

IS/MND Attachment A

Mitigation Monitoring and Reporting
Program

MITIGATION MONITORING AND REPORTING PROGRAM LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD SIDEWALK IMPROVEMENTS PROJECT (WTL019)

Purpose of Mitigation Monitoring and Reporting Program: The California Environmental Quality Act (CEQA), Public Resources Code Section 21081.6, requires that a Mitigation Monitoring and Reporting Program (MMRP) be established upon completing findings. CEQA stipulates that “the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.”

This MMRP has been prepared in compliance with Section 21081.6 of CEQA to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during the construction and operation of the project, as required. A table (attached) has been prepared to assist the responsible parties in implementing the MMRP. The table identifies individual mitigation measures, monitoring/mitigation timing, the responsible person/agency for implementing the measure, and space to confirm implementation of the mitigation measures. The numbering of mitigation measures follows the numbering sequence found in the Initial Study and Mitigated Negative Declaration.

In addition to the table of individual mitigation measures, a separate table of avoidance and minimization measures is also included for use by the lead agency.

The City of Elk Grove is the lead agency for the Project under CEQA and shall administer and implement the MMRP. The City is responsible for review of all monitoring reports, enforcement actions, and document disposition. The City shall rely on information provided by the Project site observers/monitors (e.g., construction manager, Project manager, biologist, archaeologist, etc.) as accurate and up-to-date and shall provide personnel to field check mitigation measure status, as required.

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| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| AIR QUALITY | | | | |
| AQ - 1: Route and schedule construction traffic to avoid peak travel times as much as possible, to reduce congestion and related air quality impacts caused by idling vehicles along local roads. | Construction | City of Elk Grove/ Construction Contractor | | |
| AQ - 2: The construction contractor shall comply with Caltrans' Standard Specifications Section 14 of Caltrans' Standard Specifications (2018) and Section 14-9.02 Air Pollution Control. Section 14-9.02 states: <ul style="list-style-type: none"> a. Comply with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including those provided in Government Code § 11017 (Pub Cont Code § 10231). b. Do not dispose of material by burning. | Construction | City of Elk Grove/ Construction Contractor | | |
| AQ-3: Sacramento Metropolitan Air Quality Management District's Rule 403 – Fugitive Dust would be followed. The general requirements of Rule 403 are: <ul style="list-style-type: none"> a. 301 Limitations: A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to: <ul style="list-style-type: none"> i. 301.1 Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land. ii. 301.2 Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; iii. 301.3 Other means approved by the Air Pollution Control Officer. | Construction | City of Elk Grove/ Construction Contractor | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| BIOLOGICAL RESOURCES | | | | |
| BIO-1 A qualified USFWS- and CDFW-approved biologist shall conduct botanical surveys within the typical identification periods for all potentially occurring special-status plant species within suitable habitat prior to commencement of construction activities. For the special-status plant species that may potentially occur, two rounds of focused plant surveys would be necessary to survey within the typical identification periods for all potentially occurring special-status plants. The first round of surveys would be conducted in March or April and the second round of surveys would be conducted in May or June. If no special-status plants are observed, then a letter report documenting the results of the survey will be provided to the Project proponent for their records, and no additional measures with respect to special-status plants are recommended. | Permitting/Final Design/Prior to Construction | City of Elk Grove | | |
| BIO-2 If any special-status plants are found within the Project site, they should be avoided to the extent feasible. The plant locations will be identified on a map, and an agency-approved buffer will be established around the plants with high visibility construction fencing. The construction fencing will remain intact until construction is complete. | Permitting/Final Design | City of Elk Grove | | |
| BIO-3 If special-status plants cannot be avoided, then a mitigation plan will be prepared in consultation with CDFW. CDFW would need to approve the mitigation plan prior to commencement of construction activities that would impact special-status plants. | Permitting/Final Design | City of Elk Grove | | |
| BIO-4 Onsite vernal pool and depressional seasonal wetlands represent suitable habitat for special-status plant species and vernal pool branchiopods and invertebrates. If avoidance is not feasible, then impacts to suitable vernal pool habitat shall be mitigated at a 2:1 ratio (two acres mitigated for every acre lost) or as determined through consultation between USFWS and Caltrans. Mitigation shall be accomplished through preservation of suitable vernal pool habitat or purchase of vernal pool preservation credits at a USFWS- approved conservation bank prior to commencement of activities within suitable habitat. Final habitat acreages, mitigation ratios, and other project-specific compensatory requirements shall be determined through consultation between USFWS and Caltrans. | Permitting/Final Design/ Prior to Construction | City of Elk Grove | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| BIO-5 Ground-disturbing work shall take place during the GGS active season, if feasible, while snakes are more likely to avoid potential disturbances. The general active season for GGS is May 1 – October 1 but seasonal weather patterns should be considered during construction to provide flexibility. | Construction | City of Elk Grove | | |
| BIO-6 A USFWS-approved qualified biologist shall conduct a pre-construction survey for giant garter snake within 24 hours prior to the commencement of any construction activity within 200 feet of potential giant garter snake aquatic habitat. The qualified biologist shall provide a field report of the survey results that shall be made available to the USFWS within one (1) week of the completion of the survey. The Project area shall be re-surveyed whenever a lapse in construction activity of two weeks or greater has occurred within suitable habitat areas. | Pre-construction | City of Elk Grove | | |
| BIO-7 If giant garter snake or suitable burrows are observed within the Project site during the pre-construction survey, the USFWS-approved biologist shall monitor all ground-disturbing activity within the suitable habitat area. | Pre-construction; Construction | City of Elk Grove | | |
| BIO-8 A qualified biologist shall conduct an environmental awareness training for all construction personnel. The training shall include identification of special-status species, required practices before the start of construction, general measures that are being implemented to conserve the species as they relate to the Project, penalties for non-compliance, and boundaries of work and of the permitted disturbance zones. Supporting materials containing training information will be prepared and distributed. Upon completion of training, all construction personnel shall sign a form stating that they have attended the training and understand all the measures. Proof of this instruction shall be kept on file with the Project proponent. The Project proponent shall provide the USFWS and CDFW with a copy of the training materials and copies of the signed forms indicating that training has been completed. If new construction personnel are added to the site, the crew foreman shall ensure that the personnel receive the mandatory training before starting work. Copies of signed forms shall be submitted monthly as additional training occurs for new employees. The crew foreman is responsible for ensuring that construction personnel adhere to the guidelines and restrictions. | Pre-construction | City of Elk Grove/ Construction Contractor | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| BIO-9 Exclusion fencing shall be installed along the outer edge of work along the northern edge of Segment 1 in the areas of the adjacent pond (located east of Mannington Street and north of Monterey Oaks Drive) and adjacent to Sacramento County's Lower Laguna Flood Control Project deed restricted parcels, the depressional seasonal wetland (located east of Lyndale Circle and north of Big Horn Boulevard), and along the vernal pool west of Bruceville Road. | Pre-construction | City of Elk Grove/Construction Contractor | | |
| BIO-10 A USFWS-approved biologist will inspect the exclusion fencing weekly, and the fencing will be maintained until the end of construction. If a GGS is found onsite during construction, all activities will stop until the GGS leaves the construction area on its own. The USFWS will be notified within 24 hours of any GGS observations. No handling or capture of a GGS will occur. | Construction | City of Elk Grove/Construction Contractor | | |
| BIO-11 During construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary. | Construction | City of Elk Grove/Construction Contractor | | |
| BIO-12 Hazardous materials such as fuels, oils, solvents, etc., shall be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment, and staging areas will occur at least 200 feet from any aquatic habitat. | Construction | City of Elk Grove/Construction Contractor | | |
| BIO-13 The use of erosion control materials potentially harmful to GGS and other species such as mono-filament netting or similar material will be prohibited. Tightly woven fiber netting or similar material will be used to ensure GGS do not get trapped or entangled. To avoid entrapment of GGS, trenches will be covered overnight or escape ramps installed. Any pipes or hoses will be sealed with duct tape or equally effective means so that no GGS can enter them. Alternatively, pipes and hoses may be stored at least 3 feet above ground or within a part of the staging area surrounded by exclusionary fence. | Pre-construction; Construction | City of Elk Grove/Construction Contractor | | |
| BIO-14 After completion of construction activities, the Project proponent, or its contractor, shall remove all stockpiled material and construction debris and, wherever feasible, restore disturbed areas to pre-Project conditions. | Post-construction | City of Elk Grove/Construction Contractor | | |

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| BIO-15 Impacts to western pond turtle will be avoided through implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures: Ground-disturbing work shall take place during the western pond turtle active season, if feasible, while turtles are more likely to avoid potential disturbances. The general active season for western pond turtle is March 1 – November 1 but seasonal weather patterns should be considered during construction to provide flexibility. | Construction | City of Elk Grove/Construction Contractor | | |
| BIO-16 If possible, construction shall occur outside of the breeding and dispersal season (October through May) for western spadefoot in order to avoid impacts to breeding populations and aquatic metamorphs. It should be noted, this work window conflicts with the GGS and western pond turtle active season work windows as described in Mitigation Measures BIO-5 and BIO-15 (MM-9 and MM-19 in the NES). See Mitigation Measure BIO-17 (MM-22 in the NES) below for guidance if work occurs within the western spadefoot breeding and dispersal season. | Pre-construction | City of Elk Grove | | |
| BIO-17 If construction occurs within the breeding and dispersal season, a pre-construction survey shall be conducted by a qualified biologist within the appropriate survey window to determine the presence of western spadefoot within the Project site: <ul style="list-style-type: none"> a. If western spadefoot are observed within the Project site, then additional measures such as a qualified biologist conducting a pre-construction survey within 24 hours prior to commencement of construction activities, conducting a pre-construction worker awareness training, and being present to monitor construction during initial vegetation clearing and ground disturbance shall be required. b. If no western spadefoot are observed within the Project site, then a letter report regarding survey results shall be made available to the Project proponent and no additional avoidance and mitigation measures for the species are recommended. c. If a western spadefoot is observed within the construction zone, then all work shall immediately halt in the vicinity of the animal and the animal will be allowed to leave the area on its own will. If the animal is in immediate danger and needs to be relocated, then it shall safely | Pre-construction; Construction | City of Elk Grove | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| be relocated outside of the construction zone within suitable habitat and at a safe distance from all construction related activities. No work shall resume until the animal is outside of the construction zone. | | | | |
| BIO-18 A qualified biologist shall conduct an environmental awareness training for all construction personnel. This training will follow the same guidelines as the giant garter snake and western pond turtle trainings. | Pre-construction | City of Elk Grove | | |
| BIO-19 Prior to the commencement of construction activities during the nesting season for Swainson’s hawk (between March 1 and September 15), a qualified biologist shall conduct a minimum of two (2) protocol level pre-construction surveys during the recommended survey periods for the nesting season that coincides with the commencement of construction activities, in accordance with the <i>Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley</i> (Swainson’s Hawk Technical Advisory Committee 2000). The qualified biologist shall conduct surveys for nesting Swainson’s hawk within 0.5 mile of the Project site where legally permitted to directly access; all suitable nest trees within 0.5 mile of the Project site shall be surveyed using binoculars from legally accessible areas. If no active Swainson’s hawk nests are identified within 0.5 mile of the Project site within the recommended survey periods, a letter report summarizing the survey results shall be submitted to the Project proponent and CDFW within 30 days following the final survey, and no further avoidance and minimization measures for nesting habitat are required. | Pre-construction | City of Elk Grove | | |
| BIO-20 If active Swainson’s hawk nests are found within 0.5 mile of the Project site, then a qualified biologist shall contact the Project proponent and the CDFW within one day following the pre-construction survey to report the findings. Should an active nest be present within 0.5 mile of Project site, then the CDFW shall be consulted to establish an appropriate noise buffer, develop take avoidance measures, determine whether high visibility construction fencing should be erected around the buffer zone, and implement a monitoring and reporting program prior to any construction activities occurring within 0.5 mile of the nest. Should the qualified biologist determine that the construction activities are disturbing the nest, the qualified biologist shall halt construction activities until the CDFW is consulted. | Pre-construction | City of Elk Grove | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| The construction activities shall not commence until the CDFW determines that construction activities would not result in abandonment of the nest site. Should the qualified biologist determine that the nest has not been disturbed during construction activities within the buffer zone, then a letter report summarizing the survey results shall be submitted to the Project proponent and the CDFW within 30 days following the final monitoring event, and no further avoidance and minimization measures for nesting habitat are recommended. | | | | |
| BIO-21 The Project proponent shall comply with the City of Elk Grove Swainson's Hawk Code (Chapter 16.130) to mitigate for the loss of foraging habitat. | Pre-construction | City of Elk Grove | | |
| BIO-22 A qualified biologist shall conduct an environmental awareness training for all construction personnel. The training for active white-tailed kite nests should be similar to the training described for Swainson's hawk. This training will follow the same guidelines as the giant garter snake and western pond turtle trainings. | Pre-construction | City of Elk Grove | | |
| BIO-23 A qualified biologist shall conduct a pre-construction nesting white-tailed kite survey within 14 days prior to commencement of construction activities if anticipated to commence during the nesting season (between February 15 and August 31). An additional pre-construction survey should be conducted within 72 hours of commencement of ground-disturbing activities. During the surveys, suitable nest trees adjacent to the Project site shall be surveyed using binoculars from legally accessible areas. If the pre-construction survey documents that there is no evidence of active nests, then a letter report will be submitted to the Project proponent and CDFW for their records and no additional measures are recommended. If construction does not commence within 72 hours of the pre-construction survey, or halts for more than 72 hours, then an additional pre-construction survey shall be conducted. | Pre-construction | City of Elk Grove | | |
| BIO-24 If any active white-tailed kite nests are identified during the pre-construction survey within the Project site, then a qualified biologist shall establish 250-foot buffer zone around the nests. The biologist will mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or until the young have successfully fledged. If a 250-foot buffer is not feasible, then the qualified biologist may reduce the buffer in consultation with | Pre-construction | City of Elk Grove | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| CDFW and recommend additional measures including daily monitoring to ensure that the nest is not disturbed and that no forced fledging occurs. Daily monitoring should occur until the qualified biologist determines that the nest is no longer occupied or active. Once it has been determined that the nest is no longer active, then a letter report shall be submitted to the Project proponent and CDFW for their records and no additional measures are recommended. | | | | |
| BIO-25 If construction is expected to occur during the nesting season (February 15 through August 31), then a qualified biologist will conduct an environmental awareness training for all construction personnel. The training will include information pertaining to the potential for active nests to occur within the Project site and procedures to follow in the event that an active nest is found during construction. | Pre-construction | City of Elk Grove | | |
| BIO-26 If feasible, then construction and any tree/shrub removal should be completed between September 1 and February 14, outside of the nesting season. | Pre-construction | City of Elk Grove | | |
| BIO-27 If construction begins during the nesting season (February 15 through August 31), then a pre-construction nesting bird survey shall be conducted within 14 days prior to the commencement of construction activities and vegetation removal. If the pre-construction survey results in no evidence of active nests, then a letter report will be submitted to the Project proponent and CDFW for their records and no additional measures are recommended. If active nests are located within or directly adjacent to the Project site then the following shall occur: a. If any active nests are located, then a qualified biologist shall establish an appropriate species-specific buffer zone (generally a 75-foot standard buffer for most songbirds, a 300-foot standard buffer for most raptors, and up to a buffer of 1,320-2,640 feet for Swainson’s hawk) around the nests. The qualified biologist shall mark the buffer zone with highly visible flagging or pin flags and maintain the buffer zone until all construction has been completed, until the end of the breeding season, or until the young have successfully fledged and/or the nest is no longer active. A qualified biologist will monitor active nests weekly during construction to evaluate potential nesting disturbance caused by construction activities. If establishing the | Pre-construction | City of Elk Grove | | |

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| <p>typical buffer zone is impractical, then the qualified biologist may reduce the buffer depending on the species, and daily monitoring is also recommended to ensure that the nest is not disturbed and no forced fledging occurs. Daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied or that it has been determined that nesting activity is not negatively affected by adjacent Project construction activities. Once it has been determined that the nest is no longer active, then a letter report shall be submitted to the Project proponent and the CDFW for their records.</p> | | | | |
| <p>BIO-28 Prior to commencement of ground disturbing activities, the City shall obtain all required regulatory authorizations from the USACE and RWQCB for the discharge of dredged or fill material within waters of the U.S. and/or waters of the State.</p> | Permitting/Final Design | City of Elk Grove | | |
| <p>BIO-29 To mitigate for the permanent loss of waters of the U.S. resulting from development of the proposed Project, the City shall submit a compensatory mitigation plan to the USACE and RWQCB proposing in-kind replacement of impacted waters of the U.S. at a minimum 1:1 ratio, or as otherwise required by the USACE and RWQCB.</p> | Permitting/Final Design | City of Elk Grove | | |
| <p>BIO-30 Prior to commencement of activities within resources subject to Fish and Game Code Section 1602, the City shall enter into a Streambed Alteration Agreement with CDFW.</p> | Permitting/Final Design | City of Elk Grove | | |
| <p>BIO-31 All aquatic resources delineated within the Project site are likely to be determined to be classified either as waters of the U.S. and/or waters of the State. If it is determined that some of the aquatic resources within the Project site are not subject to federal jurisdiction, then these features may still be subject to waste discharge requirements under the Porter-Cologne Water Quality Control Act should the Project result in impacts to these features. Section 13260(a) of the Porter-Cologne Water Quality Control Act (contained in the California Water Code) requires any person discharging waste or proposing to discharge waste, other than to a community sewer system, within any region that could affect the quality of the waters of the State (all surface and subsurface waters) to file a report of waste</p> | Permitting | City of Elk Grove | | |

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| discharge. The discharge of dredged or fill material may constitute a discharge of waste that could affect the quality of waters of the State. A report of waste discharge shall be filed for impacts to non-federal waters, if required. | | | | |
| BIO-32 Prior to ground-disturbing activities and any tree removal, a Tree Removal Permit shall be obtained from the City, and the Project proponent shall comply with all of the conditions of the permit. As part of the approval of a tree permit for removal of a tree(s), the approving authority shall require mitigation for the loss of the tree consistent with Article IV (Mitigation for Tree Loss) of Chapter 19.12 of the Municipal Code. A tree preservation plan shall be prepared for the Project identifying all protection and mitigation measures to be taken. The measures shall remain in place for the duration of construction activities at the Project site. The tree preservation plan shall be submitted to and approved by the City Arborist. | Permitting | City of Elk Grove | | |
| BIO-33 Tree Protection Measures <ul style="list-style-type: none"> • Tree Protection Fencing, consisting of chain link or four-foot tall, brightly-colored, high-visibility plastic fencing, shall be placed around the perimeter of the critical root zone (CRZ) (one foot per inch of trunk diameter) or dripline radius + 1 foot, whichever is greater. This is the minimum distance for placing protective fencing. Tree protection fencing should be placed as far outside of the CRZ as possible. Signs shall be placed along the fence denoting this as a “Tree Protection Zone” that shall not be moved until construction is complete. Trees or tree clusters with canopy extending beyond 50 feet from proposed Project boundaries may be fenced only along sides facing the Project. In cases where proposed work infringes on the CRZ, fence shall be placed at edge of work; • Whenever possible, fence multiple trees together in a single CRZ; • Tree protection fencing shall not be moved without prior authorization from the Project Arborist and the City, as appropriate; • No parking, portable toilets, dumping or storage of any construction materials, grading, excavation, trenching, or other infringement by workers or domesticated animals is allowed in the CRZ; | Pre-construction; Construction | City of Elk Grove/ Construction Contractor | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
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| <ul style="list-style-type: none"> • No signs, ropes, cables, or any other items shall be attached to a protected tree, unless recommended by an ISA-Certified Arborist; • No tree-toxic materials shall be dumped on the Project site (e.g., gasoline, herbicide, salt); • Prior to the installation of new asphalt, weed control chemicals shall not be applied where they can leach into the dripline of any protected tree. • Underground utilities should be avoided in the CRZ, but if necessary, shall be bored or drilled. If boring is impossible, all trenching will be done by hand under the supervision of an ISA-Certified Arborist; • No cut or fill within the dripline of existing protected tree is permitted except as shown on the final development plans. If cut or fill within the dripline is unavoidable, any mitigation requirements shall be determined by the City, as appropriate; • Pruning of any retained tree shall be done under the supervision of an ISA-Certified Arborist and in accordance with current ISA standards and ANSI A300 standards; • All wood plant material smaller than six inches in diameter shall be mulched on site. Resulting mulch shall be spread in a layer four to six inches deep in the CRZ of preserved trees. Mulch shall not be placed touching the trunk of preserved trees; and • Appropriate fire prevention techniques shall be employed around all significant trees to be preserved. This includes cutting tall grass, removing flammable debris within the CRZ, and prohibiting the use of tools that may cause sparks, such as metal blade trimmers or mowers. | | | | |

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| | | | Initials | Date |
| CULTURAL RESOURCES | | | | |
| CUL-1 No project-related activities (e.g. grubbing, staging, equipment parking/storage, traffic handling signage, etc.) shall take place within the ESA located within the unevaluated portion of P-34-005386 (CA-SAC-001278H) shown on Figure 4 of the September 2021 <i>Finding of No Adverse Effect for the Laguna Creek Trail and Bruceville Road Sidewalk improvements Project, Sacramento County, California.</i> | Construction | City of Elk Grove/Construction Contractor | | |
| CUL-2 At least two weeks prior to commencing construction, the construction contractor, in consultation with the City Project Engineer and the Caltrans Archaeologist, will delineate the boundaries of the ESA. Construction exclusion fence surrounding the ESA outside of the Project Impact Area shall be installed one calendar week prior to the initiation of work near the archaeological site. | Pre-construction | City of Elk Grove/Construction Contractor | | |
| CUL-3 Information contained in the final ESA Action Plan shall be included within the Permits, Agreements and Mitigation Form and shall be included on the Project specification and estimates package. The importance of the ESA, as well as the prohibition of any activities within the ESA, shall be relayed to the construction contractor and personnel during a pre-Project Worker Awareness Training conducted prior to commencement of Project construction. The importance of ESA shall be discussed with construction personnel, and it will be stressed that no construction activity (including storage or staging of equipment or materials) should occur within the ESA and that workers must remain outside of the ESAs at all times. Additionally, personnel will be informed of historic preservation laws that protect archaeological sites against any disturbance or removal of artifacts. | Permitting/Final Design; pre-construction | City of Elk Grove | | |
| CUL-4 The Caltrans Archaeologist shall be notified five business days prior to commencement of work in the area of the ESA. The Caltrans Archaeologist shall conduct weekly drop-in monitoring of the ESA area to ensure no breaching of the ESA. | Pre-construction; Construction | City of Elk Grove/Construction Contractor | | |

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| | | | Initials | Date |
| CUL-5 If Native American cultural materials are discovered during Project construction, then all work shall halt within 100 feet of the discovery and the Resident Engineer shall be immediately notified. The City shall contact the United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Wilton Rancheria regarding the discovery. The Resident Engineer, the City, an archaeologist meeting the Secretary of the Interior’s Standards in Archaeology, the UAIC, and the Wilton Rancheria shall assess the discovery to determine if it qualifies as a Tribal Cultural Resource. The appropriate treatment of the discovery, including any applicable avoidance or mitigation strategies, shall be determined in consultation with the City, the UAIC, and the Wilton Rancheria. Construction activities will not commence until the appropriate treatment has been determined and any applicable mitigation has been completed. Mitigation shall follow the recommendations detailed in Public Resources Code sections 21084.3(a) and (b), and CEQA Guidelines section 15370. | Construction | City of Elk Grove/Construction Contractor | | |
| CUL-6 Worker environmental training will include archaeological and Tribal Cultural Resource awareness. The training shall be developed in coordination with the UAIC and the Wilton and will be provided prior to commencement of Project construction activities for all personnel working within the Project site. The training will identify the appropriate point of contact in the case of Tribal Cultural Resource discovery and will include relevant information regarding Tribal Cultural Resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training will also underscore the requirement for confidentiality and culturally appropriate treatment of Tribal Cultural Resources. | Pre-construction | City of Elk Grove | | |
| GEOLOGY AND SOILS | | | | |
| GEO-1 Before the start of any earthmoving activities, the City shall retain a qualified scientist (e.g., geologist, biologist, paleontologist) to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. Training on paleontological resources shall also be provided | Pre-construction | City of Elk Grove | | |

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| to all other construction workers but may use videotape of the initial training and/or written materials rather than in-person training. | | | | |
| HAZARDS AND HAZARDOUS MATERIALS | | | | |
| HAZ-1 Prior to the commencement of construction, a hazardous materials compliance plan shall be prepared by a Certified Industrial Hygienist to address the metals content of any yellow and white roadway striping with the Project area. This plan shall be prepared in accordance with Caltrans Standard Specifications Section 14-11.12C for removal of yellow traffic stripe and pavement markings that produce hazardous waste residue. | Pre-construction | City of Elk Grove | | |
| LAND USE AND PLANNING | | | | |
| LU-1 Prior to implementing construction of proposed improvements, the City shall consult with the USACE and USFWS to obtain the applicable regulatory authorizations for project development. | Permitting | City of Elk Grove | | |
| NOISE | | | | |
| NOI-1 <i>Construction Equipment Sound Control.</i> All internal combustion engines, including trucks, shall be equipped with the manufacturer-recommended mufflers and silencing devices. Operation of an internal combustion engine shall not occur on the job site without the appropriate muffler. | Construction | City of Elk Grove/Construction Contractor | | |
| NOI-2 <i>Neighborhood Notification Prior to Construction.</i> At least twenty (20) days prior to commencement of construction, the contractor shall provide written notice to all property owners, businesses, and residents within 300 feet of the Project area. The notice shall contain a description of the Project, the construction schedule, including days and hours of construction, the name and phone number of the Project Environmental Coordinator (PEC) and Contractor(s). | Construction | City of Elk Grove/Construction Contractor | | |
| RECREATION | | | | |
| Implementation of mitigation measures for Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Land Use, Noise, and Tribal Cultural Resources would reduce potentially significant impacts related to recreation to less than significant levels. | | | | |

| Mitigation Measure | Monitoring / Mitigation Timing | Reporting / Responsible Party | Verification of Compliance | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------|-------------------------------|------|
| | | | Initials | Date |
| TRIBAL CULTURAL RESOURCES | | | | |
| Implementation of Mitigation Measure CUL-5 and CUL-6 would reduce potentially significant impacts related to tribal cultural resources to less than significant levels. | | | | |
| MANDATORY FINDINGS OF SIGNIFICANCE | | | | |
| See Mitigation Measures AQ-1 through AQ-3, BIO-1 through BIO-32, CUL-1 through CUL-6, GEO-1, HAZ-1, NOI-1, NOI-2, and LU-1. | | | | |

IS/MND Attachment B

Visual Impact Assessment Memorandum

VISUAL IMPACT ASSESSMENT

Laguna Creek Trail and Bruceville Road Sidewalk Project

(for Minor Level VIA)



August 16, 2023

District 03 – SAC – Laguna Creek Trail and
Bruceville Road Sidewalk Improvements Project

Federal Aid No. CML-5479(053)
City of Elk Grove Project No. WTL019

Prepared by: Meredith Branstad Date: 08/16/2023
Meredith Branstad, Principal Landscape Architect
HELIX Environmental Planning, Inc.
CA License No. 5122

Approved by: _____ Date: _____
Caltrans District Landscape Architect
District 3

Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

Table of Contents

| | |
|-----------------------------------------------------------------------|----------|
| Project Location and Setting | 1 |
| Project Purpose and Need/Purpose and Objectives | 1 |
| Build Alternative/Proposed Project | 1 |
| Project Components..... | 1 |
| Trail Design | 2 |
| Segment 1 | 2 |
| Segment 2 | 2 |
| Roads and Sidewalks | 2 |
| Culvert Crossings and Hydrology | 3 |
| Road Crossings and Signage | 3 |
| Utilities | 3 |
| Construction | 3 |
| No-Build Alternative/ No Project Alternative | 3 |
| Regulatory Setting..... | 3 |
| Visual Setting | 4 |
| Federal/National Scenic Resources..... | 4 |
| State Scenic Resources..... | 4 |
| County Scenic Resources..... | 4 |
| Other Potential Scenic Resources | 4 |
| Resource Change (Visual Character + Visual Quality)..... | 5 |
| Viewer Sensitivity (Viewer Exposure + Viewer Sensitivity)..... | 5 |
| Visual Impact (Resources Change + Viewer Sensitivity) | 6 |
| Summary..... | 6 |
| Avoidance, Minimization, and/or Mitigation Measures..... | 7 |
| References | 8 |

List of Figures

- Figure 1 Project Vicinity Map
- Figure 2 Project Location Map
- Figure 3 Proposed Project and Key Views

List of Attachments

- Attachment 1 Key Views

Project Location and Setting

The City of Elk Grove (City), in cooperation with the California Department of Transportation (CALTRANS), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road. The Laguna Creek Trail and Bruceville Road Sidewalks Project (Project) is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, California, approximately 0.5 mile west of State Route 99, and approximately three miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East on the U.S. Geological Survey (USGS) *Florin*, California 7.5-minute quadrangle (38° 25' 13" North, 121° 27' 48" West) (Figure 1, *Project Vicinity*) (Figure 2, *Project Location*).

Proposed improvements within the City would traverse through an existing undeveloped area zoned for Open Space (O), High Density Residential (RD-30), and Residential Mixed Use (RMU) (City of Elk Grove 2023).

Project Purpose and Need/Purpose and Objectives

The purpose and defined objective of the proposed Project is to construct multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road. The Project is needed to help meet the goals of the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (GHD, Inc. 2021), as well as the associated Sacramento County Bikeway Master Plan (SCBMP) (2011), and SACOG Master Plan (2015). The proposed Project is needed to provide connecting links that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities. Development of the proposed Project would provide greater accessibility to the existing trail system within the City and make trails directly accessible to additional homes.

Build Alternative/Proposed Project

Project Components

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway), with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings (Figure 3, *Proposed Project*). A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalk. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Paved surfaces would be Hot Mixed Asphalt (HMA) with stabilized Decomposed Granite (DG) shoulders relying on base and subbase as needed. Base material would consist of aggregate base, with a subbase of either existing or compacted native material or a treated native material. Treatments could include cement or lime. Sidewalk widenings on Bruceville Road would require sawcutting the existing road and cutting into the embankment. Proposed fill slopes would vary in height, ranging from one to four feet.

Trail segments may include amenities including, but not limited to, concrete entry nodes, post and cable fencing, landscaping, benches, and interpretive signage.

Trail Design

As shown on Figure 3, two trail segments would be developed as a 10-foot-wide path with 2-foot wide shoulders following existing informal trails where feasible and would maintain existing gradual slopes and relatively flat natural topography. Side slopes would be constructed with a 4:1 slope.

Segment 1

Segment 1 would be constructed west of Bruceville Road and north of Big Horn Boulevard. The trail would parallel existing residential development to the west for a length of approximately 0.75 mile trending northward from the existing sidewalk at Big Horn Boulevard to the path near Mannington Street (Figure 3). The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 36- to 44-foot-wide disturbance corridor for Segment 1.

Segment 2

Segment 2 would be constructed east of Bruceville Road, adjacent and parallel to Big Horn Boulevard for an overall length of approximately 0.16 mile (Figure 3). It is anticipated that where the Segment 2 alignment terminates, compliance with City-required Conditions of Approval for the Trojan Storage II Project (currently under construction) will result in the construction of a connecting trail segment to Lewis Stein Road. The new trail will use the existing at-grade crossing at Bruceville Road and Big Horn Boulevard to connect to Segment 1. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 34- to 40-foot-wide disturbance corridor for Segment 2.

Roads and Sidewalks

Proposed sidewalk improvements would be constructed on the west side of Bruceville Road. Approximately 1,600 feet of sidewalk would be constructed between Big Horn Boulevard and the Bruceville Road Bridge over Laguna Creek (Bridge No. 24C0405) and 180 feet of sidewalk would be constructed from the bridge to existing sidewalk. In addition, the guardrail at the bridge would be replaced and would roughly correspond to the back of sidewalk in this location. New Americans with Disabilities Act (ADA) compliant ramps would be constructed at Mannington Street and at Mannington Street/Wallbridge Way.

Approximately 230 feet of sidewalk would be constructed at an existing gap in the sidewalk between Di Lusso Drive and Laguna Boulevard. At this location, the roadway surface of Bruceville Road would be extended to match up with the proposed sidewalk.

Culvert Crossings and Hydrology

The proposed Project would maintain existing grades and drainage patterns to the greatest extent feasible and side slopes would be constructed with a 4:1 slope. To maintain the existing drainage patterns, culverts may be used to convey water from one side of the trail to the other during more intense rain events. These culverts would be located in upland areas and sized based on existing topographic information and would include rock slope protection and flared end sections to reduce erosion and provide energy dissipation measures.

Road Crossings and Signage

Trail pavement would be delineated by distinct paint, markings, and signs consistent with City standards as well as the California Manual of Uniform Traffic Control Devices (MUTCD) standards. The City may also elect to provide wayfinding signs. According to the Bicycle, Pedestrian, and Trails Master Plan (BPTMP), all bicycle striping and wayfinding signs would also conform to the CALTRANS Highway Design Manual, Chapter 1000 (GHD, Inc. 2021).

Utilities

Utility coordination would be required to relocate a utility guy-pole that is in conflict with the roadway/sidewalk widening on the west side of Bruceville Road. This pole would be relocated to another location either within the City's right of way or within a new utility easement. No other utility relocations are anticipated for this Project other than potentially adjusting existing utility lids to new grades.

Construction

Construction of the proposed Project would commence in summer of 2025 and would take approximately seven to nine months to complete.

No-Build Alternative/ No Project Alternative

Under the No-Build, or "No-Project" Alternative, the trails and sidewalks would not be constructed. Gaps in the City's trail system and sidewalks would remain.

This VIA describes the site characteristics and confirms negligible changes to the visual setting.

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Visual Setting

The Project’s visual setting is a mixture of undeveloped open land and developed suburbs and commercial uses; the site may be described as “developing” in *character*. The overall topography is flat, except for the depressed channel of Laguna Creek and berms adjacent to it. Natural landcover consists of disturbed grassland. Water features are Laguna Creek and a man-made lake east of Mannington Drive and north of Monterey Oak Drive. Man-made features are prevalent. Residential neighborhoods, including apartment complexes and single-family homes, surround the viewshed of the trail area with commercial development along Bruceville Road south of Big Horn Boulevard and north of Big Horn Boulevard at Lewis Stein Drive. Roadways in the viewshed are Bruceville Road and Big Horn Boulevard. Representative photographs of the site are shown in Attachment 1 and photograph locations are shown on Figure 3.

Officially designated scenic resources are also an element of describing visual character and visual quality. Federal, state, and local scenic resources are described below.

Federal/National Scenic Resources

No federally designated scenic resources are at or near the Project site. The nearest National Scenic Byway is Ebbetts Pass Scenic Byway, approximately 60 miles to the southwest of the Project (FHWA 2023). The nearest Wild and Scenic River is the American River, approximately nine miles north of the Project (National Parks Service 2023).

State Scenic Resources

The nearest State Scenic Highway is State Route 160 (SR-160), located approximately four miles west of the Project area along the Sacramento River (CALTRANS 2019).

County Scenic Resources

A segment of SR-160 from Isleton Bridge to Paintersville Bridge is officially designated as County Scenic Highway approximately six miles southwest of the Project; SR-160 and State Route 4 are also considered eligible from the Contra Costa County line up to the Sacramento city limits (CALTRANS 2019).

Other Potential Scenic Resources

Elk Grove does not have any officially designated scenic vistas; however, the City has identified parks and open space and lakes, rivers, and creeks—including Laguna Creek—as scenic resources (City of Elk Grove 2019). The City also describes agricultural landscapes and trees, particularly large or clustered adult trees, as typical scenic resources (City of Elk Grove 2019). There are no rock outcroppings, mature trees, historic buildings, or other unusual or unique features at the Project site.

Resource Change (Visual Character + Visual Quality)

The visual character of the proposed Project would be compatible with the existing character of the corridor. Proposed vertical elements would be minor, consisting of bench seating at three to four locations. At Key Views 1, 2, and 7 along Bruceville Road, the proposed sidewalk would close remnant gaps and provide continuous low-lying form, straight edges, light-grey color, and relatively smooth texture, consistent with the existing sidewalks. At Key Views 3 through 7, 8, and 9, the trail would introduce a new man-made feature consisting of a fairly flat form at ground-level and long lines from the trail edges; asphalt would be dark in color and the trail surface would be smooth in texture. The character would be substantially compatible with the existing corridor, as visual encroachments from residences and/or commercial buildings are still apparent in the background.

Proposed improvements have been designed to formalize trail alignments in areas where existing informal use occurs. The visual quality of the existing corridor would therefore be slightly changed by the proposed Project. At Key Views 1, 2, and 7, the proposed Project would remove existing vegetation and construct new sidewalks along the existing road. At Key Views 4, 5, 8, and 9 visual quality would change only slightly, as the trail would follow existing informal foot paths currently utilized by people in the area. At Key View 3, the trail would remove existing vegetation and construct a paved trail path and shoulders. While the trail would result in a new man-made feature, it will parallel existing concrete sidewalks. Proposed improvements would have no change on vividness.

Resource change would be moderate to low. New sidewalks at Key Views 1, 2, and 7 would be consistent with the character of the area and would improve the visual quality due to increased intactness and unity along the road. Trails at Key Views 3 through 5 would be subject to a moderate to low change and Views 6, 8, and 9 would be a moderate change due to the urbanized character of project surroundings and visual encroachment of residential buildings in the background.

Viewer Sensitivity (Viewer Exposure + Viewer Sensitivity)

Viewer Exposure and Sensitivity: Viewers of the proposed trail and sidewalks would consist of residences, recreational users, pedestrians, and automobile drivers and passengers. Sidewalks would be viewable by pedestrians and motorists; pedestrians and motorists would have low

TERMINOLOGY*

Form: Visual mass or shape

Line: Edges or linear definition

Color: Reflective brightness (light, dark) and hue (red, green)

Texture: Surface coarseness

Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.

Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.

Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

*Source: CALTRANS 2023

exposure due to the transitory nature of use surrounding proposed improvements. Adjacent residents would have the greatest exposure to project features and have a moderate-high sensitivity to visual changes. Recreational users would be exposed to project features while using the trail and given their reliance on project-related features for recreation, would therefore have a moderate-low viewer sensitivity.

Visual Impact (Resources Change + Viewer Sensitivity)

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. Key view visual ratings and discussion of each follow.

Key Views 1, 2, and 7: As discussed under Resource Change, visual quality would improve. At these locations, viewers would be pedestrians and motorists. Based on a low resource change and low viewer response by pedestrians and motorists, the visual impact would be low.

Key Views 3, 4, and 5: As discussed under Resource Change, visual quality would slightly decrease. The trail would be visible to recreational users and adjacent residents. Based on moderate-low resource change and moderate-low sensitivity of recreational users, the impact would be moderate-low on recreational users. Based on a moderate-low resource change and moderate-high viewer sensitivity, the visual impact would be moderate on residents adjacent to proposed improvements.

Key View 6, 8, and 9: As discussed under Resource Change, visual quality would slightly decrease. These trail key views would be visible to recreational users. Based on a moderate resource change and moderate-low viewer sensitivity, the visual impact would be moderate-low.

Summary

Proposed Project features would result in negligible changes to the visual setting. Officially designated federal, state, or county scenic resources are miles away from the Project site and would not be affected by the Project. While the City does not have officially designated scenic vistas, the trail's viewshed includes a creek (Laguna Creek) and open space, which are generally considered scenic resources by the City. The trail is intended to generally follow Laguna Creek and provide residents a connection to parks in the City and region. The trail would largely follow existing informal foot paths currently utilized regularly by people in the area. The trail would not require substantial fill and would be constructed at ground level. The proposed Project does not include major vertical features or other visual intrusions that would block views of the surrounding suburban setting or natural features. Proposed vertical elements would be minor, consisting of bench seating at three to four locations.

During construction, motorists and neighboring residents may observe heavy construction equipment, exposed soils during grading activities, temporary traffic control features (such as signage and orange cones), lighting, and construction workers. Visual effects due to project construction would be short-term and would cease to persist upon project completion.

The Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. The Laguna Creek Trail is designated for use between dawn and dusk, negating the need for trail lighting. However, recreational users may access the trail at night and use headlamps or flashlights while on the trail. These irregular light sources would not be expected to adversely affect nighttime views.

Avoidance, Minimization, and/or Mitigation Measures

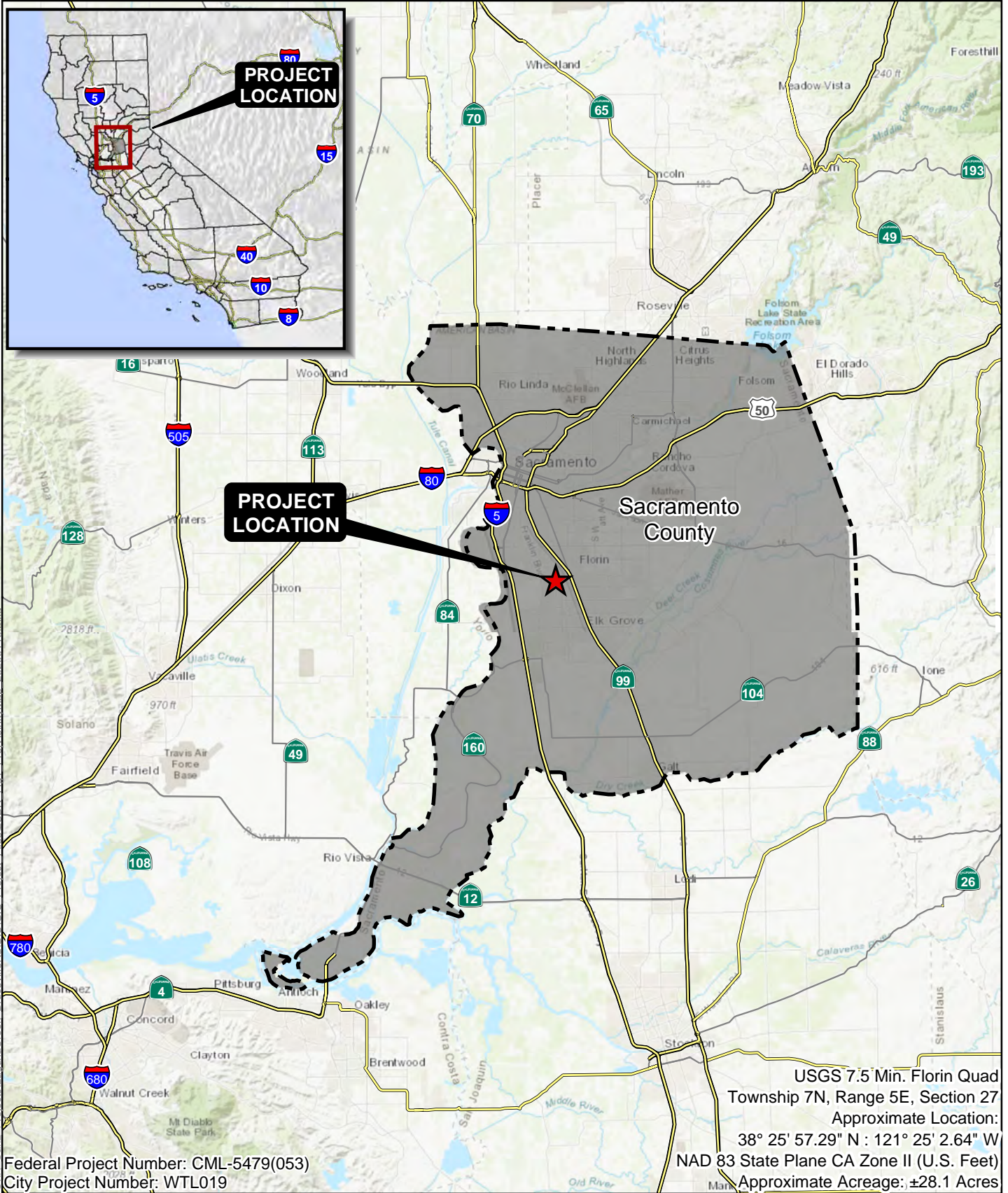
No mitigation measures are required.

References

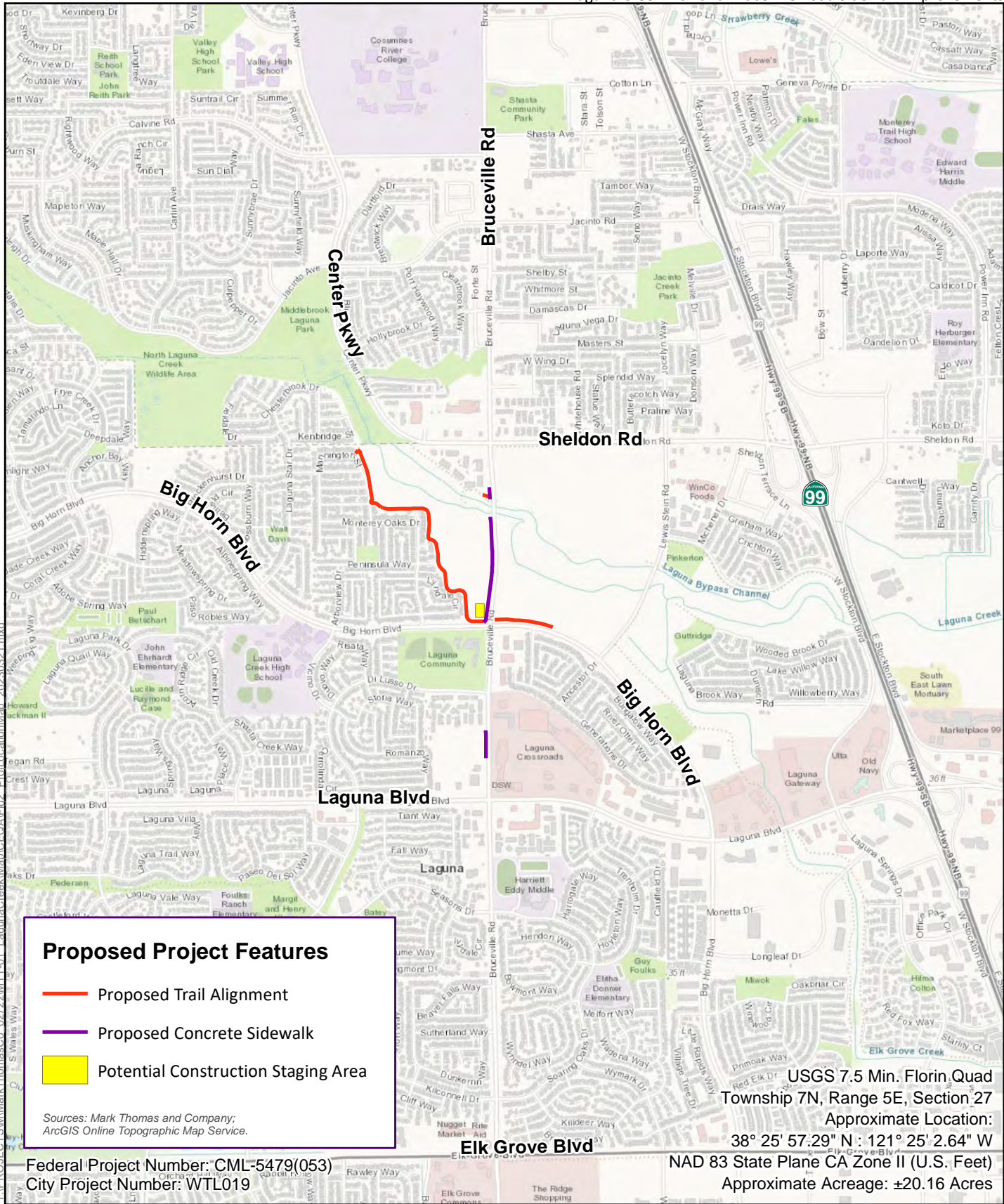
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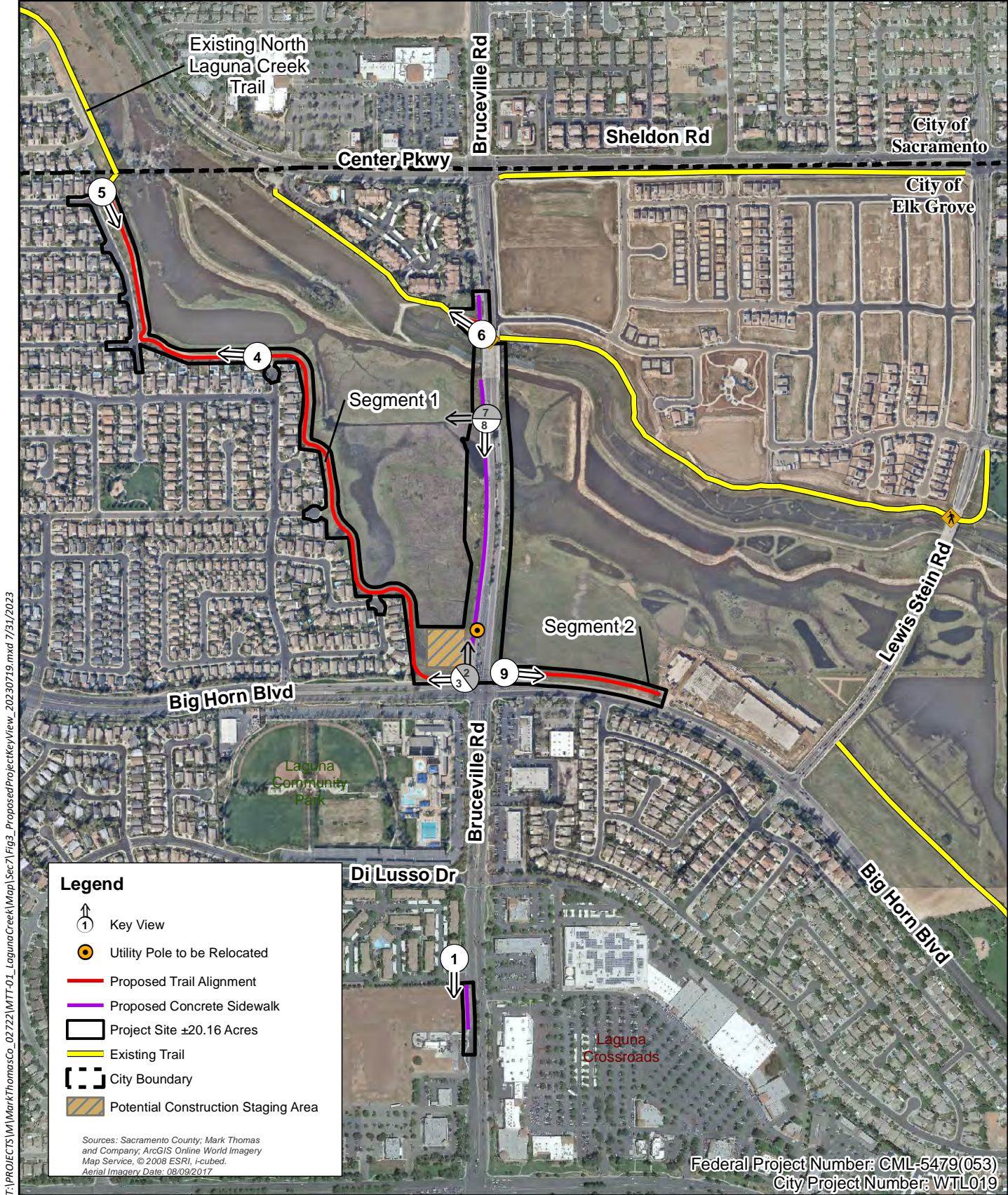
Figures



G:\N_Call\Projects\LagunaCreek_Bruceville\GIS\GIS Project Files\CBR_Fig1_ProjVicinityMap_20200110.mxd



Source: ESRI Basemap



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Attachment 1

Key Views



KEY VIEW 1. Location of proposed sidewalk on Bruceville Road between Di Lusso Drive and Laguna Boulevard, facing south
Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 2. Location of proposed sidewalk on Bruceville Road north of Big Horn Boulevard, facing north
Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 3. Location of proposed trail east of Bruceville Road and north of Big Horn Boulevard, facing west

Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 4. Location of proposed trail near Jessup Court, facing west

Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 5. Description: Location of northern endpoint of proposed trail near Mannington Street, facing southeast

Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 6. Description: End of existing trail and proposed new sidewalk and trail link west of Bruceville Road and south of Center Parkway, facing northwest

Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 7. Description: Location of proposed sidewalk on Bruceville Road north of Big Horn Boulevard, facing south

Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 8. Description: Location of proposed trail east of Bruceville Road, facing west.

Date: September 30, 2021 Photographer: C. Hagele



KEY VIEW 9. Description: Location of proposed trail on north side of Big Horn Boulevard, facing east

Date: September 30, 2021 Photographer: C. Hagele

IS/MND Attachment C

Construction Air Quality and
Greenhouse Gas Review

Rincon Consultants, Inc.

Environmental Scientists

Planners

Engineers

M E M O R A N D U M

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San Diego: (760) 918 9444

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Ventura: (805) 644 4455

Date: July 20, 2023

To: Thaleena Bhattal, Acting Branch Chief of Caltrans District 3

Project: Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

Federal Project No. CML-5479 (053)

City Project No. WTL019

From: Bill Vosti, Noise and Air Quality Consultant

E-mail: Thalena.Bhattal@dot.ca.gov

Re: Construction Air Quality and Greenhouse Gas Memorandum for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

I. Introduction

The City of Elk Grove (City), in cooperation with the California Department of Transportation (CALTRANS), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road. The Laguna Creek Trail and Bruceville Road Sidewalks Project (Proposed Project) site is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, CA, approximately 0.5 mile west of State Route 99, and approximately three miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East on the USGS Florin, California 7.5-minute quadrangle (38° 25' 13" North, 121° 27' 48" West) (Project Vicinity) (**Figure 1**) (Project Location) (**Figure 2**).

II. Project Purpose and Need/Purpose and Objectives

The purpose and defined objective of the Proposed Project is to construct multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road. The Project is needed to help meet the goals of the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan (2021), as well as the associated Sacramento County Bikeway Master Plan (2011), and SACOG Master Plan (2015). The Proposed Project is needed to provide connecting links that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial



retail and office areas, and transit facilities. Development of the Proposed Project would provide greater accessibility to the existing trail system within the City of Elk Grove and make trails directly accessible to additional homes.

III. Alternatives

Build Alternative/Proposed Project

Project Components

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway) with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings (Proposed Project) (**Figure 3**). A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalks. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Paved surfaces would be Hot Mixed Asphalt (HMA) with stabilized Decomposed Granite (DG) shoulders relying on base and sub base as needed. Base material would consist of aggregate base, with a sub base of either existing or compacted native material or a treated native material. Treatments could include cement or lime. Sidewalk widenings on Bruceville Road would require sawcutting the existing road and cutting into the embankment. Proposed fill slopes would vary in height, ranging from one to four feet.

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limited to 2-foot-deep for subbase. Grading limits would be contained within a 36- to 44-foot-wide disturbance corridor for Segment 1.

Segment 2

Segment 2 would be constructed east of Bruceville Road adjacent and parallel to Big Horn Boulevard for an overall length of approximately 0.16 mile (**Figure 3**). It is anticipated that where the Segment 2 alignment terminates, compliance with City-required Conditions of Approval for the Trojan Storage II Project (currently under construction) will result in the construction of a connecting trail segment to Lewis Stein Road. The new trail will use the existing at-grade crossing at Bruceville Road and Big Horn Boulevard to connect to Segment 1. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 34- to 40-foot-wide disturbance corridor for Segment 2.

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Proposed sidewalk improvements would be constructed on the west side of Bruceville Road. Approximately 1,600 feet of sidewalk would be constructed between Big Horn Boulevard and the Bruceville Road Bridge over Laguna Creek (Bridge No. 24C0405) and 180 feet of sidewalk would be constructed from the bridge to existing sidewalk. In addition, the guardrail at the bridge would be replaced and would roughly correspond to the back of sidewalk in this location. New Americans with Disabilities Act (ADA) - compliant ramps would be constructed at Mannington Street and at Mannington Street/Wallbridge Way.

Approximately 230 feet of sidewalk would be constructed at an existing gap in the sidewalk between Di Lusso Drive and Laguna Boulevard. At this location, the roadway surface at Bruceville Road would be extended to match up with the proposed sidewalk.

Culvert Crossings and Hydrology

The Proposed Project would maintain existing grades and drainage patterns to the greatest extent feasible. Side slopes would be constructed with a 4:1 slope. To maintain the existing drainage patterns, culverts may be used to convey water from one side of the trail to the other during more intense rain events. These culverts would be located in upland areas and sized based on existing topographic information and would include rock slope protection and flared end sections to reduce erosion and provide energy dissipation measures.

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Trail pavement would be delineated by distinct paint, markings, and signs consistent with City of Elk Grove standards as well as the California Manual of Uniform Traffic Control Devices (MUTCD) standards. The City may also elect to provide wayfinding signs. According to the Bicycle, Pedestrian, and Trails



Master Plan (BPTMP), all bicycle striping and wayfinding signs would also conform to the Caltrans Highway Design Manual chapter 1000 (GHD, Inc. 2021).

Utilities

Utility coordination would be required to relocate a utility guy-pole that is in conflict with the roadway/sidewalk widening on the west side of Bruceville Road. This pole would be relocated to another location either within the City's right of way or within a new utility easement. No other utility relocations are anticipated for this Project other than potentially adjusting existing utility lids to new grades.

Construction

Construction of the Proposed Project would commence in summer of 2025 and would take approximately seven to nine months to complete.

No-Build Alternative/No-Project Alternative

Under the No-Build, or "No-Project" Alternative, the trails and sidewalks would not be constructed. Gaps in the City's trail system and sidewalks would remain.

IV. Affected Environment

The Proposed Project is surrounded by a variety of land uses including single family residences, institutional uses such as the Barbara Morse Wackford Community & Aquatic Complex, and commercial land uses, including retail and restaurants.

Local Climate and Meteorology

The Proposed Project is located within the Sacramento Valley Air Basin (Basin), which is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). SMAQMD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "nonattainment."

The Basin is generally flat and bounded by the North Coast Ranges to the west and the northern Sierra Nevada Mountain Range to the east. Air flows into the Basin through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin Delta from the San Francisco Bay Area. The ranges forming the Basin create a physical barrier to airflow, which leads to the entrapment of locally generated air pollutants when meteorological conditions are unfavorable for transport and dilution, as well as pollution that might otherwise be transported northward on prevailing winds from the Sacramento Metropolitan area. In general, the Basin has a Mediterranean climate and generally has hot, arid, and clear summers, with short, cool, wet, and partly-cloudy winters (U. S. Climate Data 2019). Wind direction varies by month – in the beginning of the year (approximately January – April), wind generally comes from the south between April and June, and then from



November through January, wind normally comes from the north. The average annual precipitation is 20 inches with an average of 269 sunny days each year (U. S. Climate Data 2019) and the high temperature is around 93 degrees Fahrenheit, while the winter low is around 39 degrees Fahrenheit.

Air Pollutants of Primary Concern

The federal and state Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these Acts, the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for criteria pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of air pollutant emissions, as well as by the climate and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as carbon monoxide and suspended particulate matter) is proximity to major sources. In particular, ambient carbon monoxide levels usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of primary criteria pollutants is provided below.

Ozone

Ozone (O_3) is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG). NO_x is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

Carbon monoxide (CO) is a local pollutant that is found in high concentrations only near fuel combustion equipment and other sources of carbon monoxide. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2 , creating the mixture of NO and NO_2 commonly called NO_x . Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.



Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM₁₀ (which measures no more than 10 microns in diameter) and PM_{2.5} (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and PM_{2.5} can be different. Major man-made sources of PM₁₀ are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer, PM_{2.5} particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. PM_{2.5} is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Existing Ambient Air Quality

Monitoring of ambient air pollutant concentrations is conducted by CARB and SMAQMD. There are 12 ambient air monitoring stations located throughout Sacramento County. Some pollutants, such as ozone, are measured continuously. Other pollutants are sampled periodically. Particulate matter, for example, is measured over 24 hours every six days. The basic three monitoring objectives are to: 1) provide air pollution data to the general public in a timely manner; 2) support compliance with ambient quality standards and emissions strategy development; and 3) support air pollution research studies. There are a variety of types of monitoring sites to support the monitoring objectives including sites located to determine the highest pollutant concentration, the representative concentrations in areas of high population density, the impact of major pollution emissions sources, the general background concentration levels, the extent of pollutant transport, and impacts on visibility, vegetation, and other welfare-based impacts. The SMAQMD's *2021 Annual Network Plan* provides more information on specific monitoring stations throughout the District (SMAQMD 2021).

CARB and the U.S. EPA establish ambient air quality standards for major pollutants. Standards have been set at levels intended to be protective of public health. California standards are typically more restrictive than federal standards. Local air districts and CARB monitor ambient air quality to ensure that air quality standards are met, and if they are not met, develop strategies to meet the standards. Air quality monitoring stations measure pollutant ground-level concentrations (typically, ten feet above ground level). Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "nonattainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Sacramento County is in nonattainment for the state eight-hour and one-hour ozone standards as well as the state standard for particulates measuring 10 microns in diameter (PM₁₀). Additionally, Sacramento County is in nonattainment for the federal eight-hour ozone standard and the federal standard for particulates less than 2.5 microns in diameter (PM_{2.5}). The County is unclassified or in attainment for all other standards (CARB 2023a).

Table 1 indicates the number of days that the O₃ and NO₂ standards has been exceeded in 2019, 2020, and 2021 for the Elk Grove-Bruceville Road monitoring station, which is the closest station to the Project



site (approximately nine miles south) that monitors those pollutants. As shown, the ozone worst hour and eight hour concentrations exceeded federal standards in 2019 through 2021. Concentration data for PM₁₀ and PM_{2.5} is available at the Sacramento-T Street monitoring station. As shown in Table 1, the federal PM₁₀ standards were exceeded in 2019 and 2020, and the state PM₁₀ standards were exceeded in 2019 through 2021. Data for NO₂ was acquired from the Elk Grove-Bruceville Road monitoring station, where no exceedances occurred.

Table 1 Ambient Air Quality Data

| Pollutant | | | |
|---------------------------------------------------------------------------|-------|-------|-------|
| Ozone, ppm - Worst Hour | 0.103 | 0.111 | 0.105 |
| Number of days of federal exceedances (>0.07 ppm) | 2 | 1 | 2 |
| Ozone, ppm – Worst 8 Hours | 0.077 | 0.082 | 0.080 |
| Number of days of State/Federal exceedances (>0.07 ppm) | 4 | 2 | 5 |
| Nitrogen Dioxide, µg/m ³ - Worst Hour | 59.0 | 21.0 | 24.0 |
| Number of days of State exceedances (339 µg/m ³) | 0 | 0 | 0 |
| Number of days of Federal exceedances (188 µg/m ³) | 0 | 0 | 0 |
| Particulate Matter <10 microns, µg/m ³ - Worst 24 Hours | 174.7 | 298.7 | 132.6 |
| Estimated number of days of State exceedances (>50 µg/m ³) | 25 | 59 | 13 |
| Estimated number of days of Federal exceedances (>150 µg/m ³) | 1 | 4 | 0 |
| Particulate Matter <2.5 microns, µg/m ³ - Worst 24 Hours | 32.3 | 111.0 | 89.0 |
| Estimated number of days of Federal exceedances (>35 µg/m ³) | 0 | 17 | 4 |

Source: California Air Resources Board (CARB). 2023b. "iADAM: Air Quality Data Statistics." <https://www.arb.ca.gov/adam> (accessed July 6, 2023).

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient to protect public health and welfare with an adequate margin of safety. They are designed to protect that segment of the public most susceptible to respiratory distress. Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Nearby sensitive receptors include single-family residences near the proposed trail alignment and construction staging area and multi-family residences north of proposed sidewalk improvements on Bruceville Road. The closest residential receptors are single-family residences which have property boundaries approximately 15 feet west and south of the proposed alignment. The



property line for the multi-family residences is located approximately 80 feet northwest of the proposed sidewalk improvements.

V. Temporary Construction Impacts

The construction emissions associated with development of the Project were calculated using the Roadway Construction Emission Model (RCEM). Temporary emissions would result from three primary sources: operation of construction vehicles (e.g., scrapers, loaders, and excavators); ground disturbance during clearing and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances. The extent of daily emissions, particularly reactive organic gases (ROGs) and nitrogen oxide (NO_x) emissions, generated by construction equipment would depend on the quantity of equipment used and the hours of operation for each project. The extent of fugitive dust (PM_{2.5} and PM₁₀) emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether excavation is involved; and 4) whether transporting excavated materials offsite is necessary. The amount of ROG emissions generated by paints and oil-based substances such as asphalt depends upon the type and amount of material used.

The estimated duration of construction is seven months based on the applicant's preliminary construction schedule. Construction activities would include site preparation, grading, paving, and architectural coating and would result in temporary air quality impacts that may vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. This analysis anticipates that the Project would require import of 490 cubic yards (CY) of DG to line the shoulders of the trail. Additionally, it was assumed that 2,500 CY of soil would be exported from the Project site, based on applicant provided information.

Construction of the Project would result in temporary emissions of air pollutants due to grading, fumes, and vehicle exhaust. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, and suspended particulate matter.

Caltrans is the NEPA lead agency and the City of Elk Grove is the CEQA lead agency. As applicable, the provisions of *Caltrans Standard Specifications*, Section 14, *Air Pollution Control*, and Section 10, *Dust Control*, require the contractor to comply with all CARB and SMAQMD rules, ordinances, and regulations.

The Project's estimated construction emissions are shown in Table 2. Emissions of nitrogen dioxide (NO₂) were assumed to equal emissions of NO_x, and emissions of sulfur dioxide (SO₂) were assumed to constitute the functional majority of SO_x emissions.



Table 2 Potential Construction Emissions

| | Estimated Maximum Daily Emissions (pounds) | | | | | |
|---------------------------------------------------------------------------------|--------------------------------------------|-----------------|-------|------------------|-------------------|-----------------|
| | ROG | NO _x | CO | PM ₁₀ | PM _{2.5} | SO ₂ |
| Maximum Daily Emissions | 4.27 | 42.56 | 39.27 | 2.03 | 1.67 | 0.09 |
| Note: Full emissions modeling results are included in the attached spreadsheets | | | | | | |

As shown in Table 2, Project-generated construction emissions would be minor, assuming use of a water truck.¹

VI. Permanent Impacts

The Project is exempt from all project-level conformity requirements because it is a bicycle and pedestrian facility. Bicycle and pedestrian facilities are considered exempt projects as outlined in 40 CFR 93.126.

VII. Minimization Measures

Construction impacts related to air quality are short-term in duration and therefore, will not result in adverse or long-term conditions. Nonetheless, implementation of the following measures would reduce any air quality impacts resulting from construction activities:

AQ - 1: Route and schedule construction traffic to avoid peak travel times as much as possible, to reduce congestion and related air quality impacts caused by idling vehicles along local roads.

AQ - 2: The construction contractor shall comply with Caltrans’ Standard Specifications Section 14 of Caltrans’ Standard Specifications (2022) and Section 14-9.02 Air Pollution Control. Section 14-9.02 states:

- a. Comply with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including those provided in Government Code § 11017 (Pub Cont Code § 10231).
- b. Do not dispose of material by burning

AQ-3: Sacramento Metropolitan Air Quality Management District’s Rule 403 – Fugitive Dust would be followed. The general requirements of Rule 403 are:

- a. **301 Limitations:** A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:

¹ Based on the RCEM tool, PM₁₀ and PM_{2.5} estimates assume 50 percent control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.



- i. **301.1** Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land.
- ii. **301.2** Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;
- iii. **301.3** Other means approved by the Air Pollution Control Officer.

VIII. Summary

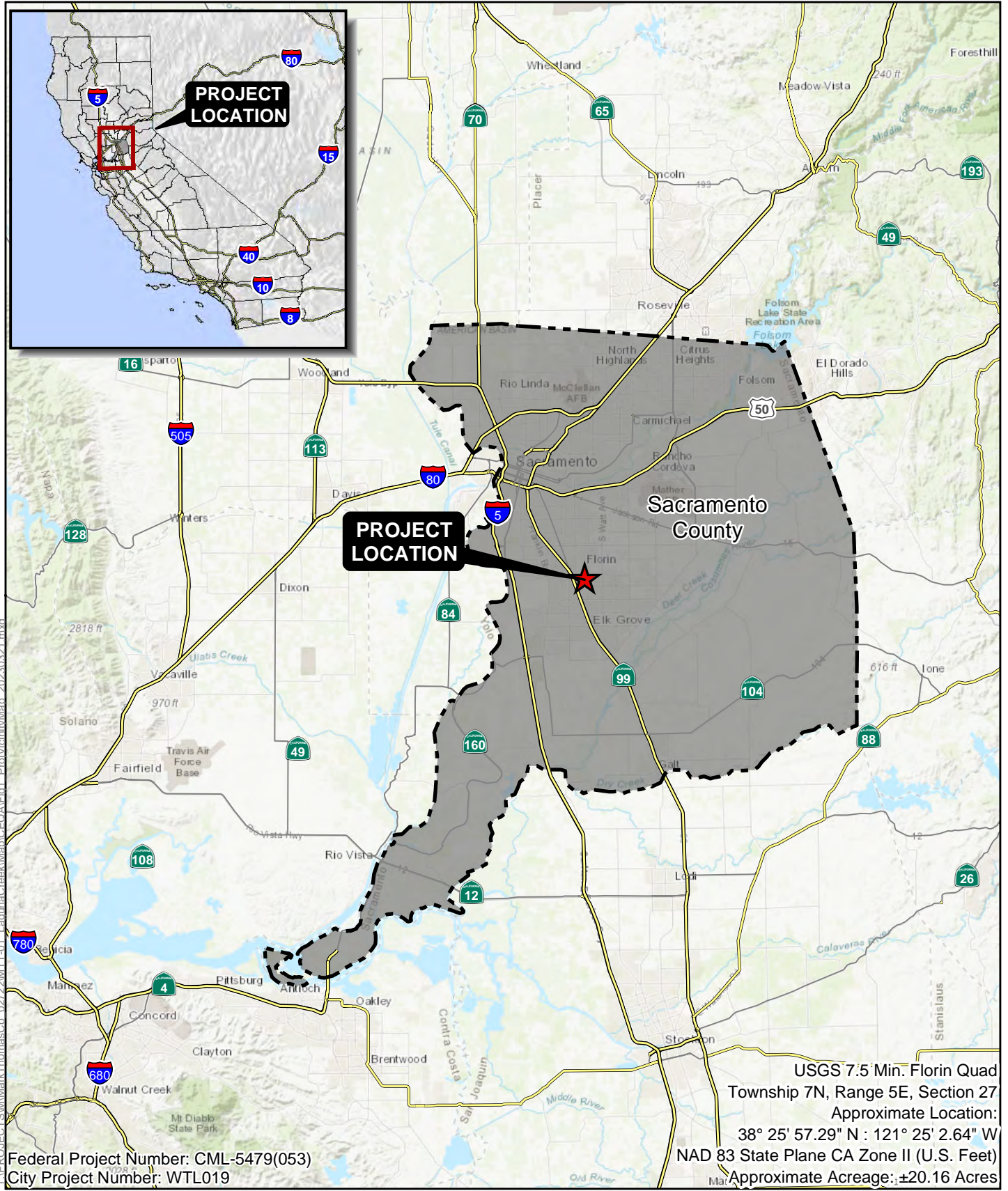
No substantially adverse air quality impacts are anticipated from construction because it would be short-term and intermittent and would be conducted in accordance with Caltrans' standard specifications and City requirements.

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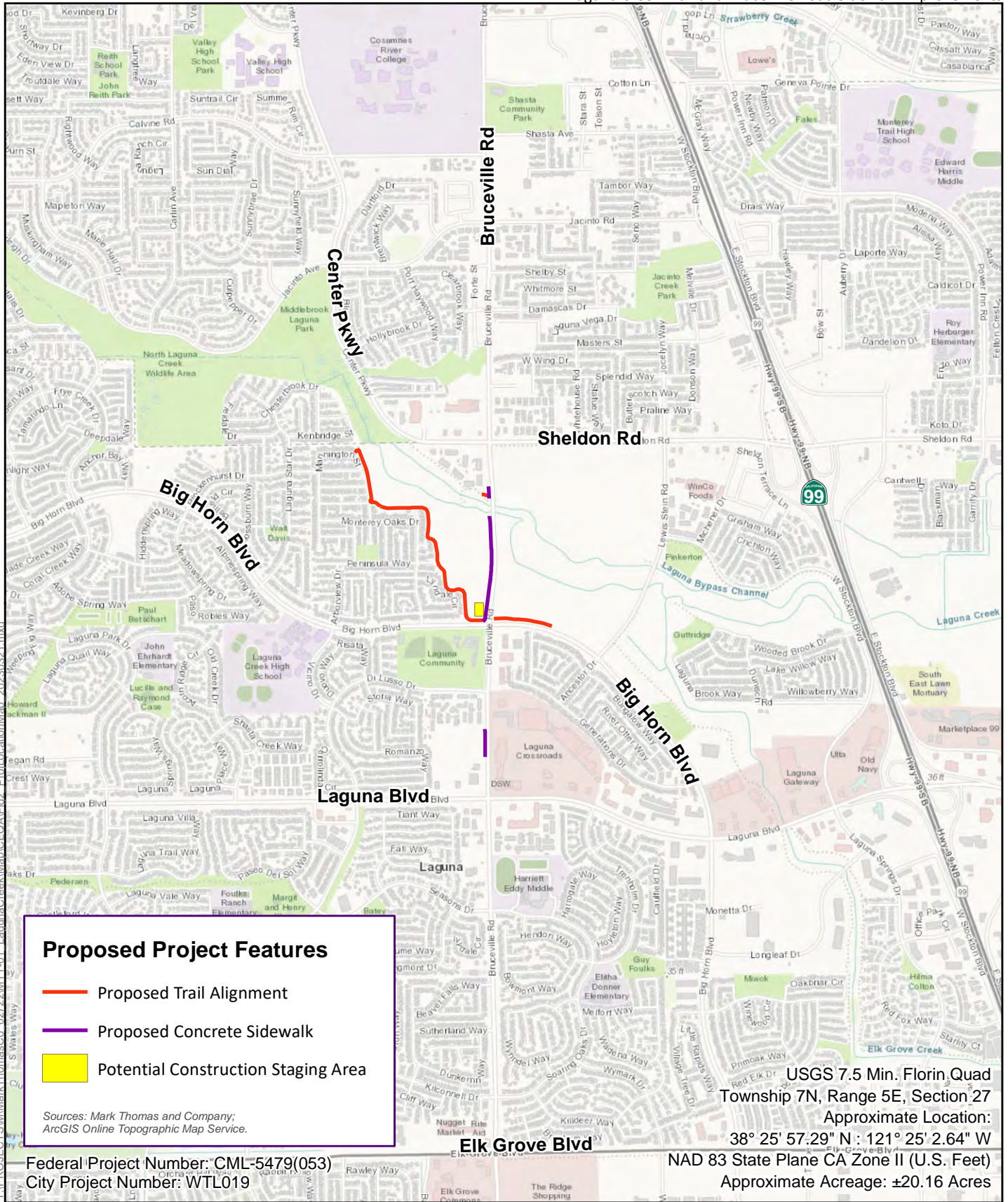
Attachment 1

Figures



T:\PROJECTS\Map\ThomasCo_02722\MTT-01_LagunaCreek\Map\GEO\A\Fig1_ProbVicinityMap_20230321.mxd

Federal Project Number: CML-5479(053)
 City Project Number: WTL019



Source: ESRI Basemap



T:\PROJECTS\MarkThomson\02722\MTT-01_LagunaCreek\Map\NES\LCBR_Fig2_ProjLocationMap_20230711.mxd

Source: Aerial Imagery (Nearmap 3/15/2023)

Attachment 2

Model Outputs

Road Construction Emissions Model, Version 9.0.0

| Daily Emission Estimates for -> Laguna Creek Trail and Bruceville Road Sidewalk Improvements Proj | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------|---------------|--------------|---------------|----------------|------------------------|------------------------------|-----------------------|-------------------------|-------------------------------|---------------|---------------|---------------|---------------|----------------|
| Project Phases (Pounds) | ROG (lbs/day) | CO (lbs/day) | NOx (lbs/day) | PM10 (lbs/day) | Exhaust PM10 (lbs/day) | Fugitive Dust PM10 (lbs/day) | Total PM2.5 (lbs/day) | Exhaust PM2.5 (lbs/day) | Fugitive Dust PM2.5 (lbs/day) | SOx (lbs/day) | CO2 (lbs/day) | CH4 (lbs/day) | N2O (lbs/day) | CO2e (lbs/day) |
| Grubbing/Land Clearing | 0.98 | 7.91 | 9.20 | 0.61 | 0.40 | 0.21 | 0.39 | 0.35 | 0.04 | 0.02 | 2,049.09 | 0.44 | 0.07 | 2,079.52 |
| Grading/Excavation | 4.27 | 39.27 | 42.56 | 2.03 | 1.82 | 0.21 | 1.67 | 1.63 | 0.04 | 0.09 | 8,715.42 | 2.48 | 0.13 | 8,816.70 |
| Drainage/Utilities/Sub-Grade | 3.70 | 34.07 | 35.75 | 1.74 | 1.53 | 0.21 | 1.44 | 1.40 | 0.04 | 0.08 | 7,247.73 | 1.58 | 0.11 | 7,321.32 |
| Paving | 1.45 | 18.37 | 13.50 | 0.69 | 0.69 | 0.00 | 0.59 | 0.59 | 0.00 | 0.03 | 3,270.47 | 0.75 | 0.09 | 3,317.39 |
| Maximum (pounds/day) | 4.27 | 39.27 | 42.56 | 2.03 | 1.82 | 0.21 | 1.67 | 1.63 | 0.04 | 0.09 | 8,715.42 | 2.48 | 0.13 | 8,816.70 |
| Total (tons/construction project) | 0.13 | 1.32 | 1.29 | 0.07 | 0.06 | 0.01 | 0.05 | 0.05 | 0.00 | 0.00 | 278.58 | 0.07 | 0.01 | 282.04 |

Notes:
 Project Start Year -> 2025
 Project Length (months) -> 6
 Total Project Area (acres) -> 3
 Maximum Area Disturbed/Day (acres) -> 0
 Water Truck Used? -> Yes

| Phase | Total Material Imported/Exported Volume (yd ³ /day) | | Daily VMT (miles/day) | | | |
|------------------------------|----------------------------------------------------------------|---------|-----------------------|-----------------|----------------|-------------|
| | Soil | Asphalt | Soil Hauling | Asphalt Hauling | Worker Commute | Water Truck |
| Grubbing/Land Clearing | 19 | 0 | 36 | 0 | 360 | 40 |
| Grading/Excavation | 19 | 0 | 36 | 0 | 880 | 40 |
| Drainage/Utilities/Sub-Grade | 19 | 0 | 36 | 0 | 760 | 40 |
| Paving | 19 | 11 | 36 | 30 | 600 | 40 |

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

| Total Emission Estimates by Phase for -> Laguna Creek Trail and Bruceville Road Sidewalk Improvements Proj | | | | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------|------------------|-----------------|------------------|-------------------|---------------------------|---------------------------------|--------------------------|----------------------------|----------------------------------|------------------|------------------|------------------|------------------|-----------------|
| Project Phases (Tons for all except CO2e. Metric tonnes for CO2e) | ROG (tons/phase) | CO (tons/phase) | NOx (tons/phase) | PM10 (tons/phase) | Exhaust PM10 (tons/phase) | Fugitive Dust PM10 (tons/phase) | Total PM2.5 (tons/phase) | Exhaust PM2.5 (tons/phase) | Fugitive Dust PM2.5 (tons/phase) | SOx (tons/phase) | CO2 (tons/phase) | CH4 (tons/phase) | N2O (tons/phase) | CO2e (MT/phase) |
| Grubbing/Land Clearing | 0.02 | 0.17 | 0.20 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 43.73 | 0.01 | 0.00 | 40.26 |
| Grading/Excavation | 0.04 | 0.41 | 0.44 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 90.12 | 0.03 | 0.00 | 82.70 |
| Drainage/Utilities/Sub-Grade | 0.04 | 0.35 | 0.37 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 74.94 | 0.02 | 0.00 | 68.68 |
| Paving | 0.03 | 0.39 | 0.29 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 69.79 | 0.02 | 0.00 | 64.22 |
| Maximum (tons/phase) | 0.04 | 0.41 | 0.44 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 90.12 | 0.03 | 0.00 | 82.70 |
| Total (tons/construction project) | 0.13 | 1.32 | 1.29 | 0.07 | 0.06 | 0.01 | 0.05 | 0.05 | 0.00 | 0.00 | 278.58 | 0.07 | 0.01 | 255.86 |

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.
 Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.
 CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.
 The CO2e emissions are reported as metric tons per phase.

IS/MND Attachment D

Natural Environment Study

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Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project



Natural Environment Study

District 03 – SAC – Laguna Creek Trail and
Bruceville Road Sidewalk Improvements Project

Federal Aid No. CML-5479(053)

City of Elk Grove Project No. WTL019

November 2023



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Natural Environment Study

Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

Federal Aid No. CML-5479(053)
City of Elk Grove Project No. WTL019
November 2023

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TABLE OF CONTENTS

| | |
|------------------------------------------------------------------------------|-----|
| Summary..... | vii |
| Chapter 1: Introduction..... | 1 |
| Project Location and Setting..... | 1 |
| Project Purpose and Need/Purpose and Objectives..... | 1 |
| Build Alternative/Proposed Project..... | 1 |
| Project Components..... | 1 |
| Trail Design..... | 2 |
| Roads and Sidewalks..... | 2 |
| Culvert Crossings and Hydrology..... | 3 |
| Road Crossings and Signage..... | 3 |
| Utilities..... | 3 |
| Construction..... | 3 |
| Schedule..... | 3 |
| Other Project Features (Biological Resources-Specific)..... | 3 |
| No-Build Alternative/ No Project Alternative..... | 4 |
| Chapter 2: Study Methods..... | 5 |
| Regulatory Requirements..... | 5 |
| Clean Water Act..... | 5 |
| Rivers and Harbors Act of 1899..... | 5 |
| Waters of the U.S..... | 6 |
| Waters of the State..... | 6 |
| Porter-Cologne Water Quality Control Act..... | 7 |
| Migratory Bird Treaty Act..... | 7 |
| The Bald and Golden Eagle Protection Act..... | 7 |
| Executive Order 11990 – Protection of Wetlands..... | 8 |
| Executive Order 13112 – Invasive Species..... | 8 |
| Magnuson-Stevens Fishery Conservation and Management Act..... | 8 |
| Federal Endangered Species Act..... | 8 |
| California Endangered Species Act..... | 9 |
| California Department of Fish & Wildlife Streambed Alteration Agreement..... | 9 |
| California Department of Fish and Game Codes..... | 9 |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| | |
|---------------------------------------------------------------------------------------|----|
| California Department of Fish and Wildlife Species of Concern | 9 |
| California Native Plant Society..... | 10 |
| City of Elk Grove Tree Ordinance | 10 |
| City of Elk Grove Swainson’s Hawk Code | 11 |
| Lower Laguna Flood Control Project | 12 |
| Studies Required | 12 |
| Literature Search | 12 |
| Biological Study Area..... | 13 |
| Survey Methods..... | 13 |
| Personnel and Survey Dates | 13 |
| Agency Coordination and Professional Contacts..... | 14 |
| Limitations That May Influence the Results..... | 15 |
| Chapter 3: Results – Environmental Setting..... | 16 |
| Description of the Existing Physical and Biological Conditions | 16 |
| Study Area | 16 |
| Physical Conditions..... | 16 |
| Biological Conditions within the Biological Study Area..... | 17 |
| Annual Grassland | 17 |
| Aquatic Resources..... | 18 |
| Common Animal Species..... | 20 |
| Invasive Species..... | 20 |
| Habitat Connectivity and Wildlife Corridors..... | 20 |
| Regional Species, Habitats, and Natural Communities of Concern | 21 |
| Chapter 4: Results – Biological Resources, Discussion of Impacts and Mitigation | 34 |
| Habitats and Natural Communities of Special Concern | 34 |
| Waters of the U.S., Waters of the State, and Northern Hardpan Vernal Pools..... | 34 |
| Special-Status Plant Species | 37 |
| Annual Grassland Special-Status Plants | 38 |
| Vernal Pool Special-Status Plants | 38 |
| Depressional Seasonal Wetland Special-Status Plants..... | 40 |
| Riverine Seasonal and Perennial Marsh Special-Status Plants..... | 41 |
| Special-Status Animal Species | 41 |
| Vernal Pool Invertebrates | 42 |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| | |
|------------------------------------------------------------------------|----|
| Giant Garter Snake..... | 44 |
| Western Pond Turtle..... | 47 |
| Western Spadefoot..... | 48 |
| Swainson’s Hawk..... | 49 |
| Tricolored Blackbird..... | 51 |
| White-Tailed Kite..... | 52 |
| Yellow-Headed Blackbird..... | 54 |
| Migratory Birds and Raptors..... | 55 |
| Chapter 5: Conclusions and Regulatory Determinations..... | 59 |
| Federal Endangered Species Act Consultation Summary..... | 59 |
| Federal Fisheries and Essential Fish Habitat Consultation Summary..... | 60 |
| California Endangered Species Act Consultation Summary..... | 60 |
| Wetlands and Other Waters Coordination Summary..... | 60 |
| Invasive Plant Species..... | 60 |
| Nesting Bird Habitat..... | 60 |
| Chapter 6: References..... | 62 |

LIST OF APPENDICES

| | |
|----------------------------------------------------------------------------|-----|
| Appendix A: CDFW List of Special-Status Species..... | 76 |
| Appendix B: CNPS List of Special-Status Species..... | 81 |
| Appendix C: USFWS List of Special-Status Species..... | 83 |
| Appendix D: NOAA Fisheries Special-Status Anadromous Fish Species..... | 92 |
| Appendix E: Plant and Wildlife Species Observed..... | 97 |
| Appendix F: Preliminary Jurisdictional Determination..... | 102 |
| Appendix G: City of Elk Grove Deed Restricted Parcels Letter to USFWS..... | 112 |
| Appendix H: Representative Site Photographs..... | 117 |

LIST OF TABLES

| | |
|-----------------------------------------------------------|----|
| Table 1: Regionally Occurring Special-Status Species..... | 23 |
| Table 2: Impact Acreage by Habitat Type..... | 34 |

LIST OF FIGURES

| | |
|------------------------------------------------------------------------|----|
| Figure 1: Project Vicinity Map..... | 66 |
| Figure 2: Project Location Map | 67 |
| Figure 3: Proposed Project..... | 68 |
| Figure 4: Biological Communities | 69 |
| Figure 5: Proposed Project and Impacts to Biological Communities | 70 |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

ACRONYMS LIST

| | |
|-----------|---------------------------------------------------------------|
| A | Absent |
| ADA | American Disabilities Act |
| BMPs | Best Management Practices |
| BPTMP | City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan |
| BSA | Biological Survey Area |
| Cal-IPC | California Invasive Plant Council |
| Caltrans | California Department of Transportation |
| CDFA | California Department of Food and Agriculture |
| CDFG | California Department of Fish and Game |
| CDFW | California Department and Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFR | California Federal Register |
| City | City of Elk Grove |
| CNPS | California Native Plant Society |
| CNDDDB | California Natural Diversity Database |
| County | Sacramento County |
| CRPR | California Rare Plant Rank |
| CWA | Clean Water Act |
| DBH | Diameter at Breast Height |
| DG | Decomposed Granite |
| Eagle Act | Bald and Golden Eagle Protection Act |
| EFH | Essential Fish Habitat |
| EO | Executive Order |
| ESAs | Environmentally Sensitive Areas |
| FESA | Federal Endangered Species Act |
| FHWA | Federal Highway Administration |
| GC | General Commercial |
| GPS | Global Positioning System |
| HELIX | HELIX Environmental Planning, Inc. |
| HMA | Hot Mixed Asphalt |
| HP | Habitat Present |
| IPaC | Information for Planning and Conservation |
| ITP | Incidental Take Permit |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| | |
|-------------------|-----------------------------------------------------------------------------------------------------|
| MBTA | Migratory Bird Treaty Act |
| MP | Industrial-Office Park |
| MSL | Mean Sea Level |
| MM | Mitigation Measure |
| MUTCD | Manual of Uniform Traffic Control Devices |
| NEPA | National Environmental Policy Act |
| NES | Natural Environment Study |
| NPDES | Non-Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NWPR | Navigable Waters Protection Rule |
| O | Open Space |
| OHWM | Ordinary High-Water Mark |
| P | Present |
| PJD | Preliminary Jurisdictional Determination |
| Procedures | Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State |
| Project | Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project |
| RD-30 | High Density Residential—Thirty Dwelling Units Per Acre |
| RMU | Residential Mixed Use |
| RWQCB | Regional Water Quality Control Board |
| SACOG | Sacramento Area Council of Governments |
| SACOG Master Plan | Sacramento Area Council of Governments Master Plan |
| SCBMP | Sacramento County Bikeway Master Plan |
| SNC | Sensitive Natural Community |
| SWRCB | State Water Resources Control Board |
| U.S. | United States |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| WQC | Water Quality Certification |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

SUMMARY

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road (Project). The Project site is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, California, approximately 0.5 mile west of State Route 99, and approximately 3.0 miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East of the U.S. Geological Survey (USGS) *Florin, California* 7.5-minute quadrangle (38° 25' 57.29" North, 121° 25' 2.64" West). The proposed Project is needed to close the gap between the existing trails and provide a connecting link that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities.

The boundary of the 20.16-acre Biological Study Area (BSA) encompasses the Project's limits of disturbance and consists of undeveloped land that is bordered by residential neighborhoods and moderate to heavily trafficked roads. Minor to moderate disturbance was observed within the BSA including the establishment of invasive and/or noxious weeds, disturbed land from continuous pedestrian use, and trash. California annual grassland (annual grassland) is the only natural upland biological community that occurs within the BSA. Six types of aquatic features occur within the BSA: depressional seasonal wetland, vernal pool, riverine seasonal marsh, riverine perennial marsh, channel, and creek.

Special-Status Species

Special-Status Plant Species

Twenty-three special-status plants have the potential to occur within the aquatic features that are present within the BSA. With the implementation of one or more of the avoidance measures discussed within this document, impacts of the Project to special-status plants can be avoided or minimized.

Special-Status Wildlife Species

Eleven special-status wildlife species have the potential to occur within the BSA as well as migratory birds and raptors protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes. With the implementation of one or more of the avoidance measures discussed within this document, the impacts of the Project to special-status wildlife species can be avoided or minimized.

The federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp have the potential to occur within the vernal pools and depressional seasonal wetlands within the BSA. The federally and state listed giant garter snake has the potential to occur in Laguna Creek and Elk Grove Creek adjacent to the BSA.

There is no critical habitat proposed or present within the BSA for federally listed species, including federally listed fish species or Essential Fish Habitat (EFH).

The proposed Project will have No Effect on the following federally listed species due to a lack of suitable habitat in the BSA, or the BSA being outside of the current known range of the species: Sacramento Orcutt grass (*Orcuttia viscida*), slender Orcutt grass (*Orcuttia tenuis*), monarch butterfly (*Danaus plexippus*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Central

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Valley steelhead (*Oncorhynchus mykiss irideus*), Chinook salmon – Central Valley (CV) spring run and Sacramento River (SR) winter run (*Oncorhynchus tshawytscha*), delta smelt (*Hypomesus transpacificus*), green sturgeon pop. 1 (*Acipenser medirostris*), longfin smelt (*Spirinchus thaleichthys*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), least Bell's vireo (*Vireo bellii pusillus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*).

As currently designed, permanent direct impacts to habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp will occur through ground disturbance of the soil within vernal pool and depressional seasonal wetland habitats, removal/fill of the vernal pools and depressional seasonal wetlands through trail construction, or altering hydrology of the vernal pools or depressional seasonal wetlands through trail construction thereby resulting in loss of potentially occupied habitat or individuals. Indirect impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp could result from disturbance caused by the movement of equipment, workers, and trail-users, silt or other debris entering the pools/wetlands during construction, or the introduction of noxious/invasive weeds into the vernal pools or depressional seasonal wetlands that reduce the suitability of the pools to support vernal pool invertebrates.

The proposed Project may affect and is likely to adversely affect vernal pool fairy shrimp and vernal pool tadpole shrimp.

Suitable giant garter snake aquatic habitat is absent from the BSA but occurs directly adjacent to the BSA. As currently designed, the Project has the potential to directly impact giant garter snake individuals through direct impacts within a portion of designated giant garter snake conservation area identified under the 1996 Biological Opinion issued by the USFWS for the Lower Laguna Flood Control Project (Service File 1-1-96-F-51). Permanent direct impacts could occur through ground disturbance of the soil and trail construction. Indirect impacts could occur to giant garter snake and result from disturbance caused by the movement of equipment, workers, and trail-users, or silt or other debris entering the site during construction.

The proposed Project may affect and is likely to adversely affect giant garter snake.

Suitable western pond turtle aquatic habitat is absent from the BSA but occurs directly adjacent to the BSA. As currently designed, the Project has the potential to directly impact western pond turtle individuals through direct impacts within potential upland habitat. Permanent direct impacts could occur through ground disturbance of the soil and trail construction. Indirect impacts could occur to western pond turtle and result from disturbance caused by the movement of equipment, workers, and trail-users, or silt or other debris entering the site during construction.

The proposed Project may affect and is likely to adversely affect western pond turtle.

The following State Species of Special Concern have the potential to occur within the BSA: yellow-headed blackbird and protected nesting migratory birds. No take of State-listed species is anticipated for the Project with implementation of minimization and avoidance measures identified in this Natural Environment Study (NES). Because no take of State-listed species is anticipated, no State Incidental Take Permit (ITP) will be required for the Project.

