



Midpeninsula Regional
Open Space District

R-26-142
Meeting 26-24
September 23, 2026

AGENDA ITEM 9

AGENDA ITEM

Mitigation Cooperative Agreement with the Peninsula Corridor Joint Powers Board for the Hicks Creek Off-Site Mitigation Project at Sierra Azul Open Space Preserve

GENERAL MANAGER'S RECOMMENDATIONS

1. Adopt a resolution adopting the Mitigated Negative Declaration for the Guadalupe River Bridge Replacement Project, as amended by the First, Second and Third Addendums, in conformance with the California Environmental Quality Act to analyze environmental impacts associated with the Hicks Creek Off-Site Mitigation Project, as set forth in the Mitigation Cooperative Agreement with the Peninsula Corridor Joint Powers Board.
2. Authorize the General Manager to execute a mitigation cooperative agreement with the Peninsula Corridor Joint Powers Board for implementation of the Hicks Creek Off-Site Mitigation Project at Sierra Azul Open Space Preserve to restore approximately 0.66-acre of instream, floodplain, riparian, and upland habitat, with all project costs estimated at approximately \$1.8 million fully funded by the Peninsula Corridor Joint Powers Board.

SUMMARY

The Peninsula Corridor Joint Powers Board (JPB), which operates Caltrain, proposes to implement the Hicks Creek Off-Site Mitigation Project (Project) on Midpeninsula Regional Open Space District (District) lands within Sierra Azul Open Space Preserve to satisfy regulatory requirements associated with JPB's Guadalupe River Bridge Replacement Project. On July 9, 2025, the District Board of Directors (Board) accepted the Project as consistent with the District's Mitigation Policy and authorized negotiation of a Mitigation Agreement. The proposed agreement would authorize implementation of the Project and establish JPB's responsibility for project funding, design, permitting, construction, maintenance, monitoring, and adaptive management. The final design identifies approximately 0.66-acre of mitigation, and the Project is estimated to provide approximately \$1.8 million in externally funded restoration work on District land. No District funding is required.

DISCUSSION

JPB is replacing one rail bridge and extending a second rail bridge across the Guadalupe River in San Jose to address structural deficiencies, channel instability, and risks to rail service. The bridge project cannot accommodate all required mitigation within its construction area. JPB therefore evaluated off-site opportunities in the Guadalupe River watershed and, with input from District staff, identified a degraded reach of Hicks Creek in Sierra Azul Preserve as a suitable

location. Hicks Creek is a perennial tributary to Guadalupe Creek within a priority watershed for Central California Coast steelhead. The reach proposed for restoration is degraded by legacy infrastructure that predates District ownership, including a concrete-lined, in-channel swimming pool, incised banks, and invasive vegetation—conditions that impair fish passage, degrade water quality, and reduce habitat complexity. Valley Water monitors Hicks Creek and has identified an abundance of special status fish species present within Sierra Azul, including steelhead, riffle sculpin, and southern coastal roach. By removing fish passage impediments and improving habitat suitability, restoration of the degraded portion of Hicks Creek will directly benefit the recovery of these species within Sierra Azul and throughout the Guadalupe River watershed.

On July 9, 2025, the Board accepted staff's evaluation of the proposed third-party mitigation project and authorized the General Manager to negotiate an agreement with JPB. JPB's initial project proposal in 2025 was based on a preliminary design and cost estimate of \$16.7 million prepared by an initial consulting engineering firm retained by JPB. Since Board action in 2025, JPB hired another qualified consulting engineering firm to reevaluate the conceptual design through additional field investigations, a hydraulic and geomorphic analysis, and regulatory agency consultation. Based on more extensive topographic surveys and hydraulic modeling, the recommended volume of earthwork needed to achieve the desired mitigation credit was substantially reduced relative to the preliminary design, and the two bridge replacements included in the original project proposal were removed because their replacement did not meaningfully improve salmonid habitat. As a result of these changes, the cost estimate was reduced from \$16.7 to \$1.8 million.

To supplement Natural Resources Department staff's review of the revised designs, the District partnered with the North Santa Clara Resource Conservation District (NSCRCD). Through a partnership agreement with the NSCRCD authorized within the General Manager's spending authority, the District hired Applied River Sciences, a California-based consulting firm specializing in river restoration with extensive experience leading projects within the Guadalupe River watershed, to comprehensively evaluate JPB's designs, including the 30%, 60%, and 100% draft design plans, the basis of design report, the habitat mitigation and monitoring plan, and hydraulic modeling results. This rigorous review by District staff and Applied River Sciences ensures that, even with the reduced cost to JPB, the project aligns with District resource management strategies and standards and provides meaningful uplift to onsite habitats important to special status species recovery. Additionally, the state and federal regulatory agencies responsible for permitting the project reviewed the designs and habitat mitigation and reporting plan to verify that the improvements would meet the strict mitigation requirements, which include demonstrating project success against a set of ecological-based performance criteria for a period of at least 10 years after construction.

The final design identifies approximately 0.66-acre of mitigation, consisting of 0.07-acre of instream habitat, 0.24-acre of floodplain and riparian habitat below top of bank, 0.20-acre of riparian habitat above top of bank, and 0.15-acre of upland habitat. Project elements include:

- Removing the remnant concrete pool, building foundations, selected concrete and mortared-rock retaining walls, and other legacy hardscape that constrains the creek and floodplain.
- Removing an artificial 3.4-foot channel drop and reconstructing a step-pool and step-run channel to improve fish passage and habitat complexity.

- Realigning an unnamed tributary to improve channel form and reconnect it to Hicks Creek through the former pool area.
- Installing native streambed material, boulders, large wood, and restored streambanks to improve hydraulic function, cover, and channel resilience.
- Removing approximately 0.32-acre of invasive vegetation and revegetating affected floodplain, riparian, and mixed oak-bay woodland areas.

District staff reviewed the design submittals at successive stages and coordinated with JPB and its consultants to protect the Preserve's natural resources and align the Project with District standards and objectives. The project supports District Resource Management Policies for fisheries habitat, native vegetation, and rare and sensitive wildlife. The project would remove fish-passage impediments and restore aquatic and riparian processes in a reach that provides year-round flow and habitat for native fish, including federally threatened steelhead. The reconstructed channel and revegetated floodplain are also expected to improve habitat for California red-legged frog, western pond turtle, and other native wildlife; reduce invasive-plant cover; and improve sediment transport and water quality.

JPB would retain all regulatory and financial responsibility for project success. JPB has completed environmental review (see CEQA Compliance section below) and would secure permits, procure and manage qualified contractors, implement construction and revegetation, maintain the site during project implementation, monitor performance, submit required reports, and implement corrective measures if regulatory permit-based success criteria are not met. The District would retain ownership of the property and coordinate access, review project submittals and monitoring results, and during the maintenance and monitoring period, manage the site consistent with its standard operational practices and procedures. The Mitigation Agreement requires JPB to adhere to the regulatory permits and to correct any damages they cause, including impacts to access roads or other District assets. While the District cannot impose additional habitat performance criteria, it retains the authority to review results, require repairs for any harm to District property, and manage the site in ways that do not compromise JPB's mitigation credit.

Construction is anticipated during summer 2027, with planting and seeding to follow. Following the implementation phase, JPB would conduct periodic performance monitoring, beginning spring 2028 that would continue for 10 years, including vegetation and channel-stability monitoring. If performance standards are not achieved by the end of the monitoring period, JPB would remain responsible for additional monitoring and corrective action as directed by the regulatory agencies. The mitigation agreement would expire upon the earlier of either regulatory agency acceptance of the project or December 31, 2042. Once the mitigation agreement expires, the District would continue to manage the site as part of Sierra Azul Open Space Preserve.

FISCAL IMPACT

The recommended action has no fiscal impact. There are minimal anticipated operational impacts on District staff time. JPB would fully fund project design, permitting, construction, maintenance, monitoring, reporting, adaptive management, and other obligations assigned to JPB under the Mitigation Agreement. The Agreement would therefore provide substantial externally funded restoration on District land without requiring District funding.

PRIOR BOARD AND COMMITTEE REVIEW

On March 23, 2022, the Board adopted a Mitigation Policy and associated revisions to the Resource Management Policies to guide future decisions on third-party mitigation proposals ([R-22-41](#), [Minutes](#)).

On July 9, 2025, the Board accepted staff's evaluation of the proposed Hicks Creek third-party compensatory mitigation project and authorized the General Manager to negotiate a mitigation agreement with JPB and return to the Board for approval of the finalized agreement ([R-25-96](#), [Minutes](#)).

PUBLIC NOTICE

Public notice was provided as required by the Brown Act. Letters were mailed to neighbors and recipients of the Natural Resources and Sierra Azul interested parties lists.

CEQA COMPLIANCE

JPB is the lead agency for the Guadalupe River Bridge Replacement Project under the California Environmental Quality Act and adopted a Final Mitigated Negative Declaration (IS/MND) in January 2021 (State Clearinghouse Number 2020110323). The District is a responsible agency for the proposed mitigation work at the Hicks Creek Site. The District has independently reviewed and considered the information contained in the IS/MND, as modified by the three adopted addenda, prepared by JPB as Lead Agency and the environmental effects of the project addressed therein. Based on these environmental documents and the administrative record, the District finds that the environmental documents are legally adequate and fully analyze the environmental impacts associated with the mitigation activities authorized by the Mitigation Agreement.

NEXT STEPS

If approved, the General Manager will execute the Mitigation Agreement. JPB will complete regulatory approvals and construction procurement, coordinate preconstruction activities with the District, and implement construction during the 2027 work season. Following construction and planting, JPB will perform maintenance, monitoring, reporting, and adaptive management until the regulatory agencies confirm that the project's performance standards have been achieved (anticipated 10 years after completion).

Attachments

1. Project Location Map
2. Final Hicks Creek Mitigation Cooperative Agreement
3. Draft Resolution Adopting the Mitigated Negative Declaration for the Guadalupe River Bridge Replacement Project

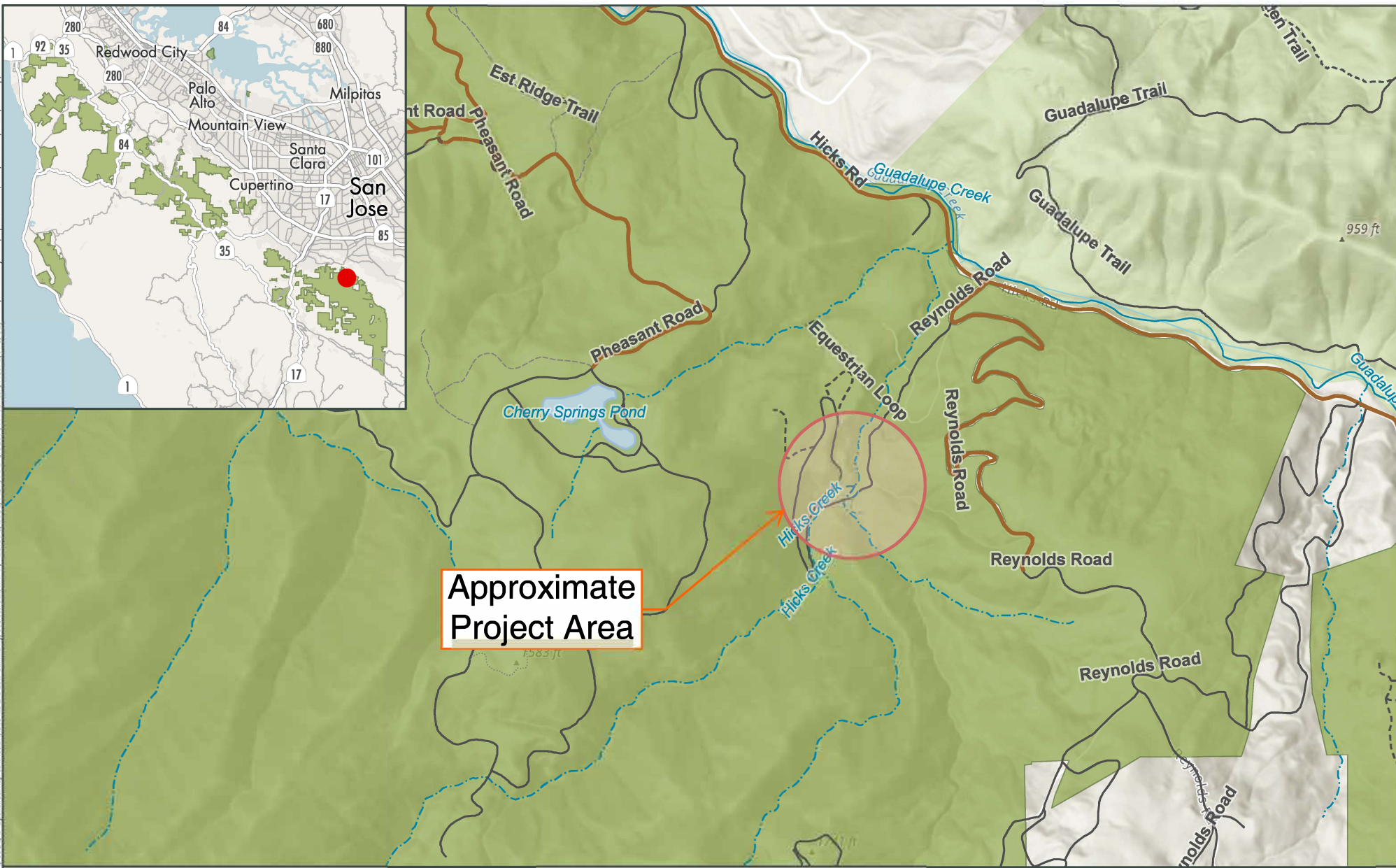
Responsible Department Head:

Kirk Lenington, Natural Resources Department Manager

Prepared by/contact person:

David Liefert, Senior Resource Management Specialist, Natural Resources Department

Data Sources: Esri, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Sources: Esri, Mosar, Airbus DS, USGS, NOAA, NASA, CGAAR, N. Robinson, NCEAS, NLS, OS, NMA, Geodataservellen, Rikswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community



Approximate Project Area

Hicks Creek Mitigation Project Location - Sierra Azul Preserve

- | | | |
|-------------------------|-------|--------------------------------|
| Stream | ---- | Trail |
| — Perennial | ----- | Abandoned / Unmaintained Road |
| - - - Intermittent | | Abandoned / Unmaintained Trail |
| Trail | | Waterbody |
| — Paved Road | | ■ Active Pond |
| — Unpaved Seasonal Road | | |

Midpeninsula Regional
Open Space District
5/22/2025



COOPERATIVE MITIGATION AGREEMENT

This Mitigation Agreement, entered into on _____, 2026 (“EFFECTIVE DATE”), referred to herein as the “AGREEMENT,” is between the Peninsula Corridor Joint Powers Board, referred to herein as “JPB,” and the Midpeninsula Regional Open Space District, referred to herein as “MIDPEN.”

RECITALS

WHEREAS, JPB and MIDPEN, herein referred to each as a “PARTY” and collectively as the “PARTIES,” are authorized to enter into this AGREEMENT.

WHEREAS, MIDPEN is an independent special district located in Santa Clara, San Mateo, and Santa Cruz counties. MIDPEN is governed by a seven-member publicly elected board of directors. MIDPEN’s mission is to acquire and preserve a regional greenbelt of open space land in perpetuity, protect and restore the natural environment, and provide opportunities for ecologically sensitive public enjoyment and education. On the coast, MIDPEN has an expanded mission: to acquire and preserve in perpetuity open space and agricultural land of regional significance, protect, and restore the natural environment, preserve rural character, encourage viable agricultural use of land resources, and provide opportunities for ecologically sensitive public enjoyment and education.

WHEREAS, MIDPEN owns more than 19,000 acres of wilderness in the Santa Cruz Mountains, Santa Clara County, known as the Sierra Azul Open Space Preserve, which encompasses land surrounding Hicks Creek, Assessor’s Parcel Numbers (“APN”) 575-09-008, 575-09-003 and 575-08-001 (“DISTRICT PROPERTY”), a portion of which is the subject of this AGREEMENT (“HICKS CREEK SITE”, as more particularly defined in Section X, DEFINED TERMS AND ACRONYMS of this AGREEMENT). MIDPEN holds fee simple absolute title to the HICKS CREEK SITE.

WHEREAS, JPB is the governing body for the Caltrain Peninsula commuter rail transit service between the cities of San Francisco, San Jose, and Gilroy. As a joint powers authority created pursuant to the California Joint Exercise of Powers Act, Government Code sections 6500 *et seq.*, the JPB is composed of representatives from the three counties Caltrain serves, San Francisco, San Mateo, and Santa Clara counties. The JPB has a nine-member Board of Directors, consisting of officials appointed from the three member agencies (City and County of San Francisco, San Mateo County Transit District, and Santa Clara Valley Transportation Authority) and is funded and governed by its three member agencies.

WHEREAS, JPB is in the process of completing the Guadalupe River Bridge Replacement Project, referred to herein as “GRBRP.” The GRBRP entails making safety repairs, including replacing the MT-1 bridge and extending the MT-2 bridge, within and around the Guadalupe River, south of Willow Street to Delmas Avenue, in San Jose, Santa Clara County, California. Both the MT-1 and MT-2 bridges span the Guadalupe River corridor in an area with developed and upland plant communities, as well as riparian, wetland, and aquatic habitats.

WHEREAS, JPB seeks to implement an environmental mitigation project to mitigate for impacts due to the GRBRP on state and federal wetland and water jurisdictional areas as required by the

San Francisco Bay Regional Water Quality Control Board, hereinafter referred to as “SFBRWQCB”, and the U.S. Environmental Protection Agency, hereinafter referred to as “EPA” and potentially the California Department of Fish and Wildlife, hereinafter referred to as “CDFW.” These mitigation obligations are, or may be, set forth in the “GRBRP PERMITS” (defined in Paragraph 4 of this AGREEMENT) issued by, or between JPB and, SFBRWQCB, EPA, and CDFW re who in the context of the GRBRP PERMITS are referred to hereinafter collectively as the “GRBRP PERMITTING AGENCIES.”

WHEREAS, JPB intends to carry out a compensatory mitigation project at the HICKS CREEK SITE, by enhancing and restoring approximately 550 linear feet of the Hicks Creek riparian corridor. Enhancement will include the removal of non-native trees and invasive plants, removal of concrete building foundations and improvements, removal of a concrete wall lining the stream channel, removal of concrete lining within the channel of Hicks Creek (former swimming pool), creating and installing habitat improvements in and around Hicks Creek, removing and controlling nonnative species, and revegetating the HICKS CREEK SITE by planting native species.

WHEREAS, to implement an environmental mitigation project at the HICKS CREEK SITE, JPB is required to obtain permits or approvals from the SFBRWQCB, the CDFW, the United States Army Corps of Engineers, hereinafter referred to as “USACE,” the United States Fish and Wildlife Service, hereinafter referred to as “USFWS,” and the United States National Marine Fisheries Service, hereinafter referred to as “NMFS.” Such permits between JPB and SFBRWQCB, CDFW, USACE, USFWS, and NMFS constitute the “HICKS CREEK PERMITS” and the aforementioned agencies, in the context of the HICKS CREEK PERMITS, are referred to hereinafter collectively as the “HICKS CREEK PERMITTING AGENCIES.”

