CHAPTER 7.0

LIST OF MITIGATION MEASURES AND ENVIRONMENTAL DESIGN CONSIDERATIONS

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7.1 Comprehensive Listing of Mitigation Measures

7.1.1 Mitigation for Air Quality Impacts

MM AQ-1 Future tenants shall implement a Low VOC Consumer Products Educational Program through the provision of educational materials (such as a display case, kiosk, or brochures) ~~to provide information~~ regarding the use of Low-VOC paints and consumer products in a prominent area accessible to residents and employees.

MM AQ-4a All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentation, and CARB operating permit shall be provided at the time of mobilization of each applicable unit of equipment. The above standards/specifications shall be met unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- A piece of specialized equipment is unavailable in a controlled form within the state of California, including through a leasing agreement;
- A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the Proposed Project, but the application process is not yet approved, or the application has been approved, but funds are not yet available; or
- A contractor has ordered a control device for a piece of equipment planned for use on the proposed Project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the proposed Project has the controlled equipment available for lease.

MM AQ-4b All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on site or to transport materials to and from the site shall comply with 2010 emission standards, where available. In addition, all on-road trucks shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel

emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified EPA rating, BACT documentation, and CARB or SDAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. The above standards/specifications shall be met unless the contractor is able to provide proof that any of these circumstances exists:

- A piece of specialized equipment is unavailable in a controlled form within the state of California, including through a leasing agreement;
- A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the Proposed Project, but the application process is not yet approved, or the application has been approved, but funds are not yet available; or
- A contractor has ordered a control device for a piece of equipment planned for use on the proposed Project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the Proposed Project has the controlled equipment available for lease.

MM AQ-4c The following measures, at minimum, shall be part of the contractor dust control plan:

- Contractors shall apply approved nontoxic chemical soil stabilizers to all inactive construction areas or replace groundcover in disturbed areas;
- Construction contractors shall provide temporary wind fencing around sites being graded or cleared;
- Trucks hauling dirt, sand, or gravel shall be covered or shall maintain at least two feet of freeboard in accordance with Section 23114 of the California Vehicle Code;
- During wet conditions, construction contractors shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads or wash off tires of vehicles and any equipment leaving the construction site; and
- Trucks hauling materials such as debris or fill shall be fully covered while operating off the property site.

MM AQ-4d The following types of measures shall be required on construction equipment (including on-road trucks):

- Use diesel oxidation catalysts and catalyzed diesel particulate traps.
- Maintain equipment according to manufacturers' specifications.
- Restrict idling of construction equipment to a maximum of five minutes when not in use.
- Install high-pressure fuel injectors on construction equipment vehicles.

7.1.2 Mitigation for Transportation/Traffic Impacts

M-TR-1 ~~Under TransNet SR-76 Widening, the SR-76 East Project is currently under construction and will result in the improvement of this segment to four lanes by 2017, at which time no significant direct Project impacts would occur. Due to timing considerations, if the Proposed Project were to be occupied prior to this improvement, a short-term, unmitigated impact would occur until the SR-76 East Project is completed, and a Statement of Overriding Considerations would be required. In this case, the Applicant would pay a fair share towards the appropriate uncompleted improvements to SR-76.~~ Caltrans is currently constructing the SR-76 East Project (TransNet SR-76 Widening), which will improve these segments to four lanes by 2017 and mitigate the Project's direct impacts. In addition the Applicant has agreed to pay Caltrans $2.28 million toward the SR-76 East Project. The Applicant will pay this amount over build out of the Project.

M-TR-2 and 2a and M-TR-3 and 3a

Caltrans is currently constructing~~Under TransNet SR-76 Widening,~~ the SR-76 East Project (TransNet SR-76 Widening) ~~is currently under construction~~ and ~~will result in the~~has completed improvements to ~~of~~the SB and NB ramps~~s~~ intersections identified in these impacts. ~~by 2017, at which time no significant direct Project impacts would occur. Due to timing considerations, if the Proposed Project were to be occupied prior to this improvement, a short-term, unmitigated impact would occur until the SR-76 East Project is completed, and a Statement of Overriding Considerations would be required. In this case,~~ In addition the ~~a~~Applicant has agreed to~~would~~ pay Caltrans~~a fair share towards the appropriate uncompleted improvements to the SR-76/I-15 SB and NB ramps intersections~~ $2.28 million toward the SR-76 East Project. The Applicant will pay this amount over buildout of the Project.

M-TR-4 A traffic signal warrant analysis will be performed prior to construction of the first unit to determine the need for a traffic signal. The Project Applicant shall install a traffic signal at Reche Road/Old Highway 395 ~~or conduct other applicable intersection improvements required for full mitigation,~~ based on the warrant analysis and final engineering to the satisfaction of the Director of PDS.

M-TR-5 Development of the Project would require signalization, widening and improvement of the SR-76/Pankey Road intersection, as follows:

- NB approach: provide two left lanes, one through lane and one right lane
- SB approach: provide one left lane, one through lane and two right lanes (with overlap phase)
- EB approach: provide two left lanes, two through lanes and one right lane
- WB approach: provide one left lane, one through lane and one right lane

M-TR-6 The Project will pay the TIF to mitigate significant cumulative impacts occurring during Existing Plus Cumulative Plus Project conditions along eight analyzed roadway segments, including:

- Five segments of Old Highway 395 from East Mission Road to SR-76 (all LOS E, except the segment from Reche Road to Stewart Canyon Road which is LOS F)
- Old Highway 395 from Dulin Road to West Lilac Road (LOS E)
- Reche Road from Live Oak Park Road to Gird Road (LOS E)
- Pala Mesa Drive from Wilt/Sage Road to Old Highway 395 (LOS E)

M-TR-7 and 7a

The Project will pay the TIF to mitigate significant cumulative impacts occurring during Existing Plus Cumulative Plus Project conditions along 11 segments of SR-76, including:

- Nine segments from Melrose Drive to I-15 SB ramps (LOS F)
- Rice Canyon Road to Couser Canyon Road (LOS F)
- Couser Canyon Road to Pala Mission Road (LOS F)

M-TR-7b The Project will pay the TIF to mitigate significant cumulative impacts occurring during Existing Plus Cumulative Plus **Scenario 2** conditions along the segment of SR-76 from Old Highway 395 to I-15 SB Ramps.

M-TR-8a The Project will pay the TIF to mitigate significant cumulative impacts occurring under Existing Plus Cumulative Plus Project conditions at the following 11 signalized intersections:

- East Mission Road/Old Highway 395 (LOS E during the a.m. peak period and LOS F during the p.m. peak period)
- Mission Road/I-15 SB ramps (LOS F during the p.m. peak period)
- Mission Road/I-15 NB ramps (LOS F during the p.m. peak period)
- SR-76/East Vista Way (LOS F during the a.m. and p.m. peak periods)
- SR-76/North River Road (LOS E during the p.m. peak period)
- SR-76/Olive Hill Road (LOS F during the a.m. and p.m. peak periods)
- SR-76/South Mission Road (LOS E during the p.m. peak period)
- SR-76/Gird Road (LOS E during the p.m. peak period)
- SR-76/Old Highway 395 (LOS F during the a.m. and p.m. peak periods)
- SR-76/I-15 SB ramps (LOS E during the a.m. peak period and LOS F during the p.m. peak period)
- SR-76/I-15 NB ramps (LOS E during the a.m. peak period and LOS F during the p.m. peak period)

M-TR-8b The Project will pay the TIF to mitigate significant cumulative impacts occurring under Existing Plus Cumulative Plus **Scenario 2** conditions at the following two signalized intersections:

