for more up-market retail tenants currently lacking in Carmel Valley. Consequently, this alternative would not achieve the village concept and would be infeasible.

12.11 SPECIALTY FOOD MARKET RETAIL ALTERNATIVE

12.11.1 Description

This alternative would include commercial uses which would not generate more than the 6,500 ADT, which would be generated by development of the property as an employment center, consistent with the current land use and zoning designations of the Community Plan, Precise Plan, and the Carmel Valley PDO (see Section 12.5). Given the community's expressed interest in a specialty food market, this alternative includes construction of a specialty food market in combination with retail stores. The specialty food market is anticipated to be 30,000 sf. Applying the City's traffic generation rate for a food market (150 trips per 1,000 sf), the specialty food market would be expected to generate 4,500 ADT. After subtracting the 4,500 ADT related to the specialty food market from the goal of 6,500 ADT, 2,000 ADT would remain for additional retail development on the site. Based on the City's traffic generation rate for retail of 40 trips per 1,000 sf, an estimated 50,000 sf of retail is included in this alternative. Thus, the Specialty Food Market and Retail Alternative includes a 30,000-sf food market, and 50,000 sf of retail uses, such as restaurants, banks, convenience stores, and other neighborhood stores, totaling 80,000 sf for an FAR of 0.08.

Based on its similarity to the retail uses associated with the nearby Del Mar Highlands Town Center, it is assumed that the retail development would be constructed at the eastern end of the project site, and take access from El Camino Real, opposite the main entry to Del Mar Highlands Town Center. The specialty food market would likely be a stand-alone, one-story building. Convenience stores, banks, cleaners, etc, would be grouped into one or more single-story buildings. Larger restaurants would be expected to be constructed as stand-alone, one-story buildings. The retail uses would share landscaped, surface parking lots surrounding the stores. The retail development and associated parking lots would occupy an area of approximately 10 acres; leaving approximately 13 acres of the project site vacant.

12.11.2 Environmental Analysis

Transportation/Circulation/Parking

According to calculations completed by USAI (USAI 2013c; Appendix C.3), the Specialty Food Market Retail Alternative would generate 6,500 ADT. Compared to the proposed project, the Specialty Food Market Retail Alternative would result in an approximately 76-percent reduction in daily traffic trips. Traffic impacts resulting from this alternative under Existing Plus Project, Near-term With Project, and Long term Cumulative (Year 2030) With Project conditions are discussed below. Table 12.11-1 compares the peak hour traffic conditions related to the Specialty Food Market Retail Alternative with the proposed project.

Table 12.11-1 Traffic Generation Comparison of Specialty Food Market Retail Alternative with Proposed Project			
Scenario	ADT		
	Total	AM Peak Hour (In/Out)	PM Peak Hour (In/Out)
Proposed Project	26,961	1,538 (1,057/481)	2,932 (1,231/1,701)
Specialty Food Market Retail Alternative	6,500	240 (162/78)	630 (315/315)
Difference	-20,461	-1,298 (-895/-403)	-2,302 (916/1,386)

Existing Plus Project

In the Existing Plus Project condition, potentially significant direct impacts would occur along two roadway segments under the Specialty Food Market Retail Alternative (refer to Attachments 2 and 3 in Appendix Q of the TIA included as Appendix C of the Draft EIR):

Segments

- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

No intersections would be significantly impacted.

Freeways

As with the project, impacts to freeway segments and metered freeway ramps would be less than significant under the Specialty Food Market Retail Alternative in the existing plus project condition.

In comparison to the proposed project, this alternative would avoid the impact of the proposed project on Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive. In addition, it would avoid the impact of the proposed project on three other local intersections.

Near-term With Project

In the Near-term condition, potentially significant direct impacts would occur along three roadway segments and three intersections under the Specialty Food Market Retail Alternative (refer to Attachments 4 and 5 in Appendix Q of the TIA included as Appendix C of the Draft EIR):

Segments

- Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive (LOS E);
- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB ramps (LOS E in the PM peak hour);
- Del Mar Heights Road/High Bluff Drive (LOS E in the PM peak hour); and
- Del Mar Heights Road/El Camino Real (LOS E in the PM peak hour).

Freeways

As with the proposed project, impacts to freeway segments and metered freeway ramps would be less than significant under the Specialty Food Market Retail Alternative in the near-term condition.

In comparison to the proposed project, this alternative would avoid impacts of the proposed project on El Camino Real/SR 56 EB on-ramp and the Carmel Creek Road/Del Mar Trail intersection.

Long-term Cumulative (Year 2030) With Project

In the Long-term Cumulative (Year 2030) With Project condition, potentially significant direct impacts would occur along two roadway segments, five intersections, and two freeway ramp meters under the Specialty Food Market Retail Alternative (refer to Attachments 6, 7, and 8 in Appendix Q of the TIA included as Appendix C of the Draft EIR):

Segments

- El Camino Real between Via de la Valle and San Dieguito Road (LOS F); and
- Via de la Valle between San Andres Drive and El Camino Real (West) (LOS F).

Intersections

- Del Mar Heights Road/I-5 NB Ramps (LOS F in the AM and PM peak hours);
- Del Mar Heights Road/High Bluff Drive (LOS E in the AM peak hour and LOS F in the PM peak hour);
- Del Mar Heights Road/El Camino Real (LOS F in the PM peak hour); and
- El Camino Real/SR 56 EB on-ramp (LOS F in the PM peak hour).