WHEREAS, the PARTIES have reviewed the compensatory mitigation project JPB intends to carry out at the HICKS CREEK SITE as described in the 100% design plans contained within the Hicks Creek Off-Site Mitigation Project Habitat Mitigation and Monitoring Plan, dated July 2026 (“FINAL HMMP”), have made the preliminary determination that the FINAL HMMP is agreeable and suitable to both PARTIES. JPB intends to implement the compensatory mitigation project at the HICKS CREEK SITE in accordance with the FINAL HMMP, referred to hereinafter as the “MITIGATION PROJECT,” incorporated herein as **Exhibit D**, and made a part of this AGREEMENT.

WHEREAS, the PARTIES have determined that this AGREEMENT and authorization to negotiate an agreement is not a project subject to the California Environmental Quality Act (“CEQA”) pursuant to CEQA Guidelines Section 15378(b)(5), as it constitutes administrative activity and preliminary planning.

WHEREAS, JPB determined that under CEQA, the MITIGATION PROJECT is a component of the JPB’s GRBRP. Pursuant to CEQA, JPB adopted the GRBRP Initial Study (“IS”) / Mitigated Negative Declaration (“MND”) in February 2021 (SCH #2020110323). In March 2025, pursuant to CEQA Guidelines Section 15164, JPB adopted an Addendum to the IS/MND for the GRBRP to analyze the changes in the project since adoption of the original IS/MND. On April 2, 2026, pursuant to CEQA Guidelines Section 15164, JPB adopted a Second Addendum to the IS/MND for the GRBRP to analyze further changes. JPB’s approval of the MITIGATION PROJECT requires JPB to analyze the potential environmental impacts of the project. JPB will prepare a

Third Addendum to the IS/MND pursuant to CEQA Guidelines 15164 to be adopted by JPB upon approval of the MITIGATION PROJECT. MIDPEN, as a CEQA responsible agency pursuant to PRC 21069, may rely on the IS/MND and the Third Addendum thereto prepared by JPB.

WHEREAS, MIDPEN desires to enter into this AGREEMENT to allow JPB to carry out the MITIGATION PROJECT at the HICKS CREEK SITE in accordance with the terms and conditions set forth herein.

WHEREAS, it is the PARTIES' shared intent that JPB be entitled to claim all environmental mitigation credit identified and calculated pursuant to the FINAL HMMP for the purposes of satisfying offsite mitigation requirements related to the GRBRP ("MITIGATION CREDIT"). It is further the PARTIES' shared intent that, upon reaching all performance standards for the MITIGATION PROJECT described in the FINAL HMMP and, if applicable, as described in the HICKS CREEK PERMITS, MIDPEN will be responsible for managing the HICKS CREEK SITE going forward as part of its Sierra Azul Open Space Preserve and consistent with MIDPEN's mission as described in this AGREEMENT.

WHEREAS, as consideration for its use of the HICKS CREEK SITE for the MITIGATION PROJECT, JPB agrees to carry out the MITIGATION PROJECT in accordance with this AGREEMENT.

AGREEMENT

NOW, THEREFORE, for and in consideration of JPB's access to the premises, JPB's ability to obtain the MITIGATION CREDIT, the MITIGATION PROJECT's furtherance of MIDPEN's mission and goals by restoring wildlife habitat, and mutual covenants and terms set forth in this AGREEMENT, the sufficiency of which the PARTIES acknowledge, the PARTIES hereby covenant and agree as follows:

1. The PARTIES agree that this AGREEMENT and the duties, responsibilities and liabilities herein are intended to enable JPB to complete the MITIGATION PROJECT, satisfy the HICKS CREEK PERMITS' conditions, and achieve MIDPEN's conservation and open space management goals. The PARTIES agree to carry out all express affirmative obligations and abide by all express negative restrictions contained in this AGREEMENT to achieve that intent.
2. MIDPEN agrees that, following completion of the MITIGATION PROJECT, MIDPEN will manage the HICKS CREEK SITE as part of its Sierra Azul Open Space Preserve. Following completion of the MITIGATION PROJECT, MIDPEN will manage the HICKS CREEK SITE in a manner that is consistent with the Mitigation Goals and Objectives outlined in the FINAL HMMP.
3. The term of this AGREEMENT shall be from the EFFECTIVE DATE through the GRBRP PERMITTING AGENCIES' and/or the HICKS CREEK PERMITTING AGENCIES' determination that the MITIGATION PROJECT has achieved all required performance criteria defined in the FINAL HMMP and, if applicable, the HICKS CREEK PERMITS or December 31, 2042, whichever occurs first ("TERM"). The PARTIES agree that it is anticipated that activities at the HICKS CREEK SITE described in the MITIGATION PROJECT will commence in 2027 or as soon thereafter as the GRBRP PERMITTING AGENCIES' and HICKS CREEK PERMITTING

AGENCIES' issue all approvals necessary to commence the MITIGATION PROJECT. The PARTIES recognize JPB may not be able to achieve all required performance criteria defined in the FINAL HMMP by the end of the TERM. The PARTIES agree that the TERM may be extended with the PARTIES' mutual written consent, and that both PARTIES will in good faith endeavor to extend the TERM to accommodate successful performance of the FINAL HMMP performance criteria.

I. PERMITS

4. JPB's existing permits which require JPB to carry the MITIGATION PROJECT as compensatory mitigation for the GRBRP (the "GRBRP PERMITS") are:

- a. San Francisco Bay Regional Water Quality Control Board, Reissued 401 Water Quality Certification and Order for the Guadalupe River Bridge Replacement Project (May 14, 2025), WDID No. 2 CW 446940, hereinafter referred to as the "REISSUED 401 CERTIFICATION," incorporated herein as **Exhibit A**, and made part of this AGREEMENT;
- b. U.S. Environmental Protection Agency, Region 9, Administrative Order on Consent (July 18, 2025), hereinafter referred to as the "AOC," incorporated herein as **Exhibit B**, and made part of this AGREEMENT; and
- c. California Department of Fish and Wildlife, Amendment of Streambed Alteration Agreement Notification No. EPIMS-SCL-20973-R3 (June 13, 2025) for the Guadalupe River Bridge Replacement Project, hereinafter referred to as the "AMENDED 1600 AGREEMENT", incorporated herein as **Exhibit C** and made part of this AGREEMENT.

5. MIDPEN agrees that it has been provided copies of the GRBRP PERMITS.

6. The PARTIES acknowledge that the REISSUED 401 CERTIFICATION and the AOC required the JPB to deliver a final plan describing the offsite mitigation project for the GRBRP to be carried out at the HICKS CREEK SITE to the SFBRWQCB and EPA, respectively, no later than December 1, 2025, for the agencies' review and approval, and that plans were delivered as required. The AMENDED 1600 AGREEMENT also requires mitigation for CDFW jurisdictional impacts related to the GRBRP, which may include the HICKS CREEK SITE, but does not establish specific requirements relative to the MITIGATION PROJECT.

7. Requirements of the REISSUED 401 CERTIFICATION. The PARTIES acknowledge the aforementioned certification contains the following requirements applicable to the MITIGATION PROJECT, among others:

- a. Requires JPB to develop a restoration plan for the HICKS CREEK SITE and conduct off-site mitigation at the HICKS CREEK SITE;
- b. Requires JPB to obtain all necessary federal and state permits for the MITIGATION PROJECT and to work with MIDPEN to provide any necessary CEQA review of the MITIGATION PROJECT;

- c. Requires JPB to implement the final approved MITIGATION PROJECT in the first dry season after obtaining all necessary federal and state permits for implementation of the MITIGATION PROJECT;
- d. Requires JPB to conduct vegetation and geomorphic monitoring for a minimum of 10 years as specified in the final approved MITIGATION PROJECT after construction and planting of the restoration, including conducting topographic surveys and fish passage assessments;
- e. Requires JPB to submit monitoring reports to the SFBRWQCB by January 31 following monitoring years 1 through 6, 8, and 10.

8. Requirements of the AOC. The PARTIES acknowledge the aforementioned order contains the following requirements applicable to the MITIGATION PROJECT, among others:

- a. Requires JPB to implement the MITIGATION PROJECT at the HICKS CREEK SITE subject to EPA's final approval;
- b. Requires JPB to submit advanced written requests and obtain advanced written approvals for proposed changes to MITIGATION PROJECT;
- c. Requires JPB to submit annual status reports to EPA starting December 1, 2026, and annual monitoring reports once construction and planting is completed; and
- d. Requires JPB to submit an executed version of this AGREEMENT to EPA.

9. The PARTIES agree that this AGREEMENT is intended to facilitate JPB's compliance with the requirements of the GRBRP PERMITS, that MIDPEN shall cooperate with JPB in good faith to facilitate JPB's completion of the MITIGATION PROJECT in accordance with the GRBRP PERMITS and any required HICKS CREEK PERMITS.

10. The PARTIES acknowledge that the MITIGATION PROJECT and the FINAL HMMP will be incorporated into the AOC upon EPA's approval of the MITIGATION PROJECT per AOC Paragraph 34.

11. The PARTIES agree to promptly notify one another of any event of which they become aware that they believe has the potential to delay JPB's timely performance of the MITIGATION PROJECT, or require a material change to the MITIGATION PROJECT or HICKS CREEK PERMITS. If any such event has the potential to substantially delay completion of the MITIGATION PROJECT or require a material change to the MITIGATION PROJECT, the PARTIES agree to meet and confer to discuss any changes to the AGREEMENT necessary to accommodate the event.

12. The PARTIES agree that JPB will obtain all additional permits or authorizations necessary to carry out the MITIGATION PROJECT at the HICKS CREEK SITE. JPB anticipates that it will obtain the following HICKS CREEK PERMITS:

- a. A Lake or Streambed Alteration Agreement from CDFW authorizing diversion or obstruction of the natural flow of Hicks Creek, changing the bed, channel, or bank of Hicks Creek, using material from Hicks Creek, or depositing or disposing of material into Hicks Creek;
- b. A Section 404 Clean Water Act Permit from USACE authorizing the discharge of dredged or fill material into Hicks Creek as a water of the United States;
- c. A Section 401 Water Quality Certification and/or Waste Discharge Requirements from the SFBRWQCB;
- d. An incidental take permit from CDFW providing take coverage for CESA listed and candidate species; and
- e. A Biological Opinion or concurrence in use of a Programmatic Biological Opinion from USFWS and/or NMFS providing take coverage for federal listed species.

13. JPB agrees that it will provide MIDPEN copies of all of the HICKS CREEK PERMITS.

14. JPB agrees that all JPB representatives, contractors, sub-contractors, agents, and invitees will request access permits (each an "ACCESS PERMIT") from MIDPEN prior to accessing the HICKS CREEK SITE. MIDPEN agrees that it will issue such ACCESS PERMITS to JPB, its contractors, sub-contractors, agents, and invitees in good faith. ACCESS PERMITS may be issued for the entire MITIGATION PROJECT or may be issued for construction, maintenance and monitoring phases of the MITIGATION PROJECT, at MIDPEN's discretion.

15. While JPB anticipates the FINAL HMMP will fulfill the terms and conditions of the HICKS CREEK PERMITS, the PARTIES acknowledge the HICKS CREEK PERMITTING AGENCIES may require the preparation and approval of one or more additional mitigation or management plans for the MITIGATION PROJECT. Such additional plans will be subject to MIDPEN'S review and approval, not to be unreasonably withheld, prior to JPB's incorporation into the MITIGATION PROJECT.

16. The PARTIES agree that, after MIDPEN'S review and approval, not to be unreasonably withheld, any additional mitigation or management plans required by the HICKS CREEK PERMITTING AGENCIES shall become part of the MITIGATION PROJECT.

17. JPB agrees that it will provide MIDPEN with reasonable opportunity to review and provide feedback all application materials JPB prepares for the HICKS CREEK PERMITS and on any drafts of the HICKS CREEK PERMITS provided by the HICKS CREEK PERMITTING AGENCIES. JPB further agrees that it will make good faith efforts to resolve any material concerns MIDPEN raises.

18. The PARTIES agree that all duties, responsibilities, and liabilities in this AGREEMENT with respect to the MITIGATION PROJECT shall apply to all HICKS CREEK PERMITS.

19. The PARTIES agree that they will cooperate in good faith to facilitate the MITIGATION PROJECT in accordance with the GRBRP PERMITS and the HICKS CREEK PERMITS, referred together herein as the "PERMITS." To the greatest extent practicable, the PARTIES will not undertake any activities in relation to the MITIGATION PROJECT that would conflict with the conditions or requirements of the PERMITS.

20. During the TERM, MIDPEN agrees to provide information and documentation in its possession to JPB as reasonably necessary for JPB's HICKS CREEK PERMITS applications and for JPB's ability to respond to requests for information or clarification from the GRBRP PERMITTING AGENCIES or the HICKS CREEK PERMITTING AGENCIES; provided, however, that the foregoing does not require MIDPEN to create any documentation, information, studies, or records, or to directly provide information or records, or respond, to state or federal regulators about the MITIGATION PROJECT or HICKS CREEK PERMITS beyond MIDPEN's existing obligations under California or Federal law.

II. SITE ACCESS

21. MIDPEN agrees this AGREEMENT grants to JPB, its contractors, sub-contractors, agents, and invitees a non-exclusive license to access the HICKS CREEK SITE, subject to the terms and conditions of the ACCESS PERMITS, as necessary to perform the MITIGATION PROJECT in accordance with the FINAL HMMP. Such access shall only be used by JPB, its contractors, sub-contractors, agents, and invitees for activities reasonably necessary and directly related to carrying out the MITIGATION PROJECT or comply with obligations in any of the HICKS CREEK PERMITS. JPB shall not access or alter any DISTRICT PROPERTY except the HICKS CREEK SITE without MIDPEN's advance written consent.

22. During the TERM, JPB shall be responsible, at its sole cost and expense, for maintaining the HICKS CREEK SITE in a condition that suits its needs for the MITIGATION PROJECT.

23. MIDPEN agrees it shall not alter the HICKS CREEK SITE in a manner that would compromise the MITIGATION PROJECT before the MITIGATION PROJECT commences without express written consent from JPB and, if necessary, the HICKS CREEK PERMITTING AGENCIES.

24. MIDPEN shall have continuing rights of access and use to all portions of the HICKS CREEK SITE during the TERM, provided that such access and use does not unreasonably interfere with the MITIGATION PROJECT.

25. The PARTIES agree that once JPB provides MIDPEN with any required written determinations from GRBRP PERMITTING AGENCIES or HICKS CREEK PERMITTING AGENCIES that the MITIGATION PROJECT has achieved the performance standards established in the FINAL HMMP and, if applicable, in the HICKS CREEK PERMITS, this AGREEMENT, and all access rights granted to JPB, its contractors, sub-contractors, agents, and invitees shall terminate.

III. MITIGATION CREDITS

26. The PARTIES agree that JPB, its successors and assigns, will own the exclusive right to all MITIGATION CREDITS. The PARTIES further agree that nothing in this AGREEMENT prevents MIDPEN from claiming any mitigation credits or environmental benefits for any project other than the MITIGATION PROJECT or activities, other than those identified in the FINAL HMMP. The PARTIES agree that nothing in this AGREEMENT gives JPB the right to claim any mitigation credits or benefits for any project other than the MITIGATION PROJECT or activities other than those identified in the FINAL HMMP.

IV. FUNDING

27. The PARTIES agree that JPB shall be solely responsible, at its sole cost and expense, for overseeing, managing, completing and ensuring compliance with all aspects of the MITIGATION PROJECT and PERMITS. The PARTIES agree that in executing this AGREEMENT, MIDPEN is not assuming responsibility for any aspect or any costs associated with the MITIGATION PROJECT or PERMITS.

28. JPB has no obligation to pay for, compensate, or reimburse MIDPEN for: any of MIDPEN's internal employment, administrative, or ancillary costs that it may incur in carrying out its obligations in this AGREEMENT (including but not limited to: regular or intermittent meetings, coordination, or communication with JPB during the TERM of this AGREEMENT and the term of the MITIGATION PROJECT); any routine maintenance, repair, or replacement projects or costs that are not specifically included in and required by the MITIGATION PROJECT, except to the extent that JPB determines that such projects or costs are necessary for JPB to complete the MITIGATION PROJECT; or any emergency response activities, operations, or measures that occur on the HICKS CREEK SITE that are unrelated to MITIGATION PROJECT activities.

29. The PARTIES agree that in the event any unforeseen circumstances cause the MITIGATION PROJECT to be substantially more expensive, they will mutually agree on a course of action. Such unforeseen circumstances include, but are not limited to, natural catastrophe, weather events, or acts of God. Notwithstanding such events, MIDPEN will not be required to fund any portion of the MITIGATION PROJECT.

V. MITIGATION PROJECT RIGHTS AND RESPONSIBILITIES

30. JPB agrees that all work performed by JPB or on JPB's behalf by contractors, sub-contractors, agents, or invitees shall be performed in accordance with relevant local, state, and federal laws and regulations and ACCESS PERMITS granted by MIDPEN.

31. The PARTIES agree that JPB bears all rights, responsibilities, and obligations related to obtaining, hiring, supervising, managing, and compensating appropriate and qualified contractors, sub-contractors, consultants, or agents to carry out the MITIGATION PROJECT. MIDPEN has no right to prevent, veto, or influence JPB's selection or hire of contractors, sub-contractors, agents, and/or invitees to carry out the MITIGATION PROJECT.

32. Project Construction. The PARTIES agree that JPB is solely responsible for all construction, restoration, and enhancement activities within the FINAL HMMP that are necessary to achieve the performance standards established therein and in compliance with the PERMITS. JPB also shall be solely responsible for site security and supervision during the construction phase of the MITIGATION PROJECT.

33. Project Maintenance. The PARTIES agree JPB is solely responsible for performing all maintenance required by, and in accordance with, the FINAL HMMP. MIDPEN shall be primarily responsible for managing the HICKS CREEK SITE in accordance with its standard operational practices and procedures during the maintenance phase of the MITIGATION PROJECT.

34. Project Monitoring. The PARTIES agree JPB is solely responsible for all monitoring as required by the FINAL HMMP during the TERM of the AGREEMENT, including any extensions of the TERM. The PARTIES agree that the manner and duration of long-term monitoring shall be conducted in accordance with the FINAL HMMP and PERMITS, including any additional formal maintenance and monitoring plan required by the GRBRP PERMITTING AGENCIES or HICKS CREEK PERMITTING AGENCIES and incorporated into the FINAL HMMP, provided that any additional monitoring that would extend past the TERM, or that differs from that set forth in the FINAL HMMP, must be pre-approved by the PARTIES through an amendment to this AGREEMENT. MIDPEN shall be primarily responsible for managing the HICKS CREEK SITE in accordance with its standard operational practices and procedures during the monitoring phase of the MITIGATION PROJECT.

