

# MITIGATION MONITORING AND REPORTING PROGRAM

State Clearinghouse No: 2017031020

**PROJECT NAME:** Trails at Santiago Creek Specific Plan

**PROJECT LOCATION:** City of Orange

**PROJECT DESCRIPTION:** The Trails at Santiago Creek Specific Plan proposes the transformation of a rock and concrete materials recycling and backfilling operation to an environmentally enhanced, ecologically friendly open space environment embracing a well-planned and attractive single-family detached residential neighborhood. The project proposes the development of 128 dwellings on approximately 40.7 acres of the approximately 109.2-acre site, with varying lots sizes including lots larger than 8,000 square feet. The majority of the project site (62.7 percent) is intended for the enhancement and preservation of the natural greenway/open space and Santiago Creek environs, as well as re-establishing open grasslands in areas that have been denuded by the project site’s history of commercial operations, totaling approximately 68.5 acres. Recreational trails will provide public access to the enhanced revegetated interior of the site.

**LEAD AGENCY:** City of Orange

**CONTACT PERSON/ TELEPHONE NO.:** Robert Garcia, Senior Planner / 714.744.7231

**APPLICANT:** Milan Capital Management

**CONTACT PERSON/ TELEPHONE NO.:** Christopher Nichelson, President / 714.687.0000

**TIME FRAME:** Where the time frame required for compliance with a mitigation measure is prior to issuance of a particular permit, the responsible party for monitoring shall ensure compliance at any time prior to issuance of the permit. Where the time frame required for compliance with a mitigation measure is “during” a particular activity, such as construction, the party responsible for monitoring shall monitor periodically during that time frame.

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<b>Aesthetics</b>						
MM AES-3	Prior to issuance of building permits, the project applicant shall prepare and submit lighting plans to the City of Orange for review and approval. The plans shall demonstrate that all exterior lighting fixtures comply with Orange Municipal Code Chapter 17.12.030, which requires that new light fixtures be directed, controlled,	Prior to issuance of building permits; Applicant	Prior to issuance of building permits; City of Orange			

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	screened or shaded in such a manner as not to shine directly on surrounding premises. Additionally, lighting on any residential property must be controlled so as to prevent glare or direct illumination of any public sidewalk or thoroughfares.					
<b>Agriculture and Forestry Resources</b>						
No mitigation is necessary.						
<b>Air Quality</b>						
<b>MM AIR-1a</b>	During construction, all equipment shall be maintained in good operating condition so as to reduce emissions. The construction contractor shall ensure that all construction equipment is properly serviced and maintained in accordance with the manufacturer's specifications. Maintenance records shall be available at the construction site for City verification.	During construction, including site preparation and grading activities; Applicant	During construction, including site preparation and grading activities; City of Orange			
<b>MM AIR-1b</b>	All paints and coatings shall meet or exceed performance standards noted in SCAQMD Rule 1113. To ensure compliance with SCAQMD Rule 1113, the following volatile organic compound (VOC) control measures shall be implemented during architectural coating activities: a) Use paints with a VOC content of no more than 50 grams per liter for both interior and exterior coatings. b) Keep lids closed on all paint containers	During painting and coating activities; Applicant	During painting and coating activities; City of Orange			

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	<p>when not in use to prevent VOC emissions and excessive odors.</p> <p>c) Use compliant low VOC cleaning solvents to clean paint application equipment.</p> <p>d) Keep all paint and solvent laden rags in sealed containers to prevent VOC emissions.</p>					
<b>MM AIR-1c</b>	<p>Prior to the issuance of grading permits for the project, the project applicant shall include a dust control plan as part of the construction contract standard specifications. The dust control plan shall include measures to meet the requirements of SCAQMD Rules 402 and 403. Such basic measures may include but are not limited to the following:</p> <p>a) All haul trucks shall be covered prior to leaving the site to prevent dust from impacting the surrounding areas.</p> <p>b) Moisten soil each day prior to commencing grading to depth of soil cut.</p> <p>c) Water exposed surfaces at least three times a day under calm conditions, and as often as needed on windy days or during very dry weather in order to maintain a surface crust and minimize the release of visible emissions from the construction site.</p> <p>d) Treat any area that will be exposed for extended periods with a soil conditioner to stabilize soil or temporarily plant with vegetation.</p> <p>e) Use street sweepers that comply with</p>	<p>Prior to issuance of grading permits; Applicant</p>	<p>Prior to issuance of grading permits; City of Orange</p>			

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	<p>SCAQMD Rules 1186 and 1186.1.</p> <p>f) All contractors shall turn off all construction equipment and delivery vehicles when not in use, or limit on-site idling to no more than 5 minutes in any one hour.</p> <p>g) On-site electrical hook ups to a power grid shall be provided for electric construction tools including saws, drills, and compressors, where feasible, to reduce the need for diesel powered electric generators.</p> <p>h) Traffic speeds on all unpaved roads to be reduced to 15 miles per hour or less.</p> <p>i) Sweep streets at the end of the day if visible soil is carried onto adjacent public paved roads.</p>					
<b>MM AIR-1d</b>	<p>Prior to and during grading activities, the project applicant shall comply with South Coast Air Quality Management District Rule 403 as follows:</p> <ul style="list-style-type: none"> <li>The applicant shall submit a fully executed Large Operation Notification (Form 403 N) to the SCQAMD Executive Officer within 7 days of qualifying as a large operation. The form shall include the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site.</li> </ul>	<p>Prior to and during grading activities; Applicant</p>	<p>Prior to and during grading activities; City of Orange</p>			