The Project has the potential to impact jurisdictional waters of the United States (U.S.). Should the Project result in impacts to any waters of the U.S., the Applicant is required to obtain authorization under a Clean Water Act (CWA) Section 404 permit for any impacts to wetlands or other waters subject

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

to U.S. Army Corps of Engineers (USACE) jurisdiction. Impacts to USACE jurisdictional waters would also require a 401 Water Quality Certification (WQC) from the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA. In addition, impacts to aquatic resources may also require a Streambed Alteration Agreement under California Fish and Game Code Section 1602. The permits will include terms and conditions to minimize impacts and to fully mitigate for any permanent impacts to wetlands and other waters. A discussion of additional measures to minimize and avoid impacts to aquatic features is also included within this NES.

Several invasive plant species and noxious weeds are present within the annual grassland habitat within the BSA. Mitigation measures shall be implemented to avoid the spread of invasive plant species and noxious weeds as the result of Project implementation.

Measures to avoid and minimize impacts to biological resources shall be implemented as described in this NES.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

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CHAPTER 1: INTRODUCTION

Project Location and Setting

The City, in cooperation with Caltrans, proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road. The purpose and need of the Project are discussed below. The Project site is located in the area of Bruceville Road and Big Horn Boulevard in the City of Elk Grove, Sacramento County (County), California, approximately 0.5 mile west of State Route 99, and approximately 3.0 miles east of Interstate 5 (**Figure 1, Project Vicinity Map**). The site is located within Section 27 of Township 7 North, Range 5 East of the USGS *Florin, California* 7.5-minute quadrangle (38° 25' 57.29" North, 121° 25' 2.64" West) (**Figure 2, Project Location Map**).

Proposed trail and sidewalk improvements within the BSA would traverse an existing undeveloped area zoned for Open Space (O), High Density Residential—Thirty Dwelling Units Per Acre (RD-30), Industrial-Office Park (MP), Residential Mixed Use (RMU), and General Commercial (GC) (City of Elk Grove 2019). Existing biological communities are discussed in **Chapter 3: Results – Environmental Setting**.

The proposed Project would develop trail improvements through a portion of the Phase 1 Lower Laguna Flood Control Project area (Phase 1 as defined within the 1999 Biological Opinion Amendment; U.S. Department of the Interior 1999). Portions of the Project that are currently covered by Deed Restrictions required for the Lower Laguna Flood Control Project are discussed in **Chapter 2: Study Methods**.

Project Purpose and Need/Purpose and Objectives

The purpose and defined objective of the proposed Project is to construct multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road. The Project is needed to help meet the goals of the *City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan* (BPTMP) (GHD, Inc. 2021), as well as the associated *Sacramento County Bikeway Master Plan* (SCBMP) (Sacramento County 2011) and *Sacramento Area Council of Governments Master Plan* (SACOG Master Plan) (SACOG 2015). The proposed Project is needed to provide connecting links that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities. Development of the proposed Project would provide greater accessibility to the existing trail system within the City and make trails directly accessible to additional homes.

Build Alternative/Proposed Project

Project Components

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway), with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings (**Figure 3, Proposed Project**). A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalk. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Parkway (approximately 0.30 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Paved surfaces would be Hot Mixed Asphalt (HMA) with stabilized Decomposed Granite (DG) shoulders relying on base and subbase as needed. Base material would consist of aggregate base, with a subbase of either existing or compacted native material or a treated native material. Treatments could include cement or lime. Sidewalk widenings on Bruceville Road would require sawcutting the existing road and cutting into the embankment. Proposed fill slopes would vary in height, ranging from one to four feet.

Trail segments may include amenities including, but not limited to, concrete entry nodes, post and cable fencing, landscaping, benches, and interpretive signage.

Trail Design

As shown on **Figure 3**, two trail segments would be developed as a 10-foot-wide path with 2-foot-wide shoulders following existing informal trails where feasible and would maintain existing gradual slopes and relatively flat natural topography. Side slopes would be constructed with a 4:1 slope.

Segment 1

Segment 1 would be constructed west of Bruceville Road and north of Big Horn Boulevard. The trail would parallel existing residential development to the west for a length of approximately 0.75 mile trending northward from the existing sidewalk at Big Horn Boulevard and path near Mannington Street (**Figure 3**). The vertical profile will roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 36- to 44-foot wide disturbance corridor for Segment 1.

Segment 2

Segment 2 would be constructed east of Bruceville Road adjacent and parallel to Big Horn Boulevard for an overall length of approximately 0.16 mile (**Figure 3**). It is anticipated that where the Segment 2 alignment terminates, compliance with City-required Conditions of Approval for the Trojan Storage II Project (currently under construction) will result in the construction of a connecting trail segment to Lewis Stein Road. The new trail would use the existing at-grade crossing at Bruceville Road and Big Horn Boulevard to connect to Segment 1. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 34- to 40-foot-wide disturbance corridor for Segment 2.

Roads and Sidewalks

Proposed sidewalk improvements would be constructed on the west side of Bruceville Road.

Approximately 1,600 ft of sidewalk would be constructed between Big Horn Boulevard and the Bruceville Road bridge over Laguna Creek (Bridge No. 24C0405) and 180 feet of sidewalk would be constructed from the bridge to the existing sidewalk. In addition, the guardrail at the bridge would be replaced and would roughly correspond to the back of sidewalk in this location. New Americans with Disabilities Act (ADA) compliant ramps would be constructed at Mannington Street and at Mannington Street/Wallbridge Way.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Approximately 230 feet of sidewalk would be constructed at an existing gap in the sidewalk between Di Lusso Drive and Laguna Boulevard. At this location, the roadway surface at Bruceville Road would be extended to match up with the proposed sidewalk.

Culvert Crossings and Hydrology

The proposed Project would maintain existing grades and drainage patterns to the greatest extent feasible and side slopes would be constructed with a 4:1 slope. To maintain the existing drainage patterns, culverts may be used to convey water from one side of the trail to the other during more intense rain events. These culverts would be located in upland areas and sized based on existing topographic information and would include rock slope protection and flared end sections to reduce erosion and provide energy dissipation measures.

Road Crossings and Signage

Trail pavement would be delineated by distinct paint, markings, and signs consistent with City standards as well as the California Manual of Uniform Traffic Control Devices (MUTCD) standards. The City may also elect to provide wayfinding signs. According to the BPTMP all bicycle striping and wayfinding signs shall also conform to the Caltrans Highway Design Manual, Chapter 1000 (GHD, Inc. 2021).

Utilities

Utility coordination would be required to relocate a utility guy-pole that is in conflict with the roadway/sidewalk widening on the west side of Bruceville Road. This pole would be relocated to another location either within the City's right of way or within a new utility easement. No other utility relocations are anticipated for this Project other than potentially adjusting existing utility lids to new grades.

Construction

Staging

As shown on **Figure 3**, one potential construction staging area is proposed within the Project site. The potential staging area is identified northwest of the Bruceville Road at Big Horn Boulevard intersection.

Schedule

Construction of the proposed Project would commence in Summer of 2025 and would take approximately seven to nine months to complete.

Other Project Features (Biological Resources-Specific)

Prior to construction, the construction contractor will install high-visibility construction exclusion fencing along the limits of disturbance adjacent to Environmentally Sensitive Areas (ESAs) (e.g., aquatic resources, special-status plants, and active bird nests) (see **Figure 4, Biological Communities**). The project proponent will ensure that the final construction plans show the locations where ESA fencing will be installed. The plans also will define the ESA fencing installation procedure. At the discretion of the project proponent, the project proponent or the construction contractor will ensure that the ESA fencing is maintained throughout the duration of the construction period. If the ESA fencing is removed, damaged, or otherwise compromised during the construction period, construction activities will cease until the fencing is repaired or replaced. The Project's special provisions package will provide clear

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

language regarding acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. Preliminary ESA locations to avoid or minimize effects to aquatic features adjacent to the trail alignment are shown on **Figure 5, Proposed Project and Impacts to Biological Communities**.

No-Build Alternative/ No Project Alternative

Under the No-Build, or “No-Project” Alternative, the trails and sidewalks would not be constructed. Gaps in the City’s trail system and sidewalks would remain.

CHAPTER 2: STUDY METHODS

The following sections describe federal, State, and local environmental laws and policies as well as the studies required for this Project that are relevant to this NES.

Regulatory Requirements

Clean Water Act

The USACE regulates discharge of dredged or fill material into waters of the U.S. under Section 404 of the CWA. “Discharges of fill material” are defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes; and subaqueous utility lines [33 C.F.R. §328.2(f)].

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Section 404 of the CWA requires approval prior to discharging dredged or fill material into the waters of the U.S. Typical activities requiring Section 404 permits are:

- Depositing of fill or dredged material in waters of the U.S. or adjacent wetlands;
- Site development fill for residential, commercial, or recreational developments;
- Construction of revetments, groins, breakwaters, levees, dams, dikes, and weirs; and
- Placement of riprap and road fills.

Rivers and Harbors Act of 1899

Section 10 of the Rivers and Harbors Act of 1899 requires approval prior to the accomplishment of any work in or over navigable waters of the U.S., or which affects the course, location, condition, or capacity of such waters. Typical activities requiring Section 10 permits are:

- Construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats intake structures, and cable or pipeline crossings; and
- Dredging and excavation.

Any person, firm, or agency (including Federal, state, and local government agencies) planning to work in navigable waters of the U.S., or dump or place dredged or fill material in waters of the U.S., must first obtain a permit from the USACE. Permits, licenses, variances, or similar authorization may also be required by other Federal, state, and local statutes.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Waters of the U.S.

The final “Revised Definition of ‘Water of the United States’” rule was published in the Federal Register on January 18, 2023, and took effect on March 20, 2023.

On May 25, 2023, the United States Supreme Court issued a decision in the case of *Sackett v. Environmental Protection Agency* (Supreme Court of the United States, 2023) which will ultimately influence how federal waters are defined. The May 25, 2023, Supreme Court decision in *Sackett v. Environmental Protection Agency* determined that “the CWA extends to only those ‘wetlands with a continuous surface connection to bodies that are “waters of the United States” in their own right,’ so that they are ‘indistinguishable’ from those waters.” USACE and U.S. Environmental Protection Agency (USEPA) are currently developing a rule to amend the Final Rule published in January 2023 consistent with the U.S. Supreme Court ruling in the Sackett case and intend to issue a final rule by September 1, 2023.

Unless considered an exempt activity under Section 404(f) of the Federal CWA, any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the USACE under Section 404 of the CWA (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403). Activities exempted under Section 404(f) are not exempted within navigable waters under Section 10.

The CWA (33 USC 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. obtain a state certification that the discharge complies with other provisions of CWA. The RWQCB administers the certification program in California and may require State WQC before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there were no practicable alternative that would have less adverse impacts.

Waters of the State

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 WQC. The State of California WQC Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal CWA. Although the CWA is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

federal license or permit does not violate California’s water quality standards (i.e., that they do not violate the Porter-Cologne Water Quality Control Act and the State Water Code). The WQC Program currently issues the WQC for discharges requiring USACE permits for fill and dredge discharges within Waters of the U.S., and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Office of Administrative Law approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code §13050(e)), “Waters of the State” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 *et seq.*) is California’s statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by several State and federal laws. The federal MBTA prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to “take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.” Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

Executive Order 11990 – Protection of Wetlands

On May 24, 1977, President Jimmy Carter signed Executive Order (EO) 11990 establishing a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. The U. S. Department of Transportation promulgated Order 5660.1A in 1978 to comply with this direction. On federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. Under this EO, this must be documented in a specific Wetlands Only Practicable Alternative Finding.

Executive Order 13112 – Invasive Species

On February 3, 1999, President William J. Clinton signed EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the Invasive Species Council of California, to define the invasive plants that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project. Under this EO, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the U.S. or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the U.S., by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Federal Endangered Species Act

The U.S. Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Projects that may affect federally threatened, endangered, or proposed listed species and proposed or designated critical habitat are required to facilitate consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 (a)(2) of the Federal Endangered Species Act (16 U.S. C 1536(c)).

California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW), formally California Department of Fish and Game (CDFG), when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State’s prohibition against take of a listed species if the “take” of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code §2081).

California Department of Fish & Wildlife Streambed Alteration Agreement

The CDFW has jurisdiction under Section 1600 *et seq.* of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will “*substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds...except when the department has been notified pursuant to Section 1601.*” Additionally, CDFW may assert jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four (4) inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

California Department of Fish and Game Codes

Fully protected fish species are protected under Section 5515 of the Fish and Game Codes; fully protected amphibian and reptile species are protected under Section 5050; fully protected bird species are protected under Section 3511; and fully protected mammal species are protected under Section 4700. The California Fish and Game Code defines take as “*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.*” Except for take related to scientific research, all take of fully protected species is prohibited.

Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests. Sections 2062 and 2067 define endangered and threatened species.

California Department of Fish and Wildlife Species of Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFW and local lead agencies during the CEQA process. Species that may be considered for review are included on

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

a list of “Species of Special Concern,” developed by the CDFW. It tracks species in California whose numbers, reproductive success, or habitat may be threatened.

California Native Plant Society

The California Native Plant Society (CNPS) maintains a rank of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2023). The CNPS rankings categorize plants as follows:

- Rank 1A: Plants presumed extinct in California;
- Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;
- Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere;
- Rank 3: Plants about which we need more information; and
- Rank 4: Plants of limited distribution.

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA. Furthermore, the CNPS Rare Plant Rankings include levels of threat for each species. These threat ranks include the following:

- 0.1 - Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- 0.2 - Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat); and
- 0.3 - Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Threat ranks do not designate a change of environmental protections, so that each species (i.e., California Rare Plant Rank (CRPR) 1B.1, 1B.2, 1B.3, etc.), be fully considered during preparation of environmental documents under CEQA.

City of Elk Grove Tree Ordinance

The City has adopted regulations for the protection and preservation of existing trees within the City. These regulations were first adopted by Sacramento County prior to the incorporation of the City in 1981; in 2011 the City provided a comprehensive update to these regulations (City of Elk Grove 2011). Trees under this ordinance include:

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

- Landmark trees: “a tree that has been determined and designated, by resolution of the City Council, to be of high value to the community because of its species, size, age, form, historical significance, or some other professional criterion”;
- Trees of local importance: Coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizenii*), oracle oak (*Quercus X moreha*), California sycamore (*Platanus racemosa*), and California black walnut (*Juglans hindsii*);
- Secured trees: “A tree of local importance retained during the course of review and approval of a discretionary development project, inclusive of the environmental review process as required by CEQA; and those trees planted as a result of a discretionary development project to satisfy a mitigation requirement under this chapter, an approved or certified CEQA document, or other regulation”; and
- Trees within the right-of-way or on City property that are qualifying landmark trees, secured trees, and/or trees of local importance.

City of Elk Grove Swainson’s Hawk Code

In 2003, the City established and adopted Chapter 16.130 (Swainson's Hawk Impact Mitigation Fees [City of Elk Grove 2023]) of the Elk Grove Municipal Code, which establishes mitigation policies tailored for projects in Elk Grove that have been determined through the CEQA process to result in a "potential significant impact" on Swainson's hawk foraging habitat. Chapter 16.130, often referred as the "Swainson's Hawk Code," serves as a conservation strategy that is achieved through the selection of appropriate replacement lands and through management of suitable habitat value on those lands in perpetuity. To mitigate for the loss of foraging habitat in the City, the Swainson's Hawk Code allows a project applicant to provide mitigation by one or a combination of the following options:

1. Provide direct land preservation to the City by fee title or conservation easement on a per acre basis (one-to one mitigation ratio), including an endowment for easement monitoring. Interests in mitigation lands are to be held in trust by an entity acceptable to the City and/or the City in perpetuity.
2. Pay Swainson's Hawk impact mitigation fee on a per acre basis of habitat impacted. The current fee is listed in the City’s Development Related Fee Booklet, which the City utilizes the fees collected to mitigate the project's impacts by acquiring land in fee title and/or conservation easements on suitable Swainson's hawk foraging habitat. Swainson's Hawk payment of a mitigation fee is limited to projects less than 40 acres.
3. Purchase mitigation credits at an accredited mitigation bank that is acceptable to the City and CDFW.
4. Purchase credits from a property owner with eligible credits for projects in Elk Grove that is acceptable to the City and CDFW.
5. Provide other instruments to preserve suitable habitat as determined by the CDFW.

Lower Laguna Flood Control Project

The USACE issued authorization under Section 404 of the Federal CWA (Regulatory ID Number 199500313) June 5, 1998 for the Lower Laguna Flood Control Project. The Lower Laguna Flood Control Project proposed to provide flood protection to neighboring upland areas by constructing a bypass channel, installing twin 72-inch pipes with outfalls, and an extension of a 60-inch pipeline across Laguna Creek, as well as the installation of a 60-inch pipe with outfall from the water quality ponds on the Park Meadows South site across Laguna Creek and discharging into the bypass channel (Permit). The Permit authorized the fill of 12.39 acres of waters of the U.S. Proposed mitigation included the creation of 23.75 acres of waters onsite plus offsite vernal pool mitigation as required by the October 29, 1996 Biological Opinion (USFWS File 1-1-96-F-51) issued by the USFWS.

The 1996 Biological Opinion included conservation measures addressing giant garter snake, as well as vernal pool tadpole shrimp and vernal pool fairy shrimp. Measures relevant to giant garter snake, in part, included preservation of onsite perennial marsh and creation of additional marsh acreage within the greater Project area. Conservation measures addressing vernal pool tadpole shrimp and vernal pool fairy shrimp included the payment of in-lieu fees to purchase 1.46 vernal pool preservation credits for effects to 0.73 acre of vernal pools and the corresponding loss of habitat for vernal pool invertebrates.

The USACE reinitiated Section 7 Consultation with the USFWS on May 15, 1998 in order to meet four objectives: a) to allow for restoring vernal pools concurrently with the phasing of the project; (b) to extend the deadlines for placing preservation areas under conservation easements; (c).to address the reduction in project-related wetland impacts; and (d) to remove the requirement of placing rock refugia along Laguna Creek for giant garter snakes.

As of March 26, 1999, Sacramento County had acquired Fee Title to the areas within the Phase 1 portion of the Laguna Creek corridor, except the Low property areas. The grant deeds for these properties, except Sheldon Farms, include deed restrictions which require the County to “Conserve, protect, restore, and enhance the Protected Property in a manner consistent with the Biological Opinion and Department of Army Permit No. 199500313.” The USFWS is acknowledged as a third-party beneficiary, with access and enforcement authority over the terms of the conservation measures listed in the grant deed. The deed restrictions protecting biological resources on the Sheldon Farms property were expected to be in place within 60 days of the issuance of the April 21, 1999 Biological Opinion Amendment. The County proposed to require easement recordation, or another form of USFWS-approved instrument that provides the same level of protection for open space, as a condition of any discretionary action to be approved by the County for the Low property.

Studies Required

Literature Search

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this assessment are listed in **Chapter 6: References**. The following site-specific information was reviewed:

- CDFW. 2023. California Natural Diversity Data Base (CNDDDB); For: *Florin, Sacramento West, Sacramento East, Carmichael, Elk Grove, Galt, Bruceville, Courtland, and Clarksburg* USGS 7.5-minute series quadrangles, Sacramento, CA. [Accessed 7/13/2023] (**Appendix A**);

- CNPS. 2023. *Inventory of Rare and Endangered Plants* (online edition, v8-02) For: *Florin, Sacramento West, Sacramento East, Carmichael, Elk Grove, Galt, Bruceville, Courtland, and Clarksburg* USGS quadrangles. [Accessed 7/13/2023] (**Appendix B**);
- USFWS. 2023. *Information for Planning and Conservation (IPaC) Trust Resource Report: Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Sacramento County, CA*. [Accessed 7/13/2023] (**Appendix C**); and
- National Oceanic Atmospheric Administration (NOAA) Fisheries. 2023. *West Coast Region, Species Directory, for ESA Threatened & Endangered Marine Species*. Available online at: <https://www.fisheries.noaa.gov/species-directory/threatened-endangered>. [Accessed 7/28/23] (**Appendix D**).

Biological Study Area

The boundary of the BSA encompasses the Project limits of disturbance and appropriate survey buffers. The BSA is located in undeveloped land, adjacent to residential neighborhoods, community parks, and small business shopping centers. Bruceville Road, Big Horn Boulevard, and Sheldon Road border the BSA (**Figure 3**).

Survey Methods

Biological surveys were conducted to characterize general biological conditions and to determine the potential for sensitive biological resources to occur within the BSA. The BSA was surveyed on foot, with binoculars and sub-meter Global Positioning System (GPS) equipment used as necessary, and to delineate the extent of aquatic resources within the BSA. Habitat types within the BSA were characterized and assessed for their potential to support special-status plant and wildlife species that may occur in the region. Botanical inventories were conducted in accordance with CDFW's 2009 plant survey protocols. Plant species observed within the BSA that are designated as invasive by the California Invasive Plant Council (Cal-IPC; Cal-IPC 2023), or as noxious weeds by the California Department of Food and Agriculture (CDFA) were noted during the biological surveys and are included in **Appendix E**. All wildlife species observed within the BSA are also included in **Appendix E**.

The aquatic resource delineation consisted of mapping aquatic resources within the BSA in accordance with USACE standards. Soil, vegetation, and hydrological data were recorded. The results of the aquatic resources delineation are summarized herein and are discussed in detail under a separate cover (HELIX 2020). The aquatic resources delineation was submitted to the USACE with a request for a Preliminary Jurisdictional Determination (PJD) on February 20, 2020. The USACE issued a PJD for the Project on May 12, 2020 concurring with aquatic resources mapped by HELIX (2020) (**Appendix F**). Following completion of the aquatic resources delineation, the BSA was revised to either avoid aquatic features completely or include entire features that may potentially be impacted. No additional aquatic resources were observed in the revised alignment during follow up biological field surveys.

Personnel and Survey Dates

HELIX Environmental Planning, Inc. (HELIX) senior botanist, Cristian Singer, and biologist, Christine Heckler, conducted biological surveys, focused plant surveys, and an aquatic resources delineation within the Project area on April 11, and April 23, 2019. On September 10, 2019, Ms. Heckler conducted

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

additional biological surveys in portions of the Project area that were expanded following a review of the initial Project area. On July 1, 2021, Ms. Heckler conducted a biological survey in the revised trail alignment north of Big Horn Boulevard and a second biological survey was conducted in the revised trail alignment east of Lewis Stein Road on September 2, 2021. Following additional trail alignment revisions in 2023, Ms. Heckler conducted a subsequent biological survey within the revised trail alignment on March 15, 2023. Upon access approval, Ms. Heckler also surveyed a portion of private property adjacent to the Segment 1 trail alignment.

Mr. Singer has over 20 years of experience working as a botanist, with an emphasis in wetland delineations and special-status plant surveys. Ms. Heckler has over nine years of experience working as a biologist in California, with an emphasis on special-status wildlife surveys and ecology.

Agency Coordination and Professional Contacts

The USFWS, CDFW, and CNPS databases were all queried through their online portals prior to conducting fieldwork and again on July 13, 2023, as detailed above.

A July 6, 2022 virtual meeting was attended by Caltrans Associate Environmental Planner Brooks Taylor and Caltrans Acting Branch Chief, Thaleena Bhattal, and USFWS Sacramento Valley Division Biologist Emma Bickerstaff and USFWS Sacramento Valley Division Senior Biologist Ian Perkins-Taylor, as well as HELIX regulatory specialists, Kyrsten Shields and Candice Guider-Heitmann and Zach Liptak, Senior Environmental Planner attending on behalf of the City to discuss USFWS comments on the Section 7 Biological Assessment, prior to initiation of formal consultation.

At the request of the USFWS, an onsite meeting with Caltrans, the USFWS, the City, and HELIX occurred on March 15, 2023, to discuss overall project details and answer questions.

On June 2, 2023, Zach Liptak, Senior Environmental Planner on behalf of the City transmitted a letter to USFWS Sacramento Valley Division Biologist Emma Bickerstaff and USFWS Sacramento Valley Division Senior Biologist Ian Perkins-Taylor, and USFWS Sacramento Valley Division Supervisor Megan Cook summarizing proposed trail improvements within and adjacent to recorded deed restricted parcels (**Appendix G**).

On September 27, 2023, the USFWS responded to the June 2, 2023, letter referenced above. The USFWS acknowledged the proposed trail alignment and construction would encroach into the deed restricted parcels but would only be a temporary and small-scale impact to upland habitat. In addition, the USFWS stated that “the proposed new post and cable fencing and interpretive signage will aid in preventing pedestrian disturbance and associated erosion. It appears as though the conservation values of these areas will still be retained upon completion of construction for the following reasons: the small scale of proposed encroachment within areas of already disturbed upland snake habitat in the deed restricted parcels, the proposed trail is not expected to restrict movement of small mammals throughout the site, we anticipate that ground squirrels and other small mammals will continue to inhabit grounds adjacent to the proposed project” (**Appendix G**).

No additional agency coordination has occurred to date on this Project.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Limitations That May Influence the Results

No limitations were encountered in the field that would influence the results of the surveys or limit the information provided in this NES.

CHAPTER 3: RESULTS – ENVIRONMENTAL SETTING

Description of the Existing Physical and Biological Conditions

The BSA is located within Section 27 of Township 7 North, Range 5 East of the USGS *Florin, California* 7.5-minute quadrangle (38° 25' 57.29" North, 121° 25' 2.64" West) (**Figure 2**). The BSA is located in an undeveloped area of the City of Elk Grove with single-family residences, community parks, and small business shopping centers within the immediate surrounding area.

Study Area

The ±20.16-acre BSA consists of undeveloped land that is bordered by residential neighborhoods and moderate to heavy trafficked roads (**Figure 3**). Minor to moderate disturbance was observed within the BSA including established invasive and/or noxious weeds, disturbed land from continuous pedestrian use, and trash. Representative site photographs of the BSA are included in **Appendix H**.

Physical Conditions

The general topography of the BSA is flat; evidence of past grading, plowing, and/or mowing is present and is visible on aerial images. The microtopography within the BSA consists of concavities and convexities and is generally comprised of irregular, broken terrain. Elevations range from approximately 19.5 feet above mean sea level (MSL) in the western portions of the BSA to approximately 26 feet above MSL in the eastern portions of the BSA.

The BSA includes five soil types: **Galt clay, 0 to 1 percent slopes; San Joaquin silt loam, leveled, 0 to 1 percent slopes; San Joaquin silt loam, 0 to 3 percent slopes; San Joaquin-Galt complex, leveled, 0 to 1 percent slopes; and San Joaquin-Galt complex, 0 to 3 percent slopes**. General characteristics and properties associated with these soils are described below (UC Davis 2019 and USDA, NRCS 2023).

- **(152) Galt Clay, 0 to 1 Percent Slopes**

This soil type consists of clayey alluvium derived from igneous, metamorphic and sedimentary rock over cemented alluvium. It is somewhat poorly drained and has a high runoff class. Frequent ponding is typical and flooding is rare. Vegetation typically found on this soil unit mainly consists of annual grasses. The hydric soils list for Sacramento County identifies two hydric inclusions occurring within this soil type: Clearlake, occurring within depressions and basins, and an unnamed hydric soil inclusion in depressions and basins. This soil type occurs within the central portion of the BSA, within the two trail segments.

- **(213) San Joaquin Silt Loam, Leveled, 0 to 1 Percent Slopes**

This soil type consists of alluvium derived from granite. It is moderately well drained and has a high runoff class. Ponding or flooding is infrequent. Vegetation typically found on this soil unit consists of non-native annual grasses, herbaceous plant species, and some native oaks. The hydric soils list for Sacramento County identifies one hydric inclusion occurring within this soil type: Galt, occurring within depressions. This soil type is absent within the central portion of the BSA but occurs within the two trail segments.

- **(214) San Joaquin Silt Loam, 0 to 3 Percent Slopes**

This soil type consists of alluvium derived from granite. It is moderately well-drained and has a high runoff class. Ponding or flooding is infrequent. Vegetation typically found on this soil unit also consists of non-native annual grasses, herbaceous plant species, and some native oaks. The hydric soils list for Sacramento County identifies one hydric inclusion occurring within this soil type: Galt, occurring within depressions. This soil type occurs within the central portion of the BSA.

- **(217) San Joaquin-Galt Complex, Leveled, 0 to 1 Percent Slopes**

This soil type consists of alluvium derived from granite. It is moderately well-drained and has a high runoff class. Ponding or flooding is infrequent. Vegetation typically found on this unit consists of annual grasses and forbs. The hydric soils list for Sacramento County identifies one hydric inclusion occurring within this soil type: Galt, occurring within depressions. This soil type occurs within the disjunct element of the BSA approximately 0.3 miles south of Big Horn Boulevard along the western edge of Bruceville Road.

- **(218) San Joaquin-Galt Complex, 0 to 3 Percent Slopes**

This soil type consists of alluvium derived from granite. It is moderately well-drained and has a high runoff class. Ponding or flooding is infrequent. Vegetation typically found on this unit consists of annual grasses and forbs. The hydric soils list for Sacramento County identifies one hydric inclusion occurring within this soil type: Galt, occurring within depressions. This soil type occurs within the central section of the BSA along the eastern edge of Bruceville Road.

Biological Conditions within the Biological Study Area

California annual grassland (annual grassland) is the only undeveloped upland biological community that occurs within the BSA. Six types of aquatic features occur within the BSA: depressional seasonal wetland, vernal pool, riverine seasonal marsh, riverine perennial marsh, channel, and creek. Disturbed/developed habitat, consisting of existing roads, sidewalks/road shoulders, a bridge, and riprap, also occurs within the BSA. The mapped locations of biological communities are illustrated in **Figure 4** and undeveloped communities are discussed in detail in the following sections.

Annual Grassland

A total of 12.33 acres of annual grassland occurs throughout the BSA. This vegetation type occurs in a majority of the State at elevations from sea level to approximately 4,000 feet above MSL. Typically, this vegetation type is dominated by upland (non-wetland) plant species. Species of grasses are the predominant component within this vegetation type, with herbaceous plant species also present to varying degrees. Dominant vegetation observed within this vegetation community within the BSA includes: Italian ryegrass (*Festuca perennis*), soft brome (*Bromus hordeaceus*), wild oat (*Avena barbata*), medusahead (*Elymus caput-medusae*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), brome fescue (*Festuca bromoides*), ripgut brome (*Bromus diandrus*), long-beaked filaree (*Erodium botrys*), cut leaved geranium (*Geranium dissectum*), rose clover (*Trifolium hirtum*), and hairy vetch (*Vicia villosa*). Photographs of annual grassland within the BSA are included in **Appendix H**.

Aquatic Resources

Vernal Pools

A total of **0.30 acre** of vernal pools has been delineated within the current BSA (HELIX 2020). Vernal pools are shallow, seasonally inundated depressions within the topography that form in soils with a subsurface layer that restricts the downward flow of water, causing them to pond for extended, variable periods of time. These layers include hardpans, claypans, or thick clay layers. Depending on common factors such as daily average temperatures and the amount and frequency of seasonal precipitation, vernal pools may pond for days, weeks, or even months. Plant species occurring within vernal pools are those that have adapted to extended periods of inundation and, as such, are commonly associated with these seasonal wetland features. Photographs of vernal pools delineated within the BSA are included in **Appendix H**.

One vernal pool occurs within Segment 1 of the BSA (**Figure 4**). Plant species observed in the vernal pool include: coyote thistle (*Eryngium* spp.), white headed navarretia (*Navarretia leucocephala* ssp. *leucocephala*), Fremont's goldfields (*Lasthenia fremontii*), vernal pool allocarya (*Plagiobothrys stipitatus* var. *micranthus*), and vernal pool buttercup (*Ranunculus bonariensis* var. *trisepalus*).

Depressional Seasonal Wetlands

A total of **0.23 acre** of depressional seasonal wetlands have been delineated within the current BSA (HELIX 2020). As with vernal pools, depressional seasonal wetlands are shallow depressions within the topography that inundate during the normal wet season. A restrictive layer may be present, weakly formed, or absent. These features are typically shallower than vernal pools and generally do not pond for durations as extended as vernal pools. These features exhibit a hydrologic regime dominated by saturation, rather than inundation. Plant species occurring within depressional seasonal wetlands are adapted to withstand short periods of saturated soils conditions but will not withstand prolonged periods of inundation, as is common in vernal pools. Photographs of depressional seasonal wetlands delineated within the BSA are included in **Appendix H**.

One depressional seasonal wetland occurs in the southern portion of Segment 1 and small sections of a depressional seasonal wetland occur in the northwest portion of Segment 1 on the east side of Bruceville Road (**Figure 4**). Plant species observed in the depressional seasonal wetlands include: sedge (*Carex* spp.), nut sedge (*Cyperus* spp.), pennyroyal (*Mentha pulegium*), rabbitsfoot grass (*Polypogon monspeliensis*), curvepod yellow cress (*Rorippa curvisiliqua*), and hyssop loosestrife (*Lythrum hyssopifolia*).

Riverine Seasonal Marsh

Less than **0.01 acre** of riverine seasonal marsh occurs in the BSA (**Figure 4**). Seasonal marshes are seasonally saturated and/or inundated and the saturation/inundation persists for some period into the warm season, but generally not beyond. Plants species occurring within riverine seasonal marshes are typically adapted to this hydrologic regime. Riverine seasonal marshes typically exhibit a unidirectional flow of water for some portion of the wet season. Within the Great Central Valley, these features are typically located along the fringes of slow moving, low gradient riverine systems or at the lower extents of the downstream terminus of riverine seasonal features, but they can persist outside of such settings.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

The riverine seasonal marsh within the BSA occurs within Segment 1 at the trail entrance from Lyndale Circle (**Figure 4**). This feature was not included in the original 2020 wetland delineation for the Project because it is located on private property that was not assessed until the March 15, 2023, survey. This feature is proposed to be avoided by the current trail alignment and occurs along the perimeter of the current BSA. Plant species observed in the riverine seasonal marsh include: sedge, nut sedge, dock (*Rumex* spp.), and rushes (*Juncus* spp.).

Riverine Perennial Marsh

A total of **0.12 acre** of riverine perennial marsh has been delineated within the current BSA (HELIX 2020). Riverine perennial marshes exhibit unidirectional water flow, at least during the normal wet season. Typically, riverine perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses, perennial herbaceous plant species, and, often, perennial woody plant species such as shrubs and trees. Riverine perennial marshes typically occur in association with perennial, flowing features such as brooks, creeks, rivers, and streams, typically on the fringes of such features.

A portion of a riverine perennial marsh occurs in Segment 1 on the east side of Bruceville Road (**Figure 4**). Plant species observed in the riverine perennial marsh include narrow leaved willow (*Salix exigua*), Gooding's willow (*Salix goodingii*), sedge, rushes, and dock.

Channel and Creek

A total of **0.01 acre** of channel and **0.05 acre** of creek have been delineated within the BSA. Both features typically exhibit a bed, bank, and ordinary high-water mark. In most cases, these features are not vegetated because of the scouring effect of moving water; however, they may be colonized by plant species during periods of low flow or may contain scattered annuals or perennials. The creek and channel occur below a bridge along Bruceville Road. Due to the features occurring below the bridge structure mapped as disturbed/developed habitat, the total acreage in **Figure 4** is a summed total of the bridge structure and the channel and creek occurring under the bridge (0.04 acre).

Plant species observed within the channel and creek include: sedge, rushes, willows, and tule (*Schoenoplectus acutus* var. *occidentalis*).

Other Features

Two roadside ditches totaling **0.08 acre** have been delineated within the BSA (**Figure 4**).

A narrow roadside ditch occurs within the small disjunct element of the BSA approximately 0.3 miles south of Big Horn Boulevard, along the western side of Bruceville Road. The ditch is dominated by upland plant species, lacks wetland hydrology indicators and hydric soil indicators, and does not have a well-defined ordinary high-water mark. The ditch appears to be nonfunctioning, with no field indicators that would provide evidence of recent flow, saturation or inundation. The roadside ditch appears to be one of the only open, earthen-lined ditches in the immediate area, perhaps an indication that as the area is being developed, the older ditches are being buried and replaced with a modern sidewalk and gutter system that conveys stormwater runoff into a subterranean water conveyance system.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

A second roadside ditch occurs within the BSA along the east side of Bruceville Road (**Figure 4**). This ditch has a defined ordinary high-water mark, is unvegetated, is not a tributary to a wetland or other water, and it does not drain a wetland or a water. As such, it appears to be a single isolated roadside ditch.

Common Animal Species

Common animal species observed within the BSA during the biological surveys include: red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), western kingbird (*Tyrannus verticalis*), killdeer (*Charadrius vociferous*), mourning dove (*Zenaida macroura*), western fence lizard (*Sceloporus occidentalis occidentalis*), valley garter snake (*Thamnophis sirtalis fitchi*), and black-tailed jackrabbit (*Lepus californicus*).

Invasive Species

Invasive plant species, as identified by Cal-IPC, observed within the BSA include: Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*), stinkwort (*Dittrichia graveolens*), rattail fescue (*Festuca myuros*), medusahead, Italian rye grass, and brome fescue. A full list of plant and wildlife species observed is included in **Appendix E**.

Habitat Connectivity and Wildlife Corridors

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat and limits dispersal. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The BSA itself is not considered a wildlife corridor because it does not link two significant habitats. However, Laguna Creek and Elk Grove Creek which are adjacent to the BSA likely serve as a corridor for semi-aquatic and terrestrial wildlife species. These watersheds are part of a network of creeks, tributaries, and canals that flow through the urbanized environment of Elk Grove and create an essentially unobstructed pathway for wildlife species to navigate through. Elk Grove Creek and Laguna Creek provide a direct connection to Upper Beach Lake Wildlife Area approximately three miles from the BSA. This Wildlife Area is a sanctuary for many wildlife species and provides habitat that connects to a delta system and the Sacramento River.

Although Elk Grove Creek and Laguna Creek adjacent to the BSA are likely a wildlife corridor, these features are not anticipated to be impacted by the Project. With appropriate construction practices and procedures, construction of the proposed trail is not expected to impact these waterways. Disturbance from construction is not anticipated to negatively affect wildlife movement through the area, as species are likely accustomed to a level of human disturbance due to the existing degree of development within and immediately adjacent to the BSA. Once construction of the trail is complete, wildlife movement will likely continue at current levels since the Project will not restrict movement as permanent fences or other movement barriers are not proposed as part of the Project. The trail is proposed to be constructed

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

outside of the main creek channel which would be expected to be the primary movement corridors for local wildlife.

Regional Species, Habitats, and Natural Communities of Concern

The biological communities present within the BSA are relatively common throughout the local area and region. However, Northern hardpan vernal pool, a natural community of concern, is present within the BSA. No designated critical habitat is present within the BSA (CDFW 2023, USFWS 2023).

A review of regionally occurring special-status species was conducted through the CDFW's CNDDDB (CDFW 2023; **Appendix A**), the CNPS Ranking List (CNPS 2023; **Appendix B**), the USFWS IPaC list (USFWS 2023; **Appendix C**) for special-status species documented within the *Florin, Sacramento West, Sacramento East, Carmichael, Elk Grove, Galt, Bruceville, Courtland, and Clarksburg* USGS quadrangles, and the NOAA *West Coast Region, Species Directory, for ESA Threatened & Endangered Marine Species* (NOAA 2023; **Appendix D**).

Table 1 below provides results of these database searches and the potential for special-status species to occur within the BSA. Species regulatory status, habitat descriptions, and a rationale as to whether the species could potentially occur within the BSA (Habitat Present, HP), have no habitat or potential for occurrence (Absent, A), or are present (Present, P) within the BSA are also included in the table.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

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Table 1: Regionally Occurring Special-Status Species

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|--------------------------|-----------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plants | | | | | |
| Ahart's dwarf rush | <i>Juncus leiospermus</i> var. <i>ahartii</i> | --; --; --; 1B | Annual herb that occurs in vernal pools and wetlands within valley and foothill grasslands. Blooming period: March-May | HP | The BSA provides suitable habitat for this species within the vernal pools, depressional seasonal wetlands, and the riverine marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Boggs lake hedge hyssop | <i>Gratiola heterosepala</i> | --; --; --; 1B | Annual herb that occurs in vernal pools, lake margins, and wetland edge habitats. Blooming period: April-August | HP | The BSA provides suitable habitat for this species within the vernal pools and wetland edge habitats. Three CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Bolander's water-hemlock | <i>Cicuta maculata</i> var. <i>bolanderi</i> | --; --; --; 2B | Perennial herb that occurs in marshes and swamps within coastal salt marsh habitats. Blooming period: July-September | A | Coastal salt marsh habitat is absent from the BSA; therefore, no suitable habitat is present. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Bristy sedge | <i>Carex comosa</i> | --; --; --; 2B | Perennial rhizomatous herb that occurs in wetlands, lake margins, and edge habitats. Occurs in coastal prairie, and foothill and valley grasslands. Blooming period: May-September | HP | The BSA provides suitable habitat for this species within the depressional seasonal wetlands. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Delta mudwort | <i>Limosella australis</i> | --; --; --; 2B | Perennial herb that occurs in mud banks of freshwater or brackish marsh and riparian scrub habitats. | A | Mud banks are absent from the BSA; no suitable habitat is present. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Delta tule pea | <i>Lathyrus jepsonii</i> var. <i>jepsonii</i> | --; --; --; 1B | Perennial herb that occurs in wetlands. May occur in freshwater or brackish wetlands. Blooming period: May-July | HP | The BSA provides suitable habitat for this species within the depressional seasonal wetlands. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Dwarf downingia | <i>Downingia pusilla</i> | --; --; --; 2B | Annual herb that occurs in vernal pools within valley grassland, freshwater wetland, and wetland-riparian habitats. Blooming period: March-May | HP | The BSA provides suitable habitat for this species within the vernal pools. Three CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Ferris' milk-vetch | <i>Astragalus tener</i> var. <i>ferrisiae</i> | --; --; --; 1B | Annual herb that occurs in meadows and seeps (vernally mesic) within valley and foothill grassland habitats. Blooming period: April-May | A | Meadows and seeps are absent from the BSA; no suitable habitat is present. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Ferris' goldfields | <i>Lasthenia ferrisiae</i> | --; --; --; 4.2 | Annual herb that occurs in vernal pools (often alkaline) and wetlands within valley grassland habitats. Blooming period: February-May | HP | The BSA provides suitable habitat for this species within the vernal pools and the depressional seasonal wetlands. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|----------------------------------|-----------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Heckard's pepper-grass | <i>Lepidium latipes</i> var. <i>heckardii</i> | --; --; --; 1B | Annual herb that occurs in wetlands within valley and foothill grasslands. Blooming period: March-May | HP | The BSA provides suitable habitat within the depressional seasonal wetlands. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Hoary navarretia | <i>Navarretia eriocephala</i> | --; --; --; 4.3 | Annual herb that occurs in wetlands and non-wetlands within cismontane woodland, foothill woodlands, and valley grassland habitats. Blooming period: May-June | HP | The BSA provides suitable habitat for this species within the depressional seasonal wetlands. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Hogwallow starfish | <i>Hesperervax caulescens</i> | --; --; --; 4.2 | Annual herb that occurs in wetlands and shallow vernal pools within valley and foothill grassland (often mesic or clay). Blooming period: March-June | HP | The BSA provides suitable habitat for this species within the vernal pools, depressional seasonal wetlands, and the riverine marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Lenenere | <i>Legenere limosa</i> | --; --; --; 1B | Annual herb that occurs in vernal pools within valley grassland, freshwater wetland, and wetland-riparian habitats. Blooming period: April-June | HP | The BSA provides suitable habitat for this species within the vernal pools. Nine CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Marsh skullcap | <i>Scutellaria galericulata</i> | --; --; --; 2B | Perennial rhizomatous herb that occurs in marshes and swamps. Blooming period: June-September | HP | The BSA provides suitable habitat for this species within the riverine seasonal marsh and riverine perennial marsh. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Mason's lilaepsis | <i>Lilaeopsis masonii</i> | --; --; --; 1B | Perennial rhizomatous herb that occurs in wetlands, marshes, and wetland riparian habitats. Blooming period: April-November | HP | The BSA provides suitable habitat for this species within the depressional seasonal wetlands and the riverine marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Northern California black walnut | <i>Juglans hindsii</i> | --; --; --; 1B | Tree that occurs in foothill woodland and wetland-riparian habitats Blooming period: April-May | A | The BSA does not contain suitable habitat for this species. Although several black walnut trees occur within the BSA and within parcel 116-0011-004, these trees are not a natural grove and hybridization is likely but unknown. The CNPS defines a Northern California black walnut tree as a California native rare plant only if it germinated prior to 1840 (CNPS 2023). The trees within the BSA did not germinate prior to 1840, are not a natural grove, and hybridization is unknown; therefore, protection is not warranted for these trees. One CNDDDB occurrence is documented within five miles of the BSA (CDFW 2023). |
| Pappose tarplant | <i>Centromadia parryi</i> ssp. <i>parryi</i> | --; --; --; 1B | Annual herb that occurs in wetlands, marshes, seeps, and meadows within chaparral, coastal prairie, or valley and foothill grasslands. Blooming period: May-November | HP | The BSA provides suitable habitat for this species within the depressional seasonal wetlands and the riverine seasonal marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Parry's rough tarplant | <i>Centromadia parryi</i> ssp. <i>rudis</i> | --; --; --; 4.2 | Annual herb that occurs in vernal pools within valley foothill and grassland habitats. Often within alkaline, vernal mesic areas. Blooming period: May-October | HP | The BSA provides suitable habitat for this species within the vernal pools. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|-------------------------|------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Peruvian dodder | <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> | --; --; --; 2B | Annual vine (parasitic) that occurs in freshwater marshes and swamps. Blooming period: July-October | HP | The BSA contains suitable habitat for this species within the riverine marshes. One CNDDDB occurrence is documented within 5 miles of the BSA (CDFW 2023). |
| Sacramento Orcutt grass | <i>Orcuttia viscida</i> | FE; CE; --; 1B | Annual herb that occurs in vernal pools within valley grassland habitats. Blooming period: April-September | A | Although vernal pools are present in the BSA, the pools are too small and shallow to provide suitable habitat for this species. The proposed Project will have no effect on this species. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Saline clover | <i>Trifolium hydrophilum</i> | --; --; --; 1B | Annual herb that is typically found in wetland-riparian habitats. May also occur in non-wetland habitats such as mesic or alkaline foothill grasslands. Blooming period: April-June | HP | The BSA contains suitable habitat for this species within the depressional seasonal wetlands and the riverine marshes. Five CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Sanford's arrowhead | <i>Sagittaria sanfordii</i> | --; --; --; 1B | Perennial, rhizomatous herb found in freshwater marsh, wetlands, and wetland-riparian habitats. Blooming period: May-October | HP | The BSA contains suitable habitat for this species within the depressional seasonal wetlands and the riverine marshes. Eighteen CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Side-flowering skullcap | <i>Scutellaria lateriflora</i> | --; --; --; 2B | Perennial rhizomatous herb that occurs in meadows, seeps, marshes, and swamps. Blooming period: July-September | HP | The BSA provides suitable habitat for this species within the riverine marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Slender Orcutt grass | <i>Orcuttia tenuis</i> | FT; CE; --; 1B | Annual herb that occurs in vernal pools (often with gravelly substrate) within valley grassland and foothill woodland habitats. Blooming period: May-October | A | Although vernal pools are present in the BSA, the pools are too small and shallow to provide suitable habitat for this species. The proposed Project will have no effect on this species. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Suisun Marsh aster | <i>Symphotrichum lentum</i> | --; --; --; 1B | Perennial rhizomatous herb that occurs in freshwater or brackish marshes. Blooming period: April-November | HP | The BSA provides suitable habitat for this species within the riverine marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Valley brodiaea | <i>Brodiaea rosea</i> ssp. <i>vallicola</i> | --; --; --; 4.2 | Perennial bulbiferous herb that occurs in swales and vernal pools within valley and foothill grassland habitats. Blooming period: April-June | HP | The BSA provides suitable habitat for this species within the vernal pools. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Watershield | <i>Brasenia schreberi</i> | --; --; --; 2B | Aquatic perennial herb that occurs in freshwater marshes and swamps Blooming period: June-September | HP | The BSA provides suitable habitat for this species within the riverine marshes. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Woolly rose-mallow | <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> | --; --; --; 1B | Perennial herb found in freshwater marsh, wetland, and wetland-riparian habitats. Blooming period: June-September | HP | The BSA contains suitable habitat for this species within the depressional seasonal wetlands and the riverine marshes. Three CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|-------------------------------------|--------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wildlife | | | | | |
| Invertebrates | | | | | |
| American bumblebee | <i>Bombus pensylvanicus</i> | --; CC; --; -- | Occurs in coastal prairie and grassland habitats. Forages on floral species such as vetches (<i>Vicia</i>), clovers (<i>Trifolium</i>), thistles (<i>Cirsium</i>), sunflowers (<i>Helianthus</i>), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground. Currently considered rare throughout its range. | A | The BSA does not contain floral species this bumblebee forages on and is dominated by invasive grasses. In addition, this species is currently considered rare across its range. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| California linderiella | <i>Linderiella occidentalis</i> | --; --; --; CSA | Occurs in a variety of vernal pool types and ephemeral freshwater habitats and is often found within deeper pools. Known within Shasta, Tehama, Butte, Yuba, Placer, Sacramento, El Dorado, Solano, San Joaquin, Contra Costa, Alameda, Stanislaus, Merced, Madera, Fresno, Monterey, Marin, Sonoma, San Benito, San Luis Obispo, Santa Barbara, and Ventura Counties. | HP | The BSA provides suitable habitat for this species within the vernal pools and depressional seasonal wetlands. Nineteen CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Crotch's bumblebee | <i>Bombus crotchii</i> | --; CC; --; -- | Known range includes the California coast east to the Sierra-Cascade crest and south into Mexico. Occurs in grassland and shrubland habitats and requires hotter and drier conditions than other bumblebee species. Forages on milkweeds, dusty maidens, lupines, medics, phacelias, sages, clarkias, poppies, and wild buckwheats. Currently considered rare throughout its range. | A | The BSA does not contain floral species this bumblebee forages on and is dominated by invasive grasses. In addition, this species is currently considered rare across its range. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Hairy water flea | <i>Dumontia oregonensis</i> | --; --; --; CSA | Occurs in vernal pools and seasonal wetland habitats. Known to occur in Sacramento and Solano Counties. | HP | The BSA provides suitable habitat within the vernal pools and depressional seasonal wetland habitats. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Midvalley fairy shrimp | <i>Branchinecta mesovallensis</i> | --; --; --; CSA | Inhabits small vernal pools and grassy swales. Known within the Southeastern Sacramento, Southern Sierra Foothill, San Joaquin, and Solano-Colusa Vernal Pool Regions. | HP | The BSA provides suitable habitat for this species within the vernal pools and within the depressional seasonal wetlands. Nine CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Monarch butterfly | <i>Danaus plexippus</i> | FC; --; --; -- | In winter, aggregates in clusters at forested groves scattered along the Pacific coast from Mendocino County to Baja California, Mexico. Disperses in spring and summer. Females lay eggs on milkweed (<i>Asclepias</i> spp.), and sometimes <i>Gomphocarpus</i> spp. and <i>Calotropis</i> spp. These plant species are critical for successful development of the caterpillar into an adult butterfly. | A | The BSA does not provide suitable habitat for this species and is not located in a wintering area. No milkweed plants were observed in the BSA. Monarch butterfly may pass through the BSA during migration but is not expected to be impacted by the Project. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Ricksecker's water scavenger beetle | <i>Hydrochara rickseckeri</i> | --; --; --; CSA | Occurs in vernal pools, seeps, slow-moving streams, and ponds. Associated with habitats with diverse aquatic vegetation. | HP | The BSA provides suitable habitat for this species within the vernal pools. No documented occurrences in the CNDDDB within 5 miles of the BSA (CDFW 2023). |
| Sacramento Valley tiger beetle | <i>Cicindela hirticollis abrupta</i> | --; --; --; CSA | Occurs on sandy shores of lakes, rivers, estuaries, and along the coast. Historically known to occur along the Sacramento and Feather Rivers. | A | The BSA does not provide suitable habitat for this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|--------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Valley elderberry longhorn beetle | <i>Desmocerus californicus dimorphus</i> | FT; --; --; -- | Endemic to the Central Valley of California and is only found in association with elderberry (<i>Sambucus</i> sp.) shrubs. Usually found near riparian areas. | A | No elderberry shrubs were observed within or adjacent to the BSA; suitable habitat is absent. The BSA is outside of the designated critical habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Vernal pool fairy shrimp | <i>Branchinecta lynchi</i> | FT; --; --; -- | Vernal pools, swales, and ephemeral freshwater habitat. Known within Alameda, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Kings, Madera, Merced, Monterey, Napa, Placer, Riverside, Sacramento, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Ventura, Yolo, and Yuba Counties. | HP | The BSA provides suitable habitat within the vernal pools, and within the depression and riverine seasonal wetlands. The proposed Project may affect and is likely to adversely affect this species. Fifteen CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Vernal pool tadpole shrimp | <i>Lepidurus packardii</i> | FE; --; --; -- | Inhabits vernal pools, swales, and ephemeral freshwater habitats. Known within Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Kings, Merced, Placer, Fresno, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba counties. | HP | The BSA provides suitable habitat within the vernal pools and within the depression seasonal wetlands. The proposed Project may affect and is likely to adversely affect this species. Nineteen CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Fish | | | | | |
| Bocaccio | <i>Sebastes paucispinis</i> | FE; --; --; -- | Range from Punta Blanca, Baja California, to the Gulf of Alaska off Kozoff and the Kodiak Islands but are most common between Oregon and northern Baja California. Occur at various depths from the surface to 1,568 feet; most live between 150–1,000 feet. Large Pacific coast rockfish that are moderately slow-growing, late to mature, and long-lived. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Central Valley steelhead DPS | <i>Oncorhynchus mykiss irideus</i> | FT; --; --; -- | Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample riparian vegetation cover or overhanging banks. Spawning occurs in streams with pool and riffle complexes. The species requires cold water and gravelly streambed to successfully breed. Spawn in the Fresno and San Joaquin rivers and tributaries before migrating to the Delta bays. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. One CNDDDB occurrence is documented within 5 miles of the BSA (CDFW 2023). |
| Chinook salmon – Central Valley (CV) spring run and Sacramento River (SR) winter run | <i>Oncorhynchus tshawytscha</i> | (CV) FT; CT; --; -- (SR) FE; CE; --; -- | CV: Remnant runs remain in Butte, Mill, Deer, Antelope, and Beegum Creeks; tributaries to the Sacramento River. SR: Runs return to freshwater through the Delta and spawn in the upper mainstem of the Sacramento River. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Chum salmon | <i>Oncorhynchus keta</i> | FT; --; --; -- | Occur throughout Alaska and as far south as Yaquina Bay, Oregon. Spend their early life in fresh water streams, estuaries, and associated wetlands. Then migrate and spend the remainder of their life foraging in the ocean before returning to the streams and tributaries where they were born to spawn. | A | The BSA does not provide suitable habitat for this species and is outside of the known range of this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|------------------------------------------------|------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coho salmon Central California Coast ESU | <i>Oncorhynchus kisutch</i> | FE; SE; --; -- | This ESU includes naturally spawned coho salmon originating from rivers south of Punta Gorda, California to and including Aptos Creek, as well as such coho salmon originating from tributaries to San Francisco Bay. This ESU also includes coho salmon from the following artificial propagation programs: Don Clausen Fish Hatchery Captive Broodstock Program, Scott Creek/King Fisher Flats Conservation Program and Scott Creek Captive Broodstock Program. Spawn in small coastal streams. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Delta smelt | <i>Hypomesus transpacificus</i> | FT; CE; ---; -- | Found in estuarine waters. Majority of life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta. | A | The BSA does not provide suitable habitat for this species. The BSA is outside of the designated critical habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Eulachon Southern DPS | <i>Thaleichthys pacificus</i> | FT; --; --; -- | Anadromous; however, spends about 95 percent of their life at sea, returning to spawn in the lower portions of coastal rivers. Range from northern California to the southeastern Bering Sea coast of Alaska. The Southern DPS spawns in rivers ranging from the Mad River in California to the Skeena River in northern British Columbia, Canada. | A | The BSA does not provide suitable habitat for this species and is outside of the known range of this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Green sturgeon pop. 1 | <i>Acipenser medirostris</i> | FT; --; --; -- | Spawns in the Sacramento, Feather, and Yuba rivers; presence in upper Stanislaus and San Joaquin rivers may indicate spawning in these rivers as well. Non-spawning adults occupy marine/estuarine waters and the Delta Estuary is important for rearing juveniles. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. One CNDDDB occurrence is documented within 5 miles of the BSA (CDFW 2023). |
| Longfin smelt | <i>Spirinchus thaleichthys</i> | FC; CT; SSC; -- | Occurs in a range of aquatic habitats and can tolerate freshwater to near saline conditions. Typically found in coastal waters near shore, bays, estuaries, and rivers. Some populations are landlocked in lakes. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. One CNDDDB occurrence is documented within 5 miles of the BSA (CDFW 2023). |
| Oceanic whitetip shark | <i>Carcharhinus longimanus</i> | FT; --; --; -- | Found throughout the world in tropical and sub-tropical waters. Pelagic species, generally found offshore in the open ocean, on the outer continental shelf, or around oceanic islands in deep water areas. | A | The BSA does not provide suitable habitat for this species and is outside of the known range of this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Sacramento perch | <i>Archoplites interruptus</i> | --; --; CSC; -- | Native populations occur within the Sacramento and San Joaquin Rivers, associated standing waters, and delta. Can tolerate alkaline waters and have been introduced to habitats for sport fishing. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Sacramento splittail | <i>Pogonichthys macrolepidotus</i> | --; --; CSC; -- | Found in freshwater pools and backwaters of rivers, lakes, slow-moving waters, and sloughs of the Delta. Spawns over flooded vegetation in tidal freshwater and euryhaline habitats. | A | The BSA does not provide suitable habitat for this species. The proposed Project will have no effect on this species. One CNDDDB occurrence is documented within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|------------------------------------------------------|--------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scalloped hammerhead shark Eastern Pacific DPS | <i>Sphyrna lewini</i> | FE; --; --; -- | Coastal pelagic species that occurs over continental and insular shelves and in nearby deeper water. It is found in warm temperate and tropical waters. | A | The BSA does not provide suitable habitat for this species and is outside of the known range of this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Sockeye salmon Snake River ESU | <i>Oncorhynchus nerka</i> | FE; --; --; -- | Includes all anadromous and residual sockeye salmon from the Snake River basin in Idaho, as well as artificially propagated sockeye salmon from the Redfish Lake captive propagation and SR sockeye salmon hatchery programs. Snake River sockeye salmon usually spend 2 to 3 years in the Pacific Ocean and return to Idaho in their 4 th or 5 th year of life. | A | The BSA does not provide suitable habitat for this species and is outside of the known range of this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Yelloweye rockfish Puget Sound/ Georgia Basin DPS | <i>Sebastes ruberrimus</i> | FT; --; --; -- | Pelagic species found from the Aleutian Islands to the Baja Peninsula. Most commonly found between 300 ft and 600 ft but have been found in water as shallow as 48 ft and as deep as 1,800 ft. | A | The BSA does not provide suitable habitat for this species and is outside of the known range of this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Amphibians/Reptiles | | | | | |
| California red-legged frog | <i>Rana draytonii</i> | FT; --; CSC; -- | Aquatic habitat typically includes slow-moving streams, ponds, or marsh communities with emergent vegetation. Prefers aquatic habitats within or near humid forests, woodlands, grasslands, or other cool, moist areas. Small standing pools (less than 3 feet deep) are typically used for breeding. Nearby upland habitat with downed debris for refuge is also required. Typically found in or within 300 feet of aquatic habitat but may disperse up to two miles away from aquatic habitats. Elevational range extends from sea level to about 5,000 ft., but typically occur below 3,935 ft. | A | The BSA does not contain suitable habitat for this species. Although some aquatic features are present within the BSA, the features are lacking suitable emergent vegetation, cover, and breeding pools. The BSA is lacking downed debris and other features that could be suitable upland refugia habitat for this species. The BSA is also lacking areas with cool, moist, or wooded habitats and is not within dispersal distance to any other cool, moist, or wooded habitats. In addition, this species is generally considered extirpated from the Central Valley including the BSA. The BSA is outside of the designated critical habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| California tiger salamander | <i>Ambystoma californiense</i> | FT; CT; --; -- | Requires both aquatic breeding habitat such as vernal pools, temporary ponds, stock ponds, or wetlands, and adjacent upland habitat with small mammal burrows present for refuge. Typically aestivates throughout summer. This species is known to occur within the Central Valley, Santa Barbara, and Sonoma counties. | A | Although the BSA contains some freshwater aquatic features and suitable upland habitat, there are no documented occurrences or known breeding ponds within 10 miles of the BSA; well outside the maximum dispersal distance of this species (approx. 1.5 miles). Additionally, no suitable burrows for this species to utilize as upland refugia habitat were observed during the field surveys. The BSA is also outside of designated critical habitat for this species. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Giant garter snake | <i>Thamnophis gigas</i> | FT; CT; --; -- | Occurs in aquatic habitats with open, sunny areas for basking, vegetation cover along banks, and abundant prey. Typically occurs in agricultural wetlands, canals, and sloughs; especially near rice fields. Upland habitat with small mammal burrows present above flood level is also required for this species. Known in Sacramento, Sutter, Butte, Colusa, Merced and Glenn counties. | HP | The BSA does not contain suitable aquatic habitat for this species but suitable aquatic habitat is present within Elk Grove Creek, inundated portions of Laguna Creek, a pond, and associated marshy edges that occur adjacent to the BSA. Some suitable burrows were observed within the BSA and the BSA could provide suitable basking habitat in areas near the adjacent aquatic habitat. The proposed Project may affect and is likely to adversely affect this species. Eight CNDDDB occurrences are documented within 5 miles of the BSA and one of the occurrence records is within the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|-----------------------|--------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Western pond turtle | <i>Emys marmorata</i> | FPT; --; CSC; -- | Occurs in a variety of aquatic habitats such as ponds, creeks, ditches, lakes, and marshes. Prefers areas with abundant vegetation and rocky or muddy substrate. Exposed banks or other basking areas such as logs or cattail mats are required. Upland habitat typically occurs within woodlands, forests, or grasslands that are within the vicinity of aquatic habitat. | P | The BSA contains suitable upland habitat for this species. Although no suitable aquatic habitat is present within the BSA, the BSA is within dispersal distance from suitable aquatic habitat that occurs adjacent to the BSA within a pond, Elk Grove Creek, Laguna Creek and associated marshy edges. One western pond turtle was observed within Laguna Creek during the April 23, 2019 field survey. Five CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Western spadefoot | <i>Spea hammondi</i> | --; --; CSC; -- | Occurs in open areas with sandy or gravelly soils. Typically found in river floodplains, sandy washes, open grasslands, chaparral, and open foothill woodlands. Estivates in burrows and typically only emerges to breed during cooler months. Breeds in shallow pools after heavy rains. | HP | The BSA does not contain suitable soil necessary for this species to aestivate. The soil within the BSA is compact and very hard which makes estivation nearly impossible for this species. However, suitable soil may be present in areas adjacent to the BSA and within dispersal distance to the BSA. Vernal pools within the BSA provide suitable breeding habitat for this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Birds | | | | | |
| Bank swallow | <i>Riparia riparia</i> | --; CT; --; -- | Occur in low lying areas along rivers, streams, coasts, and reservoirs. Typically nest in large colonies in burrows dug into vertical cliffs, banks, or bluffs. The colonies nest in areas with fairly loose soil and near large bodies of water. Forage in open areas. | A | No cliffs, banks, bluffs, or other suitable nesting habitat occurs within the BSA. The BSA provides an open space suitable for foraging but with the absence of nesting habitat and nearby large water sources, foraging is unlikely. Suitable habitat is absent from the BSA. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Burrowing owl | <i>Athene cunicularia</i> | --; --; CSC; -- (burrowing sites and some wintering sites) | Occur in a variety of open habitats, typically grasslands, vegetated desert scrub, fallow fields, washes, and human disturbed lands such as golf courses and vacant lots. Small mammal burrows, perch sites and friable soil are necessary for this species. May utilize culverts, abandoned pipelines, and other manmade structures for nesting. | A | The BSA contains tall, dense vegetation and no burrows or other structures were observed that could provide nesting habitat for this species. The soil within the BSA is also very hard and compact which is unsuitable for use by burrowing owls. Twelve CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| California black rail | <i>Laterallus jamaicensis coturniculus</i> | --; CFP; CT; -- | Occur in tidal marshes and other coastal marsh habitats. Also occurs in large, dense, shallow marshes, wet meadows, and flooded areas with grassy vegetation. The majority of these species occur in tidal salt marshes, but small isolated populations occur within freshwater marshes of the foothills of the Sierra Nevada. Breeds and nests in higher elevation marshes dominated by <i>Scirpus</i> and <i>Salicornia</i> . | A | Large, dense, marshy habitats are absent from the BSA. No stands of <i>Scirpus</i> or <i>Salicornia</i> are present within the BSA that would provide suitable nesting habitats. Suitable habitat is absent. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Golden eagle | <i>Aquila chrysaetos</i> | --; CFP; --; -- | Occur in open and semi-open habitats. Typically found in areas of cliffs, ridges, or canyonlands. Most often nests on cliffs and may also nest in trees, on the ground, or tall man-made structures such as transmission towers or windmills. This species avoids developed areas and fragmented urbanized environments. | A | The BSA is located within a fragmented urbanized environment that is typically avoided by this species. No suitable nest locations are present within the BSA; therefore, suitable habitat is absent. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Least Bell's vireo | <i>Vireo bellii pusillus</i> | FE; CE; --; -- | Occur in dense shrubby areas such as coastal chaparral, scrub oak, riverine scrub, and brushy fields. This species avoids open areas. Nests in dense, brushy vegetation near the ground. | A | The BSA does not contain any dense, brushy areas suitable for this species; therefore, suitable habitat is not present. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|-----------------------------------|-----------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purple martin | <i>Progne subis</i> | --; --; CSC; -- | Occur in a variety of habitats and nest within cavities of abandoned woodpecker holes, snags, cliffs, or man-made cavities such as bird houses, traffic lights, or buildings. | A | No suitable nesting cavities are present within the BSA. Trees are largely absent from the BSA and no cavities were observed within the few trees that are present. No other potential nest cavities are present within the BSA. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Song sparrow (Modesto population) | <i>Melospiza melodia</i> | --; --; CSC; -- | Primarily breed within riparian habitats, wetlands, and coastal scrub. Typically nest within dense vegetation such as cattails, bulrush, tule, blackberry or willows. Exposed ground or leaf litter is primarily used for foraging. | A | Riparian and wetland habitats with dense vegetation are absent from the BSA. Suitable foraging habitat such as exposed ground or leaf litter is also largely absent from the BSA. Therefore, no suitable nesting or foraging habitat occurs within the BSA. Five CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023) |
| Swainson's hawk | <i>Buteo swainsoni</i> | --; CT; --; -- | Found in a variety of habitats including grasslands, agricultural areas, and open woodlands. Often nests peripherally to riparian systems or other aquatic habitats; nests in lone trees or groves of trees in agricultural fields, residential trees, or road break trees when aquatic habitat is absent. Prefers nest sites adjacent to open areas suitable for foraging. Trees greater than 30 feet in height are generally used for nesting. | HP | The BSA contains suitable foraging habitat for this species. Although no suitable nest trees are present within the BSA, suitable nest trees occur adjacent to the BSA within residential properties and along the nearby creek margin. If Swainson's hawks were to nest within these trees, the nest buffer would overlap with the BSA. Fifty-Three CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Tricolored blackbird | <i>Agelaius tricolor</i> | --; CT; --; -- (nesting colony) | Nests in dense blackberry, cattail, tule, bulrush, sedge, willow, or other dense vegetation within freshwater marshes. Nest colonies are often associated with dairy farms. Typically nests in large colonies of at least 50 pairs (up to thousands of individuals). | HP (foraging only) | The BSA contains suitable foraging habitat for this species within the annual grassland but suitable nesting habitat is absent. No blackberry, cattail, tule, bulrush or other dense marsh vegetation is present within the BSA. Thirteen CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Western yellow-billed cuckoo | <i>Coccyzus americanus occidentalis</i> | FT; CE; --; -- | Occur in riparian habitats of low to mid-elevation forests. May also occur in dense wooded habitats near water, overgrown orchards, and dense streamside thickets. Typically nests within cottonwood (<i>Populus</i> spp.) or willow (<i>Salix</i> spp.) within large, multi-layered forests. | A | Dense riparian and forest habitat is absent from the BSA. No suitable nesting or foraging habitat is present in the BSA. The proposed Project will have no effect on this species. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| White-tailed kite | <i>Elanus leucurus</i> | --; CFP; --; -- | Occurs in a variety of habitats including savanna, marshes, grassland, open areas of woodlands, partially cleared lands, and agriculture fields. Nests in trees often near aquatic habitats. Foraging occurs within un-grazed or lightly-grazed fields, agricultural areas, and open grasslands. | P | The BSA contains suitable nesting and foraging habitat for this species. Although no suitable nest trees are directly within the BSA, suitable nest trees occur within residential properties and along the nearby creek margin. If white-tailed kite were to nest within these trees, the nest buffer would overlap with the BSA. One white-tailed kite was observed within the BSA during the April 23, 2019 field survey. Two CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Yellow-headed blackbird | <i>Xanthocephalus xanthocephalus</i> | --; --; CSC; -- | Uncommon migrant of California but some breeding populations have been documented within the Central Valley. Typically nest in cattails, bulrush, reeds, and other dense marshy vegetation, always over water. Forage in grasslands, agricultural fields, and savanna habitats. | HP (foraging only) | The BSA contains suitable foraging habitat for this species within the annual grassland but suitable nesting habitat is absent. No cattails, bulrushes, reeds or other dense marsh vegetation is present within the BSA. One CNDDDB occurrence is documented within 5 miles of the BSA (CNDDDB 2023). |
| Other migratory birds and raptors | Not Applicable. | MBTA and §3503.5 Department of Fish and Wildlife Code | Occur and nest in a variety of habitats such as wetland, marsh, riverine, grassland, agriculture, forest, woodland, and suburban areas. | HP | The annual grassland within the BSA may provide suitable nesting and foraging habitat for a variety of migratory birds and raptors. Raptor species, if present, are most likely to nest in trees outside of the BSA but nesting buffers may overlap into the BSA. Some migratory bird species may nest within the annual grassland habitat. Several CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

| Common Name | Scientific Name | Regulatory Status (Federal; State; Local; CNPS) | General Habitat Description | Habitat Present/Absent | Rationale and Potential for Occurrence within the BSA |
|-----------------|--------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mammals | | | | | |
| American badger | <i>Taxidea taxus</i> | --; --; CSC; -- | Occur in a variety of open, dry habitats including grassland, agricultural fields, open forests, savanna, meadows and semi-desert habitats. Digs a large burrow with multiple chambers and a den. Friable soil is required for this species. | A | Although the BSA contains open grassland, the soil is very hard and compact, and unsuitable for this species. Additionally, no burrows were observed within the BSA during field surveys. Therefore, suitable habitat for this species is absent from the BSA. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |
| Hoary bat | <i>Lasiurus cinereus</i> | --; --; --; CSA | Occur in a variety of habitats and migrates to winter and summer ranges across the state and Country. Typically roosts in dense foliage of large trees. During migration, may be found in unusual roosts such as abandoned woodpecker holes or buildings. | A | Large trees suitable for roosting are absent from the BSA. No other potential roost locations are present; suitable habitat is absent from the BSA. No CNDDDB occurrences are documented within 5 miles of the BSA (CDFW 2023). |

BSA Potential:

A = Absent – no habitat present and no further surveys needed.

HP = Habitat Present-habitat is, or may be present.

P = Present – the species is present.

Federally Listed Species:

FE = federal endangered
FT = federal threatened

FPD = proposed for delisting
FPT= federal proposed threatened
FC = candidate

FD = delisted

California State Listed Species:

CFP = California fully protected
CC = California candidate

CE = California state endangered
CSA = California special animal

CSC = California species of special concern
CT = California state threatened

CNPS Rank Categories:

- 1A = plants presumed extinct in California
- 1B = plants rare, threatened, or endangered in California and elsewhere
- 2 = plants rare, threatened, or endangered in California, but common elsewhere
- 3 = plants about which we need more information

- 4 = plants of limited distribution

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CHAPTER 4: RESULTS – BIOLOGICAL RESOURCES, DISCUSSION OF IMPACTS AND MITIGATION

This section identifies species with the potential to occur, potential Project impacts, and avoidance and minimization measures. Impacts to habitat types are summarized below in **Table 2** and on **Figure 5**.

Table 2: Impact Acreage by Habitat Type

| Biological Community | Permanent Impacted Acreage* | Temporary Impact Acreage* | Avoided Acreage* | Total Acreage within the BSA* |
|-------------------------------|-----------------------------|---------------------------|------------------|-------------------------------|
| Annual Grassland | 3.79 | 2.48 | 6.06 | 12.33 |
| Depressional Seasonal Wetland | 0.01 | 0.01 | 0.21 | 0.23 |
| Vernal Pool | 0.06 | 0.03 | 0.21 | 0.30 |
| Riverine Perennial Marsh | — | — | 0.12 | 0.12 |
| Riverine Seasonal Marsh | — | — | <0.01 | <0.01 |
| Channel | — | — | 0.01 | 0.01** |
| Creek | — | — | 0.05 | 0.05** |
| Disturbed/Developed | 0.80 | 0.74 | 5.61 | 7.15 |
| Total | 4.66 | 3.26 | 12.27 | 20.16 |

*Acreages calculated at 6 significant figures and subsequently rounded.

** Total includes 0.01 acre of Channel and 0.03 acre of Creek under the bridge structure at Bruceville Road, in addition to the summed total acreage of disturbed land accounting for the bridge structure.

Habitats and Natural Communities of Special Concern

Sensitive natural communities (SNC[s]), as defined by CDFW, present in the BSA include potential waters of the U.S., waters of the State, and northern hardpan vernal pools. These community types are important as further degradation and destruction threatens the communities as well as associated populations of dependent plant and wildlife species; additionally, further degradation and destruction significantly reduces their regional distribution and viability. These SNCs are described in further detail below.

Waters of the U.S., Waters of the State, and Northern Hardpan Vernal Pools

Wetlands and other waters of the U.S. are considered sensitive by federal and State agencies and occur within the BSA. Of these features, northern hardpan vernal pools are also a SNC as identified by CDFW.

The USACE determines the extent of their jurisdiction over wetlands and other waters of the U.S. on a case-by-case basis during the verification process. Areas deemed jurisdictional by the USACE are subject to the regulatory requirements of the Federal CWA, including permitting and mitigation associated with impacts to jurisdictional features.

An Aquatic Resources Delineation Report was prepared for all wetlands and other waters occurring within the BSA at the time the report was submitted (HELIX 2020). The aquatic resources delineation was submitted to the USACE with a request for a PJD on February 20, 2020. The USACE issued a PJD for the Project on May 12, 2020 concurring with aquatic resources mapped by HELIX (2020) (**Appendix F**).

Survey Results

A delineation of aquatic resources within the BSA was prepared by HELIX in June 2019. A total of 2.24 acres of aquatic resources were delineated within the BSA boundary at the time of the delineation. This acreage was comprised of 1.44 acres of vernal pools, 0.49 acre of depressional seasonal wetlands, 0.28 acre of riverine seasonal marsh and 0.03 acre of riverine perennial marsh. Following completion of the aquatic resources delineation, the trail alignment was revised to either avoid aquatic features completely or include entire features that may potentially be impacted. The coinciding revisions to the BSA resulting from the re-aligned trail, also included an expanded BSA to include the eastern portion of Bruceville Road. The revised BSA was surveyed on September 10, 2019 and a total of 2.37 acres of aquatic features were delineated within the BSA. This acreage is comprised of 1.44 acres of vernal pools, 0.52 acre of depressional seasonal wetland, 0.20 acre of riverine seasonal marsh, 0.15 acre of riverine perennial marsh, 0.01 acre of channel, and 0.05 acre of creek (HELIX 2020) (**Appendix F**).

During a subsequent biological survey of the revised trail alignment on March 15, 2023, a small portion (<0.01 acre) of riverine seasonal marsh was mapped along the border of the revised Segment 1 trail alignment. This feature was not included in previous delineations as it is located on private property that was not previously surveyed and will be avoided by the current trail alignment. Aquatic resources mapped within the current BSA are comprised of **0.23** acre of depressional seasonal wetland, **0.30** acre of vernal pool, **0.12** acre of riverine perennial marsh, **<0.01** acre of riverine seasonal marsh, **0.01** acre of channel, and **0.05** acre of creek (**Figure 4**).

Project Impacts

The Project has the potential to permanently impact a total of **0.07** acre of aquatic features delineated within the BSA (**Figure 5**). By implementing one or more of the avoidance measures discussed below, impacts to jurisdictional features will be minimized or avoided as a result of the Project. An additional 0.04 acre of aquatic resources may be subject to temporary construction-related impacts. However, aquatic resources temporarily impacted by project construction will be restored to pre-project contours/conditions following construction of the trail.

Project-related impacts to aquatic resources include impacts to a portion of one vernal pool and a portion of one depressional seasonal wetland. The portions of these features that will not be impacted are anticipated to continue to function as vernal pool/depressional seasonal wetland habitat respectively and are anticipated to continue to provide suitable habitat for special status plant and animal species. The microtopography of these two features was assessed by HELIX during the March 15, 2023 field survey and both features are concave with relatively little change in microtopography (no natural ridges, holes, large rocks, etc.). The vernal pool with proposed impacts appears to receive water from a swale outside and north of the BSA as well as direct precipitation, and the depressional seasonal wetland appears to receive water from direct precipitation. Because proposed impacts to these features are not planned in areas of direct water access/flow points, the hydrology is expected to continue to function as it currently does despite the proposed impacts to the features.

Avoidance and Minimization Measures

Because the Project will result in impacts to aquatic features, the project proponent would be required to obtain authorization under a CWA Section 404 permit for any impacts to wetlands or other waters

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

subject to USACE jurisdiction. Impacts to aquatic resources would also require a 401 Water Quality Certification from the RWQCB under Section 401 of the CWA. If applicable, any aquatic resources determined to not be subject to federal jurisdiction, but considered waters of the State, would require the filing of an application under the Procedures. Project-related impacts to aquatic resources may also require a Streambed Alteration Agreement with CDFW for impacts to resources subject to California Fish and Game Code Section 1602. Regulatory authorizations/permits will include terms and conditions to minimize impacts and to fully mitigate for any permanent impacts to wetlands and other waters.

The following additional measures would further contribute to avoidance of indirect impacts to the jurisdictional seasonal wetlands, marshes, and vernal pools:

- MM-1. Exclusion fencing shall be installed along the outer edge of work along the northern edge of Segment 1 in the areas of the adjacent pond (located east of Mannington Street and north of Monterey Oaks Drive) and adjacent to Sacramento County's Lower Laguna Flood Control Project deed restricted parcels, the depressional seasonal wetland (located east of Lyndale Circle and north of Big Horn Boulevard), and along the vernal pool west of Bruceville Road (**Figure 5**).
- MM-2. During construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary.
- MM-3. Hazardous materials such as fuels, oils, solvents, etc., shall be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment, and staging areas will occur at least 200 feet from any aquatic habitat

Compensatory Mitigation

Any compensatory mitigation for direct permanent impacts to jurisdictional waters would be addressed during the 404/401 permit process, as well as review by CDFW for impacts to resources subject to California Fish and Game Code Section 1602. It is anticipated that the Project proponent would consider the purchase of mitigation bank credits to mitigate for the fill of waters of the U.S. and/or waters of the State that may be required by the Project as described by the measures below.

- MM-4. To mitigate for the permanent loss of waters of the U.S. resulting from development of the proposed Project, the City shall submit a compensatory mitigation plan to the USACE and RWQCB proposing in-kind replacement of impacted waters of the U.S. at a minimum 1:1 ratio, or as otherwise required by the USACE and RWQCB.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

MM-5. Onsite vernal pool and depression seasonal wetlands represent suitable habitat for special-status plant species and vernal pool branchiopods and invertebrates. If avoidance is not feasible, then impacts to suitable vernal pool habitat shall be mitigated at a 2:1 ratio (two acres mitigated for every acre lost) or as determined through consultation between USFWS and Caltrans. Mitigation shall be through preservation of suitable vernal pool habitat or purchase of vernal pool preservation credits at a USFWS-approved conservation bank prior to commencement of activities within suitable habitat. Final habitat acreages, mitigation ratios, and other project-specific compensatory requirements shall be determined through consultation between USFWS and Caltrans.

Cumulative Impacts

No cumulative impacts to potentially jurisdictional features will occur as a result of the Project due to the implementation of the avoidance and minimization measures discussed above.

Aquatic resources within the BSA currently are and historically have been subject to disturbance through unauthorized access and unofficial trails, foot traffic, and other human disturbance as evident in the field and through aerial imagery. With the implementation of the proposed Project in the BSA, this disturbance would be expected to be reduced as people may be more likely to remain on the paved trails and not encroach into adjacent open space areas and aquatic features. This would likely reduce unauthorized access, further reducing the potential for ongoing encroachment within these resources and reducing the potential for long-term cumulative impacts to vernal pool and wetland habitats.

Special-Status Plant Species

The following special-status plants have potential to occur within the BSA: Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Boggs lake hedge hyssop (*Gratiola heterosepala*), bristly sedge (*Carex comosa*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), dwarf downingia (*Downingia pusilla*), Ferris' goldfields (*Lasthenia ferrisiae*), Heckard's pepper-grass (*Lepidium latipes* var. *heckardii*), hoary navarretia (*Navarretia eriocephala*), hogwallow starfish (*Hesperovax caulescens*), lenenere (*Legenere limosa*), marsh skullcap (*Scutellaria galericulata*), Mason's lilaeopsis (*Lilaeopsis masonii*), Northern California black walnut (*Juglans hindsii*), pappose tarplant (*Centromadia parryi* ssp. *parryi*), Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*), Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*), saline clover (*Trifolium hydrophilum*), Sanford's arrowhead (*Sagittaria sanfordii*), side-flowering skullcap (*Scutellaria lateriflora*), Suisun Marsh aster (*Symphyotrichum lentum*), valley brodiaea (*Brodiaea rosea* ssp. *vallicola*), watershield (*Brasenia schreberi*), and woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*).

These plant species are of special concern based on federal, State, or local laws; and limited distributions. They could potentially occur within the BSA due to the presence of suitable habitat required by these special-status plants occurring within the BSA.

For the purpose of this report, special-status plants will be discussed under the following habitat types in which they would be expected to be found: annual grassland, vernal pools, depression seasonal wetlands, and riverine seasonal and perennial marsh. No special-status plants have been observed within the BSA during the field surveys.

Annual Grassland Special-Status Plants

Survey Results

No special-status plants with potential to occur within the BSA are known to occur within annual grassland habitat. No special-status plants have been observed within the annual grassland during the field surveys.

Project Impacts

No special-status plant species would be expected to be impacted as a result of impacts to annual grassland habitats as no special-status plants were determined to potentially occur within the annual grassland habitat.

Avoidance and Minimization Efforts

Impacts to annual grassland would have no impact on special-status plants. Although the Project would result in the removal of approximately 3.79 acres of annual grassland and temporary impacts to approximately 2.48 acres, this is a common habitat type within the area and no special-status plants are known to occur or were observed during the field surveys within this vegetation community. Therefore, no avoidance measures are recommended.

Compensatory Mitigation

No compensatory mitigation will be required for special-status plants associated with impacts to the annual grassland habitat.

Cumulative Impacts

No cumulative impacts to special-status plants associated with annual grassland habitat will occur as a result of the Project.

Vernal Pool Special-Status Plants

Survey Results

The following special-status plants have potential to occur within vernal pools within the BSA: Ahart's dwarf rush, Boggs Lake hedge hyssop, dwarf downingia, Ferris' goldfields, hogwallow starfish, legenera, Parry's rough tarplant, and valley brodiaea (Calflora 2023). None of these species were observed during the field surveys; however, the site visits were not conducted during the typical identification period for all potentially occurring special-status plant species within the BSA.

Project Impacts

The BSA contains 0.30 acre of vernal pool habitat. As currently designed, the Project will permanently impact 0.06 acre of vernal pool habitat and will temporarily impact 0.03 acre of vernal pool habitat (**Figure 5**). Impacts could occur to special-status plant species, if present, through removal of habitat, removal of individual plants by construction personnel or equipment, and impacting occupied habitat through accidental discharge into the vernal pools during construction activities. By implementing one

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

or more of the measures discussed below, impacts to special-status vernal pool plants will be avoided or minimized as a result of the Project.

Avoidance and Minimization Efforts

Project implementation could result in permanent direct and temporary impacts to special-status vernal pool plants without implementation of avoidance and minimization measures. Impacts will be avoided or minimized with implementation of Caltrans' Standard Best Management Practices (BMPs) (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures:

- MM-6. A qualified USFWS and CDFW approved botanist shall conduct botanical surveys within the typical identification periods for all potentially occurring special-status plant species within suitable habitat prior to commencement of construction activities. For the special-status plant species that may potentially occur, two rounds of focused plant surveys would be necessary to survey within the typical identification periods for all potentially occurring special-status plants. The first round of surveys would be conducted in March or April and the second round of surveys would be conducted in May or June. If no special-status plants are observed, then a letter report documenting the results of the survey should be provided to the Project proponent for their records, and no additional measures with respect to special-status plants are recommended.
- MM-7. If any special-status plants are found within the Project site, they should be avoided to the extent feasible. The plant locations would be identified on a map, and an agency-approved buffer should be established around the plants with high visibility construction fencing. The construction fencing would remain intact until construction is complete.
- MM-8. If the special-status plants cannot be avoided, then a mitigation plan would be prepared in consultation with CDFW. CDFW would need to approve the mitigation plan prior to commencement of construction activities that would impact special-status plants.

Compensatory Mitigation

Compensatory mitigation may be required if the Project results in the removal of or impacts to special-status plants within the vernal pools. This can include purchase of approved bank credits for the affected species or Project-specific restoration.

Cumulative Impacts

Cumulative impacts to special-status plants may occur if these species are removed or impacted as a result of the Project. Nearly all special-status plants are of limited distribution and abundance, and plant species within vernal pools are likely even more threatened because of the limited abundance of vernal pools. Cumulative impacts as a result of the Project could occur through the removal of vernal pool habitat.

Aquatic resources within the BSA currently are and historically have been subject to disturbance through unauthorized access and unofficial trails, foot traffic, and other human disturbance as evident in the field and through aerial imagery. With the implementation of the proposed Project in the BSA, this

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

disturbance would be expected to be reduced as people may be more likely to remain on the paved trails and not encroach into adjacent open space areas and aquatic features. This would likely reduce unauthorized access, further reducing the potential for ongoing encroachment within these resources and reducing the potential for long-term cumulative impacts to vernal pool and wetland habitats and the special status plants species these habitats are suitable for supporting.

Depressional Seasonal Wetland Special-Status Plants

Survey Results

The following special-status plants have potential to occur within the depressional seasonal wetlands that occur within the BSA: Boggs Lake hedge hyssop, Delta tule pea, Ferris' goldfields, Heckard's pepper-grass, hoary navarretia, Mason's lilaepsis, saline clover, Sanford's arrowhead, and wooly rose-mallow (Calflora 2023). None of these species were observed during field surveys.

Project Impacts

As currently designed, the Project will permanently impact 0.01 acre of depressional seasonal wetland habitat and will temporarily impact 0.01 acre of depressional seasonal wetland habitat (**Figure 5**). Direct impacts could occur to these special-status plant species, if present, through removal of habitat, removal of individual plants by construction personnel or equipment, and impacting occupied habitat through accidental discharge into the depressional seasonal wetlands and depressional seasonal marsh during construction activities. By implementing one or more of the avoidance measures discussed below, impacts to special-status plants will be avoided or minimized as a result of the Project.

Avoidance and Minimization Efforts

Project implementation could result in permanent direct impacts to special-status wetland plants without implementation of avoidance and minimization measures. Impacts will be avoided or minimized with implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and **Avoidance and Minimization Measures MM-6 through MM-8** as discussed above.

Compensatory Mitigation

Compensatory mitigation may be required if the Project results in the removal of or impacts to the special-status plants within the depressional seasonal wetlands. This can include purchase of approved bank credits for the affected species or Project-specific restoration.

Cumulative Impacts

Cumulative impacts to special-status plants may occur if these species are removed or impacted as a result of the Project. Nearly all special-status plants are of limited distribution and abundance, and species within depressional seasonal wetlands are likely even more threatened because of the limited abundance of wetlands throughout the State. Cumulative impacts as a result of the Project could occur through the removal of depressional seasonal wetland and marsh habitat.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Aquatic resources within the BSA currently are and historically have been subject to disturbance through unauthorized access and unofficial trails, foot traffic, and other human disturbance as evident in the field and through aerial imagery. With the implementation of the proposed Project in the BSA, this disturbance would be expected to be reduced as people may be more likely to remain on the paved trails and not encroach into adjacent open space areas and aquatic features. This would likely reduce unauthorized access, further reducing the potential for ongoing encroachment within these resources and reducing the potential for long-term cumulative impacts to depressional seasonal wetland habitats and the special status plants species these habitats are suitable for supporting.

Riverine Seasonal and Perennial Marsh Special-Status Plants

Survey Results

The following special-status plants have potential to occur within the riverine seasonal and perennial marshes that occur within the BSA: Ahart's dwarf rush, bristle sedge, hogwallow starfish, Mason's lilaeopsis, pappose tarplant, Peruvian dodder, saline clover, Sanford's arrowhead, side-flowering skullcap, Suisun Marsh aster, watershield, and wooly rose-mallow (Calflora 2023). None of these species were observed during field surveys.

Project Impacts

As currently designed, no impacts are expected to occur to riverine seasonal and perennial marsh habitats (**Figure 5**). No special-status plants with potential to occur in these habitats will be impacted by the Project as these features will be avoided by Project design.

Avoidance and Minimization Efforts

No impacts are proposed to occur in the seasonal and perennial marsh habitats. Therefore, no avoidance measures for special-status plants that may occur in these habitats are recommended.

Compensatory Mitigation

No compensatory mitigation will be required for special-status plants associated with the seasonal and perennial marsh habitats.

Cumulative Impacts

No cumulative impacts to special-status plants associated with the seasonal and perennial marsh habitats will occur as a result of the Project.

Special-Status Animal Species

The following special-status wildlife species have the potential to occur within the BSA: California linderiella, hairy water flea, Ricksecker's water scavenger beetle, midvalley fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, giant garter snake, western pond turtle, western spadefoot, Swainson's hawk, tricolored blackbird, white-tailed kite, yellow-headed blackbird, and other migratory birds and raptors. These species are considered to be of special concern based on federal, State, or local laws; limited distributions; and/or the habitat requirements of special-status species occurring onsite.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

White-tailed kite and western pond turtle were observed within the BSA during the April 23, 2019 field survey.

Vernal Pool Invertebrates

California linderiella is not a listed species but is identified on the CDFW Special Animal List. California linderiella is a relatively common branchiopod that occurs in vernal pools, swales, and ephemeral freshwater habitats. They can reach maturity in as little as 31 days and may live as long as 6 months (Eriksen and Belk 1999). There are 19 CNDDDB occurrences documented within five miles of the BSA (CDFW 2023). The vernal pool and depression seasonal wetlands within Segment 1 of the BSA provide suitable habitat for this species (**Figure 4**).

Midvalley fairy shrimp is not a listed species but is identified on the CDFW Special Animal List. This species occurs in small, short-lived vernal pools and grass-bottomed swales ranging from 4 to 663 square feet (0.37 to 61.6 square meters) in area and averaging less than 4 inches (10 centimeters) in depth (Helm 1998). The midvalley fairy shrimp has been found on San Joaquin Silt Loam soils. They can reach maturity in as little as 14 days, but typically take 45 days, and can live as long as 5 months (Eriksen and Belk 1999). There are nine CNDDDB occurrences documented within five miles of the BSA (CDFW 2023). The vernal pool within Segment 1 of the BSA provides suitable habitat for this species (**Figure 4**).

Vernal pool fairy shrimp are federally listed as Threatened. Vernal pool fairy shrimp are found in vernal pools, swales, depression seasonal wetlands, and ephemeral freshwater habitats. These species are most commonly found in grassy or mud bottomed pools or basalt flow depression pools in unplowed grasslands. The pools vary in size from over 10 hectares to only 20 square meters. While vernal pool fairy shrimp may reach maturity in as little as 18 days, the typical maturation time is 41 days. They are relatively short-lived, generally only surviving for 10 weeks (Eriksen and Belk 1999). There are fifteen CNDDDB occurrences documented within five miles of the BSA (CDFW 2023). The vernal pool and depression seasonal wetlands within Segment 1 of the BSA provide suitable habitat for this species (**Figure 4**).

Vernal pool tadpole shrimp are federally listed as Endangered. Vernal pool tadpole shrimp are found in natural and artificial seasonally ponded habitats including: vernal pools, swales, depression seasonal wetlands, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. Wetlands range from very small (2 square meters) to very large (356,253 square meters). Vernal pool tadpole shrimp generally reproduce in approximately 54 days and live up to 5 months (NatureServe 2019). There are 19 CNDDDB occurrences documented for this species within five miles of the BSA (CDFW 2023). The vernal pool and depression seasonal wetlands within Segment 1 of the BSA provide suitable habitat for this species (**Figure 4**).

The hairy water flea is identified on the CDFW Special Animal List. This species typically occurs in vernal pools, depression seasonal wetlands, and other seasonal freshwater habitats. It has adapted to the hydrological patterns of seasonal aquatic habitats, investing in short periods of growth and reproduction when pools are inundated, and entering dormancy to survive long periods when pools are dry (USFWS 2006). There are no CNDDDB occurrences documented for this species within five miles of the BSA (CDFW 2023). The vernal pool and depression seasonal wetlands within Segment 1 of the BSA provide suitable habitat for this species (**Figure 4**).

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Ricksecker's water scavenger beetle is identified on the CDFW Special Animal list. This species is thought to occur in vernal pools, seeps, slow-moving streams, and ponds. Because very few specimens have been collected, information regarding the ecology of this species is relatively unknown. Specimens that have been collected have all occurred within the Central Valley and San Francisco Bay Area, and recent collections have occurred within a vernal pool near Sacramento (Short *et al.* 2017). There are no CNDDDB occurrences within five miles of the BSA (CDFW 2023). The vernal pool within Segment 1 of the BSA provides suitable habitat for this species (**Figure 4**).

