



Attachment B

**Table 1**  
**Impacts and Mitigation for the Proposed PVL Project**

Environmental Impact	Mitigation Measures
<b>Noise and Vibration</b>	
<p><u>Noise</u></p> <ul style="list-style-type: none"> <li>Noise impacts at areas along the SJBL in Riverside north of the UCR campus.</li> <li>Noise impacts for seven residential buildings and one church in the UCR area of Riverside.</li> </ul>	<p><b>NV-1:</b></p> <p>Noise barriers shall be constructed at the following locations (based on 30% Design Drawings):</p> <ul style="list-style-type: none"> <li>NB 1: 10' high and 530' long between Sta. 264+00 and Sta. 269+30</li> <li>NB 2: 13' high and 570' long between Sta. 269+30 and Sta. 275+00</li> <li>NB 3: 9' high and 680' long between Sta. 283+00 and Sta. 289+40</li> <li>NB 4: 12' high and 600' long between Sta. 289+40 and Sta. 295+40</li> <li>NB 5: 8' high and 530' long between Sta. 297+70 and Sta. 303+00</li> <li>NB 6: 8' high and 800' long between Sta. 303+00 and Sta. 311+00</li> <li>NB 7: 10' high and 800' long between Sta. 322+00 and Sta. 330+00</li> <li>NB 8: 11' high and 320' long between Sta. 331+00 and Sta. 334+20</li> <li>NB 9: 13' high and 950' long between Sta. 323+40 and Sta. 332+40</li> <li>NB 10: 13' high and 250' long between Sta. 332+80 and Sta. 334+80</li> <li>NB 11: 9' high and 310' long between Sta. 336+00 and Sta. 339+10</li> <li>NB 12: 9' high and 310' long between Sta. 339+10 and Sta. 342+20</li> <li>NB 13: 13' high and 380' long between Sta. 342+20 and Sta. 346+00</li> </ul> <p><b>NV-2:</b></p> <p>Based on the topography and engineering constraints at seven residential locations and St. George's Episcopal Church (eight properties total), the use of noise barriers will not provide adequate noise reduction. Improving the sound insulation of these properties by replacing windows facing the tracks with new sound-rated windows, as well as caulking and sealing gaps</p>



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	<p>in the building envelope, eliminating operable windows and installing specially designed solid-core doors, will reduce noise to below the FTA impact criteria, and to less than significant levels. Sound insulation for eight properties shall be provided at the following locations:</p> <ul style="list-style-type: none"> <li>o Northeast corner of the grade crossing at West Blaine Street (619 West Blaine Street)</li> <li>o Northeast corner of the grade crossing at Mount Vernon Avenue (116 East Campus View Drive)</li> <li>o Southwest corner of the grade crossing at Mount Vernon Avenue (first home on Mount Vernon Avenue)</li> <li>o Northeast corner of the grade crossing at Citrus Street (1027 Citrus Street)</li> <li>o Northeast corner of the grade crossing at Spruce Street (first two homes on Kentwood Drive)</li> <li>o Southeast corner of the grade crossing at Spruce Street (first home on Glenhill Drive)</li> <li>o St. George's Episcopal Church</li> </ul>
<p><u>Vibration</u></p> <ul style="list-style-type: none"> <li>• Vibration impacts at specific locations in the UCR area.</li> </ul>	<p><b>NV-3:</b></p> <p>Ballast Mats: A ballast mat consists of a rubber (such as shredded rubber tires), cork or other type of resilient elastomer pad that is placed under the normal ballast, ties, and rail. The ballast mat shall be placed on a concrete or asphalt layer to be most effective. Ballast mats can provide 5 to 12 dB attenuation at frequencies above 25 to 30Hz.</p> <p><b>NV-4:</b></p> <p>Resiliently Supported Ties (Under-Tie Pads): This treatment consists of resilient rubber pads placed underneath concrete ties. A resiliently supported tie system consists of concrete ties supported by rubber pads. The rails are fastened directly to the concrete ties using standard rail clips.</p> <p>* Implementation by RCTC of either one of the above described vibration mitigation measures (NV-3 or NV-4) between Sta. 263+00 and 275+00 will eliminate the 2 VdB impact predicted in the UCR area of Riverside (affecting a total of 14 homes extending approximately 1,200 feet along the eastern side of the proposed PVL alignment just south of Spruce Street and north of Highland Elementary School).</p>