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	<ul style="list-style-type: none"> <li>• Maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request</li> <li>• Install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities</li> <li>• Identify a dust control supervisor that (1) is employed by or contracted with the property owner or developer; (2) is on the site or available on-site within 30 minutes during working hours; (3) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements; (4) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and (5) will notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation.</li> </ul>					
<b>MM AIR-1e</b>	Prior to and during grading activities, the project applicant shall implement the following dust control measures for large operations, as applicable, pursuant to South Coast Air Quality Management District Rule 403:	Prior to and during grading activities; Applicant	Prior to and during grading activities; City of Orange			

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	<p><b>Earth Moving (except construction cutting and filling areas, and mining operations)</b></p> <p>1a. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; or</p> <p>1a-1. For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p> <p><b>Earth Moving—Construction Fill Areas</b></p> <p>1b. Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by</p>					

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	<p>ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p> <p><b>Earth Moving—Construction Cut Areas and Mining Operations</b></p> <p>1c. Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.</p> <p><b>Disturbed Surface Areas—Completed Grading Areas</b></p> <p>2a/b. Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an</p>					

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	<p>application of water at least twice per day to at least 80 percent of the unstabilized area.</p> <p>2c. Apply chemical stabilizers within five working days of grading completion; OR</p> <p>2d. Take actions (3a) or (3c) specified for inactive disturbed surface areas.</p> <p><b>Inactive Disturbed Surface Areas</b></p> <p>3a. Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; or</p> <p>3b. Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; or</p> <p>3c. Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR</p> <p>3d. Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.</p>					



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	<p><b>Unpaved Roads</b></p> <p>4a. Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8-hour work day]; or</p> <p>4b. Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; or</p> <p>4c. Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p> <p><b>Open Storage Piles</b></p> <p>5a. Apply chemical stabilizers; or</p> <p>5b. Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; or</p> <p>5c. Install temporary coverings; or</p> <p>5d. Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.</p> <p><b>All Categories</b></p> <p>6a. Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in this mitigation measure may be used.</p>					

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<b>MM AIR-1f</b>	<p>Prior to and during grading activities, the project applicant shall implement the following contingency control measures for large operations, as applicable, pursuant to and when required by South Coast Air Quality Management District Rule 403:</p> <p><b>Earth Moving</b></p> <p>1A. Cease all active operations; or</p> <p>2A. Apply water to soil not more than 15 minutes prior to moving such soil.</p> <p>0B. On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR</p> <p>1B. Apply chemical stabilizers prior to wind event; or</p> <p>2B. Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; or</p> <p>3B. Establish a vegetative ground cover within 21 days after active operations</p>	Prior to and during grading activities; Applicant	Prior to and during grading activities; City of Orange			

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	<p>have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; or</p> <p>4B. Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.</p> <p><b>Unpaved Roads</b></p> <p>1C. Apply chemical stabilizers prior to wind event; or</p> <p>2C. Apply water twice per hour during active operation; or</p> <p>3C. Stop all vehicular traffic.</p> <p><b>Open Storage Piles</b></p> <p>1D. Apply water twice per hour; or</p> <p>2D. Install temporary coverings.</p> <p><b>Paved Road Track Out</b></p> <p>1E. Cover all haul vehicles; or</p> <p>2E. Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.</p> <p><b>All Categories</b></p> <p>1F. Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in this mitigation measure may be used.</p>					

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<b>MM AIR-1g</b>	<p>During construction activities, all off-road equipment with engines greater than 50 horsepower shall meet either EPA or ARB Tier IV Final off-road emission standards. The construction contractor shall maintain records concerning its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information may include but are not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number.</p> <p>If engines that comply with Tier IV Final off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier IV Interim) available. For purposes of this mitigation measure, “commercially available” shall mean the availability of Tier IV Final engines taking into consideration factors such as (i) critical-path timing of construction; and (ii) geographic proximity to the project site of equipment. The contractor can maintain records for equipment that is not commercially available by providing letters from at least two rental companies for each piece of off-road equipment where the Tier IV Final engine is not available.</p>	During construction activities; Applicant	During construction activities; City of Orange			