- SR-76/I-15 SB ramps (LOS E during the a.m. peak period and LOS F during the p.m. peak period)
- SR-76/I-15 NB ramps (LOS E during the a.m. peak period and LOS F during the p.m. peak period)

M-TR-9 The Project will pay the TIF to mitigate significant cumulative impacts occurring during Existing Plus Cumulative Plus Project conditions, at the following eight unsignalized intersections:

- Reche Road/Old Highway 395 (LOS F during the a.m. and p.m. peak periods)
- Stewart Canyon Road/Old Highway 395 (LOS F during the a.m. and p.m. peak periods)
- Pala Mesa Drive/Old Highway 395 (LOS F during the a.m. and p.m. peak periods)
- SR-76/Via Monserate (LOS F during the a.m. and p.m. peak periods)
- SR-76/Sage Road (LOS F during the a.m. and p.m. peak periods)
- SR-76/Pankey Road (LOS F during the a.m. and p.m. peak periods)
- SR-76/Rice Canyon Road (LOS F during the a.m. and p.m. peak periods)
- SR-76/Couser Canyon Road (LOS F during the a.m. and p.m. peak periods)
- Dulin Road/Old Highway 395 (LOS F during the a.m. and p.m. peak periods)

7.1.3 Mitigation for Cultural Resources Impacts

M-CR-1, 2, and 3

Prior to approval of grading or improvement plans, the Applicant shall implement a grading monitoring and data recovery program to mitigate potential impacts to undiscovered, buried archaeological resources to the satisfaction of the Director of PDS and to a level below significant. This grading monitoring program shall include, but not be limited to, the following actions:

1. Provide evidence to the PDS that a County-approved archaeologist (consulting archaeologist) has been contracted to implement a grading monitoring and data recovery program to the satisfaction of the Director of PDS. A letter from the consulting archaeologist shall be submitted to the Director of PDS. The letter shall include the following guidelines:

    a. The consulting archaeologist shall contract with a Luiseño Native American monitor to be involved with the grading monitoring program as outlined in the 2007 County Report Format and Content Guidelines.

b. The consulting archaeologist/historian and Luiseño Native American monitor shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program as outlined in the 2007 County Report Format and Content Guidelines.

c. The consulting archaeologist and Luiseño Native American Monitor shall monitor all areas identified for development, including off-site improvements.

d. An adequate number of monitors (archaeological/historical/Native American) shall be present to ensure that all earthmoving activities are observed and shall be on site during all grading activities for areas to be monitored (on and off site).

e. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and Luiseño Native American monitor(s) shall be on site full time to perform full-time monitoring. Inspections will vary based on the rate of excavation, materials excavated, and presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Principal Investigator in consultation with the Native American monitor. The Principal Investigator, in consultation with the Luiseño Native American monitor, will determine whether to mon~~Mon~~itor~~ing of~~ the cutting of previously disturbed deposits ~~will be determined by the Principal Investigator~~.

f. Isolates and clearly non-significant deposits shall be minimally documented in the field, and the monitored grading can proceed. Should the cultural materials or isolates and non-significant deposits not be collected by the Project Archaeologist, then the Luiseño Native American monitor may collect the cultural material for transfer to a Tribal curation facility or repatriation program.

g. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeological monitor(s) or, ~~in consultation with the~~ Luiseño Native American monitor, shall have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. The Principal Investigator shall contact the County Archaeologist at the time of discovery. The Principal Investigator, in consultation with the County staff archaeologist and Luiseño Native American monitor, shall determine the significance of the discovered resource(s). The County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. ~~For significant cultural resources, a~~ A Research Design and Data Recovery Program to mitigate impacts to significant cultural resources shall be prepared by the consulting archaeologist in coordination with the Luiseño Tribes. The ~~and~~

~~approved by the~~ County Archaeologist shall review and approve the Program, which shall be~~then~~ carried out using professional archaeological methods. Coordination with the Luiseño Tribes shall consist of providing a copy of the Data Recovery Program for review and comment. The Tribes shall have 14 days to provide comment. The Research Design and Data Recovery Program shall include: (1) reasonable efforts to preserve (avoid) unique cultural resources as defined in CEQA Section 21083.2(g) or sacred sites; (2) the capping of identified sacred sites or unique cultural resources and placement of development over the cap, if avoidance is infeasible; and (3) data recovery for non-unique cultural resources as defined in CEQA Section 21083.2(h). The preferred option is preservation (avoidance).

h. If any human remains~~bones~~ are discovered, the Principal Investigator shall contact the County Coroner. In the event that the remains are determined to be of Native American origin, the MLD, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code Section 7050.5(b and c) and Public Resources Code Section 5097.98 shall be met. As part of the consultation, the MLD shall be given the opportunity to review the artifacts identified in proximity to the burial site.

i. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The Principal Investigator shall determine the amount of material to be recovered for an adequate artifact sample for analysis. The Project Archaeologist shall consult with the Luiseño Native American monitor regarding artifact sensitivity and type.

j. In the event that previously unidentified cultural resources are discovered:
(1)~~,~~ ~~A~~all prehistoric cultural material collected during the grading monitoring program shall be processed and curated at a San Diego curation facility or Tribal curation facility that meets federal standards per 36 CFR Part 79 and, therefore, would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Documentation of this curation~~Evidence~~ shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.

Or

Alternatively, the prehistoric archaeological materials may be repatriated to the appropriate Luiseño Native American Tribe.

Evidence of repatriation shall be in the form of a letter from the tribe confirming that the archaeological materials have been received.

(2) Historical cultural material collected during the grading monitoring program shall be processed and curated at a San Diego curation facility that meets federal standards per 36 CFR Part 79 and, therefore, would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records, including title, shall be transferred to an appropriate curation facility within San Diego County, and shall be accompanied by payment of the fees necessary for permanent curation. Documentation of curation shall be in the form of a letter from the curation facility confirming that the archaeological materials have been received and that all fees have been paid.

k. Monthly status reports shall be submitted to the Director of PDS and the Luiseño Native American Tribes starting ~~from~~on the date of the notice to proceed ~~to~~through termination of implementation of the grading monitoring program. The reports shall briefly summarize all activities during the period and the status of progress on overall plan implementation. Upon completion of the implementation phase, a final report shall be submitted to the Director of PDS and the Luiseño Native American Tribes describing the plan compliance procedures and site conditions before and after construction.

l. In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the Director of PDS, ~~satisfaction of the Director of PDS~~ prior to the issuance of any building permits. The report shall include Department of Parks and Recreation Primary and Archaeological Site forms. A copy of the report shall be submitted to the Luiseño Native American Tribes.

m. In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the Director of PDS and the Luiseño Native American Tribes by the consulting archaeologist confirming that the grading monitoring activities have been completed.

2. If the Proposed Project would construct any facilities within 100 feet of archaeological site CA-SDI-682, including loci A and B, the Project Applicant shall prepare and implement a temporary fencing plan to protect the site. The fencing plan shall be prepared in consultation with a qualified archaeologist and in coordination with the Luiseño Native American monitor to the satisfaction of the Director of PDS~~ and the Director of PDS staff in the Land Development Division~~. The fenced area ~~should~~shall include a buffer

sufficient to protect the archaeological site; in no event shall the buffer be less than 20 feet in width. The fence shall be installed under the supervision of the qualified archaeologist and the Luiseño Native American monitor, prior to commencement of grading or brushing and be removed only after grading operations in the vicinity of CA-SDI-682 have been completed. A Luiseño Native American monitor shall be invited to be present during the removal of the temporary fencing.

M-CR-4 If the Proposed Project uncovers resources in areas that are not RPO exempt, and scientific excavation is not authorized, grading will be halted or diverted in accordance with M-CR-1, 2, and 3.