Environmental Impact	Mitigation Measures
<b>Traffic and Parking</b>	
<ul style="list-style-type: none"> <li>Traffic impacts at three intersections: Cactus Avenue at Old 215, SR-74 at D Street, and Bonnie Drive at southbound I-215 ramps.</li> </ul>	<p><b>TP-1:</b> Cactus Avenue at Old 215 (for Moreno Valley/March Field Station) Reduce north/southbound Old 215's maximum green time to 15 seconds during the PM (5-6 PM) analysis hour. This will reduce delays for westbound Cactus Avenue's through movement from 240 to 116 seconds, and improve the overall intersection LOS from LOS F with 146 seconds of delay to LOS E with 72 seconds of delay, while maintaining LOS C for Old 215.</p> <p><b>TP-2:</b> SR-74 (4th Street) at D Street (for Downtown Perris Station) Reduce the maximum green time for the east/westbound SR-74 left-turn phase to 14 seconds during the PM (5-6 PM) analysis hour. The levels of service for north and southbound D Street's through/left-turn movements, and the overall intersection, will be improved beyond future levels of service without the project during the PM analysis hour with this mitigation measure.</p> <p><b>TP-3:</b> Bonnie Drive at southbound I-215 ramps (for South Perris Station) Install a new traffic signal. This will improve eastbound Bonnie Drive's right-turn movement from LOS F to LOS B during the PM (5-6 PM) analysis hour and left-turn movement from LOS F to LOS C during the AM (6-7 AM) and PM analysis hours.</p> <p>* RCTC shall design the above-proposed improvements, and execute agreements with the affected jurisdictions to provide funding for the installation of the signals or to install the signals in conjunction with the development of the project. With these mitigation measures in place, the significant impacts of the proposed project at the three above-mentioned intersections will be eliminated (out of the six locations where significant impacts are expected). At the remaining three locations where significant impacts are expected (San Jacinto and Redlands Avenues, SR-74 at northbound I-215 Off-Ramp, and SR-74 at Sherman Road), traffic signals are planned to be installed by other projects (unrelated to the PVL) as part of the future condition without the project. Therefore, no mitigation measures will need to be implemented by the proposed PVL project at these intersections. However, in the event that the signalization of these three locations by other projects (unrelated to the PVL) does not occur prior to the opening year of the PVL, the installation of traffic signals at these additional locations will be incorporated as PVL project features.</p>



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	<p><b>TP-4:</b></p> <p>RCTC shall develop a traffic management plan in consultation with local jurisdictions to minimize impacts to existing traffic levels of service. At a minimum, the traffic management plan shall address: detours; coordination with other construction projects (if applicable); length and timing of any street closures; length and timing of any grade crossing closures; coordination with police and fire departments regarding changes in emergency access routes; temporary access routes and signage if any commercial properties are affected; and contact information for RCTC and its contractors.</p>
<b>Aesthetics</b>	
<ul style="list-style-type: none"> <li>Potential to affect nighttime views during construction at the grade crossings.</li> </ul>	<p><b>AS-1:</b></p> <p>To minimize light spill over into residential areas during construction, light attenuating barriers or directed lighting shall be used.</p>
<b>Cultural Resources and Section 106 Compliance</b>	
<ul style="list-style-type: none"> <li>Undiscovered cultural resources may be impacted by construction.</li> <li>Unanticipated cultural resources and human remains may be unearthed during construction activities.</li> </ul>	<p><b>CR-1:</b></p> <p>A qualified archaeologist and a Native American monitor shall monitor ground disturbing construction activities between MP 3.50 and 4.50, and between MP 5.60 and 6.50. The monitors shall also be present at the Citrus Connection, South Perris Station and Layover Facility where excavation is anticipated to be greater than four feet. These monitors shall have the authority to temporarily halt or divert construction equipment to examine potential resources, assess significance, and offer recommendations for the procedures deemed appropriate to either further investigate or mitigate any adverse impacts. CA-RIV-2384, CA-RIV-4497/H and AE-CB-2 sites shall be avoided during project construction through the establishment of ESA and delineated by exclusionary fencing.</p> <p><b>CR-2:</b></p> <p>In the event cultural resources are encountered during construction, ground-disturbing activity shall cease in the immediate area. A qualified archaeologist shall be retained to examine the materials encountered, assess significance, and recommend a course of action to further investigate and/or mitigate adverse impacts to those resources that have been encountered. Treatment measures for any newly identified NRHP-eligible archaeological sites would be</p>