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<b>Biological Resources</b>						
<b>MM BIO-2a</b>	<p>Prior to the issuance of any grading permit for areas supporting least Bell's vireo habitat (such as southern cottonwood-willow riparian forest), the project applicant shall obtain federal and State take authorizations via regulatory permits (such as a CWA Section 404 permit issued by the United States Army Corp of Engineers [USACE]), which will require that the U.S. Fish and Wildlife Service (USFWS) be consulted as provided for by Section 7 of the FESA (for the federally listed least Bell's vireo). The federal regulatory permits (such as CWA Section 404 permit issued by the USACE) provide a "federal nexus" by which Section 7 consultation can occur. This statute imposes the obligation on federal agencies to ensure that their actions (such as issuing federal CWA permits for this project) are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its designated critical habitat. This obligation is enforced through the procedural requirement that agencies such as the USACE initiate consultation with the USFWS on any actions that may affect a threatened or endangered species. During the FESA Section 7 consultation anticipated for this project, the USFWS will gather all relevant information concerning the proposed</p>	<p>Prior to the issuance of any grading permit for areas supporting least Bell's vireo habitat and during construction activities; Applicant</p>	<p>Prior to the issuance of any grading permit for areas supporting least Bell's vireo habitat and during construction activities; City of Orange</p>			

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	<p>project and the potential project-related impacts on the least Bell's vireo (i.e., the project applicant will submit a species-specific Biological Assessment), prepare its opinion with respect to whether the project is likely to jeopardize the continued existence of the species (i.e., the USFWS will issue a Biological Opinion), and recommend mitigation/conservation measures where appropriate. Additionally, the need for State regulatory permits (i.e., Fish and Game Code Section 1602 Streambed Alteration Agreement issued by the California Department of Fish and Wildlife [CDFW]) will require a Consistency Determination from the CDFW for the State-listed least Bell's vireo under CESA.</p> <p>In addition, the following best management practices (BMPs) will ensure that indirect impacts will not occur to the least Bell's vireo within 300 feet of occupied habitat as monitored by a certified biologist:</p> <ol style="list-style-type: none"> <li>1. Construction limits in and around least Bell's vireo potential habitat shall be delineated with flags and fencing prior to the initiation of any grading or construction activities.</li> <li>2. Prior to grading and construction a training program shall be developed and implemented to inform all workers on the</li> </ol>					

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	<p>project about listed species, sensitive habitats, and the importance of complying with avoidance and minimization measures.</p> <p>3. All construction work shall occur during the daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City.</p> <p>4. During all excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent possible. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors (i.e., least Bell's vireo territory within Santiago Creek) nearest the project site.</p> <p>5. The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the project site during all project construction.</p> <p>6. Noise from construction activities shall be limited to the extent possible through the</p>					

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	<p>maximum use of technology available to reduce construction equipment noise. Project-generated noise, both during construction and after the development has been completed, shall be in compliance with the requirements outlined in the City of Orange General Plan Noise Element to ensure that noise levels to which the riparian area is exposed do not exceed noise standards for residential areas.</p> <p>7. The project shall be designed to minimize exterior night lighting while remaining compliant with City of Orange ordinances related to street lighting. Any necessary lighting (e.g., to light up equipment for security measures), both during construction and after the development has been completed, will be shielded or directed away from Santiago Creek and are not to exceed 0.5 foot-candles. Monitoring by a qualified lighting engineer (attained by the project applicant and subject to spot checking by City Staff) shall be conducted as needed to verify light levels are below 0.5 foot-candles required within identified, occupied least Bell's vireo territories, both during construction and at the onset of operations. If the 0.5 foot-candles requirement is exceeded, the lighting</p>					



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	<p>engineer shall make operational changes or install a barrier to alleviate light levels during the breeding season.</p> <p>8. Two brown-headed cowbird traps shall be installed and maintained within the general vicinity of the habitat for five years. If equestrian trails are proposed within the project site, which may result in increased horse manure and the potential for increased foraging resources for brown-headed cowbirds, an ongoing manure management receptacle/maintenance plan shall be prepared and implemented.</p>					
<b>MM BIO-2b</b>	<p>The following shall be incorporated into the Biological Assessment as proposed mitigation for potential impacts to least Bell's vireo, subject to USFWS and CDFW approval:</p> <p>1. On- or off-site restoration or enhancement of least Bell's vireo habitat at a ratio no less than 3:1 for permanent grading impacts.</p>	<p>During preparation of Biological Assessment in areas of least Bell's vireo habitat; Applicant</p>	<p>During review of Biological Assessment; City of Orange, USFWS and CFWF.</p>			
<b>MM BIO-2c</b>	<p>All construction, grading, and fuel modification activities (i.e., thinning) shall take place outside of the least Bell's vireo breeding season (March 15 to September 15) to the greatest extent feasible. If any construction, grading, and fuel modification activities are required during the breeding season within 300 feet of potential least</p>	<p>During construction, grading or fuel modification activities if construction, grading or fuel modification</p>	<p>During construction, grading or fuel modification activities if construction, grading or fuel modification activities are proposed in areas</p>			