7.1.4 Mitigation for Noise Impacts

On-site Exterior Noise

M-N-1 Buildout traffic noise levels at the elevated outdoor uses areas within proposed within proposed PA 2 mixed-core residential uses and PA 3 multi-family residential uses shall be mitigated to County standards of 65 dBA CNEL through the following measure:

- All elevated outdoor residential use areas in PAs 2 and 3, including decks and balconies, will require noise shielding by a 5.5-foot high noise control barrier. Required sound attenuation barriers 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 can be either a single layer of tongue and groove ~~and~~(which must be at least one-inch total thickness or have a density of at least 3½ pounds per s.f.) or a double layer of overlapped fencing (shiplap) so that no seam between boards or sheets matches with a seam on the other layer. Where architectural or aesthetic factors allow, glass or clear plastic 3/8 of an inch thick or thicker may be used on the upper portion, if it is desirable to preserve a view. 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 door(s) or gate(s) must be designed with overlapping closures on the bottom and sides and meet the minimum specifications of the wall materials described above. The gate(s) may be of one-inch thick or better wood, solid-sheet metal of at least 18-gauge metal, or an exterior-grade solid-core steel door with prefabricated door jambs.

- The conservative analysis indicates that a barrier is required when no~~without~~ consideration is given to potential~~of any~~ shielding provided by the Project buildings or additional attenuation due to distance. ~~The f~~Final building design, however, may provide substantial shielding, thus reducing the final required barrier heights necessary to provide compliance with the 65 CNEL exterior requirements. The Applicant may provide an updated acoustical analysis by a

County-approved noise consultant demonstrating compliance for all required exterior outdoor use areas with the County 65 dBA CNEL requirement, completed to the satisfaction of the Director of the PDS with a lower height balcony noise control barrier.

M-N-2 Buildout traffic noise levels at ground level outdoor use area within proposed PA 3 multi-family residential uses shall be mitigated to County standards of 65 dBA CNEL through the following measure:

- A 5.5-foot high sound attenuation barrier shall be sited along the eastern side of Pankey Road (excluding driveway entrances) for the length of the multi-family housing area with returns to the north and south. The wall shall follow the curved portion of the driveway entrance terminating at a location where it would run parallel to the entrance. The final barrier shall conform to the standards identified in M-N-1, above.

On-site Interior Noise

M-N-3 An ~~final Title 24 (California Building Code)~~ exterior to interior noise control plan provided by a County-approved noise consultant for the second story or higher living areas of all multi-family homes in PAs 2 and 3 on the Project site shall be prepared prior to obtaining building permits for the Project. Consistent with the County Noise Ordinance, the report shall confirm that interior noise levels will not exceed 45 dBA CNEL. The report shall finalize the noise requirements based on actual building design specifications, and shall be completed to the satisfaction of the Director of PDS. Noise reduction measures~~quirements~~ could include the following:

- A "windows closed" condition shall be provided that requires a means of mechanical ventilation for the second floors of all multi-family residences.
- The second floors of all multi-family residences shall be provided with weather-stripped solid-core exterior doors.
- Exterior wall/roof assemblies shall be free of cutouts and openings.
- Upgraded windows shall be provided for the second or higher floors of multi-family residences.

On-site Operational Noise

M-N-4 Potential impacts to proposed multi-family residences from commercial uses and ~~adjacent~~ residential HVAC units shall be mitigated as follows:

- A final noise study for the second story or higher living areas of all mixed use residential areas and businesses proposed in or adjacent to the mixed use areas shall be prepared during site plan and building permit approval for the mixed use portion of the Project. The report shall finalize the noise requirements based on actual building design specifications to ensure~~determine~~ compliance with the County Ordinance limitations of 57.5 dBA between 7:00 a.m. and 10:00 p.m. and

52.5 dBA between 10:00 p.m. and 7:00 a.m. (arithmetic average of multi-family and commercial noise limits) or 65 CNEL at multi-family residential locations. ~~Preliminary e~~Exterior and interior noise reduction requirements necessary to comply with the County Noise Ordinance for residential uses~~ approval on the tentative tract map~~ shall be presented in the final noise report. ~~Additional n~~Noise control methods may include screening noise sources, relocating noise sources at a greater distance from residences and/or a combination of these measures. Implementation of noise control features would ensure compliance with County standards.

M-N-5 Siren test noise at the on-site Sheriff's station shall not exceed the following Noise Ordinance standards: 57.5 dBA between 7:00 a.m. and 10:00 p.m. and 52.5 dBA between 10:00 p.m. and 7:00 a.m. [arithmetic average of multi-family and commercial noise limits], or 65 CNEL at the property line. These maximum noise levels shall be attained~~be controlled~~ through site plan design~~. process using one of the following~~ ~~t~~Two options are available: ~~S~~selecting the location of the sheriff's station such that it is not in close proximity to the residences, and using an assumed on-site building as an intervening noise control structure~~.~~; or ~~C~~constructing the parking area further away from the residences, and designating a specific siren test location. If the latter option is chosen for implementation, t~~T~~he location could be selected so that the sirens would face away from the residential structures, and a wall could be erected on both sides of the test area to further attenuate noise. A final noise study for the Sheriff's station shall be prepared during site plan approval. The report shall finalize the noise control requirements based on actual building design specifications, including identification of additional noise reducing measures as necessary to ensure compliance with County noise standards (i.e., 57.5 dBA between 7:00 a.m. and 10:00 p.m. and 52.5 dBA between 10:00 p.m. and 7:00 a.m. [arithmetic average of multi-family and commercial noise limits] or 65 CNEL at the property line between the sheriff's station and proposed multi-family residential ~~locations~~ uses).

Cumulative Noise

Cumulative commercial and residential noise impacts (**Impact N-6**) in PAs 2 and 3 will be mitigated through the implementation of M-N-4.

7.1.5 Mitigation for Biological Resources Impacts

M-BI-1 The significant impacts to three least Bell's vireos will be mitigated through the creation, enhancement, and preservation of habitat occupied by the least Bell's vireo (refer to M-BI-4a and M-BI-4b for additional details). ~~The total acreage of riparian scrub and/or riparian forest habitat included as mitigation must be adequate to support at least three least Bell's vireo individuals.~~

M-BI-2 The loss of up to 43.75 acres of raptor foraging habitat (non-native grassland and pasture) will be mitigated through implementation of measures M-BI-4e and M-BI-4f, below.

M-BI-3a Indirect impacts to habitat and associated sensitive species shall be largely addressed through Project design features identified in Subchapter 2.6 and on Table 1-3 of this EIR. In addition, the following mitigation measures are required: the presence of a biological monitor during brushing, clearing and grading to ensure that construction activities remain within identified limits; implementation of the Resource Management Plan, on-site enhancement plan and off-site revegetation plan to ensure that appropriate ratios of habitat are retained; and confirmation of construction outside the breeding season. A Resource Avoidance Area (RAA) shall be shown on all plans identifying areas to be avoided during least Bell's vireo, southwestern willow flycatcher, and other nesting or breeding birds breeding season (February 1 to August 31). If avoidance is not possible, pre-construction surveys, noise monitoring and noise attenuation measures shall be utilized. Surveys shall be done to determine if any nests are located within 300 feet of brushing, clearing and/or grading activities. If nests are located within this distance, no brushing, clearing or grading shall be done in this area until the nests are no longer active or until temporary barriers adequate to ensure that noise does not exceed 60 dBA at the nests have been installed.