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	<p>negotiated among FTA, RCTC, the SOHP, and interested parties, in accordance with 36CFR800.13(b).</p> <p><b>CR-3:</b></p> <p>In the event that unanticipated discovery of human remains occurs during project construction, the procedures outlined in §15064.5(e) of the CEQA Guidelines shall be strictly followed. These procedures specify that upon discovery, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains can occur. The county coroner must be contacted to determine if the remains are Native American. If the remains are determined to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall identify the Most Likely Descendent (MLD). The MLD shall make recommendations for the appropriate treatment and disposition of the remains and any associated grave goods in accordance with PRC §5097.98.</p> <p><b>CR-4:</b></p> <p>Replacement of four wood box culverts (MP 1.60, 5.30, 6.11 and 18.10) and two bridges (MP 20.70 and 20.80) along the SJBL alignment shall be mitigated by detailed documentation according to Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscape Survey standards.</p> <p><b>CR-5:</b></p> <p>In the event cultural or paleontological resources are encountered during construction, ground-disturbing activity shall cease in the immediate area. A qualified archeologist (cultural resources) and/or paleontologist (paleontological resources) shall be retained to examine materials encountered, assess significance, and recommend a course of action to further investigate and/or mitigate adverse impacts to those resources that have been encountered.</p>
<b>Hazards and Hazardous Materials</b>	
<ul style="list-style-type: none"> <li>Potential to encounter contaminated soil during construction.</li> </ul>	<p><b>HHM-1:</b></p> <p>Soil contamination is suspected at the following locations:</p> <ul style="list-style-type: none"> <li>6400 Fischer Road, Riverside – diesel AST release</li> <li>13260 Highway 215, Riverside – gasoline UST release</li> </ul>



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	<ul style="list-style-type: none"> <li>○ 2 South D Street, Perris – gasoline UST release</li> <li>○ 24 D Street, Perris – gasoline UST release</li> <li>○ 101 and 102 South D Street, Perris – gasoline UST release and waste oil release</li> <li>○ 210 West San Jacinto Avenue, Perris – gasoline and diesel UST release</li> </ul> <p>Prior to construction soil characterization shall occur and includes sampling and analysis, and drilling shall be coordinated with and under the guidance of the Riverside County Department of Environmental Health. RCTC shall contract with a qualified environmental consultant to determine if the soil has been sampled, characterized and disposed of properly according to state and federal regulations.</p> <p>While detected concentrations of pesticides at the Citrus Connection and Marlborough (Hunter Park Station site) locations were below applicable regulatory screening levels, and therefore appear to be characteristic of non-hazardous waste and below the threshold of concern for risk to human health, the general recommendations from Kleinfelder’s Phase II reports are expected to be incorporated into the project Specifications should chemically-impacted soil be encountered during construction activities.</p> <p><b>HMM-2:</b></p> <p>Prior to construction RCTC shall prepare a traffic management plan. The traffic management plan shall be prepared in consultation with local jurisdictions to determine detour routes, length and timing of any closures, temporary access routes, signage, coordination with police, fire departments, and nearby schools regarding changes in emergency access routes. An additional component of the plan shall be coordinating with local emergency response agencies to identify emergency evacuation routes in the event of a wildland fire near PVL facilities. This traffic management plan is the same as the traffic management plan required by Mitigation Measure TP-4.</p>
<b>Biological Resources</b>	
<ul style="list-style-type: none"> <li>● Impacts to habitat within both USACE and CDFG jurisdictional areas may occur in areas where culvert work would take place.</li> </ul>	<p><b>BR-1:</b></p> <p>The project biologist shall prepare and conduct pre-construction training for project personnel prior to any ground disturbing activities. At a minimum, the training shall include a description of the target species of concern, its habitats, the general provisions of the ESA and the MSHCP,</p>