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	<p>Bell's vireo habitat, and pre-construction surveys determine least Bell's vireo are present, activities may continue in the presence of a biological monitor who will confirm that no work will occur within a 300-foot buffer of least Bell's vireo, and that any least Bell's vireo are not being disturbed by project activities. If any disturbance to the least Bell's vireo is detected by the biological monitor, the buffer will be increased, other disturbance minimizing measures may be implemented (e.g., visual and/or noise barrier), and/or work will cease as recommended by the monitor.</p> <p>Additional measures to be taken for all construction activities within 300 feet of potential least Bell's vireo habitat during the breeding season (March 15 to September 15):</p> <ol style="list-style-type: none"> <li>1. Pre-construction surveys shall be conducted within 1 week prior to initiation of construction activities and all results forwarded to the USFWS and CDFW. Focused surveys shall be conducted for least Bell's vireo during construction activities.</li> <li>2. If at any time least Bell's vireo are found to occur within 300 feet of construction areas, the monitoring biologist shall inform the appropriate construction supervisor to cease such work and shall</li> </ol>	<p>activities are proposed in areas supporting least Bell's vireo habitat breeding season (March 15-September 15); Applicant</p>	<p>supporting least Bell's vireo habitat breeding season (March 15-September 15); City of Orange and/or Qualified Biologist</p>			

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	<p>consult with the USFWS and CDFW to determine if work shall commence or proceed during the breeding season and, if work may proceed, what specific measures shall be taken to ensure least Bell's vireos are not affected.</p> <p>3. Installation of any noise barriers and any other corrective actions taken to mitigate noise during the construction period shall be communicated to the USFWS and CDFW.</p>					
<b>MM BIO-2d</b>	<p>Prior to the issuance of any grading permit that would remove habitat containing raptor and songbird nests, the project applicant shall demonstrate to the satisfaction of the City that either of the following have been or will be accomplished.</p> <p>1. Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds.</p> <p>2. Any construction activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) will require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are</p>	<p>Prior to the issuance of any grading permit that would remove habitat containing raptor and songbird nests; Applicant</p>	<p>Prior to the issuance of any grading permit that would remove habitat containing raptor and songbird nests; City of Orange and/or Qualified Biologist</p>			

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	detected, a buffer of at least 300 feet (500 feet for raptors) will be delineated, flagged, and avoided until the nesting cycle is complete, or as determined appropriate by the biological monitor, to minimize impacts.					
MM BIO-3	<p>Prior to the issuance of any grading permit in the areas designated as sensitive riparian communities (e.g., southern cottonwood-willow riparian forest or black willow scrub/ruderal), the project Applicant shall demonstrate to the satisfaction of the City that either of the following have been or will be accomplished:</p> <p>On- or off-site restoration or enhancement of sensitive riparian communities (e.g., southern cottonwood-willow riparian forest) at a ratio no less than 1:1 for permanent impacts. Temporary impacts will be restored to pre-project conditions (i.e., pre-project contours and revegetate with native species, where appropriate). Off-site restoration or enhancement at a ratio no less than 1:1 may include the purchase of mitigation credits at an agency-approved off-site mitigation bank (e.g., <u>Soquel Canyon Mitigation Bank</u>)<sup>1</sup>.</p>	<p>Prior to issuance of grading permit in areas designated as sensitive riparian communities (e.g., southern cottonwood-willow riparian forest or black willow scrub/ruderal); Applicant</p>	<p>Prior to issuance of grading permit in areas designated as sensitive riparian communities (e.g., southern cottonwood-willow riparian forest or black willow scrub/ruderal); City of Orange and/or Qualified Biologist</p>			

<sup>1</sup> Soquel Canyon Mitigation Bank is the only certified, California Department of Fish and Wildlife (CDFW)-approved mitigation bank whose service area extends to the project site. Currently, this bank does not have the creation credits necessary to accommodate the CDFW’s policy of “no net loss” of either wetland habitat values or acreage, nor does it sell species-specific credits (i.e., least Bell’s vireo credits).

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	If mitigation is to occur on-site and/or off-site (i.e., not an in-lieu fee program), a mitigation and monitoring plan shall be prepared. The plan shall focus on the creation of equivalent habitats within disturbed habitat areas of the project site and/or off-site. In addition, the plan shall provide details as to the implementation of the plan, maintenance, and future monitoring. Mitigation for impacts to sensitive riparian communities shall be accomplished by on- or off-site restoration and/or enhancement (e.g., transplantation, seeding, and/or planting/staking of sensitive riparian species; salvage/dispersal of duff and seed bank; removal of large stands of giant reed within riparian areas).					
<b>MM BIO-4</b>	Prior to the issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features, the project Applicant shall obtain a CWA Section 404 permit from the USACE, a CWA Section 401 permit from the RWQCB, and Streambed Alteration Agreement permit under Section 1602 of the California Fish and Game Code from the CDFW. The following would be incorporated into the permitting, subject to approval by the regulatory agencies: 1. On- or off-site restoration or replacement of USACE/RWQCB jurisdictional waters	Prior to issuance of grading permit in the areas designated as jurisdictional features; Applicant	Prior to issuance of grading permit in the areas designated as jurisdictional features; City of Orange and/or Qualified Biologist			