Freeways

As with the Proposed Project, the addition of traffic from the Specialty Food Market Retail Alternative to traffic on I-5 and SR-56 would not result in significant segment impacts.

As with the Proposed Project, the addition of traffic from the Specialty Food Market Retail Alternative would have a significant impact to the following ramp meters.

- Del Mar Heights Road/I-5 SB on-ramp meter (WB) in the AM/PM peak hours; and
- Del Mar Heights Road/I-5 NB on-ramp meter in the PM peak hour.

The Specialty Food Market Retail Alternative would avoid the impact of the proposed project on Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive and the Carmel Creek Road/Del Mar Trail intersection.

Visual Effects and Neighborhood Character

The Specialty Food Market Retail Alternative would avoid significant impacts related to visual effects and neighborhood character. A food market and related retail would have a character similar to Del Mar Highlands Town Center to the east, and the single-story buildings associated with this alternative would be comparable to, or lower than, the buildings which are located adjacent to the project site. However, this alternative would have a negative visual impact resulting from retaining the central and westerly portions of the property in their current state. As discussed in Section 2.2.1 of the DEIR, this area has been mass graded in the past, and is generally void of vegetation, with the exception of weeds and street trees along Del Mar Heights Road. Thus, this alternative would retain the majority of the property in its current low aesthetic-quality condition.

Noise

This alternative would avoid significant noise impacts. As retail development is not sensitive to traffic noise, the Specialty Food Market Retail Alternative would avoid the significant noise impacts related to the proposed project. Although the retail uses would generate HVAC noise, there would be no noise sensitive land uses on the project site which could be adversely affected. Similarly, no noise sensitive uses occur adjacent development.

Paleontological Resources

Minimal grading would be expected to be required to construct a food market and related retail on the site. Thus, the Specialty Food Market Retail Alternative would result in less than significant paleontological resource impacts, and would avoid potentially significant impacts to paleontological resources resulting from the proposed project.

Biological Resources

With the smaller development footprint, it is likely that the Specialty Food Market Retail Alternative would be able to retain most, if not all, of the trees which would be impacted by the proposed project. Thus, the Specialty Food Market Retail Alternative would likely avoid potential significant impacts to nesting birds.

Health and Safety

Similar to the proposed project, construction of the Specialty Food Market Retail Alternative would involve the use or storage of construction-related hazardous materials (i.e., fuels and oils), which could pose a risk to off-site receptors in the event of an accidental spill. Long-term operations may also involve the transport, use, or storage of hazardous materials, but limited amounts of chemicals for routine maintenance (i.e., cleaners, paints, and pesticides for landscape maintenance) may be stored on site. Thus, health and safety impacts would be comparable to the proposed project.

Historical Resources

Because parking would be provided on surface lots, and deep exactions for footings or utilities would be unlikely, grading to construct the Specialty Food Market Retail Alternative would be limited to the areas already disturbed by past grading. Excavation for utilities may occur in some areas undisturbed by past grading, but the overall potential to encounter unknown subsurface historical resources is considered low. Thus, the Specialty Food Market Retail Alternative would result in less than significant impacts related to historical resources, and would avoid potentially significant impacts identified for the proposed project.

12.11.3 Conclusion

Implementation of the Specialty Food Market Retail Alternative would reduce or avoid significant impacts associated with the proposed project. Most notably, this alternative would avoid impacts to some of the roadway segments and intersections impacted by the proposed project. In addition, this alternative would avoid the neighborhood character impacts related to the proposed project by limiting building heights to one story, and reducing the square footage of buildings from 930,000 sf to 80,000 sf. Due to the limited footprint and grading requirements, this alternative would also avoid significant impacts related to biological, historical, and paleontological resources. As retail uses are not considered sensitive receptors, traffic noise impacts would be avoided by this alternative.

This alternative would not meet the basic objectives of the project. It would fail to develop a mixed-use project to serve the community, provide additional housing types in Carmel Valley, provide a place for public gathering and social interaction, or promote sustainable development principles and smart growth. Furthermore, the remaining 13 acres would be potentially subject to further development, in accordance with the Carmel Valley PDO. Thus, this alternative is considered infeasible.

12.12 IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the discussion above, the No Development Alternative would be the environmentally-preferred alternative. This alternative would avoid all impacts associated with the proposed project.

The Specialty Food Market Retail Alternative is the environmentally superior alternative among the action alternatives because it would result in the least impact with respect to traffic (resulting in a 76-percent reduction in daily traffic trips over the proposed project), and avoid significant impacts related to visual effects and neighborhood character, biological resources, historical resources, paleontological resources and noise. Despite the reduction in impacts, significant traffic impacts however would still occur under this alternative. Similarly, health and safety impacts would be reduced but not to less than significant.

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Section 13.0

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13.0 REFERENCES

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Section 14.0

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Section 15.0

CERTIFICATION PAGE



15.0 CERTIFICATION PAGE

This document has been completed by the City of San Diego's Environmental Analysis Section under the direction of the Development Services Department Environmental Review Manager and is based on independent analysis and determinations made pursuant to the San Diego Municipal Code Section 128.0103. The following individuals contributed to the fieldwork and/or preparation of this report. Resumes of EIR and technical appendices preparers are on file and available for review at the City of San Diego, Development Services Department (DSD), 1222 First Avenue, Fifth Floor, San Diego, 92101.

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