35. Long Term Site Management. Following completion of the MITIGATION PROJECT, MIDPEN shall be solely responsible for managing the HICKS CREEK SITE as part of its Sierra Azul Open Space Preserve and consistent with MIDPEN's mission as described in this AGREEMENT.

36. Hazardous Materials.

- a. MIDPEN represents that to its knowledge, the HICKS CREEK SITE does not contain any HAZARDOUS MATERIALS, including hazardous waste or underground storage tanks, that require manifesting, removal, or disposal pursuant to state or federal hazardous waste laws or regulations. MIDPEN represents that it has provided JPB with any environmental surveys or studies that MIDPEN has in its possession related to the HICKS CREEK SITE or immediately adjacent property, but MIDPEN has not conducted environmental studies of the HICKS CREEK SITE and makes no guarantees or warranties that no HAZARDOUS MATERIALS exist at the HICKS CREEK SITE.
- b. MIDPEN agrees to allow JPB to conduct surveys using ground-penetrating radar as part of JPB's pre-excavation activities consistent with the MITIGATION PROJECT.
- c. If JPB discovers or disturbs HAZARDOUS MATERIALS at the HICKS CREEK SITE in the course of carrying out the MITIGATION PROJECT, JPB will immediately notify MIDPEN. If reasonable precautions will be inadequate to

prevent foreseeable releases or exposures to such HAZARDOUS MATERIALS, JPB shall immediately stop work on the MITIGATION PROJECT.

- d. If JPB disturbs any HAZARDOUS MATERIALS in the course of carrying out the MITIGATION PROJECT, JPB is responsible for removing, manifesting, and disposing of such disturbed materials, in accordance with the state and federal law.
- e. Except as set forth below, JPB shall not bring onto, store or use on the HICKS CREEK SITE or DISTRICT PROPERTY any HAZARDOUS MATERIALS. JPB will not cause any discharge or release of any HAZARDOUS MATERIALS on the HICKS CREEK SITE or DISTRICT PROPERTY in violation of any environmental laws.
- f. Notwithstanding the foregoing, MIDPEN expressly grants JPB, its contractors, sub-contractors, and agents permission to bring, use, stage, and store materials, substances, and equipment that constitute or require the use of HAZARDOUS MATERIALS onto the HICKS CREEK SITE in accordance with the FINAL HMMP, but only as reasonably necessary to carry out the activities described therein. Such materials, substances, and equipment include, but are not limited to: construction equipment, equipment fuel, hydraulic fluid, transmission fluid, gear oil, brake fluid, power steering fluid, light duty and heavy-duty vehicles, compressed gases and cylinders, lead-acid batteries, lithium-ion batteries, and personal protective equipment.
- g. If JPB's actions, activities or omissions are the direct or proximate cause of any release or discharge of HAZARDOUS MATERIALS that are transported, used or produced during MITIGATION PROJECT, JPB must: (i) notify MIDPEN and the proper authorities; (ii) immediately investigate, remove, and monitor the HAZARDOUS MATERIALS as required by the proper authorities; and (iii) bear any and all costs associated with the remedial activities. MIDPEN shall not be responsible for HAZARDOUS MATERIALS that JPB brings onto the HICKS CREEK SITE, nor for the costs or expenses associated with remediation or cleanup of any releases or discharges of such HAZARDOUS MATERIALS.
- h. JPB will promptly, at its sole cost and expense, take all investigatory and remedial action reasonably recommended by JPB's agents and advisors or as ordered or required under applicable law for the cleanup of any contamination caused by JPB, and for the maintenance, security, or monitoring of the affected area. JPB will indemnify, defend, and hold MIDPEN harmless from any claims, damages, fines, judgments, penalties, costs, liabilities or losses arising from HAZARDOUS MATERIALS used, introduced, discharged, released or disturbed by JPB in or on the DISTRICT PROPERTY. JPB's obligations under this section include all costs for investigation of the site or any cleanup, removal, restoration, or other management or mitigation required, ordered, or agreed to with a federal, state or local agency or political subdivision.

37. As-Is Condition of Site. JPB acknowledges that it has inspected the HICKS CREEK SITE and accepts the HICKS CREEK SITE “as is” in the condition existing at commencement of this AGREEMENT. Other than as expressly set forth in this AGREEMENT, MIDPEN is not making any representations or providing any warranties concerning the HICKS CREEK SITE or its suitability for the MITIGATION PROJECT. During the TERM, JPB, at its sole expense, shall maintain the HICKS CREEK SITE, and any temporary or permanent improvements in a safe and sanitary condition, and good working order and repair in accordance with the FINAL HMMP.

38. Restoration. During the TERM, JPB shall promptly repair, at its sole cost and expense, any damage it causes to the HICKS CREEK SITE or DISTRICT PROPERTY, to a condition equivalent to that which existed just prior to the damage. In addition, at least fifteen (15) days prior to the termination or expiration of this AGREEMENT, JPB, at its sole cost and expense, shall: (1) remove all equipment, construction material, and any other personal property from the HICKS CREEK SITE; and (2) restore the HICKS CREEK SITE to the condition that existed upon the EFFECTIVE DATE, reasonable wear and tear excepted, including any repair of damage or injury to the HICKS CREEK SITE occasioned by JPB’s use of said property. The restoration requirements in this paragraph exclude any physical changes, modifications, or improvements to the HICKS CREEK SITE expressly shown in the FINAL HMMP to remain as permanent improvements as part of the MITIGATION PROJECT.

39. Restrictions. During the TERM, MIDPEN shall not execute or voluntarily subject the HICKS CREEK SITE to, or consent to, any mortgages, liens, encumbrances, covenants, conditions, restrictions, easements, or rights-of-way, or seek any zoning changes that unreasonably interfere with JPB’s ability to complete the MITIGATION PROJECT.

40. MIDPEN’s Continued Right to Use Property. Notwithstanding anything else in this AGREEMENT to the contrary, MIDPEN may use the HICKS CREEK SITE and DISTRICT PROPERTY in any manner and for any purposes allowed by applicable law, provided that those uses do not materially interfere with JPB’s ability to complete the MITIGATION PROJECT.

41. Third-Party Beneficiaries. This AGREEMENT is solely for the benefit of the PARTIES and no third-party beneficiary is or is intended to be created hereby.

VI. PERMISSIBLE MITIGATION PROJECT ACTIVITIES

42. For purposes of this AGREEMENT, the PARTIES agree that the MITIGATION PROJECT, as approved by the GRBRP PERMITTING AGENCIES and as shown in the FINAL HMMP, defines the actions and activities that JPB, its contractors, sub-contractors, agents, or invitees are allowed to perform at the HICKS CREEK SITE, and defines certain actions and activities that are impermissible at the HICKS CREEK SITE with respect to the MITIGATION PROJECT. The extent of actions and activities allowed at the HICKS CREEK SITE are only those set forth in the FINAL HMMP. Any actions or activities that deviate from the FINAL HMMP must be pre-approved in advance by JPB and MIDPEN.

43. JPB, its contractors, sub-contractors, agents, or invitees, shall be allowed to engage in the following activities as part of the MITIGATION PROJECT during the TERM: to access the HICKS CREEK SITE as described in the FINAL HMMP and to conduct activities on or relating

to the HICKS CREEK SITE as necessary to ensure the successful implementation, maintenance, and monitoring of the MITIGATION PROJECT in accordance with the FINAL HMMP.

VII. APPLICABLE STANDARDS AND REQUIREMENTS

44. The PARTIES acknowledge that the MITIGATION PROJECT will adhere to the environmental standards, requirements, or best management practices (collectively, “BMPs”) contained in the FINAL HMMP and BMPs that may be contained in the HICKS CREEK PERMITS.

45. Requirements of the MITIGATION PROJECT. The PARTIES acknowledge the MITIGATION PROJECT will adhere to the plant selection, invasive species control measures, and other vegetation criteria (collectively, “HABITAT BMPs”) contained in the FINAL HMMP and HABITAT BMPs that may be contained in the HICKS CREEK PERMITS.

46. JPB agrees to carry out the MITIGATION PROJECT in accordance with the BMPs and HABITAT BMPs contained in the FINAL HMMP, and HICKS CREEK PERMITS, and to instruct and require its contractors, sub-contractors, agents, or invitees to do the same.

47. MIDPEN agrees that it will not request, require, or attempt to require JPB to implement any additional actions, requirements, BMPs, or HABITAT BMPs in connection with the MITIGATION PROJECT other than those specified in the FINAL HMMP or HICKS CREEK PERMITS. The PARTIES acknowledge that changes to the FINAL HMMP may require compliance with additional actions, requirements, or BMPs.

48. The PARTIES agree that they will cooperate in good faith to enable implementation of the MITIGATION PROJECT in accordance with all of the aforementioned BMPs and HABITAT BMPs.

49. Conflicts of Applicable Standards or Requirements. The PARTIES agree that the FINAL HMMP does not conflict with MIDPEN’s BMPs. However, in the unforeseen event that any of the PERMITS or the FINAL HMMP conflict with MIDPEN’s BMPs, the PERMITS shall prevail over MIDPEN’s BMPs. The PARTIES agree that if the HICKS CREEK PERMITTING AGENCIES require either PARTY to undertake any activity or measure that are different from but accomplish the same goal as MIDPEN’s policies, the requirements of the HICKS CREEK PERMITTING AGENCIES shall prevail. The PARTIES agree that the FINAL HMMP shall control in the event that any requirement or term of this AGREEMENT conflicts with any requirement or element of the FINAL HMMP.

VIII. LIABILITIES

50. Neither MIDPEN nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by JPB, its contractors, sub-contractors, agents and/or invitees under or in connection with any work, authority, or jurisdiction conferred upon JPB under this AGREEMENT. It is understood and agreed that JPB, to the extent permitted by law, will defend, indemnify, and save harmless MIDPEN and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or

other theories or assertions of liability occurring by reason of anything done or omitted to be done by JPB, its contractors, sub-contractors, agents and/or invitees under this AGREEMENT.

51. Neither JPB nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by MIDPEN, its contractors, sub-contractors, agents and/or invitees under or in connection with any work, authority, or jurisdiction conferred upon MIDPEN under this AGREEMENT. It is understood and agreed that MIDPEN, to the extent permitted by law will defend, indemnify, and save harmless JPB and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by MIDPEN, its contractors, sub-contractors, agents and/or invitees under this AGREEMENT.

52. Insurance. JPB shall, and shall require its contractors, subcontractors, consultants and agents to, obtain and keep in force during the term of this AGREEMENT a general liability policy satisfactory to MIDPEN and purchased from an insurance company admitted in the State of California which includes MIDPEN as an additional insured against liability and damages arising from JPB's use of the HICKS CREEK SITE or DISTRICT PROPERTY, or from any occurrence in, on, about, or related to the HICKS CREEK SITE or DISTRICT PROPERTY, with a single combined property damage and personal injury limit of at least Two Million Dollars (\$2,000,000). All such liability insurance shall insure performance by JPB of the indemnity provisions hereof, and the policy shall contain a cross-liability endorsement. JPB agrees to furnish a certificate of such insurance to MIDPEN naming MIDPEN as an additional insured on or prior to the Agreement Date, prior to any contractor, subcontractor, consultant or agent's entry onto the HICKS CREEK SITE or DISTRICT PROPERTY, and again upon any renewal or modification of such insurance. No such policy of insurance shall be cancelable or subject to reduction of coverage or other modification except after thirty (30) days prior written notice to MIDPEN. The limits of said insurance shall in no event be deemed to limit the liability of JPB hereunder.

53. MIDPEN shall have no obligation to insure against any loss to JPB's improvements, fixtures, machinery, equipment, or other personal property in or about the HICKS CREEK SITE or DISTRICT PROPERTY occurring from any cause whatsoever, and JPB shall have no interest in the proceeds of any insurance carried by MIDPEN.

IX. ASSIGNMENT, AMENDMENT, ENFORCEMENT, TERMINATION

54. Assignment. This AGREEMENT may not be transferred or assigned, in whole or in part, by JPB or by MIDPEN without the prior written consent of the other PARTY. JPB may grant licenses which are reasonably required to carry out the MITIGATION PROJECT only with MIDPEN's prior written consent, which shall not be unreasonably withheld.

55. Amendment and Termination of AGREEMENT. This AGREEMENT may be terminated or modified only by written agreement of the PARTIES, except as otherwise provided herein. In the event the MITIGATION PROJECT is terminated by the GRBRP PERMITTING AGENCIES or the HICKS CREEK PERMITTING AGENCIES, JPB may propose a written amendment to this AGREEMENT to modify any portion of the MITIGATION PROJECT that is, as of the effective date of the GRBRP or HICKS CREEK PERMITTING AGENCIES' termination, not required to

support the compensatory mitigation required by the GRBRP PERMITTING AGENCIES. Any such amendment to the FINAL HMMP, intended to reasonably further the environmental benefits of the MITIGATION PROJECT, or to address early termination of the MITIGATION AGREEMENT, shall be subject to MIDPEN's prior written approval, not to be unreasonably withheld, to ensure that the modified MITIGATION PROJECT continues to meet MIDPEN's conservation and open space management goals.

56. Default. The occurrence of any of the following shall constitute a material default under this AGREEMENT, following notice and an opportunity to cure as set forth below: (1) JPB's abandonment of the HICKS CREEK SITE or failure to proceed with the MITIGATION PROJECT for a period of six consecutive months without MIDPEN's prior written approval; or (2) either PARTY's breach of, failure to observe, or failure to substantially perform any provision of this AGREEMENT to be observed or performed by that PARTY.

57. In the event that a PARTY breaches or fails to observe and perform any provision of this AGREEMENT, the non-breaching PARTY may give written notice thereof to the other PARTY with a demand that the breach or failure to perform be cured and corrected within thirty (30) days of the date of the notice. The breaching PARTY shall have thirty (30) calendar days to cure, or if such cure reasonably cannot be accomplished within such thirty (30) day period, commence and thereafter proceed with best efforts to complete such cure. Should the breaching PARTY fail to cure or commence and proceed to cure, as applicable, such breach within thirty (30) days following said notice, the breaching PARTY shall be in default. Any dispute concerning a breach or an alleged breach shall be subject to the dispute resolution procedures set forth in Paragraph 60, provided that the dispute resolution procedures shall not be deemed to extend the cure period set forth above.

58. In the event of default, and in addition to any other remedies available at law or in equity, this AGREEMENT shall be terminated upon delivery by the non-defaulting PARTY of notice of such termination to the defaulting PARTY.

59. Termination By Agency Order. After complying with all requirements of the FINAL HMMP and obligations set forth in this AGREEMENT with respect to the HICKS CREEK SITE, JPB may terminate this AGREEMENT if it has been issued an administrative order by the GRBRP PERMITTING AGENCIES or a court order by a court of the state of California requiring JPB to terminate the MITIGATION PROJECT.

60. Dispute Resolution and Escalation. Disputes arising under this AGREEMENT that cannot be resolved at the staff level will follow the procedures set forth in this paragraph. The process described below will be invoked after the PROGRAM DIRECTOR (identified in Paragraph 64 (Notices) of this AGREEMENT) from either PARTY has submitted an invocation to the PROGRAM DIRECTOR of the responding PARTY.

a. Invocation.

- i. Written Notice. Each PROGRAM DIRECTOR has the authority to invoke the Dispute Resolution process by providing written notice identifying the subject of the dispute to the PROGRAM DIRECTOR for the responding PARTY.

ii. Method of Resolution. Although notice of the dispute shall be provided in writing, the PROGRAM DIRECTORS may attempt to resolve the dispute either verbally or in writing.

b. Urgent Matters.

i. Initial response. For matters designated as “urgent” by the initiating PARTY, the responding PARTY shall respond within forty-eight (48) hours of receipt of notice from the initiating PARTY.

ii. Diligent efforts. The PROGRAM DIRECTORS shall make diligent efforts to resolve the dispute for up to fifteen (15) days from the responding PARTY’s response.

iii. Escalation and Executive Director Response. If the matter remains unresolved after the fifteen (15) day period, or if one or both PROGRAM DIRECTORS earlier conclude that they cannot resolve the dispute, the PROGRAM DIRECTORS shall escalate the matter by notifying one another and JPB’s DEPUTY EXECUTIVE DIRECTOR and MIDPEN’S General Manager, (identified in Paragraph 64 (Notices) of this AGREEMENT) together the “EXECUTIVES,” and providing the EXECUTIVES with all relevant information. The EXECUTIVE of the responding PARTY will have forty-eight (48) hours after receipt of notice from the EXECUTIVE of the other PARTY that staff have been unable to resolve the dispute. The EXECUTIVES shall then make a good faith effort to resolve the dispute. If the dispute or disagreement is not resolved by the process as described in the paragraphs above, the PARTIES may proceed with any method of non-binding alternative dispute resolution, including but not limited to mediation, or non-binding arbitration.

c. Non-Urgent. If the matter is not designated as “urgent” by the initiating PARTY, the dispute resolution shall proceed as above, except that the responding PARTY shall make its initial response within five (5) business days of the initial notice, the PROGRAM DIRECTORS’ diligent efforts at resolution shall extend to thirty (30) calendar days from the responding PARTY’s response, and the responding EXECUTIVE’S response upon escalation shall be provided within five (5) business days of the escalation.

If one or both PROGRAM DIRECTORS conclude that they cannot resolve the dispute after making diligent efforts to do so, they shall notify one another and their EXECUTIVES and they shall provide the EXECUTIVES with all relevant information.

d. No Limitation of Additional Rights. The PARTIES are committed to working together diligently to avoid litigation as a method of dispute resolution; however,

nothing herein will foreclose or limit the ability of either PARTY to pursue any available remedies, including without limitation judicial remedies.

61. Integration. The PARTIES agree that this AGREEMENT, including exhibits referenced herein, sets forth the entire agreement of the PARTIES with respect to the MITIGATION PROJECT and related matters herein, and supersedes all prior discussions, negotiations, understandings or agreements relating hereto. The interpretation and performance of this AGREEMENT shall be governed by the laws of the State of California. This AGREEMENT is intended solely for the purposes of carrying out the MITIGATION PROJECT and all reasonably necessary or related activities upon the terms and conditions set forth herein, and creates no joint venture, partnership, or other business relationship between the PARTIES.

62. Execution. This AGREEMENT may be executed by the PARTIES in any combination, in one or more counterparts, all of which together shall constitute one and the same instrument.

63. Miscellaneous.

- a. Interpretation. Any general rule of construction to the contrary notwithstanding, this AGREEMENT shall not be construed in favor of either PARTY. If any provision of this AGREEMENT, or its application to any person or circumstance, is determined by a court of competent jurisdiction to be invalid, the remaining provisions of this AGREEMENT shall not be affected thereby.
- b. Survival. Any and all provisions of this AGREEMENT, which by their nature or effect are required or intended to be observed, kept, or performed after the TERM or termination of this AGREEMENT, including, without limitation, provisions governing indemnities, liability and warranties, shall survive the TERM or termination of this AGREEMENT and remain binding upon and for the PARTIES' benefit.
- c. Costs and Expenses. Except as expressly set forth to the contrary herein, all costs and expenses that either PARTY may incur in connection with performing or exercising any duties, rights, or privileges granted in this AGREEMENT shall be borne by that PARTY exclusively.
- d. Time. Time is of the essence of this AGREEMENT and of each and every provision hereof. Unless specifically stated to the contrary in this Agreement, strict adherence to all dates and deadlines set forth herein is a fundamental condition of this AGREEMENT.
- e. Waiver. Either PARTY's waiver of any breach of any term, covenant, or condition of this AGREEMENT shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant, or condition of this AGREEMENT. No custom or practice that may arise between the PARTIES in the administration of the terms of this AGREEMENT shall be deemed a waiver of, or in any way affect, the rights of either PARTY to insist the other PARTY perform said terms.