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	<p>of the United States/waters of the State at a ratio no less than 2:1 for permanent impacts, and for temporary impacts, restore impact area to pre-project conditions (i.e., pre-project contours and revegetate with native species, where appropriate). Off-site restoration or enhancement at a ratio no less than 2:1 may include the purchase of mitigation credits at an agency-approved off-site mitigation bank or in-lieu fee program (e.g., Soquel Canyon Mitigation Bank).</p> <p>2. On- or off-site restoration or enhancement of CDFW jurisdictional streambed and associated riparian habitat at a ratio no less than 2:1 for permanent impacts, and for temporary impacts, restore impact area to pre-project conditions (i.e., pre-project contours and revegetate with native species, where appropriate). Off-site restoration or enhancement at a ratio no less than 2:1 may include the purchase of mitigation credits at an agency-approved off-site mitigation bank (e.g., Soquel Canyon Mitigation Bank).</p>					

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<b>Cultural Resources</b>						
<b>MM CUL-1</b>	<p>In the event that buried cultural resources are discovered during construction, operations shall stop within a 50-foot radius of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist and shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.</p> <p>If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor in accordance with Public Resource Code Section 21083.1 and CEQA Guidelines</p>	During construction in the event that cultural resources are found; Applicant	During construction in the event that cultural resources are found; City of Orange and/or Qualified Archaeologist			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
				Initials	Date	Remarks
	<p>Section 15126.4 and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.</p> <p>No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.</p>					
<b>MM CUL-2</b>	<p>During the ground disturbing activities in the areas depicted in Exhibit 3.5 1, a qualified archaeological and paleontological monitor shall be present on-site to observe earthwork activities. In the event of a discovery of an archaeological or paleontological resource, the monitor shall have the discretion to halt all ground disturbing activities within 50 feet of the find until it has been evaluated for significance. If the find is determined to have archaeological or paleontological, the procedures in Mitigation Measure CUL-1 or Mitigation Measure CUL-3 shall be implemented. Monitoring may cease once all of the areas depicted in Exhibit 3.5 1 have been thoroughly disturbed</p>	<p>During the ground disturbing activities in the areas depicted in Exhibit 3.5 1; Applicant</p>	<p>During the ground disturbing activities in the areas depicted in Exhibit 3.5 1; City of Orange and/or Qualified Archaeologist/Paleontologist</p>			



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<b>MM CUL-3</b>	<p>If the subsurface excavations for this project are proposed to exceed depths of 15 feet below surface, a qualified paleontological monitor should be retained to observe such excavations, which may breach the older Quaternary Alluvium deposits. In this situation, a detailed Mitigation Monitoring Plan (MMP) or Paleontological Resource Impact Management Plan (PRIMP) should be prepared in order to set forth the observation, collection, and reporting duties of the paleontological monitor. Additional mitigation measures and procedures will be outlined in the MMP or PRIMP as needed.</p> <p>In the event that fossils or fossil-bearing deposits are discovered during construction activities that are shallower than 10 feet in depth, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. The project contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5.</p> <p>The paleontologist shall notify the appropriate agencies to determine procedures</p>	<p>During construction activities if the subsurface excavations exceed depths of 15 feet below surface; Applicant</p>	<p>During construction activities if the subsurface excavations exceed depths of 15 feet below surface; City of Orange and/or Qualified Paleontologist</p>			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
				Initials	Date	Remarks
	that would be followed before construction activities are allowed to resume at the location of the find. If the Applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the Lead Agency for review and approval prior to implementation, and the Applicant shall adhere to the recommendations in the plan.					
<b>MM CUL-4</b>	<p>In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:</p> <ol style="list-style-type: none"> <li>1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the Native American Heritage Commission (NAHC) shall identify the</li> </ol>	During construction in the event human remains are discovered; Applicant	During construction in the event human remains are discovered; City of Orange, NAHC, and/or Orange County Coroner			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
				Initials	Date	Remarks
	<p>person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:</p> <ul style="list-style-type: none"> <li>• The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;</li> <li>• The descendent identified fails to make a recommendation; or</li> <li>• The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.</li> </ul>					

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				Initials	Date	Remarks
<b>Energy</b>						
No mitigation is necessary.						
<b>Geology and Soils</b>						
<b>MM GEO-1</b>	Prior to the issuance of building permits, the project applicant shall submit a design-level Geotechnical Investigation to City of Orange for review and approval. The investigation shall be prepared by a qualified engineer and identify grading and building practices necessary to achieve compliance with the latest adopted edition of the California Building Standards Code's geologic, soils, and seismic requirements. The measures identified in the approved report shall be incorporated into the Project plans.	Prior to issuance of building permit; Applicant	Prior to issuance of building permit; City of Orange			
<b>Greenhouse Gas Emissions</b>						
No mitigation is necessary.						
<b>Hazards and Hazardous Materials</b>						
<b>MM HAZ-2a</b>	A supplemental Phase II Environmental Site Assessment shall be conducted to further delineate the vertical and lateral extent of the contamination. The proposed enclosed structures shall be situated strategically, using supplemental Phase II Environmental Site Assessment data and DTSC's review thereof, so that structures will not interfere with future remediation of any potential	Prior to issuance of building permits; Applicant	Prior to issuance of building permits; City of Orange			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
				Initials	Date	Remarks
	<p>landfill gas migration; this shall be demonstrated in connection with approval of any tentative maps for the project. Prior to issuance of building permits for dwelling units in areas of the project site where vapor intrusion has the potential to occur, the applicant shall prepare and submit plans to the City of Orange, DTSC, or the Local Enforcement Agency (which is the County of Orange Environmental Health Division) identifying vapor intrusion abatement measures for trichloroethylene (TCE) and methane. Areas where vapor intrusion has the potential to occur are those identified in the Phase II Environmental Site Assessment.</p> <p>The Phase II Environmental Site Assessment shall be conducted in substantial compliance with applicable guidance documents, including but not limited to the DTSC Advisory – Active Soil Gas Investigation and Final Guidance for Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. The Phase II Environmental Site Assessment shall use current DTSC HHRA Note 3 and Regional Screening Levels established by the U.S. Environmental Protection Agency. Following preparation of the Phase II Environmental Site Assessment, a soil risk management plan shall be prepared to address any discovery of</p>					