M-BI-3b Indirect impacts to nesting success shall be largely addressed through Project design features identified in Subchapter 2.6 and on Table 1-3 of this EIR. In addition, the following mitigation measures are required: the presence of a biological monitor during brushing, clearing and grading to ensure that construction activities remain within identified limits; implementation of the Resource Management Plan, on-site enhancement plan and off-site revegetation plan to ensure that appropriate ratios of habitat are retained; and confirmation of construction outside the breeding season. A RAA shall be shown on all plans identifying areas to be avoided during least Bell's vireo, southwestern willow flycatcher, and other nesting or breeding birds breeding season (February 1 to August 31). If avoidance is not possible, pre-construction surveys, noise monitoring and noise attenuation measures shall be completed as required in M-BI-3a.

M-BI-4a Significant **Scenario 2** direct impacts to 7.56 acres on site and 1.10 acres off site of southern riparian forest shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement, for a total of 25.98 acres. **Scenario 1** impacts to southern riparian forest would total 7.55 acres on site and 1.10 acres off site, for a total of 8.65 acres. ~~Pending County approval, up~~These impacts shall be mitigated by the on-site preservation of a minimum of 10.93 acres (**Scenario 1**) and 10.95 acres (**Scenario 2**) of southern riparian forest ~~shall be preserved/enhanced on site~~. In addition, a minimum acreage of 8.66 creation and 6.37 enhancement (**Scenario 2**) or 8.65 creation and 6.35 enhancement (**Scenario 1**) of southern riparian forest shall~~The remaining required acreage would~~ be created/enhanced off site. Off-site m~~M~~itigation acreage shall ~~either occur~~be located within a PAMA (if the NCMSCP has been adopted when the Project is approved), at an approved mitigation bank, or on purchased~~any other~~ land that shall be managed by an RMP, as approved~~determined acceptable~~ by the Director of the County PDS.

M-BI-4b Significant direct impacts to 3.31 acres of southern riparian scrub shall be mitigated at a 3:1 ratio, including 1:1 creation and 2:1 enhancement, for a total of 9.93 acres. ~~Pending County approval, u~~Up to 1.21 acres of southern riparian scrub shall be preserved/enhanced on site. The remaining required acreage ~~would~~shall be created/enhanced off site. Off-site ~~M~~mitigation acreage shall ~~either occur~~be located within a PAMA (if the NCMSCP has been adopted when the Project is approved), at an approved mitigation bank, or on purchased~~any other~~ land that shall be managed by an RMP, as approved~~determined acceptable~~ by the Director of the County PDS.

M-BI-4c Significant direct impacts to 0.20 acre of coast live oak woodland shall be mitigated at a 3:1 ratio, for a total of 0.6~~59~~ acre preserved off site ~~and 0.01 acre preserved on site~~.

M-BI-4d Significant direct impacts to 2.27 acres of Diegan coastal sage scrub on and off site shall be mitigated at a 2:1 ratio, for a total of 4.54 acres. A total of 1.29 acres shall be preserved/restored on site and 3.25 acres shall be preserved off site. Off-site m~~M~~itigation acreage shall ~~either occur~~be located within a PAMA (if the NCMSCP has been adopted when the Project is approved), at an approved mitigation bank, or on purchased~~any other~~ land to be managed by an RMP, as approved~~determined acceptable~~ by the Director of the County PDS.

M-BI-4e Under **Scenario 2**, significant direct impacts to 43.17 acres of non-native grassland shall be mitigated at a 0.5:1 ratio, for a total of 21.59 acres. A total of 7.98 acres shall be preserved/restored on site and 13.61 acres shall be preserved off site. Under **Scenario 1**, significant direct impacts to 41.9 acres of non-native grassland shall be mitigated at a 0.5:1 ratio, for a total of 20.95 acres. A total of 7.98 acres shall be preserved/restored on site and 12.97 acres shall be preserved off site. Off-site m~~M~~itigation acreage shall ~~either occur~~be located within a PAMA (if the NCMSCP has been adopted when the Project is approved), at an approved mitigation bank, or on purchased~~any other~~ land to be managed by an RMP, as approved~~determined acceptable~~ by the Director of the County PDS.

M-BI-4f Significant direct impacts to 0.58 acre of off-site pasture shall be mitigated at a 0.5:1 ratio, for a total of 0.29 acre preserved off site. Off-site m~~M~~itigation acreage shall ~~either occur~~be located within a PAMA (if the NCMSCP has been adopted when the Project is approved), at an approved mitigation bank, or on purchased~~any other~~ land to be managed by an RMP, as approved~~determined acceptable~~ by the Director of the County PDS.

M-BI-5 Significant direct impacts to southern riparian forest and southern riparian scrub shall require permits from the ACOE and CDFW as jurisdictional wetlands/waters and mitigation at a ratio of 3:1, with a minimum 1:1 creation component to ensure no net loss of wetlands. The Project shall include on-site preservation/enhancement of 12.16 acres of riparian habitat as described in the Conceptual On-site Wetland Enhancement Plan (Appendix K of EIR Appendix G) and creation/enhancement of additional wetland habitat off site as described in the Conceptual Off-site Wetland

Creation and Enhancement Plan (Appendix L of EIR Appendix G; also see M-BI-4). Additional off-site mitigation will be provided for any of the proposed on-site habitat enhancement that is not accepted by the County.

M-BI-6 Significant, temporary impacts to low-quality non-native grassland and disturbed habitat areas from grading within the wetland buffers shall be mitigated through revegetation of the slopes with native (yet low fuel) vegetation. The revegetation of these slopes will provide higher quality buffer habitat to the adjacent riparian habitat, and the buffer areas shall be included in the Resource Management Plan to ensure that the sensitive resources of the adjacent habitat are protected.

7.1.6 Mitigation for Paleontological Resources Impacts

M-P-1 and 2

A qualified paleontologist shall be at the pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual having an M.S. or Ph.D. in paleontology or a related field (e.g., sedimentary or stratigraphic geology, evolutionary biology, etc.), and who has knowledge of San Diego County paleontology and documented experience in professional paleontological procedures and techniques.

A qualified paleontologist or paleontological monitor (under the supervision of the qualified paleontologist) shall be on site on a full-time basis during the original cutting of previously undisturbed deposits of moderate paleontological resource sensitivity (i.e., Quaternary river terrace deposits) to inspect exposures for ~~contained~~ fossils. A paleontological monitor is defined as an individual with at least one year of experience in field identification and collection of fossil materials. The paleontological monitor shall work under the direct supervision of the qualified paleontologist.

The Project Applicant shall: (1) submit a copy of a letter signed by the qualified paleontologist or paleontological monitor which states that the Applicant has retained their services and acknowledges agreement to perform and/or be responsible for concurrence with the Project mitigation measures; and (2) authorize the qualified paleontologist to direct, divert, or halt any grading activity, and to perform all other acts required by the provisions listed below. If the qualified paleontologist or paleontological monitor ascertains that the river terrace deposits are not fossil bearing, the qualified paleontologist shall have the authority to terminate the monitoring program.

If paleontological resources are unearthed, the qualified paleontologist or paleontological monitor shall:

1. Direct, divert, or halt any grading or excavation activity until the sensitivity of the resource can be determined and the appropriate recovery implemented.

2. Salvage unearthed fossil remains.

3. Record stratigraphic and geologic data to provide a context for the recovered fossil remains.

4. Prepare collected fossil remains for curation.

5. Curate, catalog, and identify all fossil remains to the lowest taxon possible, inventory specimens, assign catalog numbers, and enter the appropriate specimen and locality data into a collection database.

6. Transfer the cataloged fossil remains to an accredited institution (museum or university) in California that maintains paleontological collections for archival storage and/or display.

The qualified paleontologist shall prepare a final Paleontological Resources Mitigation Report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

7.2 Environmental Design Considerations/Conditions of Approval

7.2.1 Design Considerations for Aesthetics – Construction

- Native topsoil stockpiles will not be greater than six feet high and will be re-spread following completion of construction activities.