- f. Counterparts. This AGREEMENT may be executed in several counterparts, and all of such counterparts so executed together shall be deemed to constitute one and the same AGREEMENT, and each such counterpart shall be deemed to be an original. Facsimile or electronic signatures shall have the same legal effect as original or manual signatures if followed by mailing of a fully executed original to both parties.
- g. No Property Rights. Any rights or privileges granted in this AGREEMENT shall not run with the land or be construed to create any real property interest in the HICKS CREEK SITE or DISTRICT PROPERTY that did not exist prior to the commencement of this AGREEMENT.

64. Notices. Any notices, demands, requests, consents, approvals, or communications between the PARTIES that are required pursuant to this AGREEMENT shall be in writing and shall be deemed to have been duly given (i) upon receipt, if delivered by hand, or (ii) upon posting, if mailed, postage prepaid, by certified mail, return receipt requested, or (iii) the business day following sending if sent by Federal Express or other nationally recognized overnight courier service or Express Mail, and addressed as follows:

To MIDPEN:

Attn. Ana Ruiz
General Manager
5050 El Camino Real
Los Altos, CA 94022

To JPB:

Attn. Sherry Bullock
Deputy Executive Director
Peninsula Corridor Joint Powers Board
166 N. Rollins Rd., 4th Floor
Millbrae, CA 94030

X. DEFINED TERMS AND ACRONYMS

The terms and acronyms listed below and used in this shall, in this AGREEMENT, have the meanings ascribed to them herein. These definitions shall apply consistently throughout the AGREEMENT unless otherwise specified.

ACCESS PERMIT means the permit, license, or written authorization issued by MIDPEN authorizing a person or entity to enter upon or conduct activities on the HICKS CREEK SITE for purposes of this AGREEMENT.

AGREEMENT means this document, as executive by the PARTIES, including all its exhibits, and their corresponding schedules and appendices, incorporated herein by reference.

AMENDED 1600 AGREEMENT means the California Department of Fish and Wildlife, Amendment of Streambed Alteration Agreement Notification No. EPIMS-SCL-20973-R3 (June 13, 2025) for the Guadalupe River Bridge Replacement Project, incorporated herein as Exhibit C.

AOC means the U.S. Environmental Protection Agency, Region 9, Administrative Order on Consent, issued July 18, 2025.

BMPs means the environmental standards, requirements, or best management practices contained in the FINAL HMMP, and that may be contained in the HICKS CREEK PERMITS, as described in Paragraph 44 of this AGREEMENT.

CDFW means the California Department of Fish and Wildlife.

DEPUTY EXECUTIVE DIRECTOR means the person with primary responsibility over Engineering, Capital and Modernization which is generally responsible for JPB's project design and construction planning and execution.

DISTRICT PROPERTY means the land owned by MIDPEN surrounding Hicks Creek, Assessor's Parcel Numbers 575-09-008, 575-09-003 and 575-08-001, a portion of which constitutes the HICKS CREEK SITE.

EFFECTIVE DATE means the date set forth in the preamble of this AGREEMENT on which this AGREEMENT is entered into by the PARTIES.

EPA means the United States Environmental Protection Agency, including the Region 9 office.

EXECUTIVE means, for the JPB, the person holding the position of DEPUTY EXECUTIVE DIRECTOR or equivalent position, and for MIDPEN, the person holding the position of General Manager or equivalent position, who is authorized to act on behalf of their respective organization in matters related to this AGREEMENT.

FINAL HMMP means the Hicks Creek Off-Site Mitigation Project Habitat Mitigation and Monitoring Plan, including the 100% design plan set and specifications and performance standards contained therein, dated July 2026, as approved by JPB, MIDPEN, and the GRBRP PERMITTING AGENCIES. The FINAL HMMP details how the MITIGATION PROJECT will be performed at the HICKS CREEK SITE and is incorporated into this AGREEMENT as **Exhibit D**.

GRBRP means the Guadalupe River Bridge Replacement Project.

GRBRP PERMITS means the environmental permits applicable to the GRBRP. These include: the SFBWRQCB Reissued 401 Water Quality Certification and Order for the Guadalupe River

Bridge Replacement Project (May 14, 2025), WDID No. 2 CW 446940, the EPA, Region 9, Administrative Order on Consent (July 18, 2025), and the CDFW Amended Streambed Alteration Agreement (June 13, 2025) and any amendments to these permits.

GRBRP PERMITTING AGENCIES means the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), the U.S. Environmental Protection Agency (EPA), and the California Department of Fish and Wildlife (CDFW), collectively or individually, in the context of the GRBRP PERMITS.

HAZARDOUS MATERIAL means material that, because of its quantity, concentration or physical or chemical characteristics, is at any time now or hereafter deemed by any federal, state or local governmental authority to pose a present or potential hazard to public health, welfare or the environment. Hazardous Materials includes, without limitation, any material or substance defined as a “hazardous substance, pollutant or contaminant” pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.) or pursuant to Section 25316 of the California Health and Safety Code; a “hazardous waste” listed pursuant to Section 25140 of the California Health and Safety Code; any asbestos and asbestos containing materials whether or not such materials are part of the Property or are naturally occurring substances on the Property, and any petroleum, including, without limitation, crude oil or any fraction thereof, natural gas or natural gas liquids.

HICKS CREEK PERMITS means the permits that JPB is required to obtain from state or federal agencies to implement the MITIGATION PROJECT, and does not include the GRBRP PERMITS.

HICKS CREEK PERMITTING AGENCIES means SFBRWQCB, CDFW, the United States Army Corps of Engineers (USACE), the United States Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS), collectively or individually, in the context of the HICKS CREEK PERMITS.

HICKS CREEK SITE means the portion of DISTRICT PROPERTY where the MITIGATION PROJECT activities will be performed, as geographically defined in the FINAL HMMP, Sheet N4, with the notation “FULL AREA EXTENT OF PROJECT ACTIVITIES”.

The term “including” means including without limitation.

JPB means the Peninsula Corridor Joint Powers Board, and any of its contractors, sub-contractors, agents, or invitees.

MIDPEN’s BMPs means the BMPs contained in MIDPEN’s Open Space Maintenance and Restoration Program Manual and Integrated Pest Management Program Manual as of the date of execution of this AGREEMENT.

MITIGATION CREDIT means all environmental mitigation credit identified and calculated pursuant to the FINAL HMMP for the purposes of satisfying offsite mitigation requirements related to the GRBRP.

MITIGATION PROJECT means the habitat enhancement and restoration project JPB will implement along approximately 550 linear feet of the Hicks Creek riparian corridor in order to satisfy the offsite compensatory mitigation requirements of the GRBRP PERMITS, as approved by the GRBRP PERMITTING AGENCIES. The scope of the MITIGATION PROJECT is defined by the FINAL HMMP incorporated herein as **Exhibit D**, and includes a construction phase, maintenance phase and monitoring phase.

MIDPEN means the Midpeninsula Regional Open Space District, and any of its contractors, sub-contractors, agents, or invitees.

NMFS means the United States National Marine Fisheries Service.

PARTIES means JPB and MIDPEN, collectively.

PARTY means JPB or MIDPEN, individually.

PERMITS means the GRBRP PERMITS and HICKS CREEK PERMITS collectively.

PROGRAM DIRECTOR means the person holding primary responsibility for overseeing, implement, or coordinating activities related to the MITIGATION PROJECT with each PARTY, respectively.

REISSUED 401 CERTIFICATION means the San Francisco Bay Regional Water Quality Control Board, Reissued 401 Water Quality Certification and Order for the Guadalupe River Bridge Replacement Project, issued May 14, 2025, to JPB, WDID No. 2 CW 446940, incorporated herein as **Exhibit A**.

SFBRWQCB means the San Francisco Bay Regional Water Quality Control Board.

TERM means the length of time in which this AGREEMENT is in effect, and runs from the EFFECTIVE DATE through the GRBRP PERMITTING AGENCIES' and/or the HICKS CREEK PERMITTING AGENCIES' determination that the MITIGATION PROJECT has achieved all required performance criteria defined in the FINAL HMMP and, if applicable, the HICKS CREEK PERMITS or December 31, 2042, whichever occurs first.

USACE means the United States Army Corps of Engineers.

USFWS means the United States Fish and Wildlife Service (USFWS).

IN WITNESS WHEREOF, the Parties have executed this Cooperative Mitigation Agreement as of the EFFECTIVE DATE written above.

PENINSULA CORRIDOR JOINT POWERS BOARD (JPB)	MIDPENINSULA REGIONAL OPEN SPACE DISTRICT (MIDPEN)
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

APPROVED AS TO FORM:	APPROVED AS TO FORM:
JPB LEGAL COUNSEL	MIDPEN LEGAL COUNSEL
By: _____	By: _____
Name: _____	Name: _____
Date: _____	Date: _____

EXHIBIT A

San Francisco Bay Regional Water Quality Control Board, Reissued 401 Water Quality Certification and Order for the Guadalupe River Bridge Replacement Project (May 14, 2025), WDID No. 2 CW 446940



**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION
AND ORDER
FOR THE**

Guadalupe River Bridge Replacement Project

Santa Clara County

Sent via electronic mail: No hard copy to follow

Effective Date: May 14, 2025
RM: 446940
Place ID: 879929
WDID No. 2 CW 446940

Applicant: Peninsula Corridor Joint Powers Board
1250 San Carlos Avenue
San Carlos, CA 94070
Phone: (650)-622-7842
Attn: Michael Tauchen, Deputy Director, Environmental Compliance
Email: tauchenm@caltrain.com

Water Board Staff: Brian Wines
1515 Clay Street, Suite 1400
Oakland, CA 94612
Phone: (510) 622-5680
Email: brian.wines@waterboards.ca.gov

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Certification and Order Coverage

This Amended Clean Water Act (CWA) section 401 Water Quality Certification (Amended Certification) and Order (Order) is issued to the Peninsula Corridor Joint Powers Board (Permittee; JPB) to amend the Certification and Order issued for the Project on May 19, 2022.

Pursuant to CWA section 404, on March 8, 2022, the Permittee received authorization to fill and discharge to waters of the U.S. from the U.S. Army Corps of Engineers (Corps), Regulatory Branch, under a CWA Section 404 Nationwide Permit (NWP) 14 (*Linear Transportation Projects*) (Corps File No. SPN-2007-00817).

The Permittee applied to the San Francisco Bay Regional Water Quality Control Board (Water Board) requesting Certification verifying that the Guadalupe River Bridge Replacement Project (Project) does not violate State water quality standards. The original application for Certification was received on March 12, 2022, and supplemental application materials were received on April 21, 2022 (collectively Application). On May 19, 2022, the Water Board issued a Certification for the Project.

As is discussed below, Project implementation in 2023 deviated significantly from the Project description and implementation measures authorized in the May 19, 2022, Certification. Work at the Project site has been halted since November 2023. This Amended Certification authorizes revisions to Project construction measures, including dewatering procedures, construction access, and Project site revegetation, and requires compensatory mitigation resulting from impacts associated with the authorized changes.

The following sections are derived from the original Application and application materials for the Amended Certification received from February 2 through May 12, 2025.

1. Project

The Project purpose is to provide a safe Guadalupe River (River) crossing for Caltrain passenger service, Union Pacific Railroad freight service, Amtrak passenger service, the Altamont Commuter Express, and the Capitol Corridor by replacing a rail bridge that has exceeded its design lifetime.

1.1 Site Description

The Project site is located on the lower Guadalupe River (River) in the City of San Jose in Santa Clara County (Lat. 37.317546; Long. -121.889174). The Project is located along a sharp meander of the River 300 feet downstream (north and east) of the State Route 87 overpass and 900 feet downstream (north) of the Willow St. bridge.

The River supports a diverse fish community including several native fish species such as steelhead, Chinook salmon (*Oncorhynchus tshawytscha*), California roach (*Lavinia symmetricus*), hitch (*Lavinia exilicauda*), Sacramento sucker (*Catostomus occidentalis*), Pacific lamprey (*Lampetra tridentate*), riffle sculpin (*Cottus gulosus*), and prickly sculpin (*Cottus asper*). Nonnative fish species include largemouth bass (*Micropterus*

salmoides), multiple species of sunfish (i.e., bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), and pumpkinseed (*Lepomis gibbosis*), goldfish (*Carassius auratus*), carp (*Cyprinus carpio*), mosquitofish (*Gambusia affinis*), and brown bullhead (*Italurus nebulosus*). Chinook salmon and steelhead are most likely to occur at the Project site between October and May.

1.2 Background

The JPB operates trains on two tracks, MT-1 and MT-2, over the River on two independent and adjacent bridges, each carrying a single track. The downstream (northerly) bridge (MT-1) is a wooden trestle bridge constructed in 1935. The upstream bridge (MT-2) is a concrete bridge constructed in 1990 as part of the Caltrans Highway 87 Project. The MT-1 bridge needs to be replaced with a new structure to maintain safe and reliable operations for all users. The MT-1 bridge does not meet current railroad structural design standards and is vulnerable to damage in the event of a significant earthquake or due to severe bank erosion during a large storm. MT-1's timber structure has been damaged by multiple fires.

The MT-1 and MT-2 bridges are located along a sharp meander of the River. The River's Project reach is characterized by floodplain fill and channel confinement, which has contributed to ongoing bank failures. The reach's geomorphic instability directly affects the safety and reliability of the railroad bridges because bank erosion is approaching the bridge abutments. The Permittee has conducted emergency bank repairs near the bridges since 2008. Following 2014 –2015 heavy rain events, the stability of the MT-1 bridge abutment was threatened by bank erosion. The Permittee completed an emergency interim repair in March 2015. In 2016, another bank toe protection project was required to stabilize scour at the toe of the bank where interim slope protection was installed in 2015. The 2016 bank toe protection employed bioengineering methods and was completed in late 2016. However, these interim measures have deteriorated with subsequent rain events and resulting high water flows. In early 2017, heavy rains resulted in flows that scoured and eroded the south (right) bank just upstream of the MT-2 bridge. About 416 cubic yards of riprap were placed along the eroded slope of the south bank in March 2017.

To address these safety issues and protect the rail bridges, the JPB will: widen the channel; replace the MT-1 bridge with a new, longer bridge; and extend the MT-2 bridge. The existing MT-2 bridge does not require replacement, but will be lengthened on its southern side to address geomorphic stability issues at the bridge abutments.

Reach 6 of the Upper Guadalupe River Flood Protection Project (Reach 6 Project) was completed in 2012, and its southern, upstream, end is 250 feet downstream of the railroad bridges. The Reach 6 Project included excavation of the right bank to allow high flows to access a relatively wide and long floodplain. Overbank flows have activated this floodplain repeatedly since construction. The Project includes floodplain grading to expand the floodplain under the MT-1 and MT-2 bridges and to connect the floodplain with the Reach 6 Project floodplain. Floodplain expansion is necessary to improve hydraulics around the bridge piers by lowering water surface elevations and to reduce

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the potential for scour at the piers and erosion of the banks. The Project will increase the total surface area of the River at the Project site and improve geomorphic stability within the River's main channel.

The JPB commenced Project construction in Spring 2023. In November 2023, the Water Board, Corps, and California Department of Fish and Wildlife (CDFW) became aware that the Project was not being constructed in conformance with the permits issued by these agencies and each issued a notice of violation or notice of non-compliance (Notices) to the JPB:

- *Notice of Violation of Certification Conditions for the Guadalupe River Bridges Replacement Project* (Reg. Meas. 446940; Place ID 879929) (Water Board NOV) (Water Board, August 30, 2024).
- *Notice of Non-Compliance with Permit Conditions, File No. SPN-2007-00817* (Corps, March 8, 2024)
- *Notice of Violation of Fish and Game Code Sections 1602, 5650, 5652 and 5901 Final Streambed Alteration Agreement No. EPIMS-SCL-20973-R3, Guadalupe River Bridges Replacement Project* (CDFW, September 13, 2024).

Prior to the Notices' issuance, the MT-2 bridge extension and associated utility relocations were completed in 2023. The bridge designs have not been revised since 2022, but designs for channel dewatering, construction access, and revegetation of the Project site have been significantly modified. This Amended Certification covers these changes to the Project.

1.3 Construction Summary

In the original Certification, Project designs were provided in the design sheets titled, *Caltrain Guadalupe River Bridge Replacement, 100% Submittal (100% Submittal)* (HDR, September 30, 2021). For the Amended Certification, the design sheets are provided in the *Caltrain Guadalupe River Bridge Replacement, Conformed April 21, 2025 Rev. 1 (Conformed Set)* (HDR, April 21, 2025). The remaining Project work authorized by this Amended Certification includes the demolition and replacement of the MT-1 bridge, seismic retrofitting of the foundations of the MT-2 bridge, and widening of the river channel. To support those tasks, this Amended Certification covers dewatering activities, temporary sheet pile shoring, temporary construction access, and implementation of the Project's on-site mitigation measures. The authorized Project elements are described in detail below.

MT-1 Bridge Replacement and MT-2 Foundation Retrofitting

The existing 187-foot-long MT-1 bridge will be demolished and replaced with a new, 265-foot long, pre-cast concrete structure. The new MT-1 bridge will be supported by two new abutments and new bridge piers. Each new pier consists of two, 5- to 8-foot-diameter, cast-in-drilled-hole piles. Pier placement has been optimized through hydraulic analysis to avoid pier placement in the River's low-flow channel. A reinforced concrete superstructure will be built on the abutments and bridge piers.

In 2023, the MT-2 bridge was extended by 90 feet at its southern end, resulting in a new total bridge length of 248.5 feet. To accommodate this extension, the existing MT-2 Abutment 5 was removed and replaced by a new pier, and the channel was widened. The northern Abutment 1 and Piers 2, 3, and 4 remained in place. Remaining work on MT-2 consists of seismic retrofit of Pier 2, Pier 3, and Pier 4.

The MT-1 and MT-2 bridges are designed to accommodate future channel widening associated with implementation of Reach 7 of the Guadalupe River Flood Control Project (Reach 7 Project). The south abutments of each bridge are designed to function as future piers if the bridges must be lengthened to accommodate the Reach 7 Project.

River Channel Widening

The Project will widen the River channel by 75 feet at the downstream end of the Project reach to create a connection to the upstream end of the floodplain and the high-flow channel that was created as part of the Reach 6 Project, which is immediately downstream (north) of the Project site. The channel widening will allow river flows to spread out on the widened high-flow channel, which will reduce flow velocities and the risk of future bank failures in the Project reach.