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	<p>previously unknown contamination and shall be submitted to DTSC. These reports shall be conducted pursuant to applicable DTSC advisories, and abatement shall be implemented as directed by DTSC. Such abatement measures may include but are not limited to vapor barriers or passive/active venting systems, as determined by the appropriate regulatory agency, unless determined not to be necessary by the City in consultation with the Local Enforcement Agency. All occupied structures within a 1,000 foot radius of the landfill shall include the following structural controls to limit the potential for landfill gas accumulation (unless such controls are determined not to be necessary by the City in consultation with the Local Enforcement Agency): (1) a geomembrane between the slab and the subgrade; (2) a permeable layer with venting pipe between the geomembrane; and (3) automatic methane gas sensors with audible alarms in the permeable layer and inside the structures. The soil risk management plan shall include, among other provisions, worker safety practices and procedures for discoveries of hazardous materials, including those already identified at the site. If DTSC concludes that additional mitigation is needed, the applicant shall work with DTSC and the City to jointly develop additional</p>					

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
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	<p>mitigation measures that meet residential standards.</p> <p>The approved abatement measures shall be incorporated into project building plans. Design plans for: 1) any occupied structures within 1,000 feet of the landfill boundary; and/or 2) structural systems to prevent gas-related hazards are required to be reviewed and approved by the Local Enforcement Agency (which is the County of Orange Environmental Health Division).</p>					
<b>MM HAZ-2b</b>	<p>Prior to issuance of grading permit for construction of the residential portion of the project, the project applicant shall retain a qualified hazardous materials contractor to remove all soil containing Total Petroleum Hydrocarbons in excess of residential development standards set forth by the California Department of Toxic Substances Control (DTSC) or other applicable regulatory agency. Soil removal and disposal shall occur in accordance with DTSC (or other applicable agency) guidelines. Additional groundwater sampling shall be conducted under the guidance of DTSC, focused on the area within 1,000 feet of the Villa Park landfill, to assess whether TPH, methane, and/or VOCs have impacted groundwater at levels that generate either significant human health or ecological risk,</p>	<p>Prior to issuance of grading permit for construction of the residential portion of the project; Applicant</p>	<p>Prior to issuance of grading permit for construction of the residential portion of the project; City of Orange</p>			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
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	<p>which was encountered at depths of 20 to 50 feet bgs. If the groundwater is affected, a multi-media risk assessment shall be conducted under the guidance of DTSC, and abatement measures as required by DTSC shall be implemented, subject to final confirmation by the City.</p> <p>The applicant shall submit documentation to the City of Orange in the form of confirmatory soil and groundwater sampling results verifying that this mitigation measure was successfully implemented as part of the grading permit application for this property. All environmental investigations, sampling and/or remediation for the project site shall be conducted under a workplan approved and overseen by a regulatory agency with jurisdiction to oversee hazardous substance cleanup, such as DTSC and/or the Regional Water Quality Control Board (RWQCB). As part of proper construction operations and maintenance, any construction areas that are found to contain contaminated soils shall be excluded using a security fence. All contaminated soils shall then be excavated and disposed of off-site in accordance with the rules and regulations of: US Department of Transportation (USDOT), USEPA, CalEPA, CalOSHA, and any local regulatory agencies. All retention and detention features used during construction would be lined to prevent infiltration through</p>					