Survey Results

The vernal pool was dry at all field surveys except the March 15, 2023, survey. No focused survey was completed to determine the presence of vernal pool branchiopods within the pools as part of this NES, but suitable habitat is present within the BSA and presence of vernal pool branchiopods is assumed. No documented occurrences of vernal pool branchiopods or invertebrates occur within the BSA (CDFW 2023).

Project Impacts

As currently designed, the Project has the potential to directly impact vernal pool branchiopods and invertebrates through impact or removal of up to **0.01** acre of depressional seasonal wetland habitat and **0.06** acre of vernal pool habitat (**Figure 5**). The proposed Project may affect and is likely to adversely affect vernal pool fairy shrimp and vernal pool tadpole shrimp.

Permanent direct impacts could occur through ground disturbance of the soil, removal/fill of the wetlands through trail construction, or by altering the hydrology of the wetlands through trail construction thereby resulting in loss of occupied habitat or individuals. Individuals may be harmed, killed, or otherwise directly impacted based on assumed presence. In addition, temporary impacts are anticipated through temporary loss of 0.03 acre of vernal pool and 0.01 acre of depressional seasonal wetland. Indirect impacts could occur to vernal pools or wetlands and result from disturbance caused by the movement of equipment, workers, and trail-users, silt or other debris entering the features during construction, or the introduction of noxious/invasive weeds into the features that reduce the suitability to support vernal pool invertebrates.

Avoidance and Minimization Efforts

Mitigation Measure MM-5 provides mitigation measures to reduce impacts to vernal pool branchiopod and invertebrate species, along with suitable habitat through compensatory mitigation.

Compensatory Mitigation

Compensatory mitigation shall occur through the measures discussed above and may also occur through other measures as outlined by the governing agency such as purchase of habitat mitigation credits from a USFWS-approved mitigation bank.

Cumulative Impacts

Cumulative impacts to vernal pool branchiopods and invertebrates may occur as a result of the proposed Project. Cumulative impacts could occur to the branchiopod population through the direct

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

removal of habitat, or through indirect impacts to habitat. The loss of habitat for branchiopods could result in the decline of the species' population regionally.

Aquatic resources within the BSA currently are and historically have been subject to disturbance through unauthorized access and unofficial trails, foot traffic, and other human disturbance as evident in the field and through aerial imagery. With the implementation of the proposed Project in the BSA, this disturbance would be expected to be reduced as people may be more likely to remain on the paved trails and not encroach into adjacent open space areas and aquatic features. This would likely reduce unauthorized access, further reducing the potential for ongoing encroachment within these resources and reducing the potential for long-term cumulative impacts to vernal pool and seasonal wetland habitats and the special status branchiopod species these habitats are suitable for supporting.

Giant Garter Snake

The giant garter snake is a federal and state threatened species that inhabits sloughs, marshes, low-gradient streams, flooded rice fields, ponds, irrigation ditches, and adjacent upland habitats. This species forages primarily at the interface between open water and emergent aquatic vegetation and is most often found in habitats with slow flowing or standing water, permanent summer water, mud bottoms, earthen banks, and an abundance of prey such as small fish, frogs, and tadpoles. Giant garter snakes use upland habitat with open grassy or shrubby banks for basking and thermoregulation. They also use upland small mammal burrows and soil or rock crevices as nighttime refugia, daytime escape cover, and winter aestivation sites. Giant garter snakes typically emerge from winter retreats from late March to early April and can remain active through October. The timing of their annual activities is subject to varying seasonal weather conditions. While this species is strongly associated with aquatic habitats, individuals have been noted using burrows as much as 50 meters (164 feet) away from the water's edge (Wylie *et al.* 1997).

Survey Results

No giant garter snakes were observed during the field surveys. Some small mammal burrows were observed in the northern portion of Segment 1 but appeared occupied by California ground squirrel (*Otospermophilus beecheyi*) colonies. One occurrence record is documented from 1987 in the BSA within the northwest portion of Segment 1.

Although the BSA itself does not provide suitable aquatic habitat for giant garter snake, suitable aquatic habitat is present within Elk Grove Creek, inundated portions of Laguna Creek, a water quality pond, and associated marshy edges directly adjacent to the BSA. Some suitable burrows were observed within the BSA, and the BSA could provide suitable basking and upland habitat in areas near the adjacent aquatic habitat. This species is known to occur within an inundated area of Laguna Creek directly adjacent to the BSA. There are eight CNDDDB occurrences documented within five miles of the BSA (CDFW 2023). The BSA is also located within a portion of a designated giant garter snake conservation area identified under the 1996 Biological Opinion issued by the USFWS for the Lower Laguna Flood Control Project (Service File 1-1-96-F-51). This area is currently covered by Deed Restrictions and occurs in portions of Segment 1 of the BSA (**Figure 4**).

Project Impacts

Suitable giant garter snake aquatic habitat is absent from the BSA but occurs directly adjacent to the BSA. As currently designed, the proposed Project has the potential to directly impact potential habitat for giant garter snake through impact or removal of up to **0.41** acre of annual grassland habitat located within a portion of the designated giant garter snake conservation area identified under the 1996 Biological Opinion issued by the USFWS for the Lower Laguna Flood Control Project (Service File 1-1-96-F-51) (**Figure 5**). Permanent direct impacts could occur through ground disturbance of the soil and trail construction. In addition, temporary impacts are anticipated to **0.23** acre of annual grassland habitat within the designated giant garter snake conservation area. Project-related indirect impacts could include vehicular mortality. The project may affect, and is likely to adversely affect giant garter snake.

Avoidance and Minimization Efforts

Impacts to giant garter snake will be avoided through implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures:

- MM-9. Ground-disturbing work shall take place during the GGS active season, if feasible, while snakes are more likely to avoid potential disturbances. The general active season for GGS is May 1 – October 1 but seasonal weather patterns should be considered during construction to provide flexibility.
- MM-10. A USFWS-approved qualified biologist shall conduct a pre-construction survey for giant garter snake within 24 hours prior to the commencement of any construction activity within 200 feet potential giant garter snake aquatic habitat. The qualified biologist shall provide a field report of the survey results that shall be made available to USFWS within one (1) week of the completion of the survey.

The Project area shall be re-surveyed whenever a lapse in construction activity of two weeks or greater has occurred within suitable habitat areas.

- MM-11. If giant garter snake or suitable burrows are observed within the project site during the pre-construction survey, the USFWS-approved biologist shall monitor all ground-disturbing activity within the suitable habitat area.
- MM-12. A qualified biologist shall conduct an environmental awareness training for all construction personnel. The training shall include identification of special-status species, required practices before the start of construction, general measures that are being implemented to conserve the species as they relate to the Project, penalties for non-compliance, and boundaries of work and of the permitted disturbance zones. Supporting materials containing training information shall be prepared and distributed. Upon completion of training, all construction personnel shall sign a form stating that they have attended the training and understand all the measures. Proof of this instruction shall be kept on file with the Project proponent. The Project proponent shall provide the USFWS and CDFW with a copy of the training materials and copies of the signed forms indicating that training has been completed. If new construction personnel are added to the site, the crew foreman

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

shall ensure that the personnel receive the mandatory training before starting work. Copies of signed forms shall be submitted monthly as additional training occurs for new employees. The crew foreman is responsible for ensuring that construction personnel adhere to the guidelines and restrictions.

- MM-13. Exclusion fencing shall be installed along the outer edge of work along the northern edge of Segment 1 in the areas of the adjacent pond (located east of Mannington Street and north of Monterey Oaks Drive) and adjacent to Sacramento County's Lower Laguna Flood Control Project deed restricted parcels, the depressional seasonal wetland (located east of Lyndale Circle and north of Big Horn Boulevard), and along the vernal pool west of Bruceville Road (**Figure 5**).
- MM-14. A USFWS-approved biologist will inspect the exclusion fencing weekly, and the fencing will be maintained until the end of construction. If a GGS is found onsite during construction, all activities will stop until the GGS leaves the construction area on its own. The USFWS will be notified within 24 hours of any GGS observations. No handling or capture of a GGS will occur.
- MM-15. During construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary.
- MM-16. Hazardous materials such as fuels, oils, solvents, etc., shall be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment, and staging areas will occur at least 200 feet from any aquatic habitat.
- MM-17. The use of erosion control materials potentially harmful to GGS and other species such as mono-filament netting or similar material will be prohibited. Tightly woven fiber netting or similar material will be used to ensure GGS do not get trapped or entangled. To avoid entrapment of GGS, trenches will be covered overnight or escape ramps installed. Any pipes or hoses will be sealed with duct tape or equally effective means so that no GGS can enter them. Alternatively, pipes and hoses may be stored at least 3 feet above ground or within a part of the staging area surrounded by exclusionary fence; and
- MM-18. After completion of construction activities, the applicant shall remove all stockpiled material and construction debris and, wherever feasible, restore disturbed areas to pre-Project conditions.

Compensatory Mitigation

No compensatory mitigation will be required due to the implementation of the avoidance measures discussed above.

Cumulative Impacts

No cumulative impacts to giant garter snake will occur as a result of the Project due to the implementation of the avoidance measures discussed above.

Western Pond Turtle

The western pond turtle is designated as a Species of Special Concern by CDFW and is also proposed as threatened under the FESA. The western pond turtle was proposed for listing by the USFWS on October 3, 2023, and the listing proposal is under public comment review until December 4, 2023. This species occurs in a variety of aquatic habitats such as ponds, creeks, ditches, lakes, and marshes. Areas with abundant vegetation and rocky or muddy substrate are preferred; and exposed banks or other basking areas, such as logs or cattail mats, are required. Western pond turtles prefer to overwinter in areas with moderate woody vegetation and leaf litter and are unlikely to use annual grasslands (Reese and Hartwell 1997b, Pilliod *et al.* 2013, and Rathbun *et al.* 2002). Eggs are laid between May and August and hatch in approximately 80 days. Hatchlings often stay in or around the nest through the winter. Nests are generally found within 30 meters (100 feet) of water in areas with little vegetative cover and good sun exposure (Rathbun *et al.* 2002). Little is known about dispersal patterns of western pond turtles, but genetic analysis shows most movement is along drainages (Riensch *et al.* 2013).

Survey Results

No western pond turtles were observed within the BSA during the field surveys. However, one western pond turtle was observed within Laguna Creek adjacent to the BSA on April 11, 2019. No documented CNDDDB occurrences for western pond turtle occur within the BSA. While the BSA itself does not provide suitable aquatic habitat, this species is known to occur within inundated portions of Laguna Creek directly adjacent to the BSA. Although it is unlikely that this species would move beyond the upper banks of the inundated creek and into the annual grassland habitat within the BSA, overland movement or basking could occur within the BSA. Nesting is not expected to occur within the BSA based on the nature of the dense annual grassland habitat, the absence of areas with good sun exposure, and the presence of current walking trails/disturbance within areas of little vegetation cover. Five occurrences are documented within five miles of the BSA (CDFW 2023).

Project Impacts

While suitable aquatic habitat is absent from the BSA, suitable aquatic habitat occurs directly adjacent to the BSA in the adjacent pond, Laguna Creek, and Elk Grove Creek. As currently designed, the proposed Project has the potential to directly impact potential upland habitat for western pond turtle through impact or removal of up to **0.41** acre of annual grassland habitat located near Laguna Creek and the pond (**Figure 5**). Permanent direct impacts could occur through ground disturbance of the soil and trail construction. In addition, temporary impacts are anticipated to **0.23** acre of annual grassland habitat within this area. Project-related indirect impacts could include vehicular mortality. The project may affect, and is likely to adversely affect western pond turtle.

Avoidance and Minimization Efforts

Impacts to western pond turtle will be avoided through implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Manual (Caltrans 2013), and the following measures: Ground-disturbing work shall take place during the western pond turtle active season, if feasible, while turtles are more likely to avoid potential disturbances. The general active season for western pond turtle is March 1 – November 1 but seasonal weather patterns should be considered during construction to provide flexibility.

Measures 10 – 18 above for giant garter snake shall be applied to western pond turtle.

Compensatory Mitigation

No compensatory mitigation will be required due to the implementation of the avoidance measures discussed above.

Cumulative Impacts

No cumulative impacts to western pond turtle will occur as a result of the Project due to the implementation of the avoidance measures discussed above.

Western Spadefoot

Western spadefoot is designated as a Species of Special Concern by CDFW. This species inhabits open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, chaparral, sandy washes, lowlands, foothills, and river floodplains from 0 to 3,937 feet (0 to 1,200 meters) above MSL. The western spadefoot spends the majority of the year in underground burrows and emerges to breed in vernal pools and other seasonal pools following heavy rains; generally, October to May. Eggs typically hatch within 3-4 days and tadpoles transform in 4-11 weeks (Nafis 2023).

Survey Results

No western spadefoot were observed during the field surveys. However, species-specific surveys were not conducted to determine the presence of western spadefoot within aquatic habitat during the appropriate survey time (generally peak rainy season, about February to March). The vernal pools and seasonal wetlands within the BSA provide suitable breeding habitat for western spadefoot. Although the soil within the BSA is too hard and compact to provide suitable burrow sites, soils outside of the BSA may be suitable for western spadefoot and the species may disperse into the BSA during the breeding season to utilize the aquatic habitat. No CNDDDB occurrences are documented within five miles of the BSA (CDFW 2023).

Project Impacts

As currently designed, the Project has the potential to directly impact aquatic breeding habitat through permanent impact or removal of up to **0.01** acre of depressional seasonal wetland habitat (**Figure 5**). Permanent direct impacts could occur through ground disturbance of the soil, removal/fill of aquatic habitat through trail construction, or altering hydrology of the wetlands through trail construction thereby resulting in loss of breeding habitat or individuals.

Avoidance and Minimization Efforts

Project implementation could result in temporary and permanent direct or indirect impacts to western spadefoot without implementation of avoidance and minimization measures. Impacts will be avoided or

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

minimized with implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures:

- MM-19. If possible, construction shall occur outside of the breeding and dispersal season (October through May) for western spadefoot to avoid impacts to breeding populations and aquatic metamorphs. It should be noted, this work window conflicts with the GGS and western pond turtle active season work windows as described in MM-9 and MM-19. See MM-22 below for guidance if work occurs within the western spadefoot breeding and dispersal season.
- MM-20. If construction occurs within the breeding and dispersal season, a pre-construction survey shall be conducted by a qualified biologist within the appropriate survey window to determine the presence of western spadefoot within the project site:

If western spadefoot are observed within the project site, then additional measures such as a qualified biologist conducting a pre-construction survey within 24 hours prior to commencement of construction activities, conducting a pre-construction worker awareness training, and being present to monitor construction during initial vegetation clearing and ground disturbance shall be required.

If no western spadefoot are observed within the project site, then a letter report regarding survey results shall be made available to the Project proponent and no additional avoidance and mitigation measures for the species are recommended.

- MM-21. If a western spadefoot is observed within the construction zone, then all work shall immediately halt in the vicinity of the animal and the animal will be allowed to leave the area on its own will. If the animal is in immediate danger and needs to be relocated, then it shall be safely relocated outside of the construction zone within suitable habitat and at a safe distance from all construction related activities. No work shall resume until the animal is outside of the Project area and construction zone.

Compensatory Mitigation

No compensatory mitigation will be required due to the implementation of the avoidance measures discussed above.

Cumulative Impacts

Cumulative impacts to western spadefoot may occur as a result of the proposed Project. Cumulative impacts could occur to the western spadefoot population through the direct removal of breeding habitat, or through indirect impacts to breeding habitat. The loss of breeding habitat for western spadefoot could result in the decline of the species' population regionally.

Swainson's Hawk

Swainson's hawk is a long-distance migrant with nesting grounds in western North America. It is listed as Threatened by CDFW. Swainson's hawks arrive in the Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to late August, peaking in late May through July (Zeiner *et al.* 1990). In the Central Valley, Swainson's hawk nest in isolated trees, small groves, or large woodlands next to open grasslands or agricultural fields. This species typically nests near riparian areas; however, it has been known to nest in suburban areas as well. Valley oak, Fremont cottonwood (*Populus fremontii*), and large willow trees (*Salix spp.*), ranging in height from 30 to 82 feet,

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

are the most commonly used nest trees in the Central Valley (County of Sacramento 2007). Nest locations are usually in close proximity to suitable foraging habitats, which include fallow fields, grasslands, irrigated pastures, alfalfa and other low-growing row crops. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom and De Water 1994).

Survey Results

No Swainson's hawks were observed during the field surveys. The trees within the BSA are too small to provide suitable nesting habitat but nesting may occur in trees adjacent to the BSA within adjacent residential properties or along Laguna Creek outside of the BSA. There are 53 documented CNDDDB records for this species within five miles of the BSA. One occurrence dated 1990 occurs within Segment 2 of the BSA and the most recent nest documented within ten miles of the BSA is dated 2011 (CDFW 2023).

Project Impacts

Nesting habitat is absent from the BSA; however, suitable nesting habitat is present adjacent to the BSA and Swainson's hawks may have undocumented nesting locations in the vicinity of the BSA. In addition, the annual grassland habitat within the BSA may provide potential foraging habitat for this species. Temporary impacts from construction associated with the proposed Project could disturb nesting Swainson's hawk if they were to occur adjacent to the BSA during construction. The proposed Project would permanently impact **3.79** acres and temporarily impact **2.48** acres of potential foraging habitat for Swainson's hawk through the removal and alteration of annual grassland habitat (**Figure 5**). With the implementation of Avoidance and Minimization Efforts discussed below, Project impacts to Swainson's hawk are not anticipated to occur.

Avoidance and Minimization Efforts

Project implementation could result in temporary and permanent direct or indirect impacts to Swainson's hawk without implementation of avoidance and minimization measures. Impacts will be avoided or minimized with implementation of the City's Swainson's Hawk Code (Chapter 16.130; City of Elk Grove 2023), Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures:

- MM-22. A qualified biologist shall conduct an environmental awareness training for all construction personnel. This training will follow the same guidelines as the giant garter snake and western pond turtle trainings.

- MM-23. Prior to the commencement of construction activities during the nesting season for Swainson's hawk (between March 1 and September 15), a qualified biologist shall conduct a minimum of two (2) protocol level pre-construction surveys during the recommended survey periods for the nesting season that coincides with the commencement of construction activities, in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). The qualified biologist shall conduct surveys for nesting Swainson's hawk within 0.5 mile of the Project Site where legally permitted to directly

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

access; all suitable nest trees within 0.5 mile of the project site shall be surveyed using binoculars from legally accessible areas. If no active Swainson's hawk nests are identified within 0.5 mile of the BSA within the recommended survey periods, a letter report summarizing the survey results shall be submitted to the Project proponent and the CDFW within 30 days following the final survey, and no further avoidance and minimization measures for nesting habitat are required.

- MM-24. If active Swainson's hawk nests are found within 0.5 mile of the Project site, then a qualified biologist shall contact the Project proponent and CDFW within one day following the pre-construction survey to report the findings. Should an active nest be present within 0.5 mile of Project site, then the CDFW shall be consulted to establish an appropriate noise buffer, develop take avoidance measures, determine whether high visibility construction fencing should be erected around the buffer zone, and implement a monitoring and reporting program prior to any construction activities occurring within 0.5 mile of the nest. Should the qualified biologist determine that the construction activities are disturbing the nest, the qualified biologist shall halt construction activities until the CDFW is consulted. The construction activities shall not commence until the CDFW determines that construction activities would not result in abandonment of the nest site. Should the qualified biologist determine that the nest has not been disturbed during construction activities within the buffer zone, then a letter report summarizing the survey results shall be submitted to the Project proponent and the CDFW within 30 days following the final monitoring event, and no further avoidance and minimization measures for nesting habitat are recommended.
- MM-25. The Project proponent shall comply with the City of Elk Grove Swainson's Hawk Code (Chapter 16.130) to mitigate for the loss of foraging habitat.

Compensatory Mitigation

The Project proponent will comply with the City of Elk Grove Swainson's Hawk Code (Chapter 16.130) to mitigate for the loss of foraging habitat.

Cumulative Impacts

No cumulative impacts to Swainson's hawk will occur as a result of the Project due to the implementation of the avoidance measures discussed above. Large swaths of annual grassland exist within the vicinity of the Project and the annual grassland that is anticipated to be removed comprises an estimated 2% of the total annual grassland habitat within the vicinity of the BSA.

Tricolored Blackbird

The tricolored blackbird is listed as Threatened by CDFW. The tricolored blackbird is a colonial species that typically breeds in freshwater marshes of cattail (*Typha* sp.), bulrush (*Schoenoplectiella* sp. and *Isolepis* sp.), sedge (*Carex* sp.), and non-native vegetation including Himalayan blackberry (*Rubus armeniacus*). Nests occur in large colonies of up to thousands of individuals (NatureServe 2019). Nesting locations must be large enough to support a minimum colony of approximately fifty pairs (Zeiner *et al.* 1990). This species forages in grasslands and agricultural fields with low-growing vegetation (Shuford and Gardladi 2008).

Survey Results

No tricolored blackbirds were observed within the BSA during the field surveys. The BSA does not provide suitable breeding habitat for this species and the annual grassland provides marginal foraging habitat for this species. Tricolored blackbirds prefer to forage in grasslands with low-growing vegetation; the annual grassland within the BSA is comprised of tall, dense vegetation. Thirteen occurrences of this species are documented in the CNDDDB within five miles of the BSA (CDFW 2023).

Project Impacts

There would be permanent and temporary loss of marginally suitable foraging habitat (**3.79** acres of permanent impact and **2.48** acres of temporary impact to annual grassland) for tricolored blackbird associated with development of the Project (**Figure 5**). Removal of suitable foraging habitat would have a minimal effect on this species if tricolored blackbirds were currently utilizing portions of the BSA for foraging. However, no tricolored blackbirds were observed during field surveys and foraging habitat is not regulated under CESA. Breeding habitat is absent from the BSA and therefore nesting habitat will not be impacted. Because breeding habitat is absent and only marginally suitable foraging habitat is present in the BSA, tricolored blackbird has a low potential to occur.

Avoidance and Minimization Efforts

Project implementation would have no impact on breeding habitat since none exists within the BSA. Although the Project would result in the permanent removal of **3.79** acres and temporary impacts to **2.48** acres of potential foraging habitat, foraging habitat is not regulated under CESA. Implementation of the Project is not expected to result in take and a 2081 ITP would not be required. Therefore, no avoidance measures are recommended for this species.

Compensatory Mitigation

No compensatory mitigation will be required since foraging habitat is not regulated under CESA and nesting habitat is absent from the BSA.

Cumulative Impacts

No cumulative impacts to tricolored blackbird will occur as a result of the Project due to the minimal percentage of marginal foraging habitat that is proposed to be removed within the annual grassland. Large swaths of annual grassland exist within the vicinity of the Project and the annual grassland that is anticipated to be removed comprises an estimated 2% of the total annual grassland habitat within the BSA.

White-Tailed Kite

The white-tailed kite is listed as a Fully Protected species by CDFW. White-tailed kite is a year-round resident in coastal and valley lowlands in California. They breed from February to October, peaking from May to August (Zeiner *et al.* 1990). This species nests near the top of dense oaks, willows, or other large trees, especially near aquatic habitats. They typically forage within un-grazed or lightly-grazed fields, agricultural areas, and open grasslands.

Survey Results

One white-tailed kite was observed foraging within the BSA during the April 23, 2019 field survey. The annual grassland provides suitable foraging habitat but nesting habitat for this species is absent from the BSA. However, nesting may occur in adjacent trees within residential properties or along Laguna Creek outside of the BSA. Two occurrences are documented within five miles of the BSA (CDFW 2023).

Project Impacts

There would be permanent and temporary loss of suitable foraging habitat (**3.79** acres of permanent impact and **2.48** acres of temporary impact to annual grassland) for white-tailed kite associated with development of the Project (**Figure 5**). Removal of suitable foraging habitat would have a minimal effect on this species given the amount of suitable foraging habitat within the vicinity of the Project site. Additionally, foraging habitat is not regulated by CDFW. Minor temporary disturbances to foraging habitat could result from Project construction but white-tailed kite would likely still utilize the Project site for foraging outside of the active construction areas. Temporary disturbances to nesting white-tailed kites could occur during construction should white-tailed kite nest within or adjacent to the BSA.

Avoidance and Minimization Efforts

Project implementation could result in temporary and permanent direct or indirect impacts to white-tailed kite without implementation of avoidance and minimization measures. Impacts will be avoided or minimized with implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures:

- MM-26. A qualified biologist shall conduct an environmental awareness training for all construction personnel. The training for active white-tailed kite nests should be similar to the training described for Swainson's hawk. This training will follow the same guidelines as the giant garter snake and western pond turtle trainings.
- MM-27. A qualified biologist shall conduct a pre-construction nesting white-tailed kite survey within 14 days prior to commencement of construction activities if anticipated to commence during the nesting season (between February 15 and August 31). An additional pre-construction survey shall be conducted within 72 hours of commencement of ground-disturbing activities. During the surveys, suitable nest trees adjacent to the project site shall be surveyed using binoculars from legally accessible areas. If the pre-construction survey shows that there is no evidence of active nests, then a letter report should be submitted to the Project proponent and the CDFW for their records and no additional measures are recommended. If construction does not commence within 72 hours of the pre-construction survey, or halts for more than 72 hours, then an additional pre-construction survey is recommended.
- MM-28. If any active white-tailed kite nests are identified during the pre-construction survey within the project site, then a qualified biologist shall establish 250-foot buffer zone around the nests. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or until the young have successfully fledged. If a 250-foot buffer is not feasible, then the qualified biologist may

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

reduce the buffer through consultation with the CDFW and recommend additional measures including daily monitoring to ensure that the nest is not disturbed and that no forced fledging occurs. Daily monitoring should occur until the qualified biologist determines that the nest is no longer occupied or active. Once it has been determined that the nest is no longer active, then a letter report would be submitted to the Project proponent and CDFW for their records and no additional measures are recommended.

Compensatory Mitigation

No compensatory mitigation will be required since foraging habitat is not regulated by CDFW and nesting habitat is absent from the BSA.

Cumulative Impacts

No cumulative impacts to white-tailed kite will occur as a result of the Project due to the minimal percentage of foraging habitat that is proposed to be removed within the annual grassland. Large swaths of annual grassland exist within the vicinity of the Project and the annual grassland that is anticipated to be removed comprises an estimated 2% of the total annual grassland habitat within the BSA.

Yellow-Headed Blackbird

The yellow-headed blackbird is designated as a California Species of Special Concern. It is an uncommon California migrant, summers from April to early October, and breeds from mid-April to late July (Twedt and Crawford 1995). This species typically nests in cattails, bulrush, reeds, and other tall emergent vegetation, always over water. They forage in grasslands, agricultural fields, and savanna habitats. The yellow-headed blackbird is generally a scarce breeder in the Sacramento Valley and is only known to nest within large marshes of wildlife refuges (Shuford and Gardladi 2008). One occurrence is documented within five miles of the BSA and is dated 1899 (CDFW 2023).

Survey Results

No yellow-headed blackbirds were observed during the field surveys. Foraging habitat is present within the BSA in the annual grassland habitat, but suitable nesting habitat is absent.

Project Impacts

There would be a permanent and temporary loss of suitable foraging habitat (**3.79** acres of permanent impact and **2.48** acres of temporary impact to annual grassland) for yellow-headed blackbird associated with development of the Project (**Figure 5**). Removal of suitable foraging habitat would have a minimal effect on this species given the amount of suitable foraging habitat within the vicinity of the BSA. Additionally, foraging habitat is not regulated by CDFW and no known recent occurrences or nesting sites occur within the vicinity of the BSA.

Avoidance and Minimization Efforts

Project implementation would have no impact on breeding habitat since none exists within the BSA. Although the Project would result in the permanent removal of up to **3.79** acres of potential foraging

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

habitat, foraging habitat is not regulated by CDFW. Therefore, no avoidance measures are recommended.

Compensatory Mitigation

No compensatory mitigation will be required since foraging habitat is not regulated by CDFW and nesting habitat is absent from the BSA.

Cumulative Impacts

No cumulative impacts to yellow-headed blackbird will occur as a result of the Project due to the minimal percentage of marginal foraging habitat that is proposed to be removed within the annual grassland. Large swaths of annual grassland exist within the vicinity of the Project and the annual grassland that is anticipated to be removed comprises an estimated 2% of the total annual grassland habitat within the BSA.

Migratory Birds and Raptors

Migratory birds are protected under the MBTA of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10; this also includes feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All raptors, including common species not considered special-status, are protected under the California Fish and Wildlife Code (Section 3503.5). Removal or destruction of an active raptor nest is considered a violation of this Fish and Wildlife Code.

Survey Results

No active nests were observed within the BSA during the field surveys. The annual grassland and trees within the BSA provide nesting habitat for migratory birds and raptors during the nesting season (typically February 15 through August 31), and foraging habitat year-round. Large trees and structures adjacent to the BSA also provide nesting habitat, and a colony of nesting barn swallows (*Hirundo rustica*) was observed nesting under the western overpass at Bruceville Road.

Project Impacts

Project implementation could result in permanent and temporary direct impacts to nesting migratory birds and raptors. Permanent direct impacts could occur to ground-nesting birds through destruction of nests if present within the BSA during construction. Permanent direct impacts could also occur through removal of trees should any active nests be present during tree removals. Temporary direct impacts could occur through disturbance of nesting migratory birds and birds of prey during construction; this can include temporary direct impacts to nesting birds that may be nesting in trees adjacent to the BSA. Disturbance that results in nest abandonment could result in mortality of chicks or eggs.

Avoidance and Minimization Efforts

Project implementation could result in permanent direct impacts to nesting birds and raptors without implementation of avoidance and minimization measures. Impacts will be avoided or minimized with implementation of Caltrans' Standard BMPs (Caltrans 2017), the Construction Site Monitoring Program Guidance Manual (Caltrans 2013), and the following measures:

- MM-29. If construction is expected to occur during the nesting season (February 15 through August 31), then a qualified biologist shall conduct an environmental awareness training for all construction personnel. The training shall include information pertaining to the potential for active nests to occur within the project and procedures to follow in the event that an active nest is found during construction.
- MM-30. If feasible, then construction and any tree/shrub removal should be completed between September 1 and February 14, outside of the nesting season.
- MM-31. If construction begins during the nesting season (February 15 through August 31), then a pre-construction nesting bird survey shall be conducted within 14 days prior to the commencement of construction activities and vegetation removal. If the pre-construction survey results in no evidence of active nests, then a letter report should be submitted to the Project proponent and CDFW for their records and no additional measures are recommended. If active nests are located within or directly adjacent to the BSA then the following shall occur:
 - a. If any active nests are located, then a qualified biologist shall establish an appropriate species-specific buffer zone (generally a 75-foot standard buffer for most songbirds, a 300-foot standard buffer for most raptors, and up to a buffer of 1,320-2,640 feet for Swainson's hawk) around the nests. The qualified biologist shall mark the buffer zone with high visible flagging or pin flags and maintain the buffer zone until all construction has been completed, until the end of the breeding season, or until the young have successfully fledged and/or the nest is no longer active. A qualified biologist should monitor active nests weekly during construction to evaluate potential nesting disturbance caused by construction activities. If establishing the typical buffer zone is impractical, then the qualified biologist may reduce the buffer depending on the species, and daily monitoring is also recommended to ensure that the nest is not disturbed and no forced fledging occurs. Daily monitoring shall occur until the qualified biologist determines that the nest is no longer occupied or that it has been determined that nesting activity is not negatively affected by adjacent Project construction activities. Once it has been determined that the nest is no longer active, then a letter report shall be submitted to the Project proponent and the CDFW for their records.

Compensatory Mitigation

No compensatory mitigation will be required due to the implementation of the avoidance measures discussed above.

Cumulative Impacts

No cumulative impacts to migratory birds and raptors will occur as a result of the Project.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

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CHAPTER 5: CONCLUSIONS AND REGULATORY DETERMINATIONS

Federal Endangered Species Act Consultation Summary

An official USFWS species list was obtained on July 13, 2023. The IPaC Report for the *Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Sacramento County, CA* is included in **Appendix C**.

The federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp have the potential to occur within the vernal pool and depressional seasonal wetlands. The federally listed giant garter snake has the potential to occur in the Laguna Creek and Elk Grove corridors adjacent to the BSA.

As currently designed, permanent direct and temporary direct impacts to potential habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp will occur through ground disturbance of the soil within vernal pool and depressional seasonal wetland habitat, removal/fill of the depressional seasonal wetlands through trail construction, or altering hydrology of the vernal pool or depressional seasonal wetlands through trail construction thereby resulting in loss of occupied habitat or individuals. Indirect impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp could result from disturbance caused by the movement of equipment, workers, and trail-users, silt or other debris entering the pools/wetlands during construction, or the introduction of noxious/invasive weeds into the vernal pools or depressional seasonal wetlands that reduce the suitability of the pools to support vernal pool invertebrates.

The proposed Project may affect and is likely to adversely affect vernal pool fairy shrimp and vernal pool tadpole shrimp.

Suitable giant garter snake aquatic habitat is absent from the BSA but occurs directly adjacent to the BSA. As currently designed, the Project has the potential to directly impact giant garter snake through direct impacts to potential habitat within a portion of the designated giant garter snake conservation area identified under the 1996 Biological Opinion issued by the USFWS for the Lower Laguna Flood Control Project (Service File 1-1-96-F-51). Permanent direct impacts could occur through ground disturbance and trail construction, thereby resulting in potential loss of habitat or individuals. Indirect impacts could occur from disturbance caused by the movement of equipment, workers, and trail-users, or silt or other debris entering the site during construction.

The proposed Project may affect and is likely to adversely affect giant garter snake.

Suitable western pond turtle aquatic habitat is absent from the BSA but occurs directly adjacent to the BSA. As currently designed, the proposed Project has the potential to directly impact western pond turtle through direct impacts to potential upland habitat. Permanent direct impacts could occur through ground disturbance and trail construction, thereby resulting in potential loss of habitat or individuals. Indirect impacts could occur from disturbance caused by the movement of equipment, workers, and trail-users, or silt or other debris entering the site during construction.

The proposed Project may affect, and is likely to adversely affect western pond turtle.

The City, in coordination with Caltrans, intends to initiate Formal Consultation with the USFWS under Section 7 of the FESA for the proposed Project.

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

Federal Fisheries and Essential Fish Habitat Consultation Summary

An official species list was obtained on July 28, 2023, from the NOAA Fisheries West Coast Region, Species Directory, *ESA Threatened & Endangered Marine species* (see **Appendix D**). No designated critical habitat for federally listed fish species or EFH occurs within the BSA. Neither EFH consultation nor Section 7 consultation for federally listed fish species has been initiated as of the date of preparation of this report and based on the analysis presented within this NES, neither consultation is required. The Proposed Project will not affect suitable aquatic habitat and will result in No Effect to federally endangered NMFS resources.

California Endangered Species Act Consultation Summary

The State Fully Protected white-tailed kite was observed within the BSA during the April 23, 2019 field survey. The State threatened giant garter snake, the State threatened tricolored blackbird, and the State threatened Swainson's hawk have the potential to occur within the BSA. The following State Species of Special Concern have the potential to occur within the BSA: yellow-headed blackbird and protected nesting migratory birds. No take of State-listed species is anticipated for the Project with implementation of avoidance and minimization measures suggested in this NES. Because no take of State-listed species is anticipated, no ITP will be required for the Project.

Wetlands and Other Waters Coordination Summary

A total of **0.72** acre of aquatic resources are delineated within the BSA. This acreage is comprised of **0.23** acre of depressional seasonal wetland, **0.30** acre of vernal pool, **0.12** acre of riverine perennial marsh, **<0.01** acre of riverine perennial marsh, **0.01** acre of channel, and **0.05** acre of creek.

Should the Project result in impacts to any waters of the U.S., Section 404 Authorization would be required by the USACE, and a 401 Water Quality Certification by the RWQCB would be required. Impacts to aquatic resources subject to California Fish and Game Code Section 1602 would require a Streambed Alteration Agreement with CDFW.

If aquatic features are determined not to be subject to federal jurisdiction, and constitute waters of the State, an application under the Procedures would be required to be submitted to the RWQCB.

Invasive Plant Species

Several invasive plant species and noxious weeds are present within the annual grassland habitat within the BSA. Invasive plant and noxious weed species present in the BSA are identified in **Appendix E**. The following measures addressing invasive species abatement and control should be incorporated into the final Project design and contract specifications:

- MM-32. After construction, temporary impact areas shall be revegetated with plant species native to the vicinity and approved by a Caltrans biologist. The plant mix will avoid the use of any species listed in the Cal-IPC Invasive Plant Inventory with a high or moderate rating.

Nesting Bird Habitat

The BSA contains suitable nesting habitat for a variety of bird species protected by the federal MBTA and by California Fish and Game Codes. As such, focused nesting bird surveys are proposed if construction is expected to be initiated and occur within the typical nesting season (February 15 through

Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

August 31). Nest buffers would be established for any active nests found during pre-construction surveys. If necessary, nest monitoring may occur for construction that is required to occur within species-specific nest buffers.

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Natural Environment Study
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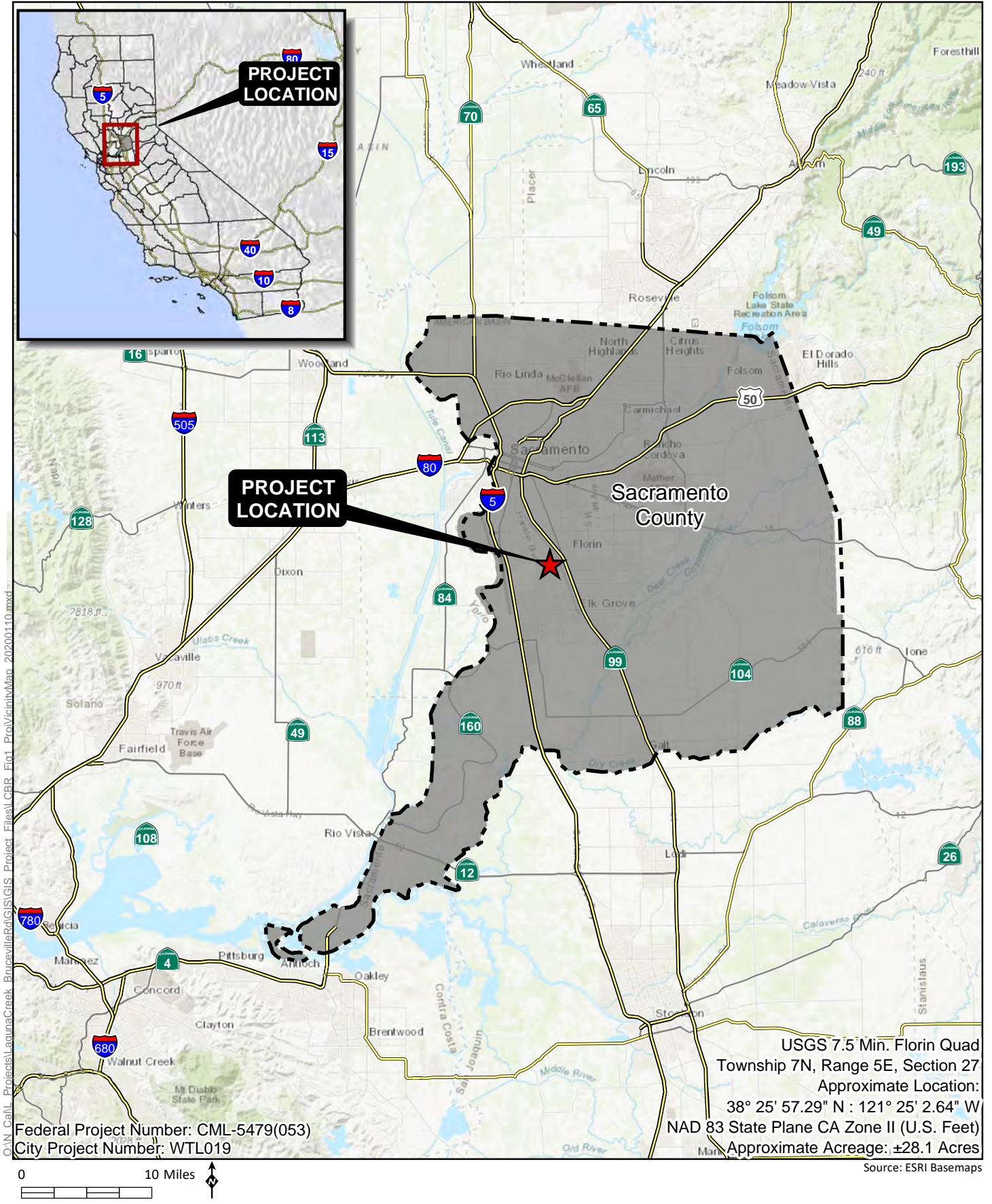
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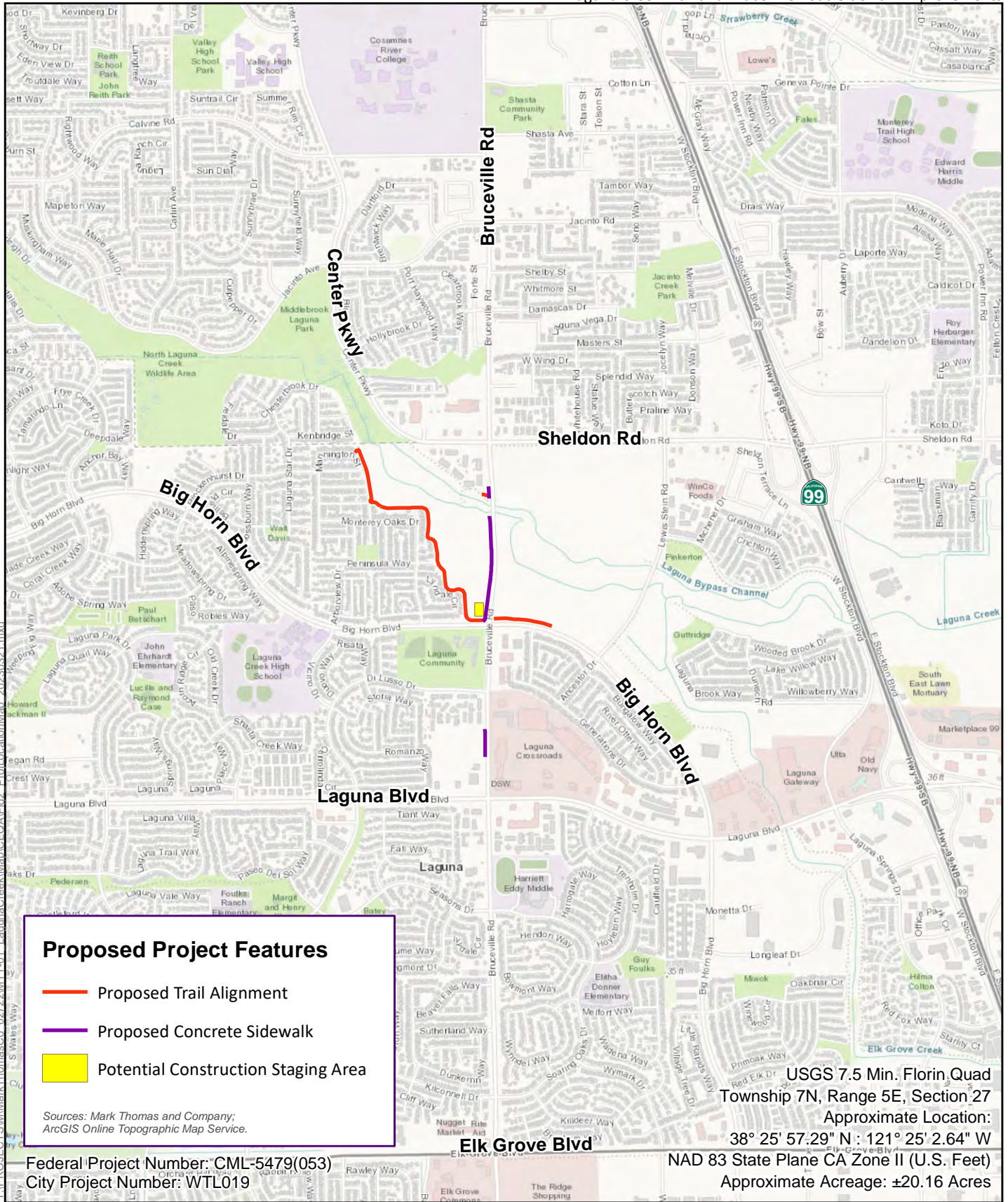


C:\N:\Call\Projects\LagunaCreek\Bruceville\GIS\GIS Project Files\CBR_Fig1_ProjVicinityMap_20200110.mxd

Federal Project Number: CML-5479(053)
City Project Number: WTL019

USGS 7.5 Min. Florin Quad
Township 7N, Range 5E, Section 27
Approximate Location:
38° 25' 57.29" N : 121° 25' 2.64" W
NAD 83 State Plane CA Zone II (U.S. Feet)
Approximate Acreage: ±28.1 Acres

Source: ESRI Basemaps



Source: ESRI Basemap



T:\PROJECTS\MarkThomson\02722\MTT-01_LagunaCreek\Map\NES\LCBR_Fig2_ProjLocationMap_20230711.mxd

Legend

- Utility Pole to be Relocated
- Existing Undercrossing
- Proposed Trail Alignment
- Existing Trail
- Proposed Concrete Sidewalk
- Potential Construction Staging Area
- City Boundary
- Project Site - 20.16 Acres



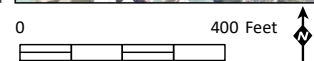
Source: Aerial Imagery (Nearmap 3/15/2023)



T:\PROJECTS\MarkThomasCo_02722\MTT-01_LagunaCreek\Map\NES\LCBR_Fig4_BioComms_11x17_20230705.mxd 7/19/2023

Federal Project Number: CML-5479(053)
City Project Number: WTL019

Source: Aerial (Nearmap, 3/5/2023)





Natural Environment Study
Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (WTL019)

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APPENDIX A: CDFW LIST OF SPECIAL-STATUS SPECIES



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Florin) OR Sacramento East OR Sacramento West OR Carmichael OR Elk Grove OR Galt OR Bruceville OR Courtland OR Clarksburg

Table with 7 columns: Species, Element Code, Federal Status, State Status, Global Rank, State Rank, Rare Plant Rank/CDFW SSC or FP. Rows include species like Accipiter cooperii, Acipenser medirostris, Agelaius tricolor, etc.



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--------------------------------------------------------------------------------------------------|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <i>Centromadia parryi ssp. parryi</i> pappose tarplant | PDAST4R0P2 | None | None | G3T2 | S2 | 1B.2 |
| <i>Cicindela hirticollis abrupta</i> Sacramento Valley tiger beetle | IICOL02106 | None | None | G5TH | SH | |
| <i>Cicuta maculata var. bolanderi</i> Bolander's water-hemlock | PDAP10M051 | None | None | G5T4T5 | S2? | 2B.1 |
| <i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh | CTT52410CA | None | None | G3 | S2.1 | |
| <i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo | ABNRB02022 | Threatened | Endangered | G5T2T3 | S1 | |
| <i>Cuscuta obtusiflora var. glandulosa</i> Peruvian dodder | PDCUS01111 | None | None | G5T4? | SH | 2B.2 |
| <i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle | IICOL48011 | Threatened | None | G3T3 | S3 | |
| <i>Downingia pusilla</i> dwarf downingia | PDCAM060C0 | None | None | GU | S2 | 2B.2 |
| <i>Dumontia oregonensis</i> hairy water flea | ICBRA23010 | None | None | G1G3 | S1 | |
| <i>Elanus leucurus</i> white-tailed kite | ABNKC06010 | None | None | G5 | S3S4 | FP |
| <i>Elderberry Savanna</i> Elderberry Savanna | CTT63440CA | None | None | G2 | S2.1 | |
| <i>Emys marmorata</i> western pond turtle | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| <i>Falco columbarius</i> merlin | ABNKD06030 | None | None | G5 | S3S4 | WL |
| <i>Gonidea angulata</i> western ridged mussel | IMBIV19010 | None | None | G3 | S2 | |
| <i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop | PDSCR0R060 | None | Endangered | G2 | S2 | 1B.2 |
| <i>Great Valley Cottonwood Riparian Forest</i> Great Valley Cottonwood Riparian Forest | CTT61410CA | None | None | G2 | S2.1 | |
| <i>Great Valley Mixed Riparian Forest</i> Great Valley Mixed Riparian Forest | CTT61420CA | None | None | G2 | S2.2 | |
| <i>Great Valley Valley Oak Riparian Forest</i> Great Valley Valley Oak Riparian Forest | CTT61430CA | None | None | G1 | S1.1 | |
| <i>Hibiscus lasiocarpus var. occidentalis</i> woolly rose-mallow | PDMAL0H0R3 | None | None | G5T3 | S3 | 1B.2 |
| <i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetle | IICOL5V010 | None | None | G2? | S2? | |
| <i>Hypomesus transpacificus</i> Delta smelt | AFCHB01040 | Threatened | Endangered | G1 | S1 | |



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--------------------------------------------------------------------------------------------|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <i>Juncus leiospermus var. ahartii</i> Ahart's dwarf rush | PMJUN011L1 | None | None | G2T1 | S1 | 1B.2 |
| <i>Lasiurus cinereus</i> hoary bat | AMACC05032 | None | None | G3G4 | S4 | |
| <i>Lasthenia chrysantha</i> alkali-sink goldfields | PDAST5L030 | None | None | G2 | S2 | 1B.1 |
| <i>Laterallus jamaicensis coturniculus</i> California black rail | ABNME03041 | None | Threatened | G3T1 | S2 | FP |
| <i>Lathyrus jepsonii var. jepsonii</i> Delta tule pea | PDFAB250D2 | None | None | G5T2 | S2 | 1B.2 |
| <i>Legenere limosa</i> legenere | PDCAM0C010 | None | None | G2 | S2 | 1B.1 |
| <i>Lepidium latipes var. heckardii</i> Heckard's pepper-grass | PDBRA1M0K1 | None | None | G4T1 | S1 | 1B.2 |
| <i>Lepidurus packardi</i> vernal pool tadpole shrimp | ICBRA10010 | Endangered | None | G3 | S3 | |
| <i>Lilaeopsis masonii</i> Mason's lilaeopsis | PDAPI19030 | None | Rare | G2 | S2 | 1B.1 |
| <i>Limosella australis</i> Delta mudwort | PDSCR10030 | None | None | G4G5 | S2 | 2B.1 |
| <i>Lindleriella occidentalis</i> California lindleriella | ICBRA06010 | None | None | G2G3 | S2S3 | |
| <i>Melospiza melodia pop. 1</i> song sparrow ("Modesto" population) | ABPBXA3013 | None | None | G5T3?Q | S3? | SSC |
| <i>Nannopterum auritum</i> double-crested cormorant | ABNFD01020 | None | None | G5 | S4 | WL |
| <i>Northern Hardpan Vernal Pool</i> Northern Hardpan Vernal Pool | CTT44110CA | None | None | G3 | S3.1 | |
| <i>Nycticorax nycticorax</i> black-crowned night heron | ABNGA11010 | None | None | G5 | S4 | |
| <i>Oncorhynchus mykiss irideus pop. 11</i> steelhead - Central Valley DPS | AFCHA0209K | Threatened | None | G5T2Q | S2 | |
| <i>Oncorhynchus tshawytscha pop. 11</i> chinook salmon - Central Valley spring-run ESU | AFCHA0205L | Threatened | Threatened | G5T2Q | S2 | |
| <i>Oncorhynchus tshawytscha pop. 7</i> chinook salmon - Sacramento River winter-run ESU | AFCHA0205B | Endangered | Endangered | G5T1Q | S2 | |
| <i>Orcuttia tenuis</i> slender Orcutt grass | PMPOA4G050 | Threatened | Endangered | G2 | S2 | 1B.1 |
| <i>Orcuttia viscida</i> Sacramento Orcutt grass | PMPOA4G070 | Endangered | Endangered | G1 | S1 | 1B.1 |
| <i>Pogonichthys macrolepidotus</i> Sacramento splittail | AFCJB34020 | None | None | G3 | S3 | SSC |



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|-----------------------------------------------------------------|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <i>Progne subis</i> purple martin | ABPAU01010 | None | None | G5 | S3 | SSC |
| <i>Riparia riparia</i> bank swallow | ABPAU08010 | None | Threatened | G5 | S3 | |
| <i>Sagittaria sanfordii</i> Sanford's arrowhead | PMALI040Q0 | None | None | G3 | S3 | 1B.2 |
| <i>Scutellaria galericulata</i> marsh skullcap | PDLAM1U0J0 | None | None | G5 | S2 | 2B.2 |
| <i>Scutellaria lateriflora</i> side-flowering skullcap | PDLAM1U0Q0 | None | None | G5 | S2 | 2B.2 |
| <i>Spea hammondi</i> western spadefoot | AAABF02020 | None | None | G2G3 | S3S4 | SSC |
| <i>Spirinchus thaleichthys</i> longfin smelt | AFCHB03010 | Candidate | Threatened | G5 | S1 | |
| <i>Symphyotrichum lentum</i> Suisun Marsh aster | PDASTE8470 | None | None | G2 | S2 | 1B.2 |
| <i>Taxidea taxus</i> American badger | AMAJF04010 | None | None | G5 | S3 | SSC |
| <i>Thamnophis gigas</i> giant gartersnake | ARADB36150 | Threatened | Threatened | G2 | S2 | |
| <i>Trifolium hydrophilum</i> saline clover | PDFAB400R5 | None | None | G2 | S2 | 1B.2 |
| <i>Valley Oak Woodland</i> Valley Oak Woodland | CTT71130CA | None | None | G3 | S2.1 | |
| <i>Vireo bellii pusillus</i> least Bell's vireo | ABPBW01114 | Endangered | Endangered | G5T2 | S3 | |
| <i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird | ABPBXB3010 | None | None | G5 | S3 | SSC |

Record Count: 74



APPENDIX B: CNPS LIST OF SPECIAL-STATUS SPECIES

CNPS Rare Plant Inventory

Search Results

2 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [1A:1B:2A:2B:3:4] Fed List is one of [FE:FT:FC] and State List is one of [CE:CT:CR:CC] , 9-Quad include [3812144:3812154:3812155:3812153:3812143:3812133:3812134:3812135:3812145]

| ▲ SCIENTIFIC NAME | COMMON NAME | FAMILY | LIFEFORM | BLOOMING PERIOD | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK | CA ENDEMIC | DATE ADDED | PHOTO |
|------------------------------------------------|-------------------------|---------|-------------|-----------------|----------|------------|-------------|------------|--------------------|------------|------------|---------------------------------------------------------------------------------------------------------------|
| <u><i>Orcuttia tenuis</i></u> | slender Orcutt grass | Poaceae | annual herb | May-Sep(Oct) | FT | CE | G2 | S2 | 1B.1 | Yes | 1974-01-01 |  © 2013 Justy Leppert |
| <u><i>Orcuttia viscida</i></u> | Sacramento Orcutt grass | Poaceae | annual herb | Apr-Jul(Sep) | FE | CE | G1 | S1 | 1B.1 | Yes | 1974-01-01 |  © Rick York and CNPS |

Showing 1 to 2 of 2 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 13 July 2023].

APPENDIX C: USFWS LIST OF SPECIAL-STATUS SPECIES



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

July 13, 2023

Project Code: 2023-0104318

Project Name: Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

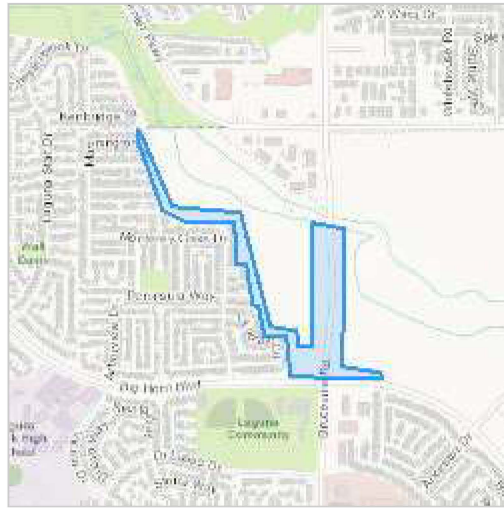
Sacramento, CA 95825-1846

(916) 414-6600

PROJECT SUMMARY

Project Code: 2023-0104318
Project Name: Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project
Project Type: Mixed-Use Construction
Project Description: Sidewalk and trail improvements project.
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.4343037,-121.41765717210956,14z>



Counties: Sacramento County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

REPTILES

| NAME | STATUS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482 | Threatened |

AMPHIBIANS

| NAME | STATUS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076 | Threatened |

INSECTS

| NAME | STATUS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |
| Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 | Threatened |

CRUSTACEANS

| NAME | STATUS |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498 | Threatened |
| Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246 | Endangered |

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: HELIX Environmental Planning Inc.
Name: Christine Heckler
Address: 1677 Eureka Road Suite 100
Address Line 2: Suite 100
City: Roseville
State: CA
Zip: 95661
Email: christineh@helixepi.com
Phone: 9164351202

APPENDIX D: NOAA FISHERIES SPECIAL-STATUS ANADROMOUS FISH SPECIES



Species Directory

- All Species
- ESA Threatened & Endangered
- Marine Mammals
- Sustainable Seafood

ESA Threatened & Endangered

NOAA Fisheries has jurisdiction over 163 endangered and threatened marine species (79 endangered; 84 threatened), including [65 foreign species](#) (39 endangered; 26 threatened).

Additional species are currently under review or have been proposed for Endangered Species Act listing: [2 petitioned species](#) awaiting a 90-day finding, [13 candidate species](#) for ESA listing, [3 proposed species](#) for ESA listing.

In the table below, the Region column shows if the species can be found in a NOAA Fisheries region. If the species occurs only in areas beyond the U.S. exclusive economic zone and territorial waters, the region is labeled as Foreign.

Species Name

Species Category

Fish & Sharks
▼

Protected Status

All
▼

Region

West Coast
▼

Display

25 ▼

[Display All](#)

| Species Name ▼ | Species Category | Listed Entity | Protected Status | Year Listed | Recovery Plan | Critical Habitat | Region |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------|------------------|-------------|-----------------------|-----------------------|----------------------|
| Bocaccio (Protected) <i>Sebastes paucispinis</i> Also Known As Bocaccio, Rock Salmon, Salmon Rockfish, Pacific | SPECIES CATEGORY Fish - Groundfish - Protected Fish | Puget Sound/Georgia Basin DPS | ESA Endangered | 2010 | Final | Final | Alaska West Coast |

| Species Name ▼ | Species Category | Listed Entity | Protected Status | Year Listed | Recovery Plan | Critical Habitat | Region |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------|-------------|---------------|------------------|----------------------|
| Red Snapper, Pacific Snapper, Oregon Red Snapper, Oregon Snapper, Longjaw, Merou, Jack, Snapper, Rock Cod, Rockfish | | | | | | | |
| Chinook Salmon (Protected) <i>Oncorhynchus tshawytscha</i> | SPECIES CATEGORY Fish - Protected Fish | Sacramento River winter-run | ESA Endangered | 1994 | Final | Final | Alaska West Coast |
| | | Upper Columbia River spring-run | ESA Endangered | 1999 | Final | Final | Alaska West Coast |
| | | California coastal | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| | | Central Valley spring-run | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| | | Lower Columbia River | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| | | Puget Sound | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| | | Snake River fall- run | ESA Threatened | 1992 | Final | Final | Alaska West Coast |
| | | Snake River spring/summer- run | ESA Threatened | 1992 | Final | Final | Alaska West Coast |
| | | Upper Willamette River | ESA Threatened | 2005 | Final | Final | Alaska West Coast |
| | | Central Valley spring-run in the San Joaquin River XN | ESA Experimental Population | — | — | — | Alaska West Coast |
| | | Upper Columbia River spring-run in the Okanogan River subbasin XN | ESA Experimental Population | — | — | — | Alaska West Coast |
| | | Upper Klamath- Trinity River | ESA Candidate | — | — | — | Alaska West Coast |
| | | Oregon Coast | ESA Candidate | — | — | — | West Coast |
| | | Southern Oregon and Northern California Coastal | ESA Candidate | — | — | — | West Coast |
| Chum Salmon (Protected) | SPECIES CATEGORY | Columbia River ESU | ESA Threatened | 1999 | Final | Final | Alaska West Coast |

| Species Name ▼ | Species Category | Listed Entity | Protected Status | Year Listed | Recovery Plan | Critical Habitat | Region |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------|-----------------------------|-------------------|------------------|------------------------------------------------------------------------|
| <i>Oncorhynchus keta</i> | Fish - Protected Fish | Hood Canal summer-run ESU | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| Coho Salmon (Protected) <i>Oncorhynchus kisutch</i> | SPECIES CATEGORY Fish - Protected Fish | Central California Coast ESU | ESA Endangered | 2005; 1996 (original) | Final | Final | Alaska West Coast |
| | | Lower Columbia River ESU | ESA Threatened | 2005 | Final | Final | Alaska West Coast |
| | | Oregon coast ESU | ESA Threatened | 2008 | Final | Final | Alaska West Coast |
| | | Southern Oregon & Northern California coasts ESU | ESA Threatened | 1997 | Final | Final | Alaska West Coast |
| Eulachon <i>Thaleichthys pacificus</i> | SPECIES CATEGORY Fish - Protected Fish | Southern DPS | ESA Threatened | 2010 | Final | Final | Alaska West Coast |
| Green Sturgeon <i>Acipenser medirostris</i> | SPECIES CATEGORY Fish - Protected Fish | Southern DPS | ESA Threatened | 2006 | Final | Final | Alaska West Coast |
| Oceanic Whitetip Shark <i>Carcharhinus longimanus</i> | SPECIES CATEGORY Fish - Highly Migratory Fish - Protected Fish - Sharks | Species | ESA Threatened | 2018 | Under Development | Not Prudent | New England/Mid-Atlantic Pacific Islands Southeast West Coast |
| Scalloped Hammerhead Shark <i>Sphyrna lewini</i> | SPECIES CATEGORY Fish - Highly Migratory Fish - Protected Fish - Sharks | Eastern Pacific DPS | ESA Endangered | 2014 | — | No | West Coast |
| | | Eastern Atlantic DPS | ESA Endangered - Foreign | 2014 | — | — | Foreign |
| | | Central & Southwest Atlantic DPS | ESA Threatened | 2014 | — | No | Southeast |
| | | Indo-West Pacific DPS | ESA Threatened | 2014 | — | No | Pacific Islands |

| Species Name ▼ | Species Category | Listed Entity | Protected Status | Year Listed | Recovery Plan | Critical Habitat | Region |
|----------------------------------------------------------------|----------------------------------------------|--------------------------------------|-----------------------------|-----------------------------|---------------|------------------|----------------------|
| Sockeye Salmon (Protected) <i>Oncorhynchus nerka</i> | SPECIES CATEGORY Fish - Protected Fish | Snake River ESU | ESA Endangered | 1991 | Final | Final | Alaska West Coast |
| | | Ozette Lake ESU | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| Steelhead Trout <i>Oncorhynchus mykiss</i> | SPECIES CATEGORY Fish - Protected Fish | Southern California DPS | ESA Endangered | 1997 | Final | Final | Alaska West Coast |
| | | California Central Valley DPS | ESA Threatened | 1998 | Final | Final | Alaska West Coast |
| | | Central California Coast DPS | ESA Threatened | 1997 | Final | Final | Alaska West Coast |
| | | Lower Columbia River DPS | ESA Threatened | 1998 | Final | Final | Alaska West Coast |
| | | Middle Columbia River | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| | | Northern California DPS | ESA Threatened | 2000 | Final | Final | Alaska West Coast |
| | | Puget Sound DPS | ESA Threatened | 2007 | Final | Final | Alaska West Coast |
| | | Snake River Basin DPS | ESA Threatened | 2006 | Final | Final | Alaska West Coast |
| | | South-Central California Coast DPS | ESA Threatened | 1997 | Final | Final | Alaska West Coast |
| | | Upper Columbia River DPS | ESA Threatened | 2006; 1997 (original) | Final | Final | Alaska West Coast |
| | | Upper Willamette River DPS | ESA Threatened | 1999 | Final | Final | Alaska West Coast |
| | | Middle Columbia River XN | ESA Experimental Population | — | — | — | Alaska West Coast |
| Olympic Peninsula DPS | ESA Candidate | — | — | — | West Coast | | |
| Yelloweye Rockfish <i>Sebastes ruberrimus</i> | SPECIES CATEGORY Fish - Protected Fish | Puget Sound/ Georgia Basin DPS | ESA Threatened | 2010 | Final | Final | Alaska West Coast |

APPENDIX E: PLANT AND WILDLIFE SPECIES OBSERVED

Appendix E
Plant Species Observed

| Family | Scientific Name | Common Name | Habitat* |
|----------------|-------------------------------------------------------------|------------------------------|-----------------|
| Boraginaceae | <i>Amsinckia menziesii</i> | Fiddleneck | N |
| Poaceae | <i>Avena barbata</i> | Slender oat | NN/I |
| Poaceae | <i>Avena fatua</i> | Wild oat | NN/I |
| Asteraceae | <i>Baccharis pilularis</i> ssp. <i>consanguinea</i> | Coyote brush | N |
| Poaceae | <i>Bromus diandrus</i> | Ripgut brome | NN/I |
| Poaceae | <i>Bromus hordeaceus</i> | Soft brome | NN/I |
| Asteraceae | <i>Carduus pycnocephalus</i> | Italian thistle | NN/I |
| Cyperaceae | <i>Carex barbarae</i> | Santa Barbara sedge | N |
| Cyperaceae | <i>Carex</i> sp. | Sedge | N |
| Asteraceae | <i>Centaurea solstitialis</i> | Yellow star thistle | NN/I |
| Convolvulaceae | <i>Convolvulus arvensis</i> | Field bindweed | NN |
| Crassulaceae | <i>Crassula aquatica</i> | Aquatic pygmy weed | N |
| Cyperaceae | <i>Cyperus</i> sp. | Nut sedge (leaves only) | N |
| Asteraceae | <i>Dittrichia graveolens</i> | Stinkwort | NN/I |
| Campanulaceae | <i>Downingia bicornuta</i> var. <i>picta</i> | Doublehorn calicoflower | N |
| Cyperaceae | <i>Eleocharis macrostachya</i> | Spike rush | N |
| Poaceae | <i>Elymus caput-medusae</i> | Medusa head | NN/I |
| Poaceae | <i>Elymus triticoides</i> | Beardless wild-rye | N |
| Onagraceae | <i>Epilobium brachycarpum</i> | Autumn fireweed | N |
| Asteraceae | <i>Erigeron</i> sp. | Fleabane daisy (leaves only) | N |
| Geraniaceae | <i>Erodium botrys</i> | Big heron bill | NN |
| Geraniaceae | <i>Erodium cicutarium</i> | Coastal heron's bill | NN/I |
| Apiaceae | <i>Eryngium</i> sp. | Coyote thistle (leaves only) | NN |
| Papaveraceae | <i>Eschscholzia californica</i> | California poppy | N |
| Poaceae | <i>Festuca bromoides</i> | Brome fescue | NN |
| Poaceae | <i>Festuca myuros</i> | Rattail fescue | NN/I |
| Poaceae | <i>Festuca perennis</i> | Italian rye grass | NN/I |
| Apiaceae | <i>Foeniculum vulgare</i> | Fennel | NN/I |
| Rubiaceae | <i>Galium aparine</i> | Cleavers | N |
| Geraniaceae | <i>Geranium dissectum</i> | Cut leaved geranium | NN/I |
| Plantaginaceae | <i>Gratiola ebracteata</i> | Common hedge hyssop | N |
| Poaceae | <i>Hordeum brachyantherum</i> ssp. <i>brachyantherum</i> | Meadow barley | N |
| Poaceae | <i>Hordeum marinum</i> ssp. <i>gussoneanum</i> | Mediterranean barley | NN/I |
| Poaceae | <i>Hordeum murinum</i> ssp. <i>leporinum</i> | Foxtail barley | NN |
| Asteraceae | <i>Hypochaeris glabra</i> | Smooth cat's ear | NN/I |
| Juglandaceae | <i>Juglans hindsii</i> | NorCal Black Walnut | N |

Appendix E
Plant Species Observed

| Family | Scientific Name | Common Name | Habitat* |
|----------------|--------------------------------------------------|-------------------------|-----------------|
| Juncaceae | <i>Juncus bufonius</i> | Toad rush | N |
| Juncaceae | <i>Juncus cf. balticus ssp. ater</i> | Baltic rush | N |
| Juncaceae | <i>Juncus sp.</i> | Rush (leaves only) | N |
| Asteraceae | <i>Lactuca serriola</i> | Prickly lettuce | NN |
| Asteraceae | <i>Lasthenia fremontii</i> | Fremont's goldfields | N |
| Asteraceae | <i>Lasthenia glaberrima</i> | Smooth goldfields | N |
| Onagraceae | <i>Ludwigia sp.</i> | Water primrose | NN |
| Fabaceae | <i>Lupinus bicolor</i> | Miniature lupine | N |
| Fabaceae | <i>Lupinus nanus</i> | Sky lupine | N |
| Myrsinaceae | <i>Lysimachia arvensis</i> | Scarlet pimpernel | NN |
| Lythraceae | <i>Lythrum hyssopifolia</i> | Hyssop loosestrife | NN/I |
| Malvaceae | <i>Malva sp.</i> | Mallow | NN |
| Fabaceae | <i>Medicago cf. polymorpha</i> | California burclover | NN/I |
| Lamiaceae | <i>Mentha pulegium</i> | Pennyroyal | NN/I |
| Polemoniaceae | <i>Navarretia leucocephala ssp. leucocephala</i> | White headed navarretia | N |
| Oxalidaceae | <i>Oxalis pes-caprae</i> | Bermuda buttercup | NN/I |
| Poaceae | <i>Phalaris paradoxa</i> | Hood canary grass | NN |
| Arecaceae | <i>Phoenix canariensis</i> | Canary Island palm | NN |
| Verbenaceae | <i>Phyla nodiflora</i> | Common lippia | N |
| Boraginaceae | <i>Plagiobothrys stipitatus var. micranthus</i> | Vernal pool allocarya | N |
| Poaceae | <i>Plantago lanceolata</i> | Ribwort | NN/I |
| Poaceae | <i>Poa annua</i> | Annual bluegrass | NN/I |
| Lamiaceae | <i>Pogogyne ziziphoroides</i> | Sacramento beardstyle | N |
| Poaceae | <i>Polypogon monspeliensis</i> | Rabbitfoot grass | NN/I |
| Salicaceae | <i>Populus alba</i> | White poplar | NN/I |
| Asteraceae | <i>Psilocarphus brevissimus var. brevissimus</i> | wooly heads | N |
| Asteraceae | <i>Psilocarphus oregonus</i> | Oregon wooly heads | N |
| Ranunculaceae | <i>Ranunculus bonariensis var. trisepalus</i> | Vernal pool buttercup | N |
| Brassicaceae | <i>Raphanus sp.</i> | Radish | NN |
| Brassicaceae | <i>Rorippa curvisiliqua</i> | Curvepod yellow cress | N |
| Rosaceae | <i>Rosa cf. rubiginosa</i> | Sweet-brier | NN |
| Polygonaceae | <i>Rubus armeniacus</i> | Himalayan blackberry | NN/I |
| Polygonaceae | <i>Rumex pulcher</i> | Fiddle dock | NN |
| Polygonaceae | <i>Rumex sp.</i> | Dock | NN |
| Salicaceae | <i>Salix exigua</i> | Narrow leaved willow | N |
| Salicaceae | <i>Salix goodingii</i> | Gooding's willow | N |
| Chenopodiaceae | <i>Salsola tragus</i> | Tumbleweed | NN/I |
| Cyperaceae | <i>Schoenoplectus acutus var. occidentalis</i> | Tule | N |

Appendix E
Plant Species Observed

| Family | Scientific Name | Common Name | Habitat* |
|----------------|-----------------------------------------------------|-----------------------|-----------------|
| Asteraceae | <i>Senecio vulgaris</i> | Common groundsel | NN |
| Asteraceae | <i>Silybum marianum</i> | Milk thistle | NN/I |
| Asteraceae | <i>Sonchus asper</i> | Spiny sow thistle | NN |
| Asteraceae | <i>Stipa pulchra</i> | Purple needle grass | N |
| Asteraceae | <i>Tragopogon porrifolius</i> | Purple salsify | NN |
| Zygophyllaceae | <i>Tribulus terrestris</i> | Puncture vine | NN/I |
| Fabaceae | <i>Trifolium fragiferum</i> | Strawberry clover | NN |
| Fabaceae | <i>Trifolium hirtum</i> | Rose clover | NN/I |
| Themidaceae | <i>Triteleia hyacinthina</i> | Wild hyacinth | N |
| Themidaceae | <i>Triteleia laxa</i> | Ithuriel's spear | N |
| Poaceae | <i>Triticum aestivum</i> | Wheat | NN |
| Typhaceae | <i>Typha cf. angustifolia</i> | Narrow leaved cattail | NN |
| Plantaginaceae | <i>Veronica peregrina</i> ssp. <i>xalapensis</i> | Purslane speedwell | N |
| Fabaceae | <i>Vicia sativa</i> | Spring vetch | NN |
| Fabaceae | <i>Vicia villosa</i> | Hairy vetch | NN |
| Apocynaceae | <i>Vinca major</i> | Greater periwinkle | NN/I |
| Asteraceae | <i>Xanthium strumarium</i> | Cocklebur | N |

* (NN) Non-native, (N) Native, (I) Invasive

Appendix E
Wildlife Species Observed

| Taxon | | Scientific Name | Common Name |
|--------------------------------|-----------------|-----------------------------------|---------------------------|
| Order | Family | | |
| VERTEBRATES | | | |
| Amphibians and Reptiles | | | |
| Anura | Hylidae | <i>Hyllola sierra</i> | Sierran treefrog |
| Anura | Ranidae | <i>Lithobates catesbeianus</i> | American bullfrog |
| Squamata | Phrynosomatidae | <i>Sceloporus occidentalis</i> | Nothwestern fence lizard |
| Squamata | Colubridae | <i>Thamnophis sirtalis fitchi</i> | Valley garter snake |
| Birds | | | |
| Passeriformes | Icteridae | <i>Agelaius phoeniceus</i> | Red-winged blackbird |
| Anseriformes | Anatidae | <i>Anas cyanoptera</i> | Cinnamon teal |
| Anseriformes | Anatidae | <i>Anas platyrhynchos</i> | Mallard |
| Pelecaniformes | Ardeidae | <i>Ardea alba</i> | Great egret |
| Pelecaniformes | Ardeidae | <i>Ardea herodias</i> | Great blue heron |
| Anseriformes | Anatidae | <i>Branta canadensis</i> | Canada goose |
| Accipitriformes | Accipitridae | <i>Buteo jamaicensis</i> | Red-tailed hawk |
| Caprimulgiformes | Trochilidae | <i>Calypte anna</i> | Anna's hummingbird |
| Cathartiformes | Cathartidae | <i>Cathartes aura</i> | Turkey vulture |
| Charadriiformes | Charadriidae | <i>Charadrius vociferus</i> | Killdeer |
| Columbiformes | Columbidae | <i>Columba livia</i> | Rock pigeon |
| Passeriformes | Corvidae | <i>Corvus brachyrhynchos</i> | American crow |
| Falconiformes | Falconidae | <i>Falco sparverius</i> | American kestrel |
| Passeriformes | Hirundinidae | <i>Hirundo rustica</i> | Barn swallow |
| Pelecaniformes | Ardeidae | <i>Nycticorax</i> | Black-crowned night heron |
| Anseriformes | Anatidae | <i>Mareca strepera</i> | Gadwall |
| Passeriformes | Mimidae | <i>Mimus polyglottos</i> | Northern mockingbird |
| Galliformes | Phasianidae | <i>Phasianus colchicus</i> | Ring-necked pheasant |
| Passeriformes | Tyrannidae | <i>Sayornis nigricans</i> | Black phoebe |
| Passeriformes | Parulidae | <i>Setophaga coronata</i> | Yellow-rumped warbler |
| Passeriformes | Turdidae | <i>Turdus migratorius</i> | American robin |
| Passeriformes | Tyrannidae | <i>Tyrannus verticalis</i> | Western kingbird |
| Columbiformes | Columbidae | <i>Zenaida macroura</i> | Mourning dove |
| Mammals | | | |
| Lagomorpha | Leporidae | <i>Lepus californicus</i> | Black-tailed jackrabbit |
| Lagomorpha | Leporidae | <i>Sylvilagus audubonii</i> | Desert cottontail |

APPENDIX F: PRELIMINARY JURISDICTIONAL DETERMINATION



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

May 12, 2020

Regulatory Division (SPK-2020-00158)

City of Elk Grove
Attn: Mr. Michael Karoly
8401 Laguna Palms Way
Elk Grove, California 95758
MKaroly@elkgrovecity.org

Dear Mr. Karoly:

We are responding to your May 4, 2020, request for a preliminary jurisdictional determination (JD) for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements site. The approximately 30.8-acre project site is located by Sheldon Road to the north, Big Horn Road to the south, Mannington Street/Monterey Oaks/Lyndale Court to the west, and Lewis Stein Road to the east, at Latitude 38.43251°, Longitude -121.41634°, in the City of Elk Grove, Sacramento County, California.

Based on available information, we concur with your aquatic resources delineation for the site as depicted on the enclosed January 3, 2020, *Figure 3, Aquatic Resources delineation map, Laguna Creek Trail and Bruceville Road Sidewalk Improvements Sacramento County, California*, drawing prepared by Helix Environmental Planning (Enclosure 1). The approximately 0.52 acre of seasonal wetland, 1.44 acres of vernal pool, 0.20 acre of seasonal marsh, 0.15 acre of perennial marsh, and 0.06 acre of open waters present within the survey area are potential jurisdictional aquatic resources (waters of the United States) regulated under Section 404 of the Clean Water Act.

At your request, we have completed a preliminary JD for the site. Enclosed find a copy of the *Preliminary Jurisdictional Determination Form* (Enclosure 2). Please sign and return the completed form to this office, at the address listed below, within 30 days of the date of this letter. If you do not return the signed form within 30 days, we will presume concurrence and finalize the preliminary jurisdictional determination.

You may request an approved JD for this site at any time prior to starting work within waters, including after a permit decision is made.

We recommend you provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This preliminary jurisdictional determination has been conducted to identify the potential limits of wetlands and other aquatic resources at the project site which may be subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the Clean Water Act and/or Section 9 and 10 of the Rivers and Harbors Act. A *Notification of Appeal Process and Request for Appeal Form* is enclosed to notify you of your options with this determination (Enclosure 3).

We appreciate feedback, especially about interactions with our staff and processes.

Please refer to identification number SPK-2020-00158 in any correspondence concerning this project. If you have any questions, please contact Peck Ha by email at Peck.Ha@usace.army.mil, or telephone at (916) 557-6617. For program information or to complete our Customer Survey, visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

A handwritten signature in black ink, appearing to read 'Peck Ha', written over a faint rectangular box.

Peck Ha
Senior Project Manager
CA Delta Section

Enclosures

cc:

Ms. Kyrsten Shields, Helix Environmental Planning, KyrstenS@HelixEpi.com

Ms. Thaleena Bhattal, Caltrans District 3, Thaleena.Bhattal@DOT.ca.gov

Ms. Jordan Hensley, CA Regional Water Quality Control Board,
Jordan.Hensley@Waterboards.ca.gov

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

| | | |
|----------------------------------------------------------|--------------------------|-------------------|
| Applicant: City of Elk Grove Attn: Mr. Michael Karoly | File No.: SPK-2020-00158 | Date: May 8, 2020 |
|----------------------------------------------------------|--------------------------|-------------------|

| | |
|--------------|-------------------|
| Attached is: | See Section below |
|--------------|-------------------|

| | | |
|---|--------------------------------------------------------------------|---|
| | INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission) | A |
| | PROFFERED PERMIT (Standard Permit or Letter of permission) | B |
| | PERMIT DENIAL | C |
| | APPROVED JURISDICTIONAL DETERMINATION | D |
| → | PRELIMINARY JURISDICTIONAL DETERMINATION | E |

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/cecw/pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Peck Ha
Senior Project Manager
U.S. Army Corps of Engineers
Phone: (916) 557-6617, FAX: (916) 557-7803
Email: Peck.Ha@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division 1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: (415) 503-6574, FAX: (415) 503-6646
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: May 08, 2020

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: City of Elk Grove Attn: Mr. Michael Karoly

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Laguna Creek Trail and Bruceville Road Sidewalk Improvements, SPK-2020-00158

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)**

State: CA County/parish/borough: Sacramento County City: Elk Grove

Center coordinates of site (lat/long in degree decimal format):

Lat.: 38.4325137121523 Long.: -121.416349411011

Universal Transverse Mercator: 638223.76, 4254992.65

Name of nearest waterbody: Strawberry Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: May 08, 2020

Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

| Site number | Latitude (decimal degrees) | Longitude (decimal degrees) | Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable) | Type of aquatic resource (i.e., wetland vs. non-wetland waters) | Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404) |
|-------------|----------------------------|-----------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| DSW1 | 38.43570500 | -121.41727700 | 0.008 | Wetlands | Section 404 |
| DSW2 | 38.43562100 | -121.41635400 | 0.027 | Wetlands | Section 404 |
| DSW3 | 38.43450600 | -121.41731800 | 0.047 | Wetlands | Section 404 |
| DSW4 | 38.43399800 | -121.41727100 | 0.050 | Wetlands | Section 404 |
| DSW5 | 38.43207900 | -121.41589300 | 0.140 | Wetlands | Section 404 |
| DSW6 | 38.43198200 | -121.41513800 | 0.066 | Wetlands | Section 404 |
| DSW7 | 38.43133100 | -121.41451600 | 0.002 | Wetlands | Section 404 |
| DSW8 | 38.43106400 | -121.41362800 | 0.050 | Wetlands | Section 404 |
| DSW9 | 38.43110300 | -121.41884400 | 0.130 | Wetlands | Section 404 |

| Site number | Latitude (decimal degrees) | Longitude (decimal degrees) | Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable) | Type of aquatic resource (i.e., wetland vs. non-wetland waters) | Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404) |
|-------------|----------------------------|-----------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| VP10 | 38.43399800 | -121.41475000 | 0.091 | Wetlands | Section 404 |
| VP11 | 38.43388069 | -121.41786309 | 0.301 | Wetlands | Section 404 |
| VP12 | 38.43246855 | -121.41602492 | 0.409 | Wetlands | Section 404 |
| VP13 | 38.43173295 | -121.41474580 | 0.149 | Wetlands | Section 404 |
| VP14 | 38.43146044 | -121.41439729 | 0.385 | Wetlands | Section 404 |
| VP15 | 38.43123739 | -121.41394546 | 0.102 | Wetlands | Section 404 |
| RSM16 | 38.43454800 | -121.42062400 | 0.010 | Wetlands | Section 404 |
| RSM17 | 38.43437300 | -121.41981200 | 0.189 | Wetlands | Section 404 |
| RPM18 | 38.43324000 | -121.41726800 | 0.122 | Wetlands | Section 404 |
| RPM19 | 38.43294500 | -121.40933900 | 0.029 | Wetlands | Section 404 |
| Creek20 | 38.43512300 | -121.41757400 | 0.052 | Wetlands | Section 404 |
| Channel21 | 38.43540500 | -121.41760800 | 0.014 | Wetlands | Section 404 |

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit

(and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there “*may be*” waters of the U.S. and/or that there “*may be*” navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: January 3, 2020, Figure 3, Aquatic Resources delineation map, Laguna Creek Trail and Bruceville Road Sidewalk Improvements Sacramento County, California,.
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale: .
- Data sheets prepared by the Corps: .
- Corps navigable waters’ study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Florin.
- Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: . (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth
Or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

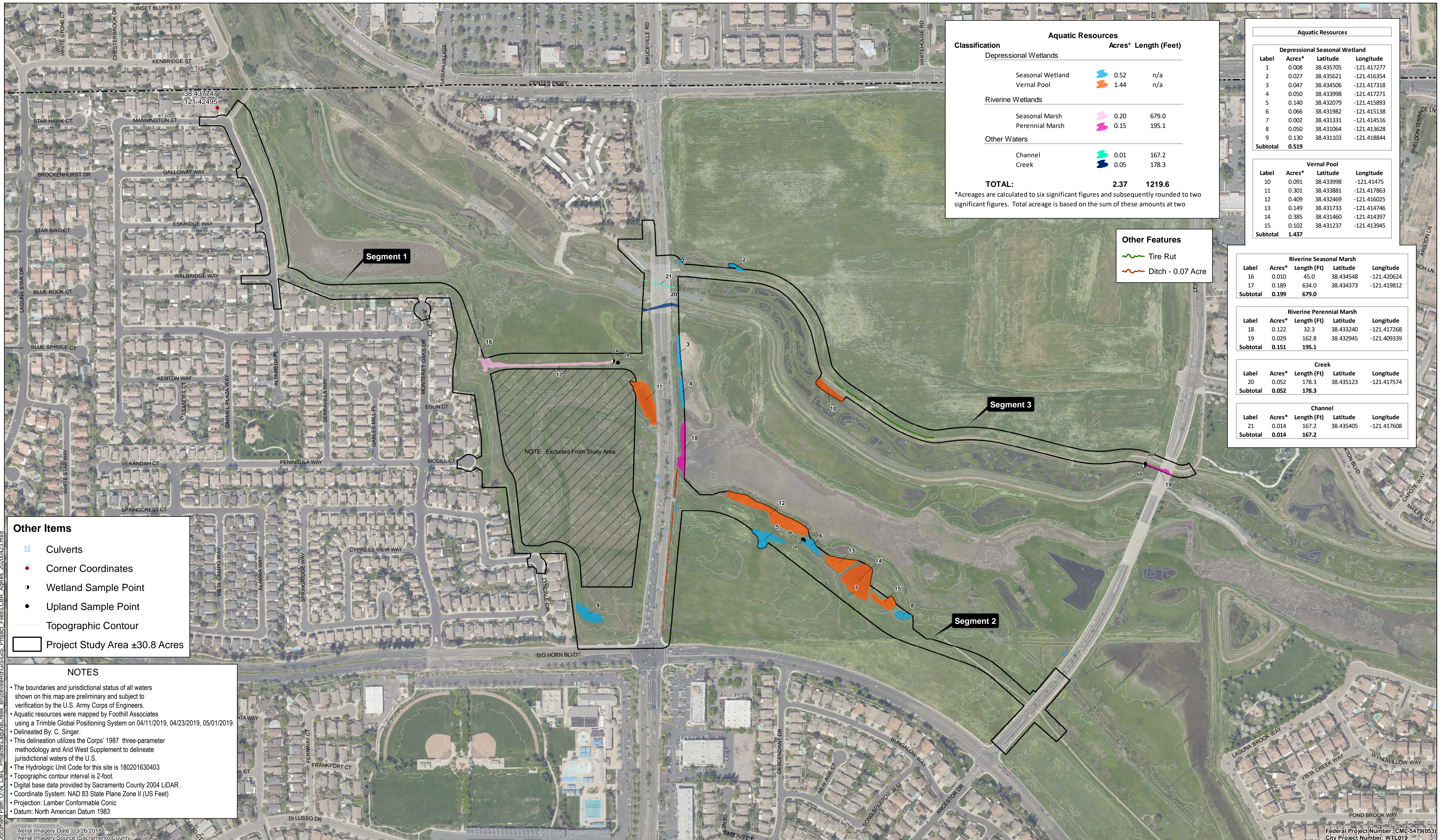


May 13, 2020

Signature and date of
Regulatory staff member
completing PJD

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.



| Aquatic Resources | | | |
|------------------------------|----------------------|-------------|---------------|
| Classification | Acres* Length (Feet) | | |
| Depressional Wetlands | | | |
| Seasonal Wetland | | 0.52 | n/a |
| Vernal Pool | | 1.44 | n/a |
| Riverine Wetlands | | | |
| Seasonal Marsh | | 0.20 | 679.0 |
| Perennial Marsh | | 0.15 | 195.1 |
| Other Waters | | | |
| Channel | | 0.01 | 167.2 |
| Creek | | 0.05 | 178.3 |
| TOTAL: | | 2.37 | 1219.6 |

*Acres are calculated to six significant figures and subsequently rounded to two significant figures. Total acreage is based on the sum of these amounts at two

| Aquatic Resources | | | |
|-------------------------------|--------------|-----------|-------------|
| Depressional Seasonal Wetland | | | |
| Label | Acres* | Latitude | Longitude |
| 1 | 0.008 | 38.435705 | -121.417277 |
| 2 | 0.027 | 38.435621 | -121.416354 |
| 3 | 0.047 | 38.434506 | -121.417318 |
| 4 | 0.050 | 38.433988 | -121.417271 |
| 5 | 0.140 | 38.432079 | -121.415893 |
| 6 | 0.066 | 38.431982 | -121.415138 |
| 7 | 0.002 | 38.431331 | -121.414516 |
| 8 | 0.050 | 38.431064 | -121.413628 |
| 9 | 0.130 | 38.431103 | -121.418844 |
| Subtotal | 0.519 | | |

| Vernal Pool | | | |
|-----------------|--------------|-----------|-------------|
| Label | Acres* | Latitude | Longitude |
| 10 | 0.091 | 38.433998 | -121.41475 |
| 11 | 0.301 | 38.433881 | -121.417863 |
| 12 | 0.409 | 38.432469 | -121.416025 |
| 13 | 0.149 | 38.431733 | -121.414746 |
| 14 | 0.385 | 38.431460 | -121.414397 |
| 15 | 0.102 | 38.431237 | -121.413945 |
| Subtotal | 1.437 | | |

| Riverine Seasonal Marsh | | | | |
|-------------------------|--------------|--------------|-----------|-------------|
| Label | Acres* | Length (Ft) | Latitude | Longitude |
| 16 | 0.010 | 45.0 | 38.434548 | -121.420624 |
| 17 | 0.189 | 634.0 | 38.434373 | -121.419812 |
| Subtotal | 0.199 | 679.0 | | |

| Riverine Perennial Marsh | | | | |
|--------------------------|--------------|--------------|-----------|-------------|
| Label | Acres* | Length (Ft) | Latitude | Longitude |
| 18 | 0.122 | 32.3 | 38.433240 | -121.417268 |
| 19 | 0.029 | 162.8 | 38.432945 | -121.409339 |
| Subtotal | 0.151 | 195.1 | | |

| Creek | | | | |
|-----------------|--------------|--------------|-----------|-------------|
| Label | Acres* | Length (Ft) | Latitude | Longitude |
| 20 | 0.052 | 178.3 | 38.435123 | -121.417574 |
| Subtotal | 0.052 | 178.3 | | |

| Channel | | | | |
|-----------------|--------------|--------------|-----------|-------------|
| Label | Acres* | Length (Ft) | Latitude | Longitude |
| 21 | 0.014 | 167.2 | 38.435405 | -121.417608 |
| Subtotal | 0.014 | 167.2 | | |

| Other Features | |
|----------------|-------------------|
| | Tire Rut |
| | Ditch - 0.07 Acre |

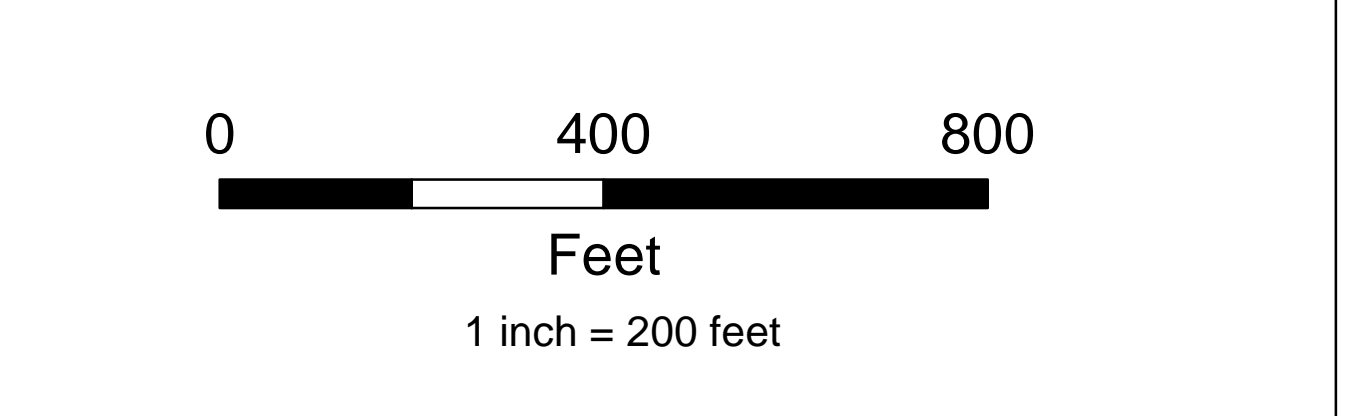
| Other Items | |
|-------------|--------------------------------|
| | Culverts |
| | Corner Coordinates |
| | Wetland Sample Point |
| | Upland Sample Point |
| | Topographic Contour |
| | Project Study Area ±30.8 Acres |

NOTES

- The boundaries and jurisdictional status of all waters shown on this map are preliminary and subject to verification by the U.S. Army Corps of Engineers.
- Aquatic resources were mapped by Foothill Associates using a Trimble Global Positioning System on 04/11/2019, 04/23/2019, 05/01/2019.
- Delineated By: C. Singer.
- This delineation utilizes the Corps' 1987 three-parameter methodology and Arid West Supplement to delineate jurisdictional waters of the U.S.
- The Hydrologic Unit Code for this site is 180201630403
- Topographic contour interval is 2-foot.
- Digital base data provided by Sacramento County 2004 LIDAR.
- Coordinate System: NAD 83 State Plane Zone II (US Feet)
- Projection: Lamber Conformable Conic
- Datum: North American Datum 1983

Aerial Imagery Date: 03/26/2018
Aerial Imagery Source: Sacramento County

| REVISIONS | | |
|-----------|-------------|----|
| DATE | DESCRIPTION | BY |
| | | |
| | | |



AQUATIC RESOURCES DELINEATION MAP
Made in accordance with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016.
Laguna Creek Trail and Bruceville Road Sidewalk Improvements
 Sacramento County, California
 April 23, 2020

FIGURE 3
Federal Project Number: CML-5479(053)
City Project Number: WTL019

**APPENDIX G: CITY OF ELK GROVE DEED RESTRICTED PARCELS
LETTER TO USFWS**



May 25, 2023

Ian Perkins-Taylor
Senior Fish & Wildlife Biologist
U.S. Fish and Wildlife Service
2800 Cottage Way
Sacramento, CA 95825

RE: Authorization to Construct Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053) / WTL019) within Deed Restricted Parcels

This letter evaluates the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project being constructed within and adjacent to three parcels currently under deed restrictions.