In-Channel Rock Modifications and Rock Riprap Stabilization Channel Bed and Banks

About 752 cubic yards of existing rock riprap, covering an area of about 0.15 acres, will be removed or repurposed in the Project's rock slope protection features if the rock meets appropriate sizing specifications.

About 0.124 acres of rock of various sizes will be placed along 342 linear feet of the bed of the low flow channel to enhance habitat for fish and stabilize the grade of the channel. This rock includes 30-inch boulders placed for rock riffle crest/keyway structures, 12-inch engineered streambed material (ESM) for rock riffle faces, 12- to 24-inch boulder/cobble material for the toe of slope.

The River's lower banks will be armored with 0.20 acres of exposed rock riprap, extending along 418 linear feet of the channel. An additional 0.351 acres of rock riprap, extending along 386 linear feet of the River banks, will be buried and covered with about two feet of soil. The soil surface will be stabilized with hydroseeded grasses, herbs, and graminoids. The buried rock armoring is intended to protect the new slope of the River bank and provide scour protection at the bridge piers (See Sheets C121 – 123 in the Conformed Set).

About 0.069 acres of buried rock, extending along 170 linear feet, will be placed in the new floodplain for grade control. This rock will be in an area that is currently outside the Water Board's jurisdiction but will become jurisdictional after Project completion. This rock includes two buried floodplain grade control structures (6-12 inches burial depth) and buried engineered streambed material surrounding the grade control structures at the downstream end of the floodplain (6-12 inches of burial depth). The total quantity of the buried grade control rock is about 600 cubic yards. The proposed burial depth of 6-

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12 inches of buried floodplain grade control rock was selected to minimize potential future downcutting and to hold grade below the MT-1 and MT-2 bridges to reduce the risk of channel avulsion, while maintaining the desired floodplain elevation for wetland establishment.

The new right bank slope that will be created by excavating the new floodplain will also be reinforced with rock riprap that will be buried under two feet of soil. This upper right bank armoring will have a surface area of 0.085 acres and will extend along 304 linear feet of the new right bank.

Post Construction Stormwater Treatment

Three existing storm drain outfalls will be protected in place, one existing outfall will be removed, and two new outfalls will be constructed. Stormwater infrastructure for the Project has been designed to comply with the water quality treatment requirements in Provision C.3 of the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP) (Order No. R2-2022-0018, as amended; NPDES Permit No. CAS612008). Two bioretention stormwater treatment cells will be constructed to treat runoff from the replacement of the MT-1 bridge and the extension of the MT-2 bridge. The Project will increase impervious surfaces at the Project site by 2,950 square feet. One stormwater treatment area will be located north of the MT-1 bridge, on the east side of the tracks, and the other stormwater treatment area will be located south of the MT-2 bridge, on the west side of the tracks (See Design Sheets C200 and C211 in the Conformed Set).

Site Restoration and On-Site Habitat Mitigation Installation

The project will result in temporary and permanent impacts to waters of the State. Some of these impacts will be mitigated at the Project site. On-site mitigation will be implemented on the JPB and Valley Water properties, and will avoid encroaching on mitigation provided by the Santa Clara Valley Water District (Valley Water) for the Reach 6 Project and areas of the River channel that are expected to be impacted by the Reach 7 Project. Mitigation measures will also avoid locations where access routes will be necessary to implement the Reach 7 Project, and maintenance roads at the Project site and City of San Jose property. On-Site Mitigation is discussed in more detail in Section 3.1, below.

Off-Site Mitigation

The Project's on-site mitigation does not fully mitigate the Project's impacts to waters of the State. To provide additional mitigation, the JPB is developing a restoration plan for Hicks Creek, a headwater tributary to Guadalupe Creek. The Hicks Creek Restoration Project will be implemented on land owned by the Mid-Peninsula Open Space District (Midpen). Off-Site Mitigation is discussed in more detail in Section 3.2, below. Because the Hicks Creek Restoration Project design has not been finalized, the final mitigation amounts may be greater or less than what is necessary to fully mitigate the Project's impacts to the River and to resolve the Water Board's NOV.

1.4 Project Phasing

Project construction will be implemented in eight phases.

Phase 1 – River Diversion Installation (starting June 2025)

Temporary 2025 Pump Bypass System

To start dewatering of the River channel for construction activities, a temporary pumped bypass system will be implemented over about 2 weeks. First, fish exclusion nets (or screens) will be installed upstream and downstream of the Project site. The nets will be secured to the channel substrate and river banks. The nets' mesh will be no greater than 1/8-inch diameter. While in place, the nets will be regularly checked and cleaned of debris to permit free flow of water. The nets will remain in place until the stream flow is diverted through temporary diversion pipes. After the nets are installed, fish relocation efforts will be conducted to capture and relocate fish from the River reach between the nets.

Next, temporary coffer dams will be installed upstream to intercept River flows and downstream to block River backwater from entering the work site. These coffer dams will be constructed from gravel bags or aquadams. Minor excavation will occur between the upstream fish exclusion net and the upstream temporary coffer dam to allow for temporary pump installation (See sheets C300 and C301 in the Conformed Set).

Pumps for the bypass system will be installed upstream of the upstream coffer dam and just downstream of the upstream fish exclusion net. Pumps will include appropriate fish exclusion screens. Diversion piping for the pumped water will be constructed along the River's north (left) bank, to a discharge point downstream of the downstream fish exclusion net. The bypass system will run 24 hours a day, seven days a week until high-density polyethylene (HDPE) 36-inch diameter-fused pipes (described in the section below) are installed and the gravity flow diversion system is operational. During bypass system operation, fish will be relocated from the dewatered area.

2025 River Diversion System (36-Inch Diversion Pipes)

With the pump bypass system in place, the JPB will construct the 2025 river diversion system. An access roadway will be excavated from the McLellan yard. The JPB will install interior coffer dams constructed of gravel bags or aquadams to completely dewater the 2025 dry season work area. Concurrent with interior coffer dam installation, three 36-inch diameter-fused HDPE diversion pipes will be installed in the low flow channel. The diversion pipes will follow the River's approximate thalweg alignment. The diversion pipes will be arranged with slightly varying entrance elevations to concentrate low flows in a single pipe; this will assist fish passage during low flows. Additional pumps will be installed in the construction area to dewater the active work area from nuisance river water seepage beneath the coffer dams. This water will be pumped through an active treatment system (ATS) prior to discharge back to the River (See sheets C302, and C320 – C323 in the Conformed Set).

Phase 2 – 2025 Dry Season Work Condition

Dewatered Area Site Preparation

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Imported 3-inch crushed rock gravel will be placed over the three 36-inch diameter diversion pipes to create a gravel land bridge. A one-foot-thick layer of spawning bed gradation gravel will be placed in the River channel to separate the 3-inch gravel from the native stream bed. The gravel bridge will facilitate construction access and create a work pad for demolition of the MT-1 bridge, construction of the new MT-1 foundations, and retrofit of the MT-2 foundations.

After the gravel is placed, the upstream and downstream exterior temporary coffer dams will be removed and the bypass system's pumps will be removed. Water will be diverted via gravity flow through the three 36-inch diversion pipes. Fish passage will be permitted downstream through the diversion pipes, but not upstream.

Bridge and Channel Construction Activities

The existing MT-1 bridge will be demolished. Temporary shoring installed in 2023 will be removed at Abutment 1 and Bent 4. Bridge bracing and wood bent frames will be removed, and pile caps will be excavated and demolished. As MT-1 is dismantled, the MT-2 bridge foundations (Piers 2, 3, and 4) will be retrofitted. The new MT-1 bridge Abutments 1 and 5 and Bents 2, 3, and 4 will be constructed, along with retaining walls and wing walls. Rock riprap scour protection will be installed at the piers and the River banks. Any groundwater encountered while drilling piers will be pumped to the ATS prior to discharge to the River. See sheets C114, C120 – C121, and C302 – C303 in the Conformed Set.

Phase 3 – Late Dry Season 2025

While flow is diverted, temporary sheet pile walls will be installed along the right and left banks of the River channel to a top elevation above the 100-year flood elevation. These sheet pile walls will isolate upper bank work areas from flow in the River in future construction phases. Sheet piles will be installed using a vibratory hammer to the greatest extent feasible and driven to full depth using an impact hammer (See sheet C304 in the Conformed Set).

Near the end of the 2025 dry season, the temporary pump bypass system will be re-established, and river flow will be re-routed through the temporary bypass, as described in Phase 1. With the temporary bypass system in place, the gravel fill, interior coffer dams, and three 36-inch diversion pipes will be removed. Upon removal of the gravel fill, the one-foot layer of spawning gravel placed on the River bed will be partially removed, leaving at least a 6-inch-thick layer of spawning gravel in the bed. The remaining sheet pile along the right bank will be installed. To provide flood protection for the work zone in the winter season, an aquadam barrier will be placed along the south end perimeter of the Reach 6 Project's floodplain. The temporary aquadam barrier and sheet pile walls will remain in place for Phase 4. The coffer dams, pump bypass system, and diversion pipes will be removed by the end of the 2025 dry season, and river flow will be returned to the low flow channel.

Phase 4 – Winter Season 2025/2026 (October 16, 2025 – June 14, 2026)

The temporary sheet pile shoring and aquadam installed in *Phase 3* will isolate work areas from wet season River flow. Any stormwater runoff in the work area will be pumped to the ATS and discharged to the San Jose sanitary sewer system.

During Phase 4, the concrete girders between MT-1 Bent 3 and Bent 4, and between Bent 4 and Abutment 5, will be set. Bridge construction will continue, including MT-2 Pier 4 retrofit completion and MT-1 foundation, pier, and superstructure construction. Grading and partial restoration work for the *Revised Guadalupe River Bridge Replacement Project Habitat Mitigation and Monitoring Plan (MMP)* in the downstream right overflow channel and bank behind the sheet pile wall will be performed.

In preparation of the 2026 dry season, three 36-inch diameter diversion pipes will be partially installed along the right bank, in the overflow channel behind the sheet pile wall. Gravel fill will be placed over the pipes to allowing travel over the pipes. See sheets C114, , C304 and C305 in the Conformed Set.

Phase 5 – 2026 River Diversion Installation (starting June 15, 2026)

The temporary bypass system described in Phase 1 will be re-established, diverting the river flow around the work area and discharging flow downstream. Fish relocation will be implemented within the dewatered area (See sheet C306 in the Conformed Set).

After the pump bypass system is operational, the right bank sheet pile wall will be extended upstream and across the main channel to block flow from entering the low flow channel. The top of the sheet pile will be placed at an elevation above the 100-year flood elevation. With the sheet pile in place across the stream, the three 36-inch diversion pipes installed in *Phase 5* will be extended upstream beyond the new sheet pile. After the pipes are installed, gravel will be placed over the pipes to prepare a work surface in the overflow channel, as described above for Phase 2 (See sheet C307 in the Conformed Set).

The aquadam barrier in the Reach 6 Floodplain installed in Phase 3 will be removed. The HDPE pipes installed in winter 2025/2026 will be extended through the Reach 6 Project's floodplain to discharge downstream of the work area. The pipes will be supported by existing ground or on temporary gravel fill to maintain the specified slope for the pipes through most of the floodplain. At the location of the existing Valley Water mitigation area, an overhead support system will suspend the HDPE pipes above the ground surface to avoid impacting Valley Water's mitigation plantings. Upstream of the mitigation area, the HDPE pipes will be supported on gravel bag piers. Cofferdams for the gravity diversion system will be installed at the upstream and downstream ends of the HDPE pipes.

Once the diversion pipe installation is complete, the pumped bypass system will be removed, and the previously installed temporary sheet pile walls will be used to divert flow into the three diversion pipes by gravity flow. Fish passage will be permitted downstream through the diversion pipes, but not upstream. The gravity diversion for the

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2026 dry season will divert flow to the east of the River's low flow channel, passing through the final overflow channel alignment. This will enable the construction of habitat enhancements (e.g. large woody debris, riffles, scour pools) within the low flow channel. Any nuisance river water seepage will be pumped to the ATS (See sheets C308 and C330 – C335 in the Conformed Set).

Phase 6 – Dry Season 2026 (July – August 2026)

With the river diverted from the existing river channel, in-channel grading work and ESM installation will be completed (See sheet C308 in the Design Sheets).

Phase 7 – Late Dry Season 2026

The left bank sheet pile wall will be removed after grading and low flow channel ESM installation are completed. The JPB will remove the downstream temporary coffer dam, upstream coffer dam, and bypass system to return flow to the low flow channel. The three 36-inch diversion pipes, aquadam, and temporary sheet piles will be removed. Final grading and channel stabilization measures will be completed.

Phase 8 –Winter Season 2026/2027

By October 15, 2026, grading and low flow channel ESM placement will be complete, and the remaining sheet pile wall will be removed. Mitigation planting will continue into the 2026/2027 winter season.

2. Impacts to Waters of the State

The Water Board has independently reviewed the Project record to analyze impacts to water quality and the environment and designated beneficial uses within the Project's watershed. The *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan) defines the beneficial uses of waters of the State. The Project will impact the Guadalupe River. The Guadalupe River has the following existing beneficial uses: groundwater recharge, cold freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, warm freshwater habitat, wildlife habitat, water contact recreation, noncontact water recreation, and navigation.

2.1 Fill and Discharge

Project implementation will temporarily impact 1.191 acres of waters of the State, extending over 569 linear feet, and permanently impact 0.849 acres of waters of the State, extending over 418 linear feet. The Project's temporary and permanent impacts to waters of the State are summarized in Table 1 and illustrated in the figures in Att. A. On-site mitigation for those impacts is summarized in Table 2 and illustrated in the figures in Att. A. Table 3 summarizes the Project's permanent and temporary impacts and the amount of mitigation provided at the Project site. The Project must provide mitigation for 0.784 acres of impacts, extending over 271 linear feet, at an off-site mitigation location(s).

Table 1. Summary of Permanent and Temporary Impacts to the Guadalupe River at the Project Site.

Type of Impact	Area (Acres)	Length Parallel to Channel (Linear Feet)
Permanent Impacts		
Areas regraded and vegetated with hydroseeding and herbaceous plants.	0.119	27
Areas regraded and hydroseeded.	0.024	106
New concrete piers and abutments.	0.012	117
Areas armored with exposed rock riprap.	0.200	418
Areas armored with unvegetated, buried rock riprap	0.143	69
Areas armored with buried rock riprap that will be vegetated with hydroseeding and herbaceous plants.	0.251	386
Areas that will be regraded and armored with buried rock riprap that will be hydroseeded.	0.100	146
Total Permanent Impacts	0.849	418*
Temporary Impacts		
Areas impacted by construction and re-vegetated with grasses and herbaceous plants	0.040	135
Temporary disturbance for access and staging	0.783	569
Temporary dewatering with Grub/Clear (0.368)	0.368	569
Total Temporary Impacts	1.191	569*
Total Permanent and Temporary Impacts	2.04	569*

* Lengths are the net length parallel to the direction of flow.

Table 2. Summary of River Channel Expansion On-Site Mitigation Credit.

Surface Treatment of Expanded Channel	Area (Acres)	Length Parallel to Channel (Linear Feet)
Expansion of channel over unvegetated, buried rock riprap.	0.068	69
Expansion of channel over buried rock riprap that will be vegetated with hydroseeding and herbaceous plants.	0.069	170
Expansion of channel over buried rock riprap that will be hydroseeded.	0.085	304
Creation of unarmored stream channel expansion that will be hydroseeded and planted with herbaceous vegetation.	0.090	109
Creation of unarmored stream channel expansion that will be hydroseeded.	0.070	261
Total Channel Expansion	0.382	304
Total Channel Expansion (unarmored)	0.160	261
Total Channel Expansion (armored)	0.222	

* New jurisdictional area that is armored with rock has lesser benefit because of the rock substrate as compared to new areas that are unarmored.

Table 3. Summary of Mitigation Required for Permanent and Temporary Impacts to the Guadalupe River at the Project Site.

Type of Impact	Area (Acres)	Length Parallel to Channel (Linear Feet)
Permanent Impacts Requiring Mitigation		
New concrete piers and abutments.	0.012 ^a	117
Areas armored with exposed rock riprap.	0.200 ^b	418
Areas armored with unvegetated, buried rock riprap	0.143 ^b	69
Areas armored with buried rock riprap that will be vegetated with hydroseeding and herbaceous plants.	0.251 ^b	386
Areas that will be regraded and armored with buried rock riprap that will be hydroseeded.	0.100 ^b	146
Permanent Impacts to be Mitigated	0.012^a 0.694^b	117* 418*
Temporary Impacts		
Total Temporary Impacts	1.191	569*
Mitigation Required for Two Years of Temporary Impacts¹	0.238	114
Total Required Mitigation	0.944	532
Mitigation Provided On-Site (See Table 2)	0.160	261
Impacts to be Mitigated Off-Site	0.784	271

* Lengths are the net length parallel to the direction of flow.

^a. Permanent impact resulting in loss of jurisdictional area waters

^b. Permanent impact resulting in degradation of waters

¹. Mitigation for temporary impacts is set at 10 percent per year of temporary impact duration.

Project implementation will increase the River's footprint in the Project reach by 0.382 acres. Of this increase, 0.222 acres will include buried rock riprap, which will prevent deep-rooted riparian vegetation from growing in the expanded footprint. In addition, Valley Water has restricted vegetation on the site to low grasses, herbs, forbs, and graminoids. Therefore, the Project will result in degradation of beneficial uses at the Project site, including a decrease in the extent of shaded riparian habitat along the Project reach.

Short-term impacts to water quality may occur in, and immediately downstream of, the Project site. Although the work site will be temporarily dewatered during in-channel work, workers, equipment, and the installation of the cofferdams may mobilize sediment in the streambed and along the banks. Localized, elevated levels of turbidity associated with

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construction activities may occur during Project construction, but will be contained to areas within the cofferdams and a short distance immediately downstream of the work site. Any elevated levels of turbidity in the water column are expected to quickly disperse from the Project area with streamflow.

One federally listed species may be present in the Project site, the Central California Coast steelhead (CCC steelhead) (*Oncorhynchus mykiss*) Distinct Population Segment and the Project site includes habitat designated as EFH for Pacific salmon (*Oncorhynchus tshawytscha*).

3. Mitigation

3.1 On-Site Mitigation

The May 19, 2022, Certification referenced the *Guadalupe River Bridge Replacement Project Habitat Mitigation and Monitoring Plan, Santa Clara County, California* (MMP) (Stillwater Sciences, January 2022). The 2022 MMP cannot be implemented since it included work on land not controlled by the JPB and included shrub and tree species on-site that Valley Water has not approved for planting in the Project reach. Thus, the MMP must be revised to accurately reflect mitigation work that will be completed on-site.

This Amended Certification requires the JPB to submit a Revised MMP, acceptable to the Executive Officer, no later than July 18, 2025. The Revised MMP must specify a 10-year monitoring and maintenance program, with monitoring reports to be provided after years 1 through 6, 8, and 10 after mitigation planting. Vegetation monitoring may end after 5 years if Year 5 performance criteria are attained.