7.2.2 Design Considerations for Aesthetics – Operation

- High solid walls located along public streets will be minimized. Where scenic views are available, transparent panels may be evaluated as an alternative method of attenuating unwanted sound.
- Where cost and space permit, the installation of berms in conjunction with landscaping would be preferred for noise attenuation.
- All walls and fences over three feet in height facing a public street will provide a fully landscaped buffer at least five feet deep at plant maturity between the street and wall or fence.
- Where safety fencing is required for a dual use detention/play area that will be visible from a street or common area, rural character wood fencing would be allowed.
- No loading areas in mixed use areas will be permitted between a building front and the central parking bay, Pankey Road, or internal streets.

- All trash dumpsters/compactors/receptacles within mixed use areas will be screened (by buildings or screen walls) if they would otherwise be visible from a street or common area. Mechanical units also will be screened.
- Screen walls will be compatible with building architecture and exterior wall materials, and also will be landscaped with a minimum hedge row with a height of three to six feet at maturity.
- Extensive flat roofs will be avoided. When flat roofs are necessary in large commercial and industrial buildings, they will incorporate shed roofs, trellises, loggias, changes in parapet height, turrets and towers, and architectural embellishments.
- Roof-top equipment would be screened from view from adjacent roads, properties, and pedestrian areas in PAs 2, 3, 4 and 5. This equipment is expected to include HVAC, etc. In the area north of Pala Mesa Drive, where shielding of routine roof equipment may not be possible, equipment would be organized in an orderly, uncluttered fashion and painted to match the roof color. Rooftop equipment screening would be identified on site plans.
- To ensure consistency in format and content of signs, as well as conformance with Sections 6250 and 6263 of the County Zoning Ordinance, a comprehensive sign package will be developed and submitted to DPLU as part of the site plan application.
- Prohibited signage includes: roof and parapet signs, light box signs (rectangular plastic signs that are intentionally illuminated), pole signs greater than six feet in height, portable or mobile signs, and signs that cover or interrupt architectural features.

7.2.3 Design Considerations for Air Quality – Construction

- The entire construction fleet will be required to use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters, and/or CARB-certified Tier 4 equipment.
- Low VOC coatings will be utilized in accordance with SDAPCD Rule 67.0 requirements.
- A minimum of three applications of water will be applied during grading between dozer/scraper passes, as necessary. Additional watering or acceptable non-toxic SDAPCD dust control agents will be applied during dry weather or windy days until dust emissions are not visible.
- Dirt storage piles will be enclosed, covered, watered three times daily, if necessary, or stabilized by chemical binders, tarps, fencing or other non-toxic erosion control according to manufacturers' specification.
- A 15-mph speed limit will be enforced on unpaved surfaces.
- On dry days, dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.
- Haul trucks hauling dirt, sand, soil, or other loose materials will be covered or two feet of freeboard will be maintained.
- When active construction ceases on the site, disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the County and/or SDAPCD to reduce dust generation.
- After completion of grading, internal roadways will be paved, chip sealed, or chemically stabilized.

- Sweepers or water trucks will be used to remove "track-out" at any point of public street access.
- Grading will be suspended if winds exceed 25 mph or if visible dust plumes emanate from a site; disturbed areas will be stabilized if construction is delayed.
- In accordance with the SDAPCD Rule 55 - Fugitive Dust Control, no dust and/or dirt will leave the property line. The following measures would be implemented to ensure the requirements of this rule are met:
  - Airborne Dust Beyond the Property Line: No person will engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.
  - Track-out/Carry-out: Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out will be:
    (i) Minimized by the use of any of the following or equally effective track-out/ carry-out and erosion control measures that apply to the Project or operation:
    (a) Track-out grates or gravel beds at each egress point
    (b) Wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks
    (c) Secured tarps or cargo covering, watering, or treating of transported material
    (ii) Removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only PM_{10}-efficient street sweepers certified to meet the most current SCAQMD Rule 1186 requirements will be used. The use of blowers for removal of track-out/carry-out will be prohibited under any circumstances.

7.2.4 Design Considerations for Air Quality – Operation

- The Project has been designed with a balance of uses including residential, commercial, limited impact industrial, and open space within close proximity (0.25 mile) to encourage walking and other non-automobile modes of transport between uses and to minimize external (off-site) trips by including local opportunities for employment and shopping for goods and services.
- The Project site will maximize access to transit lines to accommodate bus travel, and to provide lighted shelters at transit access points.
- Streets have been designed to maximize pedestrian access to transit stops.
- The landscape plan includes trees that provide shading of buildings and parking lots, and includes native drought-resistant plants (ground covers, shrubs and trees.
- The Project will be designed to meet or exceed current Title 24 energy efficiency standards.
- Flat roofs on non-residential structures will include a white or silver cap sheet to reduce energy demand.
- Building design will include roof anchors and pre-wiring to allow for the installation of photovoltaic systems and/or participate in SDG&E incentive programs for energy efficient development where feasible.
- Preferential parking for carpools will be included to accommodate carpools and vanpools in employment areas (e.g. commercial, business-professional uses).
- Bike racks will be provided throughout the development.

- All truck loading and unloading docks will be equipped with one 110/208 volt power outlets for every two-dock doors. Signs will be posted stating "Diesel trucks are prohibited from idling more than five minutes and trucks requiring auxiliary power shall connect to the 110/208-volt outlets to run auxiliary equipment."
- Electrical outlets will be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment. Installation of a gas outlet in the rear of residential buildings will be required for the use of outdoor cooking appliances, such as gas burning barbeques.
- Installation of low nitrogen oxide (NO_X) hot water heaters will be required for residences.
- Notices will be provided to homebuyers of incentive and rebate programs available through SDG&E or other providers that encourage the purchase of electric landscape maintenance equipment.
- Only natural-gas fireplaces will be permitted in residential uses.
- Two conductive/inductive electric vehicle charging stations will be provided in a commercial land use space. Signage prohibiting parking for non-electric vehicles in the designated parking spaces will be installed.
- Chemical feed addition at the pump station will be included to minimize odors. A back-up chemical injection system will be included for redundancy.

7.2.5 Design Considerations for Biological Resources – Construction

- Brushing, clearing, and grading activities will not be permitted during the avian breeding season (February 15 through August 31).
- Native topsoil (top three to five inches) will be salvaged and stockpiled within a disturbed on-site location. Stockpiles will not be greater than six feet high and will not be mixed with other excavated materials. Following completion of construction activities, stockpiled native topsoil will be re-spread as applicable.
- Dirt storage piles will be stabilized by chemical binders, tarps, fencing or other erosion control.
- Temporary protective fencing will be used to keep construction equipment and people out of sensitive habitats that are not proposed to be graded.
- Grading will be terminated if winds exceed 25 mph.
- The Project will comply with seasonal grading restrictions during the rainy season (October 1 to April 30) for applicable locations/conditions.
- Project landscaping will include native vegetation and drought tolerant plant materials.
- Storm water and non-storm water flows will be properly managed to minimize runoff.
- Erosion control/stabilizing measures, such as geotextiles, mats, plastic sheets/tarps, fiber rolls, soil binders, or temporary hydroseeding (or other plantings) established prior to October 1 in appropriate areas (e.g., disturbed areas and graded slopes), will be used.
- Sediment controls will be used to protect the construction site perimeter and prevent off-site sediment transport, including measures such as temporary inlet filters, silt fence, fiber rolls, gravel bags, temporary sediment basins, check dams, street sweeping/vacuuming, energy dissipators, stabilized construction access points/sediment stockpiles, and properly fitted covers for sediment transport vehicles.