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<ul style="list-style-type: none"> <li>Potential impacts to threatened or endangered species.</li> </ul>	<p>the need to adhere to the provision of the MSHCP, the penalties associated with violating the provisions of the ESA, the general measures that are being implemented to conserve target species of concern as they relate to the project, any provisions for wildlife movement, and the access routes to and from project site boundaries within which the project activities must be accomplished.</p> <p><b>BR-2:</b></p> <p>Equipment storage, fueling and staging areas shall be located to minimize the risks of direct drainage into riparian areas or other environmentally sensitive habitats. The project specific SWPPP shall identify appropriate construction related BMPs (such as drip pans, straw wattles, and silt fence) to control anticipated pollutants (oils, grease, etc.).</p> <p><b>BR-3:</b></p> <p>Stockpiling of materials shall be limited to disturbed areas without native vegetation, areas to be impacted by project development or in non-sensitive habitats. These staging areas shall be approved by the project biologist, and shall be located more than 500 feet from environmentally sensitive areas.</p> <p><b>BR-4:</b></p> <p>“No-fueling zones” shall be established at least 10 meters (33 feet) from drainages and fire sensitive areas.</p> <p><b>BR-5:</b></p> <p>The project biologist shall monitor construction activities at a minimum of three days per week throughout the duration of the project to ensure mitigation measures are being employed to avoid incidental disturbance of habitat and any target species of concern outside the project footprint. Construction monitoring reports shall be completed describing field conditions and construction activities. The project biologist shall be empowered to halt work activity if necessary to confer with RCTC to ensure the proper implementation of species habitat and habitat protection measures.</p> <p><b>BR-6:</b></p> <p>To avoid attracting predators that may prey upon protected species, the project site shall be kept clean of trash and debris. Food related trash items shall be disposed of in sealed containers and removed from the site with regular trash removal, at least weekly. Pets of project personnel shall</p>



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	<p>not be allowed on site.</p> <p><b>BR-7:</b></p> <p>If dead or injured listed species are located, initial notification must be made within three working days, in writing to the USFWS Division of Law Enforcement in Torrance California, and by telephone and in writing to the applicable jurisdiction, Carlsbad Field Office of the USFWS, and the CDFG.</p> <p><b>BR-8:</b></p> <p>Narrow Endemic Plants have the potential to occur in the areas near the San Jacinto River. If Narrow Endemic Plants are identified 90% of the population shall be preserved, as required in the MSHCP.</p> <p><b>BR-9:</b></p> <p>There is a potential to impact western spadefoot toads with the work on the San Jacinto River Bridge and Overflow Channel Bridge. A pre-construction survey for western spadefoot toads shall be conducted within 30 days prior to site disturbance to determine if western spadefoot toads are present within the designated construction area. Should western spadefoot toads be identified within the construction area, the project biologist shall prepare a relocation program that shall be approved by RCA and implemented prior to ground-disturbing activities in the area.</p> <p><b>BR-10:</b></p> <p>The MSHCP requires both protocol surveys and preconstruction surveys for burrowing owls. Pre-construction surveys shall be conducted within 30 days prior to ground disturbance to avoid direct take. If owls are found to be present, the following measures will be implemented; prior to burrowing owl nesting season, passive relocation will occur and active burrows will be destroyed; after burrows are destroyed, artificial burrows will be created in suitable habitat that is contiguous with the foraging habitat of affected owls; a monitoring plan will be implemented to monitor the success of the mitigation program.</p> <p><b>BR-11:</b></p> <p>If nests are identified at the billboards located on the I-215 corridor, then a project biologist shall determine if the nests are active. If the biologist determines a nest to be active, appropriate buffers shall be used until the birds have fledged and the nest shall be removed with the approval of regulatory agencies.</p>