Soil surfaces at the Project site will be stabilized by hydroseeding them with a mix of herbs, grasses, and graminoids. In addition, container plantings of herbs, graminoids, vines, and shrubs will be planted in some of the hydroseeded areas (See Tables 1 and 2 for the planting acreages). The extent of riparian enhancement provided by these plantings is limited by the amount of buried riprap at the Project site, which will prevent the establishment of deep-rooted riparian vegetation at the Project site. In addition, Valley Water's prohibition on planting willow stakes in toe of bank armoring or other tree species in the area below top of bank will prevent the establishment of shaded riparian habitat at the Project site. Although the Project will provide on-site channel creation mitigation by increasing the footprint of waters of the State by 0.382 acres at the widened channel along the right bank of the River, of this amount, 0.222 acres will have buried riprap within two feet of the soil surface.

The Project will place ESM, rocks, and woody debris within 0.124 acres of the River's low flow channel, extending along 342 linear feet. These materials will provide the following aquatic habitat features:

- Reconstructed and/or enhanced riffle-pool structures.
- In-channel large wood structures and boulder ballast placement for aquatic habitat enhancement through localized scour and sediment deposition.

- Rock weirs to hold the post-Project channel bed grade and sustain fish passage through the Project reach.

Mitigation is not required for materials placed in the low flow channel because they will enhance aquatic habitat.

The Project reach of the River will be considered geomorphically stable if the following conditions are met over the 10-year monitoring period:

- Less than one foot of scour is observed around bridge piers and/or along bridge wing walls or retaining walls.
- Active knickpoints are not observed moving through the Project reach by the end of year ten.
- Particle size distribution metrics (i.e., D16, D50, and D84) do not systematically increase or decrease by greater than one phi within the active channel during the monitoring period.
- Floodplain connectivity remains intact near the 1.5-year flow event (about 1,500 cubic feet per second) throughout the ten-year monitoring period.
- Fish passage does not become impaired at new grade control structures/riffle locations or habitat structures installed or created by the Project. Fish passage is considered possible if there are no hydraulic drops greater than 0.5 feet and maximum thalweg depths in the riffles are at least 0.4 feet deep.

3.2 Off-Site Mitigation

Providing compensatory mitigation for the Projects impacts to waters of the State at the Project site and resolving the Water Board's NOV will require at least one off-site mitigation project. At the time that this Amended Certification was issued, the JPB was working with Midpen to develop a creek restoration project on Hicks Creek. Midpen is an independent special district that protects plants and animals by preserving more than 70,000 acres of land in the greater Santa Cruz Mountains region. The JPB submitted the *Guadalupe River Bridge Replacement Project: Off-Site Mitigation Plan*, dated April 25, 2025, a concept-level plan that describes the proposed off-site mitigation project. The Amended Certification requires the JPB to submit a final off-site mitigation plan.

The Hicks Creek Restoration Project site is part of the Mt. Umunhum Area of Midpen's Sierra Azul Open Space Preserve in Santa Clara County. The land was purchased by Midpen in 2008 as part of a 90.28-acre property, giving Midpen control of Hicks Creek and the surrounding land from Hicks Road upstream to the catchment's upper boundary. Prior owners compromised the habitat quality in Hicks Creek by placing hardscape in Hicks Creek and a tributary to Hicks Creek. The hardscape includes an instream concrete pool, concrete channel lining, and rock channel lining. In addition, flow in Hicks Creek is constrained by two undersized, perched culverts that support access roads. These modifications have triggered channel incision.

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The Hicks Creek Restoration Project will remove concrete structures, concrete lining, rock lining, and undersized culverts from the creek channel. Following removal of hardscape, the creek banks will be laid back to stable grades. The restored reach of Hicks Creek will be stabilized with a chute and pool channel constructed of rock weirs. Native riparian species will be planted along the restoration project reach.

At the time that this Amended Certification was issued, the restoration plan for the Hicks Creek Restoration Project was still in development. The JPB is working on construction drawings and a monitoring and maintenance plan for Hicks Creek (Hicks MMP). The Hicks MMP will require monitoring of the restoration site in years 1 through 6, 8, and 10 after construction and planting of the restoration project. The MMP will specify interim and Year 10 performance standards for percent cover by highly invasive plant species, percent cover by native riparian plants, and percent survival of native shrubs and trees. The Hicks MMP will also include performance standards for assessing the geomorphic stability of the restored reach of Hicks Creek. The JPB will work with Midpen to provide any necessary CEQA review of the Hicks Creek Restoration Project and to obtain all necessary federal and State permits for that Project.

This Amended Certification provides conditional approval for the Hicks Creek Restoration Project as off-site mitigation that, in combination with the onsite mitigation described above, is likely to satisfy the Project's compensatory mitigation requirements for the impacts identified in the Amended Certification. This is contingent on the development of an acceptable mitigation plan for Hicks Creek, based on the submitted concept-level off-site mitigation plan, that results in substantial improvement to beneficial uses in that creek reach from the restoration of approximately 0.76 acres of riparian habitat, extending along about 700 linear feet of Hicks Creek. If the extent of creek restoration in the final design of the Hicks Creek Restoration Project, including areal extent and improvement to beneficial uses, are not sufficient to provide mitigation for the Project's impacts to the River, then the Amended Certification requires the JPB to identify and implement additional off-site mitigation projects for review and approval by the Water Board's Executive Officer. The Amended Certification does not address compensatory mitigation that may be required pursuant to impacts identified in our August 30, 2024, Notice of Violation. However, if the Hicks Creek project provides benefit in excess of that required to mitigate for the impacts identified in the Amended Certification, that excess amount may be used to address, or help address, impacts identified in the NOV.

4. California EcoAtlas

Regional, state, and national studies have determined that tracking of mitigation and restoration projects must be improved to better assess the performance of these projects, following monitoring periods that last several years. To effectively carry out the State's Wetlands Conservation Policy of no net loss to wetlands, the State needs to closely track both losses and successes of mitigation and restoration projects affecting wetlands and other waters of the State. The Water Board must also track project performance in Bay Area creeks subject to routine repair and maintenance activities, such as recurring instabilities. Therefore, we adopted the digital interactive mapping tool

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called *EcoAtlas*.^[1] *EcoAtlas* is a web-based tool that integrates maps, project plans, site conditions, restoration efforts, and other elements on a project-by-project basis based on data inputs. Accordingly, we require the Permittee to upload any changes to their Project information associated with revised designs approved in this Amended Certification to *EcoAtlas* with the *Project Tracker* tool at <https://ptrack.ecoatlas.org> (see Condition 12). The San Francisco Estuary Institute developed *EcoAtlas* and maintains detailed instructions for *Project Tracker* on its website at <https://ptrack.ecoatlas.org/instructions>.

5. California Environmental Quality Act (CEQA) Compliance

The Project's potential environmental impacts were reviewed in conformance with CEQA in the *Guadalupe Bridge Replacement Project, Initial Study/Mitigated Negative Declaration* (ISMND) (State Clearinghouse Number 2020110323). The Permittee filed a Notice of Determination (NOD) for the ISMND with the Santa Clara County Clerk on February 9, 2021.

In response to the changes in the Project's dewatering plans and construction plans, the JPB prepared the *Addendum to the Mitigated Negative Declaration for the Peninsula Corridor Joint Powers Board Guadalupe River Bridge Replacement Project* (Addendum) in February 2025. The Water Board, as a responsible agency under CEQA, has reviewed the ISMND and the Addendum and concurs that they appropriately address the Project's reasonably foreseeable environmental Impacts under CEQA. Implementation of the mitigation measures in the ISMND and the Addendum, and the mitigation measures specified in the conditions of this Certification, will mitigate the Project's impacts to waters of the State to a less than significant level.

6. Conditions

I, Eileen M. White, Executive Officer, do hereby issue this Order certifying that any discharge from the proposed Project will comply with the applicable provisions of CWA sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards), and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this Order, including the following:

6.1 Regulatory Compliance and Work Windows

1. Design Conformance

^[1] Source: California Wetlands Monitoring Workgroup (CWMW). *EcoAtlas*. Accessed March 12, 2019. <https://www.ecoatlas.org>. CWMW includes SFEI, State Board, U.S. EPA-Region IX, and other agencies with similar goals to track effects of projects in wetlands and other aquatic habitats.

The Project shall be constructed in conformance with the amended Application materials and as described in this Amended Certification, including the design sheets titled, Caltrain Guadalupe River Bridge Replacement, Conformed April 21, 2025 (Conformed Set) (HDR, April 21, 2025 (Rev.1)). Any changes to the Project that may impact waters of the State must be accepted by the Executive Officer before they are implemented. To request Executive Officer acceptance, the Permittee shall submit the proposed revisions, clearly marked and described, to the attention of the Water Board staff listed on the cover page of this Certification. The Permittee shall not implement the proposed revisions until notified that they have been accepted by the Executive Officer;

2. Work Window

To protect water in the River from sediment generation or debris associated with construction activity and to minimize potential impacts to listed fish species, construction in waters of the State is restricted to the June 15 to October 15 dry season, or to the end of any extension granted by Water Board staff on the basis of five-day weather forecasts. As is discussed in Section 1.4 of the body of this Amended Certification, work may continue all year in the areas between the sheet pile coffer dams and the top of bank;

3. Work Hours

With the exceptions noted in this condition, work shall only occur in daylight hours. Nighttime work is allowed to operate pumps necessary to set up channel dewatering equipment, to operate nuisance water pumps, and to address any emergency conditions. Emergency conditions may include, but are not limited to: removing forms and construction materials from a flooded or overtopped river diversion; fixing a “form blowout” after a concrete pour; removing damaged equipment; cleaning spills from equipment or operations; or repairing or replacing a water pump;

4. Dewatering of the Creek Channel

This Amended Certification allows dewatering of the River at the Project site for two June 15 through October 15 dry seasons. Dewatering must follow the description provided in Section 1.4 of the Body of this Amended Certification and Sheets C300 – C335 in the Conformed Set. Any changes to the approved dewatering plans must be accepted by the Executive Officer before they are implemented. To request Executive Officer acceptance, the Permittee shall submit the proposed revisions, clearly marked and described, to the attention of the Water Board staff listed on the cover page of this Certification. The Permittee shall not implement the proposed revisions until notified that they have been accepted by the Executive Officer;

5. Fish Monitoring and Relocation During Dewatering

At the beginning of dewatering activities, fish exclusion nets shall be installed upstream and downstream of the Project site. Fish exclusion nets

shall be secured to the channel substrate and riverbanks. The mesh of the nets shall be no greater than 1/8-inch diameter. While in place, the fish exclusion netting or screens shall be regularly checked and cleaned of debris to permit free flow of water. Fish exclusion nets shall remain in place until the stream flow is diverted through the temporary diversion pipes. After the fish exclusion nets are installed, fish relocation efforts shall be conducted to capture and relocate fish from between the fish exclusion nets. The fish relocation crew shall be composed of CDFW-approved fish biologists. The crew shall use multiple passes with seine nets and/or backpack electrofishing equipment to capture and relocate fish out of the dewatered section of channel. Concurrent with bypass system operation, fish relocation within the dewatered area would occur. Sweeps of the channel would be completed as water levels decrease. Captured fish shall be relocated to a suitable location downstream of the Project site. The crew shall minimize handling of fish, and when handling is necessary the crew shall always wet hands or nets prior to touching fish. Captured fish shall be held in a container that contains cool, shaded water that shall be continuously aerated with a battery-powered external bubbler. Fish shall not be subjected to jostling or excess noise and shall not be overcrowded in containers. Young-of-the-year fish shall be held separately from larger fish to avoid predation. Capture activities shall periodically cease to prevent holding captured fish for periods over 60 minutes. For all captured individuals the biologist shall identify species, assign to 50- millimeter size bins, enumerate, and then relocate to the nearest appropriate site downstream of the work area. Records of the fish species relocated, number of fish of each species relocated, and size of fish relocated shall be included in the as-built report (Condition 15). The as-built report shall also note any fish mortality, identified by species, that occurred during fish relocation;

6. Precipitation and Construction Planning

Precipitation forecasts shall be considered when planning construction activities. The Permittee shall monitor the 72-hour forecast from the National Weather Service at <http://www.nws.noaa.gov>. When there is a forecast of more than 40% chance of a rain event that produces 0.2 inches or greater of rain, or at the onset of unanticipated precipitation, the Permittee shall remove all equipment from waters of the State or below the temporary sheet pile wall as described in Section 1.4, implement erosion and sediment control measures (e.g., jute, straw, coconut fiber erosion control fabric, coir logs, straw), and cease all Project activities. If any construction activities within waters of the State or below the temporary sheet pile wall, as described in Section 1.4 will occur after October 15, a Winterization Plan shall be submitted to the Executive Officer for review and acceptance and contain, but not be limited to, the following:

a. Activities and Timeline Description—for any proposed activity that will begin or end after October 1, within waters of the State or below the

temporary sheet pile wall, as described in Section 1.4, the activity and its respective construction timeline, from start to finish, shall be described in detail.

b. Erosion Control Measures—all erosion control measures shall be described in detail, including, but not limited to, the type of erosion control measure and its material, implementation timeline, and best management practices to be used during and after implementation;

6.2 General Construction

7. Discharge Prohibition

No unauthorized construction-related materials or wastes shall be allowed to enter into or be placed where they may be washed by rainfall or runoff into waters of the State. When construction is completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be discharged to waters of the State. The Applicant shall resume construction under the current NPDES Construction Stormwater General Permit (State Water Resources Control Board Order No 2009-0009-DWQ, as amended) and shall obtain coverage under and comply with the Statewide NPDES Construction Stormwater General Permit (State Water Resources Control Board Order No. 2022-0057-DWQ, as amended, and as may be reissued). This includes the following requirements:

- a. Prior to the start of the rainy season, the Applicant shall ensure that disturbed areas of waters of the State and disturbed areas that drain to waters of the State are protected with correctly installed and maintained erosion control measures (e.g., jute, straw, coconut fiber erosion control fabric, coir logs), and/or revegetated with propagules (seeds, cuttings, divisions) of locally collected native plants. Erosion control textiles that include plastic monofilament netting are prohibited from use at the Project Site or at the Mitigation Site;
- b. Where areas of bare soil are exposed during the rainy season, appropriate erosion and sediment control measures shall be used where sediment and/or earthen fill threaten to enter waters of the State. Sediment control structures shall be monitored for effectiveness and shall be repaired or replaced as needed. Buildup of soil behind silt fences shall be removed promptly and any breaches or undermined areas repaired at once;

8. Equipment Maintenance Prohibition

No fueling, cleaning, or maintenance of vehicles or equipment shall take place within waters of the State, or within any areas where an accidental discharge to waters of the State may occur; and construction materials and heavy equipment must be stored outside of waters of the State. When work within waters of the State is necessary, best management practices shall be implemented to prevent accidental discharges;

9. Pump Management

To minimize the potential for fuel spills and noise impacts on aquatic species, diesel generators for the pumps shall be located at least 150 feet from the top of bank and placed within a spill containment berm. The generators shall be housed in wooden boxes with sound dampening materials. Pump intakes shall be periodically checked for impingement of fish or amphibians, which if found, shall be relocated to a safe location downstream of the dewatered channel segment. No artificial lighting may be installed. If nighttime activities are necessary, workers shall use flashlights to monitor the pumps and other diversion elements;

10. Beneficial Use Impacts

All work performed within waters of the State shall be completed in a manner that minimizes impacts to beneficial uses and habitat; measures shall be employed to minimize disturbances along waters of the State that will adversely impact the water quality of waters of the State. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete Project implementation;

11. Concrete Curing

Concrete used in the Project shall be allowed to completely cure (a minimum of 28 days or when water poured over the surface of concrete consistently has a pH of less than 8.5) or be treated with a sealant that is non-toxic to aquatic life before it comes into contact with flowing water (Note: Demonstration of non-toxicity to aquatic life may be evaluated by measuring survival of test organisms in a 96-hour bioassay. The bioassay should be performed according to the most up-to-date protocols in 40 CFR part 136, currently Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, 5th Edition (EPA-821-R-02-012), including sample collection, handling, and preservation in accordance with U.S. EPA protocols). Only sealants that have been tested and found non-toxic to freshwater aquatic life, including benthic macro-invertebrates, may be used on concrete surfaces that may come into contact with flowing water. Any other sealant not meeting the criteria above must be approved by CDFW prior to use;

6.3 Pre-Construction Reporting and Other Requirements

12. EcoAtlas Form

The Permittee shall input any changed Project information associated with this Amended Certification into EcoAtlas no later than 14 days from this Certification's issuance date, consistent with Section 4 herein. The Project information shall be added to the Project Tracker tool in EcoAtlas online at <https://ptrack.ecoatlas.org>. Instructions for adding information to EcoAtlas are available at <https://ptrack.ecoatlas.org/instructions>, or by contacting the Water Board staff listed on the cover page of this Certification. The Permittee shall notify the Water Board and submit documentation

demonstrating the Project has been successfully added to EcoAtlas via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead), and the notification shall reference EcoAtlas_446940_ Guadalupe River Bridge Replacement Project;

13. Commencement of Construction

The Permittee shall submit a Start of Construction (SOC) Report acceptable to the Executive Officer. The SOC Report shall be submitted no later than seven days prior to start of initial ground disturbance activities and notify the Water Board at least 48 hours prior to initiating in-water work and any stream diversions. Notification may be via telephone, email, delivered written notice, or other verifiable means. If construction activities cease for more than 30 days a new SOC Report shall be submitted in the same timeframe specified herein. The Report shall reference SOC_446940_ Guadalupe River Bridge Replacement Project; and shall be sent via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead);

14. Photo-Documentation Points

Prior to the start of construction, the Permittee shall establish a minimum of 10 photo-documentation points at the Project site. These photo-documentation points shall be selected to provide views of the new abutments and piers for MT-1 and MT-2, the expanded floodplain on the right bank and its transition to the floodplain created by the Reach 6 Project, the toe of bank on each bank of the River, and the enhanced and stabilized low flow channel through the Project reach. These photo-documentation points shall be used to track the pre- and post-construction condition of the River at the Project site, and to track the progress of revegetation and the ongoing geomorphic stability of the Project reach of the River. The Permittee shall prepare a site map(s) with the photo-documentation points clearly marked. Prior to and following Project construction and mitigation planting, the Permittee shall photographically document the immediate pre- and post-Project condition at locations where impacts to waters of the State occur, including temporarily impacted areas of the Project site. The post-construction photographs and map(s) shall be submitted, along with the as-built and construction completion reports (See Conditions 15 and 16);

6.4 Active Construction and Post-Construction Reporting Requirements

15. As-Built Report

The Permittee shall prepare an as-built report acceptable to the Executive Officer upon the completion of Project construction, including the implementation of the required mitigation planting. The as-built report shall be submitted to the Water Board no later than 60 days after completing Project construction activities. The report shall include a description of the areas of actual disturbance during Project construction and the photographs

and map specified in Condition 13. The report(s) shall clearly identify and illustrate the Project activities that occurred and the locations where impacts to waters of the State occurred. The as-built report shall include the 100 percent construction plans marked with the contractor's field notes that clearly depict any deviations made during construction from the designs reviewed by the Water Board. The as-built report will also include records of the fish species relocated, number of fish of each species relocated, and size of fish relocated (Condition 5). The as-built report will also note any fish mortality, identified by species, that occurred during fish relocation. The As-Built report shall reference **As-Built_ 446940_ Guadalupe River Bridge Replacement Project** and shall be sent via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead);

16. Project Construction Completion Report

The Permittee shall submit a Notice of Project Construction Completion (NOC) acceptable to the Executive Officer to notify the Water Board that the Project has been completed. The Completion Notice shall be submitted to the Water Board no later than 60 days after completing all Project construction activities. The Completion Notice shall include the as-built reports (see Condition 15), the post-construction photographs (see Condition 14), the date of the first Project-related disturbance of waters of the State occurred, and the date construction was completed for each Project activity. The Notice shall include the date Project construction activities (defined as Project construction and vegetation) were completed and reference **NOC_446940_ Guadalupe River Bridge Replacement Project**. The Notice shall be sent via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead);

6.5 On-Site Mitigation and Monitoring Requirements

17. Mitigation Implementation and Maintenance Requirements

The Permittee shall submit a *Revised Guadalupe River Bridge Replacement Project Habitat Mitigation and Monitoring Plan, Santa Clara County, California* Revised (MMP) to the Water Board, acceptable to the Executive Officer, no later than July 18, 2025. Upon receiving approval of the Revised MMP from the Water Board's Executive Officer, the Permittee shall implement the Revised MMP. Implementation shall include (1) monitoring and maintaining impacted areas of the Project site to verify that the vegetation has met applicable success criteria and (2) geomorphic monitoring of the Project reach to ensure it is geomorphically stable.