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	contaminated soils. Post-construction retention features shall be lined to prevent infiltration of groundwater.					
<b>MM HAZ-2c</b>	Prior to commencement of any construction activities that would impact existing landfill or related gas monitoring equipment, the project applicant shall contact the City Engineer to consult with and obtain approval from the Orange County Integrated Waste Management Department for the relocation of any monitoring wells or probes that would be impacted by development on the project site.	Prior to commencement of any construction activities that would impact existing landfill or related gas monitoring equipment; Applicant	Prior to commencement of any construction activities that would impact existing landfill or related gas monitoring equipment; City of Orange			
<b>MM HAZ-5</b>	Prior to issuance of the first building permit, the applicant shall prepare and submit plans to the City of Orange for review and approval demonstrating compliance with all applicable emergency access provisions of the Fire Code. The approved plan shall be incorporated into the proposed project.	Prior to issuance of the first building permit; Applicant	Prior to issuance of the first building permit; City of Orange and/or OCFD			
<b>MM HAZ-6</b>	Prior to issuance of the first building permit, the applicant shall retain a qualified fire safety consultant to prepare a Fuel Modification Plan for the proposed project. The plan shall identify defensible space around dwelling units in accordance with City requirements. The plan shall be submitted to the City of Orange for review and approval. The approved plan shall be incorporated into the proposed project.	Prior to issuance of the first building permit; Applicant	Prior to issuance of the first building permit; City of Orange and/or OCFD			

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				Initials	Date	Remarks
<b>Hydrology and Water Quality</b>						
<b>MM HYD-1a</b>	<p>Prior to the issuance of grading permits, the project applicant shall file a Notice of Intent with and obtain a facility identification number from the State Water Resources Control Board. The project applicant shall also submit a Storm Water Pollution Prevention Plan (SWPPP) to the California State Water Resources Control Board/Santa Ana Regional Water Quality Control Board. The SWPPP that identifies specific actions and BMPs to prevent stormwater pollution during construction activities. The SWPPP shall identify a practical sequence for BMP implementation, site restoration, contingency measures, responsible parties, and agency contacts. The SWPPP shall include but not be limited to the following elements:</p> <ul style="list-style-type: none"> <li>• Comply with the requirements of the State of California's most current Construction Stormwater Permit.</li> <li>• Temporary erosion control measures shall be implemented on all disturbed areas.</li> <li>• Sediment shall be retained on-site by a system of sediment basins, traps, or other BMPs.</li> <li>• The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate discharge of materials to storm drains.</li> </ul>	Prior to the issuance of grading permits; Applicant	Prior to the issuance of grading permits; City of Orange			

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				Initials	Date	Remarks
	<ul style="list-style-type: none"> <li>BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (such as inadvertent petroleum release) is required by the Santa Ana Regional Water Quality Control Board to determine adequacy of the measure.</li> <li>In the event of significant construction delays or delays in final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.</li> </ul>					
<b>MM HYD-1b</b>	<p>Prior to the issuance of building permits, the project applicant shall submit a Water Quality Management Plan (WQMP) to the City of Orange for review and approval. The plan shall be developed using the Orange County Model Water Quality Management Plan and Technical Guidance Document. The WQMP shall identify pollution prevention measures, low impact development features, and BMPs necessary to control stormwater pollution from operational activities and facilities, identify hydromodification flow controls, and provide</p>	<p>Prior to the issuance of building permits; Applicant</p>	<p>Prior to the issuance of building permits; City of Orange</p>			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
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	<p>for appropriate maintenance over time. The WQMP shall include design concepts and BMPs that are intended to address the Design Capture Volume, more commonly referred to as the “first flush,” and remove pollutants from the design system event before entering the Municipal Separate Storm Sewer Systems (MS4). In accordance with the Regional MS4 Permit and City of Orange WQMP requirements, the use of low impact development features will be consistent with the prescribed hierarchy of treatment provided in the Permit: including techniques to infiltrate, filter, store, evaporate, or retain runoff close to the source of runoff. For those areas of the project where infiltration is not recommended or acceptable and harvest/reuse demands are insufficient, biofiltration features will be designed to treat runoff and discharge controlled effluent flows to downstream receiving waters. The project WQMP shall also include an operations and maintenance plan for the prescribed Low Impact Development (LID) features, structural BMPs, and any hydromodification controls to ensure their long-term performance. A funding mechanism for operations and maintenance shall also be prescribed.</p>					

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				Initials	Date	Remarks
<b>MM HYD-5</b>	Prior to issuance of the first Certificate of Occupancy, the applicant shall retain a qualified consultant to prepare and implement an Emergency Evacuation Plan. The plan shall identify the various types of emergency that could affect the proposed project (e.g., dam failure, earthquake, flooding, etc.) and identify procedures for the safe and orderly evacuation of the project. The plan shall require that streets be identified with clear and visible signage and, if necessary, wayfinding signage be provided to identify exit points.	Prior to issuance of the first Certificate of Occupancy; Applicant	Prior to issuance of the first Certificate of Occupancy; City of Orange			
<b>Land Use and Planning</b>						
No mitigation is necessary.						
<b>Mineral Resources</b>						
No mitigation is necessary.						
<b>Noise</b>						
<b>MM NOI-1a</b>	To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the proposed project: <ul style="list-style-type: none"> <li>The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.</li> <li>The construction contractor shall locate</li> </ul>	Prior to and during construction activities; Applicant	Prior to and during construction activities; City of Orange			

No.	Mitigation Measure	Time Frame and Responsible Party for Implementation	Time Frame and Responsible Party for Monitoring	Verification of Compliance		
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	<p>stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.</p> <ul style="list-style-type: none"> <li>• The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited.</li> <li>• The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.</li> <li>• The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.</li> <li>• The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the project site.</li> <li>• The construction contractor shall designate a noise disturbance coordinator who would</li> </ul>					