7.2.6 Design Considerations for Biological Resources – Operation

- The proposed storm drain system will accommodate peak 100-year storm flows and be designed so that off-site flows from the west do not comingle with on-site flows (except for drainage from the northernmost Caltrans storm drain tributary to the site).
- Appropriate energy dissipation facilities (e.g., riprap aprons) will be used at the proposed discharge locations.
- The Project will replace the North Pankey Bridge and realign/raise applicable portions of Pankey Road, as well as raise applicable graded pad elevations such that all proposed roadways, bridges, and graded pads will be located outside of the mapped Horse Ranch Creek and San Luis Rey River 100-year floodplains.
- Lighting will be shielded to minimize light impacts to adjacent riparian and other sensitive habitats and no buildings will be allowed within limited building zones.
- The Project will provide a 25- to 100-foot buffer between riparian areas and proposed development.
- Biological open space areas will be fenced off from the proposed development.
- Signage will be placed along the edge of the biological open space area to deter human incursion.
- Open space areas will be preserved within an easement and will be subject to an RMP.
- The amount of hazardous materials used and stored on site will be minimized, and storage/use locations will be restricted to areas at least 50 feet from storm drains and surface waters.

7.2.7 Design Considerations for Transportation/Traffic – Construction

- The Proposed Project will include the preparation and approval of a TCP, including measures to reduce traffic delays and minimize public safety impacts, such as the use of flagpersons, traffic cones, detours and advanced notification signage, pedestrian/equestrian detours, movement restrictions, and temporary lane closures. In addition, the construction contractor will provide a means for public liaison/contact information for public inquiries and concerns.
- Grading will be balanced on site, with no import, and potential export restricted to oversized rock transfer to Granite Construction, approximately 0.3 mile east of the Project.
- Pankey Road's intersections with Pala Mesa Drive, SR-76, and Shearer Crossing will be signalized under Existing Plus Project conditions.

7.2.8 Design Considerations for Transportation/Traffic – Operation

- Bicycle spaces shall conform to the standards provided within the County Zoning Ordinance Sections 6758-6783, 6787, and 6792.

7.2.9 Design Considerations for Climate Change – Operation

- The Proposed Project will be designed in accordance with the Building Industry Association's California Green Builder (CGB) program.
- The Project will exceed the current 2008 California Energy Code's residential and non-residential efficiency standards by 15 percent through improved HVAC systems and

duct seals; enhanced ceiling, attic and wall insulation; Energy Star appliances; high-efficiency water heaters; energy-efficient three-coast stucco exteriors; energy-efficient lighting; and high efficiency window glazing.

- The Project will reduce the overall use of potable water within each home by 20 percent by including advanced plumbing systems, such as parallel hot water piping or hot water recirculation systems, and fixtures such as low flow toilets, water-saving showerheads and kitchen faucets, and buyer-optional high-efficiency clothes washers.
- The Project's outdoor landscaping plan will minimize turf, maximize drought-tolerant plants, and incorporate weather-based irrigation controllers, multi-programmable irrigation clocks, and high-efficiency drip irrigation systems. At the time of final inspection, a manual shall be placed in each building that includes, among other things, information about water conservation.
- In accordance with CalGreen criteria and state and local laws, at least 50 percent of on-site construction waste and ongoing operational waste will be diverted from landfills through reuse and recycling. To further minimize waste, the Project will incorporate recycled materials for flooring, and certified sustainable wood products and other recycled or rapidly renewable building materials where possible. Areas for storage and collection of recyclables and yard waste would be provided for each residence.
- To maximize shade and reduce heat island effects, the landscape plan will include strategic location of deciduous trees and other vegetation. Impervious surfaces, including paved parking areas, will also be minimized and pervious pavers used instead where practical. No CFC-based refrigerants will be used, and interior finishes, adhesives, sealants, paints and coatings, and carpet systems will be low in VOCs, and meet the testing and product requirements of one or more nationally recognized green product labeling programs. Compliance with these requirements of the CGB program shall be verified through documentation.

7.2.10 Design Considerations for Geologic Hazards – Construction

- Project grading, excavation and construction activities (including all on- and off-site areas) will be subject to on-the-ground geotechnical observations and testing by the Project Geotechnical Engineer to verify or (if applicable) modify the design measures and recommendations identified in the Project geotechnical investigations, based on site-specific conditions.
- The Project design will incorporate measures to accommodate projected seismic loading pursuant to recommendations in the Project geotechnical investigations and the on-the-ground observations/testing noted above, as well as applicable seismic elements of the IBC and County Building Code. Specifically, such measures will include incorporating the recommended peak ground acceleration levels, as well as parameters related to subsurface profile types, acceleration and velocity coefficients, seismic zone, and seismic source (including type and distance).
- Based on geotechnical recommendations and on-the-ground observations/testing as noted above, standard measures will be implemented to reduce the potential for liquefaction and related effects in applicable areas, including efforts such as removal/replacement of unsaturated soils, vibro-compaction of saturated materials, deep soil mixing (i.e., introducing

cement to consolidate loose soils), and the use of stone or sand columns and/or vibro-replacement/densification techniques.

- Based on geotechnical recommendations and on-the-ground observations/testing as noted above, if expansive soils are determined to be present on the Project site or at the locations of off-site facilities in areas that could pose a risk to life or structures, standard measures will be implemented to address related potential impacts. Specifically, this may include efforts such as burial in deeper fills, use of stiffer slab/foundation design, presaturation, overexcavation, or other IBC-recommended measures.
- Based on geotechnical recommendations and on-the-ground observations/testing as noted above, standard measures will be implemented to address potential impacts related to compression and settlement in potentially susceptible areas including fill, topsoil/colluvium, alluvium and weathered terrace deposits. Depending on site-specific conditions, this may include removal and recompaction or replacement of compressible deposits with engineered fill, and/or placement of settlement monuments and related monitoring in applicable areas after completion of Project grading and prior to construction of proposed improvements. Monitoring of the settlement monuments will be conducted to verify when settlement ceases or is no longer a hazard to Project facilities, with 13 preliminary settlement monument locations identified in areas of substantial alluvial deposits (Figure 3.1.2-1, Geologic Map). Associated monitoring is anticipated to extend over a period of approximately three to six months, and could potentially extend up to one year locally. Once it is determined that significant settlement is no longer occurring in the monitored areas, proposed construction of Project improvements will be allowed to commence.
- Based on geotechnical recommendations and on-the-ground observations/testing as noted above, the proposed Pankey Road bridge foundation design (consisting of driven plies or cast-in-drilled-hole piles) would be verified or modified as necessary to ensure conformance with all applicable regulatory requirements and industry standards.
- Based on geotechnical recommendations and on-the-ground observations/testing as noted above, applicable standard measures will be implemented to address the potential generation and use/disposal of oversize materials, including efforts such as selective disposal (e.g., burial in deeper fills), use in landscaping/decorative efforts or off-site disposal.
- Based on geotechnical recommendations and on-the-ground observations/testing as noted above, standard industry measures will be implemented to address potential effects from corrosive soils, including efforts such as: (1) removal of unsuitable deposits and replacement with non-corrosive fill; (2) use of corrosion-resistant construction materials (e.g., coated or non-metallic facilities); and (3) installation of cathodic protection devices (e.g., use of a more easily corroded "sacrificial metal" to serve as an anode and draw current away from the structure to be protected).

7.2.11 Design Considerations for Hazards and Hazardous Waste – Construction

- The RC Flyers Club is being notified to either repair the tractor so that it is not leaking oil or remove it from the premises as a matter of Project design.
- Upon removal of storage containers from the Project site, areas beneath the containers will be inspected for hydrocarbon stined or odorous soils. If such soils are discovered, they will be removed in accordance with standard procedures as part of Project design.