Background

The proposed Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (Project) (CML-5479(053) / WTL019) will develop paved trail improvements in the northwest quadrant of Big Horn Boulevard and Bruceville Road. The Project will construct two segments of new asphalt Class I Bikeway trail as a gap closure between existing trails within the City of Elk Grove (City). Trail segments may include amenities such as, but not limited to, concrete entry nodes, post and cable fencing, landscaping, benches, and interpretive signage.

Deed restrictions have been placed on three of the parcels intersecting and adjacent to the Project, APNs 116-0011-102, 116-0011-097, and 116-0011-094. These deed restrictions requiring certain conservation measures were required by the Lower Laguna Creek Drainage Master Plan Biological Opinion (1996) issued by the U.S. Fish and Wildlife Services as mitigation for impacts to Giant Garter Snake (GGS) habitat (Deed Restrictions). The County of Sacramento constructed the Lower Laguna Flood Control Project and as part of the required mitigation measures for development, deed restrictions were placed on three parcels within and adjacent to the trail Project's footprint in 1999. Once the City was incorporated in 2000, the three parcels under deed restrictions were transferred to City ownership.

The deed restrictions have the following purpose language stated within them:

- a) Conserve, protect, restore, and enhance the Protected Property
- b) Prevent any activity on or use of the Protected Property that is inconsistent with the purposes stated herein and to restore such areas or features of the Protected Property that may be damaged by any inconsistent activity or use
- c) Undertake all reasonable actions to prevent the unlawful entry and trespass by persons whose activities may degrade or harm the Conservation Values of the Protected Property.

As the deed restricted parcels stand today, there is nothing indicating that any passerby should stay out of the area. In fact, a site visit revealed the public is currently traversing the area. This Project will provide

May 25, 2023

Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053) / WTL019)
within Deed Restricted Parcels

Page 2 of 5

an adjacent paved path to help ensure that people are less likely to enter the greater conserved area. Additionally, post and cable fencing will be installed creating a physical barrier to people entering the larger conserved area. Further, interpretive signage will also be placed outside the deed restricted parcels which will indicate the requirement to stay out of the area. These Project features are discussed in further detail under the Proposed Project Features section below.

Additionally, the deed restrictions prohibit the following activities:

- a) Erecting of any building, billboard, or sign, excepting signs identifying the Protected Property, its conservation values and prohibited activities;
- b) Depositing of soil, trash, ashes, garbage, waste, bio-solids or any other material;
- c) Excavating, dredging or removing of loam, gravel, soil, rock, sand or other material;
- d) Otherwise altering the general topography of the Protected Property.
- e) Removing, destroying, or cutting of trees, shrubs, or other vegetation, except as required for (1) channel maintenance, (2) fire breaks, (3) maintenance of access roads, (4) construction and maintenance of water quality basins and associated outfall structures, or (5) emergency repairs.

The Project would be consistent with the prohibited activities as it would not erect any vertical above ground structures (buildings), billboards, or signs other than the interpretive signage outside the deed restricted parcels which will indicate the requirement to stay out of the area; therefore, the Project would be in compliance with prohibited activity a above.

The Project would not deposit soil, trash, ashes, garbage, waste, bio-solids, or other harmful material which would degrade or otherwise harm or conflict with the conservation values of the deed restricted parcels. Trail construction will require importation of materials, such as, but not limited to, aggregate base, asphalt concrete, and decomposed granite; however, the majority of these materials will be placed outside of the deed restricted parcels with only two minor encroachments detailed below in the Proposed Project Features section. Other features to be placed include post and cable fencing along the northern and eastern edges of the trail (adjacent to the deed restricted parcels), as well as needed bike-traffic safety signage. The Project will construct a trail and prevent future trespass into the deed restricted parcels with the post and cable fencing, which will prevent the public from depositing materials in conflict with the purpose and conservation values of the deed restrictions; therefore, the Project would be in compliance with prohibited activity b above.

Additionally, the Project would construct a trail over base material and trail construction activities include minor grading and excavation sufficient to flatten the existing ground per the advanced preliminary design plans in accordance with Caltrans Highway Design Manual Chapter 1000 (Bicycle Transportation Design) and City Public Works Design Standards. Excess earth excavated will either be placed within the deed restricted parcel, be moved to other trail locations outside the deed restricted parcels, or exported from the Project site to a remote disposal location. As the minor grading and excavation would be necessary to install the trail and post and cable fencing, the Project would not be in conflict with the purpose and conservation values of the deed restrictions to not excavate, dredge, or remove any soil or other material from the deed restricted parcels; therefore, the Project would be in compliance with prohibited activity c above.

May 25, 2023

Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053) / WTL019)
within Deed Restricted Parcels

Page 3 of 5

The Project would not alter the general topography of the deed restricted parcels as the trail would be constructed along the existing topography; therefore, the Project would be in compliance with prohibited activity d above.

Lastly, the Project would not remove or destroy trees, or shrubs, contributing to the purpose of the deed restrictions subject to the discussion in the next paragraph. The small segments of trail within the deed restricted parcels would be constructed along an existing heavily utilized dirt path and would maintain existing access at these locations; therefore, the Project would be in compliance with prohibited activity e above.

See the Proposed Project Features and Encroachment I and II sections below for more specific discussion of each location.

Proposed Project Features

The Project will encroach into the deed restricted parcels at two locations of the Project, one at the northernmost segment of the trail near Mannington Street (Encroachment I) in APNs 116-0011-094 and 116-0011-097, and the second near McGill Court (Encroachment II) in APN 116-0011-102. The Project's proposed paved trail location, while encroaching into the deed restricted parcels in two small areas (about 1% of the overall Project), is consistent with the City Bicycle, Pedestrian, and Trails Master Plan. The Project proposes to install post and cable fencing along the entire trail to prevent the public from encroaching into the deed restricted parcels to be consistent with the commitments to conserve and protect the property. If these post and cable fences were not constructed as part of this Project, it is possible that future trespass into these deed restricted parcels would continue to occur. Additional signage is also anticipated to inform the public of the land's conservation values and prohibited activities beyond the post and cable fencing, which would be compliant with the deed restrictions. Both encroachments are discussed further below.

Encroachment I

A small portion of the trail alignment encroaches into the deed restricted parcel APN 116-0011-094 near the intersection of Mannington Street and Walbridge Way and APN 116-011-097 at its northern most reach, along the constructed berm near Mannington Street. The encroachment into APN 116-0011-094 is only to install post and cable fencing which is in compliance with the deed restrictions. The encroachment into APN 116-011-097 is intentionally being placed along an existing dirt path on top of an existing berm that has been traversed by the public. This unofficial dirt pathway has been heavily trafficked by the public and appears in aerial imagery dating back to 2002. Additionally, according to the Project's Natural Environment Study and Biological Assessment, this area's aquatic habitats are too small and shallow to support a GGS population, it lacks suitable emergent vegetation, and all adjacent aquatic features are completely dry during a majority of the year. This area is considered to have minimal biological value as there are no waters, vernal pools, or wetland features within the areas of encroachment and the existing dirt trails used for recreation do not provide adequate GGS habitat; therefore, this portion of the deed restricted parcel does not provide for conservation value of any protected plants or species, including GGS. Secondly, the Project would not require the removal of trees, or shrubs in this location and the trail would be constructed as explained below and placed on the existing dirt path on top of the berm within the deed restricted parcel.

May 25, 2023

Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053) / WTL019)
within Deed Restricted Parcels

Page 4 of 5

Trail construction will involve removal of existing grasses for a width of 16 to 30 feet, including minor amounts of grading up to 2'-3' in depth and soil preparation/compaction in advance of placing imported trail materials. Imported trail materials include aggregate base (10' wide, 9"± deep), asphalt concrete pavement (10' wide, 3" deep), and decomposed granite (two 2' wide, 3" deep strips either side of trail). Conform grading will be performed from the edge of the decomposed granite to adjacent undisturbed ground. Other features will include the post and cable fencing, and bike safety signs & posts along the trail. Excess earth excavated from this location will either be placed within the deed restricted parcel, will be moved to other trail locations outside the deed restricted parcels, or exported from the Project site to a remote disposal location.

In summary, the reasons for the encroachment into this location, the northernmost berm area, is because it is already disturbed by existing pedestrian traffic, has no conservation value, and after trail construction, the Project will prevent further revision to the topography, which is a requirement under the deed restrictions.

Encroachment II

A small portion of the trail alignment encroaches into and traverses the deed restricted parcel APN 116-0011-102 near McGill Court, as the deed restricted parcel abuts private property at this location and there is no other option to provide a connection to Big Horn Boulevard outside of encroaching into the deed restricted parcels at this location. It is intentionally being placed along an existing dirt path that has been traversed by the public and the radius of the curve reduced to minimize the encroachment to the maximum extent feasible. This unofficial dirt pathway has been heavily trafficked by the public and appears in aerial imagery dating back to 2002. Additionally, similar to the location of Encroachment I, this area's aquatic habitats are too small and shallow to support a GGS population, it lacks suitable emergent vegetation, and all adjacent aquatic features are completely dry during a majority of the year according to the Project's Natural Environment Study and Biological Assessment. This area is considered to have minimal biological value as there are no waters, vernal pools, or wetland features within the areas of encroachment and the existing dirt trails used for recreation do not provide adequate GGS habitat; therefore, this portion of the deed restricted parcel does not provide for conservation value of any protected plants or species, including GGS. Secondly, the Project would not require the removal of trees, or shrubs in this location as described below and the trail would be placed on the existing dirt path within the deed restricted parcel.

Trail construction will involve removal of existing grasses for a width of 16 to 20 feet, including minor amounts of grading up to 1' in depth and soil preparation/compaction in advance of placing imported trail materials. Imported trail materials include aggregate base (10' wide, 9"± deep), asphalt concrete pavement (10' wide, 3" deep), and decomposed granite (two 2' wide, 3" deep strips either side of trail). Conform grading will be performed from the edge of the decomposed granite to adjacent undisturbed ground. Other features will include the post and cable fencing, and bike safety signs & posts along the trail. Excess earth excavated from this location will either be placed within the deed restricted parcel, will be moved to other trail locations outside the deed restricted parcels, or exported from the Project site to a remote disposal location.

In summary, the reasons for the encroachment into this location, the area near McGill Court, is to make the connection with Big Horn Boulevard; however, the curve radius has been reduced to minimize the

May 25, 2023

Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053) / WTL019)
within Deed Restricted Parcels

Page 5 of 5

encroachment to the maximum extent feasible, the area is already disturbed by existing pedestrian traffic and has no conservation value, and the Project will prevent further revision to the topography, which is a requirement under the deed restrictions.

Therefore, this Project, and Encroachment I and II, are in conformance with the spirit of the conservation and protection requirements of the deed restrictions listed above.

Determination

Upon review of the intent of the deed restrictions on these three parcels, the City has determined the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project would construct improvements that help meet the deed restriction's obligations for conservation. These improvements in compliance with the deed restrictions include formalizing long-standing dirt pathway to minimize future trespass onto the deed restricted parcels, construction of post and cable fencing, and placement of interpretive signage to inform the public of the conservation values of the lands. The proposed trail alignment also avoids impacting nearby environmentally sensitive areas.

The Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project has been designed to minimally encroach into the deed restrictions to the maximum extent feasible. The Project is permissible to encroach into the deed restrictions as the proposed Project features meet the spirit of the commitments/obligations of the deed restrictions and will help restrict future trespass by the public on the conserved property.

Sincerely,



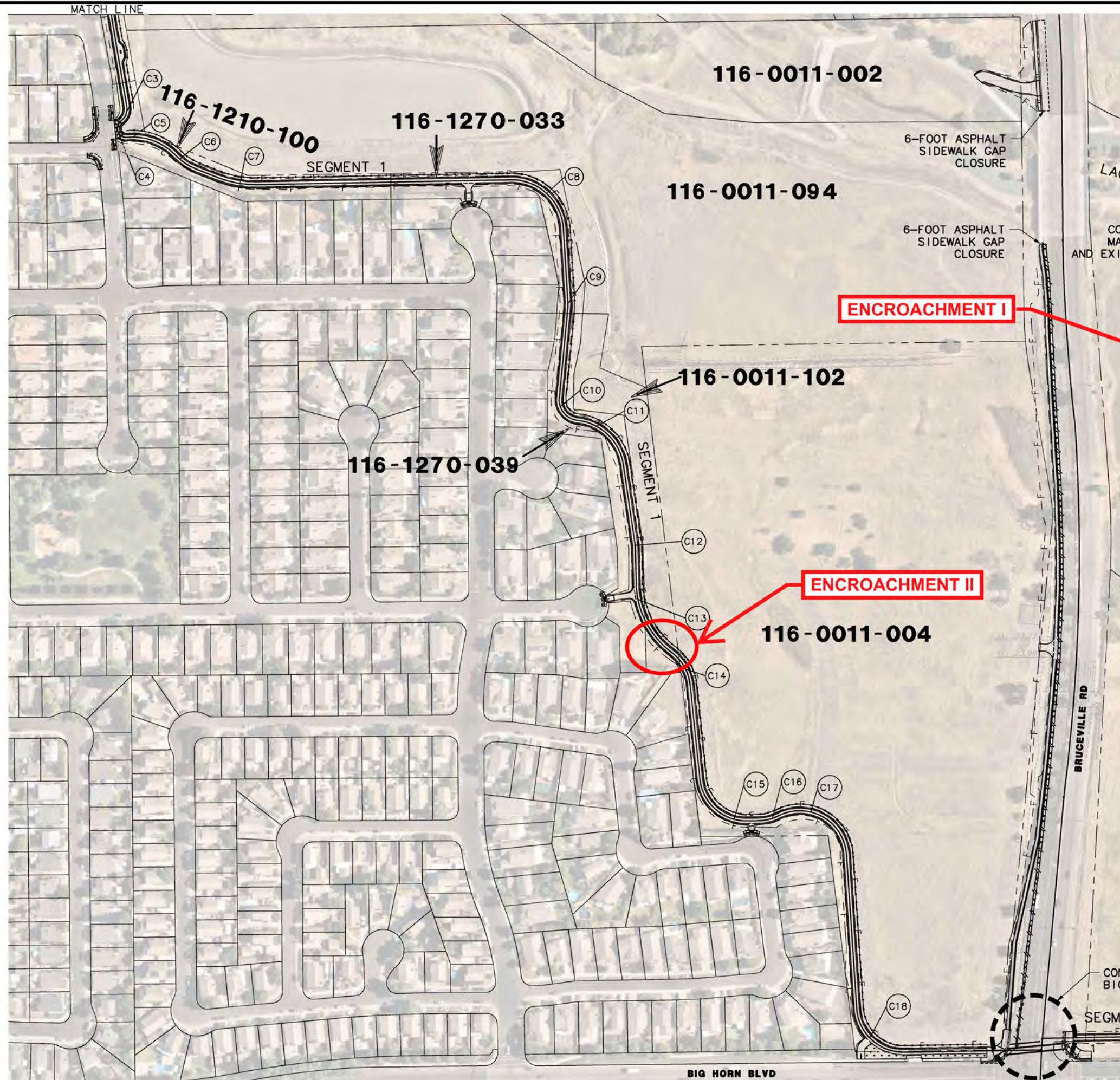
Jeff Werner
Public Works Director
City of Elk Grove

cc: Jennifer Alves, City Attorneys Office

Attachments

Trail Alignment Figure

Conservation Measures from Deed Restrictions



CURVE TABLE

| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
|---------|---------|------------|---------|---------|
| C1 | 90.00' | 32°18'12" | 26.07' | 50.74' |
| C2 | 500.00' | 11°20'12" | 49.63' | 98.93' |
| C3 | 30.00' | 62°51'07" | 18.33' | 32.91' |
| C4 | 17.00' | 146°26'22" | 56.38' | 43.45' |
| C5 | 115.00' | 49°49'21" | 53.41' | 100.00' |
| C6 | 115.00' | 22°58'49" | 23.38' | 46.12' |
| C7 | 200.00' | 22°32'42" | 39.86' | 78.70' |
| C8 | 100.00' | 87°31'15" | 95.76' | 152.75' |
| C9 | 100.00' | 9°01'52" | 7.90' | 15.76' |
| C10 | 40.00' | 89°03'58" | 39.35' | 62.18' |
| C11 | 100.00' | 75°13'02" | 77.03' | 131.28' |
| C12 | 100.00' | 6°50'54" | 5.98' | 11.95' |
| C13 | 170.00' | 51°41'02" | 82.34' | 153.35' |
| C14 | 90.00' | 47°19'27" | 39.44' | 74.34' |
| C15 | 90.00' | 84°38'12" | 81.95' | 132.95' |
| C16 | 90.00' | 26°44'17" | 21.39' | 42.00' |
| C17 | 90.00' | 112°57'59" | 135.89' | 177.45' |
| C18 | 90.00' | 86°23'07" | 84.49' | 135.69' |

SCALE: 1" = 100' MAY 11, 2023

**LAGUNA CREEK TRAIL
TRAIL ALIGNMENT REVISED**

EXHIBIT "C"

CONSERVATION MEASURES

The grant of the real property described in this Grant Deed (herein referred to as the "Protected Property") from Lennar Renaissance, Inc., a California corporation ("GRANTOR") to the County of Sacramento (Referred to herein as either "GRANTEE" or "County") is subject to the following conservation measures as required by that certain Biological Opinion No. 1-1-96-F-51 issued by the U.S. Fish and Wildlife Service (the "Service") on October 29, 1996, as amended (the "Biological Opinion"):

1. PURPOSE

It is the purpose of these conservation measures to assure that the Protected Property will be retained forever in an open space condition and to prevent any use of the Protected Property that will impair or interfere with the significant ecological and habitat values (collectively the "Conservation Values") of the Protected Property. These values include habitat for the giant garter snake (*Thamnophis couchii gigas*), a species listed as threatened under the federal Endangered Species Act.

2. OBLIGATIONS OF GRANTEE

To accomplish the purposes stated herein, GRANTEE shall:

- (a) Conserve, protect, restore, and enhance the Protected Property in a manner consistent with the Biological Opinion and Department of the Army Permit No. 199500313 (the "Army Permit").
- (b) Prevent any activity on or use of the Protected Property that is inconsistent with the purposes stated herein and to restore such areas or features of the Protected Property that may be damaged by any inconsistent activity or use.
- (c) Undertake all reasonable actions to prevent the unlawful entry and trespass by persons whose activities may degrade or harm the Conservation Values of the Protected Property.

3. PROHIBITED USES

Subject to GRANTEE's right to maintain the Protected Property for flood control purposes in accordance with the Army Permit and Biological Opinion, any activity on or use of the Protected Property inconsistent with the purposes stated herein is prohibited. Without limiting the generality of the foregoing, and subject to GRANTEE's right to perform routine maintenance activities, emergency repairs, construct and maintain water quality basins and associated outfall structures, prohibited activities include:

- (a) Erecting of any building, billboard, or sign, excepting signs identifying the Protected Property, its conservation values and prohibited activities;
- (b) Depositing of soil, trash, ashes, garbage, waste, bio-solids or any other material;
- (c) Excavating, dredging or removing of loam, gravel, soil, rock, sand or other material;
- (d) Otherwise altering the general topography of the Protected Property.
- (e) Removing, destroying, or cutting of trees, shrubs, or other vegetation, except as required for (1) channel maintenance, (2) fire breaks, (3) maintenance of access roads, (4) construction and maintenance of water quality basins and associated outfall structures, or (5) emergency repairs.

4. REMEDIES

If the Service determines that there is a violation of the terms herein or that a violation is threatened, the Service shall give written notice to the County of such violation and demand corrective action sufficient to cure the violation and, where the violation involved injury to the Protected Property resulting from any use or activity inconsistent with the purposes, to restore in accordance with the Army Permit and Biological Opinion the portion of the Protected Property so

injured. If the County fails to cure a violation within sixty (60) days after receipt of notice thereof from the Service, or under circumstances where the violation cannot reasonably be cured within a sixty (60) day period, fails to continue diligently to cure such violation until finally cured, the Service may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms hereof, to enjoin the violation, ex parte as necessary, by temporary or permanent injunction, and to require the restoration of the Protected Property to the condition that existed prior to any such injury. If the Service, in its good faith and reasonable discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the Conservation Values of the Protected Property, the Service may pursue its remedies under this paragraph without prior notice to the County or without waiting for the period provided for the cure to expire. In such event, the Service must provide notice to the County within three (3) days of taking any such action.

The remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity.

Nothing contained herein shall be construed to entitle the Service to bring any action against County for any injury to or change in the Protected Property resulting from causes beyond the County's control, including, without limitation, fire, drought, flood, storm, and earth movement.

5. ACCESS

Service, its employees and agents shall have the right to access the Protected Property at all reasonable times.

6. NOTICE

Any notice or other communication regarding these conservation measures shall be in writing and either served personally or sent by first class mail, postage prepaid, addressed as follows:

Grantee: Col of Sacramento
Public Works Agency
Water Resources Division
827 7th Street, Room 301
Attn: William R. Forrest, P.E.

Service: U.S. Fish and Wildlife Service
Ecological Field Office
3310 El Camino Avenue, Suite 130
Sacramento, CA 95821-6340

or to such other address or person as either entity may from time to time designate by written notice to the other.

7. RECORDATION

This instrument shall be recorded in the official records of Sacramento County as part of the grant deed conveying the property from GRANTOR to GRANTEE.

8. GENERAL PROVISIONS

(a) Controlling Law. The interpretation and performance of this instrument shall be governed by the laws of the State of California, the Federal Endangered Species Act, and other applicable Federal laws.

(b) Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be construed to effectuate the conservation purposes stated herein. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the conservation purposes that would render the provision valid shall be favored over any interpretation that would render it invalid.

(c) Severability. If any provision of this instrument or the application thereof to any person or circumstances, is found to be invalid, the remainder of the provisions, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.

- (d) Successors. The terms, conditions, and restrictions of this instrument shall be binding upon, and inure to the benefit of, GRANTEE, Service and their respective successors and assigns and shall continue as servitudes running in perpetuity with the Protected Property.
- (e) Captions. The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction of interpretation.
- (f) Third-Party Beneficiary. GRANTOR and GRANTEE acknowledge that the Service is a third party beneficiary of the conservation measures contained herein with the right of access to the Protected Property and the right to enforce the terms and conditions hereof.

Christine Heckler

From: Bickerstaff, Emma L <emma_bickerstaff@fws.gov>
Sent: Wednesday, September 27, 2023 4:24 PM
To: Zach Liptak; Cook, Megan T; Perkins-Taylor, Ian E
Cc: Michael Karoly; Samuel Grimm; Kyrsten Shields; 'Jonathan Hernandez'; 'Aaron Silva'; Candice Guider-Heitmann; 'Taylor, Brooks M@DOT'; Jeff Werner; Jennifer Alves
Subject: RE: [EXTERNAL] Laguna Creek Trail and Bruceville Sidewalk - Deed Restriction Letter - CML-5479(053)
Attachments: CML-5479(053)-USFWS Letter Signed-20250525.pdf

[EXTERNAL EMAIL]

Hi Zach,

Apologies for the delayed response to your June 2 email (below) that discusses the proposed re-alignment and encroachment into the deed restricted areas of the Laguna Creek Trail and Bruceville Sidewalk proposed project (proposed project). We appreciate you sending us the letter from the City of Elk Grove (attached), that discusses the proposed project's re-design in relation to reducing encroachments onto three parcels that are currently under deed restriction for the giant garter snake (snake).

Regarding the information provided in the City's letter, while the proposed revised trail alignment and construction will encroach onto a portion of potential snake upland habitat that is within 200 feet of aquatic habitat and contains refugia for the snake (such as small mammal burrows), project-related disturbance to the upland habitat will be temporary during construction implementation and relatively small in scale. Additionally, the proposed new post and cable fencing and interpretive signage will aid in preventing pedestrian disturbance and associated erosion. It appears as though the conservation values of these areas will still be retained upon completion of construction for the following reasons: the small scale of proposed encroachment within areas of already disturbed upland snake habitat in the deed restricted parcels, the proposed trail is not expected to restrict movement of small mammals throughout the site, we anticipate that ground squirrels and other small mammals will continue to inhabit grounds adjacent to the proposed project.

Regarding the forthcoming biological assessment for the proposed project, we recommend incorporating a more detailed effects analysis for the snake including possible project-related impacts to the snake's terrestrial (upland) habitat, in addition to the recommendations we made in July of last year.

Please feel free to contact me with any questions.

Thank you,

Emma Bickerstaff (she/her)
Sacramento Valley Division Biologist
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605, Sacramento, CA 95825
(916) 414-6577

From: Zach Liptak <zliptak@elkgrovecity.org>
Sent: Friday, June 2, 2023 10:07 AM
To: Cook, Megan T <megan_cook@fws.gov>; Perkins-Taylor, Ian E <ian_perkins-taylor@fws.gov>; Bickerstaff, Emma L <emma_bickerstaff@fws.gov>

Cc: Michael Karoly <MKaroly@elkgrovecity.org>; Samuel Grimm <sgrimm@elkgrovecity.org>; 'Kyrsten Shields' <KyrstenS@helixepi.com>; 'Jonathan Hernandez' <jhernandez@markthomas.com>; 'Aaron Silva' <asilva@markthomas.com>; 'Candice Guider-Heitmann' <CandiceGH@helixepi.com>; 'Taylor, Brooks M@DOT' <brooks.taylor@dot.ca.gov>; Jeff Werner <jwerner@elkgrovecity.org>; Jennifer Alves <jalves@elkgrovecity.org>
Subject: [EXTERNAL] Laguna Creek Trail and Bruceville Sidewalk - Deed Restriction Letter - CML-5479(053)

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hello Ian, Megan, and Emma,

During our field visit a few months back on the Laguna Creek Trail and Bruceville Sidewalk Project (CML-5479(053)), the Service requested a letter from property owners (the City of Elk Grove) regarding the proposed trail segments within the GGS deed restricted parcels. We've worked to redesign the trail to avoid the deed restrictions to the maximum extent feasible, including removing the segment of trail across the open field to Bruceville. The attached letter documents the project activities in relation to the deed restrictions, and finds that the proposed trail, in its current alignment, will meet the spirit of the commitments/obligations of the deed restrictions and is permitted to be constructed within the deed restrictions and signed by the City's Public Works Director. The Project will construct post and cable fencing to prevent future trespass into the deed restricted areas as well as signage informing the public of the habitat value and sensitivity of the area to comply with intent of the deed restrictions.

We are currently working to update the Biological Assessment to resume consultation based on the project design changes and we anticipate the letter will also be attached to the BA; however, we would like some preliminary concurrence on the proposed alignment and encroachment into the deed restrictions.

Please let us know if you have any questions, thank you very much !



Zach Liptak | Capital Program Division

Senior Environmental Planner

Contracted with Dokken Engineering

City of Elk Grove

8401 Laguna Palms Way, Elk Grove, CA 95758

Working Remotely, Please use cell: 916.873.0573

elkgrovecity.org

By sending us an email (electronic mail message) or filling out a web form, you are sending us personal information (i.e. your name, address, email address or other information). We store this information in order to respond to or process your

request or otherwise resolve the subject matter of your submission.

Certain information that you provide us is subject to disclosure under the California Public Records Act or other legal requirements. This means that if it is specifically requested by a member of the public, we are required to provide the information to the person requesting it. We may share personally identifying information with other City of Elk Grove departments or agencies in order to respond to your request. In some circumstances we also may be required by law to disclose information in accordance with the California Public Records Act or other legal requirements.

APPENDIX H: REPRESENTATIVE SITE PHOTOGRAPHS

**Appendix H
Representative Photographs**



Photo 1: View of proposed construction staging area; facing northwest.
Date: April 11, 2019.



Photo 2: Typical view of the proposed trail alignment in Segment 1; facing north.
Date: April 11, 2019.

Appendix H Representative Photographs



Photo 3: Existing trail and view of proposed trail alignment in Segment 1; facing west.

Date: March 15, 2023.



Photo 4: Vernal pool in Segment 1; facing north.

Date: March 15, 2023.

**Appendix H
Representative Photographs**



Photo 5: Existing trail and view of proposed trail alignment in Segment 1; facing east.

Date: March 15, 2023.



Photo 6: Depressional seasonal wetland in Segment 1; facing south.

Date: March 15, 2023.

Appendix H Representative Photographs



Photo 7: Representative view of proposed trail alignment in Segment 2; facing east.

Date: August 2, 2021.



Photo 8: Representative view of proposed trail alignment in Segment 2; facing west.

Date: August 2, 2021.

**Appendix H
Representative Photographs**



Photo 9: Depressional seasonal wetland in Segment 1; facing east.
Date: April 11, 2019.



Photo 10: Representative view of riverine perennial marsh in Segment 1;
facing northeast.
Date: January 15, 2020.

Appendix H Representative Photographs



Photo 11: Ditch and view of southern adjunct trail alignment in Segment 1; facing north.

Date: September 2, 2021.



Photo 12: Ditch and view of southern adjunct trail alignment in Segment 1; facing south.

Date: September 2, 2021.

IS/MND Attachment E

Arborist Report

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Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

Arborist Report

City Project Number: WTL019
Federal Project Number: CML-5479(053)

December 2019 | MTT-01

Prepared for:

City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

Prepared by:

HELIX Environmental Planning, Inc.
590 Menlo Drive, Suite 5
Rocklin, CA 95765

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Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

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December 2019 | MTT-01

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TABLE OF CONTENTS

| <u>Section</u> | <u>Page</u> |
|-----------------------------------------------|--------------------|
| 1.0 INTRODUCTION..... | 1 |
| 1.1 Regional Location..... | 1 |
| 1.2 City of Elk Grove Tree Ordinance..... | 1 |
| 2.0 METHODOLOGY | 1 |
| 3.0 RESULTS AND DISCUSSION | 3 |
| 3.1 Surveyed Trees..... | 3 |
| 3.2 Impacts and Mitigation..... | 3 |
| 3.3 Recommended Tree Protection Measures..... | 4 |
| 4.0 REFERENCES..... | 5 |

LIST OF APPENDICES

| | |
|---|---------------------|
| A | Tree Inventory Data |
|---|---------------------|

TABLE OF CONTENTS (cont.)

LIST OF FIGURES

| <u>No.</u> | <u>Title</u> | <u>Follows Page</u> |
|------------|---------------------------------|---------------------|
| 1 | Site and Vicinity..... | 2 |
| 2 | Approximate Tree Locations..... | 2 |

LIST OF TABLES

| <u>No.</u> | <u>Title</u> | <u>Page</u> |
|------------|------------------------------------------------------|-------------|
| 1 | Tree Rating System | 2 |
| 2 | Number of Trees by Health and Structure Ratings..... | 3 |

ACRONYMS AND ABBREVIATIONS

| | |
|-------|--------------------------------------------------------------------|
| City | City of Elk Grove |
| CRZ | critical root zone (1-foot per inch of trunk diameter) |
| DSH | diameter at standard height (54 inches above grade) |
| DLR | dripline radius (length from trunk to tip of longest lateral limb) |
| GPS | Global Positioning System |
| HELIX | HELIX Environmental Planning, Inc. |
| ISA | International Society of Arboriculture |

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1.0 INTRODUCTION

1.1 REGIONAL LOCATION

This report presents the results of a tree survey conducted for the approximately 30.79-acre Laguna Creek Trail and Bruceville Road Sidewalk Improvement project site in the City of Elk Grove, California (Study Area). The Study Area is located approximately one mile west of State Route 99, and is situated south of Sheldon Road, west of Lewis Stein Road, and north of Laguna Boulevard. The project site is located within Township 7 North, Range 5 East, Section 27 of the USGS *Florin, California* 7.5-minute quadrangle (Figure 1). The purpose of this report is to document all the trees on the project site and assess the impacts to them from the proposed project.

1.2 CITY OF ELK GROVE TREE ORDINANCE

The City of Elk Grove (City) regulates the removal, pruning, and impacts to protected trees under the Tree Preservation and Protection Ordinance (Chapter 19.12 of the Municipal Code). Protected trees include trees of local importance, which are defined as any trees of the following species with a trunk diameter at standard height (DSH) of six inches or greater: coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), oracle oak (*Quercus x morehus*), California sycamore (*Platanus racemosa*), and California black walnut (*Juglans hindsii*). The DSH of multi-trunk trees is either measured at the narrowest point between the ground and the branch point or as the cumulative diameter of the largest trunk plus half the diameter of each additional trunk. Additionally, designated Landmark trees, trees in the right-of way or on City property, and trees previously retained during development review or planted as mitigation, are protected. The critical root zone (CRZ) is defined as a circle around the tree with a radius equal to one foot per inch DSH. A tree permit and mitigation are required prior to removal, pruning, or disturbance within the CRZ of any protected tree. Mitigation is required at a 1:1 ratio of trunk inches and may take the form of on-site or off-site planting, payment of in-lieu fees, or preservation of existing protected trees smaller than 6-inches DSH. Mitigation may be waived if the City Arborist determines a tree proposed for removal poses a significant risk to health and safety.

2.0 METHODOLOGY

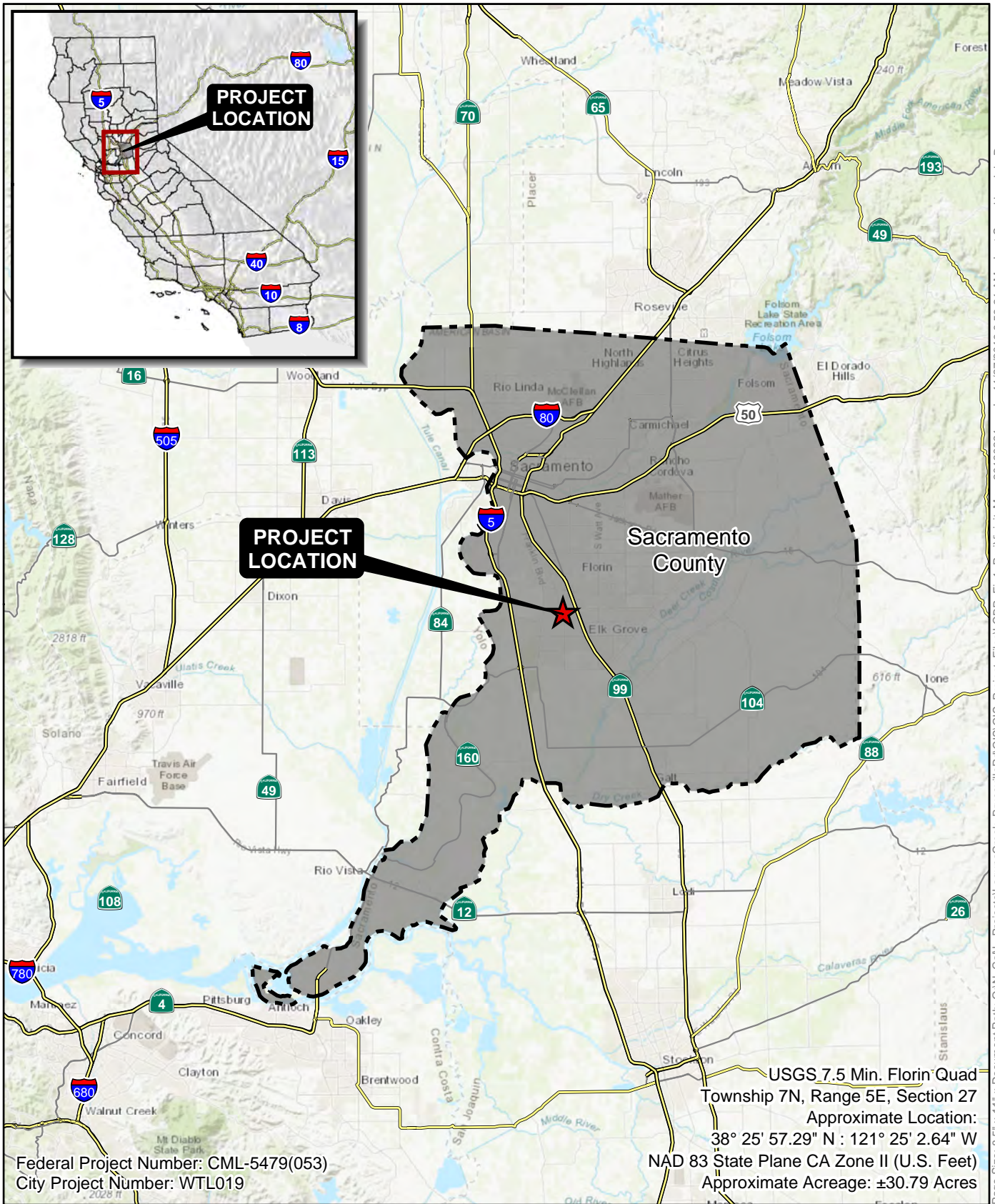
The Study Area was surveyed by International Society of Arboriculture (ISA)-Certified Arborist Charlotte Marks (WE-10519A) on May 3 and 6, 2019. All trees measuring at least four inches in DSH, within or overhanging the Study Area boundary, were inventoried. Each surveyed tree was examined to determine species type and trunk DSH. A diameter tape or calipers were used to verify each trunk diameter at 54 inches above grade (DSH). The measurement from the trunk to the end of the longest lateral limb was used as the approximate dripline radius (DLR). All accessible trees were tagged with a round pre-printed aluminum tag, which correspond to the numbering in Appendix A. Approximate tree locations were mapped using a Trimble GeoXT Global Positioning System (GPS) hand-held unit with sub-meter accuracy. Dead trees were mapped; however, no tree inventory data was collected and these trees were not tagged. Approximate tree locations of surveyed trees are identified in Figure 2.

The health and structural condition of each tree was rated according to the rating system described in Table 1. The health rating considers factors such as the size, color, and density of the foliage; the

amount of deadwood within the canopy; bud viability; evidence of wound closure; and the presence or evidence of stress, disease, nutrient deficiency, and insect infestation. The structural rating reflects the trunk and branch configuration; canopy balance; the presence of included bark and other structural defects such as decay; and the potential for structural failure. In cases where conditions fall between the good, fair, and poor ratings, intermediate ratings fair-good and poor-fair were used.

Table 1
TREE RATING SYSTEM

| | |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Good | There is an average or below-average amount of deadwood/dieback with respect to the tree’s size and growing environment; leaf size, color, and density are typical for the species; buds are normal size, viable, abundant, and uniform throughout the canopy; current and past growth increments are generally average or better; any callusing is vigorous. This health rating indicates that there is very little, if any, evidence of stress, disease, nutrient deficiency, and/or insect infestation. |
| Fair | There is an above-average amount of deadwood/dieback with respect to the tree’s size and growing environment; leaf size, color, and density may be below what is typically expected for the species; buds are normal size and viable, but slightly sparse throughout the canopy; current and past growth increments may be below average; tree may be slow to callus around old wounds. This health rating indicates that there is moderate evidence of stress, disease, nutrient deficiency, and/or insect infestation. |
| Poor | There is an extreme amount of deadwood/dieback with respect to the tree’s size and growing environment; leaf size, color, and density are clearly compromised; very few viable buds are present throughout the canopy; current and past growth increments are meager; no evidence of callusing around old wounds. This health rating indicates that there is widespread evidence of stress, disease, nutrient deficiency, and/or insect infestation. |
| Good | No wounds, cavities, decay, or indication of hollowness are evident in the root crown, trunk, or primary and secondary limbs; no anchor roots are exposed; no codominant branching or multiple trunk attachments are present; very little included bark at branch attachments exists; no dead primary or secondary limbs are present in canopy; there have been no major limb failures; limbs are not overburdened; branching structure is appropriate for species; any decay is limited to small dead branches/stubs. This structure rating represents a low potential for failure. |
| Fair | With respect to the size of the tree, small to moderate wounds, cavities, decay, and indication of hollowness may be evident in the root crown, trunk, and/or primary and secondary limbs; some anchor roots may be exposed; codominant branching or multiple trunk attachments may be present, but included bark does not exist or is not well developed; minor to moderate amounts of included bark at branch attachments may exist; there may be small to moderate amounts of large dead limbs in canopy, but there is no evidence of large limb failures; limbs may be slightly overburdened; branching structure and/or canopy balance may be moderately altered by the tree’s growing environment. This structure rating represents a moderate potential for failure. |
| Poor | With respect to the size of the tree, significant wounds, cavities, decay, and/or indication of hollowness may be evident in the root crown, trunk, and/or primary and secondary limbs; anchor roots may be exposed and/or the tree may have lost anchorage; codominant branching or multiple trunk attachments may be present; significant amounts of included bark may exist in trunk and branch attachments; there may be significant amounts of large dead limbs in the canopy; there may be evidence of trunk or large limb failures; limbs may be severely overburdened; branching structure and/or canopy balance may be drastically altered by the tree’s growing environment. This structure rating represents a high potential for failure. |



Page Size: 8.5" x 11" : Document Path: O:\N_CatL_Projects\LagunaCreek_BrucevilleRd\GIS\GIS_Project_Files\LCBR_Fig1_ProjVicinityMap_20190221.mxd : 11/27/2019 8:59:21 AM : Last Saved by: JohnD

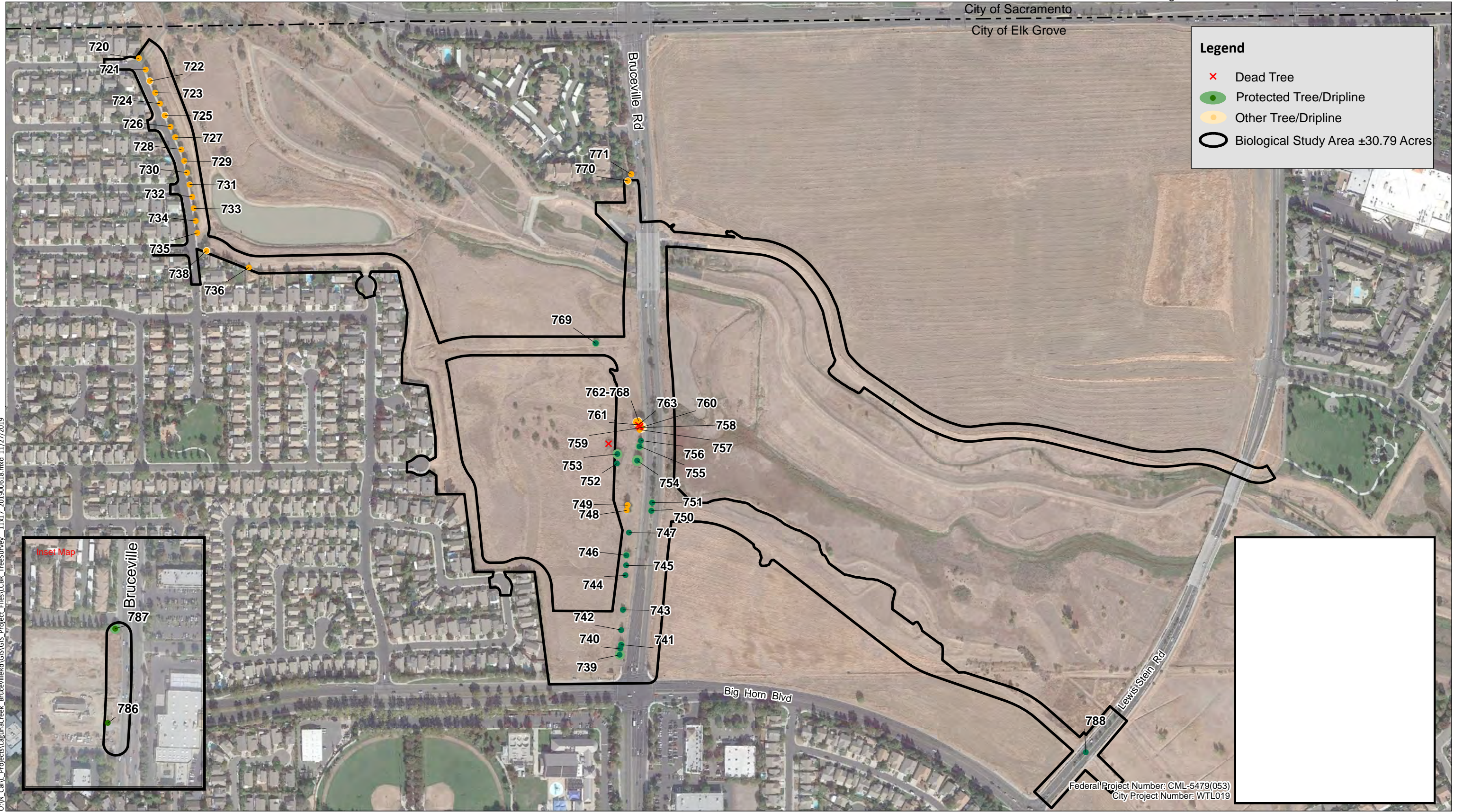
PROJECT VICINITY MAP

| | | | | |
|-----------------------------------------------------------|----------|-----------------------------------------|-------------------------------------------|-----------------|
| <p>HELIX Environmental Planning © 2019</p> | <p>N</p> | <p>0 5 10 Miles 1 : 633,600</p> | <p>Drawn By: JCD Date: 11/27/2019</p> | FIGURE 1 |
|-----------------------------------------------------------|----------|-----------------------------------------|-------------------------------------------|-----------------|

City of Sacramento
City of Elk Grove

Legend

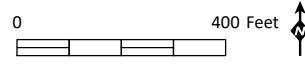
- ✗ Dead Tree
- Protected Tree/Dripline
- Other Tree/Dripline
- Biological Study Area ±30.79 Acres



O:\N_Cal\Projects\LagunaCreek_BrucevilleRd\GIS\Project_Files\LCBR_TreeSurvey_11x17_20190618.mxd 11/27/2019

Federal Project Number: CML-5479(053)
City Project Number: WTL019

Source: Aerial (Google Earth, 2018).



3.0 RESULTS AND DISCUSSION

3.1 SURVEYED TREES

A total of 54 trees were inventoried within the Study Area, consisting of three Callery pear (*Pyrus calleryana*), two Canary Island date palms (*Phoenix canariensis*), 15 black walnut (*Juglans hindsii*), one Fremont cottonwood (*Populus fremontii*), 12 white poplars (*Populus alba*), 16 Chinese pistache (*Pistacia chinensis*), and five valley oaks (*Quercus lobata*). Additionally, four dead trees were mapped within the Study Area. Detailed data on the surveyed trees is included in Appendix A. Approximate locations of surveyed trees are shown on Figure 2 and Table 2 shows the number of surveyed trees by health and structure ratings.

**Table 2
NUMBER OF TREES BY HEALTH AND STRUCTURE RATINGS**

| | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--|----------|-----------|-----------|-----------|----------|----------|-----------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 11 | 17 | 1 | 0 | 0 | 29 |
| | 0 | 0 | 9 | 5 | 0 | 0 | 14 |
| | 0 | 0 | 0 | 11 | 0 | 0 | 11 |
| | 0 | 11 | 26 | 17 | 0 | 0 | 54 |

Just over half of the trees (28) were in Fair health and structure. The remainder had at least moderate structural or health problems. A total of 24 trees are proposed for removal due to poor health and structural condition, as noted in Appendix A. Many of the trees in poor health have moderate to severe trunk rot and/or limb rot, bark wounds, and trunk death, which provide entry points for disease and decay organisms. Structurally, many of them demonstrated multiple trunks, leaning trunks, included bark and asymmetrical canopy which can lead to potential hazard to public safety in the long term. However, dead and dying trees provide vital habitat functions as nest and breeding locations and should be preserved where they do not pose a hazard to people or property.

3.2 IMPACTS AND MITIGATION

Only 20 of the surveyed trees are protected under the Ordinance. Of these protected trees, 14 are recommended for removal due to poor condition. The Study Area is based on preliminary project design and the limits of disturbance may be refined during final design. Once final design plans are developed, a Tree Removal Permit should be obtained from the City of Elk Grove. Mitigation requirements, the exact number and location of trees to be planted or the total amount of the in-lieu payment, will be determined based on the final impacts to protected trees and the recommendation of the City Arborist.

3.3 RECOMMENDED TREE PROTECTION MEASURES

The following measures should be integrated into the construction documents to protect the trees that will remain:

- Tree Protection Fencing, consisting of chain link or four-foot tall, brightly-colored, high-visibility plastic fencing, shall be placed around the perimeter of the CRZ (one foot per inch of trunk diameter) or dripline radius + 1 foot, whichever is greater. This is the minimum distance for placing protective fencing. Tree protection fencing should be placed as far outside of the CRZ as possible. Signs shall be placed along the fence denoting this as a “Tree Protection Zone” that shall not be moved until construction is complete. Trees or tree clusters with canopy extending beyond 50 feet from proposed project boundaries may be fenced only along sides facing the project. In cases where proposed work infringes on the CRZ, fence shall be placed at edge of work;
- Whenever possible, fence multiple trees together in a single CRZ;
- Tree protection fencing shall not be moved without prior authorization from the Project Arborist and the City of Elk Grove, as appropriate;
- No parking, portable toilets, dumping or storage of any construction materials, grading, excavation, trenching, or other infringement by workers or domesticated animals is allowed in the CRZ;
- No signs, ropes, cables, or any other items shall be attached to a protected tree, unless recommended by an ISA-Certified Arborist;
- No tree-toxic materials shall be dumped on the project site (e.g., gasoline, herbicide, salt);
- Prior to the installation of new asphalt, weed control chemicals shall not be applied where they can leach into the dripline of any protected tree;
- Underground utilities should be avoided in the CRZ, but if necessary, shall be bored or drilled. If boring is impossible, all trenching will be done by hand under the supervision of an ISA-Certified Arborist;
- No cut or fill within the dripline of existing protected tree is permitted except as shown on the final development plans. If cut or fill within the dripline is unavoidable, any mitigation requirements shall be determined by the City of Elk Grove, as appropriate;
- Pruning of any retained tree shall be done under the supervision of an ISA-Certified Arborist and in accordance with current ISA standards and ANSI A300 standards;
- All wood plant material smaller than six inches in diameter shall be mulched on site. Resulting mulch shall be spread in a layer four to six inches deep in the CRZ of preserved trees. Mulch shall not be placed touching the trunk of preserved trees; and
- Appropriate fire prevention techniques shall be employed around all significant trees to be preserved. This includes cutting tall grass, removing flammable debris within the CRZ, and prohibiting the use of tools that may cause sparks, such as metal blade trimmers or mowers.

4.0 REFERENCES

City of Elk Grove. 2019. Chapter 19.12: Tree Preservation and Protection Ordinance. Available online at:
<https://www.codepublishing.com/CA/ElkGrove/html/ElkGrove19/ElkGrove1912.html#19.12>.

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Appendix A

Tree Inventory Data

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Appendix A: Tree Inventory Data

| Tree # | Tree Species | # of Trunks | DSH (inches) | DLR (feet) | Height (feet) | Condition | | Protected Tree? | Notes |
|--------|------------------|-------------|--------------|------------|---------------|-----------|-----------|-----------------|--------------------------------------------|
| | | | | | | Health | Structure | | |
| 720 | Chinese pistache | 1 | 7 | 12 | 15 | Fair-Good | Fair | No | included bark |
| 721 | Chinese pistache | 1 | 10 | 12 | 15 | Fair | Fair | No | included bark, dieback |
| 722 | Chinese pistache | 1 | 11 | 15 | 20 | Fair | Fair | No | included bark, limb wound |
| 723 | Chinese pistache | 1 | 9 | 12 | 20 | Fair-Good | Fair | No | included bark, asymmetrical canopy |
| 724 | Chinese pistache | 1 | 6 | 10 | 12 | Fair | Fair | No | included bark, pruning cuts |
| 725 | Chinese pistache | 1 | 10 | 15 | 17 | Fair | Fair | No | exposed roots, included bark |
| 726 | Chinese pistache | 1 | 9 | 10 | 17 | Fair-Good | Fair | No | included bark |
| 727 | Chinese pistache | 1 | 9 | 12 | 17 | Fair | Fair | No | pruning cuts, exposed roots, included bark |
| 728 | Chinese pistache | 1 | 7 | 12 | 15 | Fair | Fair | No | included bark, pruning cuts |
| 729 | Chinese pistache | 1 | 10 | 12 | 15 | Fair | Fair | No | included bark, pruning cuts |
| 730 | Chinese pistache | 1 | 9 | 12 | 15 | Fair-Good | Fair | No | included bark |
| 731 | Chinese pistache | 1 | 9 | 12 | 15 | Fair | Fair | No | included bark, girdled roots |
| 732 | Chinese pistache | 1 | 5 | 6 | 12 | Fair-Good | Fair | No | included bark, pruning cuts |

Appendix A: Tree Inventory Data

| Tree # | Tree Species | # of Trunks | DSH (inches) | DLR (feet) | Height (feet) | Condition | | Protected Tree? | Notes |
|--------|--------------------|-------------|--------------|------------|---------------|-----------|-----------|-----------------|-------------------------------------------------------------------------------------------------------------|
| | | | | | | Health | Structure | | |
| 733 | Chinese pistache | 1 | 8 | 10 | 15 | Fair | Fair | No | included bark, pruning cuts |
| 734 | Chinese pistache | 1 | 8 | 10 | 17 | Fair-Good | Fair | No | included bark, pruning cuts |
| 735 | Chinese pistache | 1 | 12 | 12 | 17 | Fair | Fair | No | included bark, pruning cuts |
| 736 | Callery pear | 6 | 4,2,2,2,2,2 | 6 | 12 | Fair | Fair | No | asymmetrical canopy, pruning cuts, included bark |
| 738 | Fremont cottonwood | 1 | 14 | 15 | 32 | Fair | Fair | No | trunk wound, lean, included bark, trunk rot, limb rot |
| 739 | Black walnut | 1 | 25 | 20 | 27 | Poor-Fair | Poor-Fair | Yes | Recommended for removal; included bark, trunk rot, limb rot, bark damage, limb rot, exfoliating bark |
| 740 | Black walnut | 1 | 11 | 10 | 12 | Poor-Fair | Poor | Yes | Recommended for removal; trunk rot, trunk death, lean, limb rot, crown death, burrow at base |
| 741 | Black walnut | 2 | 14,15 | 15 | 20 | Poor-Fair | Poor-Fair | Yes | Recommended for removal; included bark, lean, trunk rot, limb rot, asymmetrical canopy |
| 742 | Black walnut | 1 | 15 | 10 | 15 | Poor-Fair | Poor-Fair | Yes | Recommended for removal; trunk cavity, included bark, limb rot, trunk rot |
| 743 | Black walnut | 6 | 8,7,4,9,8,5 | 12 | 10 | Poor-Fair | Poor | Yes | Recommended for removal; burrow at base, included bark, trunk rot, weighted limbs |

Appendix A: Tree Inventory Data

| Tree # | Tree Species | # of Trunks | DSH (inches) | DLR (feet) | Height (feet) | Condition | | Protected Tree? | Notes |
|--------|-------------------------|-------------|----------------|------------|---------------|-----------|-----------|-----------------|-------------------------------------------------------------------------------------------------------------|
| | | | | | | Health | Structure | | |
| 744 | Black walnut | 4 | 9,6,5,2 | 8 | 6 | Poor-Fair | Poor | Yes | Recommended for removal; trunk death, trunk rot, included bark, crown death, limb rot |
| 745 | Black walnut | 3 | 7,8,6 | 4 | 10 | Poor-Fair | Poor | Yes | Recommended for removal; basal cavity, included bark, trunk rot |
| 746 | Black walnut | 1 | 18 | 15 | 15 | Fair | Poor-Fair | Yes | Recommended for removal; lean, trunk rot, included bark, limb rot |
| 747 | Black walnut | 1 | 6 | 6 | 6 | Poor-Fair | Poor | Yes | Recommended for removal; multiple trunk deaths, trunk rot, trunk cavity, limb rot |
| 748 | Canary Island date palm | 1 | 21 | 10 | 27 | Fair-Good | Fair | No | bark damage |
| 749 | Canary Island date palm | 1 | 23 | 12 | 35 | Fair-Good | Fair | No | burrows at base, bark damage |
| 750 | Valley oak | 1 | 10 | 15 | 25 | Fair | Poor-Fair | Yes | lean, epicormic growth, dieback, trunk scars |
| 751 | Valley oak | 1 | 10 | 15 | 25 | Poor-Fair | Fair | Yes | slight lean, included bark, dieback |
| 752 | Black walnut | 5 | 3,5,5,4,2 | 10 | 8 | Poor-Fair | Poor | Yes | Recommended for removal; trunk rot, limb rot, included bark, slight lean |
| 753 | Black walnut | 6 | 10,10,6,12,9,6 | 20 | 17 | Fair | Poor-Fair | Yes | Recommended for removal; multiple trunks at the base, included bark, trunk rot, limb rot, limb death |

Appendix A: Tree Inventory Data

| Tree # | Tree Species | # of Trunks | DSH (inches) | DLR (feet) | Height (feet) | Condition | | Protected Tree? | Notes |
|--------|--------------|-------------|--------------|------------|---------------|-----------|-----------|-----------------|----------------------------------------------------------------------------------------------------------------------|
| | | | | | | Health | Structure | | |
| 754 | Black walnut | 2 | 13, 11 | 22 | 27 | Poor-Fair | Poor | Yes | Recommended for removal; hollow at base , burrow at base, trunk rot, multiple trunk deaths, lean, bark damage |
| 755 | Black walnut | 5 | 7,9,9,11,5 | 17 | 20 | Poor-Fair | Poor | Yes | Recommended for removal; multiple trunks at the base, trunk rot, included bark, lean, limb rot |
| 756 | Black walnut | 3 | 10,8,9 | 10 | 12 | Poor-Fair | Poor-Fair | Yes | Recommended for removal; trunk rot, trunk deaths , included bark, limb rot |
| 757 | White poplar | 1 | 6 | 8 | 17 | Poor-Fair | Poor-Fair | No | Recommended for removal; trunk rot, lean, included bark, trunk death |
| 758 | White poplar | 1 | 4 | 6 | 15 | Poor-Fair | Poor | No | Recommended for removal; multiple trunk deaths, included bark, lean, trunk rot, fungus |
| 759 | White poplar | 2 | 11,10 | 12 | 22 | Fair | Poor-Fair | No | Recommended for removal; included bark, lean, trunk rot, exfoliating bark |
| 760 | White poplar | 2 | 4,7 | 22 | 17 | Poor-Fair | Poor | No | Recommended for removal; lean, trunk death, exfoliating bark, trunk rot, included bark |
| 761 | White poplar | 1 | 8 | 8 | 27 | Fair | Poor-Fair | No | Recommended for removal; lean, trunk rot, limb death |
| 762 | White poplar | 3 | 10,9,7 | 15 | 22 | Fair | Poor-Fair | No | Recommended for removal; lean, multiple trunks at the base, trunk rot |
| 763 | White poplar | 3 | 6,11,9 | 12 | 20 | Fair | Poor-Fair | No | Recommended for removal; lean, included bark, multiple trunks at the base, bark damage |

Appendix A: Tree Inventory Data

| Tree # | Tree Species | # of Trunks | DSH (inches) | DLR (feet) | Height (feet) | Condition | | Protected Tree? | Notes |
|--------|--------------|-------------|---------------------------|------------|---------------|-----------|-----------|-----------------|--------------------------------------------------------------------------------------|
| | | | | | | Health | Structure | | |
| 764 | White poplar | 1 | 5 | 8 | 10 | Poor-Fair | Poor | No | Recommended for removal; epicormic growth, lean, trunk rot, crown death |
| 765 | White poplar | 1 | 9 | 15 | 25 | Fair | Poor-Fair | No | Recommended for removal; lean, epicormic growth, included bark |
| 766 | White poplar | 1 | 4 | 15 | 20 | Fair | Fair | No | lean, epicormic growth |
| 767 | White poplar | 4 | 4,3,6,2 | 15 | 17 | Fair | Poor-Fair | No | multiple trunks at the base, included bark, limb rot; Recommended for Removal |
| 768 | White poplar | 5 | 10,10,11,6,9 | 15 | 27 | Fair | Fair | No | multiple trunks at the base, lean, included bark |
| 769 | Black walnut | 13 | 2,4,3,4,4,4,4,3,3,5,6,5,7 | 15 | 17 | Fair | Fair | Yes | included bark, weighted limbs, limb rot |
| 770 | Callery pear | 1 | 16 | 15 | 27 | Fair-Good | Fair | No | power lines, included bark, pruning cut scars |
| 771 | Callery pear | 1 | 11 | 12 | 25 | Fair | Fair | No | exposed roots, included bark, pruning cut scars |
| 786 | Valley oak | 2 | 3,7 | 6 | 12 | Fair-Good | Fair | Yes | included bark |
| 787 | Valley oak | 2 | 13,11 | 20 | 32 | Fair-Good | Fair | Yes | included bark, asymmetrical canopy, slight lean, dieback |
| 788 | Valley oak | 1 | 6 | 6 | 20 | Fair | Fair | Yes | included bark, dieback |

IS/MND Attachment F

Historic Property Survey Report/
Archaeological Survey Report

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HISTORIC PROPERTY SURVEY REPORT**1. UNDERTAKING DESCRIPTION AND LOCATION**

| <i>District</i> | <i>County</i> | <i>Federal Project Number. (Prefix, Agency Code, Project No.)</i> | <i>Location</i> |
|-----------------|---------------|-----------------------------------------------------------------------|----------------------------------|
| 3 | SAC | CML-5479 (053) | Elk Grove, Sacramento County, CA |

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA), as well as under Public Resources Code 5024 and pursuant to the January 2015 *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Office Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92, addended 2019* (5024 MOU) as applicable.

Project Description:

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalk improvements along Bruceville Road. The Laguna Creek Trail and Bruceville Road Sidewalks Project (Project) site is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, California, approximately 0.5 mile west of State Route 99 (SR-99), and approximately 3 miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East on the U.S. Geological Survey (USGS) Florin, California (CA) 7.5-minute quadrangle (38° 25' 13" North, 121° 27' 48" West) (Figure 1, Project Vicinity Map, and Figure 2, Project Location Map).

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway) with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings (Figure 3, Proposed Project). A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalk. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

2. AREA OF POTENTIAL EFFECTS

In accordance with Section 106 PA Stipulation VIII.A, the Area of Potential Effects (APE) for the project was established in consultation with Lisa Machado, Caltrans Professional Qualified Staff (PQS): PI-Historical Archaeology and Co-PI-Prehistoric Archaeology, and Ross Foon, Project Local Assistance Engineer, on September 8, 2021. The APE maps are located in Attachment A in this Historic Property Survey Report. The APE was established as 22.13 acres and encompasses all areas where potential direct and indirect impacts to cultural resources could

HISTORIC PROPERTY SURVEY REPORT

occur as a result of Project construction, operation, and maintenance. The APE includes the trail and sidewalk segments, staging area, culvert crossings, and utility relocation. The width of the APE ranges from 60 feet to 100 feet to account for the 10-foot wide path with 2-foot wide shoulders for the trail and sidewalk segments. The APE is depicted on the Florin 7.5-minute USGS quadrangle in Section 27 of Township 7 North, Range 5 East, Mount Diablo Baseline and Meridian.

Partial right of way acquisition (ROW) is required for Assessor's Parcel Numbers (APNs) 116-0011-002-0000, 116-0011-004-0000, 116-0011-094-0000, 116-0011-097-0000, 116-0011-102-0000, 116-0012-048-0000, 116-0012-064-0000, 116-1210-100-0000, 116-1280-059-0000, 116-1270-033-0000, 116-1270-039-0000, and 116-1390-071-0000.

These parcels are undeveloped and would be traversed by the proposed trail alignment. The vertical APE is the maximum depth of any Project related ground disturbing work. The maximum depth of ground disturbance would be 4.5-feet for guardrail post and approximately 5-foot maximum for drainage ditches/culverts associated with the trail and 2-feet for the trail. A maximum depth of ground disturbance of 2-feet may occur within the landscaping strip between the existing sidewalk and the bike trail, parallel to Big Horn Road where existing soils will be replaced with planting soils.

3. CONSULTING PARTIES / PUBLIC PARTICIPATION Native American Heritage Commission

A Sacred Lands File (SLF) search was requested by Cogstone from the NAHC on May 3rd, 2019. The NAHC responded on May 24th, 2019 that there are no known sacred lands within the APE.

 Native American Tribes, Groups and Individuals

- Colfax-Todds Valley Consolidated Tribe - Ms. Pamela Cubbler, Treasurer: On July 8, 2019 Ms. Cubbler stated via phone that the tribe defers to the Wilton Rancheria and has no further comment.
- Ione Band of Miwok Indians - Cynthia Turner, Administrator: On July 8, 2019 Ms. Turner requested on behalf of Chairperson Sara Dutschke Setchwaelo via phone that the consultation letter be forwarded to the Tribe's consultation committee. The letter was forwarded via email on the same day. No further response has been received.
- Shingle Springs Band of Miwok Indians - Cultural Resources Director Daniel Fonseca: On June 21, 2019, Mr. Fonseca responded via email stating that the Tribe was not aware of any cultural resources within the Project Site but request copies of project documents including record search and survey results, as well as

HISTORIC PROPERTY SURVEY REPORT

environmental, archaeological, and cultural reports. Requested documentation was sent to the Tribe on June 24, 2021.

- United Auburn Indian Community – Cheryl Neider responded on April 26, 2019 by email and offered migration measures that address inadvertent discoveries and the inclusion of a tribal cultural resources section in the Worker Environmental Awareness and Protection training. On May 10, 2019, Amy Dunay, Senior Environmental Planner, City of Elk Grove responded with edited mitigation measures, said that draft documents would be sent when available and asked if electronic or hard copies were preferred, and noted that Wilton Rancheria had also requested consultation. On May 14, 2019 Ms. Neider responded that electronic copies are fine. Requested documentation was sent to the Tribe on June 24, 2021.

Anna Starkey, Cultural Regulatory Specialist: responded via email on July 23, 2019 stating the tribe is not aware of any resources within the APE and requests digital copies of the cultural report and copies of the environmental report being prepared. They also have recommended two mitigation measures, one for inadvertent discoveries of TCRs and the other for worker awareness training.

- Wilton Rancheria – On May 8, 2019, Mariah Mayberry, Administrator Assistant requested by email that Wilton Rancheria tribal representatives be allowed to observe and participate in all cultural resource studies, including pedestrian surveys, geoarchaeology, phases testing, forensic canine surveys, and other management work for the project. Ms. Mayberry also requested that all existing cultural resource documentation, including, Sacred Lands File checks, ethnographic studies, records searches, and previous studies and records be sent to Wilton Rancheria. She also stated that it is “Wilton Rancheria’s policy is to protect and preserve tribal cultural resources in place to avoid impacts and assist with mitigating for significant impacts whenever possible. Work in known cemeteries (mounds/burials), cultural areas, subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria and receiving Wilton Rancheria’s written consent on a project or site-specific plan or agreement. Requested documentation was sent to the Tribe on June 24, 2021.

Mariah Mayberry, Administrator Assistant, responded via email on June 11, 2019 asking for the results of the pedestrian survey. Cogstone followed up by email on June 24, 2019. On June 24, 2019, The Tribe’s Department of Cultural Preservation responded that the Tribe did not wish to engage in AB52 consultations but requested all environmental documentation for the Project. Cogstone again followed up by email on July 10, 2019 unaware of this response.

HISTORIC PROPERTY SURVEY REPORT

- Local Historical Society / Historic Preservation Group (also if applicable, city archives, etc.)

Elk Grove Historical Society: An email requesting consultation with the Elk Grove Historical Society was sent on June 21, 2019. On July 9, 2019, a response was received from historian Louis Silveira, who stated that he would contact knowledgeable residents as well as local historians for information on the APE. On July 9 and 10, 2019 Cogstone received responses from Elk Grove locals Dave Lema, Jim Entrican, and Town Historian, Elizabeth Pinkerton. All replied that there is no known historic significance to the property associated with APN: 11600110040000. Mr. Silveira further stated on July 16, 2019 that the property at APN 11600110040000 was owned by “Alar R Wightman” until 1903 or later.

4. SUMMARY OF IDENTIFICATION EFFORTS

- National Register of Historic Places (NRHP)
- California Register of Historical Resources (CRHR)
- California Historical Landmarks (CHL)
- Other Sources consulted: United States Geological Survey (USGS) topographic quadrangle maps; United States Department of Agriculture (USDA) aerial photographs; and Bureau of Land Management (BLM) General Land Office Records.
- Results:
- A California Historical Resources Information System (CHRIS) records search was conducted by the North Central Information Center (NCIC) on April 15, 2019. A total of 44 cultural resources investigations have been completed previously within a one-mile radius of the APE. Of these, four studies included portions of the APE.
 - One cultural resource, the Olen Ranch Complex (P-34-000707/CA-SAC-549H), was identified within the APE by the record search. The Olen Complex was recorded in 1995 as a small ranch consisting of a house, barn, milk house, shed, and mobile home. Pedestrian survey of the APE on June 12, 2019 found the entire Olen Ranch Complex demolished and the site cleared since its documentation in 1995. No structural features or artifacts of any kind were observed. The resource is no longer within the APE.
 - A total of 44 cultural resources have been recorded outside the APE but within the one-mile radius. Of these, 41 are historic built environment resources, one is a historic linear resource, one is a historic cemetery, and one is a historic bridge.
 - Tim Spillane, Cogstone Principal Investigator for Archaeology, completed the intensive pedestrian survey of the entire APE on June 12, 2019.
- California Points of Historical Interest
- California Historical Resources Information System (CHRIS)
- Caltrans Historic Bridge Inventory

HISTORIC PROPERTY SURVEY REPORT

- The survey newly identified P-34-005386 (CA-SAC-001278H), a historic foundation and refuse site located within APN 11600110040000 on the west side of Bruceville Road approximately 745 feet north of Big Horn Boulevard.

5. PROPERTIES IDENTIFIED

- John Gust, Ph.D., who meets the Professionally Qualified Staff (PQS) Standards in Section 106 PA Attachment 1 as a Principal Investigator - Historical Archaeology, has determined that the only other properties present within the APE meet the criteria for Section 106 PA Attachment 4 (**Properties Exempt from Evaluation**).
- Caltrans, in accordance with Section 106 PA Stipulation VIII.C.5 and as applicable PRC 5024 MOU Stipulation VIII.C.5 has determined there are cultural resources within the APE that were **previously determined not eligible** for inclusion in the NRHP with SHPO concurrence and those determinations remain valid. Copy of SHPO/Keeper correspondence is attached.
 - Bridges listed as **Category 5** (previously determined not eligible for listing in the NRHP) in the Caltrans Historic Bridge Inventory are present within the APE and those determinations remain valid. Appropriate pages from the Caltrans Historic Bridge Inventory are attached.
 - 24C0405 Laguna Creek
- The following archaeological sites within the APE are **considered eligible** for inclusion in the NRHP for the purposes of this project only because they will be protected in their entirety from any potential effects through the establishment of an Environmentally Sensitive Area (ESA), in accordance with Section 106 PA Stipulation VIII.C.3. See attached documentation.
 - P-34-005386 (CA-SAC-001278H)

6. FINDING FOR THE UNDERTAKING

- Caltrans, pursuant to Section 106 PA Stipulation X.B.2, has determined a **Finding of No Adverse Effect (without Standard Conditions)** is appropriate for this undertaking, and requests SHPO's concurrence in this determination.

7. CEQA CONSIDERATIONS

- Not applicable; **Caltrans is not the lead agency under CEQA.**

HISTORIC PROPERTY SURVEY REPORT

8. LIST OF ATTACHED DOCUMENTATION

- Project Vicinity, Location, and APE Maps: Attachment A (Figures 1, 2, 3)
- California Historic Bridge Inventory Sheet: Attachment B
- Archaeological Survey Report (ASR): Attachment C
- Archaeological Evaluation Report (AER, PII): Attachment D
- Finding of Effect (FOE): Attachment E
- Environmentally Sensitive Area (ESA) Action Plan: FOE, Attachment C

9. HPSR PREPARATION AND CALTRANS APPROVAL

Prepared by: Molly Valasik 8/25/2023
Molly Valasik, M.A., RPA, Principal Investigator Date
Prehistoric Archaeology
Affiliation: Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865

Reviewed for approval by:

District 3 Caltrans Katie Vallaire, Caltrans District 3 PQS Date
PQS discipline/level: PI-Historical Archaeology

Approved by: _____
District 3 EBC Laura Loeffler, Senior Environmental Planner Date

ATTACHMENT A: MAP EXHIBITS

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project

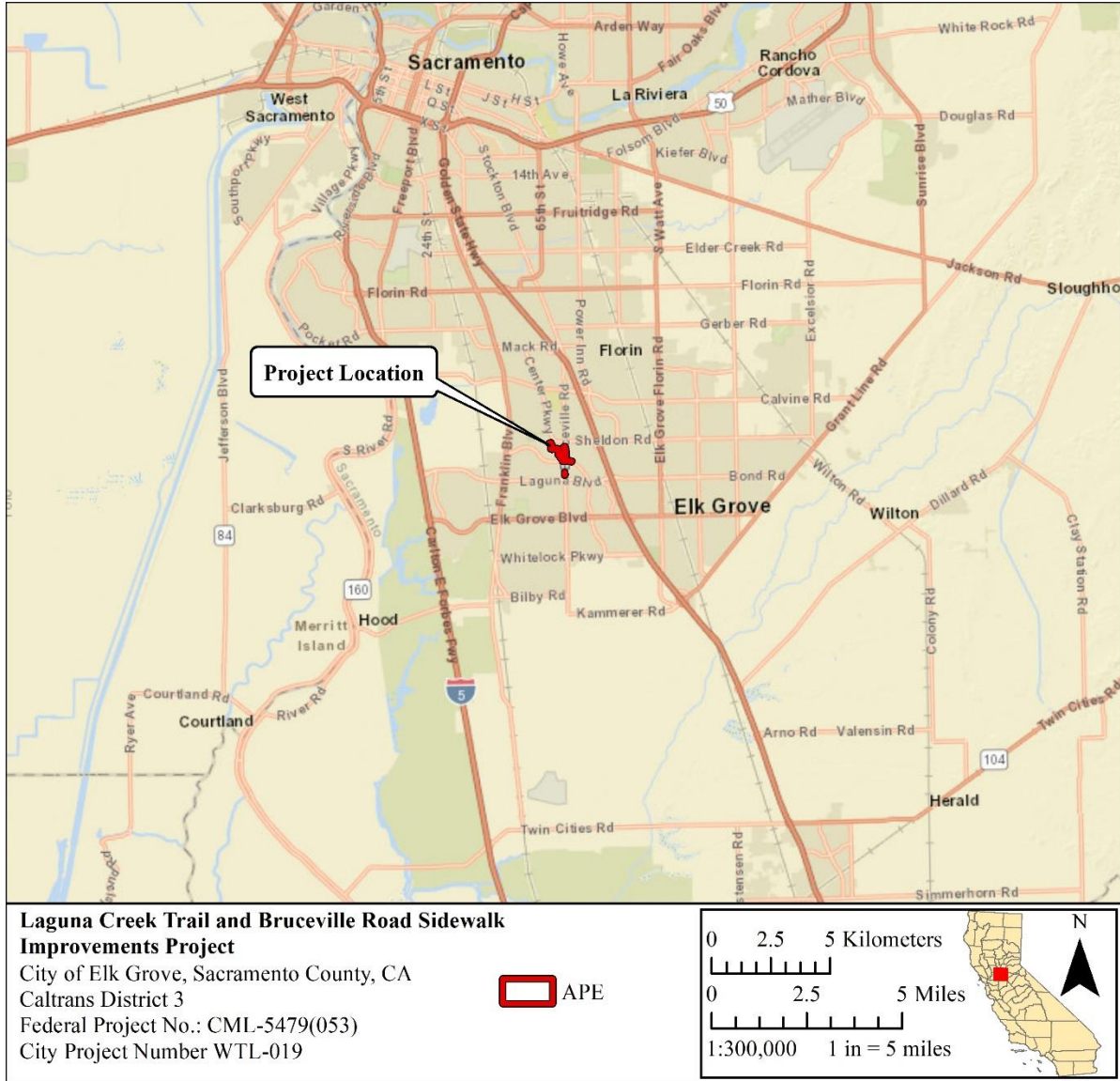
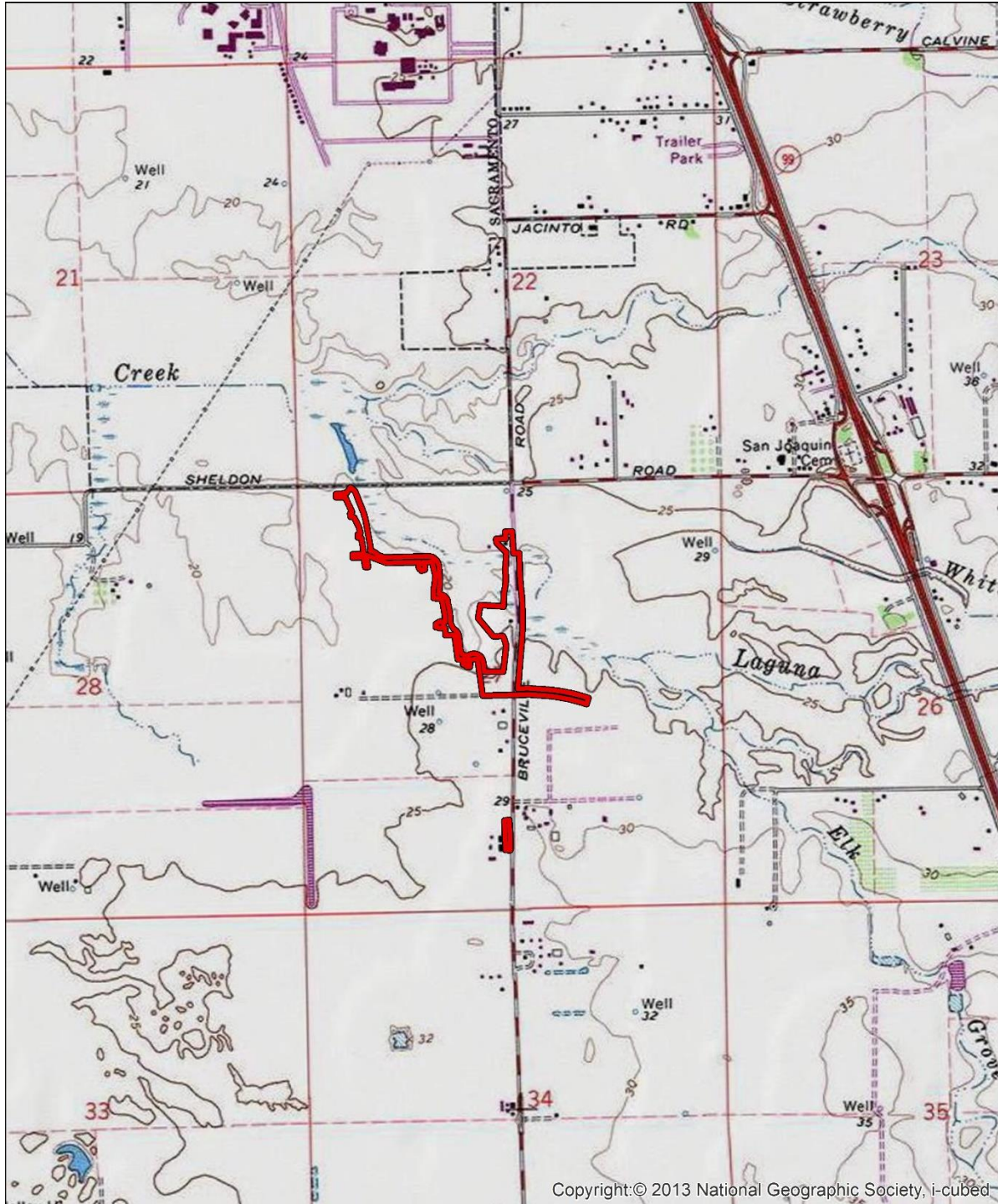



Figure 1. Project Vicinity Map



Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project
 City of Elk Grove, Sacramento County, CA
 Caltrans District 3
 Federal Project No.: CML-5479(053)
 City Project Number WTL-019

 APE
 USGS 7.5' Quad:
 FLORIN

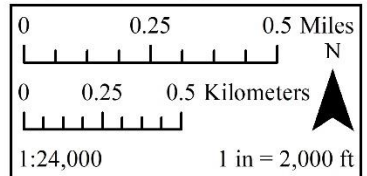


Figure 2. Project Location Map



Figure 3A. Project APE, Overview Map



Figure 3B. Project APE, Map 1 of 3



Figure 3C. Project APE, Map 2 of 3



Figure 3D. Project APE, Map 3 of 3

ATTACHMENT B: CALTRANS BRIDGE INVENTORY



**Structure Maintenance &
Investigations**



Historical Significance - Local Agency Bridges

| District 03 | | | | | | |
|-------------------|--------------------------------------------|---------------------------|---------------------------------|------------|--------------|--|
| Sacramento County | | | | | | |
| Bridge Number | Bridge Name | Location | Historical Significance | Year Built | Year Wid/Ext | |
| 24C0374 | MAIN CANAL | 1/4 MI S LITTLE RIVER WAY | 5. Bridge not eligible for NRHP | 1983 | | |
| 24C0375 | RIO LINDA CREEK | 2 MI S/O E ST | 5. Bridge not eligible for NRHP | 1984 | | |
| 24C0376 | RIO LINDA CREEK | .1 MI S/O E ST | 5. Bridge not eligible for NRHP | 1984 | | |
| 24C0377 | MAGPIE CREEK | .1 MI E/O NORWOOD AVE | 5. Bridge not eligible for NRHP | 1984 | | |
| 24C0378 | HOLIDAY INN PARKING STRUCTURE ACCESS RD OC | E/O 3RD ST | 5. Bridge not eligible for NRHP | 1983 | | |
| 24C0379 | NATOMAS EAST MAIN DRAIN VIADUCT | 0.3 MI E OF NORTHGATE BLV | 5. Bridge not eligible for NRHP | 2000 | | |
| 24C0380 | LAGUNA CREEK | 0.18 MI W ELK GR FLORIN R | 5. Bridge not eligible for NRHP | 1972 | 1995 | |
| 24C0381 | ELK GROVE CREEK | 0.1 MI N ELK GROVE BLVD | 5. Bridge not eligible for NRHP | 1977 | | |
| 24C0382L | EAST DRAINAGE CANAL | 0.1 MI. E. OF TRUXEL RD | 5. Bridge not eligible for NRHP | 1988 | | |
| 24C0382R | EAST DRAINAGE CANAL | 0.1 MI. E. OF TRUXEL RD | 5. Bridge not eligible for NRHP | 1986 | | |
| 24C0383 | ANTELOPE ROAD OVERHEAD | 0.2 MI W OF ROSEVILLE RD | 5. Bridge not eligible for NRHP | 1990 | | |
| 24C0384 | WILLOW CREEK | 0.6 MI S OF E BIDWELL RD | 5. Bridge not eligible for NRHP | 1986 | | |
| 24C0386 | WILLOW CREEK | 0.5 MI S. OF BLUE RAVINE | 5. Bridge not eligible for NRHP | 1988 | | |
| 24C0387 | HUMBUG CREEK | 200' S. OF BLUE RAVINE RD | 5. Bridge not eligible for NRHP | 1988 | | |
| 24C0389 | MORRISON CREEK | SOUTH OF 53RD AVE | 5. Bridge not eligible for NRHP | 1961 | | |
| 24C0390 | FLORIN CREEK | SOUTH OF ORANGE AVE | 5. Bridge not eligible for NRHP | 1973 | | |
| 24C0391 | ARCADE CREEK | BTWN LIALANA W MAUAND WY | 5. Bridge not eligible for NRHP | 1960 | | |
| 24C0392 | MARIPOSA CREEK | JUST NORTH OF COOK AVE | 5. Bridge not eligible for NRHP | 1960 | 1990 | |
| 24C0393 | MARIPOSA CREEK | 0.07 MI W MARIPOSA AVE. | 5. Bridge not eligible for NRHP | 1983 | | |
| 24C0394 | CRIPPLE CREEK | 0.1 MI S TWIN OAKS AVE | 5. Bridge not eligible for NRHP | 1983 | | |
| 24C0395 | ARCADE CREEK | 0.16 MI N GREENBACK LN | 5. Bridge not eligible for NRHP | 1976 | | |
| 24C0396 | ARCADE CREEK | 0.17 MI N GREENBACK LN | 5. Bridge not eligible for NRHP | 1980 | | |
| 24C0397 | CRIPPLE CREEK | EAST INDIAN RIVER DR | 5. Bridge not eligible for NRHP | 1980 | | |
| 24C0398 | ARCADE CREEK | 0.1 MI S CROSSWOODS PKWY | 5. Bridge not eligible for NRHP | 1970 | | |
| 24C0399 | ARCADE CREEK | 0.3 MI S CROSSWOODS PKWY | 5. Bridge not eligible for NRHP | 1975 | | |
| 24C0400 | CRIPPLE CREEK | 0.15 MI E VAN MAREN WY | 5. Bridge not eligible for NRHP | 1970 | | |
| 24C0401 | NATOMAS EAST TRIBUTARY NO 1 | 0.85 MI N ELVERTA RD | 5. Bridge not eligible for NRHP | 1963 | | |
| 24C0402 | RIO LINDA CREEK | BTWN CHAN DR & LARY WAY | 5. Bridge not eligible for NRHP | 1971 | | |
| 24C0403 | CARMICHAEL CREEK | SAN LORENZO WAY | 5. Bridge not eligible for NRHP | 1964 | | |
| 24C0404 | BRANCH LAGUNA CREEK | 4 MI S DILLARD RD | 5. Bridge not eligible for NRHP | 1955 | 1975 | |
| 24C0405 | LAGUNA CREEK | 0.15 MI S SHELDON RD | 5. Bridge not eligible for NRHP | 1970 | 1998 | |
| 24C0406 | FLORIN CREEK | JUST SOUTH FLORIN RD | 5. Bridge not eligible for NRHP | 1968 | | |
| 24C0407 | FLORIN CREEK | 0.1 MI N FLORIN RD | 5. Bridge not eligible for NRHP | 1966 | | |
| 24C0408 | ELDER CREEK | 0.4 MI S FLORIN RD | 5. Bridge not eligible for NRHP | 1966 | | |
| 24C0409 | WILLOW CREEK | 0.1 MI W FOLSOM BLVD | 5. Bridge not eligible for NRHP | 1984 | | |
| 24C0410 | SAN JUAN CREEK | 0.4 MI N GREENBACK LANE | 5. Bridge not eligible for NRHP | 1967 | | |
| 24C0411 | BOYD STATION DRAINAGE CHANNEL | 0.5 MI W ROUTIERS RD | 5. Bridge not eligible for NRHP | 1978 | | |
| 24C0412 | STRONG RANCH SLOUGH | 0.25 MI E HOWE AVE | 5. Bridge not eligible for NRHP | 1971 | | |
| 24C0413 | NATOMAS DITCH | 0.44 MI N FOLSOM BLVD | 5. Bridge not eligible for NRHP | 1960 | | |
| 24C0414 | CARMICHAEL CREEK | 0.3 MI E CALIFORNIA AVE | 5. Bridge not eligible for NRHP | 1959 | | |
| 24C0415 | CHICKEN RANCH SLOUGH | 0.1 MI E OF HOWE AVE | 5. Bridge not eligible for NRHP | 1972 | | |
| 24C0416 | STRONG RANCH SLOUGH | 0.22 MI E FULTON AVE | 5. Bridge not eligible for NRHP | 1972 | | |
| 24C0417 | CRIPPLE CREEK TRIBUTARY | 0.35 MI EAST OF I-80 | 5. Bridge not eligible for NRHP | 1959 | 1970 | |

hs_local.rdf

Attachment C. ASR

**ARCHAEOLOGICAL SURVEY REPORT FOR THE
LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD
SIDEWALK IMPROVEMENTS PROJECT,
SACRAMENTO COUNTY, CALIFORNIA**

Federal Project CML-5479 (053); City Project WTL019

Prepared for:
California Department of Transportation – District 3
703 B St, Marysville, CA 95901

and

City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758

Prepared by: Molly Valasik 08/25/2023
Molly Valasik, M.A., RPA Date
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Authors: Molly Valasik, M.A., RPA, John Gust, PhD, RPA, Holly Duke, B.A., and Kim Scott, M.S.

Reviewed by: _____
Katie Vallaire, PQS Date
PI-Historical Archaeology
Caltrans District 3

Approved by: _____
Laura Loeffler Date
Senior Environmental Planner
Caltrans District 3

USGS 7.5-Minute Quadrangle: Florin 1980;
20.16 Acres

Cultural Resources: Olen Ranch Complex (P-34-000707/CA-SAC-549H); Historic foundation and refuse site (P-34-005386/CA-SAC-001278H)

**August
2023**

TABLE OF CONTENTS

| | |
|---------------------------------------------------------------------------------|------------|
| TABLE OF CONTENTS | I |
| LIST OF FIGURES..... | II |
| LIST OF TABLES..... | II |
| SUMMARY OF FINDINGS | III |
| INTRODUCTION | 1 |
| REGULATORY ENVIRONMENT | 1 |
| <i>NATIONAL HISTORIC PRESERVATION ACT.....</i> | <i>1</i> |
| <i>NATIONAL REGISTER OF HISTORIC PLACES.....</i> | <i>1</i> |
| <i>NATIONAL ENVIRONMENTAL PROTECTION ACT</i> | <i>2</i> |
| <i>ANTIQUITIES ACT.....</i> | <i>2</i> |
| PROJECT LOCATION AND DESCRIPTION | 3 |
| PROJECT LOCATION | 3 |
| PROJECT DESCRIPTION | 3 |
| <i>TRAIL DESIGN.....</i> | <i>3</i> |
| <i>ROADS AND SIDEWALKS.....</i> | <i>4</i> |
| <i>CULVERT CROSSINGS AND HYDROLOGY.....</i> | <i>4</i> |
| <i>ROAD CROSSINGS AND SIGNAGE.....</i> | <i>5</i> |
| <i>UTILITIES.....</i> | <i>5</i> |
| <i>CONSTRUCTION</i> | <i>5</i> |
| AREA OF POTENTIAL EFFECTS | 5 |
| SOURCES CONSULTED..... | 6 |
| CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM | 6 |
| <i>P-34-000707 (CA-SAC-549H)</i> | <i>12</i> |
| OTHER SOURCES | 12 |
| HISTORICAL CONSULTATION..... | 14 |
| NATIVE AMERICAN CONSULTATION | 14 |
| BACKGROUND | 16 |
| ENVIRONMENTAL SETTING | 16 |
| <i>GEOLOGY, HYDROLOGY, AND SOILS.....</i> | <i>16</i> |
| <i>CLIMATE, FLORA/ FAUNA, AND CURRENT LAND USE.....</i> | <i>17</i> |
| GEOARCHAEOLOGICAL SENSITIVITY ANALYSIS..... | 17 |
| <i>STRATIGRAPHY.....</i> | <i>17</i> |
| <i>METHODS.....</i> | <i>17</i> |
| <i>RESULTS.....</i> | <i>18</i> |
| ETHNOGRAPHY..... | 20 |
| PREHISTORIC SETTING..... | 22 |
| <i>PALEOINDIAN AND LOWER ARCHAIC PERIODS (11,500–5,550 CAL B.C.)</i> | <i>23</i> |
| <i>MIDDLE ARCHAIC PERIOD/WINDMILLER PATTERN (5550–550 CAL B.C.)</i> | <i>23</i> |
| <i>UPPER ARCHAIC PERIOD/BERKELEY PATTERN (550 CAL B.C.–CAL A.D. 1100)</i> | <i>24</i> |
| <i>EMERGENT PERIOD/AUGUSTINE PATTERN (CAL A.D. 1100–HISTORIC CONTACT).....</i> | <i>25</i> |
| HISTORICAL SETTING | 26 |
| <i>SPANISH PERIOD (1769-1822).....</i> | <i>26</i> |
| <i>MEXICAN PERIOD (1822-1848).....</i> | <i>26</i> |
| <i>AMERICAN PERIOD (1848-PRESENT).....</i> | <i>27</i> |
| <i>LOCAL HISTORY</i> | <i>27</i> |
| <i>APE HISTORY.....</i> | <i>28</i> |

FIELD METHODS.....29
STUDY FINDINGS AND CONCLUSIONS29
 CULTURAL RESOURCES WITHIN THE APE.....30
 OTHER RESOURCES.....31
CONCLUSIONS32
REFERENCES CITED.....33
APPENDIX A. MAPS AND OTHER FIGURES.....39
APPENDIX B. NATIVE AMERICAN AND HISTORICAL SOCIETY CONSULTATION RESULTS50
APPENDIX C. DPR FORMS88

LIST OF FIGURES

FIGURE 1. PROJECT VICINITY MAP.....40
FIGURE 2. PROJECT LOCATION MAP41
FIGURE 3. SURVEY COVERAGE MAP42
FIGURE 4. PROJECT SOILS MAP43
FIGURE 5. TRIBAL TERRITORIES MAP44
FIGURE 6. NORTH END OF APE WITH LAGUNA CREEK AND DENSE GRASS COVER, VIEW WEST45
FIGURE 7. P-34-005386/CA-SAC-001278H SITE MAP46
FIGURE 8. P-34-005386/CA-SAC-001278H, F-001 CONCRETE BOARD-FORMED STRUCTURE, VIEW SOUTHEAST 47
FIGURE 9. P-34-005386/CA-SAC-001278H, F-002 CONCRETE STRUCTURE PAD DENSELY OVERGROWN WITH WEEDS, VIEW SOUTH.....47
FIGURE 10. P-34-005386/CA-SAC-001278H, F-007 CONCRETE TROUGH DENSELY OVERGROWN WITH THISTLES, VIEW NORTH.....48
FIGURE 11. P-34-005386/CA-SAC-001278H WOODEN FENCE WITH BARBED WIRE, VIEW NORTHWEST.....48
FIGURE 12. P-34-005386/CA-SAC-001278H OVERVIEW OF REFUSE SCATTER WITH PLOWING DISTURBANCE, VIEW SOUTH49
TRIBAL CONSULTATION LOG FOR THE LAGUNA CREEK TRAIL & BRUCEVILLE RD SIDEWALK IMPROVEMENTS PROJECT.....58

LIST OF TABLES

TABLE 1. PREVIOUS STUDIES WITHIN A ONE-MILE RADIUS OF THE APE6
TABLE 2. PREVIOUSLY RECORDED RESOURCES WITHIN A ONE-MILE RADIUS OF THE APE.....10
TABLE 3. ADDITIONAL SOURCES CONSULTED.....13
TABLE 4. SOILS OF THE APE19
TABLE 5. CULTURAL PERIODS FOR THE CENTRAL VALLEY23
TABLE 6. P-34-005386/CA-SAC-001278H FEATURES.....31

SUMMARY OF FINDINGS

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalk improvements along Bruceville Road. The Laguna Creek Trail and Bruceville Road Sidewalks Project (Project) site is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, California, approximately 0.5 mile west of State Route 99 (SR-99), and approximately 3 miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East on the U.S. Geological Survey (USGS) Florin, California (CA) 7.5-minute quadrangle (38° 25' 13" North, 121° 27' 48" West)

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway) with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings (Proposed Project). A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalk. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Cogstone completed an intensive pedestrian survey of the APE on June 12, 2019. The survey aimed to identify cultural resources that could be impacted by the Project. Visibility within the APE was generally poor (0 to 25 percent), with fair visibility (50 percent) in areas to the northwest and east of Bruceville Road.