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				Initials	Date	Remarks
	<p>be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and establishment reasonable measures necessary to correct the problem. The construction contractor shall visibly post a telephone number for the disturbance coordinator at the construction site.</p> <ul style="list-style-type: none"> <li>All on-site construction activities, including deliveries and engine warm-up, shall be restricted to the hours between 7:00 a.m. and 8:00 p.m. Monday through Saturday. Construction, except emergency work, shall not be permitted on Sunday or federal holidays.</li> </ul>					
<b>MM NOI-1b</b>	<p>To reduce potential future on-site exterior traffic noise impacts at on-site receptors adjacent to East Santiago Canyon Road, the following multi-part mitigation measure shall be implemented for the proposed project:</p> <ul style="list-style-type: none"> <li>Based on SoundPlan model runs, a 6-foot high noise barrier, relative to the receptor elevation, is required to comply with the City's exterior noise standard for proposed residential uses located adjacent to East Santiago Canyon Road. The calculated noise contours are shown in Exhibit 3.12 7. In order to meet the City's exterior noise standard for community uses, a 4-</li> </ul>	Prior to issuance of building permits; Applicant	Prior to issuance of building permit; Applicant			

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	<p>foot high berm would be required along East Santiago Canyon Road; or</p> <ul style="list-style-type: none"> <li>A minimum setback distance of 164 feet from the centerline of East Santiago Canyon Road shall be incorporated into the design feature. The first row of residential uses constructed 164 feet from the centerline will also have front yards facing East Santiago Canyon Road.</li> </ul>					
<b>MM NOI-1c</b>	<p>To reduce potential future on-site interior traffic noise impacts at on-site receptors adjacent to East Santiago Canyon Road, the following multi-part mitigation measure shall be implemented for the proposed project:</p> <ul style="list-style-type: none"> <li>All proposed residential units located within 560 feet of the centerline of East Santiago Canyon Road shall include an alternate form of ventilation, such as an air conditioning system, in order to ensure that windows can remain closed for a prolonged period of time. The building plans approved by the County shall reflect this requirement.</li> <li>All second story habitable rooms of proposed residential units located within 164 feet of the centerline of East Santiago Canyon Road shall include STC 30 rated windows in facades that would be parallel and perpendicular to East Santiago Canyon Road; or,</li> <li>Upon completion of the architectural plans,</li> </ul>	Prior to issuance of building permits; Applicant	Prior to issuance of building permits; City of Orange			



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	a detailed acoustical study shall be prepared by a qualified noise analyst that analyzes the interior noise levels of the proposed residential units and provides design features to reduce the interior noise levels to within the 45 dBA CNEL standard.					
<b>Population and Housing</b>						
No mitigation is necessary.						
<b>Public Services</b>						
No new mitigation is necessary. Mitigation measures HAZ-5 and HAZ-6 are required to mitigate Impact PS-1.						
<b>Recreation</b>						
No mitigation is necessary.						
<b>Transportation</b>						
<b>MM TRANS-2</b>	Prior to issuance of building permits, the project applicant shall provide the City of Orange with fair share fees to restripe the northbound approach of Orange Park Boulevard at East Santiago Canyon Road to provide one exclusive left-turn lane and one shared left-turn/right-turn lane. The applicant's fair share responsibility for these improvements is 18.2 percent.	Prior to issuance of building permits; Applicant	Prior to issuance of building permits; City of Orange			
<b>MM TRANS-5</b>	Prior to issuance of the first certificate of occupancy, the City of Orange shall verify that the Applicant has made improvements to traffic circulation in the area and ensured that adequate ingress and egress to the project site	Prior to issuance of the first certificate of occupancy; Applicant	Prior to issuance of the first certificate of occupancy; City of Orange			

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	<p>is provided, as follows:</p> <ul style="list-style-type: none"> <li>• Project Driveway/Nicky Way at East Santiago Canyon Road: <ul style="list-style-type: none"> <li>- Construct the north leg of the intersection and provide one inbound lane and two outbound lanes (i.e., one dedicated left turn lane and one shared through/right-turn lane).</li> <li>- Widen and/or restripe East Santiago Canyon Road to provide one eastbound left-turn lane, one westbound right-turn lane and a third westbound through-lane.</li> <li>- A five-phase signal has been installed with protected left-turn phasing in the east-west direction and permissive phasing in the north-south direction.</li> </ul> </li> <li>• Cannon Street at Taft Avenue: <ul style="list-style-type: none"> <li>- Widen and/or restripe Cannon Street to provide a third northbound through lane. The third northbound through lane on Cannon Street begins after East Santiago Canyon Road and does not extend through Serrano Avenue.</li> </ul> </li> </ul>					
<b>Tribal Cultural Resources</b>						
No mitigation is necessary.						
<b>Utilities and Service Systems</b>						
No mitigation is necessary.						
<b>Wildfire</b>						
No mitigation is necessary.						