18. Vegetation Monitoring

Revegetation in impacted areas in the riparian corridor and vegetation planting in the Project reach shall be maintained and monitored for a minimum period of 5 years, as specified in the approved Revised MMP, until

the Year 5 performance criteria in the Revised MMP are achieved. Plant species to be established at the Project site shall be consistent with the species approved by Valley Water.

To ensure that the on-site mitigation for impacts to waters of the State is performing as intended, the Permittee shall monitor mitigation plantings for a minimum of 5 years as described in the Revised MMP. The Year 5 vegetation performance criteria in Revised MMP, shall be used to assess the success of mitigation vegetation at the Project site. Percent survival shall be evaluated individually for each planted species. To demonstrate that mitigation plantings have become successfully established, no irrigation shall be used in the last 2 years of monitoring. Only shrubs that have not been irrigated for at least 2 years may be used to meet Year 5 through Year 10 performance criteria.

19. Geomorphic Monitoring

Geomorphic monitoring of the Project reach shall be conducted as specified in the Revised MMP, for a minimum period of 10 years, including conducting topographic surveys, geomorphic mapping, and fish passage assessments until the Year 10 performance standards in the MMP are achieved. At the end of the initial 10-year monitoring period, the Project site shall be considered geomorphically stable if the following conditions are met:

- Less than one foot of scour is observed around bridge piers and/or along wing walls or retaining walls;
- Active knickpoints are not moving through the Project reach by the end of year ten;
- Particle size distribution metrics (i.e., D16, D50, and D84) do not systematically increase or decrease by greater than one phi within the active channel during the monitoring period;
- Floodplain connectivity remains intact near the 1.5-year flow event (approximately 1,500 cubic feet per second) throughout the 10-year monitoring period; and
- Fish passage does not become impaired at new grade control structures, riffle locations, or at habitat structures installed or created by the Project, based on hydraulic drops no greater than 0.5 feet and maximum thalweg depths in riffles of at least 0.4 feet;

20. Corrective Actions

If vegetation is failing to meet percent cover or percent survival criteria in any monitoring year, the Permittee shall document these observations in the next monitoring report and provide corrective action recommendations, as necessary. If the performance criteria are not achieved, dead plants shall be replaced in-kind, unless the Permittee demonstrates that the site is not conducive to survival of a plant species, in which case alternative native species may be used with the concurrence of the Water Board's Executive

Officer. Replacement plantings shall be made within 1 year of survival rates failing to meet the specified performance criteria. Replacement shrubs shall be monitored for 5 years from the date of replanting. Replacement plants are subject to the same performance criteria as the initial plantings.

If the Project reach is exhibiting signs of geomorphic instability, the Permittee shall document these observations in the next monitoring report and provide corrective action recommendations, as necessary.

After receipt of a monitoring report, if corrective actions are determined necessary by the Executive Officer, the Permittee shall be required to re-submit the corresponding annual report to include corrective actions or revise recommended corrective actions that were previously proposed or accepted by the Executive Officer. After proposed corrective actions are approved by the Water Board's Executive Officer, remedial actions shall be implemented in the first dry season after receiving approval for physical modifications and in the first rainy season after receiving approval for supplemental vegetation plantings.

If any adverse impacts to waters of the State are observed during the initial 10-year geomorphic monitoring period, the monitoring period may be extended, and additional compensatory mitigation may be required by the Executive Officer;

21. Monitoring Reports

The Permittee shall submit monitoring reports acceptable to the Executive Officer by January 31 following monitoring years 1 through 6, 8, and 10. The first monitoring year commences in the calendar year following completion of the Project. At the time of this Certification and Order, the Project is anticipated to be completed in 2026. Therefore, the first annual monitoring report shall be due on January 31, 2028, unless the Project is completed at a different time. Annual reports shall include, but not be limited to, the following:

- a) Photographs: photographs taken during the monitoring year from the photo-documentation points specified in Condition 14 shall be included in each monitoring report. The photographs shall include captions with respect to the photograph's point of view, direction of flow, locations of Project activities, location of the photo-documentation point, and date photographed.
- b) Environmental Drivers: each monitoring report shall describe the precipitation events that occurred at the site during the monitoring year. The effects of the Project and environmental drivers (e.g., precipitation events, drought events) on site conditions shall be described in reference to the monitoring year's precipitation events.
- c) Cumulative Monitoring: each annual report shall summarize all data from previous monitoring reports in addition to the current year's monitoring data, including the need for, and implementation of, any remedial

actions. Monitoring data may include all relevant qualitative and quantitative data necessary to determine whether the site is stable. The final monitoring report shall document whether the temporarily impacted areas were restored to their pre-Project condition.

Reports shall document the status of the Project's attainment of performance criteria for vegetation and geomorphic stability. The overall Project and mitigation success shall be determined by, and acceptable to, the Executive Officer. If monitoring indicates that beneficial uses have been, or have the potential to be, adversely affected, the Permittee shall, in consultation with Water Board staff, identify remedial measures to be undertaken, including additional compensatory mitigation and extension of the monitoring and reporting period until the final performance standards are met. Annual Monitoring Reports shall be submitted via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead) and reference **AMR_446940_Guadalupe River Bridge Replacement Project** in the subject line when sent electronically or in the cover letter for hard copy submissions;

6.6 Off-Site Mitigation and Monitoring Requirements

22. Off-Site Mitigation Implementation and Maintenance Requirements

This Amended Certification provides conditional approval and deadlines for the Hicks Creek Restoration Project as the off-site mitigation the Permittee is required to complete to compensate for Project impacts. This is contingent on the development of an acceptable mitigation plan for Hicks Creek that results in substantial improvement to beneficial uses in that creek reach; the amount of off-site mitigation credit provided for the Project by the Hicks Creek Restoration Project shall be determined based on the final designs for this restoration project. Because the Hicks Creek Restoration Project design has not yet been finalized, the final mitigation amounts may be greater or less than the amount required to compensate for Project impacts. To facilitate Project construction, the Amended Certification sets forth a process to determine final off-site mitigation requirements. The Hicks Creek Restoration Project is anticipated to restore 0.76 acres of riparian habitat, extending along 700 linear feet of Hicks Creek which would provide in-kind mitigation for Project impacts (i.e., new concrete piers/abutments and rock riprap armoring in the River channel) because it will remove concrete and rock armoring from the channel of Hicks Creek and restore a vegetated riparian corridor.

The Permittee shall submit a *Hicks Creek Restoration Project Mitigation and Monitoring Plan* (Hicks MMP) to the Water Board no later than December 1, 2025. Upon receiving approval of the Hicks MMP from the Water Board's Executive Officer, the Permittee shall implement the Hicks MMP in the first dry season after obtaining all necessary federal and State permits for implementation of the Hicks Creek Restoration Project. If any adverse

impacts to waters of the State are observed during the initial 10-year monitoring period at Hicks Creek, its monitoring period may be extended and additional compensatory mitigation may be required by the Executive Officer;

23. Off-Site Vegetation Monitoring

Revegetation in temporarily impacted areas in the Hicks Creek riparian corridor and riparian vegetation planting in the Hicks Creek Restoration reach shall be maintained and monitored for a minimum period of 10 years, as specified in the approved Hicks MMP, until the Year 10 performance criteria are achieved. The Hicks MMP shall require monitoring of the restoration site in years 1 through 6, 8, and 10 after construction and planting of the restoration project. The MMP shall specify interim and Year 10 performance criteria for percent cover by highly invasive plant species, percent cover by native riparian plants, and percent survival of native shrubs and trees. Percent survival shall be evaluated individually for each planted species.

To demonstrate that mitigation plantings have become successfully established, no irrigation shall be used in the last two years of monitoring. Only shrubs and trees that have not been irrigated for at least 2 years may be used to meet Year 5 through Year 10 performance criteria. If any performance criteria are not met in a monitoring year, the Permittee shall assess the deficiencies that led to the underperformance and recommend corrective actions, as necessary, to ensure the Year 10 success criteria are met in the final monitoring year. This assessment and recommendations for corrective actions shall be included in the next required monitoring report (See Condition 26);

24. Off-Site Geomorphic Monitoring

Geomorphic monitoring of the Hicks Creek reach shall be conducted as specified in the Hicks MMP, for a minimum period of 10 years, including conducting topographic surveys and fish passage assessments, until the Year 10 performance standards in the Hicks MMP are achieved. At the end of the initial 10-year monitoring period, the Hicks site shall be considered geomorphically stable if the geomorphic performance standards in the approved Hicks MMP are attained;

25. Off-Site Corrective Actions

If vegetation is failing to meet percent cover or percent survival performance criteria in any monitoring year, the Permittee shall document these observations in the next monitoring report and provide corrective action recommendations, as necessary. If the vegetation performance criteria are not achieved, dead plants shall be replaced in-kind, unless the Permittee demonstrates that the site is not conducive to survival of a plant species, in which case alternative native species may be used with the concurrence of the Water Board's Executive Officer. Replacement plantings shall be made

within one year of survival rates or percent cover failing to meet the specified performance standards. Replacement shrubs shall be monitored for five years from the date of replanting and replacement trees shall be monitored for ten years from the date of replanting. Replacement plants are subject to the same performance standards as the initial plantings.

If the Project reach is exhibiting signs of geomorphic instability, the Permittee shall document these observations in the next monitoring report and provide corrective action recommendations, as necessary.

After receipt of a monitoring report, if corrective actions are determined necessary by the Executive Officer, the Permittee shall be required to re-submit the corresponding annual report to include corrective actions or revise recommended corrective actions that were previously proposed or accepted by the Executive Officer. After proposed corrective actions are approved by the Water Board's Executive Officer, corrective actions shall be implemented in the first dry season after receiving approval for physical modifications and in the first rainy season after receiving approval for supplemental vegetation plantings;

26. Off-Site Monitoring Reports

The Permittee shall submit monitoring reports, acceptable to the Executive Officer, by January 31 following monitoring years 1 through 6, 8, and 10. The first monitoring year commences in the calendar year following completion of the Project. At the time of this Amended Certification, the Hicks Creek Restoration Project is anticipated to be completed in 2026. Therefore, the first annual monitoring report shall be due on January 31, 2028, unless that project is completed at a different time. Annual reports shall include, but not be limited to, the following:

- a) **Photographs**: photographs taken during the monitoring year from the photo-documentation points specified in the Hicks MMP shall be included in each monitoring report. The photographs shall include captions with respect to the photograph's point of view, direction of flow, locations of Project activities, location of the photo-documentation point, and date photographed.
- b) **Environmental Drivers**: each monitoring report shall describe the precipitation events that occurred at the site during the monitoring year. The effects of the Project and environmental drivers (e.g., precipitation events, drought events) on site conditions shall be described in reference to the monitoring year's precipitation events.
- c) **Cumulative Monitoring**: each annual report shall summarize all data from previous monitoring reports in addition to the current year's monitoring data, including the need for, and implementation of, any remedial actions. Monitoring data may include all relevant qualitative and quantitative data necessary to determine whether the site is stable.

The final monitoring report shall document whether the temporarily impacted areas were restored to their pre-Project condition.

Reports shall document the status of the Hicks Creek Restoration Project's attainment of performance standards for vegetation and geomorphic stability. The overall Project and mitigation success shall be determined by, and acceptable to, the Executive Officer. If monitoring indicates that beneficial uses have been, or have the potential to be, adversely affected, the Permittee shall, in consultation with the appropriate agencies, identify remedial measures to be undertaken, including additional compensatory mitigation and extension of the monitoring and reporting period until the final performance standards are met. Annual Monitoring Reports shall be submitted via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead) and reference **AMR_446940_Guadalupe River Bridge Replacement Project** in the subject line when sent electronically or in the cover letter for hard copy submissions;

27. Additional Off-site Mitigation

If the Water Board's Executive Officer determines that the combined on-site mitigation and the off-site mitigation at the Hicks Creek Restoration Project are not sufficient to provide mitigation for the Project's impacts to waters of the State and to resolve the Water Board's NOV, the JPB shall provide additional off-site mitigation proposals to the Water Board's Executive Officer for review and approval within 12 months of being informed that additional off-site mitigation is necessary. After receiving Executive Officer approval of the additional off-site mitigation, the JPB shall implement the additional off-site mitigation within one year of receiving Executive Officer approval;

6.7 Post-Construction Stormwater Treatment

28. Project Compliance with the MRP

The Permittee shall ensure the Project complies with MRP Provision C.3 by constructing the bioretention cells illustrated in Design Sheets C200 and C211 in the Conformed Set. The stormwater bioretention cells at the Project site shall be constructed and operational in the first rainy season in which new or recreated impervious surfaces are created that drain to a bioretention cell, following the stabilization of soil within the drainage area tributary to the bioretention cells. If soil in areas that discharge to a bioretention cells has not been stabilized prior to the first rainy season after the impervious surfaces have been created, the Permittee shall continue to provide construction stormwater management practices consistent with the requirements of Condition 6 until the surfaces have been stabilized and stormwater can be discharged to the bioretention cells. Any changes from the treatment measures described in the body of this Certification and the plan referenced in this Condition, including sizing, locations, or designs of

stormwater treatment facilities, shall not be implemented without the prior written approval of the Executive Officer;

29. Operation and Maintenance of Stormwater Facility Requirements at the Project Site

The Permittee shall ensure that the bioretention cells are operated and maintained in conformance with the MRP requirements;

6.8 Administrative and General Compliance

30. Site Access

The Permittee shall grant Water Board staff or an authorized representative, upon presentation of credentials and other documents as may be required by law, permission to: (1) enter upon the Project site or compensatory mitigation site(s) where a regulated facility or activity is located or conducted, or where records are kept; (2) have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order; (3) inspect any facilities, equipment, practices, or operations regulated or required under this Order; and (4) sample or monitor for the purposes of assuring Order compliance. Water Board staff or authorized representatives will be required to adhere to all applicable health and safety protocol when entering the Project site;

31. Certification and Order at Site

A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall remain at the Project site for the duration of this Order. The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors;

32. Ownership Change Notification

The Permittee shall provide a signed and dated notification to the Water Board of any change in ownership or interest in ownership of any Project area at least 10 days prior to the transfer of ownership. The purchaser shall also submit a written request to the Water Board to be named as the permittee in an amended order. Until this Order has been modified to name the purchaser as the permittee, the Permittee shall continue to be responsible for all requirements set forth in this Order;

33. Water Quality Violations Notification

The Permittee shall notify the Water Board of any violations of water quality standards, along with the cause of such violations, as soon as practicable (ideally within 24 hours). Notification may be via telephone, email, delivered written notice, or other verifiable means;

34. Discharge Change Notification

In accordance with Water Code section 13260, the Permittee shall file with the Water Board a report of any material change or proposed change in the ownership, character, location, or quantity of this waste discharge. Any proposed material change in operation shall be reported to the Executive Officer at least 30 days in advance of the proposed implementation of any change. Changes to discharges include, but are not be limited to, significant new soil disturbances, proposed expansions of development, or any change in drainage characteristics at the Project site. For the purpose of this Order, this includes any proposed change in the boundaries of the area of wetland/waters of the State to be impacted;

35. Submittal of Reports

Where this Certification requires submittal of reports, including plans, reports, or related information, the submitted reports shall be acceptable to the Executive Officer;

36. Individual Waste Discharge Requirements

Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements pursuant to Water Code sections 13263 and/or 13377 and 23 CCR section 3857;

37. Expiration

This Order shall continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project;

6.9 Standard Conditions

38. Certification and Order Modification

This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code sections 13320 and 13330 and 23 CCR section 3867;

39. Hydroelectric Facilities

This Order does not apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought;

40. Application Fee

This Certification and Order is conditioned upon full payment of the required fee, including annual fees, as set forth in 23 CCR section 3833. The required \$76,590 fee was calculated using the 2024/2025 Water Quality Certification Dredge and Fill Application Fee Calculator, Category A— *Fill & Excavation Discharges*, for a project with a total of 2.04 acres of permanent

Amended Water Quality Certification
Guadalupe River Bridge Replacement Project

RM: 446940
WDID# 2 CW 446940

and temporary impacts. Payment in full was received by the Water Board on May 13, 2025;

6.10 Annual Fees

41. Annual Fee

In accordance with 23 CCR section 2200, the Permittee shall pay an annual fee to the Water Board each fiscal year (July 1 – June 30) until Project construction activities are completed and an acceptable Notice of Project Construction Completion is received by the Water Board (See Condition 16). In addition, an annual fee shall be paid to the Water Board until all required monitoring reports have been submitted (See Conditions 21, 26, and 27) and an acceptable Notice of Mitigation Monitoring Completion is received by the Water Board. Annual fees will be automatically invoiced to the Permittee. **The Permittee must notify the Water Board at Project and/or mitigation completion with a final report to request to terminate annual invoicing.** Notification shall reference **NOT_ 446940_Guadalupe River Bridge Replacement Project** and should be sent to the staff listed at the bottom of this Order and to RB2-401Reports@waterboards.ca.gov. Water Board staff will verify conditions of the Certification have been met and may request a site visit at that time to confirm the Project's status and compliance with this Certification;

This Order applies to the Project as proposed in the application materials and designs referenced above in the conditions of Certification. Be advised that failure to implement the Project in conformance with this Order is a violation of this Certification. Any violation of Certification conditions is a violation of State law and subject to administrative civil liability pursuant to Water Code sections 13350, 13385, or 13399.2. Failure to meet any condition of this Certification may subject the Permittee to civil liability imposed by the Water Board to a maximum of \$25,000 per day of violation and/or \$25 for each gallon of waste discharged in violation of this action above 1000 gallons. Any requirement for a report made as a condition to this Certification (e.g., conditions 12, 13, 15, 16, 17, 22, 23, 28, 29, 34, 35, 36, and 43) is a formal requirement pursuant to Water Code sections 13267 and 13383, and failure or refusal to provide, or falsification of such required report, is subject to civil liability as described in Water Code section 13268 and criminal liability under 13387. The burden, including costs, of these reports bears a reasonable relationship to the need for the report and the benefits to be obtained. Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements.