One cultural resource, the newly recorded P-34-005386 (CA-SAC-001278H), a historic foundation and refuse site, was identified during the pedestrian survey. P-34-005386 (CA-SAC-001278H) is a historic ranch site located within APN 11600110040000 on the west side of Bruceville Road approximately 3.07 acres in size. Project improvements at the location of P-34-005386 (CA-SAC-001278H) include the trail alignment and a sidewalk segment. The site consists of one concrete board-formed structure, three concrete pads, and three irrigation features including a pump station, control box, and concrete water trough. Fencing is present with one post located to the east at Bruceville Road and a longer 50 foot fence segment to the west which is likely the remains of a corral. Throughout the site is a light-density disturbed scatter of demolition debris mixed with modern refuse, roadway trash, and few potentially historic artifacts. An Archaeological Evaluation Report (AER) was completed to determine if the site is

eligible for the NRHP (see Attachment D to this HPSR).

P-34-000707 (CA-SAC-549H) was previously recorded in 1995 as a house, barn, milk house, shed, and mobile home has since been demolished. The resource was not present during the pedestrian survey and is no longer within the APE. Although the record search identified it as a resource within the APE, it has since been removed and is therefore is not considered as a resource within the APE.

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the sites cannot be avoided by the project. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. Additional survey will be required if the project changes to include areas not previously surveyed.

INTRODUCTION

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road (Federal Project No. CML-5479 (053) and City Project No. WTL-019). The Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (Project) is located generally in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, CA (Figures 1 and 2). The proposed Project is needed to provide connecting links that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities. Development of the proposed Project would provide greater accessibility to the existing trail system within the City of Elk Grove and make trails directly accessible to additional homes.

Cogstone archaeologist, Tim Spillane, performed the pedestrian survey of the Area of Potential Effects (APE) on June 12, 2019 (Figure 3). Mr. Spillane holds an M.A. in Text & Material Culture from Roehampton University, London. Mr. Spillane is a Registered Professional Archaeologist with more than ten years of experience in California archaeology.

REGULATORY ENVIRONMENT

The Archaeological Survey Report (ASR) for this undertaking was carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA).

NATIONAL HISTORIC PRESERVATION ACT

The National Historic Preservation Act (NHPA) is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections which encourage the identification and protection of cultural and historic resources of national, state, tribal and local significance. A primary component of the act requires that federal agencies take into consideration actions that could adversely affect historic properties listed or eligible for listing on the National Register of Historic Places, known as the Section 106 Review Process.

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American

history, architecture, archeology, engineering, and culture. The National Register recognizes resources of local, state and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is administered by the National Park Service, which is part of the U. S. Department of the Interior.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of our history
- B. Is associated with the lives of persons significant in our past
- C. Embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
- D. Has yielded, or may be likely to yield, information important in history or prehistory

NATIONAL ENVIRONMENTAL PROTECTION ACT

NEPA directs federal agencies to use all practicable means to "Preserve important historic, cultural, and natural aspects of our national heritage...". If the presence of a significant environmental resource is identified during the scoping process, federal agencies and their agents must take the resource into consideration when evaluating project effects. Consideration of paleontological resources may be required under NEPA when a project is proposed for development on federal land, or land under federal jurisdiction. The level of consideration depends upon the federal agency involved.

ANTIQUITIES ACT

The Antiquities Act states, in part: That any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court.

PROJECT LOCATION AND DESCRIPTION

PROJECT LOCATION

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalk improvements along Bruceville Road. The Laguna Creek Trail and Bruceville Road Sidewalks Project (Project) site is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, California, approximately 0.5 mile west of State Route 99 (SR-99), and approximately 3 miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East on the U.S. Geological Survey (USGS) Florin, California (CA) 7.5-minute quadrangle (38° 25' 13" North, 121° 27' 48" West).

PROJECT DESCRIPTION

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway) with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings. A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalk. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Paved surfaces would be Hot Mixed Asphalt (HMA) with stabilized Decomposed Granite (DG) shoulders relying on base and sub base as needed. Base material would consist of aggregate base, with a sub base of either existing or compacted native material or a treated native material. Treatments could include cement or lime. Sidewalk widenings on Bruceville Road would require sawcutting the existing road and cutting into the embankment. Proposed fill slopes would vary in height, ranging from one to four feet.

Trail segments may include amenities including, but not limited to, concrete entry nodes, post and cable fencing, landscaping, benches, and interpretive signage.

TRAIL DESIGN

Two trail segments would be developed as a 10-foot-wide path with 2-foot-wide shoulders following existing informal trails where feasible and would maintain existing gradual slopes and

relatively flat natural topography. Side slopes would be constructed at a gradient of 4:1.

Segment 1

Segment 1 would be constructed west of Bruceville Road and north of Big Horn Boulevard. The trail would parallel existing residential development to the west for a length of approximately 0.75 mile trending northward from the existing sidewalk at Big Horn Boulevard and path near Mannington Street. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot-depth for subbase. Grading limits would be contained within a 36- to 44-foot-wide disturbance corridor for Segment 1.

Segment 2

Segment 2 would be constructed east of Bruceville Road adjacent and parallel to Big Horn Boulevard for an overall length of approximately 0.16 mile. It is anticipated that where the Segment 2 alignment terminates, compliance with City-required Conditions of Approval for the Trojan Storage II Project (currently under construction) will result in the construction of a connecting trail segment to Lewis Stein Road. The new trail will use the existing at-grade crossing at Bruceville Road and Big Horn Boulevard to connect to Segment 1. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 34- to 40-foot-wide disturbance corridor for Segment 2.

ROADS AND SIDEWALKS

Proposed sidewalk improvements would be constructed on the west side of Bruceville Road. Approximately 1,600 feet of sidewalk would be constructed between Big Horn Boulevard and the Bruceville Road Bridge over Laguna Creek (Bridge No. 24C0405) and 180 feet of sidewalk, would be constructed from the bridge to existing sidewalk. In addition, the guardrail at the bridge would be replaced and would roughly correspond to the back of sidewalk in this location. New Americans with Disabilities Act (ADA) compliant ramps would be constructed at Mannington Street and at Mannington Street/Wallbridge Way.

Approximately 230 feet of sidewalk would be constructed at an existing gap in the sidewalk between Di Lusso Drive and Laguna Boulevard. At this location, the roadway surface at Bruceville Road would be extended to match up with the proposed sidewalk.

CULVERT CROSSINGS AND HYDROLOGY

The proposed Project would maintain existing grades and drainage patterns to the greatest extent feasible and side slopes would be constructed with a 4:1 slope. To maintain the existing drainage patterns, culverts may be used to convey water from one side of the trail to the other during more intense rain events. These culverts would be located in upland areas and sized based on existing topographic information and would include rock slope protection and flared end sections to reduce erosion and provide energy dissipation measures.

ROAD CROSSINGS AND SIGNAGE

Trail pavement would be delineated by distinct paint, markings, and signs consistent with City standards as well as the California Manual of Uniform Traffic Control Devices (MUTCD) standards. The City may also elect to provide wayfinding signs. According to the Bicycle, Pedestrian, and Trails Master Plan (BPTMP), all bicycle striping and wayfinding signs would also conform to the Caltrans Highway Design Manual, Chapter 1000 (GHD, Inc. 2021).

UTILITIES

Utility coordination would be required to relocate a utility guy-pole that is in conflict with the roadway/ sidewalk widening on the west side of Bruceville Road. This pole would be relocated to another location either within the City's right of way or within a new utility easement. No other utility relocations are anticipated for this Project other than potentially adjusting existing utility lids to new grades.

CONSTRUCTION

Staging

One potential construction staging area is proposed within the Project site. The potential staging area is identified northwest of the Bruceville Road at Big Horn Boulevard intersection.

AREA OF POTENTIAL EFFECTS

The APE was established as 22.13 acres and encompasses all areas where potential direct and indirect impacts to cultural resources could occur as a result of Project construction, operation, and maintenance. The APE includes the trail and sidewalk segments, staging area, culvert crossings, and utility relocation. The width of the APE ranges from 60 feet to 100 feet to account for the 10-foot wide path with 2-foot wide shoulders for the trail and sidewalk segments. The APE is depicted on the Florin 7.5-minute USGS quadrangle in Section 27 of Township 7 North, Range 5 East, Mount Diablo Baseline and Meridian.

Partial right of way acquisition (ROW) is required for Assessor's Parcel Numbers (APNs) 116-0011-002-0000, 116-0011-004-0000, 116-0011-094-0000, 116-0011-097-0000, 116-0011-102-000, 116-0012-048-0000, 116-0012-064-0000, 116-1210-100-0000, 116-1280-059-0000, 116-1270-033-0000, 116-1270-039-0000, and 116-1390-071-0000. These parcels are undeveloped and would be traversed by the proposed trail alignment.

The vertical APE is the maximum depth of any Project related ground disturbing work. The maximum depth of ground disturbance would be 4.5-feet for guardrail post and approximately 5-foot maximum for drainage ditches/culverts associated with the trail and 2-feet for the trail. A maximum depth of ground disturbance of 2-feet may occur within the landscaping strip between the existing sidewalk and the bike trail, parallel to Big Horn Road where existing soils will be replaced with planting soils. The APE was established in consultation with Katie Vallaire,

Caltrans PQS: PI-Historical Archaeology, and Ross Foon, Caltrans Project Local Assistance Engineer on [DATE].

SOURCES CONSULTED

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

A California Historical Resources Information System (CHRIS) records search was conducted at the North Central Information Center (NCIC) on the campus of California State University, Sacramento, on April 15, 2019. The record search included the APE and a one-mile radius. The records search indicated that a total of 44 cultural resources investigations have been completed previously within a one-mile radius of the APE (Table 1). Of the 44 studies, four include portions of the APE.

Table 1. Previous Studies within a One-Mile Radius of the APE

| Report Number | Author | Report Title | Date | USGS Quad | Distance from APE (miles) |
|---------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|---------------------------|
| 000088 | Johnson, Jerald J. | Reconnaissance Archeological Survey of the Morrison Stream Group in Sacramento County, California. | 1974 | Florin, Bruceville, Carmichael, Clarksburg, Courtland, Elk Grove, Sacramento East | Within |
| 000135 | Werner, Roger | A Cultural Resource Survey of the Laguna Creek Floodplain Alternatives, Sacramento County, CA. | 1984 | Florin | 0-0.25 |
| 000489 | Peak, Ann S. | Cultural Resource Assessment of the Proposed Laguna Woods Development, Sacramento County, California. | 1980 | Florin | 0.5-1 |
| 001883 | Derr, Eleanor | A Cultural Resources Study for Addendum Report to: The Cosumnes River College Area Land Use Plan, Sacramento County (APN# 117-0202-04/117-0202-16). | 1995 | Florin | 0.25-0.5 |
| 001911 | Derr, Eleanor | Pacific Bell Mobile Services: 8680 West Stockton Boulevard, Sacramento, Sacramento County: Site # SA-089-07/C2. | 1998 | Florin | 0.5-1 |
| 002457 | Bakic, Tracy, John Dougherty, and Cindy Baker | Cultural Resources Investigation of the Laguna Pavilion Project, Franklin-Laguna Area, Sacramento County, California. | 1998 | Florin | 0.5-1 |

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

| Report Number | Author | Report Title | Date | USGS Quad | Distance from APE (miles) |
|---------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|---------------------------|
| 002458 | Peak, Melinda and Robert A. Gerry | Cultural Resources Assessment of the Proposed Village Crossing Apartments Project Site, Sacramento County, California. | 2000 | Florin | 0.5-1 |
| 002977 | Derr, Eleanor | A Cultural Resources Study for The Strawberry and Jacinto Creeks Drainage Master Plans Sacramento County | 1993 | Florin, Elk Grove | 0.5-1 |
| 002980 (a-b) | Barry, Antonia | Bruceville Road Widening Laguna Boulevard to Sheldon Road | 1994 | Florin | Within |
| | Warner, Laurie | Cultural Resources Investigation of the Proposed Bruceville Road Widening Project, Sacramento County | 1994 | Florin | |
| 002984 | Rains, Jim and Kate Brownfield | Draft Environmental Impact Report for Park Meadows (Formerly Kramer Ranch) General Plan Amendment, Community Plan Amendment, Rezone, Tentative Subdivision Map and Abandonment | 1994 | Florin | 0-0.25 |
| 003037 | Michael Brandman Associates | Draft Environmental Impact Report, Park Meadows North Community Plan Amendment, Rezone, and Tentative Subdivision Map | 1996 | Florin | 0-0.25 |
| 003522 | Noble, Daryl | Observation of an Excavation of two sumps at the Benada Pederson #1 gas well. | 1983 | Florin | 0.5-1 |
| 003523 | Noble, Daryl | S.R. 99, Post Mile 14.3, Widening and replacing portions of the Laguna Creek Bridge | 1994 | Florin | 0.5-1 |
| 003525 | Noble, Daryl | S.R. 99, Post Mile 14.8, Park and Ride Facility | 1991 | Florin | 0.25-0.5 |
| 003529 | Peak & Associates, Inc. | Cultural Resource Assessment of Laguna Oaks Units 2 & 4, Sacramento County, CA | 1994 | Florin | 0.5-1 |
| 003540 | Boghosian, Paula | Historic Resource Assessment for the Laguna Springs #3 Development, Lee Wightman Dairy Ranch | 1988 | Florin | 0.5-1 |
| 003542 (a-c) | Shapiro, Lisa and Mary Maniery | Cultural Resources Investigation for the Proposed Laguna Park Development Site, Sac. Co, CA | 1991 | Florin | Within |
| | Shapiro, Lisa | Addendum Report, Cultural Resources Investigation for the Proposed Laguna Park Development Site, Sacramento County, California | 1991 | Florin | |
| | Maniery, Mary L. | Architectural and Archaeological Significance Evaluation of Resources Within the Laguna Park Subdivision Project, Sacramento County, California | 1991 | Florin | |
| 003548 | Derr, Eleanor H. | A Cultural Resources Study for The Cosumnes River College Area Land Use Plan Sacramento County | 1993 | Florin | 0-0.25 |
| 004473 | Unknown | Archaeological and Historic Investigations for the Sheldon Road Widening Project | 2003 | Florin, Elk Grove | 0-0.25 |

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

| Report Number | Author | Report Title | Date | USGS Quad | Distance from APE (miles) |
|---------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------|---------------------------|
| 006111 | ECORP Consulting Inc. | Cultural Resources Assessment of the Sheldon Place, Sacramento County, California | 2003 | Florin | 0.5-1 |
| 006115 | Nadolski, John | Historic Properties Survey Report for the Sheldon Road/State Route 99 Interchange Improvement Project (Kilometer Post 23-25; Post Mile 14.43-15.5) | 2004 | Florin | 0.25-0.5 |
| | Nadolski, John | Historic Resources Evaluation Report for the Sheldon Road/State Route 99 Interchange Improvement Project (Kilometer Post 23-25; Post Mile 14.43-15.5) | 2004 | Florin | |
| 006120 | Billat, Lorna | Request for SHPO Review of FCC Undertaking: Laguna/ CA-0204J | 2004 | Florin | 0-0.25 |
| 006123 | Bonner, Wayne H. | Records Search and Site Visit for Cingular Wireless Facility Candidate SA-089-05 | 2004 | Florin | 0.5-1 |
| 006154 | Hatoff, Brian, Barb Voss, Sharon Waechter, Stephen Wee, and Vance Bente | Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project | 1995 | Florin, Buffalo Creek, Carmichael, Clay, Elk Grove, Florin, Galt, Sacramento East, Sloughhouse | 0.5-1 |
| 006899 | EarthTouch | New Tower ("NT") Submission Packet FCC Form 620 EG Fire Station #74 SC-15335 | 2006 | Florin | 0.5-1 |
| 007225 | Peak, Melinda | Determination of Eligibility and Effect for the Sheldon Farms Project, City of Elk Grove, California. | 2006 | Florin | Within |
| 007777 | Jensen, Sean | Nouveau Sheldon Development Project c. 25 acres, Sacramento County, CA | 2006 | Florin | 0.25-0.5 |
| 010398 | Billat, Lorna | Zimbelman Park CA-SAC0558B: New Tower Submission Packet FC FORM 620 | 2009 | Florin | 0-0.25 |
| 010467 | Billat, Lorna | Foulks Park/CA-SAC0557C, New Tower ("NT") Submission Packet | 2010 | Florin | 0.5-1 |
| 010477 | Billat, Lorna | Meadow Springs SMUD/CA-SAC0553C, New Tower ("NT") Submission Packet | 2010 | Florin | 0.5-1 |
| 010566 | Billat, Lorna | Zimbelman Park - CA-SAC0558C (Design Change) | 2010 | Florin | 0-0.25 |
| 010675 | Loftus, Shannon | Cultural Resource Records Search Clearwire Wireless Site CA-SAC0556C Middlebrok Park PGE Tower #7/62 PGE SAP #40663637 LINE NAME: BRIGHTON-GRAND ISLAND #1 115kv 6200 Jacinto Avenue Sacramento, Sacramento County, California 95823 | 2010 | Florin | 0.25-1 |

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

| Report Number | Author | Report Title | Date | USGS Quad | Distance from APE (miles) |
|----------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------|----------------------------------|
| | Loftus, Shannon | Historic Architectural Resource-Inventory and Assessment Clearwire Wireless Site CA-SAC-556C Middlebrok Park PGE Tower #7/62 PGE SAP #40443637 LINE NAME: BRIGHTON-GRAND ISLAND #1 115kv 6200 Jacinto Avenue Sacramento, Sacramento County, California 95823 | 2010 | Florin | |
| 011142 | Wills, Carrie | Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SC06086A (SN082 Laguna & Laguna Park), 5619 Adobe Spring Way, Elk Grove Sacramento County, California | 2012 | Florin | 0.5-1 |
| 011143 | Wills, Carrie | Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SC06868A (SA868 Franklin/Jacinto Ave), 8580 Center Parkway, Sacramento, Sacramento County, California | 2012 | Florin | 0.5-1 |
| 011245 | Crawford, Kathleen | Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate SC06868A (SA868 Franklin/Jacinto Ave.), 8580 Center Parkway, Sacramento, Sacramento County, California | 2012 | Florin | 0.5-1 |
| 011246 | Crawford, Kathleen | Direct APE Historic Architectural Assessment for T-West, LLC Candidate SC06086A (SN082 Laguna & Laguna Park), 5619 Adobe Spring Way, Elk Grove, Sacramento County, California | 2012 | Florin | 0.5-1 |
| 011271 | Wills, Carrie | Section 106 Cultural Resources Assessment East Lawn Elk Grove Memorial Park Expansion Project City of Elk Grove, Sacramento County, California | 2012 | Florin | 0.5-1 |
| 011531 | Cher L. Peterson and Kathleen A. Crawford | Collocation ("CO") Submission Packet. FCC Form 621. T-Mobile West, LLC Candidate SC06868A (Franklin and Jacinto Ave) 8580 Center Parkway, Sacramento, Sacramento County California | 2014 | Florin | 0.5-1 |
| 011674 | Robinson, Holly, Johni Etheridge, and Christine Ames | Laguna Village Ensite #23947 (282019) | 2014 | Florin | 0.5-1 |
| 011775 | Travers, Aniela | EBI Project No. 61133044 | 2013 | Florin, Elk Grove | 0.5-1 |
| 011823 | Crawford, Kathleen and Carrie D. Wills | SC06086A (Laguna & Laguna Park) | 2015 | Florin | 0.5-1 |

| Report Number | Author | Report Title | Date | USGS Quad | Distance from APE (miles) |
|---------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|---------------------------|
| 012214 | Nayyar, Margo Michael Elliott, and Trish Fernandez | City of Elk Grove, East Lawn Cemetery Expansion Project: Cultural Resources Identification Project | 2015 | Florin | 0.5-1 |
| 012579 | Beard, Vicki R. | Historical Resources Study for the Bruceville Terrace Project, Sacramento, Sacramento County, California | 2017 | Florin | 0.5-1 |
| 012590 | Clifton, Virginia and Don C. Perez | Cultural Resources Survey Big Horn/Ensite #22972 (281994) Big Horn Boulevard Elk Grove, Sacramento County, California 95758 NW 1/4 NE 1/4 Section 28 T07N R05E EBI Project No. 6114009173 | 2016 | Florin | 0.5-1 |

The NCIC records search also indicated that one cultural resource, the Olen Ranch Complex (P-34-000707/CA-SAC-549H), is located within the APE for the Project. An additional forty-four historic-era cultural resources have been recorded outside the APE but within one-mile (Table 2). Of these, 41 are historic built environment resources, one is a historic linear resource, one is a historic cemetery, and one is a historic bridge.

Table 2. Previously Recorded Resources within a One-Mile Radius of the APE

| Primary No. (P-34-) | Trinomial (CA-SAC-) | Resource Type | Description | Date Recorded | Distance from APE |
|---------------------|---------------------|----------------------------|--------------------------------------------------------------------------------|---------------|-------------------|
| 000546 | - | Historic Built Environment | Ehnisz Dairy Farm/Dickson Ranch | 1998, 1999 | 0.5-1 mile |
| 000680 | - | Historic Built Environment | George Werre Agricultural-Residential Complex | 1994 | 0-0.25 |
| 000694 | 000540H | Historic Built Environment | Historic structural remnants including septic tank and water conveyance system | 1996 | 0.25-0.5 |
| 000696 | 000541H | Historic Built Environment | Pumphouse and structural remnants of a potential well | 1993 | 0.5-1 |
| 000698 | 000543H | Historic Linear Resource | Bow Street; two-lane paved road | 1993, 2002 | 0.5-1 |
| 000701 | - | Historic Built Environment | Concrete pad with footing and associated trash | 1993, 2003 | 0.5-1 |
| 000702 | - | Historic Built Environment | Albert Leavitt House located at 8555 East Stockton Road | 1993 | 0.5-1 |
| 000703 | - | Historic Built Environment | Single-family residence located at 8610 Bow Street | 1993 | 0.5-1 |
| 000707 | 000549H | Historic Built Environment | Olen Complex located at 8860 Bruceville Road | 1991, 1995 | Within |
| 000751 | 000576H | Historic Built Environment | Werre Dairy; single-family residence located on Big Horn Boulevard | 1991, 1991 | 0.25-0.5 |
| 000793 | 000610H | Historic Built Environment | Historic ranch site | 1993, 2002 | 0.5-1 |

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

| Primary No. (P-34-) | Trinomial (CA-SAC-) | Resource Type | Description | Date Recorded | Distance from APE |
|---------------------|---------------------|----------------------------|---------------------------------------------------------------------------|---------------|-------------------|
| 000794 | 000611H | Historic Built Environment | Historic ranch site | 1993 | 0.5-1 |
| 000795 | 000612H | Historic Built Environment | Historic ranch site | 1993 | 0.5-1 |
| 000796 | 000613H | Historic Built Environment | Historic ranch site | 1993 | 0.5-1 |
| 000797 | 000614H | Historic Built Environment | Historic ranch site | 1993 | 0.5-1 |
| 000798 | 000615H | Historic Built Environment | Historic ranch site; silo is the only building still standing | 1993, 2002 | 0.25-0.5 |
| 000824 | 000631H | Historic Built Environment | Historic residential complex structural remnants | 1992 | 0.5-1 |
| 001249 | - | Historic Built Environment | Concrete trailer pads | 2003 | 0.5-1 |
| 001255 | - | Historic Built Environment | Single-family residence; now veterinary hospital | 2003 | 0-0.25 |
| 001256 | - | Historic Built Environment | Historic ranch site | 2003 | 0-0.25 |
| 001295 | 000818H | Historic Built Environment | Flood control barrier | 1994 | 0-0.25 |
| 001406 | - | Historic Built Environment | Single-family residence located at 8165 Sheldon Road | 2002 | 0.25-0.5 |
| 001407 | - | Historic Built Environment | Single-family residence located at 8159 Sheldon Road | 2002 | 0.25-0.5 |
| 001408 | - | Historic Built Environment | Single-family residence located at 8169 Sheldon Road | 2002 | 0.25-0.5 |
| 001409 | - | Historic Built Environment | Single-family residence located at 8310 Sheldon Road | 2002 | 0.5-1 |
| 001410 | - | Historic Built Environment | Two single-family residences located at 8386 Sheldon Road | 2002 | 0.5-1 |
| 001411 | - | Historic Built Environment | Single-family residence located at 8685 East Stockton Boulevard | 2002 | 0.5-1 |
| 001412 | - | Historic Built Environment | Single-family residence located at 8691 East Stockton Boulevard | 2002 | 0.5-1 |
| 001413 | - | Historic Built Environment | Two single-family residences located at 8701 East Stockton Boulevard | 2002 | 0.5-1 |
| 001414 | - | Historic Built Environment | Single-family residence located at 8711 East Stockton Boulevard | 2002 | 0.5-1 |
| 001415 | - | Historic Built Environment | Single-family residence located at 8627 Bow Street | 2002 | 0.5-1 |
| 001416 | - | Historic Built Environment | Single-family residence located at 8706 West Stockton Boulevard | 2002 | 0.5-1 |
| 001417 | - | Historic Built Environment | Single-family residence or office located at 8686 West Stockton Boulevard | 2002 | 0.5-1 |
| 001418 | - | Historic Built Environment | Single-family residence located at 8717 East Stockton Boulevard | 2002 | 0.5-1 |
| 001419 | 000858H | Historic Built Environment | Historic preschool and before and after school care facility | 2003 | 0-0.25 |
| 001420 | - | Historic Built Environment | Single-family residence located at 8665 Sheldon Road | 2003 | 0.5-1 |
| 001421 | - | Historic Built Environment | Single-family residence located at 8780 White House Road | 2003 | 0-0.25 |

| Primary No. (P-34-) | Trinomial (CA-SAC-) | Resource Type | Description | Date Recorded | Distance from APE |
|---------------------|---------------------|----------------------------|------------------------------------------------------------------------|---------------|-------------------|
| 001423 | - | Historic Cemetery | San Joaquin Cemetery in use from 1860s through 1940s | 2003 | 0.5-1 |
| 002399 | - | Historic Bridge | Bridge #24-17; State Route 99 over Whitehouse Creek at mile post 14.63 | 1979 | 0.5-1 |
| 004286 | - | Historic Built Environment | Middlebrook Park PGE Tower #7/62 PGE SAP #40663637 | 2010 | 0.25-0.5 |
| 004531 | - | Historic Built Environment | T-Mobile West LLC SC06868A/Franklin Jacinto Avenue | 2012 | 0.5-1 |
| 004532 | - | Historic Built Environment | T-Mobile West LLC SC06086A Laguna & Laguna Park | 2012 | 0.5-1 |
| 004538 | - | Historic Built Environment | Concrete water conveyance system and irrigation ditch | 2012 | 0.5-1 |
| 005002 | - | Historic Built Environment | Historic barn or shed | 2013 | 0.5-1 |
| 005241 | - | Historic Built Environment | Erikson Dairy | 1991 | 0.25-0.5 |

P-34-000707 (CA-SAC-549H)

P-34-000707 (CA-SAC-549H) is the Olen Complex located within the APE at 8860 Bruceville Road south of Sheldon Road. The Olen Complex was recorded in 1995 as a small ranch consisting of a house, barn, milk house, shed, and mobile home (PAR 1995). The original complex which included the house, barn, and milk house originated in 1942. The house was removed by 1957 and an older home that was constructed in the late 1930s was moved onto the property. The shed was constructed after 1950 and was purchased by the Olen and moved to the property between 1968 and 1973 for use as a workshop. The mobile home was also moved to the site after 1968. P-34-000707 was evaluated by PAR Environmental Services in 1995 and recommended the complex, including the residence, mobile home, shed, milk house, and barn, not eligible for listing on the California Register of Historical Resources (CRHR) or NRHP. The resource is listed in the Built Environment Resource Directory (BERD) and has status 6Y, determined ineligible for National Register by consensus through Section 106 process. Although the record search identified P-34-000707 (CA-SAC-549H) as a resource within the APE, it was not relocated and is therefore is not considered as a resource within the APE.

OTHER SOURCES

In addition to the records at the NCIC, a variety of sources were consulted by Holly Duke and Shannon Lopez in June and July of 2019 to obtain information regarding the cultural context of the APE (Table 3). These sources include the NRHP, CRHR, California Built Environment Resources Directory (BERD), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the APE was obtained from historic United States Geological Survey (USGS) topographic maps and United States Department of Agriculture (USDA) aerial photographs, and is presented in the APE history section.

Table 3. Additional Sources Consulted

| Source | Results | | | | | | | | |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|--------------|------|---------|--------------|-----------------------|------|
| National Register of Historic Places (NRHP; 1979-2002 & supplements) | Negative | | | | | | | | |
| Historic USGS Topographic Maps | <p>The earliest available historic topographic map is the 1894 Lodi 7.5-minute map which shows the APE as mostly undeveloped, with Sheldon Road constructed to the north, and Bruceville Road, to the east. The 1909 Florin 7.5-minute map depicts, one structure within the APE, just west of Bruceville Road. The 1941 Franklin 15-minute map depicts two bridges spanning Laguna Creek and the wetland, while Big Horn Road has been constructed to the south. By 1953, there is an increase in development within the APE on the west and east side of Bruceville Road. Additional developments surround the APE. The 1953, 1968, 1975, and 1980 USGS Florin 7.5-minute quadrangle maps show the Olen Ranch Complex (P-34-000707/CA-SAC-549H) with buildings that vary in number and position through time. A small, discontinuous portion of the APE runs along the west side of Bruceville Road between approximately 1500 feet and 2050 feet south of Big Horn Boulevard. No development is depicted in this area until two rectangular building are shown slightly to the west of the APE on the 1968 Florin 7.5-minute USGS topographic quadrangle map.</p> | | | | | | | | |
| Historic US Department of Agriculture Aerial Photographs | <p>The earliest historic aerial photographs from 1947 and 1957 depict the APE as largely agricultural fields with only minor developments, mostly along Bruceville Road. Residential homes surround much of the APE by 1993; however, the area along Bruceville Road remains largely open and undeveloped. By 2002, multiple trails or access roads have been constructed, intersecting the APE at Bruceville Road. Historic USDA aerial photographs from 1967 and 1993 shows the buildings within the discontinues southern portion of the APE to be houses for adjoining farm complexes with a growing number of outbuildings including a large barn. This barn is no longer visible in the 1998 USDA aerial photograph. The homes and outbuildings remain visible in USDA aerial photographs from 2002 and 2005 but are no longer visible in the 2009 aerial photograph, and the area remains vacant in the 2016 aerial photograph (NETROnline 2021). This portion of the APE is now a car wash at the south and an empty lot to the north.</p> | | | | | | | | |
| California Register of Historical Resources (CRHR; 1992-2014) | Negative | | | | | | | | |
| California Built Environment Resource Directory (BERD) | Olen Farm Complex 6Y (1997) | | | | | | | | |
| California Historical Landmarks (CHL; 1995 & supplements to 2014) | Negative | | | | | | | | |
| California Points of Historical Interest (CPHI; 1992 to 2014) | Negative | | | | | | | | |
| Caltrans Historic Bridge Inventory (Caltrans 2016) | <p>Positive: 1 Bridge</p> <table border="1"> <thead> <tr> <th>Number</th> <th>Name</th> <th>Significance</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>24C0405</td> <td>Laguna Creek</td> <td>Not eligible for NRHP</td> <td>1970</td> </tr> </tbody> </table> | Number | Name | Significance | Year | 24C0405 | Laguna Creek | Not eligible for NRHP | 1970 |
| Number | Name | Significance | Year | | | | | | |
| 24C0405 | Laguna Creek | Not eligible for NRHP | 1970 | | | | | | |

| Source | Results |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Bureau of Land Management (BLM) General Land Office Records | Positive: Two land patents issued to the State of California in 1866 and 1871 (CACAAA 040741 and CACAAA 040771) |

HISTORICAL CONSULTATION

On June 21, 2019, Cogstone contacted the Elk Grove Historical Society for information regarding the history of the APE (Appendix B). On July 9, 2019, a response was received from historian Louis Silveira, who stated that he would forward the inquiry to knowledgeable residents of Elk Grove as well as to local historians. On July 9 and 10, 2019, Cogstone received responses from Elk Grove locals Dave Lema, Jim Entrican, and Town Historian, Elizabeth Pinkerton. All replied that there is no known historic significance to the property associated with APN: 116-0011-004-0000. Mr. Silveira further stated on July 16, 2019 that the property at APN 116-0011-004-0000 was owned by “Alar R Wightman” until 1903 or later.

NATIVE AMERICAN CONSULTATION

Cogstone submitted a Sacred Lands File (SLF) search request to the Native American Heritage Commission (NAHC) on May 3, 2019. The NAHC responded on May 24, 2019, that there are no known sacred lands within the APE. The NAHC recommended that eight representatives from local Native American tribal organizations be contacted for further information regarding the Project vicinity.

Consultation letters were sent via certified mail to the eight contacts on June 10, 2019 requesting information related to cultural resources or heritage sites within the APE. Additional attempts at contact were made by email or phone on June 24 and July 8, 2019. To date, four responses have been received and are summarized below. All consultation correspondence and a contact log are provided in Appendix B.

- Colfax-Todds Valley Consolidated Tribe - Ms. Pamela Cubbler, Treasurer: On July 8, 2019 Ms. Cubbler stated via phone that the tribe defers to the Wilton Rancheria and has no further comment.
- Ione Band of Miwok Indians - Cynthia Turner, Administrator: On July 8, 2019 Ms. Turner requested on behalf of Chairperson Sara Dutschke Setchwaelo via phone that the consultation letter be forwarded to the Tribe’s consultation committee. The letter was forwarded via email on the same day. No further response has been received.
- Shingle Springs Band of Miwok Indians - Cultural Resources Director Daniel Fonseca: On June 21, 2019, Mr. Fonseca responded via email stating that the Tribe was not aware of any cultural resources within the Project Site but request copies of project documents

including record search and survey results, as well as environmental, archaeological, and cultural reports. Requested documentation was sent to the Tribe on June 24, 2021.

- United Auburn Indian Community – Cheryl Neider responded on April 26, 2019 by email and offered mitigation measures that address inadvertent discoveries and the inclusion of a tribal cultural resources section in the Worker Environmental Awareness and Protection training. On May 10, 2019, Amy Dunay, Senior Environmental Planner, City of Elk Grove responded with edited mitigation measures, said that draft documents would be sent when available and asked if electronic or hard copies were preferred, and noted that Wilton Rancheria had also requested consultation. On May 14, 2019 Ms. Neider responded that electronic copies are fine. Requested documentation was sent to the Tribe on June 24, 2021.

Anna Starkey, Cultural Regulatory Specialist: responded via email on July 23, 2019 stating the tribe is not aware of any resources within the APE and requests digital copies of the cultural report and copies of the environmental report being prepared. They also have recommended two mitigation measures, one for inadvertent discoveries of TCRs and the other for worker awareness training.

- Wilton Rancheria – On May 8, 2019, Mariah Mayberry, Administrator Assistant requested by email that Wilton Rancheria tribal representatives be allowed to observe and participate in all cultural resource studies, including pedestrian surveys, geoarchaeology, phases testing, forensic canine surveys, and other management work for the project. Ms. Mayberry also requested that all existing cultural resource documentation, including, Sacred Lands File checks, ethnographic studies, records searches, and previous studies and records be sent to Wilton Rancheria. She also stated that it is “Wilton Rancheria’s policy is to protect and preserve tribal cultural resources in place to avoid impacts and assist with mitigating for significant impacts whenever possible. Work in known cemeteries (mounds/burials), cultural areas, subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria and receiving Wilton Rancheria’s written consent on a project or site-specific plan or agreement. Requested documentation was sent to the Tribe on June 24, 2021.

Mariah Mayberry, Administrator Assistant, responded via email on June 11, 2019 asking for the results of the pedestrian survey. Cogstone followed up by email on June 24, 2019. On June 24, 2019, The Tribe’s Department of Cultural Preservation responded that the Tribe did not wish to engage in AB52 consultations but requested all environmental documentation for the Project. Cogstone again followed up by email on July 10, 2019 unaware of this response.

BACKGROUND

ENVIRONMENTAL SETTING

GEOLOGY, HYDROLOGY, AND SOILS

The APE is located in the Sacramento Valley within the Great Valley Geomorphic Province. The Great Valley Geomorphic Province is a long, narrow northwest-trending alluvial valley that lies between the Sierra Nevada Range to the east and the Coast Ranges to the west (Wagner 2002). The Sacramento Valley is located in the northern portion of the Great Valley and is bounded by the Klamath Mountains to the north and the Stockton Arch to the south. This region formed as a forearc basin during the subduction of the Pacific plate underneath the North American plate. Valley sediments range from Jurassic to Holocene in age and record a history of alternating marine and terrestrial depositional environments (McPherson and Garven 1999).

The Sacramento River is located 4.71 miles to the west of the APE, the Cosumnes River, 6.81 miles southeast, and the American River, 8.63 miles to the north. The Project vicinity contains a number of creek drainages, including Deer, Elk Grove, and Laguna creeks. Laguna Creek is located approximately 700 feet to the north of the APE. Laguna Creek is approximately 25 miles long, extending southwestward to its termination at Morrison Creek which empties into the Sacramento River. The Morrison Creek Stream Group drainage basin, which includes Laguna Creek and its tributaries, covers 192 square miles.

The Laguna Creek drainage flows across broad floodplains and terraces created by the ancestral American and Sacramento Rivers. The creek channel generally follows topographic lows and valleys, and is cut into these ancient deposits. The ancient deposits are comprised of young and old alluvium left from several hundred-thousand years ago to a million years ago by the ancestral rivers. Historically, Laguna Creek occupied multiple channels along the floodplains, but decades of agriculture use have reduced the creek to mainly one primary channel. Historically, the creek and its tributaries in the greater APE are perennial. The perennial nature of the creek is due primarily to irrigation runoff from the surrounding land uses (Geosyntec Consultants 2007:2.1-2.4).

The present-day soil horizons and indurated sublayers in the Laguna Creek watershed and the APE were formed as the ancient ancestral riverine deposits were weathered, cemented, and modified (Geosyntec Consultants 2006:2.5). Soils in the APE consist of San Joaquin silt loam, San Joaquin-Galt complex, and Galt clay. San Joaquin silt loam formed on terraces from alluvium derived from granite (California Soil Resource Lab 2013; Soil Survey Staff 2014a, 2014b). The soils are moderately well-drained with a depth to the duripan of from 28 to 54 inches. A typical San Joaquin silt loam and San Joaquin-Galt profile includes a plow zone but no buried soil: silt loam from the surface to 23 inches, clay loam from 23 to 28 inches, an

indurated layer from 28 to 54 inches, and a stratified sandy loam to loam from 54 to 60 inches below the surface. A typical Galt clay profile consists of clay from zero to 32 inches and cemented material from 32 to 60 inches. Such soils are suitable for a wide range of crops, livestock grazing, pasturage, vineyards, or orchards (USDA Natural Resources Conservation Service 2019).

CLIMATE, FLORA/ FAUNA, AND CURRENT LAND USE

The Mediterranean climate near the APE is characterized by hot, dry summers and warm, moist winters. The APE falls within a climate region where the winter precipitation falls as rain, with rare snowfalls. Average annual rainfall is about 20 inches, with the rainy season generally from November through March. The temperature ranges from 20 to 115 degrees Fahrenheit during the year. Summer highs are usually in the 90s, while winter lows only occasionally are below freezing. When California initially was occupied, the climate was moister and cooler than today's Mediterranean climate (Major 1988).

Current land use in the Project vicinity is mainly urban in character with residential housing and commercial areas. Portions of the APE have not been developed but have been impacted. The Project vicinity is characterized by natural vegetation communities that included grasslands, seasonal vernal pools, riparian vegetation, and oak and cottonwood woodlands.

GEOARCHAEOLOGICAL SENSITIVITY ANALYSIS

STRATIGRAPHY

The APE is mapped entirely as the lower member of the middle Pleistocene Riverbank Formation (Helley and Harwood 1985). In the San Joaquin Valley, this formation is estimated to be between 130,000 and 450,000 years old (Marchand and Allwardt 1981). Sands, silts, and gravels of this formation were derived from the Sierra Nevada and emplaced in alluvial fans and river terraces. The formation is typically a reddish color due to oxidation and has also developed argillic B soil horizons (Helley and Harwood 1985).

METHODS

University of California Davis National Resources Conservation Service California Soils Resource Lab (UCD SoilWeb, accessed July 2019) soils maps were consulted along with the United States Department of Agriculture National Resources Conservation Service (USDA-NRCS, accessed July 2019) soils descriptions and geologic maps for this assessment. Using the UCD maps, the APE was mapped for soils (



Figure 4). All sites were accessed in July 2019 for this assessment.

Subsurface site preservation depends on many factors. Soils and locations were analyzed for grain sizes, slope, and environmental indicators that contribute to the preservation of sites. Primarily sites accumulate where people have the highest probability of living, on lower slope gradients near water sources but in areas that are unlikely to experience regular flooding. Additionally, lower slope gradients decreases erosion and increases deposition assisting in site burial. Both pebbly and coarser grain sizes as well as clay rich soils preserve artifacts poorly. The age of a soil also determines the likelihood of buried archaeological sites and must be assessed as the older soils are less likely to contain sites unless items were intentionally buried in them. Soils likely too old for site preservation have duripans (hardpans), and argillic (clay rich) horizons, while younger soils with a higher potential for preservation are indicated by the lack of a B horizon or the presence of a cambic horizon. Both Holocene alluvial and aeolian units have a higher potential for artifacts as the soils were co-deposited during occupation by local cultural groups.

Classifications for Buried Site Potential are as Follows:

Very low: Soils are underlain by deposits that predate human occupation of the region. Soils that are very low in potential have B, argillic or silicic (duripan) horizons. Additionally, exposed bedrock, borrow pits, heavily eroded or gullied land, or water bodies have a very low potential. Areas of high erosion, water, borrow pits, rock outcrops or sediments mapped as Pleistocene or older are classified as having a very low potential.

Low: Soils are underlain by deposits that predate human occupation of the region, high-energy deposits unlikely to contain cultural materials in a primary context, are residual soils (soils weathered in place above bedrock), or include B horizons. Low-potential areas include Inceptisols. Although these soils commonly have a higher probability for buried sites, Inceptisols are formed in residual soils weathered directly from bedrock and, thus, have a low potential for buried sites. Areas where soils are weathered from bedrock, dissected alluvial fans and locations where soils are forming on mountains are classified as having a low potential.

Medium: Soils are underlain by deposits that are most likely terminal Pleistocene or Holocene in age, possibly have intact buried surfaces, or have sediments that are likely to have been deposited in a low-energy environment. Alluvial fans, fan aprons, valley fills, dissected remnants of alluvial fans, floodplains, and drainages are classified as having a medium potential.

High: Soils are underlain by deposits that are most likely terminal Pleistocene or Holocene in age, or sediments represent low-energy deposits, or have a high potential to contain buried intact geomorphic surfaces that could have been used by humans in the past. Alluvial stream terraces and floodplains, terrace escarpments, alluvial fans (fan skirts, fan aprons, and inset fans), and areas with aeolian deposits are classified as having a high potential.

RESULTS

The APE is located within the lower member of the middle Pleistocene Riverbank Formation (Helley and Harwood 1985). All soil types within the APE contain duripans and are assigned a

very low potential for buried sites (Table 4).

Table 4. Soils of the APE

| Map symbol | Primary soil name and slopes; Other soils; General geomorphology and elevations | Soil Taxonomy/ Basic Description | Diagnostic features | Geology | Potential |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------|
| 152 | Galt clay, slope 0% to 1% is found in valleys and in alluvial fan remnants. Galt is 85% of total volume; 5% Clear Lake, 5% Dierssen, 5% San Joaquin soils are also present. | Galt Soil Series: Order-Vertisols; Suborder-Xererts; Fine, smectitic, thermic Aquic Durixererts. / Galt soils can have A, Bss1, Bss2, Bw, and Bkqm horizons. | In general: Commonly found in small slightly concave or level basins that may be connected by narrow drainage ways. Deposited in terraces and alluvial fans. Formed in alluvium derived from mixed but dominantly granitic rocks. Duripan depth 51 cm to 102 cm. A (0 to 13 cm) and Bss1 horizon (13 to 33 cm): Greyish brown to dark greyish brown clay with a few, fine and medium iron-manganese concretions. Acidity: slightly acid to neutral Bss2 horizon (33 to 56 cm): Greyish brown, brown, dark brown clay. Acidity: neutral Bw horizon (56 to 81 cm): Greyish brown, brown, dark brown clay. Acidity: moderately alkaline BBkqm horizon: (81 to 152 cm): White, light yellowish brown, yellowish red clay. Acidity: moderately alkaline | Mapped as middle Pleistocene Riverbank Formation | very low |
| 174 | Madera loam, slope 0% to 2%. Madera is 85% of total volume; is present on alluvial fan terraces and in drainages; Kimball 5%, Clear Lake 4%, Galt 4%, unnamed 2% soils are also present | Madera Soil Series: Order-Alfisols; Suborder- Xeralfs; Fine, montmorillonitic, thermic Abruptic Durixeralfs. / Madera soils can have Ap, Bt1, 2Bt2, Bqkm, and 3C horizons. | In general: Commonly found in small slightly concave or level basins that may be connected by narrow drainage ways. Deposited in terraces and alluvial fans. Formed in alluvium derived from mixed but dominantly granitic rocks. Depth duripan encountered from 51 cm to 102 cm. Slopes: 0% to 9% Ap horizon (0 to 23 cm): light to dark yellowish brown loam; Organics: low; Acidity: moderately acid Bt1 horizon (23 to 46 cm): light to dark yellowish brown sandy clay loam; Acidity: neutral 2Bt2 horizon (46 to 64 cm): moderate to dark yellowish brown sandy clay loam; Acidity: neutral Bqkm horizon (64 to 71 cm): moderate to dark yellowish brown indurated iron- silica cemented duripan 3C horizon (71 to 152 cm): pale to dark brown sandy loam; Acidity: mildly alkaline | Mapped as middle Pleistocene Riverbank Formation | very low |
| 213 | San Joaquin silt loam, leveled, slope 0% to 1%; present in terraces and the toes of slopes. San Joaquin is 85% of total volume; Bruella 3%, Durixeralfs 3%, Galt 2%, Hedge 2%, Kimball 2%, Xerarents 2%, and unnamed 1% soils are also present. | San Joaquin Soil Series: Order- Xeralfs; Suborder-Durixeralfs; Fine, mixed, thermic Abruptic Durixeralfs. / San Joaquin soils can have Ap, Bt1, Bt2, 2Bt3, 2Bt4, 2Bqm1, 2Bqm2, and 2Bq horizons. | <u>In general:</u> Commonly found in small slightly concave or level basins that may be connected by narrow drainage ways. Deposited in terraces and alluvial fans. Formed in alluvium derived from mixed but dominantly granitic rocks. Duripan is cemented with iron and or silica becoming less indurated with depth. Depth duripan encountered from 51 cm to 102 cm. Slope 0% to 9% <u>Ap horizon (0 to 15 cm):</u> Brown to reddish brown loam with a few Fe-Mn concretions and stains. Acidity: moderately to slightly acid <u>Bt1 and Bt2 horizons (15 to 41 cm):</u> Brown to reddish brown loam with a few Fe-Mn concretions and stains. Acidity: moderately acid to neutral <u>2Bt3 and 2Bt4 horizons (41 to 66 cm):</u> Brown to dark brown clay loam or clay; average clay content is 35% to 50%. Approx. 3% Fe-Mn concretions and stains. Acidity: slightly acid to slightly alkaline <u>2Bqm1 and 2Bqm2 horizons (66 to 122 cm):</u> Light to dark brown duripan (2Bq1 is indurated) with a few to common Fe-Mn concretions and stains. Acidity: moderately alkaline <u>2Bq horizon (122 to 152 cm):</u> Brown to dark brown duripan with common Fe-Mn concretions; silica and sesquioxide cementation in 70% to 90% of matrix. Acidity: moderately alkaline | Mapped as middle Pleistocene Riverbank Formation | very low |
| 214 | San Joaquin silt loam, slope 0 to 3%; present in terraces and the toes of slopes. San Joaquin is 85% of total volume; Galt 4%, Bruella 4%, Hedge 3%, Kimball 3%, and unnamed 1% soils are also present. | see San Joaquin Series | see San Joaquin Series | Mapped as middle Pleistocene Riverbank Formation | very low |
| 217 | San Joaquin-Galt complex, leveled, slope 0% to 1%; present in terraces and the toes of slopes. San Joaquin is 45% of total volume and Galt is 40%; Clear Lake 4%, Durixeralfs 4%, Xerarents 4%, Kimball 2%, and unnamed 1% soils are also present. | see San Joaquin Series | see San Joaquin Series | Mapped as middle Pleistocene Riverbank Formation | very low |
| | | see Galt Series | see Galt Series | | |
| 218 | San Joaquin-Galt complex, slope 0% to 3%; present in terraces and the toes of slopes. San Joaquin is 45% of total volume and Galt is 45%; Clear Lake 10% and unnamed 5% soils are also present. | see San Joaquin Series | see San Joaquin Series | Mapped as middle Pleistocene Riverbank Formation | very low |
| | | see Galt Series | see Galt Series | | |

ETHNOGRAPHY

The Plains Mi-wuk (also spelled Miwok) historically occupied the APE (Kroeber 1925; Levy 1978; Figure 5). They are one of four other Eastern Mi-wuk groups (Bay, Northern Sierra, Central Sierra, and Southern Sierra) whose Eastern Miwok language is a subfamily of the Miwokan branch of the Utian language family, Penutian stock. Prior to Euro-American contact, Plains Mi-wuk territory included the lower Mokelumne River, Cosumnes River, and the Sacramento River from Rio Vista to Freeport (Levy 1978:398-399). Neighboring groups included the Washoe to the east, Northern Valley Yokuts to the south, Patwin and Bay Miwok to the west, and the Nisenan to the north.

The Sacramento–San Joaquin Delta and surrounding areas provided the Plains Miwok with an abundance of natural resources. Seasonally mobile hunter-gatherers, their semi-permanent settlements or winter villages were located on high ridges or knolls near watercourses or on the sandy islands in the Delta. They also established hunting and fishing base camps on the Delta islands.

Political units among the Plains Mi-wuk were structured by similarities in language and ethnicity, and villages were divided into “tribelet” (Levy 1978:410). Tribelets averaged 300 to 500 individuals, and controlled specific lands and the natural resources within that territory. Each tribelet’s territory included a main village and smaller satellite villages. In the main village, a large semi-subterranean structure or a simpler circular brush structure served as the dance or assembly house (Kroeber 1925:447). Villages also contained dwellings, acorn granaries, conical sweathouses, and winter grinding houses (Levy 1978:408-409). Their dwellings were either aboveground conical houses made with tule-matting or were semi-subterranean. Cremation, rather than interment, was practiced by the Plains Mi-wuk (Kroeber 1925:452).

Ethnohistoric accounts from the Spanish colonial period have provided some information on tribelet locations along the west bank of the Sacramento River, the south bank of the Cosumnes River, and the banks of the Mokelumne River (Levy 1978:399; Kroeber 1925:446, Plate 37). In the Project vicinity, the principal tribelet villages included *Mayeman*, *Sukididi*, and *Yomit* along the Cosumnes River southeast of the APE.

Similar to many other Native American groups in California, the acorn was the primary food staple of the Plains Mi-wuk, supplemented by fish, shellfish, waterfowl, and large and small mammals (Bennyhoff 1977; Levy 1978:402-403). Acorns from the prevalent valley oak (*Quercus lobata*) were collected in the late fall/early winter, plant greens and roots in the spring; and nuts and seeds in the spring, summer, and early fall. Acorns were stored in the conical-shaped granaries prior to processing. Large and small animals regularly hunted by the Plains Mi-

wuk included mule deer, tule elk, pronghorn, rabbits, squirrels, beaver, and woodrats. Salmon were an important fish resource, along with sturgeon and lamprey.

The Plains Mi-wuk employed a variety of tools, implements, and enclosures for hunting and collecting natural resources (Levy 1978:403-404, 406). These included the bow and arrow, snares, traps, nets, and enclosures or blinds were used for hunting land mammals and birds, and nets, seines, hook and line, harpoons, and basketry traps for fishing. On navigable rivers, the principal water craft was the tule balsa canoe. They made both twined and coiled basketry, and woven burden baskets were used to transport the seeds, roots, or nuts for processing or storage.

The array of tools and implements used by the Plains Mi-wuk to process food resources included bedrock mortars, cobblestone pestles, anvils, and portable stone mortars and pestles to grind or mill acorns and seeds (Levy 1978:405). During food preparation, a variety of knives, leaching and boiling baskets, woven strainers and winnowers, and woven drying trays, among others, were employed. Earth ovens were used to bake acorn bread.

Plains Mi-wuk participated in an extensive east-west trade network between the coast and the Great Basin (Levy 1978:411-412). They obtained marine shell (*Olivella* and abalone) and steatite from coastal groups. Basketry was an important trade item and moved in both directions. Salt and obsidian from the Sierras and Great Basin were traded westward.

The Native American population in the Sacramento Valley came into contact with Spanish explorers in the late 1700s as the Franciscan missions sought to convert interior peoples with the dwindling of coastal indigenous populations (Levy 1978:400). Plains Mi-wuk converts were transported to Mission San José in the early 1800s, although many resisted and tried to return to their villages in the Delta. Many Plains Mi-wuk labored on the large ranchos awarded during the Mexican period (Levy 1978:400-402), although in the 1820s and 30s, many tribelets banded together to repel the invaders and with neighboring Yokuts, attacked Mexican coastal settlements.

During two epidemics in 1830 and 1837, foreign diseases decimated the indigenous populations in the Sacramento Valley (Cook 1955). Soon after the 1848 discovery of gold in the Sierran foothills and the ensuing Gold Rush, the number of non-indigenous peoples into the California interior and Plains Mi-wuk territory increased exponentially. Population estimates show a momentous decline in Eastern Mi-wuk numbers from nearly 20,000 in 1805 to only 3,000 by 1856 (Cook 1943). With the resulting loss of the majority of their traditional lands, population numbers, and experiencing drastic alterations of their traditional lifeways, surviving Mi-wuk labored for the growing mining, ranching, farming, and lumber industries.

During the first half of the 1900s, the federal government acquired lands and established *rancherias* (reservations) from two acres to more than 300 acres, for the Plains Mi-wuk, Northern Sierra Mi-wuk and Central Sierra Mi-wuk (Levy 1978:401). Between 1934 and 1972, the U.S. Bureau of Indian Affairs terminated relations with most of these rancherias, but beginning in 1984, status to the majority has been restored.

At present, there are eight federally-recognized tribal rancherias with Eastern Mi-wuk populations. These include: Auburn Rancheria (Sierran Miwok, Placer County), Buena Vista (Plains Me-wuk, Amador County), Chicken Ranch (Central Sierra division of Eastern Me-wuk, Tuolumne County), Ione (Northern Sierra and Plains Miwok, Amador County), Jackson (Northern Sierra and Plains Me-wuk, Amador County), California Valley (formerly Sheep Ranch; Northern Sierra Miwok, Calaveras County), Shingle Springs (Plains Miwok, El Dorado County), Tuolumne (Central Sierra Me-wuk, Tuolumne County), and Wilton Rancheria (Plains and Sierra Miwok, Sacramento County) (BIA 2012).

PREHISTORIC SETTING

The archaeology of California's Central Valley is divided into five temporal periods (Fredrickson 1973, 1974, 1994; Rosenthal et al. 2007) (Table 5). Variation in climate and environment generally coincide with these broad chronological divisions. The transition from the Paleoindian to Lower Archaic periods, for example, corresponds to the drying of Pleistocene pluvial lakes. Within the greater project region, the cultural framework is also divided into three regionally based "patterns" that mark changes in distinct artifact types, subsistence orientation, and settlement patterns.

The Windmill, Berkeley, and Augustine patterns generally conform to the Middle Archaic, Upper Archaic, and Emergent temporal divisions, and were defined four decades ago by Fredrickson (1973, 1974). Fredrickson initially identified each pattern at specific archaeological sites in the region; namely, the Windmill site (CA-SAC-107) near the Cosumnes River in Sacramento County, the West Berkeley site (CA-ALA-307) in Alameda County on the east side of the Bay, and the Augustine site (CA-SAC-127) in the Sacramento–San Joaquin Delta. Each pattern or cultural tradition represents a general expression of resource exploitation that began circa 5,550 cal B.C. during the Middle Archaic Period and lasted until historic contact in the early 1800s.

Table 5. Cultural Periods for the Central Valley

| Period | Regional Pattern | Dates* |
|-----------------|------------------|--------------------------------|
| Paleoindian | N/A | 11,500–8,550 cal B.C. |
| Lower Archaic | N/A | 8,550–5,550 cal B.C. |
| Middle Archaic | Windmilller | 5,550–550 cal B.C. |
| Upper Archaic | Berkeley | 550 cal B.C.–cal A.D. 1100 |
| Emergent Period | Augustine | cal A.D. 1100–Historic Contact |

* Timeframes are adjusted for modern calibration curves for radiocarbon dates (cal=calibrated).

PALEOINDIAN AND LOWER ARCHAIC PERIODS (11,500–5,550 CAL B.C.)

Few archaeological sites that predate 5,000 years ago have been discovered in the region. Near the end of the Pleistocene (approximately 9,050 cal B.C.) and during the early Middle Holocene (approximately 5,550 cal B.C.), there were periods of climate change and associated alluvial deposition throughout the central California lowlands (Rosenthal et al. 2007:151). The change in climate and rising sea levels at the start of the Middle Holocene also led to the development of the extensive marshland known as the Sacramento–San Joaquin Delta (Atwater and Belknap 1980). Recent geoarchaeological studies (e.g., Meyer and Rosenthal 2008; Rosenthal and Meyer 2004a, 2004b; White 2003) have verified that large segments of the Late Pleistocene landscape were removed or buried by periodic episodes of deposition or erosion during the Middle Holocene. These studies confirm estimates advanced by Moratto (1984:214) that Paleoindian and Lower Archaic sites were buried during the last 5,000 to 6,000 years by deposits of Holocene alluvium up to 10-meters thick along the lower stretches of the Sacramento River and San Joaquin River drainage systems.

One of the few Early Holocene sites in the region was discovered buried approximately two meters below the surface within an alluvial fan (Meyer and Rosenthal 1998). Located just above the valley floor in the foothills of eastern Contra Costa County, CA-CCO-637 has a record of human occupation dating to 8,500 years ago during the Lower Archaic Period. Other Lower Archaic Period sites have been excavated in the foothills of Calaveras County, notably at the Skyrocket site (CA-CAL-629/630) (LaJeunesse and Pryor 1996).

MIDDLE ARCHAIC PERIOD/WINDMILLER PATTERN (5550–550 CAL B.C.)

Middle Archaic Period archaeological sites are more common in the foothills, particularly in buried contexts between circa 4,050 and 2,050 cal B.C., and are relatively scarce on the valley floor (Rosenthal et al. 2007:153). The archaeological record indicates Windmilller Pattern populations followed a seasonal foraging strategy and exploited a wide range of natural resources, including a variety of large and small mammals, fish, waterfowl, and plant resources (Fredrickson 1973; Heizer 1949; Ragir 1972; Moratto 1984). It is also likely that populations occupied higher elevations in the summer and shifted to lower elevations during the winters

(Moratto 1984:206), and that residential stability along river corridors within the Central Valley increased during this period (Rosenthal et al. 2007:153).

Faunal remains recovered from Windmill Pattern sites include tule elk, deer, pronghorn, and rabbits, while fish remains include salmon, sturgeon, and smaller fishes. Seeds or acorns apparently formed an important part of the diet during this period (Moratto 1984:201; Rosenthal et al. 2007:153, 155). The remains of acorns and pine nuts have been recovered from foothill sites in Calaveras (CA-CAL-629/630 and CA-CAL-789) and Fresno (CAL-FRE-61) counties, and milling implements found at Windmill Pattern sites include grinding slabs (metates) and handstones (manos), as well as mortar fragments.

Projectile points common at Windmill Pattern sites are classified within the Sierra Contracting Stem and Houx Contracting Stem series (Justice 2002:266, 276). Spears, angling hooks, composite bone hooks, and baked clay artifacts that may have been used as net or line sinkers represent the variety of fishing implements found at sites dating to this period. Other baked clay items include pipes and discoids, as well as cooking “stones.” Impressions of twined basketry, bone tools, shell beads, and ground and polished charmstones have also been recovered. A variety of grave goods accompanied burials in cemetery areas, which were separate from habitation areas.

The presence during the Middle Archaic of an established trade network is indicated by a variety of exotic cultural materials, including obsidian tools, quartz crystals, and Olivella shell beads. Obsidian sources during this period included quarries in the eastern Sierra, Cascades, and North Coast Ranges (Rosenthal et al. 2007:153, 155).

UPPER ARCHAIC PERIOD/BERKELEY PATTERN (550 CAL B.C.–CAL A.D. 1100)

The Windmill Pattern shifted to a more specialized, adaptive pattern over a 1,000-year period during the Upper Archaic. An increase in mortars and pestles, accompanied by a decrease in slab milling stones and handstones, indicates a shift to a greater reliance on acorns as a dietary staple during the Berkeley Pattern (Fredrickson 1974:125; Moratto 1984:209; Wohlgemuth 2004; Rosenthal et al. 2007:156). Archaeologists generally agree that milling slabs and handstones may have been used primarily for grinding wild grass grains and seeds, while mortars and pestles are better suited to crushing and grinding acorns (Moratto 1984:209–210).

Berkeley Pattern populations continued to exploit a variety of natural resources. Subsistence strategies varied regionally, focusing on seasonally available resources suited for harvesting in bulk, such as salmon, shellfish, deer, rabbits, and acorns (Rosenthal et al. 2007:156). Numerous large shell mounds dating to this period are located near fresh or salt water and indicate exploitation of a variety of aquatic resources was relatively intensive. The artifact assemblage also demonstrates hunting persisted as an important aspect of food procurement (Fredrickson

1973:125-126). Specialized technologies proliferated, producing numerous types of bone tools, Olivella shell beads, Haliotis ornaments, and ceremonial blades, among other cultural items.

The accumulations of cultural debris and habitation features, such as rock-lined ovens, house floors, burials, hearths and fire-cracked rock, reflect long-term residential occupation (Bouey 1995:348-349). Mortuary practices continued to be dominated by interment, although a few cremations have been discovered from Berkeley Pattern sites. The stratigraphic record at CA-SAC-107 in the eastern delta shows replacement of the Windmill Pattern by the Berkeley tradition.

The subsistence pattern characteristic of the Berkeley tradition may have developed initially in the San Francisco Bay region, and then spread to the surrounding coastal areas and central California. As suggested by Moratto (1984:207-211), the Berkeley Pattern is likely related to Eastern Miwok population expansion, spreading from the San Francisco Bay area to the Sacramento Valley and Sierran foothills.

EMERGENT PERIOD/AUGUSTINE PATTERN (CAL A.D. 1100–HISTORIC CONTACT)

A growth in population accompanies a substantial increase in the intensity of subsistence exploitation associated with the Augustine Pattern during the Emergent Period (Moratto 1984:211-214; Rosenthal et al. 2007:157-159). Fishing, hunting, and gathering plant foods continue as the foci of subsistence practices, including intensive harvesting of acorns. The Emergent Period is marked by the introduction of the bow and arrow. Small Gunther barbed series projectile points are present early in the period, with Desert-side notched points occurring later in the period (Rosenthal et al. 2007:158). A unique arrow point style (Stockton serrated) also developed during this period.

The Augustine Pattern toolkit also included bone fish hooks, harpoons, and gorge hooks for fishing. Hopper mortars and shaped mortars and pestles, as well as bone awls used for producing coiled baskets, are also common components of the artifact assemblages. Cosumnes Brownware has been recovered from sites in some parts of the lower Sacramento Valley. The appearance of ceramics is likely an outgrowth and direct improvement on the prior baked clay industry, although baked clay balls, which were probably used for cooking in the absence of stone, remain common.

Accompanying the increase in sedentism and population growth during this period is the development of social stratification, including an elaborate ceremonial and social organization. Cultural items associated with ceremonials and rituals include flanged tubular pipes and baked clay effigies representing humans and animals, among others. Clamshell disk beads were used as a form of currency and accompanied the development of extensive exchange networks. Mortuary practices included flexed burials, the cremation of high-status individuals, and pre-interment burning of offerings in grave pits (Fredrickson 1973:127-129; Moratto 1984:211).

House floors or other structural remains have been discovered at Augustine Pattern sites in the valley and foothills, including ones in Calaveras and Sacramento counties (CA-CAL-1180/H, CA-SAC-29, CA-SAC-267) (Rosenthal et al. 2007:158).

The cultural patterns known from historic period Native American groups in the region are reflected in the subsistence and land use patterns practiced during the Emergent Period, as well as in the increase in sedentism and the development of social stratification typical of the Augustine Pattern (Rosenthal et al. 2007:157-158). According to Moratto (1984:211-214), the Augustine Pattern may represent the southward expansion of Wintu populations. In addition, many of the large villages with house pits that developed along the rivers, major tributaries, and the Delta have been attributed to known ethnographic settlements.

HISTORICAL SETTING

SPANISH PERIOD (1769-1822)

Exploration between 1529 and 1769 of Alta (upper) California by Spanish expeditions was limited. The spring of 1769 marks the true beginning of Spanish settlement with the establishment by Gaspar de Portolá at San Diego of the first of 21 missions to be built along the California coast by the Spanish and Franciscan Order between 1769 and 1823. In the fall of 1769, Portolá reached San Francisco Bay. Later expeditions by Pedro Fages in 1772 and Juan Bautista De Anza in 1776 explored the land east of San Francisco Bay (Gunsky 1989:2-3).

The first expedition into the Sacramento Valley was led by Spanish Lieutenant Gabriel Moraga in 1808. Scouting for new mission locations and also searching for runaway Native American neophytes from the coastal missions, they traveled south as far as the Merced River and explored parts of the American, Calaveras, Cosumnes, Feather, Mokelumne, Sacramento, and Stanislaus Rivers to the north. Luis Arguello led the final Spanish expedition into the interior of Alta California in 1817. They traveled up the Sacramento River, past today's City of Sacramento to the mouth of the Feather River, before returning to the coast (Beck and Haase 1974:18, 20; Gunsky 1989:3-4).

MEXICAN PERIOD (1822-1848)

After Mexico gained independence from Spain in 1822, the Mission lands were secularized under the Secularization Act of 1833, but much of the land was transferred to political appointees. A series of large land grants (ranchos) that transferred Mission properties to private ownership were awarded by the various governors of California. Land grants were also awarded in the interior to increase the population away from the coastal areas that were settled during the Spanish Period. Captain John Sutter received the two largest land grants in the Sacramento Valley. In 1839, Sutter founded a trading and agricultural empire called New Helvetia, which was headquartered at Sutter's Fort near the divergence of the Sacramento and American rivers, in Valley Nisenan territory.

The Mexican Period also marks the exploration by American fur trappers west of the Sierra Nevada Mountains. Jedediah Smith was the first trapper to enter California; his small party trapped and explored along the Sierra Nevadas in 1826 and then entered the Sacramento Valley in 1827. They traveled along the American and Cosumnes rivers and camped near the Rosemont section of modern-day Sacramento and Wilton. The explorations by Smith and other trappers resulted in the creation and then circulation of maps of the Sacramento Valley in the 1830s (Gunsky 1989:9-11).

AMERICAN PERIOD (1848-PRESENT)

The Mexican-American War followed on the heels of the Bear Flag Revolt of June 1846 (Ohles 1997). General Andrés Pico and John C. Frémont signed the Articles of Capitulation in December 1847, and with the signing of Treaty of Guadalupe Hidalgo in February 1848, hostilities ended and Mexico relinquished California to the United States. Under the treaty, Mexico ceded the lands of present-day California, New Mexico, and Texas to the U.S. for \$15 million (Fogelson 1993:10). Within two years following the treaty, California applied for admission as a state.

Gold was discovered in 1848 on the American River at Sutter's Mill near Coloma. One year later, nearly 90,000 people had journeyed to the gold fields of California. California became the 31st state in 1850, and three years later the population of the state exceeded 300,000. In 1854, Sacramento became the state capital. Thousands of new settlers and immigrants poured into the state after the transcontinental railroad was completed in 1869, spurring California's economic growth. The fertile soils in the vast Central Valley combined with the rise in the number of irrigation canals promoted the state's role as a national leader in agricultural production. Products included fruits, vegetables, and nuts, field crops, such as barley, cotton, hay, and rice, and livestock (cattle and sheep).

LOCAL HISTORY

The APE is located approximately 5.5 miles west of historical Rancho Omochumnes, an 18,662 acre land grant situated along the north bank of the Cosumnes River. The land was awarded to Jared Dixon Sheldon in 1844 by Mexican Governor Manuel Micheltorena. Sheldon and his partner, William Daylor, divided the grant into three parcels: Sheldon Ranch, Upper Daylor Ranch, and Lower Daylor Ranch (Pinkerton 2007). Sheldon and Daylor ranched and farmed the area, and with the discovery of gold in 1848 in the nearby foothills at Coloma, they profited from the variety of goods and services they provided to the miners and early settlers (Hoover et al. 2002:306). In 1870, the land grant was patented to Sheldon's widow, Catherine Rhoads. Grant Line Road, which marks the western boundary of the rancho, is the area's most prominent physical remnant from the Mexican Period.

Originally settled as an agricultural community, Elk Grove was characterized by its various farms and ranches. English immigrant James Watson Hall is credited with founding Elk Grove in

1850 (Elk Grove Historical Society 2019). Hall built a hotel named the Elk Grove House, which was not only the first building constructed in Elk Grove but also among the finest taverns and stage stops along Upper Stockton Road (today's State Route 99) between Sacramento and Stockton. In 1868, when the Sacramento-Stockton line of the Central Pacific Railroad was constructed about one mile east of the town, the community moved to its current location alongside the railroad. The new post office at Elk Grove Station was in place by 1869 (Pinkerton 2002). Julius Everson founded the Elk Grove Building Company in 1876 and within two years, established a variety of businesses in the new town (Davis 1890).

Over the course of a ten-year period, the business association built two hotels, a flour mill, general store, hardware store, meat market, furniture manufactory, a carriage and wagon manufactory, dressmaker and milliner shops, and a grain warehouse (Thompson and West 1880:234). By 1887, the businesses along Main Street, today's Elk Grove Boulevard, as well as high crop yields, particularly from wheat, contributed substantially to the town's growing economy.

By the early 1900s, Elk Grove had experienced significant development with the construction of schools, library's, churches, a fire department, and fraternal halls. It had also become a major center for industrial wine production as well as fruit packing and shipping. Despite this early growth, Elk Grove would not experience a burst in population until the mid-20th century with the widening of Highway 99 (Stockton Road) in the late 1950s and the spread of suburban development in the 1960s. Elk Grove was incorporated as a city in 2000, and in 2010 it became a Certified Local Government (Page and Turnbull 2012).

APE HISTORY

The earliest available historical topographic map depicting the APE is the 1894 USGS Lodi 7.5-minute quadrangle, which shows the APE almost entirely undeveloped, with Sheldon Road constructed to the north, and Bruceville Road, to the east. The 1909 USGS Florin 7.5-minute quadrangle shows that Bruceville Road is in place and one structure has been constructed within the APE, just west of Bruceville Road, in the area of the historic foundation and refuse site (P-34-005386/CA-SAC-001278H) identified during the survey completed for this Project (see Study Findings) (USGS 1909). The 1941 USGS Franklin 15-minute quadrangle depicts two bridges spanning Laguna Creek and a portion of the surrounding wetland, while Big Horn Road has been constructed to the south of the APE (USGS 1941). By 1953, the number of buildings within the APE increases on both the west and east side of Bruceville Road (USGS 1953). Additional residential developments surround the APE by that time as well. The 1953, 1968, 1975, and 1980 USGS Florin 7.5-minute quadrangle maps show the Olen Ranch Complex (P-34-000707/CA-SAC-549H) with buildings that vary in number and position through time. Historical aerial imagery dating to 1957 indicate that the APE was composed mostly of agricultural fields with only minor developments, mostly along Bruceville Road (NETR 2021). The Olen Ranch Complex remains visible within the APE, just west of Bruceville Road in USDA aerial

photograph from 1957, 1964, 1993, and 1998 but is no longer present in the 2002 aerial photograph (NETR 2021). Residential homes surround much of the APE by 1993; however, the area along Bruceville Road remains largely open and undeveloped. By 2002, multiple trails or access roads have been constructed, intersecting the APE at Bruceville Road.

A small, discontinuous portion of the APE runs along the west side of Bruceville Road between approximately 1500 feet and 2050 feet south of Big Horn Boulevard. No development is depicted in this area until two rectangular buildings are shown slightly to the west of the APE on the 1968 Florin 7.5-minute USGS topographic quadrangle map. Historic USDA aerial photographs from 1967 and 1993 shows these buildings to be houses for adjoining farm complexes with a growing number of outbuildings including a large barn. This barn is no longer visible in the 1998 USDA aerial photograph. The homes and outbuildings remain visible in USDA aerial photographs from 2002 and 2005 but are no longer visible in the 2009 aerial photograph, and the area remains vacant in the 2016 aerial photograph (NETROnline 2021). This portion of the APE is now a car wash at the south and an empty lot to the north.

FIELD METHODS

Tim Spillane, Cogstone Principal Investigator for Archaeology, completed an intensive pedestrian survey of the 27.53 acre APE on June 12, 2019 (see Figure 3). The survey consisted of walking parallel transects spaced at ten-meter intervals within the APE while closely inspecting the ground surface. Existing disturbances (e.g., rodent burrows, ditches) were examined for artifacts or buried cultural deposits. Where cultural resources were encountered, the ground was intensively surveyed and inspected to record and define the resource.

The majority of the APE is undeveloped with the exception of the hardscaped portions of the APE that run along Bruceville Road. Ground surface visibility within the undeveloped segments of the APE was poor (25 percent) due to the expansive cover of high grasses (Figure 36). Visibility was fair (50 percent) in the northwestern and eastern portions of the APE where plowing has exposed more of the topsoil. Grasses were pushed aside and ground was scraped with boot heel periodically to see the surface in areas of poor visibility. Vegetation consisted of coyote brush, perennial grasses, and various marshland species.

STUDY FINDINGS AND CONCLUSIONS

The pedestrian survey identified one new resource, a historic ranch site (P-34-005386/CA-SAC-001278H). The location of previously recorded P-34-000707 (CA-SAC-549H), the Olen

Complex, was revisited but the resource has been removed and is no longer within the APE. Department of Parks and Recreation (DPR) 523 series form update was prepared for P-34-000707 (CA-SAC-549H), the Olen Complex, and is located in Appendix D. DPR 523 series forms for P-34-005386 (CA-SAC-001278H) are located in the Appendix E of the Archaeological Evaluation Report (AER; Attachment D of this HPSR).

P-34-000707 (CA-SAC-549H), the Olen Complex, was recorded in 1995 as a small ranch consisting of a house, barn, milk house, shed, and mobile home (PAR 1995). P-34-000707 (CA-SAC-549H) is listed in the BERD and has status 6Y, determined ineligible for National Register by consensus through Section 106 process. Project improvements at the location of P-34-000707 (CA-SAC-549H) include a sidewalk segment which is located along the eastern border of the Olen Complex. Results of the survey found the entire complex of structures demolished and the site cleared since its documentation in 1995. No structural features or artifacts of any kind were observed. Ground visibility was fair (50 percent) due to vegetation overgrowth. Although the record search identified it as a resource within the APE, it has since been removed and is therefore not considered as a resource within the APE.

CULTURAL RESOURCES WITHIN THE APE

P-34-005386 (CA-SAC-001278H) is a historic foundation and refuse site located within APN 11600110040000 on the west side of Bruceville Road approximately 745 feet north of Big Horn Boulevard (Figure 7). The site is approximately 3.07 acres in size. Project improvements at the location of P-34-005386 (CA-SAC-001278H) include the trail alignment and a sidewalk segment. A partial ROW acquisition is anticipated for the parcel.

The pedestrian survey identified seven features including one concrete board-formed structure, three concrete pads, and three irrigation features including a pump station, control box, and concrete water trough within the APE (Table 6 and Figures 8 to 12). Fencing is also present with one post located to the east at Bruceville Road and a longer 50 foot fence segment to the west which is likely the remains of a corral. Throughout the site is a light-density disturbed scatter of demolition debris mixed with modern refuse, roadway trash, and few potentially historic artifacts. The refuse scatter has been severely disturbed by recurrent heavy equipment use. Demolition debris includes common red brick, concrete chunks, timber fragments, window and mirror glass shards, and amorphous ferrous metal fragments. Refuse includes bottle glass shards, a small quantity of non-diagnostic whiteware ceramic dish sherds, modern clothing fragments, roadway debris such as vehicle parts, and drug paraphernalia including hypodermic needles. The majority of the refuse artifacts appears to be modern, though some ceramic and bottle glass fragments may be historical in age but no diagnostic markings were found.

Table 6. P-34-005386/CA-SAC-001278H Features

| Feature Number | Name | Description |
|-----------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F-001 | Concrete board-formed structure | Structure measures 11 feet (north to south) by 8.5 feet (east to west). The top of the concrete walls are lined with timber boards held in place with heavy iron metal bolts and washers. There is a two-foot opening on the northern wall, and the entire structure rests on a concrete pad. The feature is in poor condition, though appears to be the most complete structure at the site, and is filled with modern transient refuse, such as trash bags, modern clothing, and hypodermic needles. |
| F-002 | Concrete pad | Concrete structure pad measures 37.5 feet (north to south) by 15 feet (east to west). The tops of its walls are capped with cut timber boards and iron hardware. |
| F-003 | Concrete pad | Concrete foundation pad measures 25 feet (north to south) by 18.5 feet (east to west). Pad is almost entirely obscured by vegetation at the time of the survey. |
| F-004 | Concrete pad | Small concrete pad measuring 5 feet (north to south) by 2.5 feet (east to west). May be related to irrigation although due to dense vegetation overgrowth, its function could not be confirmed. |
| F-005 | Irrigation feature | Concrete irrigation control box measuring 12 feet (east to west) by 4.5 feet from (north to south). It is densely overgrown with vegetation at the time of survey. |
| F-006 | Irrigation feature | Concrete board-formed pump station with intersecting ferrous metal piping. It measures 10 feet (north to south) by 4 feet (east to west). |
| F-007 | Irrigation feature | Concrete water trough measuring 30 feet (north to south) by 2.5 feet (east to west). The top of its walls are lined with timber boards held in place by heavy iron hardware. It is heavily overgrown with thistles and other weeds. The concrete element of the feature appears to be intact. |

Historic research for the site included a review of historic maps and consultation with the Elk Grove Historical Society. The 1909 USGS Florin 7.5-minute quadrangle (1:24,000) depicts one structure just west of Bruceville Road in the area of the historical ranch site (USGS 1909). The Elk Grove Historical Society responded on July 9 and 10, 2019 that that there is no known historic significance to the property associated with APN: 116-0011-004-0000. Historian, Mr. Silveira further stated on July 16, 2019 that the property at APN 116-0011-004-0000 was owned by Alar R Wightman until 1903 or later.

The site is in poor condition as a result of the structure demolitions and recurrent disturbances from heavy equipment use such as plowing. Despite its current condition at the surface, additional historical research and excavations is necessary to determine if the P-34-005386 (CA-SAC-001278H) is eligible for the NRHP. An Archaeological Evaluation Report (AER) was prepared (see Attachment D to this HPSR).

OTHER RESOURCES

Bridge 24C0405 is located within the APE. Bridge 24C0405 Laguna Creek has been evaluated by Caltrans as a Category 5 bridge and determined not eligible for listing on the NRHP.

CONCLUSIONS

It is Caltrans' policy to avoid cultural resources whenever possible. Further investigations may be needed if the sites cannot be avoided by the Project. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. Additional survey will be required if the Project changes to include areas not previously surveyed.

The following two mitigation measures are recommended under CEQA based on the City's coordination with the United Auburn Indian Community of the Auburn Rancheria and Wilton Rancheria.

CUL-1 If Native American cultural materials are discovered during project construction, then all work shall halt within 100 feet of the discovery and the Resident Engineer shall be immediately notified. The City shall contact the United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Wilton Rancheria regarding the discovery. The Resident Engineer, the City of Elk Grove, an archaeologist meeting the Secretary of the Interior's Standards in Archaeology, the UAIC, and the Wilton Rancheria shall assess the discovery to determine if it qualifies as a Tribal Cultural Resource. The appropriate treatment of the discovery, including any applicable avoidance or mitigation strategies, shall be determined in consultation with the City, the UAIC, and the Wilton Rancheria. Construction activities will not commence until the appropriate treatment has been determined and any applicable mitigation has been completed. Mitigation shall follow the recommendations detailed in Public Resources Code sections 21084.3(a) and (b), and CEQA Guidelines section 15370.

CUL-2 Worker environmental training will include archaeological and Tribal Cultural Resource awareness. The training shall be developed in coordination with the UAIC and the Wilton Rancheria and will be provided prior to commencement of project construction activities for all personnel working within the project site. The training will identify the appropriate point of contact in the case of Tribal Cultural Resource discovery and will include relevant information regarding Tribal Cultural Resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training will also underscore the requirement for confidentiality and culturally-appropriate treatment of Tribal Cultural Resources.