- If proposed grading at the residential site (corresponding to Boring B-4) requires a cut of two feet or more, the applicant or successors in assigns shall perform further testing to determine the contamination of Dieldrin. If soil removal is required based on the results of testing, it shall be completed in accordance with USEPA and/or DTSC standards.

7.2.12 Design Considerations for Hazards and Hazardous Waste – Operation

- A minimum of 100 feet of fuel treatment will be placed around all structures that abut flammable native vegetation located north and east of the Project. The first 50 feet from a structure will be landscaped and irrigated, with an additional 50 feet of fuel treatment (non-irrigated thinning zone). On the west and south sides of the project, 75 feet of fuel treatment will provide fire protection and reduce the fire threat to less than significant levels.
- A 6-foot high and approximately 2,300-foot long fire wall would be located on the southernmost developable portion of PA 2 and an approximately 450-foot long wall would be located on the northern boundary of PA 5. Both barriers would be of non-combustible solid wood and or tempered glass (also non-combustible and solid).
- All newly constructed structures will be built to "Enhanced" building requirements, as specified in the FPP. The installation of automatic interior sprinkler systems (National Fire Protection Association – NFPA Standard 13R – Standard for the Installation of Sprinkler Systems in Residential Occupancies Up To and Including Four Stories in Height) will be required. Tempered glass will be used in at least one panel of all windows and openings in the outer walls.
- Per the Fire Code Amendments of January 28, 2008, all buildings and structures will be set back a minimum of 30 feet from the property line unless the County Zoning Ordinance requires a greater minimum. When the property line abuts a roadway, the setback will be measured from the centerline of the roadway. All buildings located along the western project boundary will be set back from the boundary a minimum of 75 feet to allow space for fuel treatment as discussed above. All buildings will be located outside of fuel treatment zones.
- Additional features include minimum street widths and turning radii for streets and cul-de-sacs, all-weather road paving capable of supporting fire apparatus, fire access roadways throughout the development free of speed control devices, clear street signs and marking, a lighted directory map at each driveway entrance, minimum setbacks if gates are proposed, and a continuous water supply.
- Buildings will be no more than 35 feet in height above grade, unless otherwise approved by NCFPD. Architectural projections may extend above 35 foot height requirement, subject to NCFPD review and approval. Unless NCFPD acquires upgraded facilities/equipment or otherwise determines greater heights may be safely allowed, residential structures with pitched roofs are limited to a top of fascia height of 24 feet and a topmost ridgeline of 35 feet and non-residential buildings with flat roofs over 24 feet will require an exterior ladder at that point in order to reach the roof.
- If fencing will be located within a brush management zone, the appearance may remain rustic, but materials will be non-combustible and require a minimum one-hour fire resistance rating, such as wood treated with a fire-retardant coating or Class A fire-rated composite or treated wood.
- Site furnishings in brush management zones will be fire resistant or fire proof.

- Only plant species listed in the County of San Diego PDS Approved Plant List will be used. Other recommended plant species meeting the criteria for fire resistive plant characteristic may be planted within any fuel treatment zone only after these plants have been certified by the Project Applicant's landscape architect and fire consultant in conjunction with the NCFPD Fire Marshal.
- Each lot owner will be individually responsible for fuel treatment on property lots, including all measures included in the FPP. Property owners will be members of a legally constituted HOA, which will support the maintenance of common areas (including roadsides) in perpetuity. Refer to the FPP (Appendix K) for specific requirements for the ongoing fuel modification maintenance.

7.2.13 Design Considerations for Hydrology/Water Quality – Construction

Erosion/Sedimentation

- The Project will comply with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) during all grading and land-disturbance activities. This includes preparation of a Construction Site Monitoring Plan (CSMP), a Risk Assessment to determine the Project's Risk Level (1, 2 or 3), and appropriate Risk Level Requirements as outlined in the Construction General Permit. Prior to land disturbance activities, a SWPPP will be prepared by a qualified SWPPP preparer, with this plan to be located on site at all times.
- If the site is determined to be a Risk Level 2 or 3 site, a REAP will be prepared and implemented 48 hours prior to any likely precipitation event (50 percent or greater probability of producing precipitation in the Project area). The REAP shall be prepared for all phases of construction and implemented for construction activities to provide enhanced erosion and sediment control measures during predicted storm events.
- The Project will comply with seasonal grading restrictions during the rainy season (October 1 to April 30) for applicable locations/conditions.
- Existing vegetation will be preserved wherever feasible, and phased grading schedules will be used to limit the area subject to erosion at any given time.
- Storm water and non-storm water flows will be properly managed to minimize runoff.
- Erosion control/stabilizing measures, such as geotextiles, mulching, mats, plastic sheets/tarps, fiber rolls, soil binders, compost blankets, soil roughening, and/or temporary hydroseeding (or other plantings) in appropriate areas (e.g., disturbed areas and graded slopes), will be used.
- Sediment controls will be used 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 bag berms, compost bags/berms, temporary sediment basins, check dams, street sweeping/vacuuming, ATS (if applicable based on risk assessment), energy dissipators, stabilized construction access points/sediment stockpiles, and properly fitted covers for sediment transport vehicles.
- BMP materials will be stored in applicable on-site areas to provide "standby" capacity adequate to provide complete protection of exposed areas and prevent off-site sediment transport.

- Full erosion control will be provided in disturbed areas not scheduled for additional activity for 14 or more consecutive calendar days.
- Appropriate training will be provided for the personnel responsible for BMP installation and maintenance.
- Solid waste management efforts, such as proper containment and disposal of construction debris, will be used.
- The Project will comply with local dust control requirements.
- Permanent landscaping, with emphasis on native and/or drought-tolerant varieties, will be installed as soon as feasible after construction.
- Appropriate monitoring and maintenance efforts (e.g., prior to and after storm events) will be implemented to ensure proper BMP function and efficiency.
- Monitoring/reporting and post-construction management programs will be implemented per NPDES and/or County requirements.
- Additional BMPs as necessary will be implemented to ensure adequate erosion and sediment control (e.g., enhanced treatment and more detailed monitoring/reporting).
- The Project will implement sampling/analysis, monitoring/reporting and post-construction management programs per NPDES and/or County requirements.
- The Project will implement additional BMPs as necessary to ensure adequate erosion and sediment control (e.g., enhanced treatment and more detailed monitoring/reporting).

Hazardous Materials

- The amount of hazardous materials used and stored on site will be minimized, and storage/use locations will be restricted to areas at least 50 feet from storm drains and surface waters.
- Rose (e.g., on pallets), covered, and/or enclosed storage facilities will be used for all hazardous materials.
- Accurate and up-to-date written inventories and labels will be maintained for all stored hazardous materials.
- Berms, ditches, and/or impervious liners (or other applicable methods) will be used 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.
- Warning signs will be placed in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal.
- All construction equipment and vehicles will be properly maintained.
- Paving operations will be restricted during wet weather, appropriate sediment control devices/methods will be used downstream of paving activities, and wastes and/or slurry from sources including concrete, dry wall and paint will be contained or disposed of by using properly designed and contained washout areas.
- Training for applicable employees will be provided in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill.
- Absorbent and clean-up materials will be stored in readily accessible on-site locations.
- Portable wastewater facilities will be properly located, maintained, and contained.

- Solid waste management efforts such as proper containment and disposal of construction debris, and restricting construction debris storage areas to appropriate locations at least 50 feet from storm drain inlets and water courses will be implemented.
- A licensed waste disposal operator will be employed to regularly (at least weekly) remove and dispose of construction debris at an authorized off-site location.
- Recycled or less hazardous materials will be used, wherever feasible.
- Regulatory agency telephone numbers and a summary guide of clean-up procedures will be posted in a conspicuous on-site location.
- Hazardous material use/storage facilities and operations will be regularly (at least weekly) monitored and maintained to ensure proper working order.
- Additional BMPs will be implemented as necessary (and in conformance with applicable requirements) to ensure adequate hazardous material control.