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	<p><b>BR-12:</b></p> <p>There is a potential for impacts to southwestern willow flycatchers in the southern area of the Box Springs Reserve. To avoid potential impacts to nesting birds, culvert work proposed for this area shall be completed outside the bird breeding season (May 15th to July 17th) [Santa Ana Watershed Association (SAWA), 2004].</p> <p><b>BR-13:</b></p> <p>There is a potential for impacts to least Bell's vireo in the southern area of Box Springs Reserve. To avoid potential impacts to nesting birds, culvert work proposed for this area shall be conducted outside the bird breeding season (April 10th to July 31st) (SAWA, 2004).</p> <p><b>BR-14:</b></p> <p>The project is within the SKR Fee area. RCTC shall pay \$500 per acre to the SKR for development outside the existing right-of-way. This fee shall be paid at the time of the grading permit submittal. The fee will include sites for the Citrus Connection, Hunter Park Station, South Perris, and Layover Facility (approximately 65 acres).</p> <p><b>BR-15:</b></p> <p>There is a potential for impacts to California horned lark in the area of the South Perris Station option and the Layover Facility if the agricultural fields are allowed to fallow. To avoid potential impacts to nesting birds, the ground preparation work shall be conducted outside of the bird nesting season (March 1st to July 31st) (County of Santa Barbara, 2009) and maintained to ensure that no birds then use the area for nesting prior to construction.</p> <p><b>BR-16:</b></p> <p>There is a potential for impacts to the coastal California gnatcatcher within the Box Springs Reserve. To avoid potential impacts to nesting birds, culvert work proposed for this area shall be conducted outside the bird breeding season (February 15th to August 30th) (SAWA, 2004).</p> <p><b>BR-17:</b></p> <p>Prior to any construction impacts to jurisdictional areas, RCTC shall obtain permit approval from the USACE, CDFG and the RWQCB. The mitigation for jurisdictional area impacts will be to purchase mitigation credits at a 1:1 ratio (total of 0.41 acres) from a local mitigation bank.</p>



Environmental Impact	Mitigation Measures
<b><i>Paleontological Resources</i></b>	
<ul style="list-style-type: none"> <li>Undiscovered paleontological resources may be encountered during construction.</li> </ul>	<p><b>P-1:</b> Ground-disturbing activities shall be monitored by a qualified paleontologist at the Moreno Valley/March Field Station, Downtown Perris Station, South Perris Station, and Layover Facility, as well as two of the three potential locations for the Hunter Park Station (Columbia Avenue Station option and the Palmyrita Avenue Station option) where excavation is anticipated to be deeper than four feet. The monitor shall have the authority to temporarily halt or divert construction equipment to allow for removal of specimens. The monitor shall be equipped to salvage any fossils unearthed during project construction, and shall be prepared to collect sediment samples that are likely to contain the remains of small fossil invertebrates and vertebrates.</p> <p>To mitigate adverse impacts to any paleontological resources encountered during construction, recovered specimens shall be identified, prepared for permanent preservation, and curated at the San Bernardino County Natural History Museum with permanent retrievable paleontological storage. A report of findings that includes an itemized inventory of specimens shall accompany the recovered specimens for curation and storage.</p> <p><b>P-2:</b> In the event paleontological resources are encountered during construction, ground-disturbing activity shall cease in the immediate area. A qualified paleontologist shall be retained to examine the materials encountered, assess significance, and recommend a course of action to further investigate and/or mitigate adverse impacts to those resources that have been encountered.</p>