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APPENDIX A. MAPS AND OTHER FIGURES

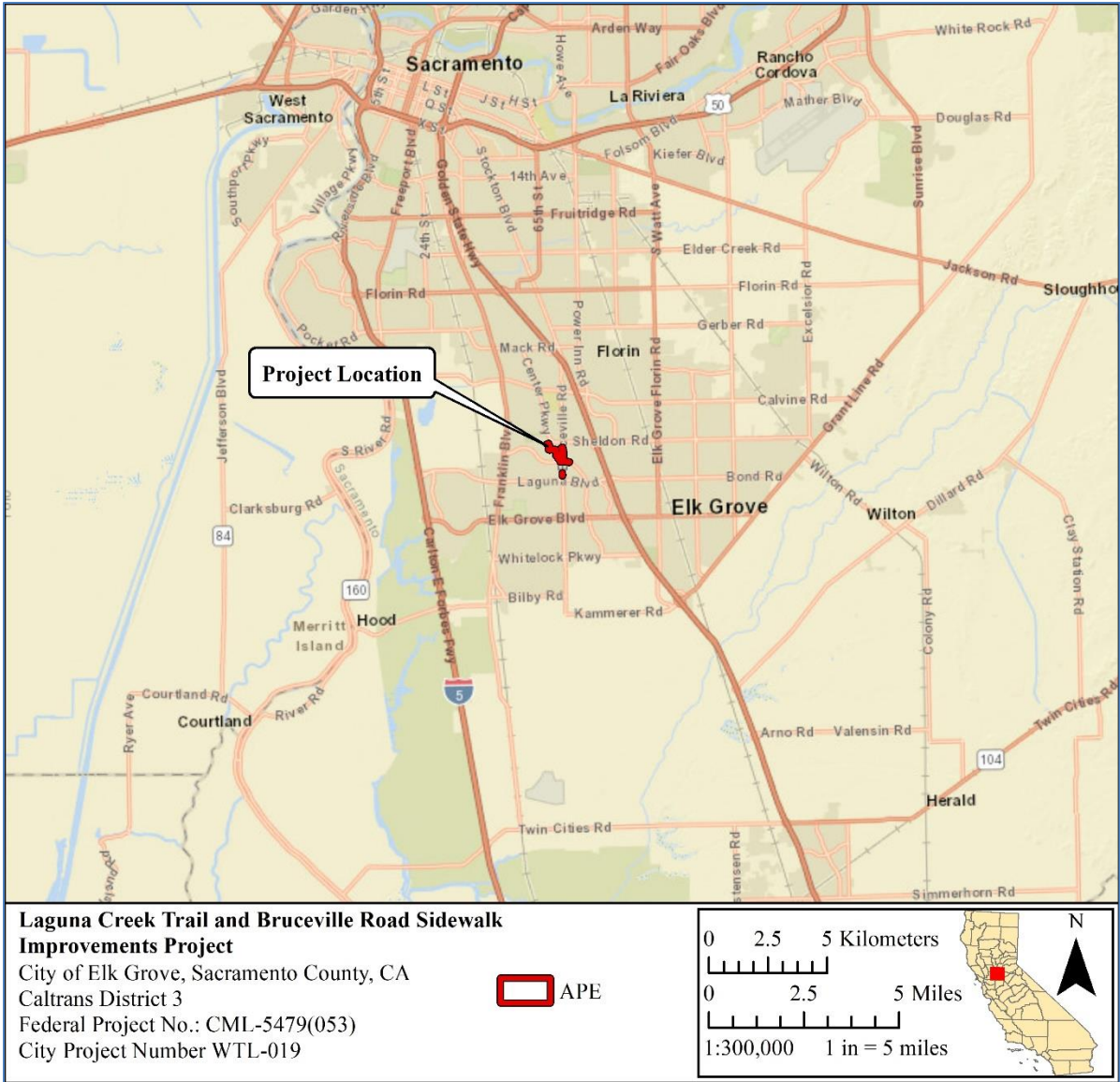


Figure 1. Project vicinity map

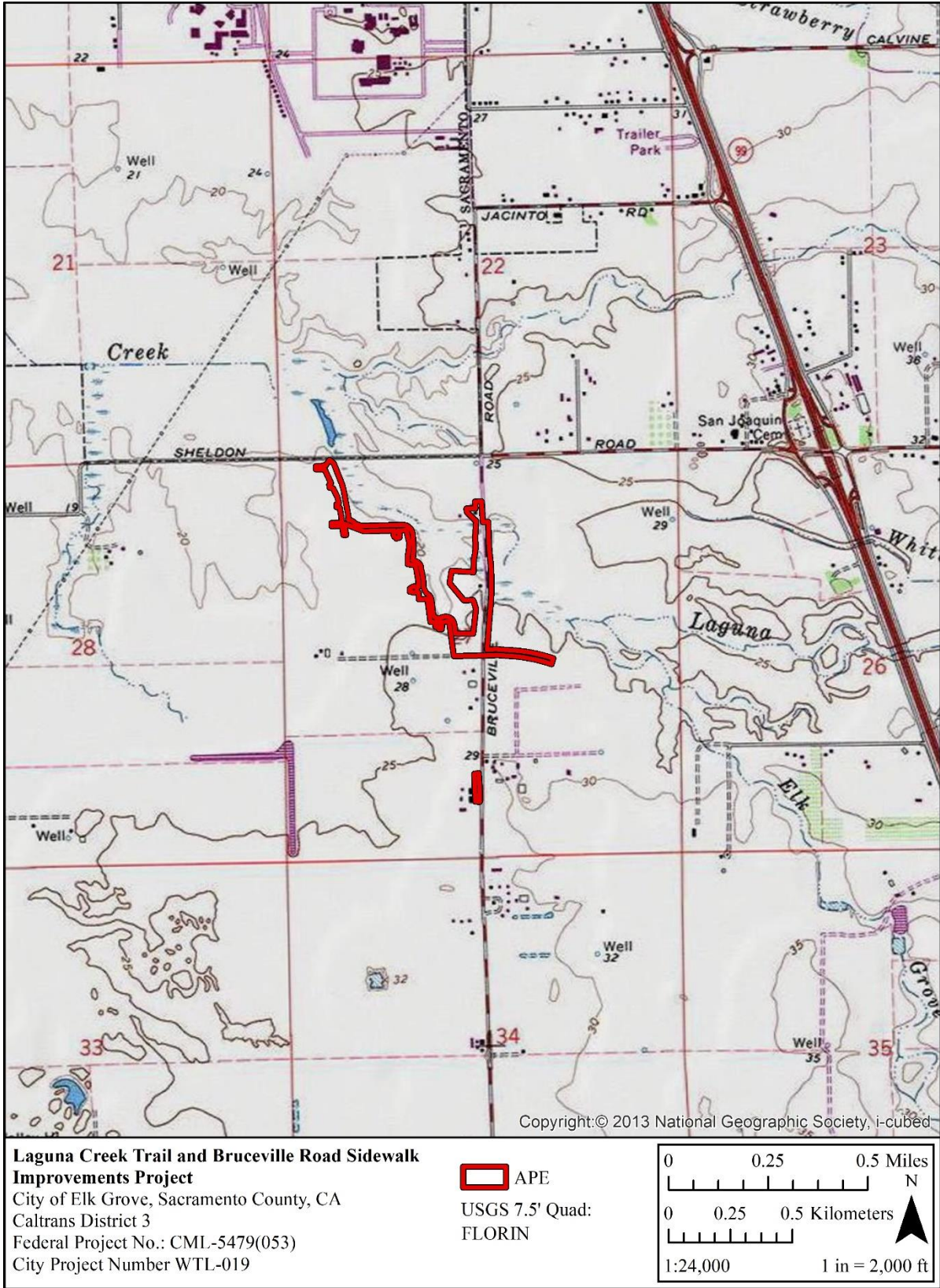


Figure 2. Project location map

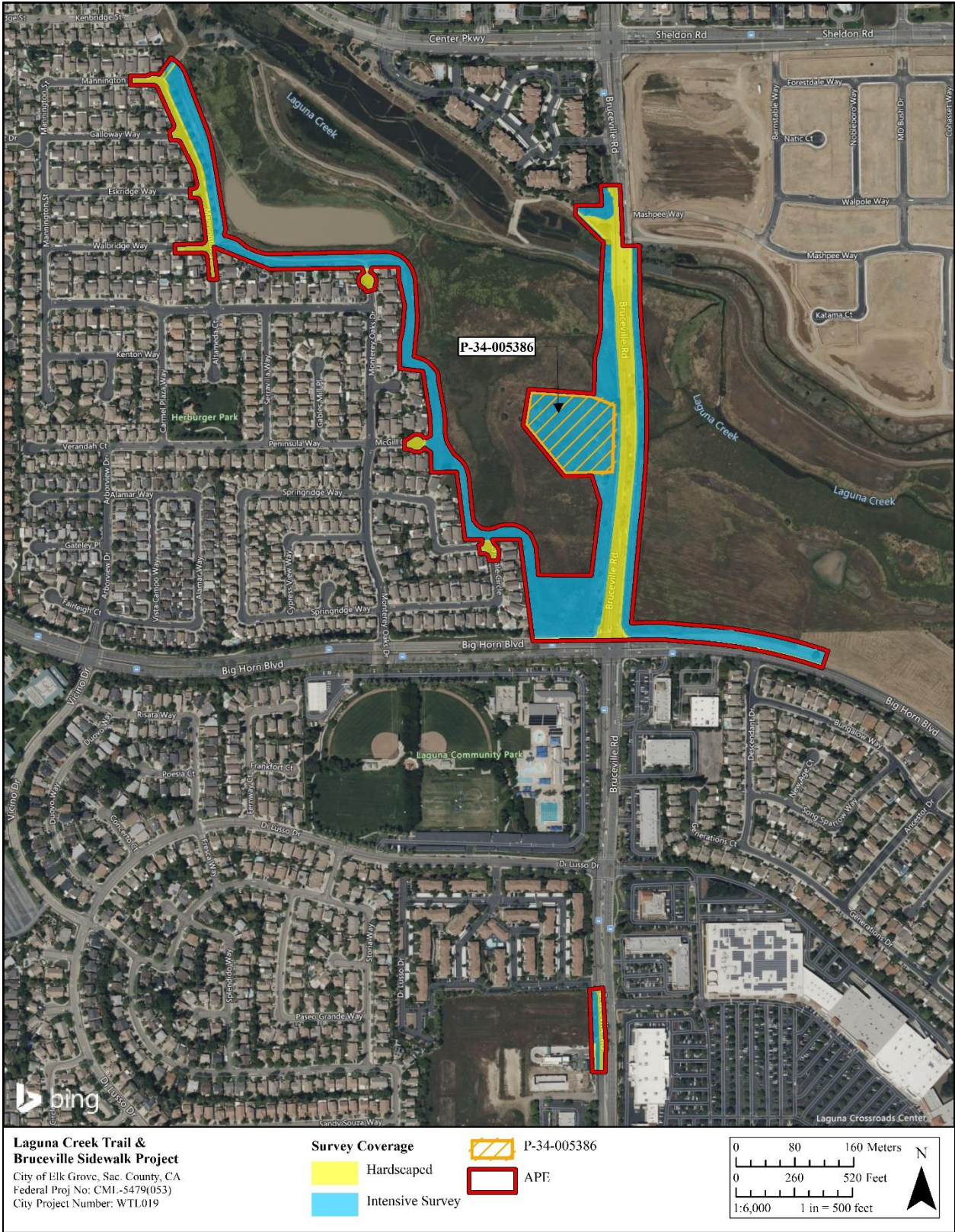


Figure 3. Survey coverage map

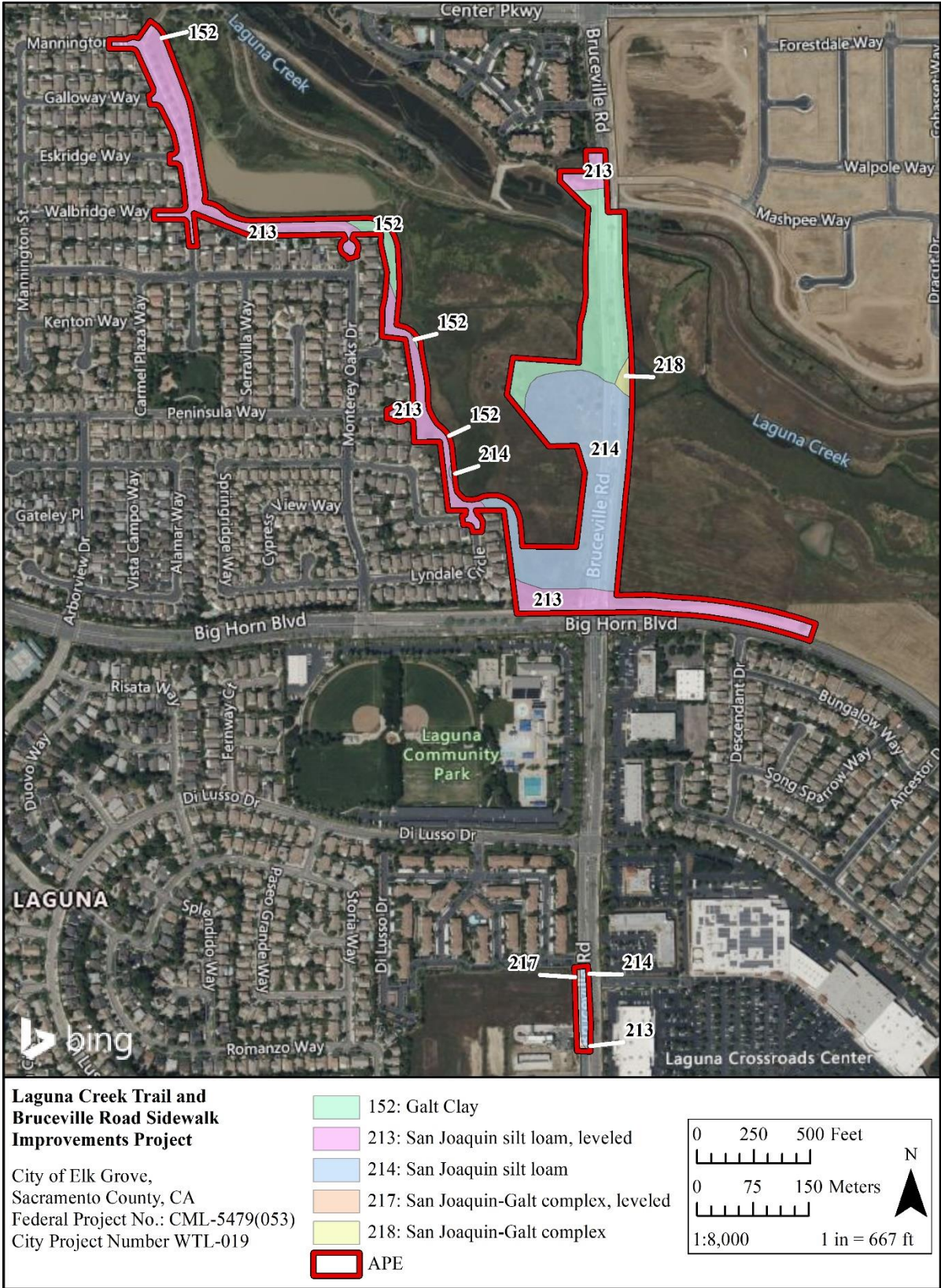


Figure 4. Project soils map

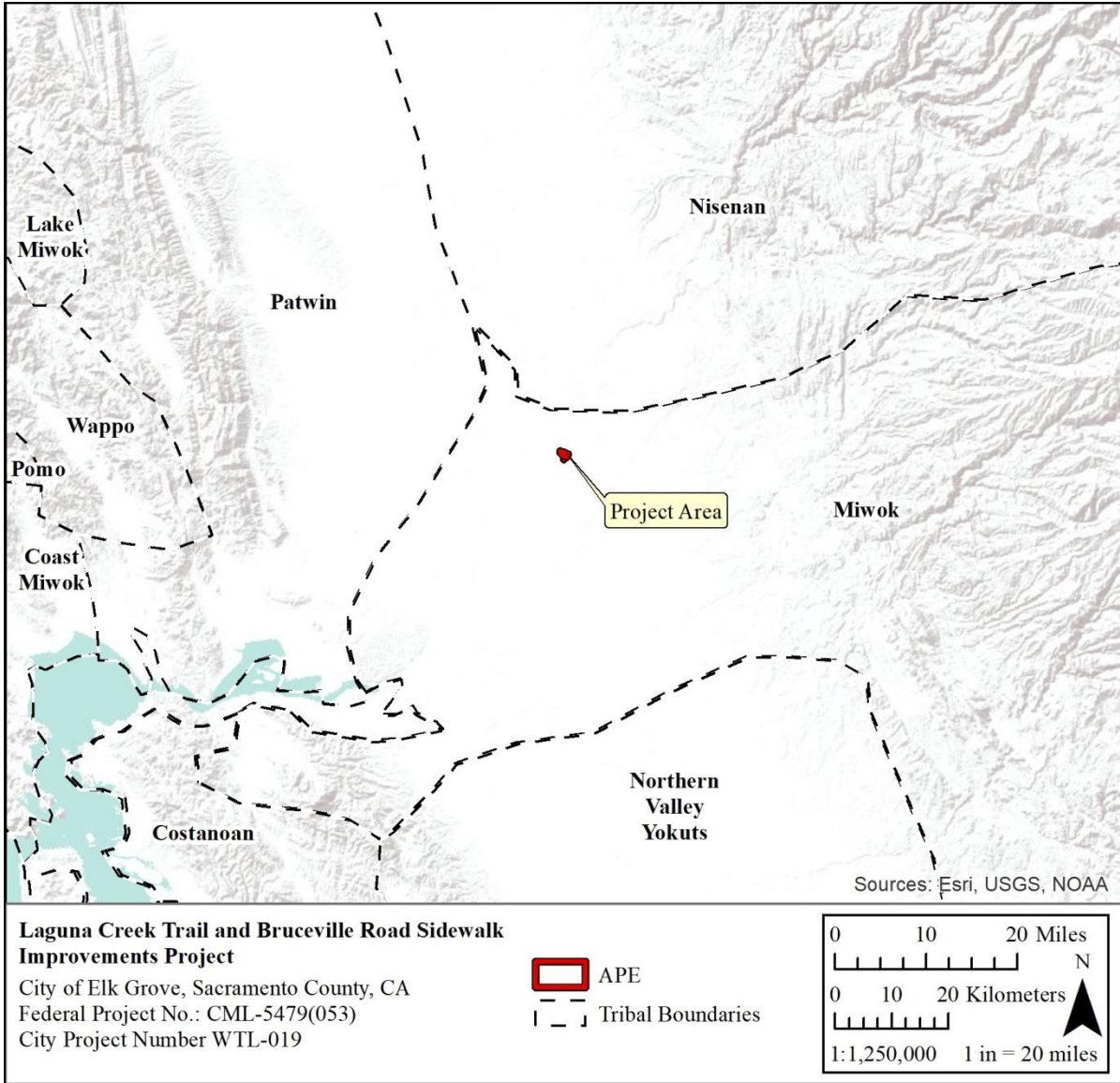


Figure 5. Tribal territories map



Figure 6. North end of APE with Laguna Creek and dense grass cover, view west



Figure 7. P-34-005386/CA-SAC-001278H site map



Figure 8. P-34-005386/CA-SAC-001278H, F-001 concrete board-formed structure, view southeast



Figure 9. P-34-005386/CA-SAC-001278H, F-002 concrete structure pad densely overgrown with weeds, view south



Figure 10. P-34-005386/CA-SAC-001278H, F-007 concrete trough densely overgrown with thistles, view north



Figure 11. P-34-005386/CA-SAC-001278H wooden fence with barbed wire, view northwest



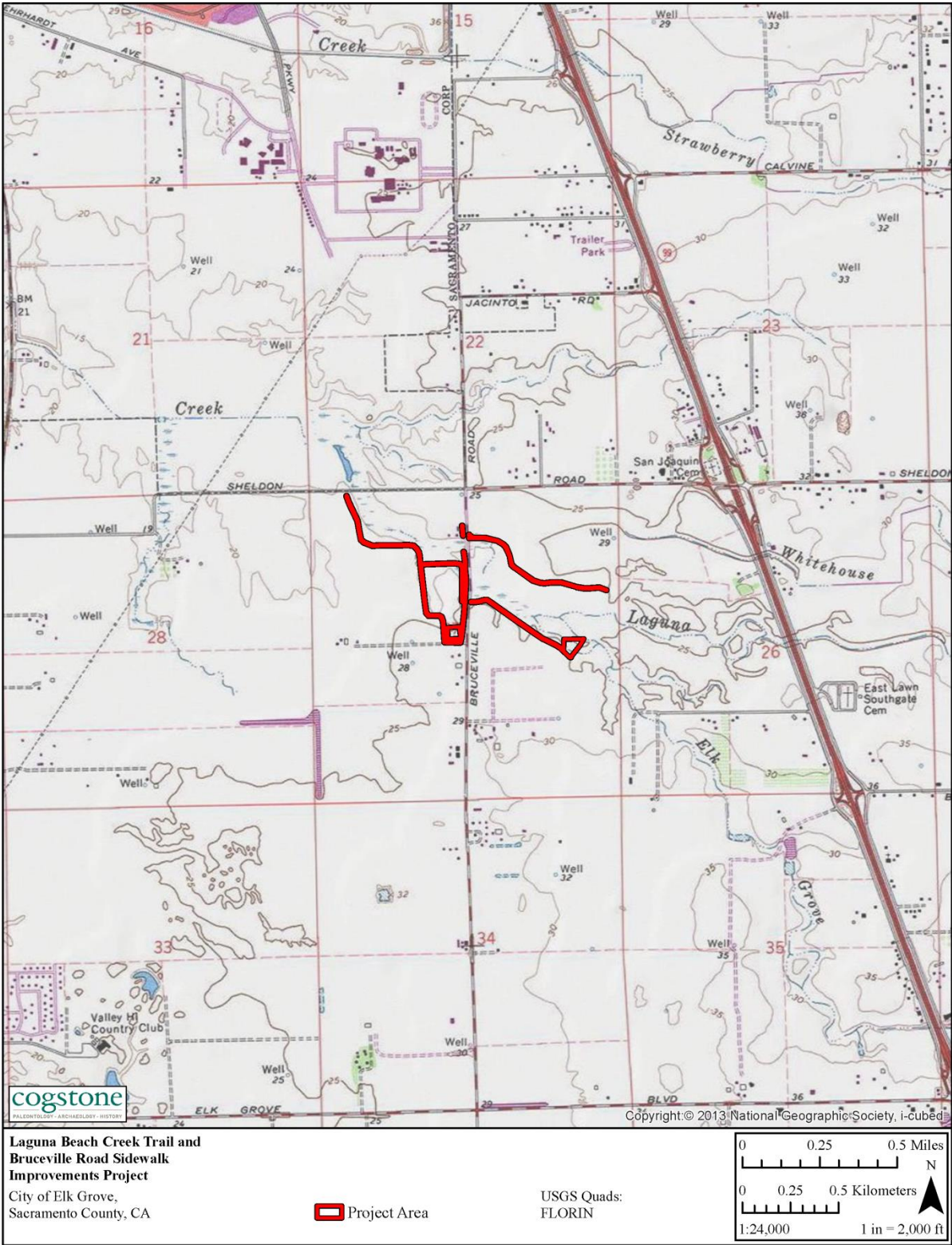
Figure 12. P-34-005386/CA-SAC-001278H Overview of refuse scatter with plowing disturbance, view south

**APPENDIX B. NATIVE AMERICAN AND HISTORICAL SOCIETY
CONSULTATION RESULTS**

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

| | |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COGSTONE SACRED LANDS SEARCH REQUEST: NAHC | |
| DATE | May 3, 2019 |
| COGSTONE PROJECT NUMBER: | 4019 |
| COGSTONE PROJECT NAME: | Laguna Creek Trail |
| PROJECT DESCRIPTION: | The proposed project consists of multiple trail extensions and gap closures of the Laguna Creek Trail as well as sidewalks along Bruceville Road. The major improvements include portions of new 10 foot wide asphalt Class I Bikeway with 2 foot wide granite shoulders, new sidewalks, repair of existing low water trail crossings, and appropriate signs, striping, and pavement markings. The project is approximately 2.2 miles in length. The City is anticipating Caltrans Local Assistance federal funding thus all documents will be prepared in Caltrans format with the expectation that Caltrans will be the lead federal agency. |
| USGS 7.5' QUAD: | Florin |
| COUNTY: | Sacramento |
| TOWNSHIP/RANGE/SECTION: | T: 7N; R: 5E; Section 27 |
| Acres | 7.85 |
| TYPE OF SEARCH: | Sacred Lands Search |
| 1:24000 map attached | √ |
| Thank you. | |
| Please Mail to: | Tim Spillane 1518 W. Taft Ave. Orange, CA 92865 (714) 974-8303 fax tspillane@cogstone.com |

Laguna Creek Trail & Bruceville Rd Sidewalk Improvements Project ASR



STATE OF CALIFORNIA

Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



May 24, 2019

Tim Spillane
Cogstone

VIA Email to: tspillane@cogstone.com

RE: Laguna Creek Trail, Sacramento County

Dear Mr. Spillane:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Katy Sanchez".

for
Katy Sanchez
Associate Environmental Planner

Attachment

**Native American Heritage Commission
Native American Contacts List
5/24/2019**

Buena Vista Rancheria of Me-Wuk Indians
Rhonda Morningstar Pope, Chairperson
1418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento CA 95811
rhonda@buenavistatribe.com
(916) 491-0011 Office
(916) 491-0012 Fax

Shingle Springs Band of Miwok Indians
Regina Cuellar, Chairperson
P.O. Box 1340 Miwok
Shingle Springs CA 95682 Maidu
rcuellar@ssband.org
(530) 387-4970
(530) 387-8067 Fax

Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 Miwok
Auburn CA 95604 Maidu
PCubbler@colfaxrancheria.com
(530) 320-3943

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn CA 95603 Miwok
bguth@auburnrancheria.com
(530) 883-2390 Office
(530) 883-2380 Fax

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairman
P.O. Box 4884 Miwok
Auburn CA 95604 Maidu
miwokmaidu@yahoo.com
(916) 577-3558

Wilton Rancheria
Raymond Hitchcock, Chairperson
9728 Kent Street Miwok
Elk Grove CA 95624
rhitchcock@wiltonrancheria-nsn.gov
(916) 683-6000 Office
(916) 683-6015 Fax

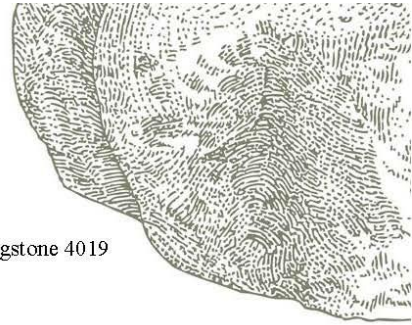
Ione Band of Miwok Indians
Sara Dutschke Setchwaelo, Chairperson
P.O. Box 699 Miwok
Plymouth CA 95669
sara@ionemiwok.org
(209) 245-5800 Office
(209) 245-6377 Fax

Nashville Enterprise Miwok-Maidu-Nishinam Tribe
Cosme A. Valdez, Chairperson
P.O. Box 580986 Miwok
Elk Grove CA 95758-001
valdezcome@comcast.net
(916) 429-8047 Voice/Fax
(916) 396-1173 Cell

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed:
Laguna Creek Trail, Sacramento County.



June 10, 2019

Cogstone 4019

Name
Title
Tribal Organization
Address
City, State, Zip

Re: Request for Section 106 Consultation for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053)), Elk Grove, Sacramento County, California.

Dear Tribal Contact:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), and in cooperation with the City of Elk Grove, is conducting a cultural resource investigation under Section 106 for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (Federal Project Number CML-5479(053)). The Project proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road (see Figure 1). The Project is located in the vicinity of Bruceville Road and its intersection with Sheldon Road and Bighorn Boulevard in Elk Grove, Sacramento County, California. It is within the United States Geological Survey Florin quadrangle map in Township 7 North, Range 5 East, Section 27 of the Mount Diablo Base and Meridian (see Figure 2).

We invite you to help identify historic properties, cultural resources and/or areas of religious and cultural significance that might be affected by the Project. If the Project might have an effect to these resources and places, we would like to discuss possible ways to avoid, minimize or mitigate the potential effects. The point of contact for the Caltrans is below.

| CALTRANS Point of Contact Information | |
|---------------------------------------|----------------------------------------------------|
| Name/Title: | David Giongco / District Local Assistance Engineer |
| Address: | 703 B Street |
| City: | Marysville, CA 95901 |
| Tel: | (530) 741 5450 |
| E-Mail: | David.Giongco@dot.ca.gov |

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego - Riverside - Morro Bay - Northern California

cogstone.com
Toll free (888) 333-3212

Federal Certifications EDWOSB, SDB,
State Certifications DBE, WBE, SBE, UDBE

The main trail extension is from Lewis Stein Road to Bruceville Road (0.5 miles [mi]) along the north side of Laguna Creek. It will connect two existing undercrossings and existing trails on both sides of the undercrossings. The other main trail extension is along the south side of Laguna Creek from Lewis Stein Road to Bruceville Road (0.4 mi). Additional trail gap closures will finish connections to existing trails between Bruceville Road, Mannington Street, and Center Parkway (0.8 mi) that extend further north and west into the City of Sacramento. There will also be trail crossings of Bruceville Road and Lewis Stein Road that will include a user actuated warning system. Sidewalks will be added along the west side of Bruceville Road between Big Horn Boulevard and Center Parkway (0.5 mi) and close a gap about 500 feet north of Laguna Boulevard and about 600 feet south of Di Lusso Drive (0.1 mi). These new trails and sidewalks will allow thousands of residents to use an interconnected trail system between two cities and multiple neighborhoods alike. The major improvements include portions of new 10-12 foot wide asphalt trail (Class 1 Bikeway) with 3 foot decomposed granite shoulders, new 6 to 8 foot wide sidewalks, repair of existing low-water trail crossings, signs, stripping, and pavement markings. Caltrans will be the Lead Federal Agency. Cogstone Resource Management, Inc. (Cogstone) has been retained to conduct a cultural resource assessment of the Area of Potential Effects (APE) and manage the Section 106 Consultations on behalf of the Caltrans.

The Native American Heritage Commission (NAHC) was contacted on May 3, 2019 to perform a search of the Sacred Lands File. The NAHC responded on May 24, 2019 and reported no Native American sacred sites or heritage resources are located within the APE or the immediate vicinity. The NAHC also provided a list of Native American individuals/organizations that may have knowledge of cultural resources and/or sacred lands within or near the APE and recommended that we contact you, among others.

A record search of the APE and a one-mile buffer was requested from the Northern California Information Center located at California State University, Sacramento on April 15, 2019. There are 45 sites within the one-mile buffer with 1 site within the APE, all historical resources, No sites were identified within the APE

An intensive pedestrian survey of the APE will be performed by Cogstone soon, and when the results are ready, that information will be shared with you upon request.

Please let us know of your concerns regarding the Project within **30 days, if possible**. All information provided regarding cultural, sacred sites or other areas of concern will be kept confidential. Please contact me by phone (714-974-8300), email (cogstoneconsult@cogstone.com), or fax (714-974-8303). You may also contact Mr. Giongco if you prefer.

Thank you for your assistance.



Emily Barton

Attachments: Project vicinity map
Project location map

Laguna Creek Trail & Bruceville Rd Sidewalk Improvements Project ASR

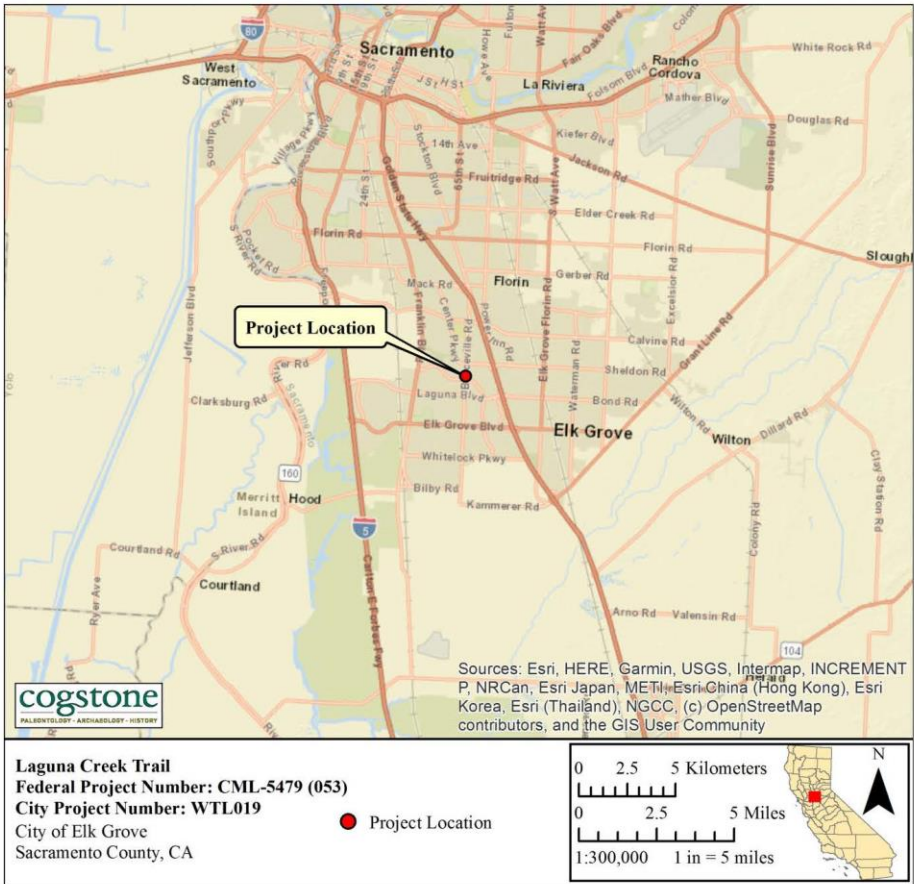


Figure 1. Project vicinity map

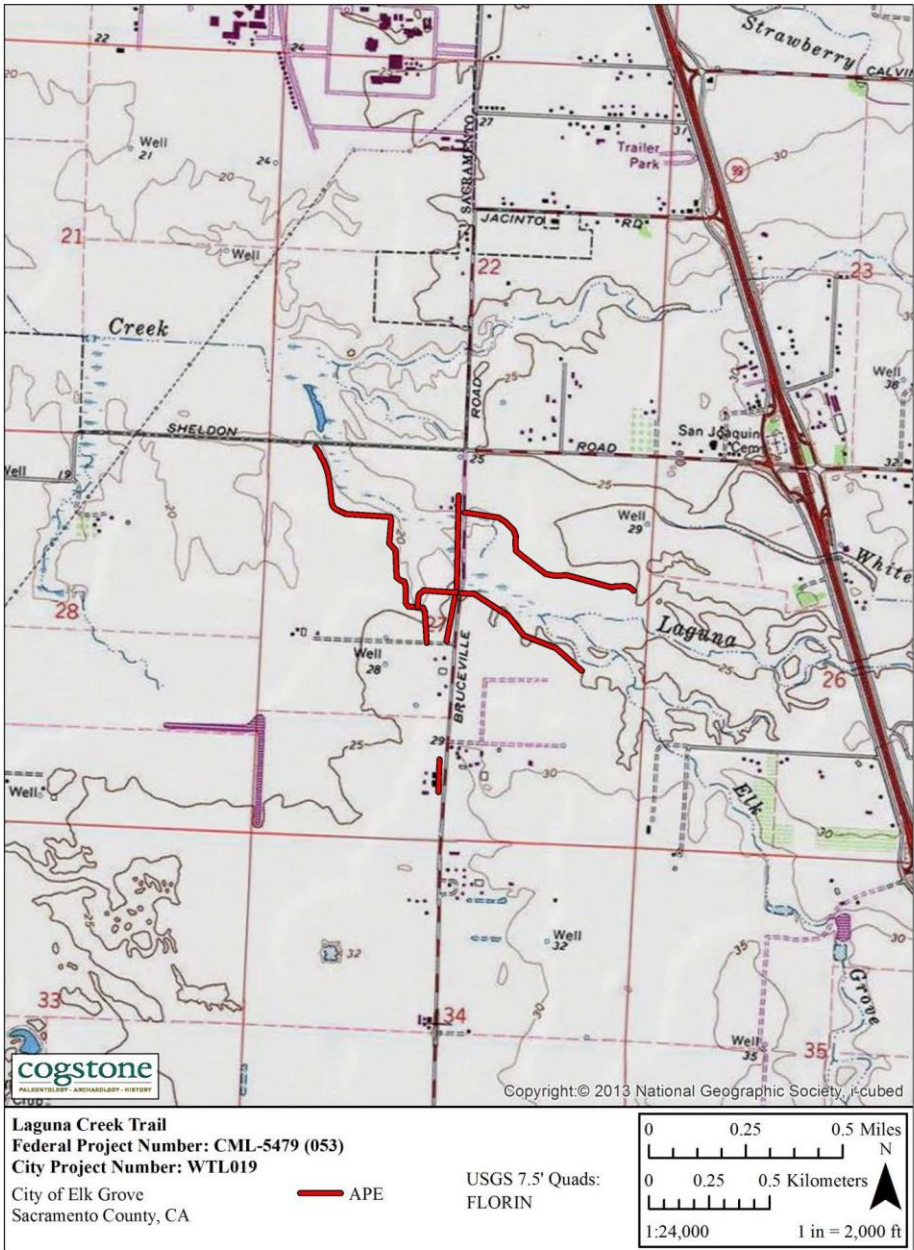


Figure 2. Project location map

Tribal Consultation Log for the Laguna Creek Trail & Bruceville Rd Sidewalk Improvements Project

| Native American Group | Contact | Date(s) and Method of First Contact Attempt | Date(s) and Method of Second Attempt | Date(s) and Method of Third Attempt | Date(s) of Replies Rec'd | Comments |
|-------------------------------------------------|----------------------------------------|----------------------------------------------------|---------------------------------------------|--------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Buena Vista Rancheria of Mewuk Indians | Chairperson Rhonda I. Morningstar Pope | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/8/2019 phone, voicemail | | No response |
| Colfax-Todds Valley Consolidated Tribe | Treasurer Pamela Cubbler | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/8/2019 phone call | 7/8/2019 phone call | Ms. Pamela Cubbler responded with no comment and stated that the tribe defers to Wilton Rancheria. |
| Colfax-Todds Valley Consolidated Tribe | Chairman Clyde Prout | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/8/2019 phone call | 7/8/2019 phone call | See above response from Ms. Pamela Cubbler. |
| Ione Band of Miwok Indians | Chairperson Sara Dutschke Setchwaelo | 6/10/2019 Certified USPS Mail | 6/24/2019 email (returned) | 7/8/2019 phone call 7/10/2019 email | | Cynthia Turner, Administrator, responded on July 8, 2019 via phone requesting that the consultation letter be sent to the Tribe's cultural committee at culturalcommittee@ionemiwok.net. Cogstone forwarded the letter and followed up on July 10, 2019. No further response has been received. |
| Nashville Enterprise Miwok-Maidu-Nishinam Tribe | Chairperson Cosme A. Valdez | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/10/2019 phone, voicemail | | No response |
| Shingle Springs Band of Miwok Indians | Chairperson Regina Cuellar | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/10/2019 phone, voicemail | | On June 21, 2019, Cultural Resources Director Daniel Fonseca emailed stating that the Tribe was not aware or any cultural resources within the Project Site but request copies of project documents including record search and survey results, as well as environmental, archaeological, and cultural reports. |

| Native American Group | Contact | Date(s) and Method of First Contact Attempt | Date(s) and Method of Second Attempt | Date(s) and Method of Third Attempt | Date(s) of Replies Rec'd | Comments |
|--------------------------------|--------------------------------|---------------------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| United Auburn Indian Community | Chairperson Gene Whitehouse | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/10/2019 phone call & email | 4/26/2019 email; 7/23/2019 email | <p>Cherilyn Neider responded on April 26, 2019 by email and offered mitigation measures that address inadvertent discoveries and the inclusion of a tribal cultural resources section in the Worker Environmental Awareness and Protection training. On May 10, 2019, Amy Dunay, Senior Environmental Planner, City of Elk Grove responded with edited mitigation measures, said that draft documents would be sent when available and asked if electronic or hard copies were preferred, and noted that Wilton Rancheria had also requested consultation. On May 14, 2019 Ms. Neider responded that electronic copies are fine.</p> <p>Anna Starkey, Cultural Regulatory Specialist, emailed on July 25, 2019 stating the tribe is not aware of any resources within the APE and requests digital copies of the cultural report and copies of the environmental report being prepared. They also have recommended two mitigation measures, one for inadvertent discoveries of TCRs and the other for worker awareness training.</p> |

| Native American Group | Contact | Date(s) and Method of First Contact Attempt | Date(s) and Method of Second Attempt | Date(s) and Method of Third Attempt | Date(s) of Replies Rec'd | Comments |
|-----------------------|----------------------------|---------------------------------------------|--------------------------------------|-------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wilton Rancheria | Chairman Raymond Hitchcock | 6/10/2019 Certified USPS Mail | 6/24/2019 email | 7/10/2019 phone, voicemail | 5/8/2019 email; 6/11/2019 email | <p>Mariah Mayberry, Administrator Assistant requested by email on May 8, 2019 that Wilton Rancheria tribal representatives be allowed to observe and participate in all cultural resource studies, including pedestrian surveys, geoarchaeology, phases testing, forensic canine surveys, and other management work for the project. Ms. Mayberry also requested that all existing cultural resource documentation, including, Sacred Lands File checks, ethnographic studies, records searches and previous studies and records be sent to Wilton Rancheria. She also stated that it is “Wilton Rancheria’s policy is to protect and preserve tribal cultural resources in place to avoid impacts and assist with mitigating for significant impacts whenever possible. Work in known cemeteries (mounds/burials), cultural areas, subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria’s and receiving Wilton Rancheria’s written consent on a project or site-specific plan or agreement.</p> <p>Mariah Mayberry, Administrator Assistant, responded by email on June 11, 2019 asking for the results of the pedestrian survey. Cogstone followed up by email on June 24, 2019. On June 24, 2019, The Tribe’s Department of Cultural Preservation responded that the Tribe did not wish to engage in AB52 consultations but requested all environmental documentation for the Project. Cogstone again followed up by email on July 10, 2019 unaware of this response.</p> |

Historical Society Consultation for the Laguna Creek Trail & Bruceville Rd Sidewalk Improvements Project

| Name | First attempt | Second Attempt | Comment |
|------------------------------|-----------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elk Grove Historical Society | Mailed: June 21, 2019 | Emailed: July 6, 2017 | On July 9, 2019, Historian Louis Silveira of the Elk Grove Historical Society responded via email. Mr. Silveira informed Cogstone that he would forward our inquiry to locals knowledgeable of Elk Grove as well as local historians. On July 9 and July 10, 2019 Cogstone received responses from Elk Grove locals Dave Lema, Jim Entrican, and town historian Elizabeth Pinkerton. All replied that there is no known historic significance to the property associated with APN: 11600110040000. In addition, Mr. Silveira was able to provide some information of land ownership. |



**SHINGLE SPRINGS BAND
OF MIWOK INDIANS**

Shingle Springs Rancheria
(Verona Tract), California
5168 Honpie Road
Placerville, CA 95667
Phone: 530-676-8010
shinglespringsrancheria.com

CULTURAL RESOURCES

June 21, 2019

David Giongco, District Local Assistance
703 B Street
Marysville, CA 95901

RE: Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project

Dear David Giongco,


Thank you for your letter dated June 10, 2019 in regard to the above mentioned project. Based on the information provided, the Shingle Springs Band Of Miwok Indians is not aware of any known cultural resources on this site. However, SSR would like to have continued consultation through updates, as the project progresses. This will foster a greater communication between the Tribe and your agency.

SSR would also like to request any and all completed record searches and or surveys that were done in or around the project area up to and including environmental, archaeological and cultural reports. If during the progress of the project new information or human remains are found, we would like to be able to go over our process with you to protect such important and sacred artifacts (especially near rivers and streams).

If such finds are made, please contact Kara Perry, Cultural Outreach Coordinator, at (530) 488-4049 or kperry@ssband.org.

Thank you for providing us with this notice and opportunity to comment.

Sincerely,


Daniel Fonseca
Cultural Resource Director
Tribal Historic Preservation Officer (THPO)
Most Likely Descendant (MLD)

7/25/2019

Consultation for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Elk Grove

From: Anna Starkey <astarkey@auburnrancheria.com>
To: cogstoneconsult@cogstone.com <cogstoneconsult@cogstone.com>
Date: 7/23/2019 4:36 PM

Second email attempt. First was undelivered.

Dear Emily,

Thank you for your recent letter requesting consultation for the above mentioned project. Should we expect to see an AB 52 letter from the City of Elk Grove for this project as well?

Our records show no known resources in the proposed project area of potential effects. While there are no recorded resources in the project area, we recommend that the City of Elk Grove include the two attached measures to protect for unanticipated discoveries in the environmental documents, including the construction standard specifications. In addition, we request a digital copy of the Archaeological Survey Report or any other cultural resources report, prepared for the project and to be notified if any unanticipated finds are discovered during construction.

Thank you again for involving the UAIC early in the planning process. We look forward to reviewing the documents requested above. Please don't hesitate to reach out if you would like to discuss the recommended protective measures.

Respectfully,
Anna Starkey

ANNA M. STARKEY, M.A., RPA | CULTURAL REGULATORY SPECIALIST

Tribal Historic Preservation Department | United Auburn Indian Community

Office (916) 251-1565 | Cell (530) 863-6503

astarkey@auburnrancheria.com | www.auburnrancheria.com

Nothing in this e-mail is intended to constitute an electronic signature for purposes of the Electronic Signatures in Global and National Commerce Act (E-Sign Act), 15, U.S.C. §§ 7001 to 7006 or the Uniform Electronic Transactions Act of any state or the federal government unless a specific statement to the contrary is included in this e-mail.

Attachments:

- Worker Awareness Brochure.pdf
- 3_Mitigation_Measures_CEQA_Discoveries.docx
- 5_Mitigation_Measures_CEQA_Construction_Worker_Awareness_Training.docx

1/2

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

From: Cherilyn Neider <cneider@auburnrancheria.com>
Sent: Tuesday, May 14, 2019 10:25 AM
To: Amy Dunay
Cc: Kristin Parsons; Michael Karoly; Zach Liptak; Zach Siviglia; 'czamora@foothill.com'
Subject: RE: AB 52 Notification for the Proposed Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Elk Grove

Good morning,
Electronic copies are just fine. If you are able to provide a link to the documents when they are available then we can download them for our records.

Thank you, Amy!
Cherilyn

Cherilyn Neider
Tribal Historic Preservation
United Auburn Indian Community
530.883.2394

From: Amy Dunay [mailto:adunay@elkgrovecity.org]
Sent: Tuesday, May 14, 2019 10:13 AM
To: Cherilyn Neider <cneider@auburnrancheria.com>
Cc: Kristin Parsons <kparsons@elkgrovecity.org>; Michael Karoly <MKaroly@elkgrovecity.org>; Zach Liptak <zliptak@dokkenengineering.com>; Zach Siviglia <zsiviglia@markthomas.com>; 'czamora@foothill.com' <czamora@foothill.com>
Subject: RE: AB 52 Notification for the Proposed Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Elk Grove

Cherilyn,

Thank you for reviewing the proposed measures and providing your response email. We will provide draft copies of the environmental document, when ready. Are hard copies or electronic copies (CD or an email link?) preferred?



Amy Dunay | Senior Environmental Planner
Contracted with Dokken Engineering

City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758

From: Cheryl Neider [<mailto:cneider@auburnrancheria.com>]
Sent: Monday, May 13, 2019 4:25 PM
To: Amy Dunay
Cc: Kristin Parsons; Michael Karoly
Subject: RE: AB 52 Notification for the Proposed Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Elk Grove

Good afternoon Amy,

I appreciate your notification that the City has received the UAIC's request for consultation and for the opportunity to provide comment on the measures, despite the late request for consultation. We are in agreement with the measures for the inadvertent discovery and worker protection awareness training and have no additional comments regarding the project at this time. We ask that the City provide draft copies of the environmental documents when they become available.

Many thanks,
Cheryl

Cheryl Neider
Tribal Historic Preservation
United Auburn Indian Community
530.883.2394

From: Amy Dunay [<mailto:adunay@elkgrovecity.org>]
Sent: Friday, May 10, 2019 1:38 PM
To: Cheryl Neider <cneider@auburnrancheria.com>
Cc: Kristin Parsons <kparsons@elkgrovecity.org>; Michael Karoly <MKaroly@elkgrovecity.org>
Subject: RE: AB 52 Notification for the Proposed Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Elk Grove

Cheryl,

Thank you for the response. While the official 30 day comment period to consult under AB 52 for this Project closed on April 15, the City would like to coordinate with the UAIC outside of AB 52 for this Project.

As requested, the environmental document will be provided to the UAIC during the public review period, which is anticipated to occur later this year. Additionally, the City has reviewed the provided measures and the brochure, and has made some revisions so that the measures can be incorporated into the environmental document. Please note that the City has also received a request from the Wilton Rancheria to consult on the Project.

- If Native American cultural materials are discovered during Project construction, all work shall halt within 100 feet of the discovery and the Resident Engineer shall be immediately notified. The City shall contact the United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Wilton Rancheria regarding the discovery. The Resident Engineer, the City of Elk Grove, an archaeologist meeting the Secretary of the Interior's Standards in Archaeology, the UAIC, and the Wilton Rancheria shall assess the discovery to determine if it qualifies as a Tribal Cultural Resource. The appropriate treatment of the discovery, including any applicable avoidance or mitigation strategies, shall be determined in consultation with the City, the UAIC, and the Wilton Rancheria. Construction activities will not commence until the appropriate treatment has been determined and any applicable mitigation has been completed. Mitigation shall follow the recommendations detailed in Public Resources Code sections 21084.3(a) and (b), and CEQA Guidelines section 15370.
- Worker Environmental Training will include archaeological and Tribal Cultural Resource awareness. The training shall be developed in coordination with the UAIC and the Wilton and will be provided prior to commencement of Project construction activities for all personnel working within the Project area. The training will identify the appropriate point of contact in the case of Tribal Cultural Resource discovery and will include relevant information regarding Tribal Cultural Resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training will also underscore the requirement for confidentiality and culturally-appropriate treatment of Tribal Cultural Resources.

Information from the brochure and the Inadvertent Discoveries Mitigation Measure regarding the importance, treatment, and preservation of heritage resource would be included in future worker environmental training developed for the Project.

Please let me know your thoughts on the above measures. I can be contacted via phone or email, at your convenience.



Amy Dunay | Senior Environmental Planner
Contracted with Dokken Engineering

City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758
t 916.627.3431 | f 916.627.3173 | c 916.260.1857 – preferred phone contact
TTY/TDD 888.435.6092
elkgrovecity.org



From: Cheryl Neider <cneider@auburnrancheria.com>
Sent: Friday, April 26, 2019 2:04 PM
To: Amy Dunay <adunay@elkgrovecity.org>
Subject: AB 52 Notification for the Proposed Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Elk Grove

Dear Amy Dunay,

Thank you for your letter received notifying us of the Laguna Creek Trail and Bruceville Road Sidewalk Improvements project. Attached you will find measures recommended for these project. These measures address inadvertent discoveries and the inclusion of a tribal cultural resources section in the Worker Environmental Awareness and Protection training.

Please confirm that the attached mitigation measures will be included in the environmental document and the adopted mitigation, monitoring and reporting program. Thank you for involving UAIC in the planning process at an early stage. We ask that you make this correspondence a part of the project record and that you provide UAIC with a copy of the final environmental document.

Many thanks,
Cherilyn

Cherilyn Neider
Tribal Historic Preservation
United Auburn Indian Community
530.883.2394

Root, Cindy A@DOT

From: Giongco, David C@DOT
Sent: Monday, June 24, 2019 4:09 PM
To: Root, Cindy A@DOT
Subject: FW: : Laguna Creek Trail Project: Section 106 Consultation

Please disregard my last email. Below is the info from Laura regarding the email.

From: Loeffler, Laura M@DOT
Sent: Monday, June 24, 2019 4:03 PM
To: Giongco, David C@DOT <david.giongco@dot.ca.gov>
Subject: RE: : Laguna Creek Trail Project: Section 106 Consultation

Hi. The letter was sent out by the local agency to consult with the tribes under state environmental law. These letters are "templated" letters sent to inform the tribes within the area that a project will occur in the near future. No action is needed on your part.

Laura Loeffler, Branch Chief, M1
Division of Environmental, North Region
Caltrans, District 3
703 B Street, Marysville
(530) 741-4592

From: Giongco, David C@DOT
Sent: Monday, June 24, 2019 3:47 PM
To: Loeffler, Laura M@DOT <laura.loeffler@dot.ca.gov>
Subject: FW: : Laguna Creek Trail Project: Section 106 Consultation

I'm not familiar with the 6/10/19 letter being referenced. Is this something that was sent out from your team?

From: Cultural Resource Department Inbox <crd@wiltonrancheria-nsn.gov>
Sent: Monday, June 24, 2019 3:22 PM
To: Giongco, David C@DOT <david.giongco@dot.ca.gov>

Laguna Creek Trail & Bruceville Rd
Sidewalk Improvements Project ASR

Cc: Cultural Resource Department Inbox <crd@wiltonrancheria-nsn.gov>
Subject: : Laguna Creek Trail Project: Section 106 Consultation

The Wilton Rancheria received a letter dated June 10, 2019, formally notifying us of a proposed project and an opportunity to consult under AB 52. Wilton Rancheria does not wish to initiate consultation under AB 52 at this time, but should the project description change, we request that the Tribe be informed of those changes so that we may reassess the need to initiate consultation. We do ask, however, that this letter be made part of the project record.

Wilton Rancheria will not initiate AB 52 consultation at this time, we would like to receive copies of all environmental documentation completed for the proposed project to determine or minimize potential impacts to tribal cultural resources that are important to Wilton Rancheria. We also request copies all cultural reports for the proposed project so that we can have the opportunity to comment on potential impacts and proposed mitigation measures related to cultural resources. Finally, if cultural resources or human remains are discovered within the project area post review, please contact us immediately.

If tribal cultural resources are identified, it is Wilton Rancheria's policy to have a tribal monitor present during any ground disturbing activities. It is also our policy to have tribal representatives present during any surveys, including initial pedestrian surveys, to assist with the identification, inventory and evaluation of tribal cultural resources. Wilton Rancheria's policy is to protect and preserve tribal cultural resources in place to avoid impacts and assist with mitigating for significant impacts whenever possible. Work in known cemeteries (mounds/burials), cultural areas, subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria's and receiving Wilton Rancheria's written consent.

If you have any questions or additional information to provide, please contact us by email at crd@wiltonrancheria-nsn.gov

Thank you for notifying Wilton Rancheria of the proposed project. We look forward to working with you on other projects in the future.

Sincerely,

Department of Cultural Preservation

From: Mariah Mayberry <mmayberry@wiltonrancheria-nsn.gov>
Date: June 11, 2019 at 1:24:13 PM PDT
To: Amy Dunay <adunay@elkgrovecity.org>
Cc: "Ralph T. Hatch" <rhatch@wiltonrancheria-nsn.gov>, "Emma L. Snuggs" <esnuggs@wiltonrancheria-nsn.gov>, Ed Silva <esilva@wiltonrancheria-nsn.gov>
Subject: RE: Laguna Creek Trail (WTL019) CL 2211

Hi Amy,

Thank you for the update. Did you have a time you will be out there? We will try to have a representative from our department be out there during the survey but if we cannot then can you please keep us apprised of the results?

Thanks again,



Mariah Mayberry
Administrator Assistant
Wilton Rancheria
9728 Kent St Elk Grove, Ca 95624
916-683-6000 |

From: Amy Dunay <adunay@elkgrovecity.org>
Sent: Tuesday, June 11, 2019 1:19:51 PM
To: Mariah Mayberry
Cc: Cultural Resource Department Inbox; Kristin Parsons; Michael Karoly; Zach Liptak
Subject: RE: Laguna Creek Trail (WTL019) CL 2211

Mariah,

We wanted to let you know that the archaeological survey will be taking place tomorrow. Please let me know if you have any questions or comments on the May 29th email, below. Thank you.



Amy Dunay | Senior Environmental Planner
Contracted with Dokken Engineering

City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758
t 916.627.3431 | f 916.627.3173 | c 916.260.1857 – preferred phone contact
TTY/TDD 888.435.6092
elkgrovecity.org

From: Amy Dunay
Sent: Wednesday, May 29, 2019 9:58 AM
To: 'Mariah Mayberry' <mmayberry@wiltonrancheria-nsn.gov>
Cc: Cultural Resource Department Inbox <crd@wiltonrancheria-nsn.gov>; Kristin Parsons <kparsons@elkgrovecity.org>; Michael Karoly <MKaroly@elkgrovecity.org>; Zach Liptak <zliptak@dokkenengineering.com>
Subject: RE: Laguna Creek Trail (WTL019) CL 2211

Mariah,

Thank you for the response. While the official 30 day comment period to consult under AB 52 for this Project closed on April 15, the City would like to coordinate with the Wilton Rancheria outside of AB 52 for this Project.

Here are answers to some of the questions/requests proposed in your May 8 email:

- The pedestrian survey has not yet taken place.
- The City is still awaiting the results of the Sacred Lands File Search from the Native American Heritage Commission.
- The records search results indicated that one previously documented cultural resource is present within the (proposed) APE, the historic Olen Ranch. There are 44 cultural resources, all historical resources, previously recorded within the 1-mile records search radius. No prehistoric or tribal resources have been documented with the North Central Info Center within 1 mile of the APE. The records search results will be summarized in the forthcoming cultural resources report and included as an attachment/appendix. We can provide this draft report, once ready.
- There may be subsurface cultural resource probing within the portion of the historic site, the Olen Ranch, that is located within the APE, to determine if remnants of the site are present. This is still being discussed as the portion of the site located within the APE is quite minimal, the proposed project work in this area would be to construct a sidewalk, and the vertical project disturbance in this area may only disturb a layer of fill. The City and its consultant are assessing this issue before proposing cultural subsurface probing.
- The proposed CEQA environmental document for this project is an Initial Study with Proposed Mitigated Negative Declaration. A copy of the draft IS/MND. The project qualifies as a Categorical Exclusion, under NEPA (Caltrans, on behalf of the Federal Highway Administration, is the lead NEPA agency).

In regards to potential mitigation measures, the City will be proposing the following measures, but these may change as the environmental review process continues.

- If Native American cultural materials are discovered during Project construction, all work shall halt within 100 feet of the discovery and the Resident Engineer shall be immediately notified. The City shall contact the United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Wilton Rancheria regarding the discovery. The Resident Engineer, the City of Elk Grove, an archaeologist meeting the Secretary of the Interior's Standards in Archaeology, the UAIC, and the Wilton Rancheria shall assess the discovery to determine if it qualifies as a Tribal Cultural Resource. The appropriate treatment of the discovery, including any applicable avoidance or mitigation strategies, shall be determined in consultation with the City, the UAIC, and the Wilton Rancheria.

Construction activities will not commence until the appropriate treatment has been determined and any applicable mitigation has been completed. Mitigation shall follow the recommendations detailed in Public Resources Code sections 21084.3(a) and (b), and CEQA Guidelines section 15370.

- Worker Environmental Training will include archaeological and Tribal Cultural Resource awareness. The training shall be developed in coordination with the UAIC and the Wilton and will be provided prior to commencement of Project construction activities for all personnel working within the Project area. The training will identify the appropriate point of contact in the case of Tribal Cultural Resource discovery and will include relevant information regarding Tribal Cultural Resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training will also underscore the requirement for confidentiality and culturally-appropriate treatment of Tribal Cultural Resources.

Please let me know if you have questions/comments on the above information and proposed measures and please let us know if you would like a field meeting to discuss further, thank you!



Amy Dunay | Senior Environmental Planner
Contracted with Dokken Engineering

City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758
t 916.627.3431 | f 916.627.3173 | c 916.260.1857 – preferred phone contact
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elkgrovecity.org



From: Mariah Mayberry [<mailto:m.mayberry@wiltonrancheria-nsn.gov>]
Sent: Wednesday, May 8, 2019 10:08 AM
To: Amy Dunay
Cc: Cultural Resource Department Inbox
Subject: Laguna Creek Trail (WTL019) CL 2211

Wilton Rancheria received a letter dated March 8th 2019, formally notifying us of a proposed project, the «Project» Project in «Region», and an opportunity to consult under AB 52. This letter is notice that Wilton Rancheria would like to initiate consultation under AB 52.

We would like to discuss the topics listed in Cal. Public Resources Code section 21080.3.2(a), including the type of environmental review to be conducted for the project; project alternatives; the project's significant effects; and mitigation measures for any direct, indirect, or cumulative impacts the project may cause to tribal cultural resources. As consultation progresses, we may also wish to discuss design options that would avoid impacts to tribal cultural resources; the scope of any environmental document that is prepared for the project; pre-project surveys; and tribal cultural resource identification, significance evaluations and culturally-appropriate treatment.

This letter is also a formal request to allow Wilton Rancheria tribal representatives to observe and participate in all cultural resource studies, including pedestrian surveys, geoarchaeology, phases testing, forensic canine surveys, and other management work for the project. Please send us all existing cultural resource documentation, including, Sacred Lands File checks, ethnographic studies, records searches and previous studies and records. Wilton Rancheria's policy is to protect and preserve tribal cultural resources in place to avoid impacts and assist with mitigating for significant impacts whenever possible. Work in known cemeteries (mounds/burials), cultural areas, subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria's and receiving Wilton Rancheria's written consent on a project or site-specific plan or agreement.

Wilton Rancheria requests consultation on the following topics checked below, which shall be included in consultation if requested (Public Resources Code section 21080.3.2, subd. (a)):

- Alternatives to the project
- Recommended mitigation measures
- Significant effects of the project

Wilton Rancheria also requests consultation on the following discretionary topics checked below (Public Resources Code section 21080.3.2, subd. (a)):

- Type of environmental review necessary
- Significance of tribal cultural resources, including any regulations, policies or standards used by your agency to determine significance of tribal cultural resources
- Significance of the project's impacts on tribal cultural resources
- Project alternatives and/or appropriate measures for preservation or mitigation that we may recommend, including, but not limited to:

- (1) Avoidance and preservation of the resources in place, pursuant to Public Resources Code section 21084.3, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks or other open space, to incorporate the resources with culturally appropriate protection and management criteria;
- (2) Treating the resources with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resources, including but not limited to the following:
 - a. Protecting the cultural character and integrity of the resource;
 - b. Protection the traditional use of the resource; and
 - c. Protecting the confidentiality of the resource.
- (3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- (4) Protecting the resource.

We would like to remind your agency that CEQA Guidelines section 15126.4, subdivision (b)(3) states that preservation in place is the preferred manner of mitigating impacts to archaeological sites. Section 15126.4, subd. (b)(3) of the CEQA Guidelines has been interpreted by the California Court of Appeal to mean that "feasible preservation in place must be adopted to mitigate impacts to historical resources of an archaeological nature unless the lead agency determines that another form of mitigation is available and provides superior mitigation of impacts." *Madera Oversight Coalition v. County of Madera* (2011) 199 Cal.App.4th 48, disapproved on other grounds, *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* (2013) 57 Cal.4th 439.

Thank you for involving Wilton Rancheria in the planning process at an early stage. We ask that you make this letter a part of the project record and we look forward to working with you to ensure that tribal cultural resources are protected.

Please contact us email at crd@wiltonrancheria-nsn.gov begin the consultation process.

Thank you,

Wilton Rancheria Cultural Preservation Department

**Laguna Creek Trail 4019
Tribal Consultation Log**

| Conversations With: | | | |
|------------------------------|-----------------------------------------|-------------|--|
| Tribe | Colfax- Todds Valley Consolidated Tribe | | |
| Name | Pamela Cubbler | | |
| Title | Treasurer | | |
| Address | | | |
| Phone Number (Office) | 530-320-3943 | Cell | |
| Email Address | | | |

| Date: 7/8 | Time: 2:50 | 1 st Attempt <input type="checkbox"/> Email <input type="checkbox"/> US Mail <input checked="" type="checkbox"/> Phone Call | By: Emily Barton |
|-------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Reached Pamela who had no comments and referred me to Wilton Rancheria. | | | |

| Date: | Time: | 2 nd Attempt <input type="checkbox"/> Email <input type="checkbox"/> US Mail <input type="checkbox"/> Phone Call | By: |
|-------|-------|-----------------------------------------------------------------------------------------------------------------------------|-----|
| | | | |

| Date: | Time: | 3 rd Attempt <input type="checkbox"/> Email <input type="checkbox"/> US Mail <input type="checkbox"/> Phone Call | By: |
|-------|-------|-----------------------------------------------------------------------------------------------------------------------------|-----|
| | | | |



June 21, 2019

Elk Grove Historical Society
P.O. Box 562
Elk Grove, CA 95759

Re: Request for Information for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (CML-5479(053)), Elk Grove, Sacramento County, California.

To Whom It May Concern:

The City of Elk Grove proposes to develop the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project (Project). The Project proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalks along Bruceville Road (see Figure 1). The Project is located in the vicinity of Bruceville Road and its intersection with Sheldon Road and Bighorn Boulevard in Elk Grove, California. It is within the Florin USGS quadrangle map in Township 7 north, Range 5 east, Section 27 of the Mount Diablo Meridian (see Figure 2). We are contacting you because we would like to invite the Elk Grove Historical Society to help identify historic properties or cultural resources within the Project area.

One trail extension would run from Lewis Stein Road to Bruceville Road (0.5 miles [mi]) along the north side of Laguna Creek which would connect two existing undercrossings and existing trails on both sides of the undercrossings. Another trail extension would run along the south side of Laguna Creek from Lewis Stein Road to Bruceville Road (0.4 mi). Additional trail gap closures would finish connections to existing trails between Bruceville Road, Mannington Street, and Center Parkway (0.8 mi) that extend further north and west into the City of Sacramento. There would also be trail crossings of Bruceville Road and Lewis Stein Road that would include a user actuated warning system. Sidewalks would be added along the west side of Bruceville Road between Big Horn Boulevard and Center Parkway (0.5 mi) and close a gap about 500 feet north of Laguna Boulevard and about 600 feet south of Di Lusso Drive (0.1 mi). These new trails and sidewalks would allow thousands of residents to use an interconnected trail system between two cities and multiple neighborhoods alike. The major improvements include portions of new 10-12 foot wide asphalt trail (Class 1 Bikeway) with 3 foot decomposed granite shoulders, new 6 to 8 foot wide sidewalks, repair of existing low-water trail crossings, signs, stripping, and pavement markings.

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego - Riverside - Morro Bay - Northern California

cogstone.com
Toll free (888) 333-3212

Federal Certifications EDWOSB, SDB,
State Certifications DBE, WBE, SBE, UDBE

A record search of the Project Area and a one-mile buffer was requested from the Northern California Information Center located at California State University, Sacramento on April 15, 2019. There are 45 sites within the one-mile buffer with 1 site within the APE. 45 sites are historical resources.

An intensive pedestrian survey of the APE was conducted on June 12th, 2019. The remains of a ranch/farm complex was discovered north of the intersection of Bruceville Road and Big Horn Boulevard, and is made up of half a dozen small structures and remnant, and a demolition debris field (APN:11600110040000) (Figure 3). Per historic topographic maps, it appears that the earliest building(s) were present on this property c. 1909. Any information you can provide on the history of this property including ownership and any possible relation to historical people or events would be greatly appreciated.

Please do not hesitate to contact me at slopez@cogstone.com or at (714) 974-8300. Thank you for your attention to this matter.

Sincerely,



Shannon Lopez, M.A.
Architectural Historian
Cogstone Resource Management, Inc.

Attachments: Figure 1. Project Vicinity map
Figure 2. Project Location map
Figure 3. Surveyed Ranch/Farm Location

Laguna Creek Trail & Bruceville Rd Sidewalk Improvements Project ASR

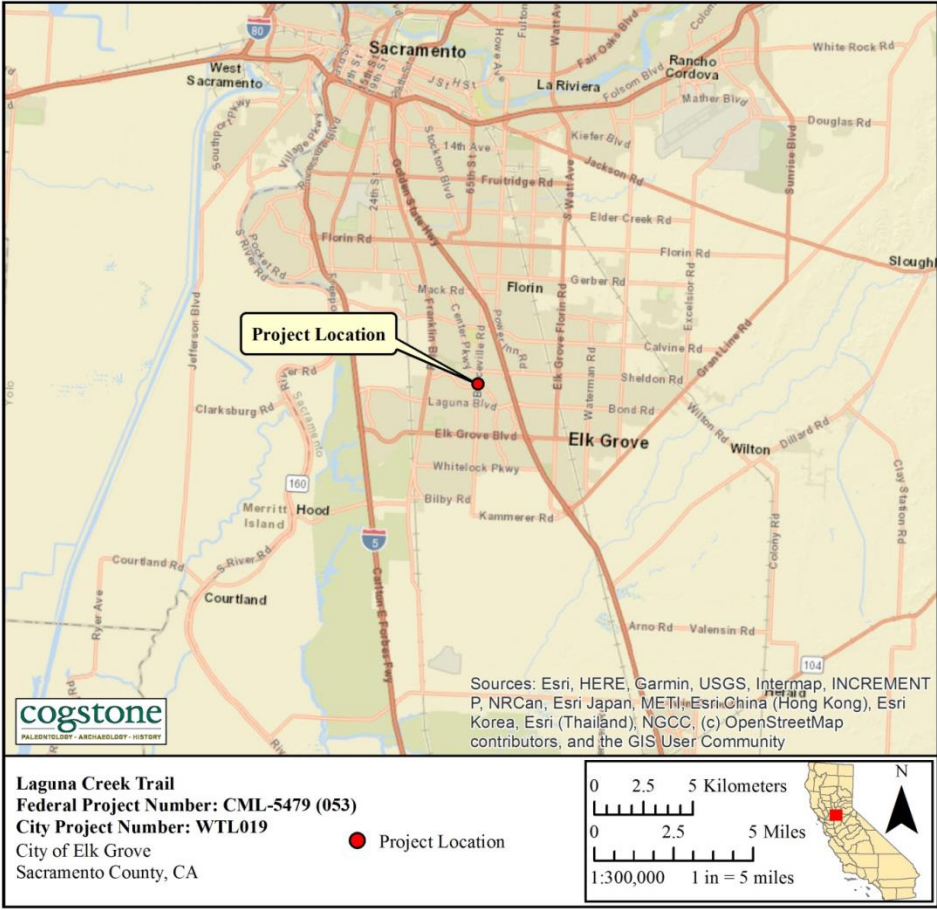


Figure 1. Project vicinity map

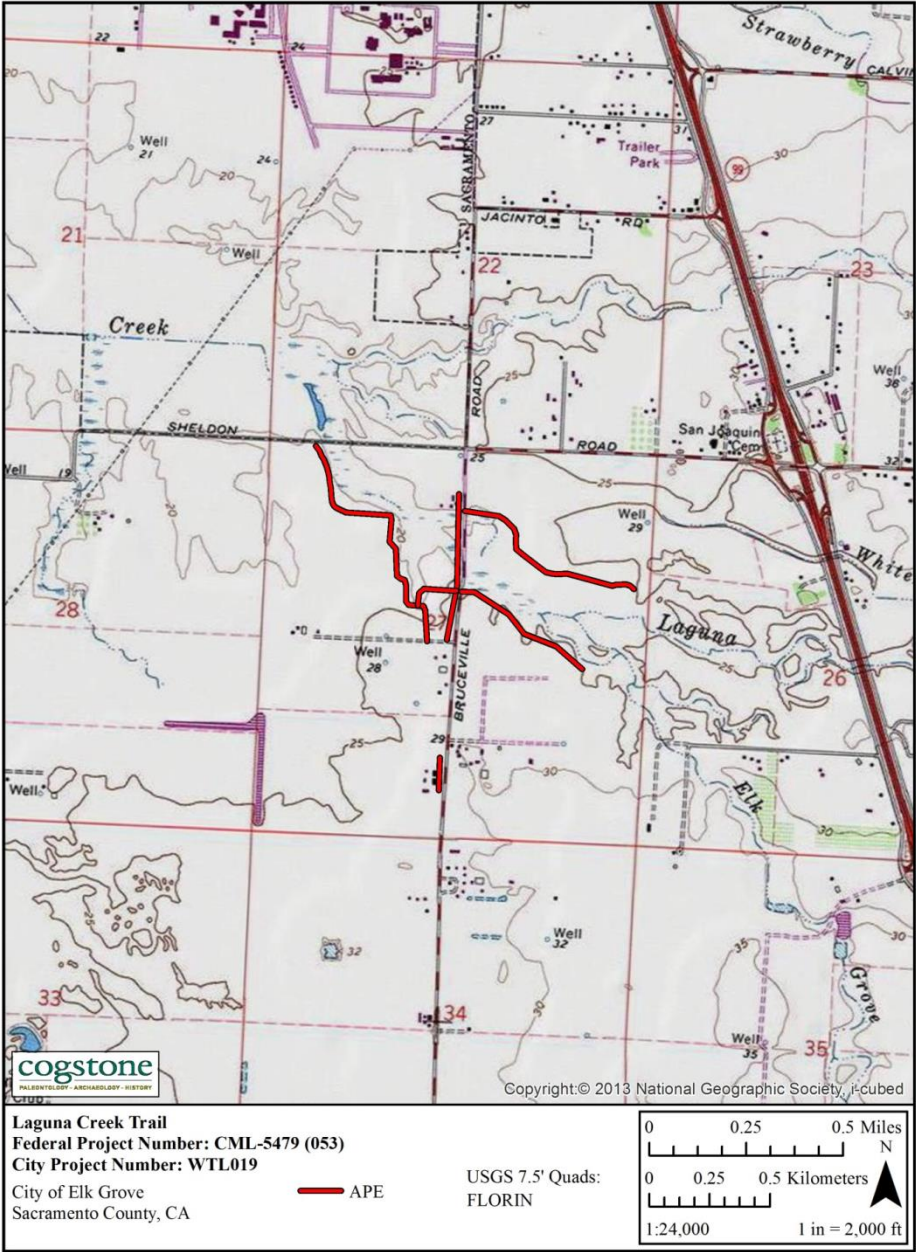


Figure 2. Project location map



Figure 3. Surveyed Ranch/Farm Location

Laguna Creek Trail and Bruceville Road Sidewalk Improvements

From: Louis Silveira <lssilveira@comcast.net>
To: Shannon Lopez <slopez@cogstone.com>
Date: 7/10/2019 11:06 AM

Hi Shannon,

I received this reply from Dave Lema. That's three out of the four most knowledge people from this area. All saying that there seems to be no significant history remaining that is of any consequence. Just waiting to hear something from Dennis Buscher.

LOUIE

"Hi Louie,

**I don't have any particular info about the area they are interested in –
sorry. Talk soon, David"**

Laguna Creek Trail and Bruceville Road Sidewalk Improvements

From: Louis Silveira <lssilveira@comcast.net>
To: slopez@cogstone.com
Date: 7/9/2019 9:24 AM

Hi Shannon,

I just received your email requesting historical information concerning the property on the NW corner of Bruceville and Big Horn Roads. It was passed on, but evidently it wasn't noticed or responded to. I am sorry. I now have it and will work on your requests.

I was raised in the area, but personally, not very familiar with that tract of property. Dennis Buscher (916-714-2355 home or the bluevictorian@frontiernet.net) is the Elk Grove Historical Society second Vice President, was born, raised, and lives in Franklin, is on the local preservation committee, and is truly a historian of the area. I will forward your letter to him and hopeful he can share his information. He would be your best source in relation to that portion of land.

Jim Entrican (916-761-2225 cel or jentrican@comcast.net) was also raised in that area, may have good information, and would be a good contact.

Also, considered the unofficial official historian of the town is Elizabeth Pinkerton (916-685-0606 home or elizabethpink@gmail.com) who has written three books of the area may be of help. I don't know how familiar she is with the area, but is worth the connection.

Lastly, one other individual, Dave Lema (916-761-0935 cel or drlema@drlema.com) who was raised in Elk Grove, though not near that tract, was part of the incorporation of Elk Grove, knows a lot of the history of the area and maybe of some assistance.

I will check some files at the museum, but meanwhile I am forwarding your attachment below and am hopeful they will respond soon.

Good luck,
Louis Silveira
(916) 682-1335
Elk Grove Historical Society

Attachments:

- Request for Information_ Laguna Creek Trail Project.pdf

Re: Laguna Creek Trail and Bruceville Road Sidewalk Improvements

From: Louis Silveira <lssilveira@comcast.net>
To: Shannon Lopez <slopez@cogstone.com>
Date: 7/16/2019 8:12 AM

Hi Shannon,

I went through some old maps at the museum. The maps are divided into grids, which doesn't necessarily mean that's where the roads are, but below is my best guess as to ownership of the property that you were highlighting. It seems to be an "AlarR Wrightman." They were owners at least to 1903, but have no idea after that. (PS - The 1988 and 1903 maps are pretty much the same)

I have no idea of any benefit to you of the maps, but maybe good information. Our view is still the same that there is no historical evidence or remains of the site worth saving or has any historical value anymore.

I think that this is all we can do. You are welcome to come to the museum and search any records. Just let me know.

Good Luck,
Louis Silveira
(916) 682-1335

1959



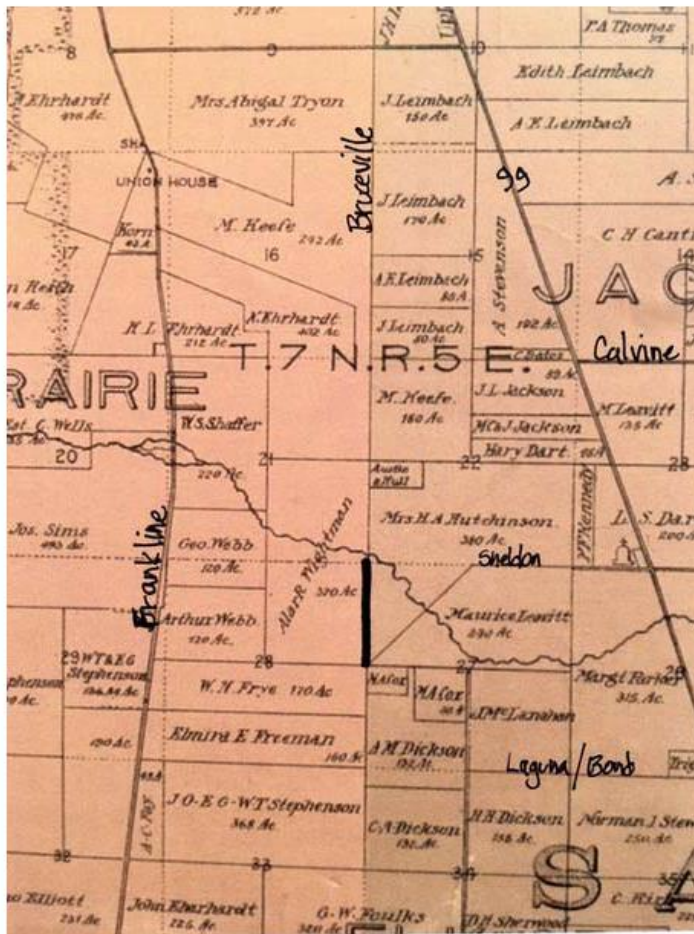
1959

1903

<https://mail.cogstone.com/webmail/>

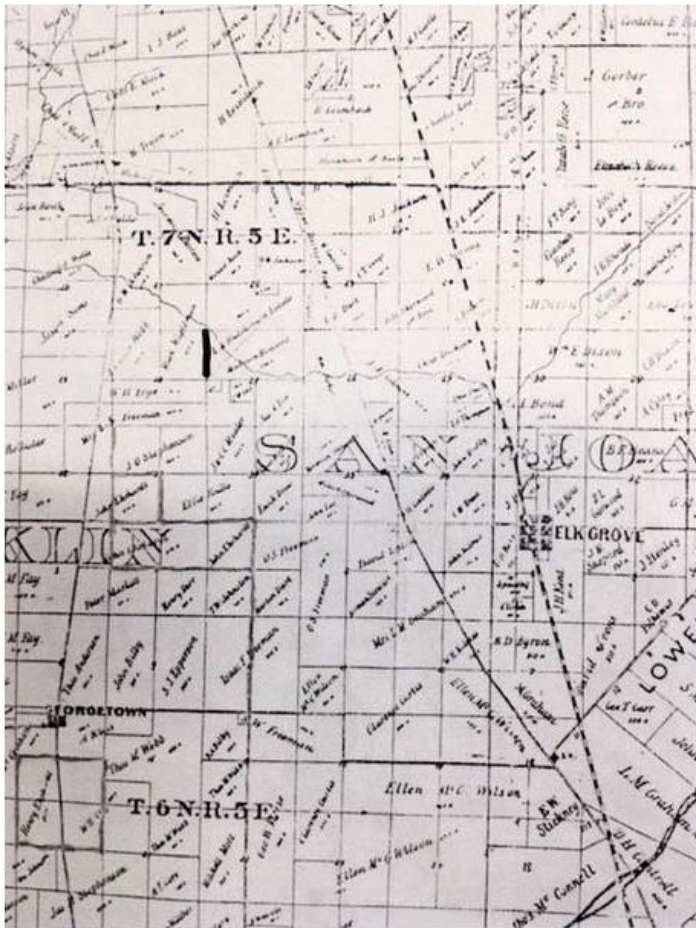


1903



1903

1888



1880

Jim Entrican response

From: Louis Silveira <lssilveira@comcast.net>
To: Shannon Lopez <slopez@cogstone.com>
Date: 7/9/2019 3:09 PM

Here are two responses I received to your requests. LOUIE

Shannon,

After reviewing the site on the maps, and somewhat familiar with the area, I do not see any historic significance to the property and currently I don't feel there's any structures remaining from the old farms that used to be in the area.

This plot of land has a lot of runoff marsh areas and not sure developers will ever be able to utilize this area.

Very appropriate for trails.

Jim

Elizaberth Pinkerton responded to me with...

"I do not have anything on the Laguna trail and Bruceville, but check on that 1902 map that I gave you." (Note: Which I will do and get back to you.)

APPENDIX C. DPR FORMS

CONTINUATION SHEET

*Recorded by: Tim Spillane

*Date: June 12, 2019 Continuation **UPDATE**

P-34-000707 (CA-SAC549H), the Olen Complex, was recorded by Maniery, in 1995 as a small ranch consisting of a house, barn, milk house, shed, and mobile home (PAR 1995). P-34-000707 was previously recommended not eligible for listing on the CRHR or NRHP. Project improvements at the location of P-34-000707 included a sidewalk segment, located along the eastern border of the Olen Complex.

Cogstone Resource Management, Inc. (Cogstone) revisited P-34-000707, and performed intensive pedestrian survey on June 12, 2019, within the site. Results of the survey found the entire complex of structures demolished and the site cleared since its documentation in 1995. No structural features or artifacts of any kind were observed. Ground visibility was fair (50 percent) due to vegetation overgrowth.

References:

Syda, Keith A., Cindy Baker, Mary L. Maniery, James G. Maniery
1995 Cultural Resources Investigation of the Lower Laguna Master Plan Project, Sacramento County, California.

Valasik, Molly
2019 Archaeological Survey Report for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Sacramento County, California.

**Attachment D. Archaeological Evaluation
Report**

**ARCHAEOLOGICAL EVALUATION REPORT
(PHASE II) FOR**

HISTORIC FOUNDATION AND REFUSE SITE P-34-005386 (CA-SAC-1278H)

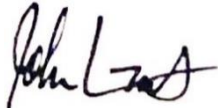
**LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD
SIDEWALK IMPROVEMENTS PROJECT,
SACRAMENTO COUNTY, CALIFORNIA**

Federal Project CML-5479 (053); City Project WTL019

Prepared for:
California Department of Transportation – District 3
703 B St., Marysville, CA 95901
and
City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758

**CONFIDENTIAL DOCUMENT – NOT SUITABLE FOR
PUBLIC DISTRIBUTION**

January 2024

Prepared by: 
John Gust, PhD, RPA
Principal Investigator – Historical Archaeology
Cogstone Resource Management Inc.
1518 West Taft Ave., Orange CA, 92865

1/31/2024
Date

Author: John Gust, PhD, RPA
(Cogstone Project No. 4019)

Reviewed by: _____
Katie Vallaire
PQS: PI - Historical Archaeology
Caltrans District 3, Division of Environmental Planning

Date

Approved by: _____
Laura Loeffler, Chief
Senior Environmental Planner
Caltrans District 3, Division of Environmental Planning

Date

ATTACHMENT E: FINDING OF EFFECT

**FINDING OF NO ADVERSE EFFECT FOR THE
LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD
SIDEWALK IMPROVEMENTS PROJECT,
SACRAMENTO COUNTY, CALIFORNIA**

Prepared for:
California Department of Transportation – District 3
703 B St., Marysville, CA 95901
and
City of Elk Grove
8401 Laguna Palms Way, Elk Grove, CA 95758



Prepared by: _____
John Gust, PhD, RPA
Principal Investigator – Historical Archaeology
Cogstone Resource Management Inc.
1518 West Taft Ave., Orange CA, 92865

1/31/2024
Date

Author: John Gust, PhD, RPA
(Cogstone Project No. 4019, Federal Project No. CML-5479 (053), and City Project No. WTL019)

Reviewed by: _____
Katie Vallaire
PQS: PI - Historical Archaeology
Caltrans District 3, Division of Environmental Planning

Date

Approved by: _____
Laura Loeffler, Chief
Senior Environmental Planner
Caltrans District 3, Division of Environmental Planning

Date

USGS 7.5' topographic quadrangle: Florin, California (1909 rev. 1980)

January 2024

INTRODUCTION

The City of Elk Grove (City) proposed the Laguna Creek Trail Project to make improvements to the Laguna Creek Trail that include both enhancing existing sections and adding new sections to the trail aided by the California Department of Transportation (Caltrans) local assistance program.

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act* (Section 106 PA), as well as under Public Resources Code 5024 and pursuant to the January 2015 *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Office Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92* (5024 MOU) as applicable. This study also complies with the requirements of the California Environmental Quality Act (CEQA), for which the City of Elk Grove is the lead agency.

Cogstone conducted background research, field survey, Native American consultation, and drafted the Archaeological Survey Report (Valasik 2021) to identify resources in the Area of Potential Effects (APE) that may meet the definition of a historic property under Section 106. Cogstone identified one historic-period cultural resource P-34-005386 (CA-SAC-001278H) not previously recorded within the APE that has not been evaluated for eligibility for inclusion in the National Register of Historic Places (NRHP), and that has the potential to be affected by the Project. Based on the results of the ASR, Cogstone conducted a Phase II investigation to identify intact cultural deposits at the site. The Phase II investigation did not identify intact cultural deposits in the ADI. However due to the discovery of a new feature during testing that resulted in a changed site boundary, a portion of the site was not tested. As P-34-005386 (CA-SAC-001278H) has not been fully evaluated for inclusion in the NRHP, it is assumed eligible and the unevaluated portion will be protected in its entirety from any potential effects through the establishment of an Environmentally Sensitive Area (ESA), in accordance with Section 106 PA Stipulation VII.C.3

In applying the Criteria of Adverse Effect, Cogstone, in coordination with Caltrans, concludes that a finding of No Adverse Effect without Standard Conditions is appropriate for P-34-005386 (CA-SAC-001278H) and is seeking SHPO concurrence in the effect determination, pursuant to 36 CFR 800.5(c) and Stipulation X.B.2 of the Section 106 PA.

TABLE OF CONTENTS

| | |
|------------------------------------------------------------|-----------|
| INTRODUCTION..... | II |
| PROJECT LOCATON AND DESCRIPTION | 1 |
| PROJECT LOCATION..... | 1 |
| PROJECT DESCRIPTION | 1 |
| <i>Trail Design</i> | 2 |
| <i>Roads and Sidewalks</i> | 2 |
| <i>Culvert Crossings and Hydrology</i> | 3 |
| <i>Road Crossings and Signage</i> | 3 |
| <i>Utilities</i> | 3 |
| <i>Construction</i> | 3 |
| AREA OF POTENTIAL EFFECTS | 3 |
| PUBLIC PARTICIPATION | 4 |
| HISTORICAL CONSULTATION | 4 |
| DESCRIPTION OF HISTORIC PROPERTIES..... | 6 |
| STUDIES CONDUCTED TO DATE | 8 |
| APPLICATION OF THE CRITERIA OF ADVERSE EFFECT | 10 |
| <i>P-34-005386 (CA-SAC-001278H)</i> | 11 |
| <i>Criterion i:</i> | 12 |
| <i>Criterion ii:</i> | 12 |
| <i>Criterion iii:</i> | 12 |
| <i>Criterion iv:</i> | 13 |
| <i>Criterion v:</i> | 13 |
| <i>Criterion vi:</i> | 13 |
| <i>Criterion vii:</i> | 14 |
| <i>Integrity assessment</i> | 14 |
| CONCLUSIONS | 15 |
| REFERENCES..... | 17 |
| APPENDIX A. MAPS..... | 18 |
| APPENDIX B. FIGURES | 23 |
| APPENDIX C. ESA ACTION PLAN | 28 |

LIST OF TABLES

| | |
|------------------------------------------------------------------------------------------------------------|---|
| TABLE 1. OTHER DATA SOURCES CONSULTED FOR INFORMATION ON P-34-005386 (CA-SAC-001278H) AND INHABITANTS..... | 8 |
| TABLE 2. UPDATED FEATURE DESCRIPTIONS | 8 |

PROJECT LOCATON AND DESCRIPTION

PROJECT LOCATION

The City of Elk Grove (City), in cooperation with the California Department of Transportation (Caltrans), proposes multiple trail extensions and gap closures of the Laguna Creek Trail and sidewalk improvements along Bruceville Road. The Laguna Creek Trail and Bruceville Road Sidewalks Project (Project) site is located in the area of Bruceville Road and Big Horn Boulevard in Elk Grove, California, approximately 0.5 mile west of State Route 99 (SR-99), and approximately 3 miles east of Interstate 5. The site is located within Section 27, Township 7 North, Range 5 East on the U.S. Geological Survey (USGS) Florin, California (CA) 7.5-minute quadrangle (38° 25' 13" North, 121° 27' 48" West).

PROJECT DESCRIPTION

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway) with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings. A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalk. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Paved surfaces would be Hot Mixed Asphalt (HMA) with stabilized Decomposed Granite (DG) shoulders relying on base and sub base as needed. Base material would consist of aggregate base, with a sub base of either existing or compacted native material or a treated native material. Treatments could include cement or lime. Sidewalk widenings on Bruceville Road would require sawcutting the existing road and cutting into the embankment. Proposed fill slopes would vary in height, ranging from one to four feet.

Trail segments may include amenities including, but not limited to, concrete entry nodes, post and cable fencing, landscaping, benches, and interpretive signage.

TRAIL DESIGN

Two trail segments would be developed as a 10-foot-wide path with 2-foot-wide shoulders following existing informal trails where feasible and would maintain existing gradual slopes and relatively flat natural topography. Side slopes would be constructed at a gradient of 4:1.

Segment 1

Segment 1 would be constructed west of Bruceville Road and north of Big Horn Boulevard. The trail would parallel existing residential development to the west for a length of approximately 0.75 mile trending northward from the existing sidewalk at Big Horn Boulevard and path near Mannington Street. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot-depth for subbase. Grading limits would be contained within a 36- to 44-foot-wide disturbance corridor for Segment 1.

Segment 2

Segment 2 would be constructed east of Bruceville Road adjacent and parallel to Big Horn Boulevard for an overall length of approximately 0.16 mile. It is anticipated that where the Segment 2 alignment terminates, compliance with City-required Conditions of Approval for the Trojan Storage II Project (currently under construction) will result in the construction of a connecting trail segment to Lewis Stein Road. The new trail will use the existing at-grade crossing at Bruceville Road and Big Horn Boulevard to connect to Segment 1. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 34- to 40-foot-wide disturbance corridor for Segment 2.

ROADS AND SIDEWALKS

Proposed sidewalk improvements would be constructed on the west side of Bruceville Road. Approximately 1,600 feet of sidewalk would be constructed between Big Horn Boulevard and the Bruceville Road Bridge over Laguna Creek (Bridge No. 24C0405) and 180 feet of sidewalk, would be constructed from the bridge to existing sidewalk. In addition, the guardrail at the bridge would be replaced and would roughly correspond to the back of sidewalk in this location. New Americans with Disabilities Act (ADA) compliant ramps would be constructed at Mannington Street and at Mannington Street/Wallbridge Way.

Approximately 230 feet of sidewalk would be constructed at an existing gap in the sidewalk between Di Lusso Drive and Laguna Boulevard. At this location, the roadway surface at Bruceville Road would be extended to match up with the proposed sidewalk.

CULVERT CROSSINGS AND HYDROLOGY

The proposed Project would maintain existing grades and drainage patterns to the greatest extent feasible and side slopes would be constructed with a 4:1 slope. To maintain the existing drainage patterns, culverts may be used to convey water from one side of the trail to the other during more intense rain events. These culverts would be located in upland areas and sized based on existing topographic information and would include rock slope protection and flared end sections to reduce erosion and provide energy dissipation measures.

ROAD CROSSINGS AND SIGNAGE

Trail pavement would be delineated by distinct paint, markings, and signs consistent with City standards as well as the California Manual of Uniform Traffic Control Devices (MUTCD) standards. The City may also elect to provide wayfinding signs. According to the Bicycle, Pedestrian, and Trails Master Plan (BPTMP), all bicycle striping and wayfinding signs would also conform to the Caltrans Highway Design Manual, Chapter 1000 (GHD, Inc. 2021).

UTILITIES

Utility coordination would be required to relocate a utility guy-pole that is in conflict with the roadway/ sidewalk widening on the west side of Bruceville Road. This pole would be relocated to another location either within the City's right of way or within a new utility easement. No other utility relocations are anticipated for this Project other than potentially adjusting existing utility lids to new grades.

CONSTRUCTION

Staging

One potential construction staging area is proposed within the Project site. The potential staging area is identified northwest of the Bruceville Road at Big Horn Boulevard.

AREA OF POTENTIAL EFFECTS

The APE was established as 22.13 acres and encompasses all areas where potential direct and indirect impacts to cultural resources could occur as a result of Project construction, operation, and maintenance. The APE includes the trail and sidewalk segments, staging area, culvert crossings, and utility relocation. The width of the APE ranges from 60 feet to 100 feet to account for the 10-foot wide path with 2-foot wide shoulders for the trail and sidewalk segments. The APE is depicted on the Florin 7.5-minute USGS quadrangle in Section 27 of Township 7 North, Range 5 East, Mount Diablo Baseline and Meridian

The vertical APE is the maximum depth of any Project related ground disturbing work. The maximum depth of ground disturbance would be 4.5-feet for guardrail post and approximately 5-foot maximum for drainage ditches/culverts associated with the trail and 2-feet for the trail. A maximum depth of ground disturbance of 2-feet may occur within the landscaping strip between the existing sidewalk and the

The vertical APE is the maximum depth of any Project related ground disturbing work. The maximum depth of ground disturbance would be 4.5-feet for guardrail post and approximately 5-foot maximum for drainage ditches/culverts associated with the trail and 2-feet for the trail. A maximum depth of ground disturbance of 2-feet may occur within the landscaping strip between the existing sidewalk and the bike trail, parallel to Big Horn Road where existing soils will be replaced with planting soils.

Land within the Project is a mix of land owned by the City of Elk Grove and private landowners. Partial right of way acquisition (ROW) is required for Assessor's Parcel Numbers (APNs) 116-0011-002-0000, 116-0011-004-0000, 116-0011-094-0000, 116-0011-097-0000, 116-011-102-0000, , 116-0012-048-0000, 116-0012-064-0000, , , 116-1210-100-0000, 116-1280-059-0000, 116-1270-033-0000, 116-1270-039-0000, and 116-1390-071-0000. These parcels are undeveloped and would be traversed by the proposed trail alignment.

PUBLIC PARTICIPATION

HISTORICAL CONSULTATION

On June 21, 2019, Cogstone contacted the Elk Grove Historical Society for information regarding the history of the APE. On July 9, 2019, a response was received from historian Louis Silveira, who stated that he would forward the inquiry to knowledgeable residents of Elk Grove as well as to local historians. On July 9 and 10, 2019, Cogstone received responses from Elk Grove locals Dave Lema, Jim Entrican, and Town Historian, Elizabeth Pinkerton. All replied that there is no known historic significance to the property associated with APN:

116-0011-004-0000. Mr. Silveira further stated on July 16, 2019 that the property at APN 116-0011-004-0000 was owned by "Alar R Wightman" until 1903 or later.

Cogstone submitted a Sacred Lands File (SLF) search request to the Native American Heritage Commission (NAHC) on May 3, 2019. The NAHC responded on May 24, 2019, that there are no known sacred lands within the APE. The NAHC recommended that eight representatives from

local Native American tribal organizations be contacted for further information regarding the Project vicinity.

Consultation letters were sent via certified mail to the eight contacts on June 10, 2019 requesting information related to cultural resources or heritage sites within the APE. Additional attempts at contact were made by email or phone on June 24 and July 8, 2019. To date, four responses have been received and are summarized below. All consultation correspondence and a contact log are provided in Appendix B of the ASR.

- Colfax-Todds Valley Consolidated Tribe - Ms. Pamela Cubbler, Treasurer: On July 8, 2019 Ms. Cubbler stated via phone that the tribe defers to the Wilton Rancheria and has no further comment.
- Ione Band of Miwok Indians - Cynthia Turner, Administrator: On July 8, 2019 Ms. Turner requested on behalf of Chairperson Sara Dutschke Setchwaelo via phone that the consultation letter be forwarded to the Tribe's consultation committee. The letter was forwarded via email on the same day. No further response has been received.
- Shingle Springs Band of Miwok Indians - Cultural Resources Director Daniel Fonseca: On June 21, 2019, Mr. Fonseca responded via email stating that the Tribe was not aware of any cultural resources within the Project Site but request copies of Project documents including record search and survey results, as well as environmental, archaeological, and cultural reports. Requested documentation was sent to the Tribe on June 24, 2021.
- United Auburn Indian Community – Cherilyn Neider responded on April 26, 2019 by email and offered migration measures that address inadvertent discoveries and the inclusion of a tribal cultural resources section in the Worker Environmental Awareness and Protection training. On May 10, 2019, Amy Dunay, Senior Environmental Planner, City of Elk Grove responded with edited mitigation measures, said that draft documents would be sent when available and asked if electronic or hard copies were preferred, and noted that Wilton Rancheria had also requested consultation. On May 14, 2019, Ms. Neider responded that electronic copies are fine. Requested documentation was sent to the Tribe on June 24, 2021.

Anna Starkey, Cultural Regulatory Specialist: responded via email on July 23, 2019 stating the tribe is not aware of any resources within the APE and requests digital copies of the cultural report and copies of the environmental report being prepared. They also have recommended two mitigation measures, one for inadvertent discoveries of TCRs and the other for worker awareness training.

- Wilton Rancheria – On May 8, 2019, Mariah Mayberry, Administrator Assistant requested by email that Wilton Rancheria tribal representatives be allowed to observe and participate in all cultural resource studies, including pedestrian surveys, geoarchaeology, phases testing, forensic canine surveys, and other management work for the project. Ms. Mayberry also requested that all existing cultural resource documentation, including, Sacred Lands File checks, ethnographic studies, records searches and previous studies and records be sent to Wilton Rancheria. She also stated that it is “Wilton Rancheria’s policy is to protect and preserve tribal cultural resources in place to avoid impacts and assist with mitigating for significant impacts whenever possible. Work in known cemeteries (mounds/burials), cultural areas, subsurface testing and data recovery must not occur without first consulting with Wilton Rancheria’s and receiving Wilton Rancheria’s written consent on a project or site-specific plan or agreement. Requested documentation was sent to the Tribe on June 24, 2021.

Mariah Mayberry, Administrator Assistant, responded via email on June 11, 2019 asking for the results of the pedestrian survey. Cogstone followed up by email on June 24, 2019. On June 24, 2019, The Tribe’s Department of Cultural Preservation responded that the Tribe did not wish to engage in AB52 consultations but requested all environmental documentation for the Project. Cogstone again followed up by email on July 10, 2019 unaware of this response.

DESCRIPTION OF HISTORIC PROPERTIES

Archaeological site P-34-005386 (CA-SAC-001278H) is a historic ranch site located within APN 116-0011-004-0000 on the west side of Bruceville Road and is approximately 3.07 acres in size. Project improvements at the location of P-34-005386 (CA-SAC-001278H) include the trail alignment and a sidewalk segment. The site consists of one concrete board-formed structure, three concrete pads, and four irrigation features including a pump station, control box, concrete water trough, and an irrigation trench (Figures B-1 to B-7). Fencing is present with one post located to the east at Bruceville Road a longer 50-foot fence segment to the west which is likely the remains of a corral, and a historic irrigation trench. Throughout the site is a light-density disturbed scatter of demolition debris mixed with modern refuse, roadway trash, and a few historic artifacts. The site is not eligible for inclusion in the NRHP under Criteria A, B, or C as it has not been associated with events that have made a significant contribution to the broad patterns of our history; has not been associated with the lives of persons significant in our past;

nor does it embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. Phase II testing was conducted on a portion of the site and did not result in positive findings for intact subsurface deposits that meet the data requirements for eligibility under Criterion D. The surficial structural remains were recorded in their entirety and plotted using geographic information systems software so their data potential has been captured in the event additional subsurface features are identified and site evaluation/analysis is required. P-34-005386 (CA-SAC-001278H) is, however, considered eligible for inclusion in the NRHP for the purposes of this Project under NRHP Criterion D as an additional feature was identified during Phase II testing that altered the site extent and precluded testing of the entire site.

Historic research for P-34-005386 (CA-SAC-001278H) included a review of historic maps, newspaper archives, genealogical records, parcel dates from the Sacramento County Assessor, Bureau of Land Management (BLM) General Land Office (GLO) patent records, historic United States Geological Survey and Sanborn Fire Insurance maps and consultation with the Elk Grove Historical Society (Table 1). The 1909 USGS Florin 7.5-minute topographic quadrangle map depicts one structure just west of Bruceville Road in the area of the historical ranch site (USGS 1909). The Elk Grove Historical Society responded on July 9 and 10, 2019 that there is no known historic significance to the property associated with APN 116-0011-004. Historian Mr. Silveira further stated on July 16, 2019 that the property at APN 116-0011-004 was owned by Alar R. Wightman until 1903 or later. United States Department of Agriculture (USDA) aerial photographs of the site from 1964 and 1966 depict the ranch with standing buildings. These buildings do not appear in the 1993 USDA aerial photograph, having been removed in the interim (NETROnline 2020). The County Assessor's office was consulted in November 2019 and responded that structures were present on the parcel by 1961. The structures were likely from the early 1900s based on a property value of \$14,079. In 1975, a house was removed from the parcel. Other structures remaining on the parcel were in such poor condition that they had no value assigned. BLM GLO records indicate that the State of California received a patent for the land where the site is located on October 18, 1871. No other information about nineteenth century history of the parcel has been found. Due to the limited information available from the Elk Grove Historical Society and other sources, and possibility that Mr. Wightman's first name was wrong or misspelled in the records, all name-based searches were conducted using "Alan R. Wightman", "Alan Wightman, and Wightman" in addition to "Alar R. Wightman" and "Alar Wightman" as search terms.

Table 1. Other data sources consulted for information on P-34-005386 (CA-SAC-001278H) and inhabitants

| Data Type | Source | Result |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Newspaper archives for Sacramento, CA area | www.newspapers.com https://chroniclingamerica.loc.gov/ | No additional information found |
| Genealogical data for Alar (and Alan) Wightman | www.ancestry.com | No additional information found |
| Parcel information | County of Sacramento Assessor; https://assessor.saccounty.net/Pages/default.aspx | No additional information found |
| Archival information | https://www.saclibrary.org/About-Us | No additional information found |
| GIS data for Elk Grove | Geographic Information Systems - City of Elk Grove; https://elkgrovecity.org/city_hall/departments_divisions/geographic_information_systems | No additional information found |
| Land patent records | Bureau of Land Management General Land Office Records; https://gloreCORDS.blm.gov/search/default.aspx?searchTabIndex=0&searchByTypeIndex=0 | The State of California received a patent for the northern half of Section 27, Township 7 North, Range 5 East on October 18, 1871 (CACAAA 040771); no other patents found |
| Historic aerial photographs and United Geological Survey Topographic quadrangle maps | https://www.historicaerials.com/viewer# | No additional information found |
| Historic Maps | https://www.davidrumsey.com/ | No additional information found |
| Sanborn Fire Insurance Maps | https://m.lapl.org/webfeat/sanborn.html | No additional information found |

STUDIES CONDUCTED TO DATE

Cogstone newly identified P-34-005386 (CA-SAC-001278H) during the pedestrian survey completed for the ASR (Valasik et al 2021). Subsequently, Cogstone prepared the Archaeological Evaluation Report (AER; Gust 2021) for the portion of P-34-005386 (CA-SAC-001278H) located within and directly adjacent to the Area of Direct Impacts (ADI). The Phase II testing was conducted from November 16 to November 23, 2020 After clearing the site of brush, a total of 8 surface features were recorded (Table 2). Discovery of Feature F-008 during the Phase II testing altered the boundary of the resource by expanding it to the west.