Demolition-related Debris Generation

- Appropriate (i.e., non-hazardous) construction debris will be recycled for on- or off-site use whenever feasible.
- Dust-control measures such as watering to reduce particulate generation will be used for pertinent locations/activities (e.g., concrete removal).
- Appropriate erosion prevention and sediment control measures will be used downstream of all demolition activities.
- The Project will conform with applicable requirements related to the removal, handling, transport and disposal of hazardous materials generated during demolition, including efforts such as implementing appropriate sampling and monitoring procedures; proper containment of contaminated materials during construction; providing protective gear for workers handling contaminated materials; ensuring acceptable exposure levels; and ensuring safe and appropriate handling, transport and disposal of hazardous materials generated during Project construction.

Disposal of Extracted Groundwater

- Dewatering operations conducted during Project construction, if required, will conform with all applicable treatment and disposal requirements under the NPDES 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). This may include standard measures such as: (1) using appropriate erosion and sediment controls in applicable areas/conditions (e.g., disposal of extracted groundwater on slopes or graded areas); (2) testing extracted groundwater for appropriate contaminants prior to discharge; and (3) treating extracted groundwater prior to discharge, if required, to provide conformance with applicable Groundwater Permit discharge criteria, through methods such as filtration, aeration, adsorption, disinfection, and/or conveyance to a municipal wastewater treatment plant.

7.2.14 Design Considerations for Hydrology/Water Quality – Operation

Runoff Rates/Amounts

- The proposed storm drain system will accommodate peak 100-year storm flows and be designed so that off-site flows from the west do not comingle with on-site flows (except for minor drainage from the northernmost Caltrans storm drain tributary to the site).
- Appropriate energy dissipation facilities (e.g., riprap aprons) will be used at the proposed discharge locations.

Hydromodification

- The Project design will include four appropriately located and sized detention basins to address post-development flows and provide conformance with County of San Diego Final Hydromodification management Plan, pursuant to recommendations in the Project Preliminary Hydromodification Management Study.

Floodplains/Flooding

- The Project will replace the North Pankey Bridge and realign/raise applicable portions of Pankey Road, as well as raise applicable graded pad elevations such that all proposed roadways, bridges, and graded pads will be located outside of the mapped Horse Ranch Creek and San Luis Rey River 100-year floodplains.

Water Quality

- **LID Site Design BMPs**
  - Well-draining (Type A and B) soils, significant trees, critical areas (e.g., floodplains and steeper slopes), and areas near drainages will be preserved wherever feasible to provide natural buffer zones.
  - Appropriate set-backs from drainages will be provided for development envelopes, and construction equipment access will be restricted in planned green/open space areas.
  - Clustered lot designs will be used and landscaping will be provided in applicable paved areas such as parking lots.
  - Curb cuts will be provided to drain applicable areas to landscaping.
  - Pitched and/or permeable pavement will be used in appropriate areas to drain impervious surfaces to landscaping.
  - Downspouts and cisterns/rain barrels will be provided to direct drainage into vegetated areas where deemed appropriate.
  - Appropriate soil amendments will be used, native soils will be reused, ‘smart’ irrigation systems (e.g., appropriate water schedules and rain/pressure-sensitive shutoff devices) and appropriate landscaping, including street trees, will be installed.

- **Source Control BMPs**
  - "No dumping" stencils/tiles and/or signs with prohibitive language (per current County guidelines) will be installed at applicable locations such as drainages, storm drain inlets, catch basins and public access points to discourage illegal dumping.
  - Outdoor material storage areas, food service facilities, water features, loading docks, maintenance bays, vehicle/equipment wash areas, outdoor processing areas, and non-retail fueling areas (if proposed) will be designed to reduce pollutant discharge through methods such as: (1) providing appropriate storage facilities for hazardous materials (e.g., cabinets, sheds or similar structures that prevent runoff contact and discharge to storm drains; (2) providing appropriate on-site pre-treatment and/or directing flows to the sanitary sewer; (3) installing impermeable floors, covers and secondary containment structures such as berms, dikes, or curbs; and (4) using pavement grades, containment or other appropriate measures to prevent run-on.
  - Trash storage areas will be designed to reduce pollutant discharge through methods such as paving with impervious surfaces, precluding run-on, installing screens or walls to prevent trash dispersal, providing attached lids and/or roofs for trash containers to prevent direct precipitation contact, and providing pre-treatment prior to discharge of associated runoff to the sanitary sewer.
  - Regular street sweeping will be implemented in areas such as plazas, sidewalks and parking lots, and associated debris and washwater will be precluded from entering the storm drain system.
  - Site landscaping will be designed to maximize the use of appropriate native and/or drought-tolerant varieties, and use efficient irrigation systems as described above for Site Design and LID BMPs.
  - Drainage from private roadways will be directed into water quality basins or other appropriate treatment control BMP.
  - Whenever feasible, driveways will be designed to include shared access, flared lanes (i.e., a single lane at the street), wheelstrips (i.e., pavement only under tires), and/or drainage to landscaped areas prior to entering the storm drain system.
  - Landscaping will be incorporated into parking area drainage systems, wherever applicable.
  - Manufactured or disturbed slopes will be revegetated/stabilized as soon as feasible, and appropriate drainage structures will be used to preclude concentrated flows on slopes.
  - Pet waste disposal bags and related educational materials will be provided at trail heads, open space corridors, or other applicable locations to encourage clean-up efforts.
  - Applications of chemical pesticides, herbicides and fertilizers will be minimized; licensed professionals will be used for application of such chemicals in common landscaped areas; the rates and times of fertilizer applications will be restricted to minimize potential discharge in irrigation or precipitation runoff; and native landscaping will be used to reduce fertilizer use.
  - An educational program will be implemented for home and business owners/tenants to prevent illegal or inadvertent pollutant discharge, including the distribution of materials regarding dry-clean methods, protection of storm drain inlets, prevention/proper disposal of pet wastes, proper handling/disposal of hazardous wastes, water conservation, swimming pool chemical use/maintenance, IPM methods, employee training, secondary

containment, minimizing hazardous material use, proper clean-up procedures, street and parking lot sweeping, and proper collection/disposal of wash water.

- **LID and Treatment Control BMPs**
  - Water quality basins or BMPs of equivalent effectiveness (e.g., underground storage devices, mechanical control devices, etc.), will be used to treat runoff from most of the site prior to discharge, Attachment C of the Project SWMP in Appendix M).
  - Media filters will be used to treat Project runoff from applicable areas not covered by the described water quality basins. Specifically, this includes areas around the proposed intersection of SR-76/Pankey Road, with a series of curb inlets proposed to direct associated flows to the filters prior to discharge into the Project storm drain system (refer to Attachment C of the Project SWMP In Appendix M).
  - A baffle separator (or equivalent device) will be used to treat runoff from Shearer Crossing and the proposed commercial development south of SR-76. In addition, one or more supplemental treatment devices will also be required in the commercial areas to ensure regulatory conformance, potentially including media filters, biofilters, vegetated swales, bioretention facilities, and/or infiltration devices as outlined in the Project SWMP. The specific types and locations of these additional BMPs will be determined after completion of preliminary site design for the noted commercial areas.
  - Monitoring and maintenance efforts for the water quality basins will be implemented by the Project owner(s) through entering into a written BMP Maintenance Agreement with the County. Specific monitoring and maintenance efforts associated with proposed BMP facilities and programs include monitoring and reporting to document that programs/activities are being implemented as designed, inspection and maintenance of physical facilities, and making necessary modifications to ensure that intended BMP functions and regulatory requirements are being met.