Table 2. Updated Feature Descriptions

Laguna Creek Trail & Bruceville Rd Sidewalk Improvements Project FNAE

| Feature Number | Name | Description |
|-----------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F-001 | Concrete board-formed structure | Structure measures 11 feet (north to south) by 8.5 feet (east to west). The top of the concrete walls are lined with timber boards held in place with heavy iron metal bolts and washers. There is a two-foot opening on the northern wall, and the entire structure rests on a concrete pad. Clearing transients' debris from the feature did not reveal additional information. |
| F-002/ F-007 | Concrete pad (possible foundation) | Concrete structure pad measures 37.5 feet (north to south) by 44 feet (east to west). The tops of its walls are capped with cut timber boards and iron hardware. The feature is bounded by a strip of concrete that varies in width between 6 and 8.5 inches. Within this bounding box at the western side there are two adjoining 5.5-foot (east west) wide slabs that run the length of the feature (north to south). A raised length of concrete measuring 0.5 feet above ground and 0.5 feet wide with bolts and wood fragments is located directly to the east of these slabs. Remains of a second 0.5-foot wide length of concrete sits two feet to the east. Continuing east there is an open space that is 16 feet wide and runs the length of the feature north to south. Previously identified Feature 7 sits to the east of this open space and starts at the northern edge of Feature 2. It is a concrete trough measuring 2.5 feet (east to west) by 30 feet (north to south), but the concrete is damaged and it may have originally continued to the southern extent of Feature 2. The final portion of the feature is an 11-foot wide concrete slab. The feature may have been symmetrical with slabs totaling 11 feet wide at east and west ends, trough-like structures at the inner edges of these slabs, and an open area without concrete in the middle. This combined feature appears to be the foundation of a barn or other building that possibly contained feed or watering troughs for livestock. |
| F-003 | Concrete pad | Concrete foundation pad measures 25 feet (north to south) by 18.5 feet (east to west). |
| F-004 | Concrete pad | Small concrete pad measuring 5 feet (north to south) by 2.5 feet (east to west). The feature may be related to irrigation but clearing brush did not reveal additional information. |
| F-005 | Irrigation Feature | Concrete irrigation control box measuring 12 feet (east to west) by 4.5 feet (north to south). Clearing brush from the feature did not reveal additional information. |
| F-006 | Irrigation Feature | Concrete board-formed pump station with intersecting ferrous metal piping. It measures 10 feet (north to south) by 4 feet (east to west). |
| F-007 | Irrigation Feature | See Feature 2 above |
| F-008 | Irrigation Feature | This irrigation trench is located 130 feet south and 140 feet west of Feature 001. It runs 70 feet west before turning northwest, and continues 285 feet before continuing northward until it terminates in a tilled area. The trench is approximately 1 foot deep and varies from one to two feet wide. Three pieces of 11-inch diameter, 2-inch thick concrete pipe were found within the trench, one of which was securely in the ground sitting 16 inches tall. A concrete filled metal ring with an inner diameter of 8.25 inches and outer diameter of 12 inches was also in the trench. The trench is only visible in aerial photographs in most places (See Map A-3). |

A total of 15 Shovel Test Pits (STPs) were excavated to determine whether intact site deposits were present within the ADI and immediately adjacent areas. Of these, four STPs were excavated in the ADI and the remaining 11 STPs were excavated near previously identified features (F 001-007) and at the edges of the resource as defined during the ASR.

The Phase II testing resulted in seven STPs containing cultural material but none contained more than two different cultural items either in a single approximately 10-centimeter (four-inch) level or cumulatively between two adjoining 10-centimeter (four-inch) levels that would necessitate expanding the STP. P-34-005386 (CA-SAC-001278H) does not contain intact subsurface deposits or features within the Project ADI.

Due to the late addition of Feature F-008, the site boundary of P-34-005386 (CA-SAC-001278H) was expanded west beyond what was defined in the ASR and AER Proposal. This new area was not included in the Phase II excavations and thus the portion of site P-34-005386 (CA-SAC-001278H) associated with Feature F-008 was not for its eligibility for listing in the NRHP under Criterion D. The tested portion of the site did not have subsurface cultural deposits that aid in answering the research questions posed, or otherwise yield important information about the past and is recommended as non-contributing to eligibility for listing in the NRHP under Criterion D. Based on the AER's negative findings within the ADI, and as a portion of the site remains untested and unevaluated for NRHP eligibility under Criterion D, Caltrans has assumed eligibility in accordance with Section 106 PA Stipulation VII.C.3 for purposes of this Project only.

APPLICATION OF THE CRITERIA OF ADVERSE EFFECT

The regulations that define the Criteria of Adverse Effect at 36 CFR 800.5(a)(1) states that: "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association... Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative." Examples of the potential diminishment of integrity are provided at 36 CFR Part 800.5(2) and include, but are not limited to:

- i. Physical destruction of or damage to all or part of the property;

- ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOIS; 36 CFR Part 68) and applicable guidelines;
- iii. Removal of a property from its historic location;
- iv. Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance;
- v. Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- vi. Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- vii. Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance [36 CFR 800.5(a)(2)(i) through viii)].

Cogstone applied the Criteria of Adverse Effect to assess the Project's changes to the character or use of the P-34-005386 (CA-SAC-001278H), particularly with respect to the degree to which they may diminish the historic integrity of unevaluated portions of this potential historic property.

P-34-005386 (CA-SAC-001278H)

The Project would not result in an adverse effect to the P-34-005386 (CA-SAC-001278H) under any criteria. The portion of the site within the ADI has been subjected to Phase II testing and did not yield intact cultural deposits necessary for eligibility for listing in the NRHP under Criterion D of Section 106 of the NHPA as defined in 36 CFR § 60.4. F-001 is a small concrete pad with short walls that has been fully measured, described, and photographed. As noted above, Features F-001 to F-007 are recommended not eligible under Criteria A, B, or C. The data potential for the known Features has been exhausted. F-001 is not likely to yield additional information important in history or as a contributing element of P-34-005386 (CA-SAC-001278H) because it has been plotted and fully recorded. Its physical presence is not required for conveying its significance under Criterion D. By fully recording this feature, future scientists will still be able to analyze its spatial relationship with other potential features of the site across the landscape and answer research questions related to site structure and land use patterns.

Unevaluated portions of P-34-005386 (CA-SAC-001278H) will not be affected by the Project and thus will be no less likely to provide information important to history or prehistory as a result of the Project and therefore the Project will not affect eligibility under Criterion D of Section 106 of the National Historic Protection Act.

CRITERION I:

Physical destruction of or damage to all or part of the property

The Project would not have an adverse effect on P-34-005386 (CA-SAC-001278H) under this criterion because while the expansion of the paths may affect the feature within the ADI, Feature F-001, the effect would not be adverse because even though the feature will be destroyed, recording and plotting the feature and other features within the tested portion of the site in their entirety allows for its data to be preserved for future researchers to answer research questions related to site structure and land use patterns. Therefore, the Project would not result in an adverse effect to P-34-005386 (CA-SAC-001278H) under 36 CFR Part 800.5(2)(i).

CRITERION II:

Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOIS; 36 CFR Part 68) and applicable guidelines

The Project would not have an effect on P-34-005386 (CA-SAC-001278H) under this criterion because no restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, or provision of handicapped access that is not consistent with Secretary of the Interior's Standards for the Treatment of Historic Properties is planned. Therefore, the Project would not result in an adverse effect to P-34-005386 (CA-SAC-001278H) under 36 CFR Part 800.5(2)(ii).

CRITERION III:

Removal of a property from its historic location

The Project would have an effect on P-34-005386 (CA-SAC-001278H) under this criterion but the effect would not be adverse. A total of eight known features are located within P-34-005386. One feature, F-001, is within the ADI and will be demolished. F-001 is a small concrete pad with short walls that has been fully measured, described, and photographed. F-001 has been plotted and fully recorded. Its physical presence is not required for conveying its significance under Criterion D. By fully recording this feature and other features within the tested portion of the site, future scientists will still be able to analyze their spatial relationship with other potential features of the site across the landscape and answer research questions related to site structure

and land use patterns. Therefore, the Project would not result in an adverse effect to P-34-005386 (CA-SAC-001278H) under 36 CFR Part 800.5(2)(iii).

CRITERION IV:

Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance

The Project would have an effect on P-34-005386 (CA-SAC-001278H) under this criterion but the effect would not be adverse as even though Feature F-001 will be destroyed, recording and plotting the feature and other features within the tested portion of the site in their entirety allows for their data to be preserved for future researchers to answer research questions related to site structure and land use patterns. Not all of P-34-005386 (CA-SAC-001278H) has been tested and untested portions of the site are assumed eligible under Criterion D for the purposes of this project. The site is no longer in use as a farm and while its setting has changed, the significance of the site is not based on its integrity of setting. Therefore, the changes to the resources use or physical features associated with the Project would not result in an adverse effect to P-34-005386 (CA-SAC-001278H) under 36 CFR Part 800.5(2)(iv).

CRITERION V:

Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features

The Project may have a minimal effect on P-34-005386 (CA-SAC-001278H) under this criterion as it would introduce heightened visual, atmospheric, or audible elements that would diminish the integrity of setting to a small extent. As the site is not connected with people or events important to history, is not a prime example of the resource type, and does not represent the work of a master, the only way P-34-005386 (CA-SAC-001278H) could be determined a historic property lies in its potential to yield important information about history or prehistory. This potential is not affected by a change to feeling or setting. Therefore, the Project would not result in an adverse effect to P-34-005386 (CA-SAC-001278H) under 36 CFR Part 800.5(2)(v).

CRITERION VI:

Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization

The Project would not have an effect on P-34-005386 (CA-SAC-001278H) under this criterion since the Project does not propose neglecting a historic property that has been regularly maintained and upkept by its owner. Further, the site features are currently experiencing deterioration due to use by transient communities. Improvement and upkeep of the proposed trail is more likely to inhibit such activity and slow deterioration below its current rate.

CRITERION VII:

Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance [36 CFR 800.5(a)(2)(i) through viii]

The Project would not have an effect on P-34-005386 (CA-SAC-001278H) under this criterion as the property is under a mix of City of Elk Grove and private ownership and thus will not be transferred, leased, or sold out of federal ownership. Therefore, the Project would not result in an adverse effect to P-34-005386 under 36 CFR Part 800.5(2)(vii).

INTEGRITY ASSESSMENT

Location

The proposed Project would not alter the geography of P-34-005386 (CA-SAC-001278H). The integrity of location would not be diminished by the Project.

Setting

The proposed Project would alter the setting to a minor degree as it transitions the site to recreational use.

Design

Destruction of Feature F-001, located within the ADI, will diminish integrity of design but not to a level where the site cannot convey its significance under Criterion D for its potential to yield valuable data. Design data has been captured by the recording and plotting of these features and can be used in assessing site significance should any buried deposits be identified in the future.

Materials

Destruction of Feature F-001, located within the ADI, will diminish integrity of materials but not to a level where the site cannot convey its significance under Criterion D for its potential to yield valuable data. Materials data for the features has been captured by the recording and plotting of these features, and can be used in assessing site significance should any buried deposits be

identified in the future. Modern materials such as concrete are also consistent with those used originally at P-34-005386 (CA-SAC-001278H).

Workmanship

Destruction of Feature F-001, located within the ADI, will diminish integrity of workmanship but not to a level where the site cannot convey its significance under Criterion D for its potential to yield valuable data since workmanship data has been captured by the recording and plotting of these features.

Feeling

Use of the resource for recreation instead of agriculture may slightly diminish the integrity of feeling of portions of the resource not yet evaluated for eligibility for listing on in the NRHP but the possible significance is contingent on its potential to yield important information about history or prehistory, not its integrity of feeling.

Association

Destruction of Feature F-001, located within the ADI, will diminish integrity of association but not to a level where the site cannot convey its significance under Criterion D for its potential to yield valuable data. Feature F-001's association data has been captured by the recording and plotting of these features for purposes of this Project.

CONCLUSIONS

An effect to the P-34-005386 (CA-SAC-001278H) under 36 CFR Part 800.5(2)(v) would result from the undertaking through the construction of new recreational trail segments within the portion of the resource within the ADI. The pedestrian traffic from these new trail segments may introduce increased visual and audible elements that would slightly diminish the integrity of the property's historic setting and feeling should the resource be determined eligible based on the potential of the unevaluated portion of the site to provide important information about history or prehistory. Destruction of Feature F-001, located within the ADI, would diminish integrity of design, materials, workmanship, and association but not to a level where the site cannot convey its significance under Criterion D. Data regarding these aspects of the site has been captured by recording and plotting these features. Changes to audio and visual elements would not affect this potential to yield information for future researchers as it is not predicated on the property's historic setting and feeling. The unevaluated portion of P-34-005386 (CA-SAC-001278H) would

be protected and any potential to yield data from intact subsurface cultural deposits will be unaffected. Therefore, the effects under 36 CFR Part 800.5(2) (v) are not considered adverse to this potential historic property. P-34-005386 (CA-SAC-001278H) would retain integrity of location, and somewhat diminished integrity of design, material, workmanship, and association. The significance of P-34-005386 (CA-SAC-001278H) is dependent on the integrity of association of subsurface deposits within the untested portion of the site and to a lesser extent integrity of materials, design, and workmanship of the features of the site. Data on integrity of material, design, and workmanship have been captured through the recording and plotting of the site's currently known features, and integrity of these aspects would be diminished but not lost if Feature F-001 is removed. Removal of Feature F-001 would not disturb the integrity of association of intact buried cultural deposits that may be present outside of the tested portion of the site. The site would remain significant under Criterion D if Feature F-001 is removed as the data from recording and plotting would remain along with the data potential of subsurface deposits within the untested portion of the site. Therefore, the proposed Project would result in a determination of No Adverse Effect without Standard Conditions to P-34-005386 (CA-SAC-001278H).

REFERENCES

Gust, John

2021 *Archaeological Evaluation Report (Phase II) for Historic Foundation and Refuse Site P-34-005386 (CA-SAC-1278H) Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Sacramento County, California.* Prepared for Caltrans District 3.

Valasik, Molly, Tim Spillane, Holly Duke, and Kim Scott

2021 *Archaeological Survey Report for the Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project, Sacramento County, California.* Prepared for Caltrans District 3.

APPENDIX A. MAPS

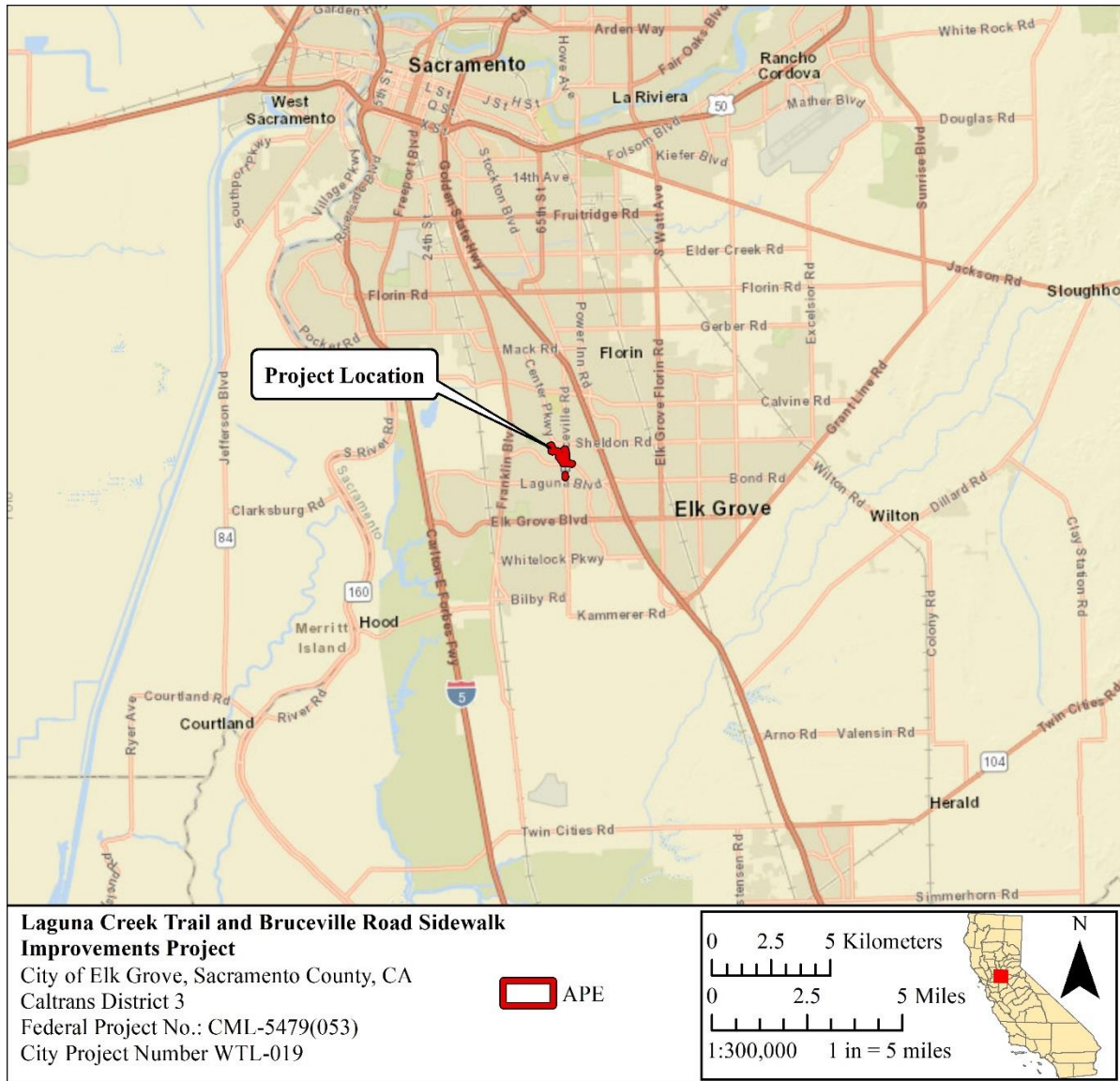
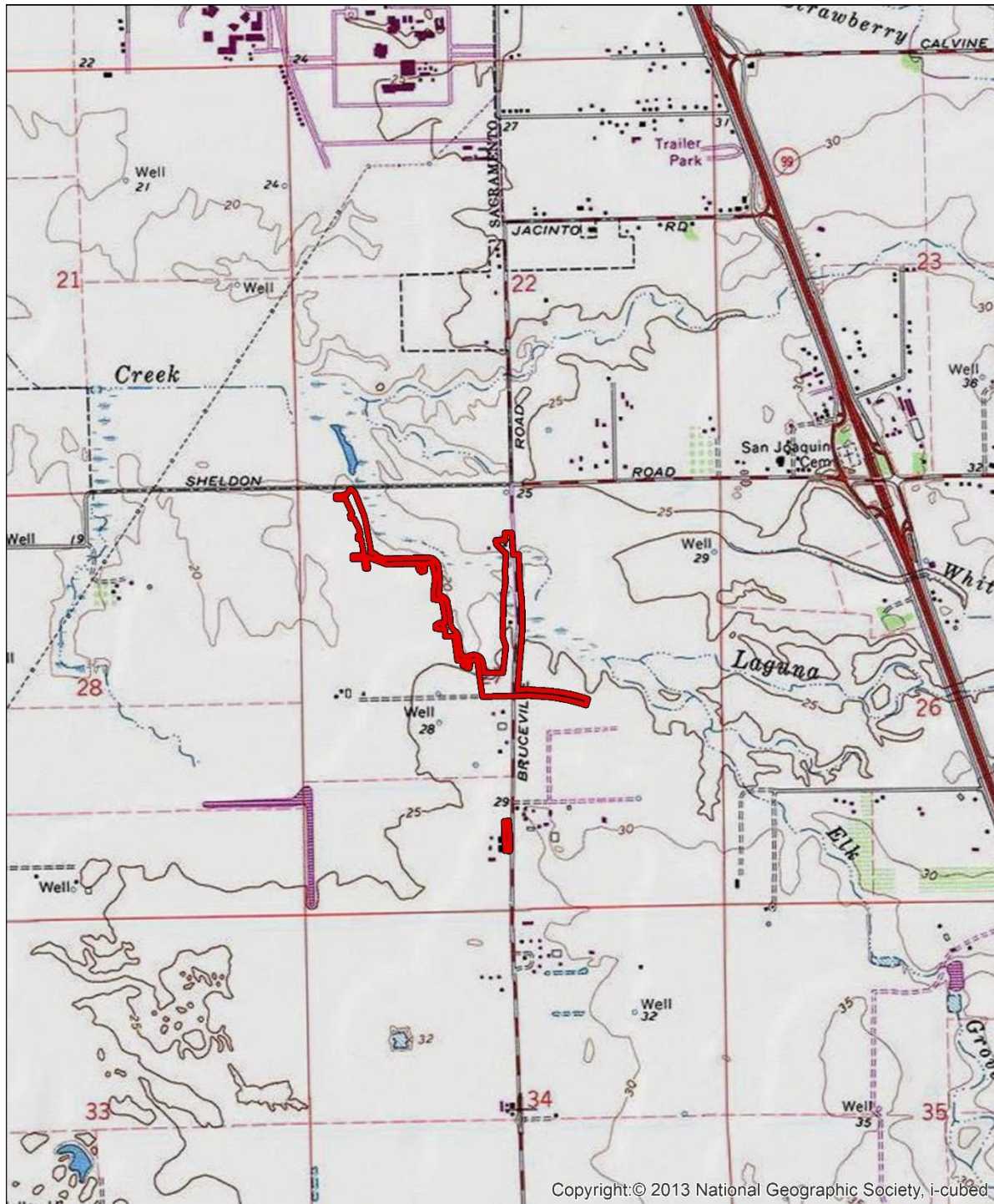



Figure 1. Vicinity Map



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Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project
 City of Elk Grove, Sacramento County, CA
 Caltrans District 3
 Federal Project No.: CML-5479(053)
 City Project Number WTL-019

 APE
 USGS 7.5' Quad:
 FLORIN

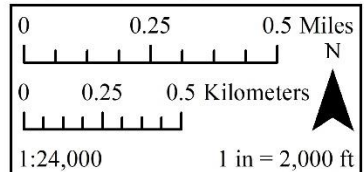


Figure 2. Location Map



Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project
 Elk Grove, Sac. County, CA
 Federal Proj No: CML-5479(053)
 City Project Number: WTL019

- Utility Pole to be Relocated
- Existing Undercrossing
- Proposed Trail Alignment
- Proposed Concrete Sidewalk
- P-34-005386
- Potential Construction Staging Area
- APE
- Project Parcel
- Existing Trail

Ross Foon
 Caltrans District 3 Project LAE
 Date _____

Katie Vallaire
 Caltrans District 3 PQS, PI-Historical Archaeology
 Co-PI Prehistoric Archaeology
 Date _____

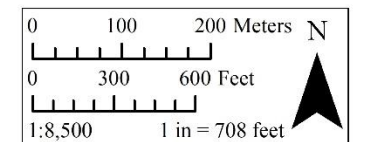


Figure 3. APE Overview Map

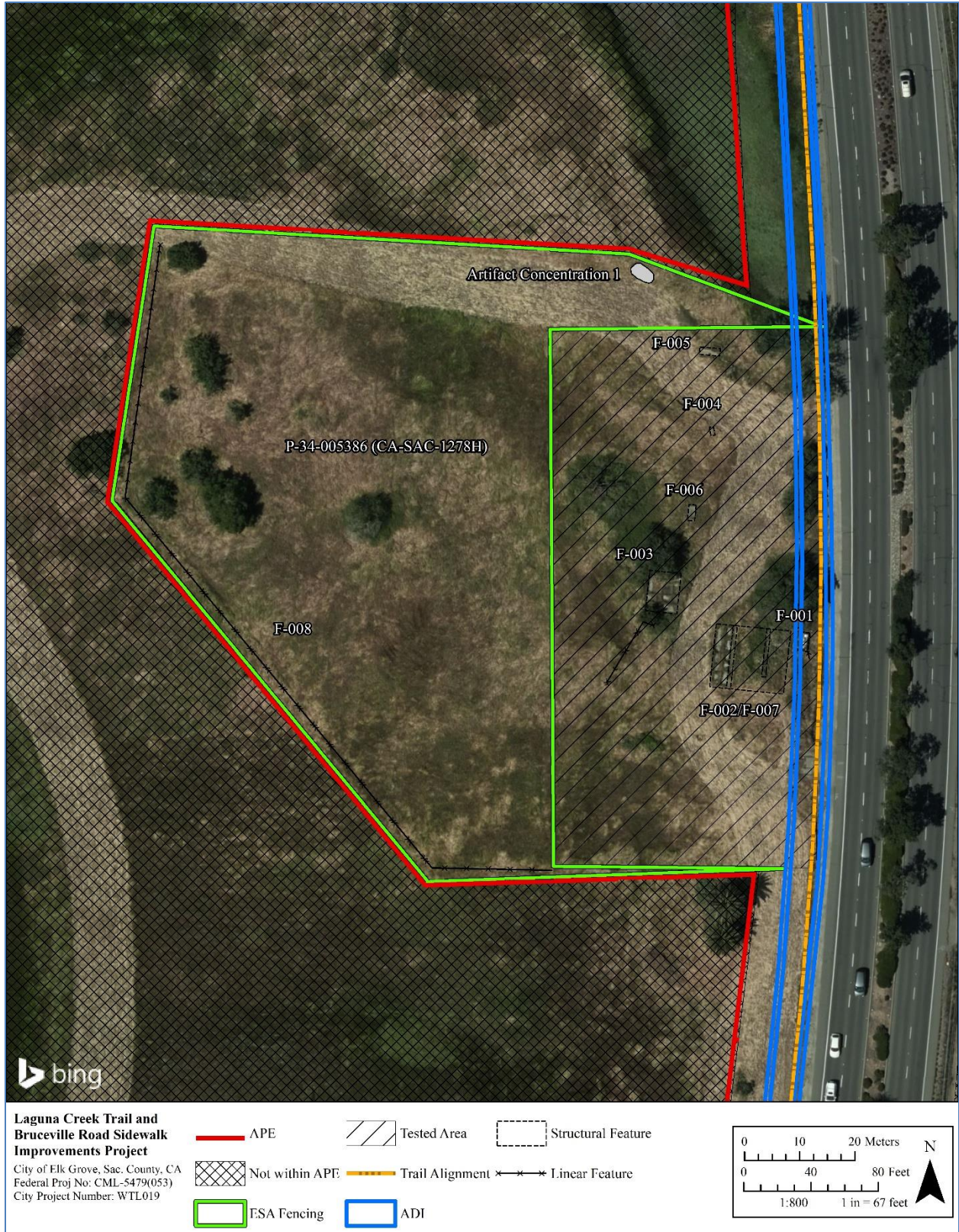


Figure 4. ESA Map

APPENDIX B. FIGURES



Figure B-1. Overview of northern portion of site, facing north-northeast



Figure B-2. Overview of Features 001, 002 and 007, facing north-northeast



Figure B-3. Feature F-003 (with large rodent nest in debris pile), facing west



Figure B-4. Feature F-004, facing north



Figure B-5. Feature F-005, facing east



Figure B-6. Feature F-006, facing southeast



Figure B-7. Pipe at Feature 008, facing north

IS/MND Attachment G

City of Elk Grove Laguna Creek Trails
Project - Floodplain Evaluation

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TECHNICAL MEMORANDUM

DATE: June 3, 2019 Project No.: 009-60-19-20
SENT VIA: EMAIL

TO: Zach Siviglia, Mark Thomas and Company

FROM: Mark Kubik, PE, RCE #50963
Megan McWilliams, EIT# 164172

REVIEWED BY: Doug Moore, PE, RCE #058122

SUBJECT: City of Elk Grove Laguna Creek Trails Project – Floodplain Evaluation



INTRODUCTION

The City of Elk Grove (City) plans to construct pedestrian trails along Laguna Creek (Project) near Lewis Stein Road and Bruceville Road. The proposed trails will be adjacent to Laguna Creek and the Laguna Creek Bypass Channel (Project). West Yost Associates (West Yost) performed a hydraulic analysis to determine the potential floodplain impacts of the Project. This Technical Memorandum describes the hydraulic analysis and summarizes the results.

HYDRAULIC MODEL UPDATE

A dynamic HEC-RAS hydraulic model of Laguna Creek was previously prepared to support the City's Storm Drainage Master Plan. For this analysis, the City's HEC-RAS model was modified to represent the proposed post-project conditions using the 35% design drawings (see Attachment A) prepared by Mark Thomas and Company (Mark Thomas) dated April 10, 2019. The elevations in the City's HEC-RAS model are based on the National Geodetic Vertical Datum of 1929 (NGVD29) while the drawings prepared by Mark Thomas are based on the North American Vertical Datum of 1988 (NAVD88). The elevations from the 35% drawings were adjusted from NAVD88 to NGVD29 by subtracting 2.43 feet. This is the datum conversion determined by the Federal Emergency Management Agency for the Sacramento County Flood Insurance Study.

Based on the design drawings, West Yost determined those locations where the proposed trails would be constructed within the 100-year floodplain. For those locations, the cross sections in the HEC-RAS model were revised to represent post-project conditions. Figure 1 displays the Project's location and highlights the cross sections that were revised to represent post-project conditions. Our review of the drawings indicates that the trail along the Laguna Creek Bypass Channel will be constructed at the top of the bank and will not encroach into the floodplain. Also, there are a few locations along Laguna Creek where the trail appears to be proposed just within the fringe of the 100-year floodplain on Figure 1 (Cross Sections 3.728, 3.777, and 3.853). Our review of the plans and the floodplain data indicate that the existing ground elevations along the proposed trail alignment at these cross sections are above the floodplain elevation and the proposed Project will not change the floodplain conditions at these cross sections. Therefore, no changes were made to the HEC-RAS model at those cross sections.

HYDRAULIC ANALYSIS AND RESULTS

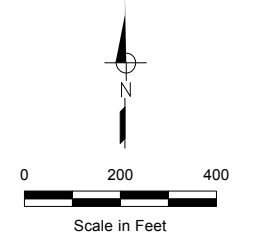
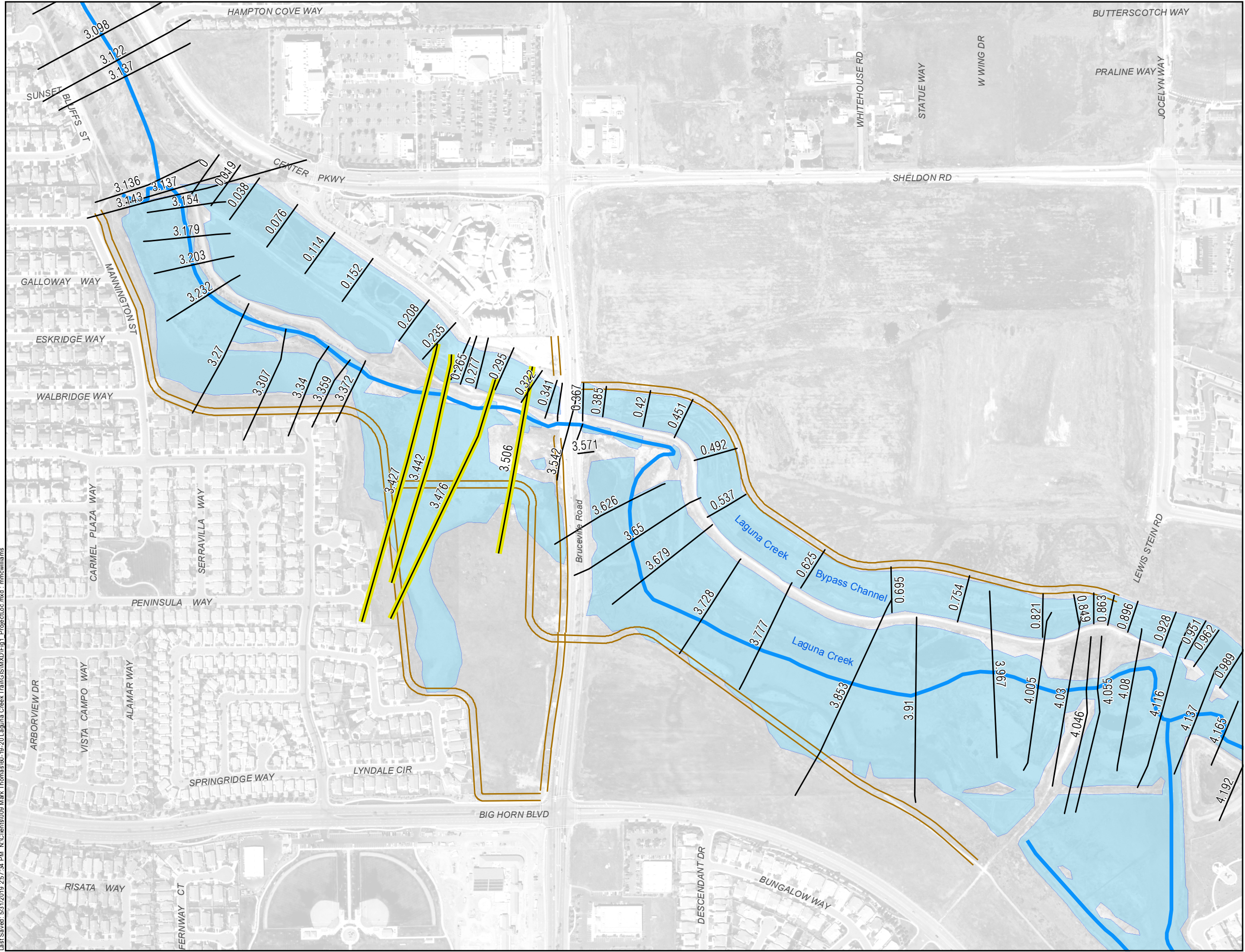
The Project was evaluated using the 10-year and 100-year storms. Table 1 presents the results of the hydraulic analysis. The locations of the HEC-RAS cross sections that are referenced in Table 1 are displayed in Figure 1. Table 1 does not list the results for all cross sections in the City's HEC-RAS model. For cross sections not listed, the results from the hydraulic model indicated no change in the water surface elevations between existing and post-project conditions for either the 10-year or 100-year storm.

For the 10-year storm, the maximum increase in water surface elevations due to construction of the Project is 0.02 feet. For the 100-year storm, the maximum increase in water surface elevations is 0.01 feet. The predicted increases in water surface elevation are very small and would not significantly change the floodplain limits and would not result in flooding of the surrounding developed areas. Based on these model results, we believe the Project can be constructed as proposed without causing significant floodplain impacts.

Table 1. Comparison of Water Surface Elevations in Feet (NGVD29)

| HEC-RAS Cross Section Number | 10-Year Storm | | | 100-Year Storm | | |
|------------------------------------|---------------|--------------|------------|----------------|--------------|------------|
| | Existing | Post-Project | Difference | Existing | Post-Project | Difference |
| Laguna Creek | | | | | | |
| 4.005 | 25.20 | 25.20 | 0.00 | 25.37 | 25.37 | 0.00 |
| 3.967 | 24.99 | 24.99 | 0.00 | 25.18 | 25.18 | 0.00 |
| 3.91 | 24.82 | 24.83 | 0.01 | 25.03 | 25.03 | 0.00 |
| 3.853 | 24.67 | 24.68 | 0.01 | 24.88 | 24.88 | 0.00 |
| 3.777 | 24.37 | 24.38 | 0.01 | 24.60 | 24.60 | 0.00 |
| 3.728 | 24.16 | 24.17 | 0.01 | 24.41 | 24.42 | 0.01 |
| 3.679 | 24.05 | 24.05 | 0.00 | 24.31 | 24.31 | 0.00 |
| 3.65 | 23.98 | 23.99 | 0.01 | 24.24 | 24.24 | 0.00 |
| 3.626 | 23.93 | 23.93 | 0.00 | 24.19 | 24.19 | 0.00 |
| 3.5985 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.571 | 23.75 | 23.76 | 0.01 | 23.95 | 23.95 | 0.00 |
| 3.552 DS OF BRUCEVILLE | 23.64 | 23.64 | 0.00 | 23.77 | 23.78 | 0.01 |
| 3.542 | 23.45 | 23.46 | 0.01 | 23.65 | 23.66 | 0.01 |
| 3.506 ^(a) | 22.70 | 22.72 | 0.02 | 23.13 | 23.14 | 0.01 |
| 3.476 ^(a) | 22.62 | 22.63 | 0.01 | 23.09 | 23.10 | 0.01 |
| 3.442 ^(a) | 22.58 | 22.59 | 0.01 | 23.07 | 23.07 | 0.00 |
| 3.427 ^(a) | 22.57 | 22.57 | 0.00 | 23.06 | 23.06 | 0.00 |
| 3.372 | 22.51 | 22.51 | 0.00 | 23.00 | 23.00 | 0.00 |
| 3.359 | 22.47 | 22.47 | 0.00 | 22.97 | 22.97 | 0.00 |
| 3.34 | 22.43 | 22.43 | 0.00 | 22.93 | 22.93 | 0.00 |
| 3.307 | 22.39 | 22.38 | -0.01 | 22.89 | 22.89 | 0.00 |
| 3.27 | 22.33 | 22.33 | 0.00 | 22.84 | 22.84 | 0.00 |
| 3.232 | 22.30 | 22.29 | -0.01 | 22.81 | 22.81 | 0.00 |
| 3.203 | 22.28 | 22.28 | 0.00 | 22.80 | 22.80 | 0.00 |
| 3.179 | 22.21 | 22.21 | 0.00 | 22.71 | 22.71 | 0.00 |
| 3.154 | 22.13 | 22.12 | -0.01 | 22.62 | 22.62 | 0.00 |
| 3.143 | 20.55 | 20.54 | -0.01 | 20.84 | 20.84 | 0.00 |
| 3.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.137 | 16.55 | 16.55 | 0.00 | 18.26 | 18.26 | 0.00 |
| 3.136 | 16.55 | 16.55 | 0.00 | 18.26 | 18.26 | 0.00 |
| Laguna Creek Bypass Channel | | | | | | |
| 0.341 | 18.14 | 18.14 | 0.00 | 19.86 | 19.86 | 0.00 |
| 0.322 | 17.8 | 17.8 | 0.00 | 19.56 | 19.56 | 0.00 |
| 0.295 | 17.61 | 17.61 | 0.00 | 19.43 | 19.43 | 0.00 |
| 0.277 | 17.48 | 17.48 | 0.00 | 19.31 | 19.31 | 0.00 |
| 0.265 | 17.35 | 17.35 | 0.00 | 19.19 | 19.19 | 0.00 |
| 0.259 | 17.38 | 17.38 | 0.00 | 19.22 | 19.22 | 0.00 |
| 0.235 | 17.28 | 17.28 | 0.00 | 19.12 | 19.12 | 0.00 |
| 0.208 | 17.19 | 17.19 | 0.00 | 19.02 | 19.02 | 0.00 |
| 0.152 | 17.01 | 17.01 | 0.00 | 18.82 | 18.82 | 0.00 |
| 0.114 | 16.89 | 16.9 | 0.01 | 18.68 | 18.68 | 0.00 |
| 0.076 | 16.78 | 16.78 | 0.00 | 18.54 | 18.54 | 0.00 |
| 0.038 | 16.67 | 16.67 | 0.00 | 18.4 | 18.4 | 0.00 |
| 0.019 | 16.61 | 16.61 | 0.00 | 18.33 | 18.33 | 0.00 |
| 0 | 16.55 | 16.55 | 0.00 | 18.26 | 18.26 | 0.00 |

(a) Cross sections updated with post-project conditions.



- Symbology**
- HEC-RAS Cross Section
 - HEC-RAS Cross Section - Updated with Post-Project Conditions
 - Proposed Laguna Creek Trail
 - Laguna Creek
 - Laguna Creek Existing 100 Year Floodplain

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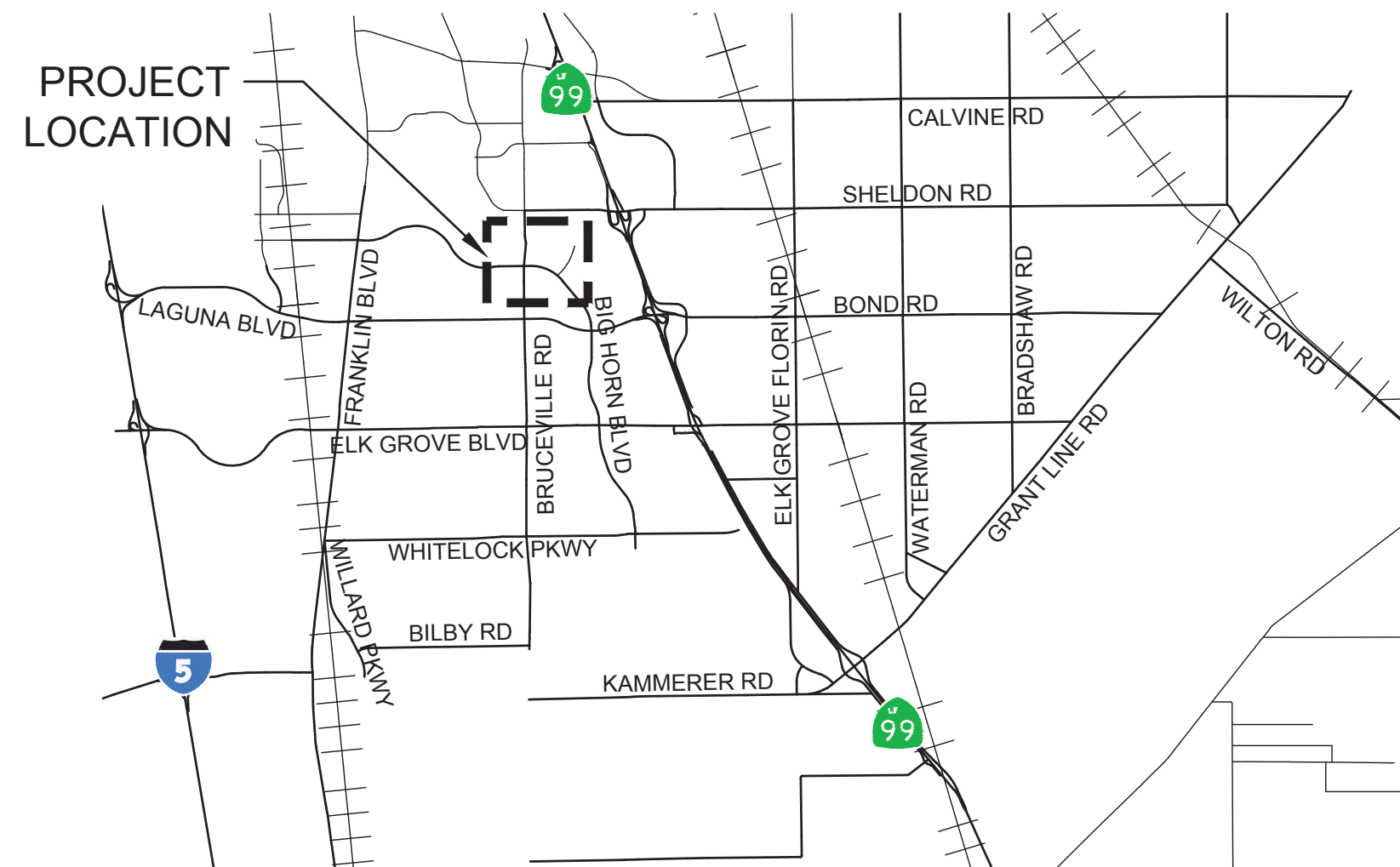


Figure 1
Project Location and Existing 100-Year Floodplain

Mark Thomas and Company
 Floodplain Evaluation
 Laguna Creek Trails Project

ATTACHMENT A

Laguna Creek Trail and Bruceville Road Sidewalk
Improvements Project (35% Design Drawings)



VICINITY MAP
CITY OF ELK GROVE, CA



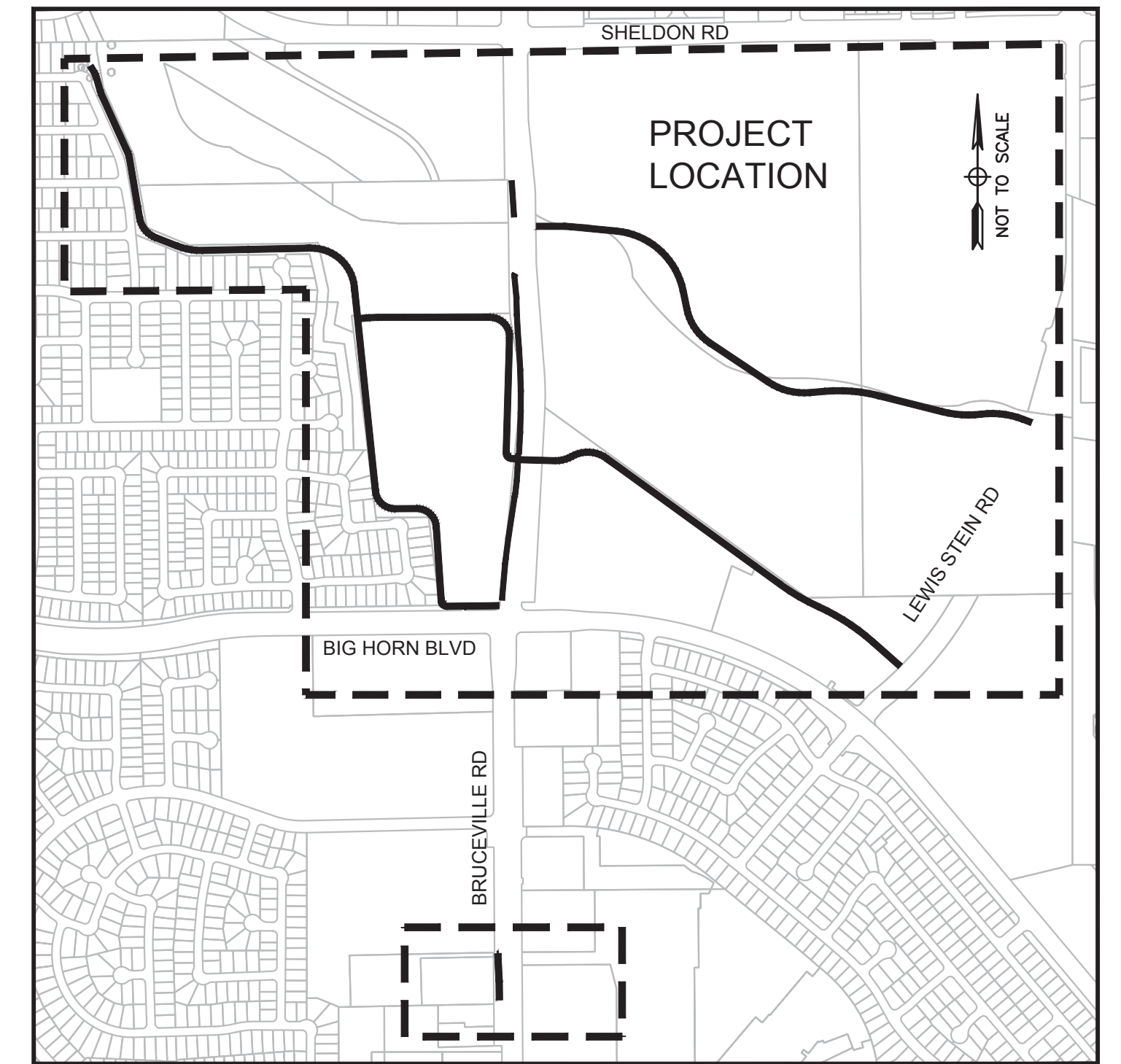
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IMPROVEMENT PLANS FOR:

LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD SIDEWALK IMPROVEMENTS PROJECT - WTL019



LOCATION MAP

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APRIL, 2019

TO BE SUPPLEMENTED BY:
CITY OF ELK GROVE IMPROVEMENT STANDARDS AND STANDARD DRAWINGS, LATEST EDITION
CITY OF ELK GROVE STANDARD CONSTRUCTION SPECIFICATIONS, LATEST EDITION
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND SPECIFICATIONS, 2018

SHEET INDEX:

- | | | |
|---|-------|------------------|
| 1 | T-1 | TITLE SHEET |
| 2 | X1-X2 | TYPICAL SECTIONS |
| 3 | L1-L8 | LAYOUT SHEETS |
| 4 | P1-P7 | PROFILE SHEETS |

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DRAWN: Z. HUBBARD
CHECKED: A. SILVA

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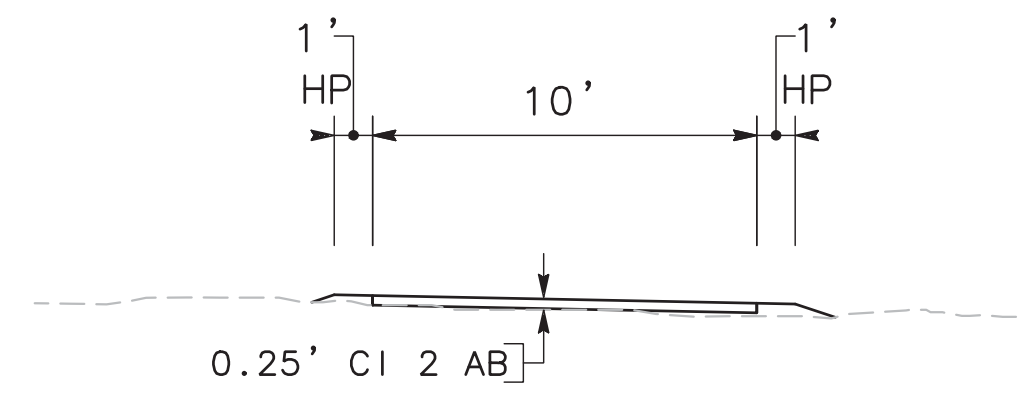
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TITLE SHEET

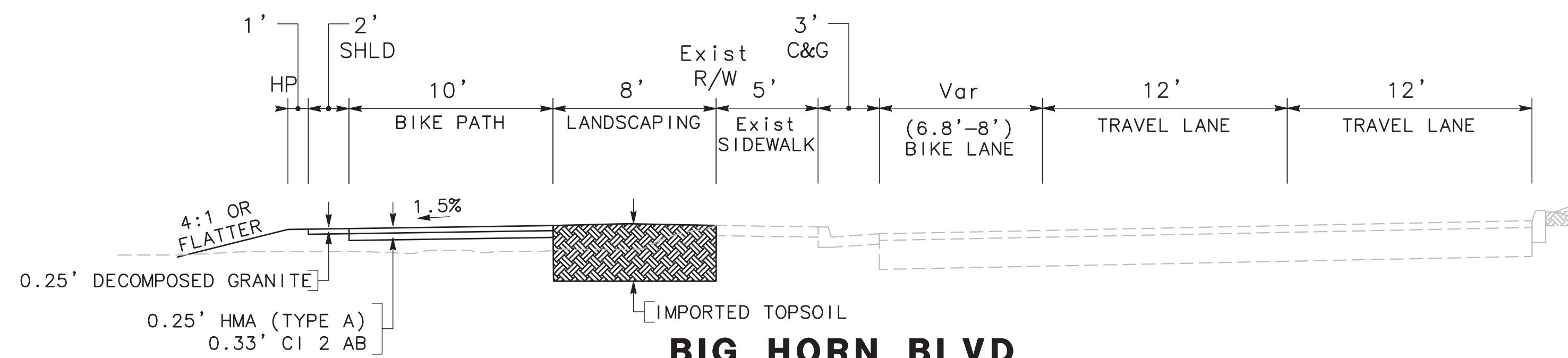
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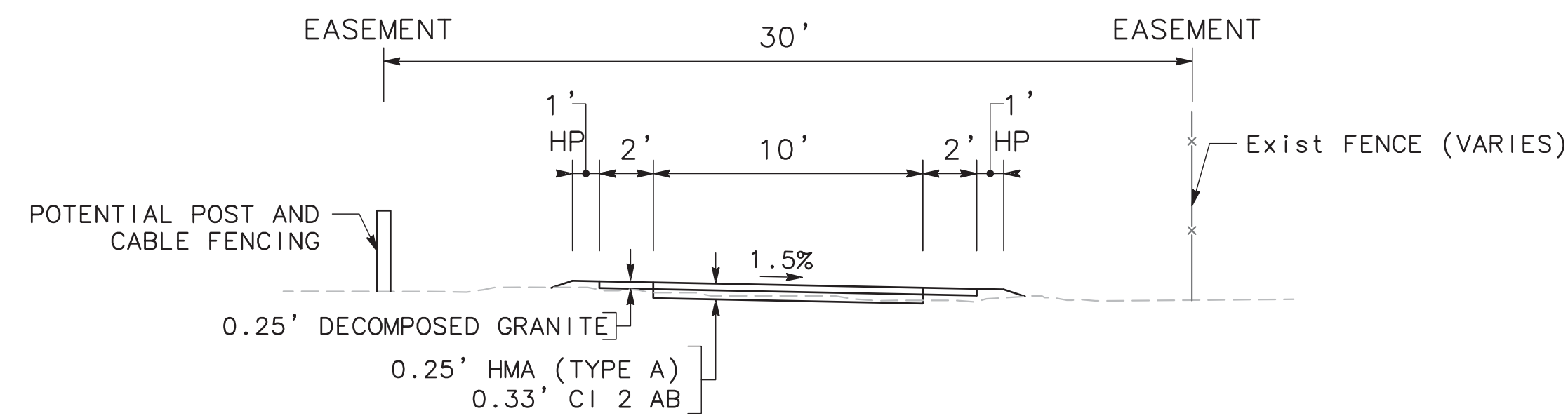
UNPAVED TRAIL

"U" LINE 10+00 TO 14+31



BIG HORN BLVD

"BH" LINE 228+76 TO 231+62



LAGUNA CREEK TRAIL

"S1" LINE 10+00 TO 46+14
 "S2" LINE 60+00 TO 84+81
 "S3" LINE 105+20 TO 132+10

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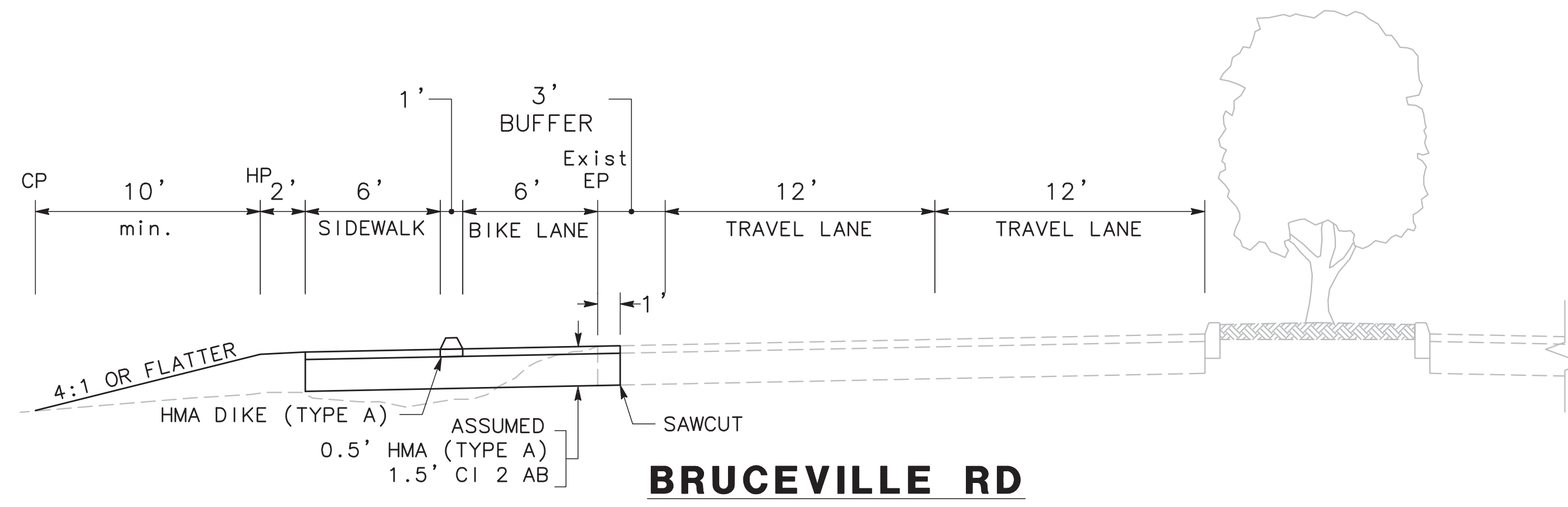
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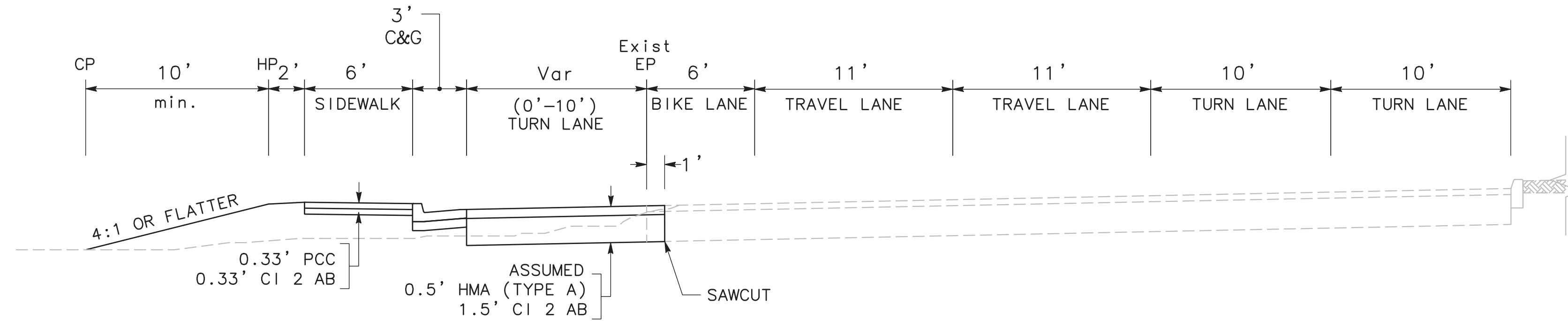
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| PROJECT No.: WTL019 | OF 18 |

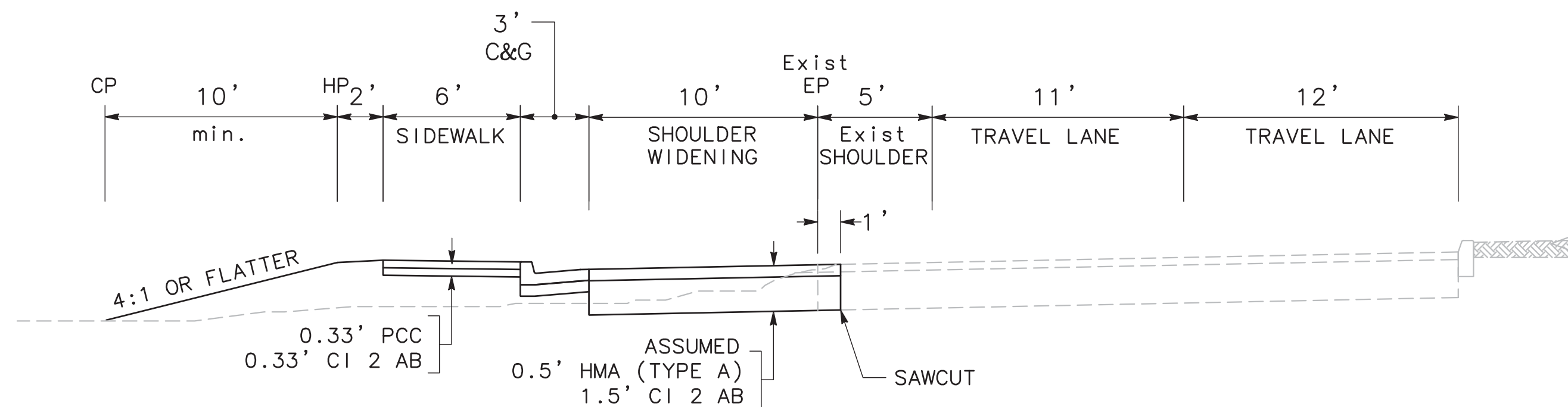
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BRUCEVILLE RD
"BR" LINE 182+46 TO 197+05



BRUCEVILLE RD
"BR" LINE 177+23 TO 182+46



BRUCEVILLE RD
"BR" LINE 158+76 TO 161+97

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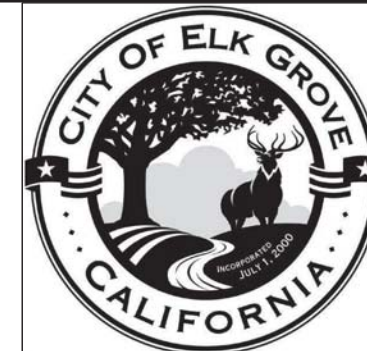
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TYPICAL SECTIONS

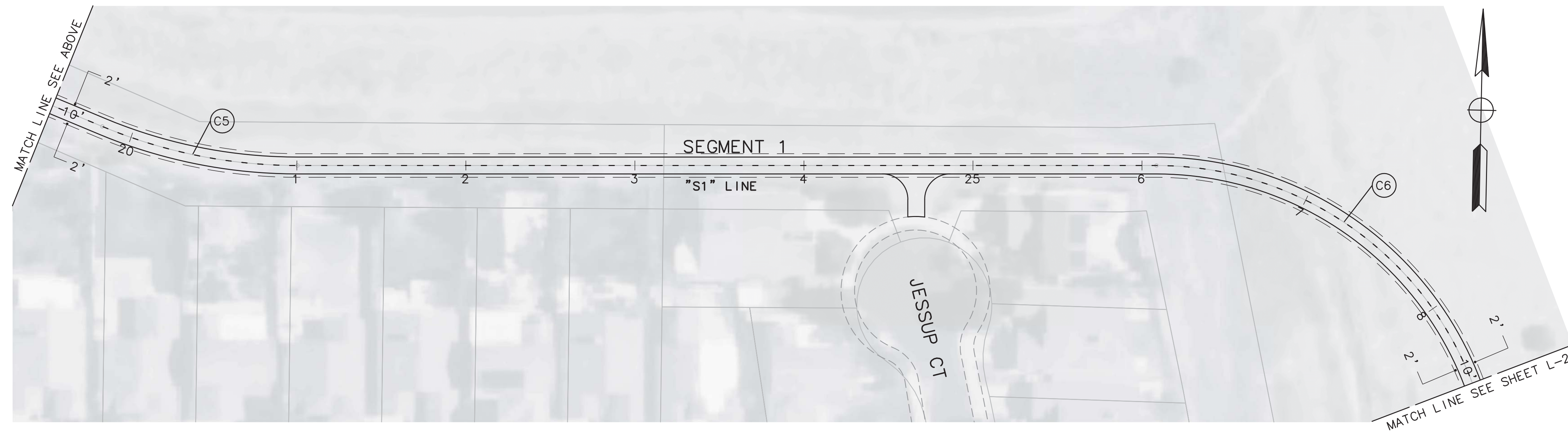
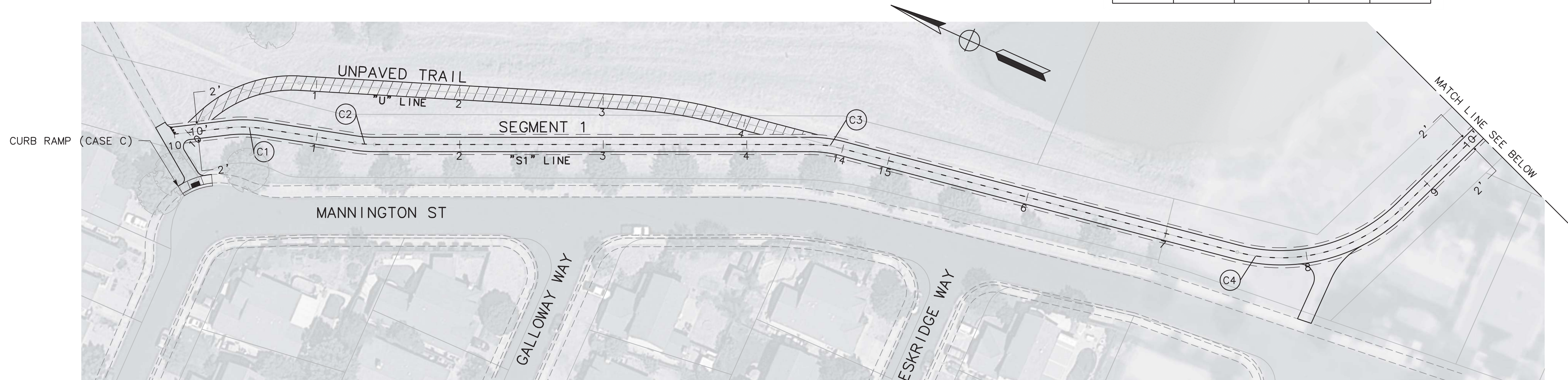
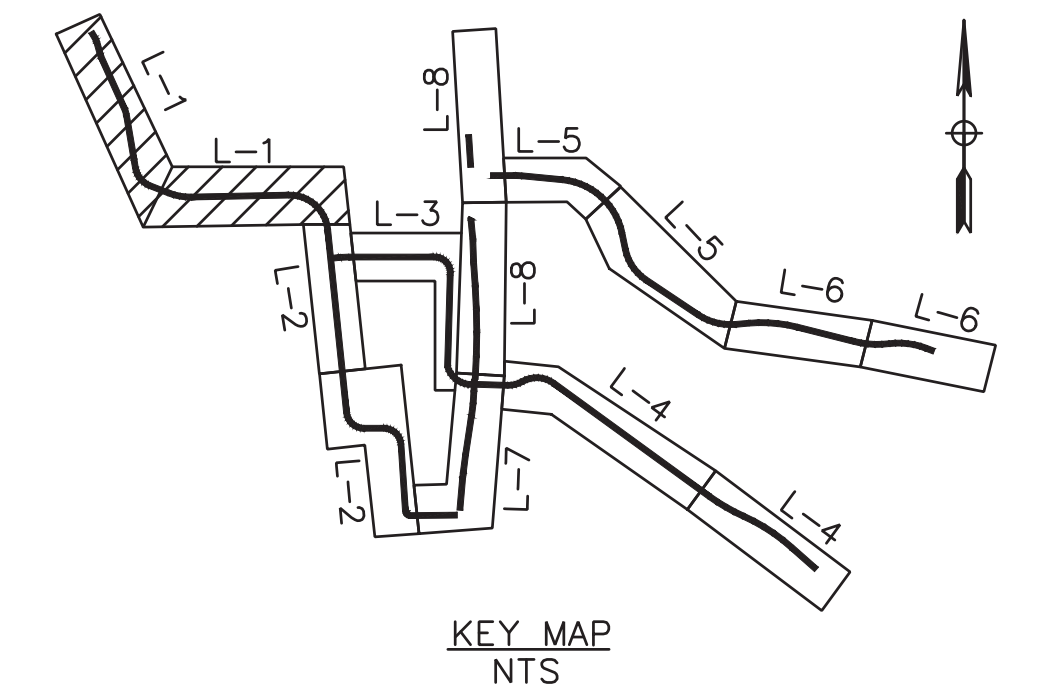
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LEGEND:

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- ▨ LANDSCAPE AREA
- ▨ CLASS 2 AB

| CURVE TABLE | | | | |
|-------------|---------|-----------|---------|---------|
| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
| C1 | 90.00' | 15°34'55" | 12.31' | 24.48' |
| C2 | 90.00' | 8°51'51" | 6.98' | 13.92' |
| C3 | 90.00' | 14°40'54" | 11.59' | 23.06' |
| C4 | 120.00' | 58°56'18" | 67.81' | 123.44' |
| C5 | 300.00' | 22°38'49" | 60.07' | 118.58' |
| C6 | 200.00' | 85°17'37" | 184.21' | 297.73' |



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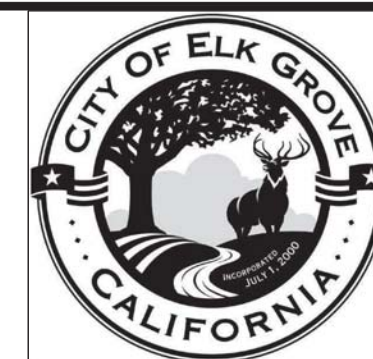
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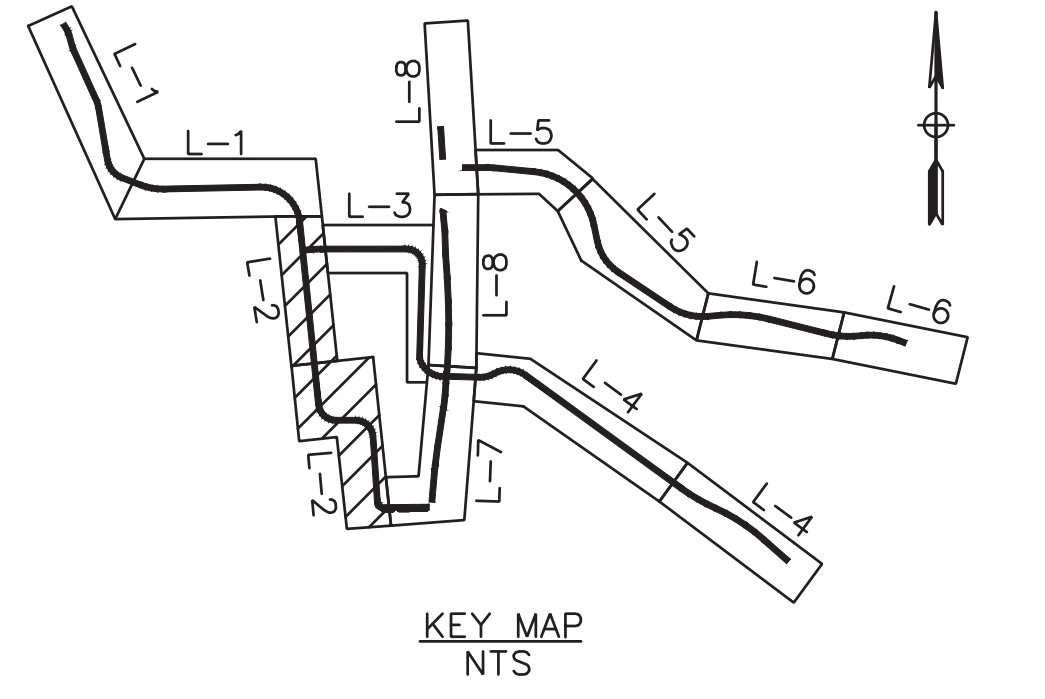
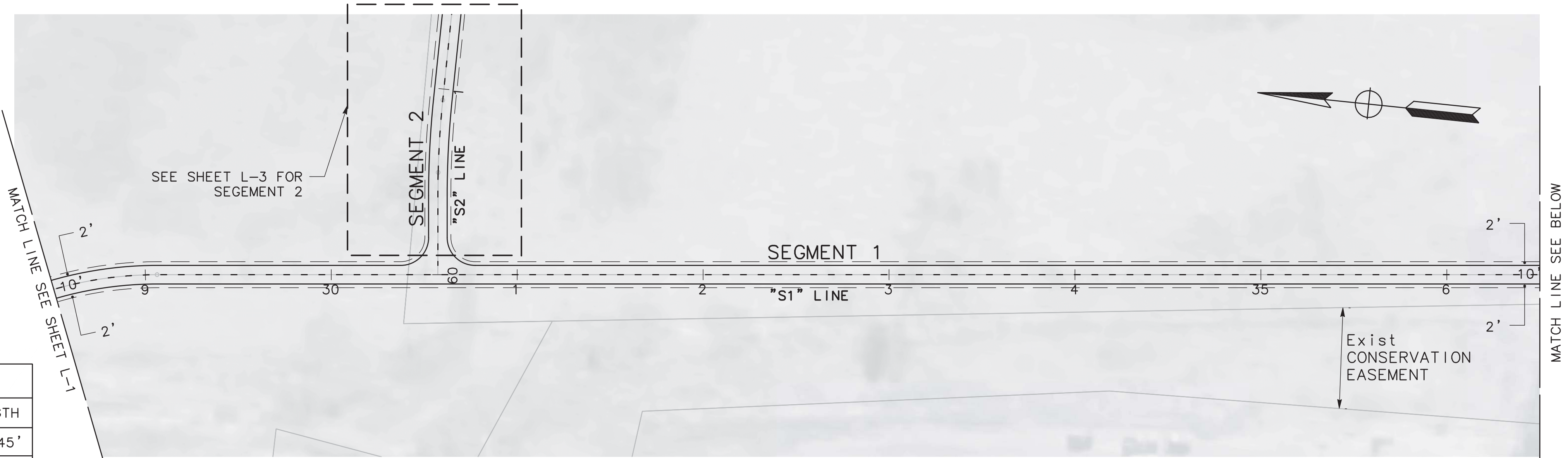
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 IMPROVEMENTS
LAYOUTS

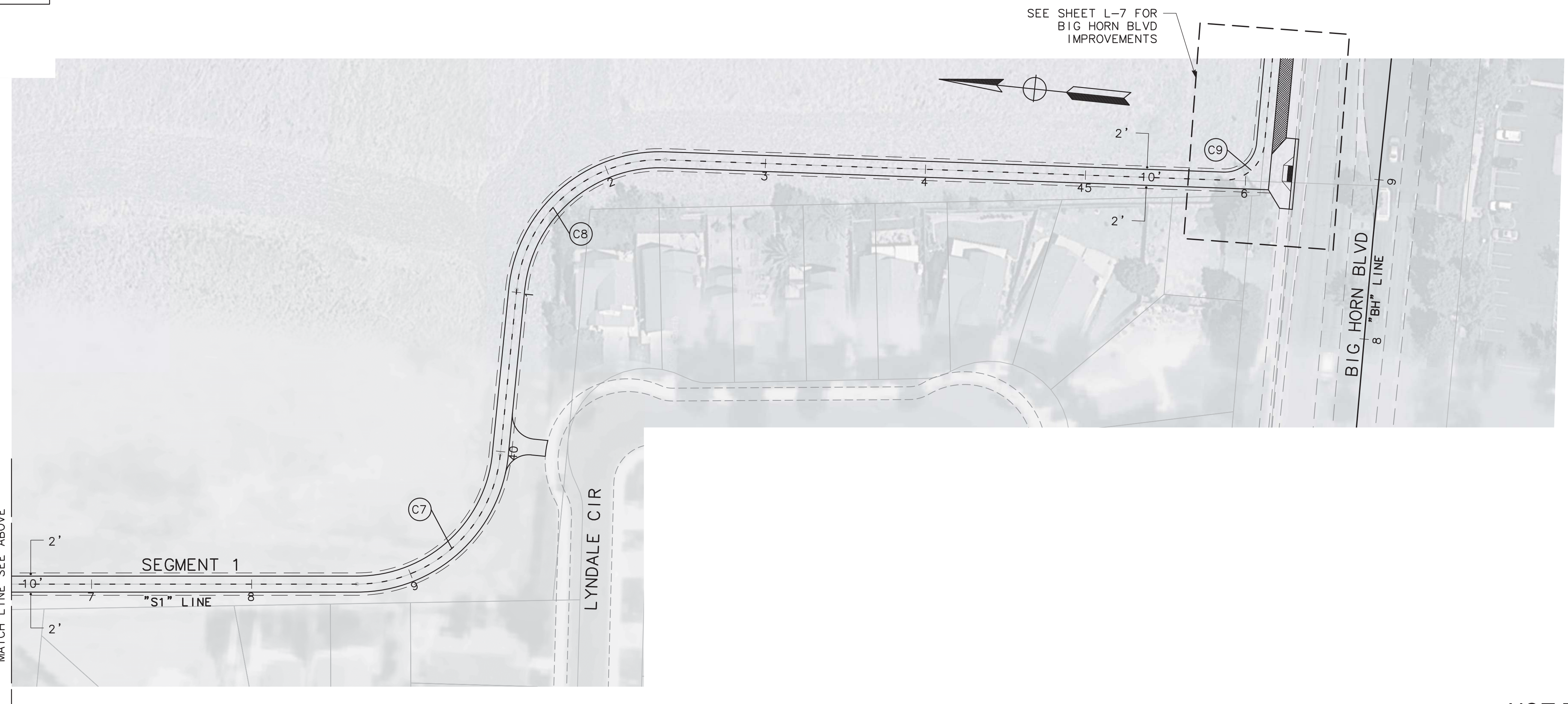
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 OF **18**



CURVE TABLE

| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
|---------|--------|-----------|---------|---------|
| C7 | 90.00' | 84°19'04" | 81.49' | 132.45' |
| C8 | 90.00' | 86°23'51" | 84.51' | 135.71' |
| C9 | 25.00' | 86°48'11" | 23.64' | 37.88' |



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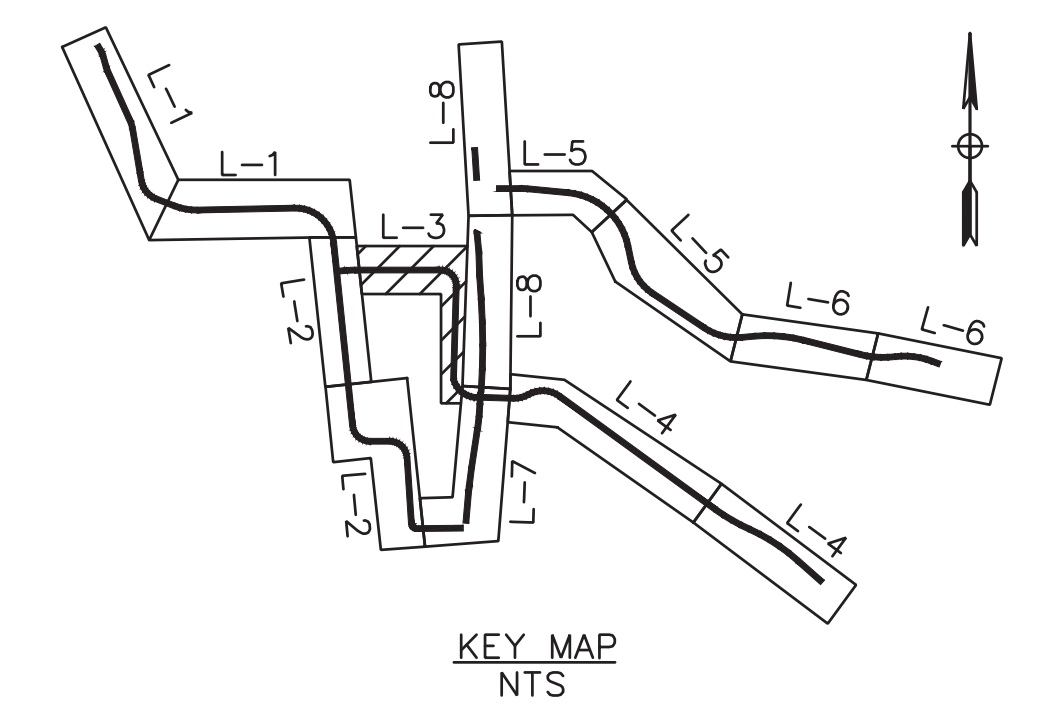
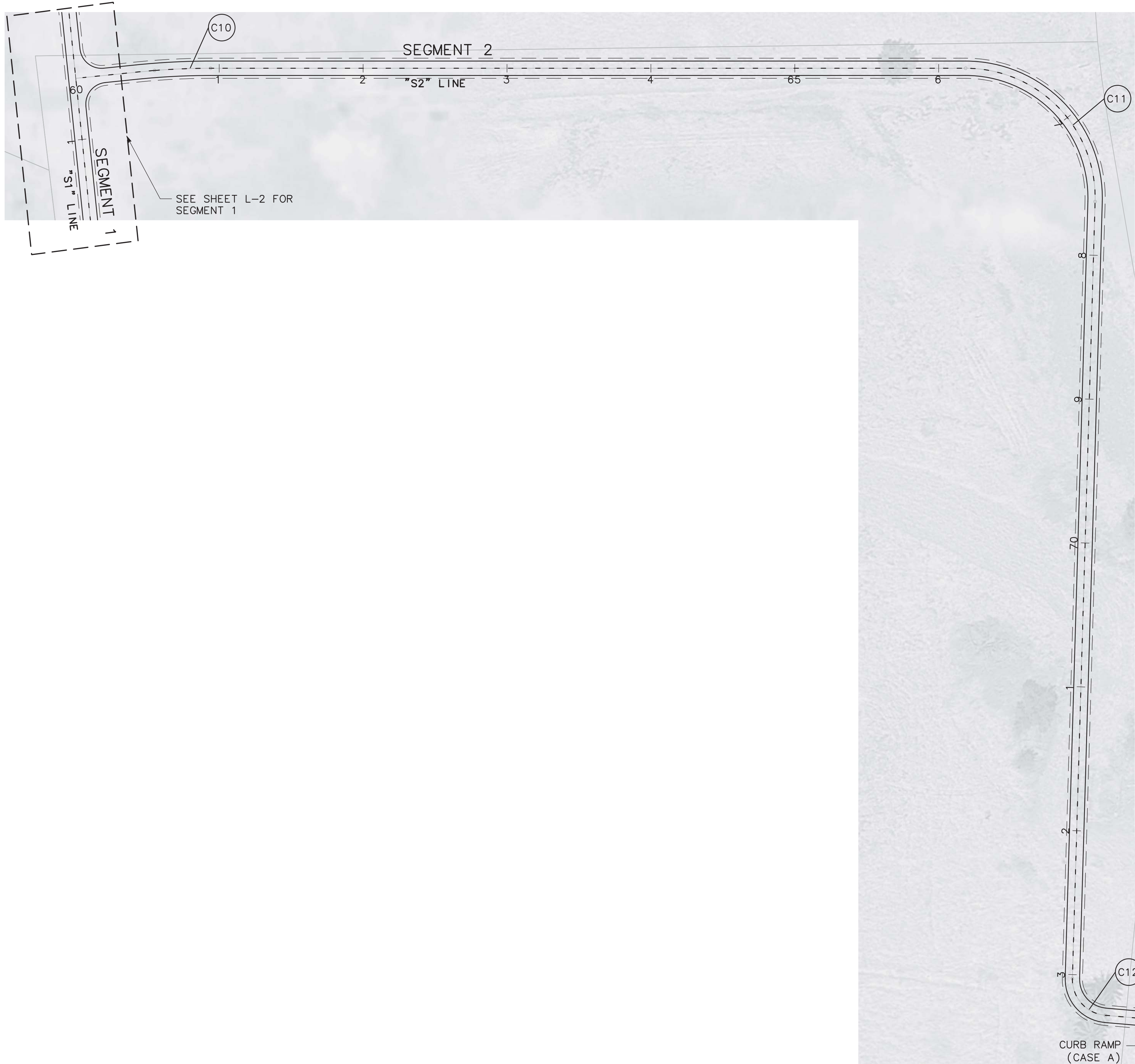


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LAYOUTS

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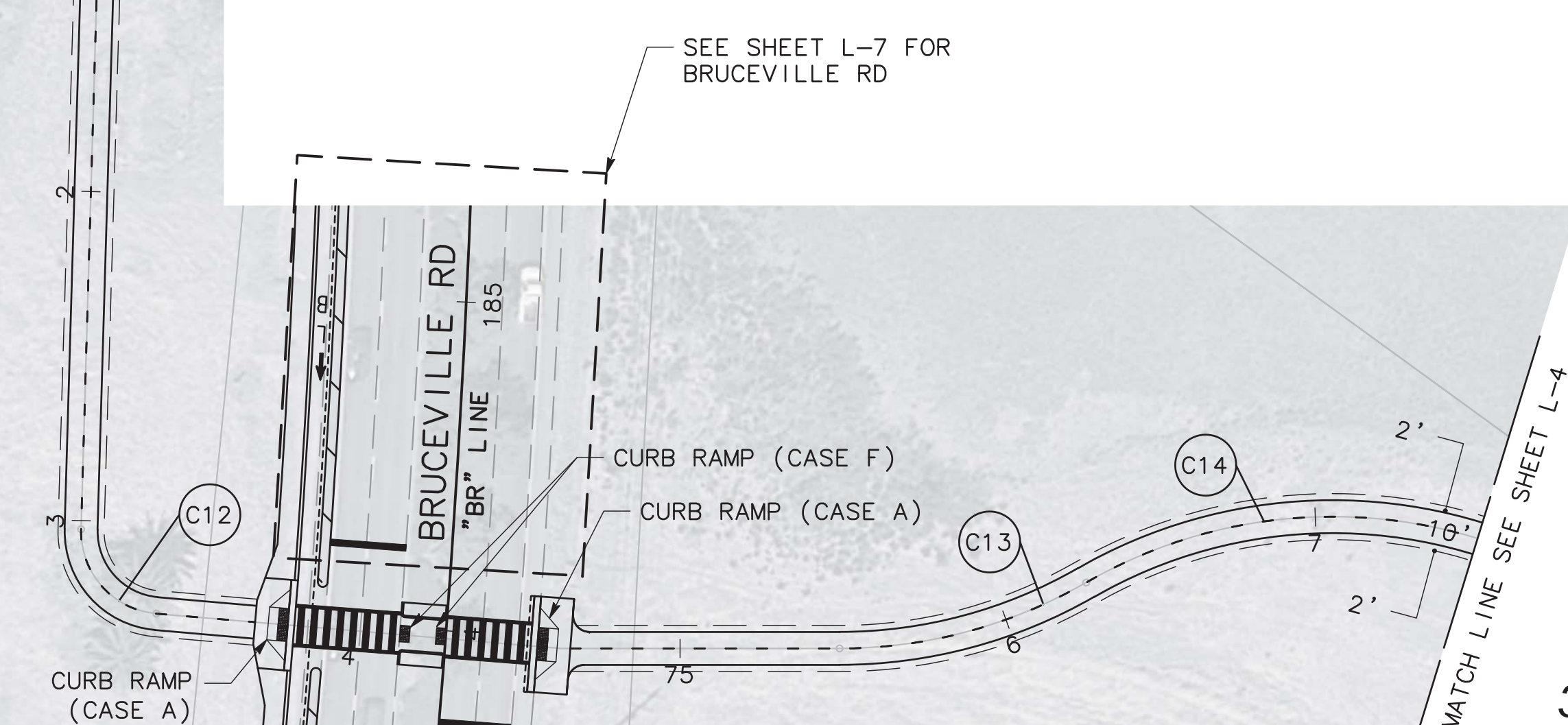
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CURVE TABLE

| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
|---------|---------|-----------|---------|---------|
| C10 | 500.00' | 4°28'12" | 19.51' | 39.01' |
| C11 | 90.00' | 91°40'25" | 92.67' | 144.00' |
| C12 | 25.00' | 86°44'58" | 23.62' | 37.85' |
| C13 | 150.00' | 29°56'52" | 40.12' | 78.40' |
| C14 | 150.00' | 65°56'34" | 97.30' | 172.64' |



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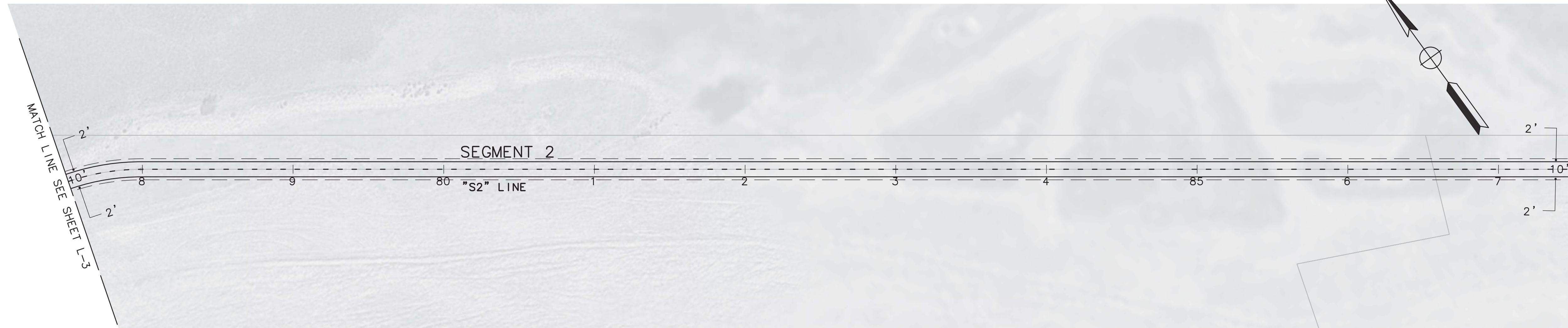
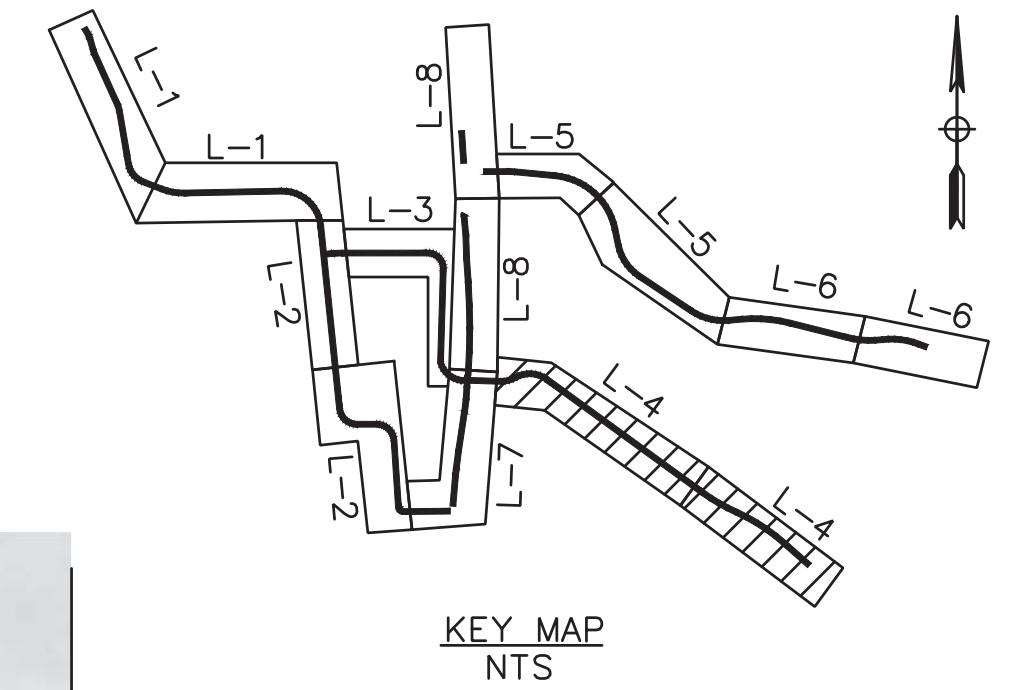
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DRAWING NUMBER: **L-3**
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|-------------|----------|-----------|---------|---------|
| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
| C15 | 1000.00' | 11°39'58" | 102.16' | 203.61' |
| C16 | 1000.00' | 17°13'48" | 151.50' | 300.72' |



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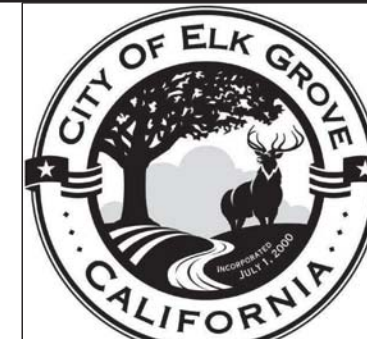
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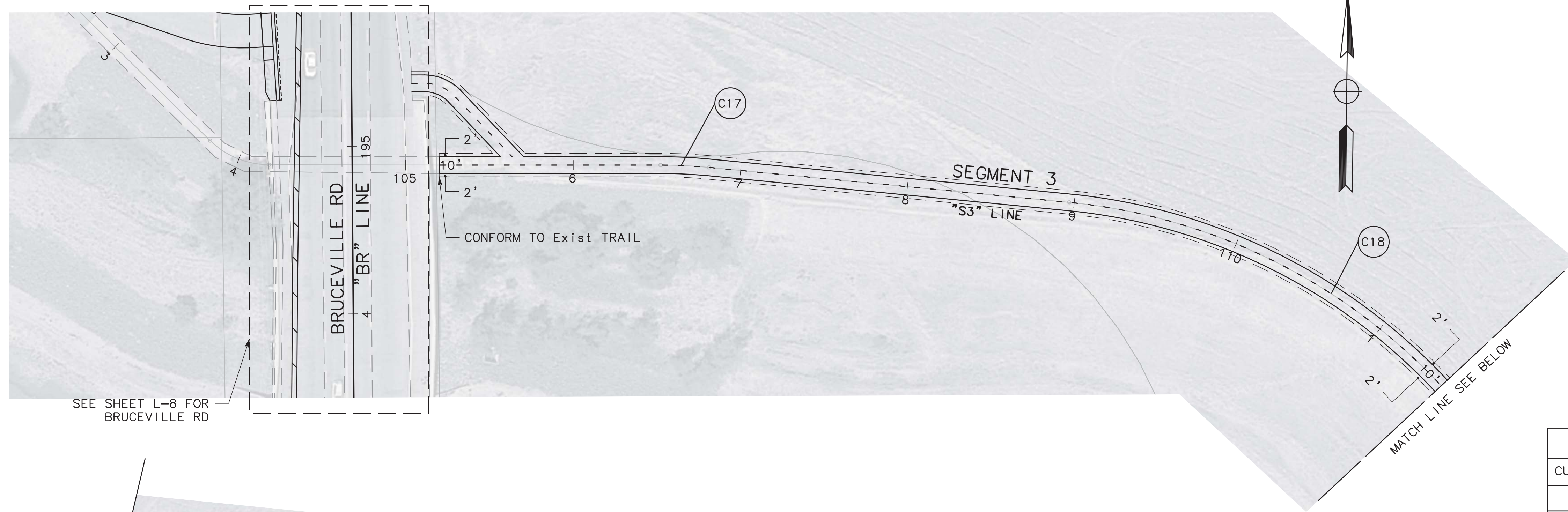
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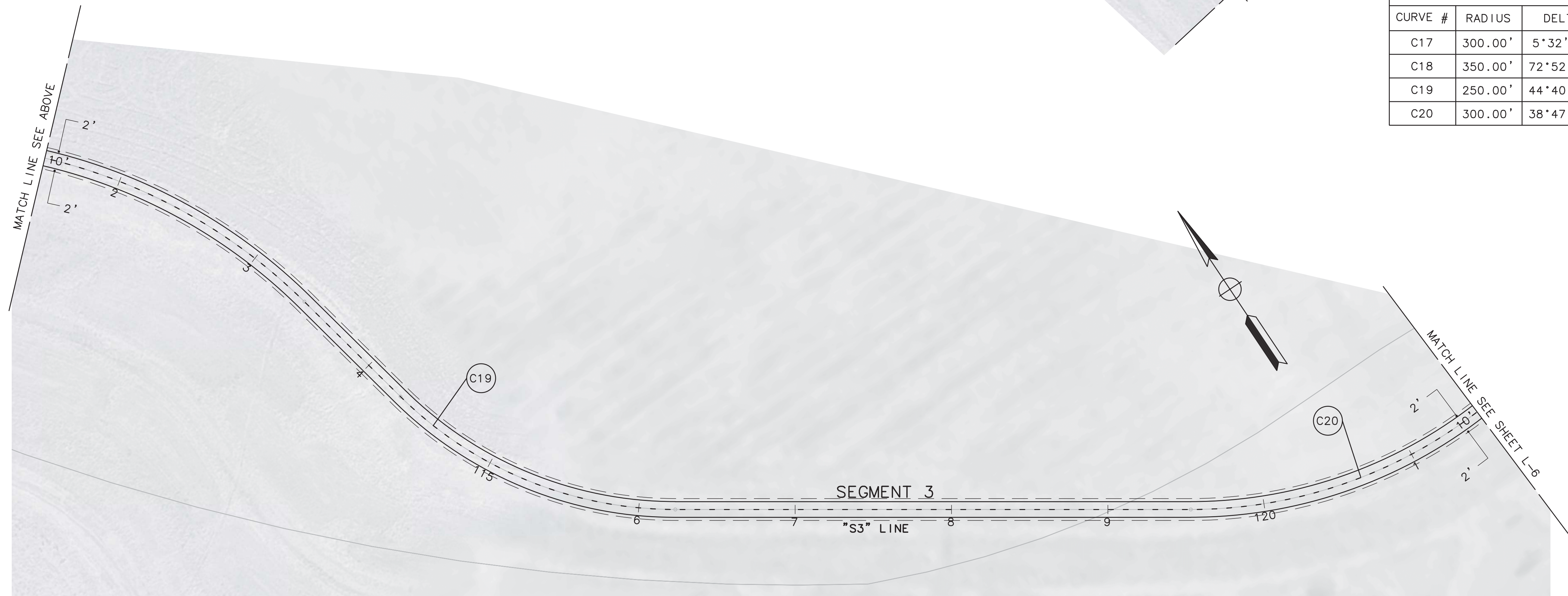
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|-------------|---------|-----------|---------|---------|
| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
| C17 | 300.00' | 5°32'39" | 14.53' | 29.03' |
| C18 | 350.00' | 72°52'20" | 258.38' | 445.15' |
| C19 | 250.00' | 44°40'15" | 102.71' | 194.91' |
| C20 | 300.00' | 38°47'05" | 105.60' | 203.08' |



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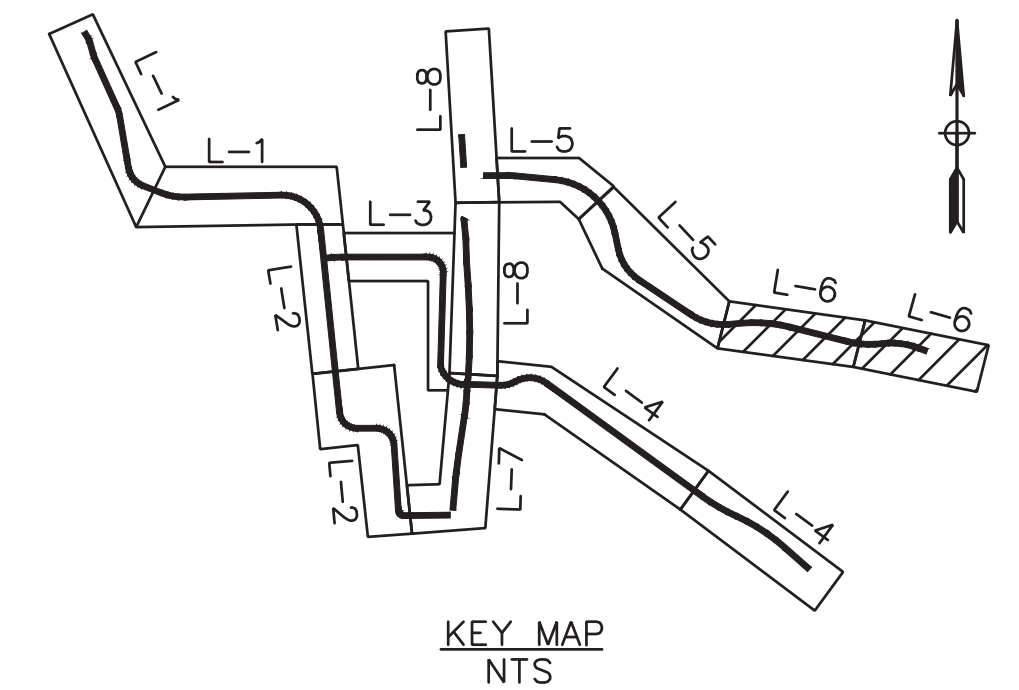
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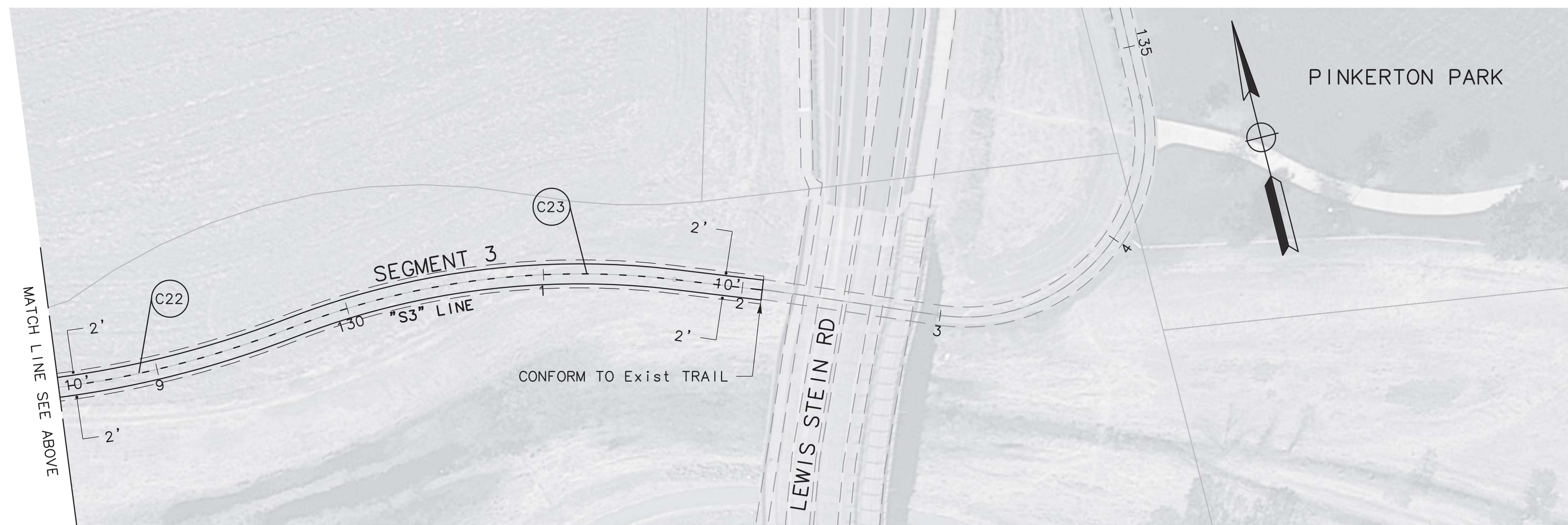
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LAYOUTS

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 SCALE: 1"=40'
 PROJECT No.: WTL019

DRAWING NUMBER: L-5
 SHEET: 8 OF 18



| CURVE TABLE | | | | |
|-------------|---------|-----------|---------|---------|
| CURVE # | RADIUS | DELTA | TANGENT | LENGTH |
| C21 | 750.00' | 19°13'33" | 127.03' | 251.66' |
| C22 | 500.00' | 21°12'50" | 93.64' | 185.13' |
| C23 | 400.00' | 28°03'02" | 99.92' | 195.83' |



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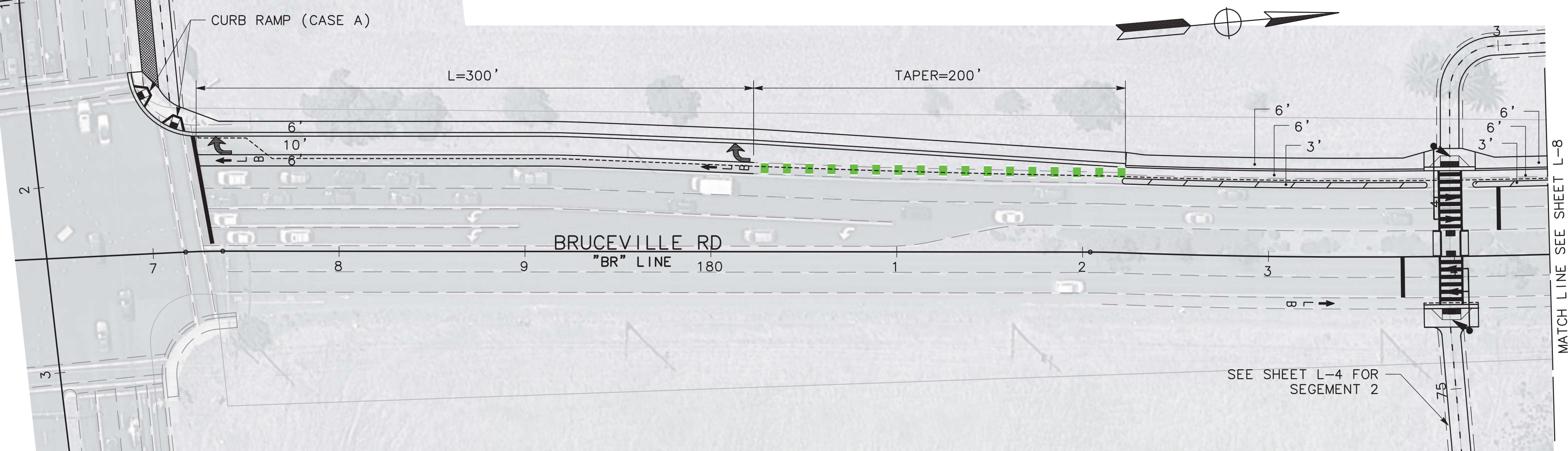
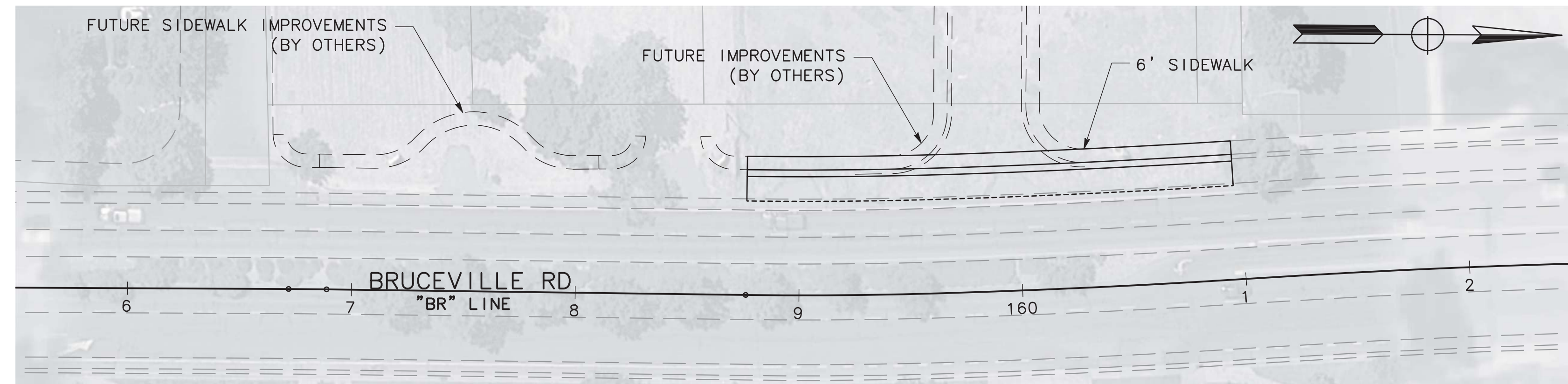
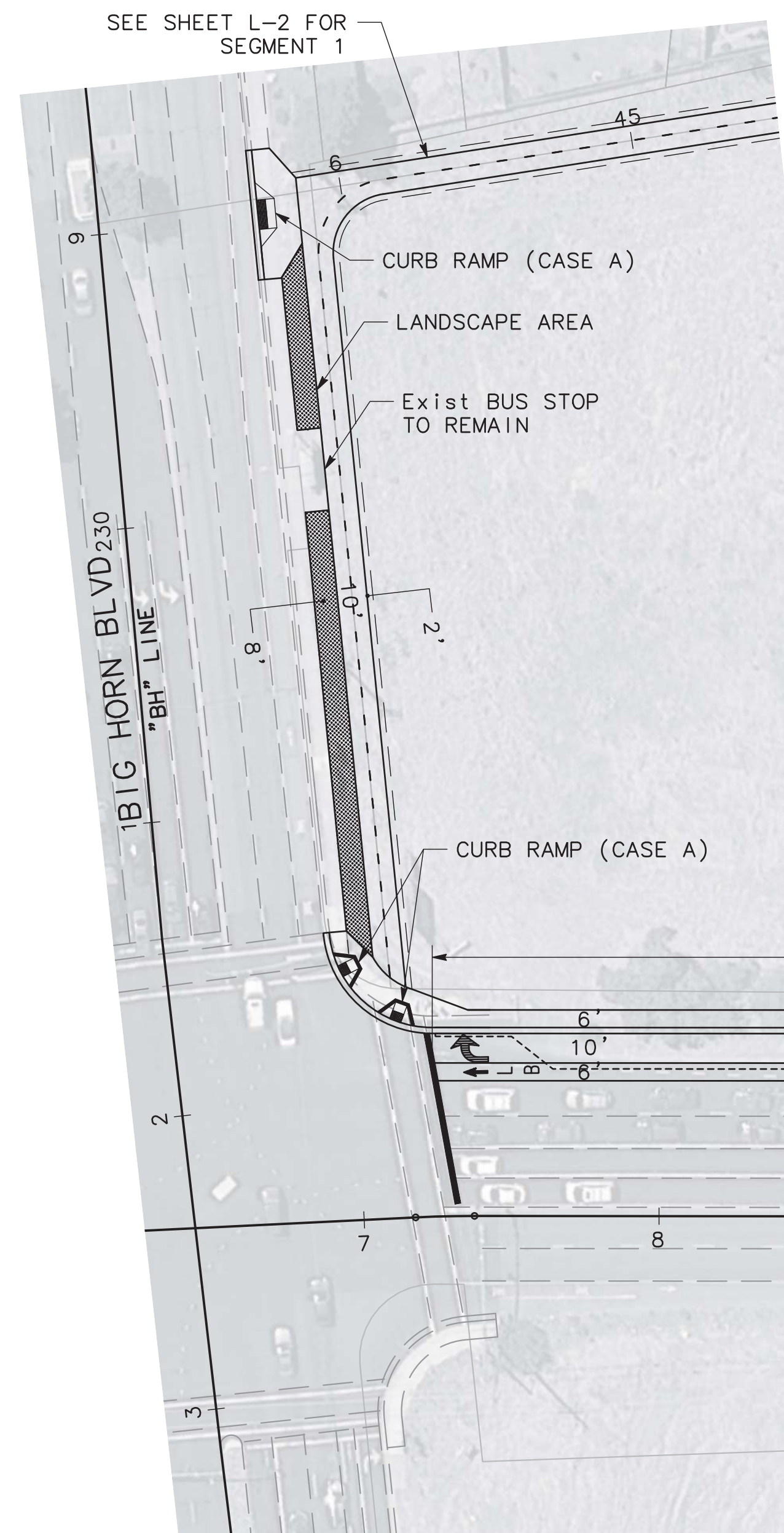
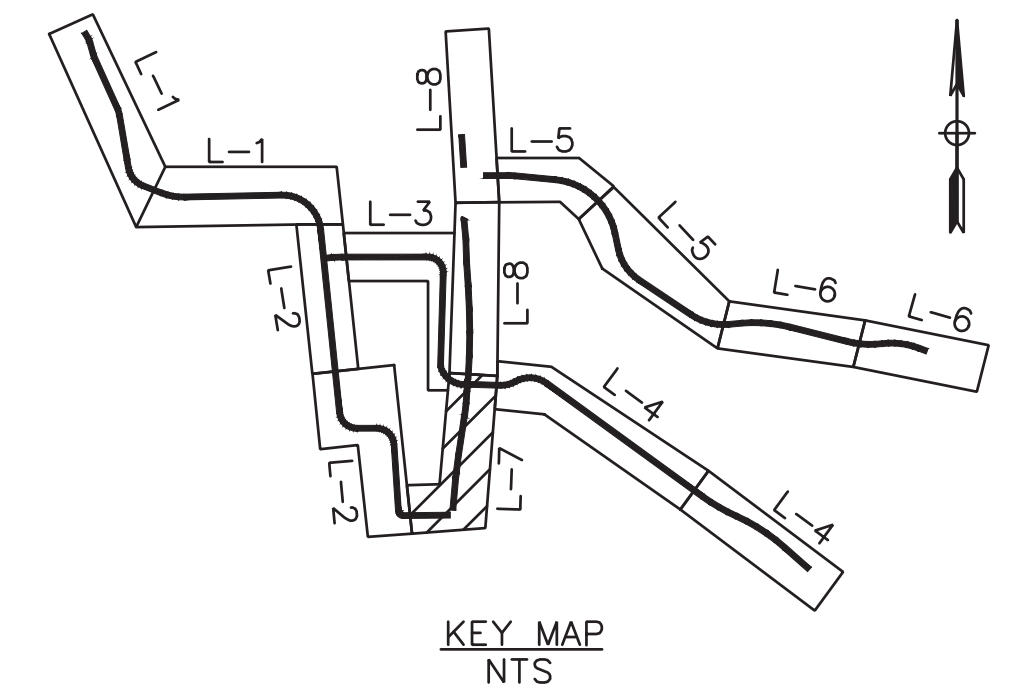


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LAYOUTS

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 PROJECT No.: WTL019

DRAWING NUMBER: L-6
 SHEET: 9 OF 18

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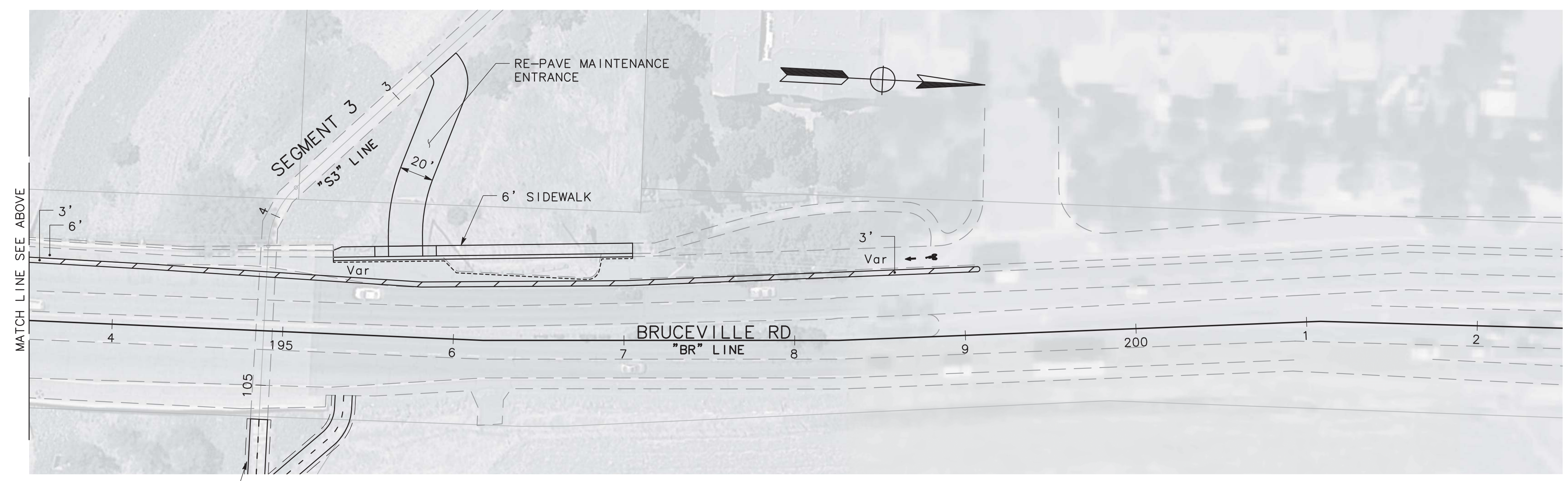
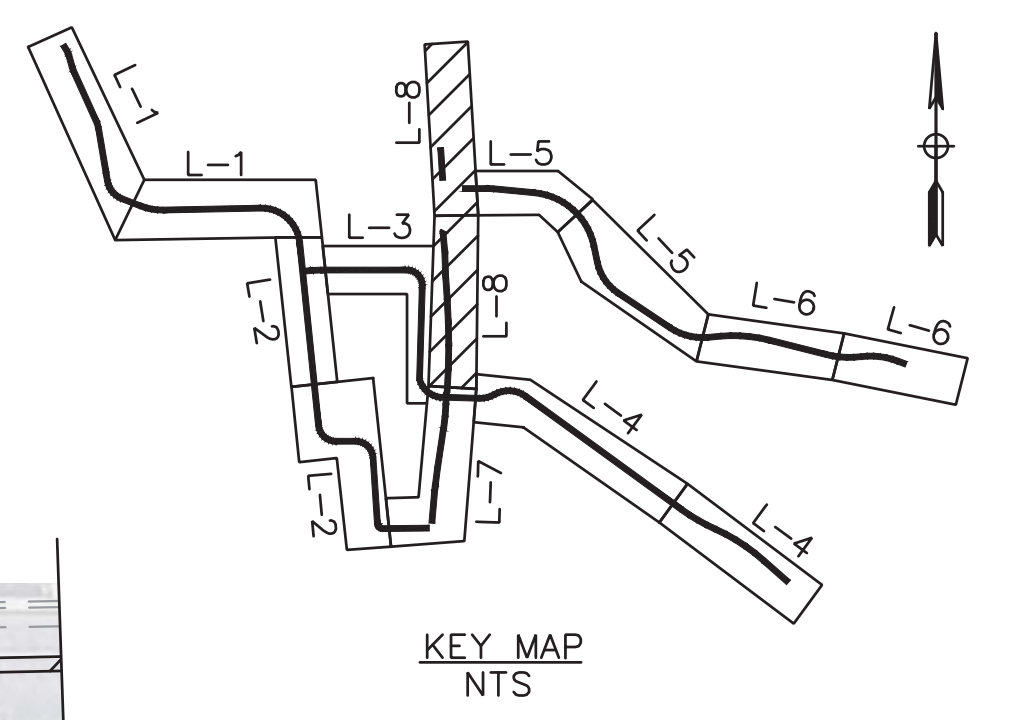
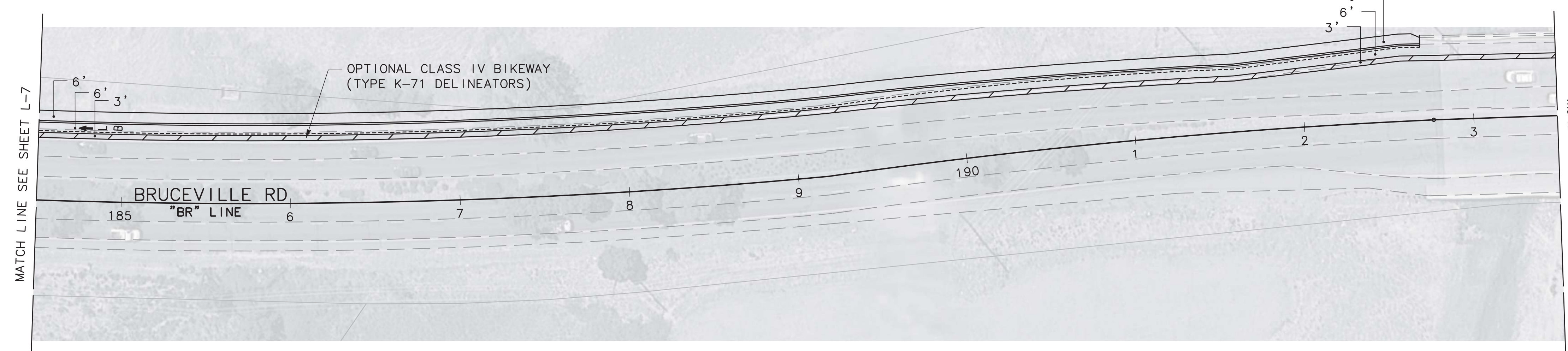
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APRIL 10, 2019
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1"=40'
PROJECT No.:
WTL019

DRAWING NUMBER:
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SHEET:
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OF
18

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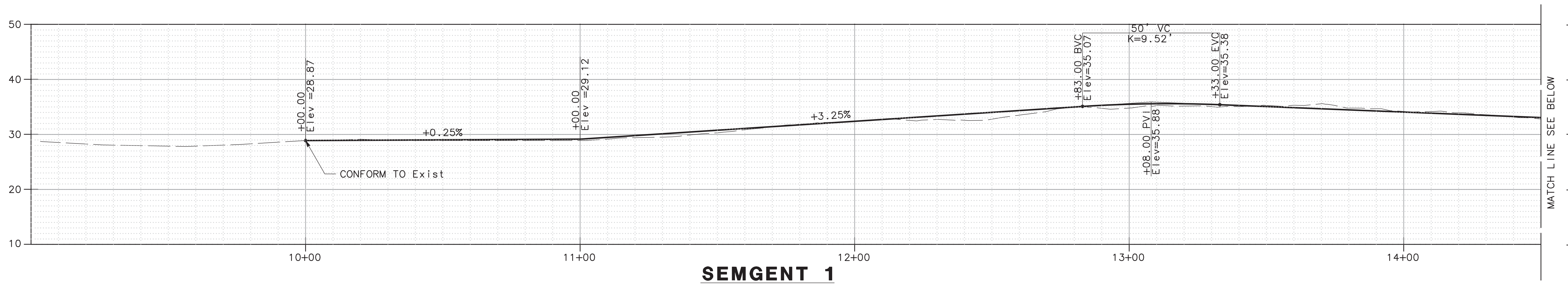


WTL019
 LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD SIDEWALK
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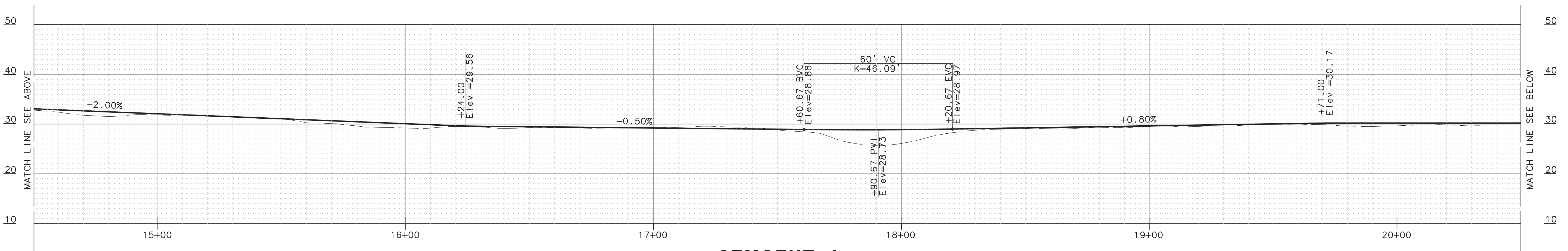
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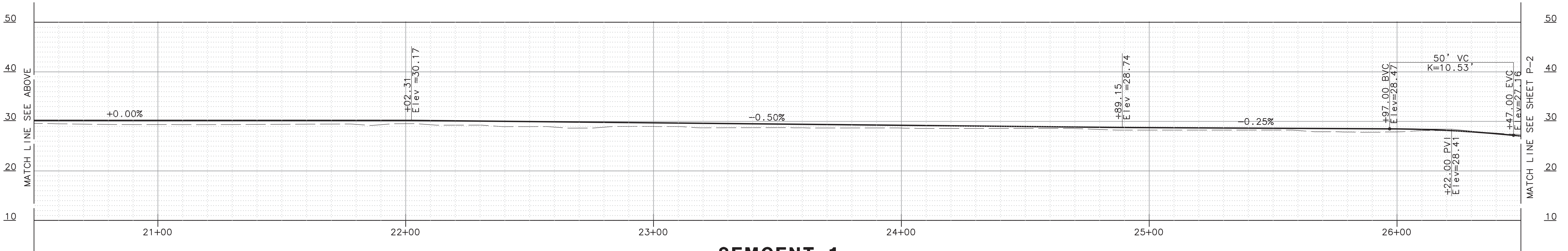
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SEGMENT 1



SEGMENT 1



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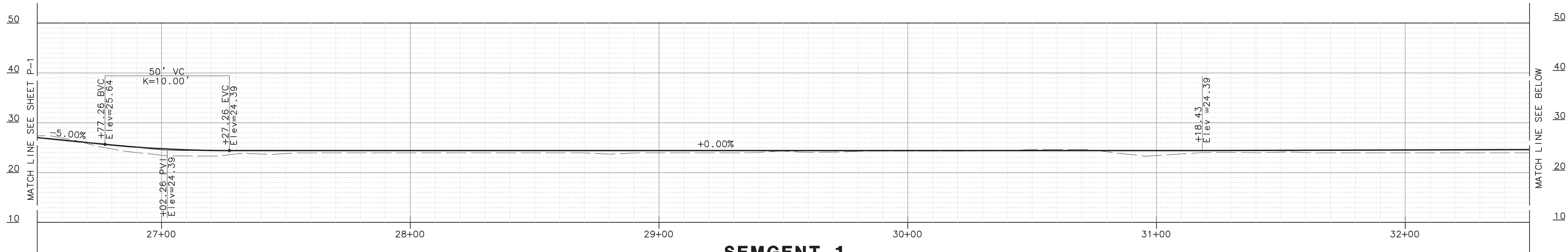


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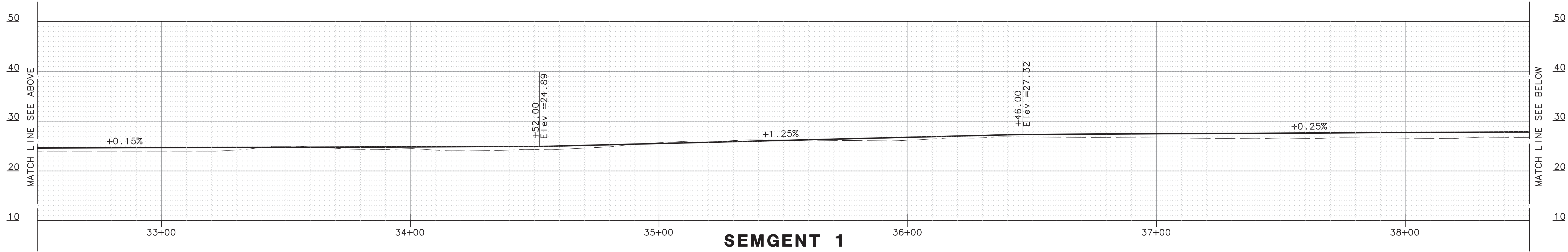
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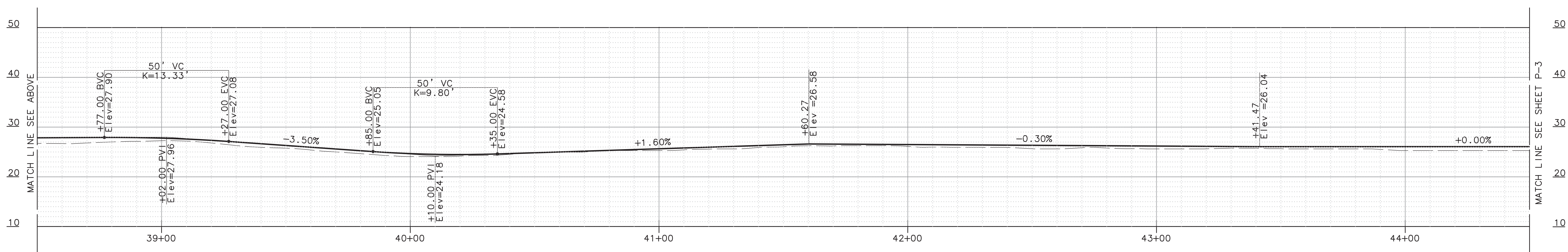
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SEGMENT 1



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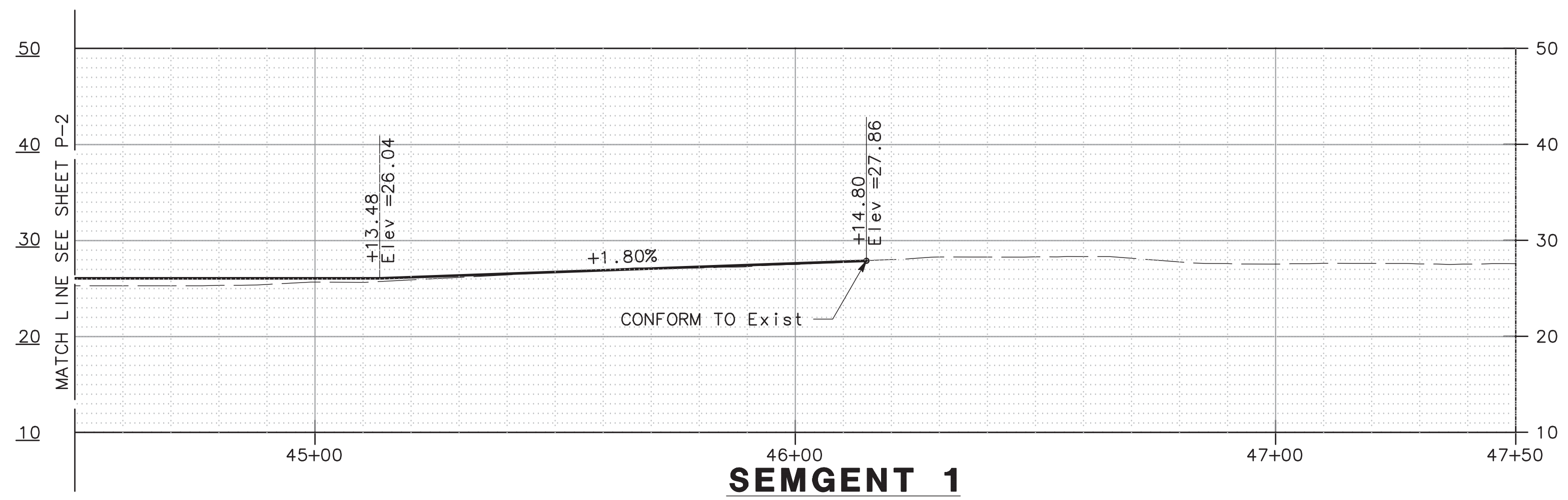


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 LAGUNA CREEK TRAIL AND BRUCEVILLE ROAD SIDEWALK
 IMPROVEMENTS
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DATE: APRIL 10, 2019
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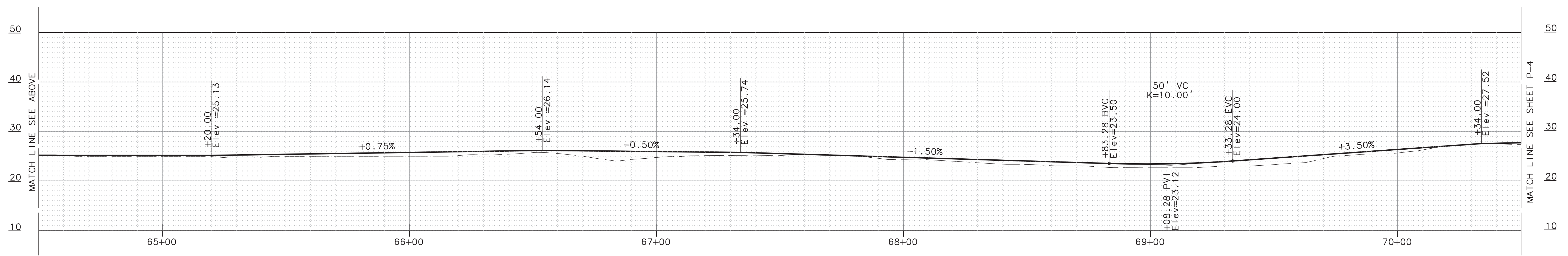
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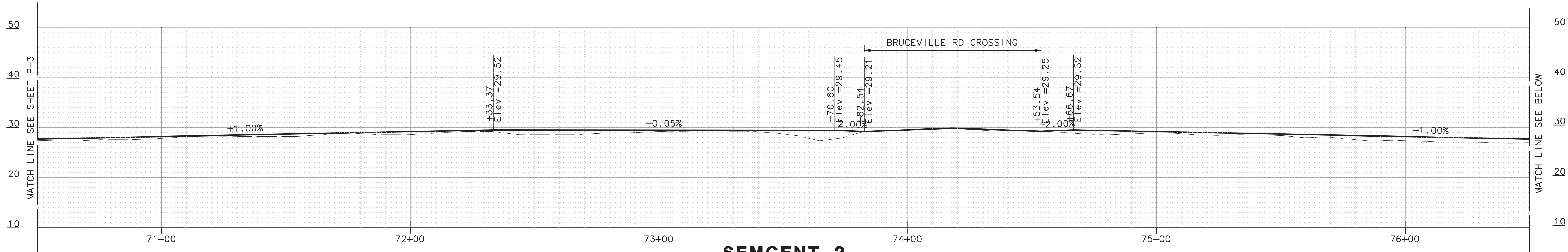


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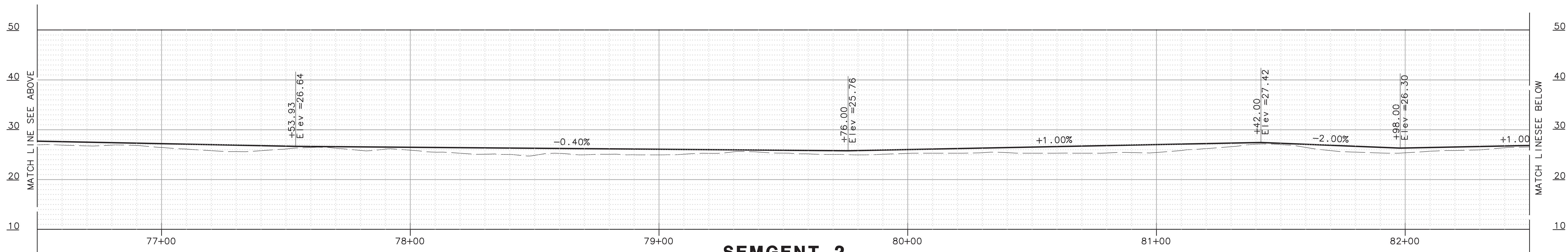
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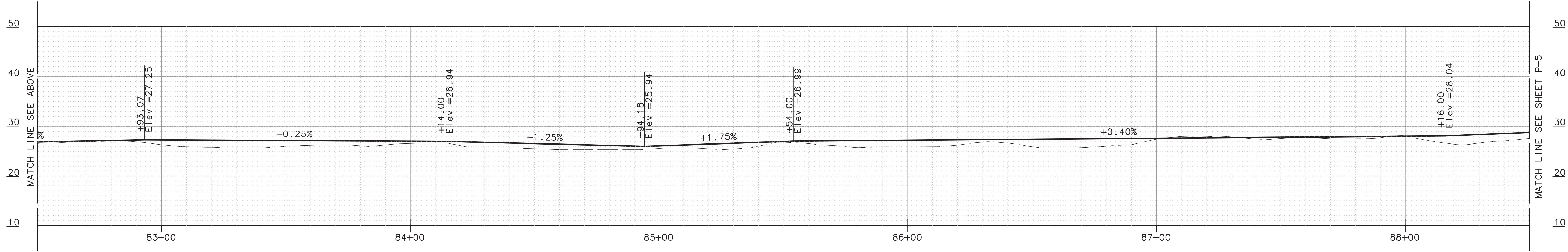
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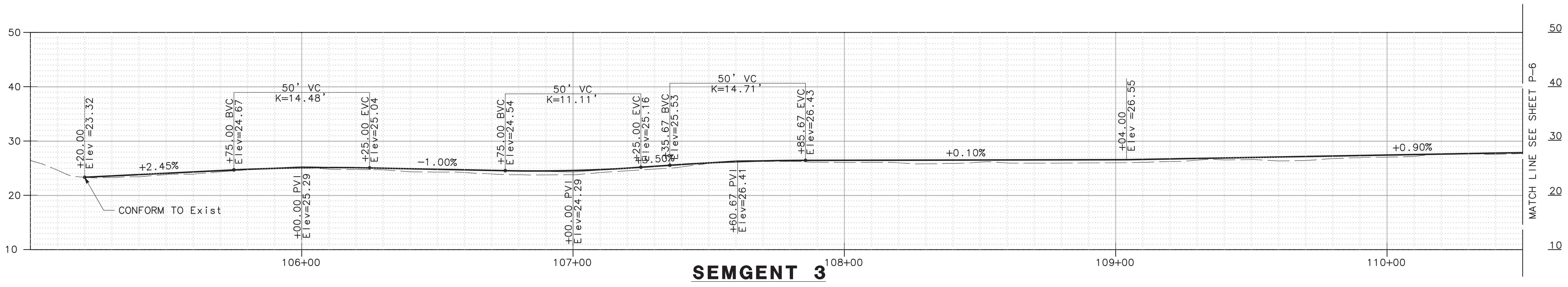
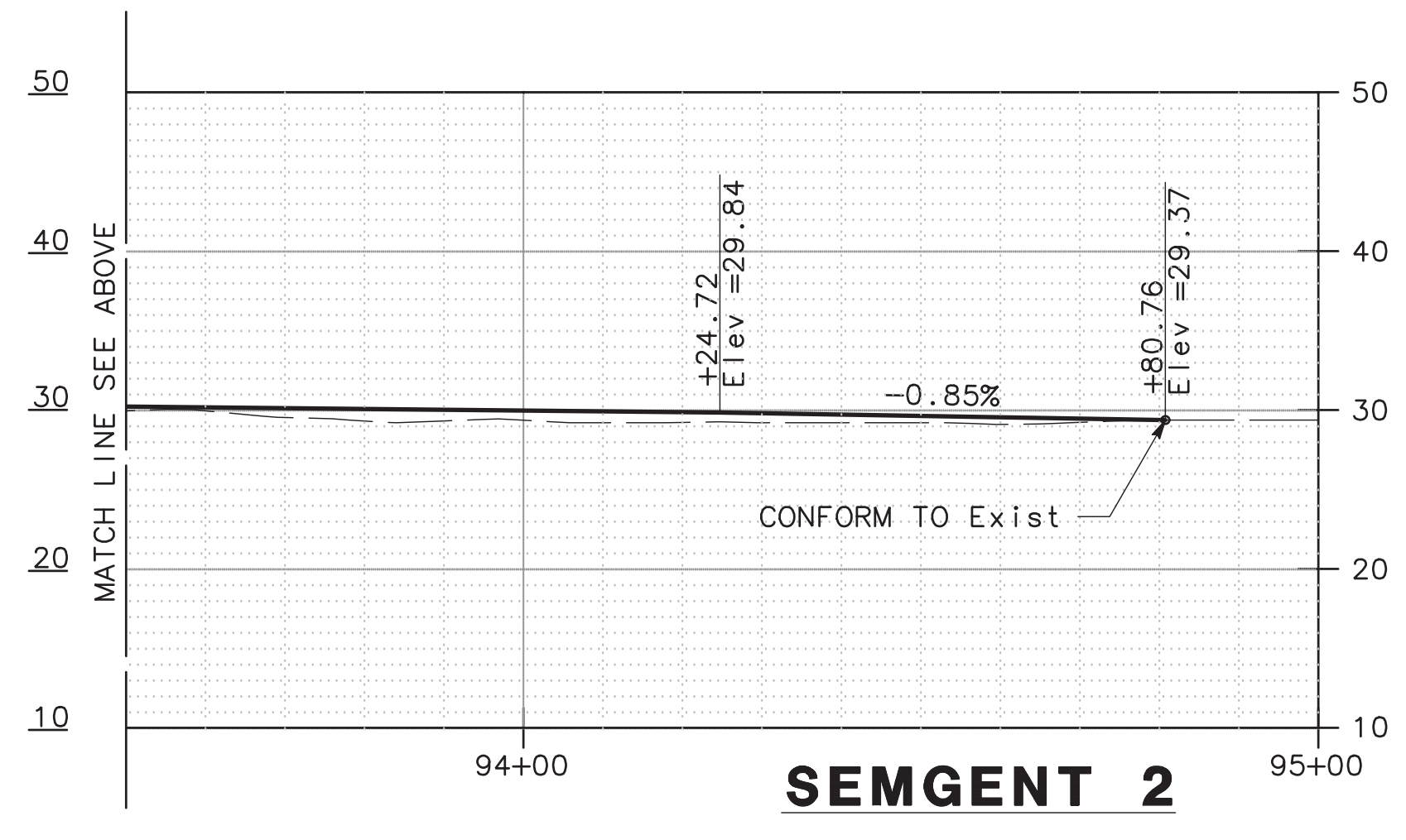
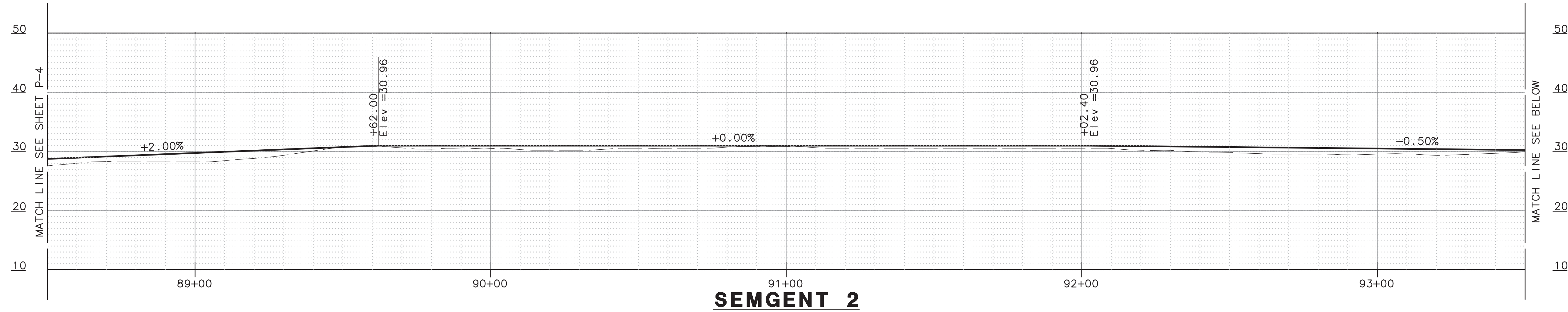


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 IMPROVEMENTS
PROFILES

DATE: APRIL 10, 2019
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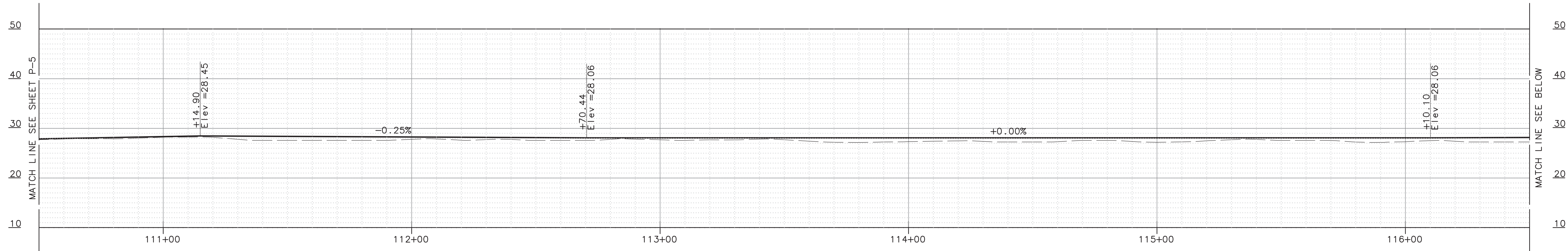
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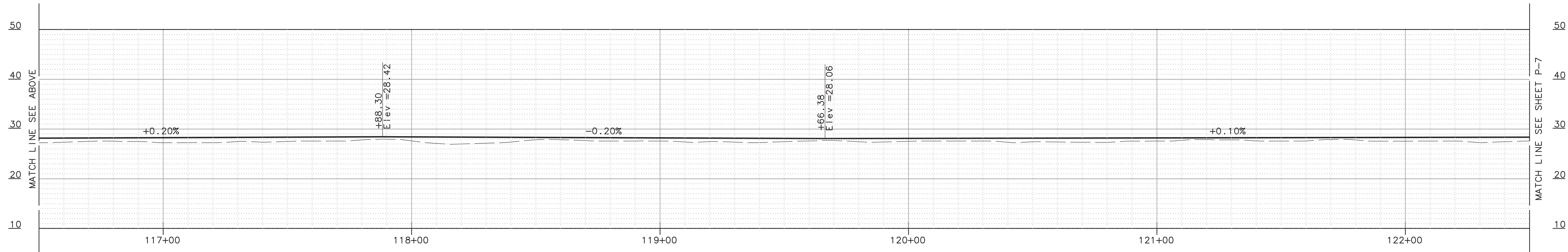
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SEMGENT 3



SEMGENT 3

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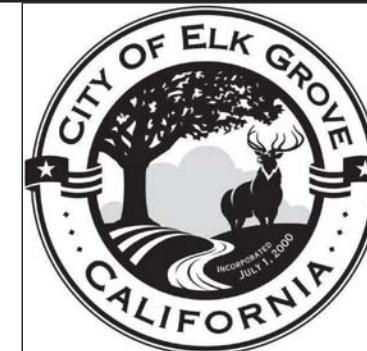
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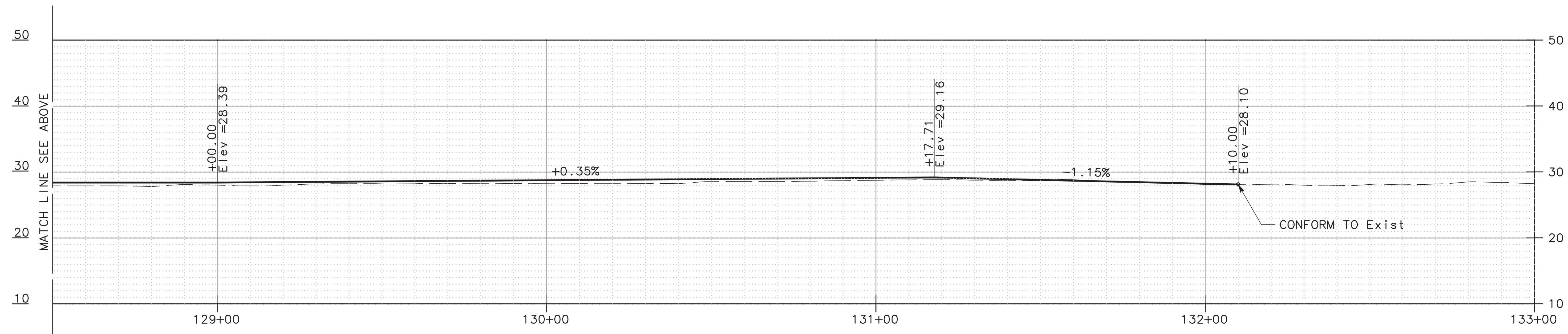
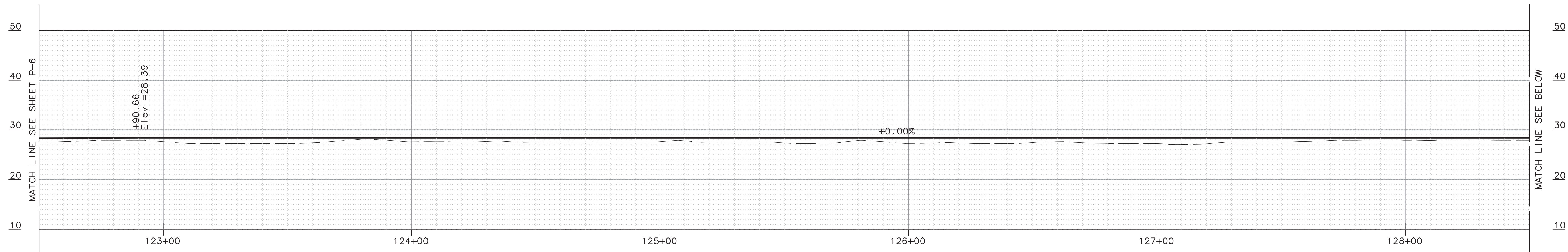


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DATE: APRIL 10, 2019
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PROFILES

DATE: APRIL 10, 2019
SCALE: HORIZ: 1"=20', VERT: 1"=10'
PROJECT No.: WTL019

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SHEET: 18 OF 18

IS/MND Attachment H

Construction Noise Review

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Environmental Scientists

Planners

Engineers

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access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities. Development of the Proposed Project would provide greater accessibility to the existing trail system within the City of Elk Grove and make trails directly accessible to additional homes.

III. Alternatives

Build Alternative/Proposed Project

Project Components

Development of the proposed Project would include two segments (0.94 mile) of new asphalt trail (Class I Bikeway) with decomposed granite shoulders, new sidewalks, signs, striping, and pavement markings (Proposed Project) (**Figure 3**). A trail extension is proposed from Bruceville Road adjacent and parallel to Big Horn Boulevard (approximately 0.16 mile). This trail segment would cross at-grade with Bruceville Road at an existing signal-controlled crosswalks. Additional trail gap closures between Bruceville Road, Mannington Street, and Center Parkway would complete connections to existing trails that extend further north and west into the City of Sacramento, thereby connecting thousands of residents to an interconnected trail system between two cities and multiple neighborhoods alike. Sidewalk improvements would be constructed along Bruceville Road between Big Horn Boulevard and Center Parkway (approximately 0.3 mile) and between Laguna Boulevard and Di Lusso Drive (approximately 0.04 mile).

Paved surfaces would be Hot Mixed Asphalt (HMA) with stabilized Decomposed Granite (DG) shoulders relying on base and sub base as needed. Base material would consist of aggregate base, with a sub base of either existing or compacted native material or a treated native material. Treatments could include cement or lime. Sidewalk widenings on Bruceville Road would require sawcutting the existing road and cutting into the embankment. Proposed fill slopes would vary in height, ranging from one to four feet.

Trail segments may include amenities including, but not limited to, concrete entry nodes, post and cable fencing, landscaping, benches, and interpretive signage.

Trail Design

As shown on **Figure 3**, two trail segments would be developed as a 10-foot-wide path with 2-foot-wide shoulders following existing informal trails where feasible and would maintain existing gradual slopes and relatively flat natural topography. Side slopes would be constructed with a 4:1 slope.



Segment 1

Segment 1 would be constructed west of Bruceville Road and north of Big Horn Boulevard. The trail would parallel existing residential development to the west for a length of approximately 0.75 mile trending northward from the existing sidewalk at Big Horn Boulevard and path near Mannington Street (**Figure 3**). The vertical profile would roughly follow the natural topography with excavation being limited to 2-foot-deep for subbase. Grading limits would be contained within a 36- to 44-foot-wide disturbance corridor for Segment 1.

Segment 2

Segment 2 would be constructed east of Bruceville Road adjacent and parallel to Big Horn Boulevard for an overall length of approximately 0.16 mile (**Figure 3**). It is anticipated that where the Segment 2 alignment terminates, compliance with City-required Conditions of Approval for the Trojan Storage II Project (currently under construction) will result in the construction of a connecting trail segment to Lewis Stein Road. The new trail will use the existing at-grade crossing at Bruceville Road and Big Horn Boulevard to connect to Segment 1. The vertical profile would roughly follow the natural topography with excavation being limited to a maximum 2-foot depth for subbase. Grading limits would be contained within a 34- to 40-foot-wide disturbance corridor for Segment 2.

Roads and Sidewalks

Proposed sidewalk improvements would be constructed on the west side of Bruceville Road. Approximately 1,600 feet of sidewalk would be constructed between Big Horn Boulevard and the Bruceville Road Bridge over Laguna Creek (Bridge No. 24C0405) and 180 feet of sidewalk would be constructed from the bridge to existing sidewalk. In addition, the guardrail at the bridge would be replaced and would roughly correspond to the back of sidewalk in this location. New Americans with Disabilities Act (ADA) - compliant ramps would be constructed at Mannington Street and at Mannington Street/Wallbridge Way.

Approximately 230 feet of sidewalk would be constructed at an existing gap in the sidewalk between Di Lusso Drive and Laguna Boulevard. At this location, the roadway surface at Bruceville Road would be extended to match up with the proposed sidewalk.

Culvert Crossings and Hydrology

The Proposed Project would maintain existing grades and drainage patterns to the greatest extent feasible. Side slopes would be constructed with a 4:1 slope. To maintain the existing drainage patterns, culverts may be used to convey water from one side of the trail to the other during more intense rain events. These culverts would be located in upland areas and sized based on existing topographic



information and would include rock slope protection and flared end sections to reduce erosion and provide energy dissipation measures.

Road Crossings and Signage

Trail pavement would be delineated by distinct paint, markings, and signs consistent with City of Elk Grove standards as well as the California Manual of Uniform Traffic Control Devices (MUTCD) standards. The City may also elect to provide wayfinding signs. According to the Bicycle, Pedestrian, and Trails Master Plan (BPTMP), all bicycle striping and wayfinding signs would also conform to the Caltrans Highway Design Manual chapter 1000 (GHD, Inc. 2021).

Utilities

Utility coordination would be required to relocate a utility guy-pole that is in conflict with the roadway/sidewalk widening on the west side of Bruceville Road. This pole would be relocated to another location either within the City's right of way or within a new utility easement. No other utility relocations are anticipated for this Project other than potentially adjusting existing utility lids to new grades.

Construction

Construction of the Proposed Project would commence in summer of 2025 and would take approximately seven to nine months to complete.

No-Build Alternative/No-Project Alternative

Under the No-Build, or "No-Project" Alternative, the trails and sidewalks would not be constructed. Gaps in the City's trail system and sidewalks would remain.

IV. Existing Uses and Noise Environment

The Proposed Project is surrounded by a variety of land uses including single family residences, institutional uses such as the Barbara Morse Wackford Community & Aquatic Complex, and commercial land uses, including retail and restaurants.

A field noise study was conducted in accordance with recommended procedures in the Caltrans Technical Noise Supplement (TeNS) to quantify the existing noise environment and gather data to input into the Roadway Construction Noise Model. A short-term measurement location was selected to represent sensitive receptors within the Project area and selected to determine existing ambient noise in the Project vicinity. The measurement location is identified in **Figure 4** attached. Noise Measurement



Location 1 (NM1) north of Big Horn Boulevard represents noise levels at adjacent single family residences.

One short-term measurement was conducted in the vicinity of the Project alignment and adjacent residential land uses on Friday, May 3, 2019, using an ANSI Type II Sound Level Meter. The noise measurement was conducted over a 15-minute period and generally characterizes existing ambient noise levels in the vicinity of the Project alignment. During the short-term measurement, field staff attended the meter. The calibration of the meter was checked before the measurements. Wind speed was recorded at 0 miles per hour (mph) during the measurements. Measurements were taken in light cloud cover. Measurements were taken in accordance with Caltrans recommended protocols per the Technical Noise Supplement (September 2013).

Table 1 summarizes the results of the short-term noise monitoring conducted in the Project area. Traffic was the main contributor of noise at the measurement location. Existing noise levels result primarily from traffic along Big Horn Boulevard and Bruceville Road.

Table 1 Summary of Short-Term Noise Measurements

| | | | | | | | |
|--------------------------|-------------|--------------------|----|-------------------------------------|------|------|----|
| [Redacted Table Content] | | | | | | | |
| NM1: Bruceville Road | Residential | 11:22 – 11:36 a.m. | 15 | 340 ¹ , 390 ² | 47.4 | 57.6 | 40 |

¹ Distance from Big Horn Boulevard

² Distance from Bruceville Road

L_{eq} = average of the sound energy occurring over a specified period

Note: Refer to **Figure 4** for measurement location. See Attachment 2 for noise measurement data.

As shown in Table 1, noise-sensitive land uses adjacent to the Project site currently are exposed to ambient noise levels of approximately 47 dBA L_{eq} with maximum (L_{max}) levels of approximately 58 dBA L_{max}.

Regulatory Setting

Federal

23 CFR 772. Provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and Federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects.

FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly



changes either the horizontal or vertical alignment of the highway. The following projects are also considered to be Type I projects:

- The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane.
- The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane.
- The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange.
- Restriping existing pavement for the purpose of adding a through traffic lane or an auxiliary lane.
- The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

If a project is determined to be a Type I project under this definition, the entire project area as defined in the environmental document is a Type I project.

A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. The Laguna Creek Trail and Bruceville Road Sidewalk Improvements Project is a Type III project that would not result in an increase in roadway capacity. Type III projects do not require an analysis of long-term changes to the noise environment.

State

Noise associated with construction is controlled by Caltrans Standard Specifications (2022) Section 14-8.02, "Noise Control," which states the following:

- Control and monitor noise resulting from work activities
- Do not exceed 86 dBA L_{max} at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

Sensitive Receptors

Land uses identified in the Project site vicinity are primarily residential and commercial. Typically, noise sensitive land uses include single-family residential, multiple-family residential, churches, hospitals and similar health care institutions, convalescent homes, libraries, and school classroom areas. Noise-sensitive receptors in the Project vicinity include single-family residences near the proposed trail alignment and construction staging area and multi-family residences north of proposed sidewalk improvements on Bruceville Road. The closest residential receptors are single-family residences which have property boundaries approximately 15 feet west and south of the proposed alignment. The property line for multi-family residences is located approximately 80 feet northwest of the proposed sidewalk improvements.



V. Construction Noise

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction, which includes residential receptors. The closest residential receptors are single family residences approximately 15 feet west and south of the proposed alignment and multi-family residences approximately 80 feet northwest of the proposed sidewalk improvements on Bruceville Road.

This construction noise analysis assumes the use of heavy equipment using equipment and construction phase information provided by the Project engineer. Construction equipment included in this analysis is described in Table 2, and includes clearing and grubbing (site preparation) equipment, grading equipment, paving, and architectural coating equipment.¹

Roadway Construction Noise Model

The FHWA Roadway Construction Noise Model (RCNM) was used to estimate the Project equipment noise levels at the nearest sensitive receptors for each phase of Project construction. RCNM uses a compilation of empirical data and the application of acoustical propagation formulas to predict construction noise (FHWA 2017). As described in *Sound Propagation*, construction noise levels would attenuate at a rate of approximately 6 dBA per doubling of distance. Each phase of Project construction relies on a specific assemblage of construction equipment required for specific tasks, such as site preparation, grading, architectural coating and paving.

Table 2 summarizes noise levels produced by the specific assemblage of equipment expected to be used for each phase at distances of 15, 50, and 80 feet from the Project site. These distances correspond to property line of noise-sensitive receptors in the *Sensitive Receptors* subsection, above. Table 2 also shows noise levels at a distance of 50 feet, which corresponds to the distance associated with Caltrans' nighttime construction noise standard. When the frequency of equipment usage was unknown, default frequency percentages from RCNM were used.

Due to site and equipment limitations, only a limited amount of equipment can operate near a given location at a particular time. In addition, construction equipment estimates used for the analysis for site preparation, grading, architectural coating and paving noise levels are representative of worse case conditions, since it is assumed that equipment would operate simultaneously during the work day. Estimated construction noise levels shown in Table 2 are conservative, and do not account for intervening barriers that may further attenuate the noise level at noise receptors, such as walls, structures, or topography. Therefore, the noise levels presented in Table 2 represent a worst-reasonable-case estimate of potential construction noise.

¹ An architectural coating phase was not provided by the project engineer. However, the phase has been added to this analysis to account for striping of the proposed trail.



Table 2 RCNM Construction Equipment Noise

| | | | | | | | |
|-----------------------|---------------------------------------------------------------------------------|------|-------|------|------|------|------|
| Site Preparation | Scraper, Dump Truck, Saw Cutter, Small Hand Tools (<5 horsepower), Grader | 98.1 | 100.0 | 87.6 | 89.6 | 83.5 | 85.5 |
| Grading | Excavator, Compactor, Grader, Dump Trucks (2), Small Hand Tools (<5 horsepower) | 95.0 | 95.5 | 84.5 | 85.0 | 80.4 | 80.9 |
| Paving | Paver | 84.7 | 87.7 | 74.2 | 77.2 | 70.1 | 73.1 |
| Architectural Coating | Air Compressor | 90.1 | 94.1 | 79.6 | 83.6 | 75.5 | 79.5 |

See Attachment 3 for RCNM equipment and noise data sheets

¹ L_{eq} represents the combined average noise level of all equipment over a one-hour period. Because L_{eq} combines noise from multiple pieces of equipment operating simultaneously, calculated L_{eq} may be higher than L_{max} .

² L_{max} represents the instantaneous peak noise level of the single loudest piece of equipment. Because L_{max} is limited to single pieces of equipment, L_{max} may be lower than calculated L_{eq} .

Construction activities would be temporary in nature. The nearest sensitive receptors to the Project site are single family residences west and south of the proposed alignment, approximately 15 feet from the Project site. Receptors within 15 feet of construction activity would experience exterior construction noise up to approximately 98 dBA L_{eq} at their property lines during the site preparation phase and from approximately 85 to 95 dBA L_{eq} at their property lines during the grading, paving, and architectural coating phases. Receptors within 80 feet of construction activity would experience exterior construction noise up to approximately 84 dBA L_{eq} at their property lines during the site preparation phase and from approximately 70 dBA L_{eq} to 80 dBA L_{eq} at their property lines during the grading, paving, and architectural coating phases. The manner in which buildings in California are constructed generally provides for an exterior-to-interior transmission loss of about 25 dBA with closed windows and doors (FTA 2018). Therefore, interior noise levels would not be expected to exceed approximately 73 dBA L_{eq} during construction activity.² Construction activity would be temporary, occurring over approximately a seven month period, and avoidance and minimization measures for construction noise are recommended below.

² Interior noise levels are based on the distance to property lines, not the distance to structures. Single and multi-family residences are set back from the property line. Therefore, this analysis provides a conservative estimate of interior noise levels.



Caltrans Standard Specifications Section 14-8.02, "Noise Control," states noise levels generated during construction shall not exceed 86 L_{max} 50 feet from the Project site from 9:00 p.m. to 6:00 a.m.

During the loudest phases of construction, based on the results of the construction noise estimates shown in Table 2, the maximum noise level at 50 feet would exceed 86 dBA L_{max} . Because construction activity would not occur outside of daytime hours, construction noise would not exceed the 86 dBA L_{max} Caltrans standard specification for nighttime construction operations 50 feet from the Project site.

VI. Minimization Measures

Avoidance and Minimization Measures NOI-1 and NOI-2 would be implemented as standards per City and Caltrans requirements. Avoidance and Minimization Measures NOI-3 and NOI-4 are recommended to be applied to the Project to reduce temporary construction noise levels at nearby sensitive receptors.

NOI-1: City of Elk Grove Standards. Construction activity should be limited to daytime hours, based on the City's Municipal Code, limiting construction activities to 7:00 a.m. and 7:00 p.m. when located adjacent to residential land uses and 6:00 a.m. and 8:00 p.m. when not adjacent to residential land uses.

NOI-2: Caltrans Standard Specifications. If work is performed at nighttime, construction noise should be conducted in accordance with Caltrans Standard Specifications Section 14.8-02 restricting nighttime noise levels. The provisions of Caltrans Standard Specifications, Section 14-8.02 "Noise Control" require the following:

- Control and monitor noise resulting from work activities
- Do not exceed 86 dBA L_{max} at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

In addition, as directed by the Project Engineer, the contractor should implement appropriate additional noise reduction measures for construction activity, including changing the location of stationary construction equipment, turning off idling equipment, use of sound blankets on individual components of construction equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.

NOI-3: Construction Equipment Sound Control. All internal combustion engines, including trucks, should be equipped with the manufacturer-recommended mufflers and silencing devices. Operation of an internal combustion engine shall not occur on the job site without the appropriate muffler.

NOI-4: Neighborhood Notification Prior to Construction. At least twenty (20) days prior to commencement of construction, the contractor should provide written notice to all property owners, businesses, and residents within 300 feet of the Project area. The notice should contain a description of the Project, the construction schedule, including days and hours of construction, the name and phone number of the Project Environmental Coordinator (PEC) and Contractor(s).



With the implementation of temporary construction noise avoidance and minimization measures no substantial adverse noise impacts from construction activity are anticipated; additional short-term construction noise investigation is not required.

Vibration

During development of the Project, construction equipment including a compactor, excavator, grader, trucks, and a scraper may be used in close proximity to vibration sensitive receptors, including single-family residences located approximately 15 feet west and south of the Project alignment. To provide a conservative analysis of potential vibration effects, this analysis uses the Caltrans vibration level threshold of 0.24 in/sec PPV at which transient vibration sources, such as construction equipment, are considered to be distinctly perceptible (Caltrans 2020). Vibration source levels from construction equipment used for the Project are shown in Table 3.

As shown in Table 3, the construction equipment that would be used during Project development would generate vibration levels up to 0.133 in/sec PPV as measured at a distance of 15 feet from the operating machinery. Caltrans' *Transportation and Construction Vibration Manual* (2020) provides a distance calculation methodology to estimate the groundborne vibration level at distances closer from the source than the reference distance of 25 feet shown in Table 3:

$$PPV = PPV_{ref} \times (25/D)^n$$

Where:

PPV = vibration level (in amplitude)

PPV_{ref} = reference vibration level (at 25 feet)

D = distance from vibration-generating equipment to the receptor

n = constant value related to the attenuation rate through the ground³

³ The n-value is assumed to be 1.1, Caltrans' recommended value for conservative analysis.



Table 3 Vibration Levels of Common Types of Construction Equipment

| [Redacted] | | |
|----------------|-------|-------|
| Compactor | 0.050 | 0.088 |
| Excavator | 0.040 | 0.070 |
| Loaded Trucks | 0.076 | 0.133 |
| Paver | 0.063 | 0.111 |
| Pneumatic Tool | 0.040 | 0.070 |
| Scraper/Grader | 0.057 | 0.100 |

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018

During Project construction, the closest sensitive receptors would be located approximately 15 feet from the potential active construction areas. At this distance, when the heaviest construction equipment operates at the edge of the Project construction limits, people in their backyards may be exposed to groundborne vibration levels up to 0.133 in/sec PPV. This groundborne vibration level is below the Caltrans distinctly perceptible limit for transient vibration sources. Therefore, construction related ground-borne vibration impacts would not exceed applicable standards with implementation of the Project.

VII. Summary

The Project would not result in perceptible transient vibration at nearby sensitive receptors from construction related groundborne vibration.



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Attachment 1

Figures



T:\PROJECTS\MarkThomson\02722\MTT-01_LagunaCreek\Map\NES\LCBR_Fig2_ProjLocationMap_20230711.mxd

Source: Aerial Imagery (Nearmap 3/15/2023)

Attachment 2

Noise Measurement Data

Freq Weight : A
 Time Weight : SLOW
 Level Range : 40-100
 Max dB : 57.6 - 2019/05/03 11: 36: 20
 Level Range : 40-100
 SEL : 76.9
 Leq : 47.4

| No. s | Date Time | (dB) | | | | |
|-------|-----------------------|------|------|------|------|------|
| 1 | 2019/05/03 11: 22: 03 | 45.4 | 47.1 | 49.4 | 46.5 | 43.9 |
| 6 | 2019/05/03 11: 22: 13 | 42.9 | 42.7 | 43.4 | 44.2 | 44.7 |
| 11 | 2019/05/03 11: 22: 23 | 45.5 | 45.0 | 45.0 | 45.3 | 46.6 |
| 16 | 2019/05/03 11: 22: 33 | 50.3 | 50.0 | 49.9 | 48.9 | 50.1 |
| 21 | 2019/05/03 11: 22: 43 | 47.0 | 46.0 | 45.5 | 45.0 | 45.0 |
| 26 | 2019/05/03 11: 22: 53 | 44.3 | 43.3 | 43.2 | 42.8 | 42.8 |
| 31 | 2019/05/03 11: 23: 03 | 43.8 | 43.0 | 42.7 | 42.7 | 42.9 |
| 36 | 2019/05/03 11: 23: 13 | 43.2 | 43.5 | 42.8 | 42.4 | 42.9 |
| 41 | 2019/05/03 11: 23: 23 | 43.6 | 43.9 | 44.1 | 47.2 | 47.4 |
| 46 | 2019/05/03 11: 23: 33 | 48.9 | 50.1 | 50.1 | 52.8 | 50.2 |
| 51 | 2019/05/03 11: 23: 43 | 48.1 | 47.2 | 46.1 | 43.9 | 42.5 |
| 56 | 2019/05/03 11: 23: 53 | 44.9 | 43.0 | 42.3 | 43.9 | 43.9 |
| 61 | 2019/05/03 11: 24: 03 | 44.2 | 44.1 | 44.2 | 45.2 | 45.8 |
| 66 | 2019/05/03 11: 24: 13 | 46.1 | 47.1 | 47.6 | 47.4 | 47.2 |
| 71 | 2019/05/03 11: 24: 23 | 47.1 | 47.0 | 46.4 | 46.7 | 47.0 |
| 76 | 2019/05/03 11: 24: 33 | 46.9 | 46.6 | 46.3 | 46.1 | 46.1 |
| 81 | 2019/05/03 11: 24: 43 | 48.2 | 48.7 | 46.4 | 44.5 | 44.3 |
| 86 | 2019/05/03 11: 24: 53 | 43.9 | 43.7 | 44.0 | 46.8 | 44.5 |
| 91 | 2019/05/03 11: 25: 03 | 43.9 | 44.7 | 45.7 | 45.3 | 44.9 |
| 96 | 2019/05/03 11: 25: 13 | 44.5 | 44.2 | 44.3 | 46.9 | 46.6 |
| 101 | 2019/05/03 11: 25: 23 | 46.1 | 47.2 | 47.5 | 46.8 | 46.2 |
| 106 | 2019/05/03 11: 25: 33 | 45.5 | 45.4 | 44.6 | 44.6 | 43.5 |
| 111 | 2019/05/03 11: 25: 43 | 43.6 | 43.3 | 43.2 | 42.5 | 45.6 |
| 116 | 2019/05/03 11: 25: 53 | 44.8 | 43.1 | 45.7 | 45.3 | 44.3 |
| 121 | 2019/05/03 11: 26: 03 | 45.7 | 48.3 | 49.6 | 49.8 | 49.6 |
| 126 | 2019/05/03 11: 26: 13 | 49.9 | 49.1 | 52.3 | 53.1 | 50.3 |
| 131 | 2019/05/03 11: 26: 23 | 49.7 | 48.9 | 47.7 | 46.1 | 46.6 |
| 136 | 2019/05/03 11: 26: 33 | 45.5 | 45.3 | 45.9 | 45.5 | 46.2 |
| 141 | 2019/05/03 11: 26: 43 | 46.3 | 45.8 | 45.9 | 45.3 | 46.0 |
| 146 | 2019/05/03 11: 26: 53 | 45.9 | 46.5 | 47.2 | 48.3 | 47.7 |
| 151 | 2019/05/03 11: 27: 03 | 46.9 | 46.5 | 46.9 | 47.7 | 45.2 |
| 156 | 2019/05/03 11: 27: 13 | 44.7 | 48.2 | 47.1 | 48.6 | 47.9 |
| 161 | 2019/05/03 11: 27: 23 | 49.2 | 46.1 | 48.0 | 47.1 | 47.3 |
| 166 | 2019/05/03 11: 27: 33 | 47.9 | 45.6 | 45.2 | 46.1 | 46.6 |
| 171 | 2019/05/03 11: 27: 43 | 47.4 | 45.7 | 46.7 | 47.0 | 45.5 |
| 176 | 2019/05/03 11: 27: 53 | 50.2 | 48.4 | 48.8 | 52.1 | 50.5 |
| 181 | 2019/05/03 11: 28: 03 | 51.3 | 51.2 | 51.1 | 48.8 | 49.0 |
| 186 | 2019/05/03 11: 28: 13 | 48.2 | 45.7 | 46.4 | 43.4 | 44.6 |
| 191 | 2019/05/03 11: 28: 23 | 45.4 | 44.2 | 43.0 | 42.3 | 42.4 |
| 196 | 2019/05/03 11: 28: 33 | 42.6 | 42.4 | 43.1 | 42.6 | 45.0 |
| 201 | 2019/05/03 11: 28: 43 | 46.0 | 45.0 | 47.2 | 46.5 | 47.2 |
| 206 | 2019/05/03 11: 28: 53 | 46.7 | 46.5 | 46.9 | 45.3 | 44.6 |
| 211 | 2019/05/03 11: 29: 03 | 45.1 | 45.4 | 44.4 | 44.5 | 44.1 |
| 216 | 2019/05/03 11: 29: 13 | 44.1 | 44.6 | 44.9 | 45.1 | 46.3 |
| 221 | 2019/05/03 11: 29: 23 | 45.0 | 45.8 | 46.6 | 47.9 | 51.5 |
| 226 | 2019/05/03 11: 29: 33 | 48.2 | 49.0 | 46.3 | 44.2 | 44.5 |
| 231 | 2019/05/03 11: 29: 43 | 44.3 | 45.3 | 43.5 | 45.9 | 44.2 |
| 236 | 2019/05/03 11: 29: 53 | 44.2 | 47.6 | 46.0 | 49.2 | 47.6 |
| 241 | 2019/05/03 11: 30: 03 | 46.0 | 45.5 | 45.0 | 44.5 | 44.3 |
| 246 | 2019/05/03 11: 30: 13 | 43.7 | 43.9 | 46.4 | 44.2 | 44.9 |
| 251 | 2019/05/03 11: 30: 23 | 42.8 | 45.3 | 48.7 | 48.0 | 50.1 |
| 256 | 2019/05/03 11: 30: 33 | 51.8 | 51.3 | 51.7 | 48.8 | 50.5 |
| 261 | 2019/05/03 11: 30: 43 | 51.9 | 53.0 | 53.5 | 52.0 | 49.6 |
| 266 | 2019/05/03 11: 30: 53 | 48.4 | 47.9 | 46.9 | 46.4 | 45.7 |
| 271 | 2019/05/03 11: 31: 03 | 44.3 | 43.2 | 43.0 | 42.9 | 42.3 |
| 276 | 2019/05/03 11: 31: 13 | 41.8 | 41.7 | 42.2 | 41.9 | 41.7 |
| 281 | 2019/05/03 11: 31: 23 | 42.5 | 45.7 | 46.0 | 45.2 | 43.7 |
| 286 | 2019/05/03 11: 31: 33 | 43.3 | 42.9 | 42.1 | 41.6 | 42.2 |
| 291 | 2019/05/03 11: 31: 43 | 44.7 | 44.8 | 46.7 | 46.9 | 45.9 |
| 296 | 2019/05/03 11: 31: 53 | 45.0 | 45.6 | 43.5 | 43.3 | 44.7 |
| 301 | 2019/05/03 11: 32: 03 | 44.4 | 46.1 | 46.4 | 50.8 | 53.4 |
| 306 | 2019/05/03 11: 32: 13 | 50.0 | 45.5 | 42.7 | 44.7 | 46.2 |
| 311 | 2019/05/03 11: 32: 23 | 45.2 | 44.6 | 48.6 | 46.8 | 46.6 |
| 316 | 2019/05/03 11: 32: 33 | 46.0 | 47.8 | 47.9 | 47.1 | 46.1 |
| 321 | 2019/05/03 11: 32: 43 | 45.1 | 44.5 | 44.4 | 44.3 | 44.9 |
| 326 | 2019/05/03 11: 32: 53 | 44.1 | 44.6 | 43.5 | 43.2 | 42.8 |
| 331 | 2019/05/03 11: 33: 03 | 42.1 | 44.1 | 44.9 | 43.0 | 42.5 |
| 336 | 2019/05/03 11: 33: 13 | 42.2 | 41.4 | 41.5 | 43.4 | 43.5 |
| 341 | 2019/05/03 11: 33: 23 | 44.4 | 44.8 | 46.1 | 43.1 | 42.1 |
| 346 | 2019/05/03 11: 33: 33 | 44.5 | 43.1 | 45.5 | 43.1 | 44.5 |
| 351 | 2019/05/03 11: 33: 43 | 46.1 | 46.1 | 46.1 | 48.6 | 47.3 |
| 356 | 2019/05/03 11: 33: 53 | 47.0 | 45.2 | 43.8 | 43.0 | 42.1 |
| 361 | 2019/05/03 11: 34: 03 | 42.5 | 41.8 | 41.7 | 42.0 | 42.2 |
| 366 | 2019/05/03 11: 34: 13 | 41.8 | 41.3 | 41.7 | 42.4 | 43.2 |
| 371 | 2019/05/03 11: 34: 23 | 44.9 | 47.8 | 45.7 | 47.4 | 49.3 |
| 376 | 2019/05/03 11: 34: 33 | 48.4 | 48.4 | 48.0 | 48.2 | 46.8 |
| 381 | 2019/05/03 11: 34: 43 | 45.5 | 47.4 | 46.2 | 49.9 | 49.2 |
| 386 | 2019/05/03 11: 34: 53 | 50.9 | 50.0 | 51.2 | 52.5 | 53.2 |
| 391 | 2019/05/03 11: 35: 03 | 52.7 | 50.6 | 49.6 | 52.7 | 48.7 |
| 396 | 2019/05/03 11: 35: 13 | 47.1 | 45.4 | 44.3 | 44.3 | 44.3 |
| 401 | 2019/05/03 11: 35: 23 | 45.9 | 47.9 | 49.9 | 49.7 | 54.8 |
| 406 | 2019/05/03 11: 35: 33 | 50.6 | 49.3 | 52.4 | 51.7 | 50.6 |
| 411 | 2019/05/03 11: 35: 43 | 49.8 | 49.8 | 52.7 | 54.2 | 54.0 |
| 416 | 2019/05/03 11: 35: 53 | 53.6 | 51.1 | 50.0 | 56.5 | 52.9 |
| 421 | 2019/05/03 11: 36: 03 | 51.4 | 49.1 | 51.5 | 49.7 | 49.3 |

| | | | | | | | |
|-----|------------|----------|------|------|------|------|------|
| 426 | 2019/05/03 | 11:36:13 | 46.7 | 48.7 | 52.3 | 54.9 | 50.0 |
| 431 | 2019/05/03 | 11:36:23 | 47.2 | 47.0 | 50.8 | 46.9 | 43.7 |
| 436 | 2019/05/03 | 11:36:33 | 43.4 | 44.5 | 45.5 | 47.9 | 50.6 |
| 441 | 2019/05/03 | 11:36:43 | 49.9 | 48.5 | 49.2 | 48.2 | 46.1 |
| 446 | 2019/05/03 | 11:36:53 | 45.1 | 46.0 | 48.2 | 47.7 | 46.7 |

Attachment 3

Model Outputs

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/17/2023

Case Description: Laguna Creek Trail Site Preparation Phase

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|---------------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Single Family Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|----------------------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Scraper | No | 40 | | 83.6 | 15 | 0 |
| Concrete Saw | No | 20 | | 89.6 | 15 | 0 |
| Dump Truck | No | 40 | | 76.5 | 15 | 0 |
| All Other Equipment > 5 HP | No | 50 | 85 | | 15 | 0 |
| Grader | No | 40 | 85 | | 15 | 0 |

Results

| Equipment | Calculated (dBA) | | Noise Limits (dBA) | | | | | |
|----------------------------|------------------|------|--------------------|-----|---------|-----|-------|-----|
| | *Lmax | Leq | Day | | Evening | | Night | |
| | | | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Scraper | 94 | 90.1 | N/A | N/A | N/A | N/A | N/A | N/A |
| Concrete Saw | 100 | 93 | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 86.9 | 82.9 | N/A | N/A | N/A | N/A | N/A | N/A |
| All Other Equipment > 5 HP | 95.5 | 92.4 | N/A | N/A | N/A | N/A | N/A | N/A |
| Grader | 95.5 | 91.5 | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 100 | 98.1 | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) | | |
|--------------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Multi Family Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|----------------------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Scraper | No | 40 | | 83.6 | 80 | 0 |
| Concrete Saw | No | 20 | | 89.6 | 80 | 0 |
| Dump Truck | No | 40 | | 76.5 | 80 | 0 |
| All Other Equipment > 5 HP | No | 50 | 85 | | 80 | 0 |
| Grader | No | 40 | 85 | | 80 | 0 |

| Equipment | Results | | | | | | |
|----------------------------|------------------|-------------|------------|--------------------|------------|------------|------------|
| | Calculated (dBA) | | | Noise Limits (dBA) | | | |
| | *Lmax | Leq | Day | Evening | Night | | |
| Scraper | 79.5 | 75.5 | N/A | N/A | N/A | N/A | N/A |
| Concrete Saw | 85.5 | 78.5 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 72.4 | 68.4 | N/A | N/A | N/A | N/A | N/A |
| All Other Equipment > 5 HP | 80.9 | 77.9 | N/A | N/A | N/A | N/A | N/A |
| Grader | 80.9 | 76.9 | N/A | N/A | N/A | N/A | N/A |
| Total | 85.5 | 83.5 | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| Description | Land Use | Baselines (dBA) | | |
|----------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Caltrans Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact | Device | Usage(%) | Equipment | | | Receptor Distance (feet) | Estimated Shielding (dBA) |
|----------------------------|--------|--------|----------|------------|------------|------|--------------------------|---------------------------|
| | | | | Spec | Actual | | | |
| | | | | Lmax (dBA) | Lmax (dBA) | | | |
| Scraper | No | | 40 | | | 83.6 | 50 | 0 |
| Concrete Saw | No | | 20 | | | 89.6 | 50 | 0 |
| Dump Truck | No | | 40 | | | 76.5 | 50 | 0 |
| All Other Equipment > 5 HP | No | | 50 | 85 | | | 50 | 0 |
| Grader | No | | 40 | 85 | | | 50 | 0 |

| Equipment | Results | | | | | | |
|----------------------------|------------------|-------------|------------|--------------------|------------|------------|------------|
| | Calculated (dBA) | | | Noise Limits (dBA) | | | |
| | *Lmax | Leq | Day | Evening | Night | | |
| Scraper | 83.6 | 79.6 | N/A | N/A | N/A | N/A | N/A |
| Concrete Saw | 89.6 | 82.6 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 76.5 | 72.5 | N/A | N/A | N/A | N/A | N/A |
| All Other Equipment > 5 HP | 85 | 82 | N/A | N/A | N/A | N/A | N/A |
| Grader | 85 | 81 | N/A | N/A | N/A | N/A | N/A |
| Total | 89.6 | 87.6 | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/17/2023

Case Description: Laguna Creek Trail Site Grading Phase

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|---------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Single Family Resid | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|----------------------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Excavator | No | 40 | | 80.7 | 15 | 0 |
| Compactor (ground) | No | 20 | | 83.2 | 15 | 0 |
| Dump Truck | No | 40 | | 76.5 | 15 | 0 |
| Dump Truck | No | 40 | | 76.5 | 15 | 0 |
| All Other Equipment > 5 HP | No | 50 | 85 | | 15 | 0 |

Results

| Equipment | Calculated (dBA) | | Noise Limits (dBA) | | | | |
|----------------------------|------------------|------|--------------------|-----|---------|-----|-------|
| | *Lmax | Leq | Day | | Evening | | Night |
| | | | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 91.2 | 87.2 | N/A | N/A | N/A | N/A | N/A |
| Compactor (ground) | 93.7 | 86.7 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 86.9 | 82.9 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 86.9 | 82.9 | N/A | N/A | N/A | N/A | N/A |
| All Other Equipment > 5 HP | 95.5 | 92.4 | N/A | N/A | N/A | N/A | N/A |
| Total | 95.5 | 95 | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) | | |
|--------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Multi Family Resid | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|----------------------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Excavator | No | 40 | | 80.7 | 80 | 0 |
| Compactor (ground) | No | 20 | | 83.2 | 80 | 0 |
| Dump Truck | No | 40 | | 76.5 | 80 | 0 |
| Dump Truck | No | 40 | | 76.5 | 80 | 0 |
| All Other Equipment > 5 HP | No | 50 | 85 | | 80 | 0 |

| Equipment | Results | | | | | | |
|----------------------------|------------------|-------------|------------|--------------------|------------|------------|------------|
| | Calculated (dBA) | | | Noise Limits (dBA) | | | |
| | *Lmax | Leq | Day | Evening | Night | | |
| Excavator | 76.6 | 72.6 | N/A | N/A | N/A | N/A | N/A |
| Compactor (ground) | 79.1 | 72.2 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 72.4 | 68.4 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 72.4 | 68.4 | N/A | N/A | N/A | N/A | N/A |
| All Other Equipment > 5 HP | 80.9 | 77.9 | N/A | N/A | N/A | N/A | N/A |
| Total | 80.9 | 80.4 | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| Description | Land Use | Baselines (dBA) | | |
|----------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Caltrans Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|----------------------------|---------------|----------|------------|------------|-----------------|-----------------|
| | | | Spec | Actual | Receptor | Estimated |
| | | | Lmax (dBA) | Lmax (dBA) | Distance (feet) | Shielding (dBA) |
| Excavator | No | 40 | | 80.7 | 50 | 0 |
| Compactor (ground) | No | 20 | | 83.2 | 50 | 0 |
| Dump Truck | No | 40 | | 76.5 | 50 | 0 |
| Dump Truck | No | 40 | | 76.5 | 50 | 0 |
| All Other Equipment > 5 HP | No | 50 | 85 | | 50 | 0 |

| Equipment | Results | | | | | | |
|----------------------------|------------------|-------------|------------|--------------------|------------|------------|------------|
| | Calculated (dBA) | | | Noise Limits (dBA) | | | |
| | *Lmax | Leq | Day | Evening | Night | | |
| Excavator | 80.7 | 76.7 | N/A | N/A | N/A | N/A | N/A |
| Compactor (ground) | 83.2 | 76.2 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 76.5 | 72.5 | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 76.5 | 72.5 | N/A | N/A | N/A | N/A | N/A |
| All Other Equipment > 5 HP | 85 | 82 | N/A | N/A | N/A | N/A | N/A |
| Total | 85 | 84.5 | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/17/2023
 Case Description: Laguna Creek Trail Paving Phase

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|---------------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Single Family Residential | Residential | 47.4 | 45 | 45 |

| Description | Equipment Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|-------------|------------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | | | | |
| Paver | No | 50 | | 77.2 | 15 | 0 |

Results

| Equipment | Calculated (dBA) | Noise Limits (dBA) | | | | |
|-----------|------------------|--------------------|------|---------|------|-----|
| | | Day | | Evening | | |
| | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 87.7 | 84.7 | N/A | N/A | N/A | N/A |
| Total | 87.7 | 84.7 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) | | |
|--------------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Multi Family Residential | Residential | 47.4 | 45 | 45 |

| Description | Equipment Device | Usage(%) | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|-------------|------------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | | | | |
| Paver | No | 50 | | 77.2 | 80 | 0 |

Results

| Equipment | Calculated (dBA) | Noise Limits (dBA) | | | | |
|-----------|------------------|--------------------|------|---------|------|-----|
| | | Day | | Evening | | |
| | *Lmax | Leq | Lmax | Leq | Lmax | Leq |
| Paver | 73.1 | 70.1 | N/A | N/A | N/A | N/A |
| Total | 73.1 | 70.1 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| Description | Land Use | Baselines (dBA) | | |
|----------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Caltrans Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|-------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Paver | No | 50 | | 77.2 | 50 | 0 |

| Equipment | Results | | | | | |
|-----------|------------------|------|----------|--------------------|--------------|-----|
| | Calculated (dBA) | | | Noise Limits (dBA) | | |
| | *Lmax | Leq | Day Lmax | Leq | Evening Lmax | Leq |
| Paver | 77.2 | 74.2 | N/A | N/A | N/A | N/A |
| Total | 77.2 | 74.2 | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 7/17/2023

Case Description Laguna Creek Trail Architectural Coating Phase

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) | | |
|---------------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Single Family Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|-------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Scrapper | No | 40 | | 83.6 | 15 | 0 |

Results

| Equipment | Calculated (dBA) | Noise Limits (dBA) | | | | | |
|-----------|------------------|--------------------|-----|---------|-----|-------|-----|
| | | Day | | Evening | | Night | |
| Scrapper | *Lmax Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| | 94 90.1 | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 94 90.1 | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

| Description | Land Use | Baselines (dBA) | | |
|--------------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Multi Family Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|-------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Scrapper | No | 40 | | 83.6 | 80 | 0 |

Results

| Equipment | Calculated (dBA) | Noise Limits (dBA) | | | | | |
|-----------|------------------|--------------------|-----|---------|-----|-------|-----|
| | | Day | | Evening | | Night | |
| Scrapper | *Lmax Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq |
| | 79.5 75.5 | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 79.5 75.5 | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

| Description | Land Use | Baselines (dBA) | | |
|----------------------|-------------|-----------------|---------|-------|
| | | Daytime | Evening | Night |
| Caltrans Residential | Residential | 47.4 | 45 | 45 |

| Description | Impact Device | Usage(%) | Equipment | | | |
|-------------|---------------|----------|-----------------|-------------------|--------------------------|---------------------------|
| | | | Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
| Scraper | No | 40 | | 83.6 | 50 | 0 |

| Equipment Scraper | Results | | | | | | |
|-------------------|------------------|------|----------|--------------------|--------------|-----|------------|
| | Calculated (dBA) | | | Noise Limits (dBA) | | | |
| | *Lmax | Leq | Day Lmax | Leq | Evening Lmax | Leq | Night Lmax |
| | 83.6 | 79.6 | N/A | N/A | N/A | N/A | N/A |
| Total | 83.6 | 79.6 | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.