Amended Water Quality Certification
Guadalupe River Bridge Replacement Project

RM: 446940
WDID# 2 CW 446940

If you have any questions concerning this Order, please contact Brian Wines of my staff at (510) 622-5680 or brian.wines@waterboards.ca.gov. All future correspondence regarding this Project should reference Regulatory Measure **446940** as indicated at the top of this letter.

Sincerely,

Eileen M. White

Eileen M. White, P.E.
Executive Officer

Attachment A: Figures Summarizing Impacts to Waters of the State and Stabilization and Mitigation at the Post Project Site.

cc: SWRCB, DWQ, stateboard401@waterboards.ca.gov
Water Board, Victor Aelion, victor.aelion@waterboards.ca.gov
CDFW:

Jason Faridi, jason.faridi@wildlife.ca.gov
Melony Wood, melony.wood@wildlife.ca.gov
Michelle Battaglia, michelle.battaglie@wildlife.ca.gov

U.S. EPA, Region IX:

Region IX Mailbox, r9cwa401@epa.gov
Jennifer Siu, siu.jennifer@epa.gov
Scott McWhorter, mcwhorter.scott@epa.gov

Corps:

Katerina Galacatos, katerina.galacatos@usace.army.mil
Sarah Firestone, sarah.m.firestone@usace.army.mil
Jessica Vargas, jessica.m.vargas@usace.army.mil

Valley Water:

Lisa Brancatelli, lbrancatelli@valleywater.org
Yvonne Arroyo, yarroyo@valleywater.org
Colleen Haggerty, chaggerty@valleywater.org
Sean Hobbs, CPRUinspector@valleywater.org

NMFS, Darren Howe, Darren.howe@noaa.gov

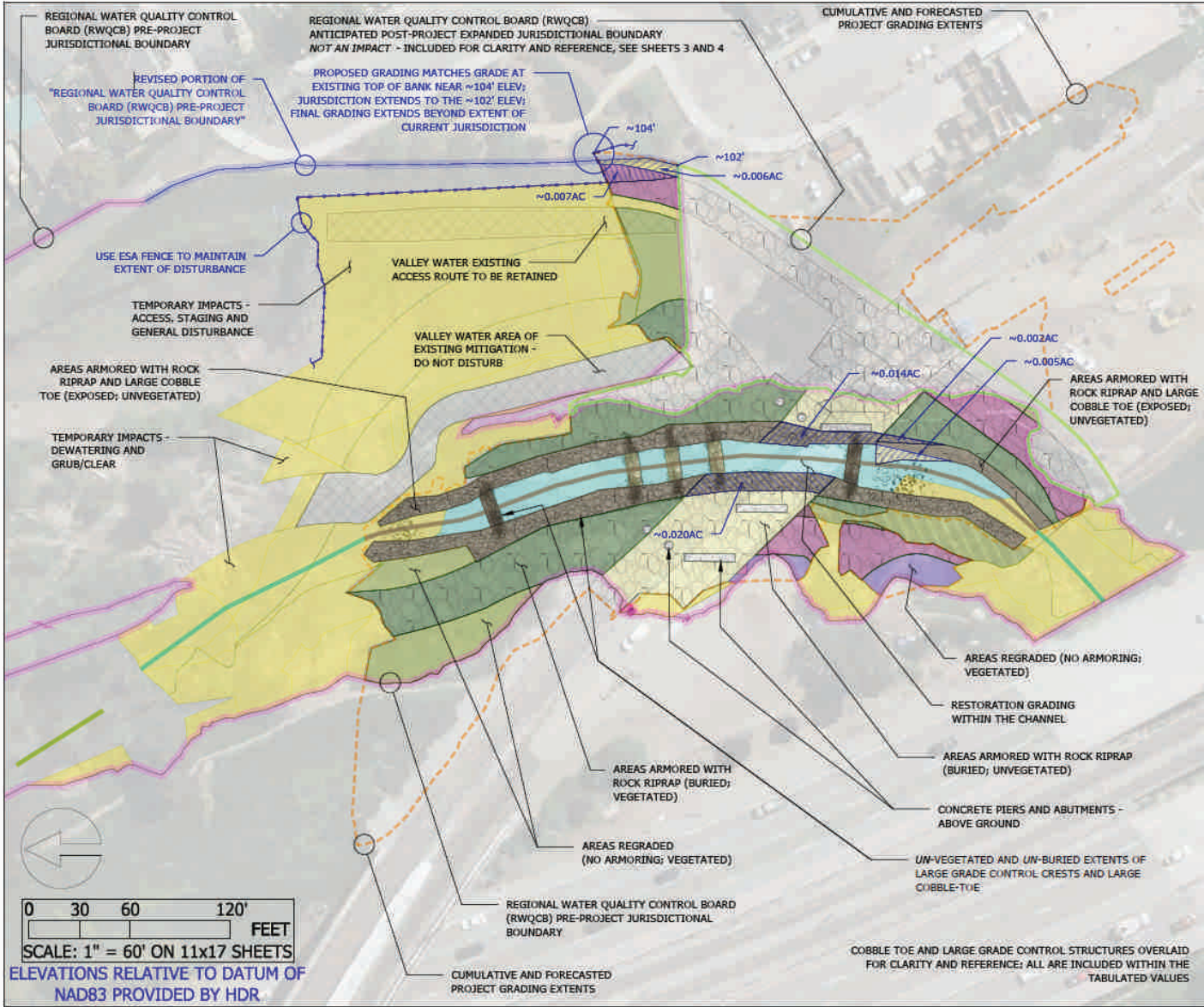
JPB:

Bonny OConnor, oconnorb@caltrain.com
Sherry Bullock, bullocks@caltrain.com

ATTACHMENT A

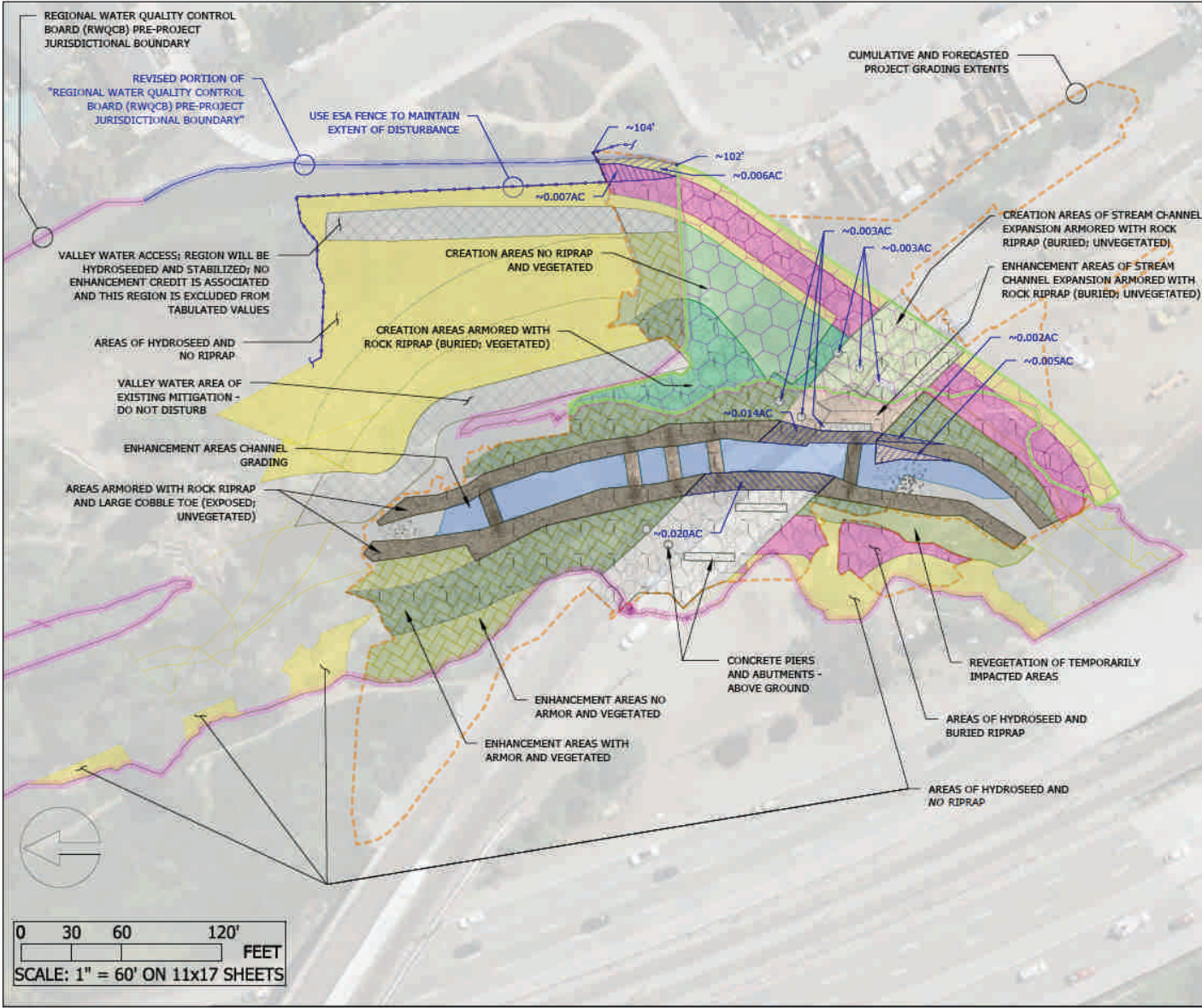
Amended Water Quality Certification for the Guadalupe River Bridge Replacement Project in the City of San Jose Santa Clara County

Site Figures of Project Impacts



LEGEND			
SWATCH / KEY	RELEVANT REGION WITHIN RWQCB'S PRE-PROJECT JURISDICTIONAL BOUNDARY	AREA (ACRES)	LENGTH (LINEAR FEET OF CHANNEL)
	PRE-PROJECT RWQCB JURISDICTIONAL BOUNDARY	-	-
	AREAS REGRADED AND ANTICIPATED TO BECOME JURISDICTION - NOT AN IMPACT, SEE SHEETS 3 & 4	SEE SHEET 3 & 4	SEE SHEETS 3 & 4
	TOTAL LENGTH OF PERMANENT IMPACT OF FINAL RSP AND ROCK ARMOR	CENTER LENGTH ONLY	47+27+8+80+8+20+43+74+23+59+29 = 418
	TOTAL LENGTH OF TEMPORARY IMPACT RELATED TO DEWATERING	CENTER LENGTH ONLY	119+36+58 = 213
	TOTAL LENGTH OF TEMPORARY IMPACT RELATED TO ACCESS	CENTER LENGTH ONLY	61
	SUBSTRATE MODIFICATION (ESM)	0.124	27+8+80+8+63+74+23+59 = 342
	AREAS REGRADED (NO ARMORING; VEGETATED WITH GRASSES AND HERBACEOUS PLANTS ONLY)	0.119	27
	AREAS OF NO GRADING, AND NO ARMORING; VEGETATED WITH GRASSES AND HERBACEOUS PLANTS ONLY	0.0400	135
	AREAS REGRADED WITHOUT BURIED RIPRAP AND WITH INSTALLED HYDROSEED	0.024	106
	NEW CONCRETE PIERS AND ABUTMENTS; WITHIN EXISTING JURISDICTION	0.012	117
	AREAS ARMORED WITH ROCK RIPRAP (EXPOSED; UNVEGETATED)	0.200	47+27+8+80+8+63+74+23+59+29 = 418
	AREAS ARMORED WITH ROCK RIPRAP (BURIED; UNVEGETATED) VALUE SHOWN IS WITHIN JURISDICTION	0.143	69
	AREAS ARMORED WITH ROCK RIPRAP (BURIED AND VEGETATED; GRASS/HERBACEOUS)	0.2510	211+67+108 = 386
	AREAS REGRADED WITH BURIED RIPRAP AND WITH INSTALLED HYDROSEED	0.100	27+119 = 146
	ROCK RIPRAP AND ARMOR INSTALLED BEYOND THE CURRENT RWQCB JURISDICTION; NOT AN IMPACT, SHOWN FOR CLARITY	-	-
	NO GRADING - GENERAL TEMPORARY DISTURBANCE FOR ACCESS AND STAGING (0.783) & TEMPORARY DEWATERING WITH GRUB/CLEAR (0.368)	1.151	61+155+145+62+59+29+58 = 569
	CUMULATIVE AND FORECASTED PROJECT BOUNDARY OF DISTURBANCE	-	-
	VALLEY WATER FEATURES AND AREAS OF SPECIAL CONCERN	-	-
	AREAS OF REVISIONS MADE SINCE LAST RWQCB REVIEW; FROM REV.E INTO THIS REV.F	-	-

PRELIMINARY DRAFT
FOR COORDINATION AND CONSENSUS
SHEET 1 OF 4; REV.F - 5/12/2025



LEGEND			
SWATCH / KEY	RELEVANT REGION WITHIN RWQCB'S PRE-PROJECT JURISDICTIONAL BOUNDARY	AREA (ACRES)	LENGTH (LINEAR FEET OF CHANNEL)
	PRE-PROJECT RWQCB JURISDICTIONAL BOUNDARY	-	-
	CREATION AREAS REGRADED AND ANTICIPATED TO BECOME JURISDICTION	0.382	
	ENHANCEMENT AREAS WITHIN PRE-PROJECT RWQCB JURISDICTIONAL BOUNDARY	0.345	
	CREATION AND GRADING OF STREAM CHANNEL EXPANSION AREAS ARMORED WITH BURIED ROCK RIPRAP AND UNVEGETATED - VALUE OF NEW JURIS	0.068	69
	CREATION AND GRADING OF STREAM CHANNEL EXPANSION AREAS ARMORED WITH BURIED ROCK RIPRAP AND HERBACEOUS VEGETATION	0.069	170
	CREATION AND GRADING OF STREAM CHANNEL EXPANSION AREAS ARMORED WITH BURIED ROCK RIPRAP AND VEGETATED WITH HYDROSEED	0.085	373-69 = 304
	CREATION AND GRADING OF STREAM CHANNEL EXPANSION AREAS WITH NO ARMOR AND COVERED WITH HERBACEOUS VEGETATION	0.090	109
	CREATION AND GRADING OF STREAM CHANNEL EXPANSION AREAS WITH NO ARMOR AND VEGETATED WITH HYDROSEED	0.070	21+109+13+118 = 261
	ENHANCEMENT AND GRADING OF AREAS WITHIN EXISTING JURISDICTION, ARMORED WITH BURIED ROCK RIPRAP AND HERBACEOUS VEGETATION	0.2510	211+67+108 = 386
	ENHANCEMENT AND GRADING OF AREAS WITHIN EXISTING JURISDICTION, WITH NO ARMOR AND COVERED IN HERBACEOUS VEGETATION	0.103	26
	SUBSTRATE MODIFICATION (ESM)	0.124	27+8+80+8+63+74+23+59 = 342
	SUBSTRATE MODIFICATION AND GRADING OF STREAM CHANNEL EXPANSION AREAS ARMORED WITH BURIED ROCK RIPRAP AND UNVEGETATED	0.0450	45+69+8+8 = 138
	AREAS ARMORED WITH BURIED ROCK RIPRAP AND VEGETATED WITH HYDROSEED	0.1000	118
	AREAS WITH NO ARMOR AND VEGETATED WITH HYDROSEED	0.6660	53+31+50+208+177 = 519
	AREAS WITHIN EXISTING JURISDICTION, WITH NO ARMOR AND COVERED IN HERBACEOUS VEGETATION	0.0460	138
	NEW CONCRETE PIERS AND ABUTMENTS	0.006	117
	CUMULATIVE AND FORECASTED PROJECT BOUNDARY OF DISTURBANCE	-	-
	VALLEY WATER FEATURES AND AREAS OF SPECIAL CONCERN	-	-
	AREAS ARMORED WITH ROCK RIPRAP (EXPOSED; UNVEGETATED)	0.2000	41+77+52+68+73+45+38+31 = 425
	AREAS OF REVISIONS MADE SINCE LAST RWQCB REVIEW; FROM REV.E INTO THIS REV.F	-	-

PRELIMINARY DRAFT
FOR COORDINATION AND CONSENSUS
SHEET 3 OF 4; REV.F - 5/12/2025

EXHIBIT B

U.S. Environmental Protection Agency, Region 9, Administrative Order on Consent (July 18, 2025)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9

75 Hawthorne Street
San Francisco, California 94105

IN THE MATTER OF:	)	DOCKET NO. CWA- 309(a)-09-25-011
	)	
Peninsula Corridor Joint Powers Board	)	ADMINISTRATIVE ORDER ON CONSENT
(Caltrain)	)	
	)	<i>Proceeding under Section 309(a) of the Clean</i>
San Carlos, California,	)	<i>Water Act, 33 U.S.C. § 1319(a)</i>
	)	
Respondent.	)	

I. **INTRODUCTION AND JURISDICTION**

1. This Administrative Order on Consent ("AOC") is entered into voluntarily by the United States Environmental Protection Agency ("EPA"), and the Peninsula Corridor Joint Powers Board, commonly referred to as Caltrain ("Respondent").

2. This AOC is issued under the authority vested in the EPA Administrator by Section 309(a) of the CWA, 33 U.S.C. § 1319(a), which provides that, whenever the EPA finds that any person is in violation of, *inter alia*, Section 301(a) of the CWA, 33 U.S.C. § 1311(a), the EPA may issue an order requiring such person to comply with the CWA, and may specify a time for compliance that the EPA determines to be reasonable. This authority was delegated to Regional Administrators by EPA Delegation 2-22 (May 11, 1994). This authority was further redelegated to the Director of the Enforcement and Compliance Assurance Division of the EPA, Region 9, by EPA Delegation R9-2-22 (February 11, 2013).

3. Upon execution of this AOC, the EPA will immediately notify the State of California of this action pursuant to Section 309(a)(4) of the CWA, 33 U.S.C. § 1319(a)(4).

4. The EPA and Respondent recognize that this AOC has been negotiated in good faith, and that the actions undertaken by Respondent in accordance with this AOC do not constitute an admission of liability. Respondent neither admits nor denies the specific factual allegations contained in Section IV of this AOC, except to the extent that those allegations provide the EPA with a jurisdictional basis to enforce this AOC. Respondent agrees to comply with and be bound by the terms of this AOC and agrees not to contest the basis or validity of this AOC or its terms in any action brought by EPA relating to the AOC.

II. **APPLICABILITY**

5. This AOC shall apply to and be binding on Respondent and its successors or other entities or persons otherwise bound by law. Unless the EPA otherwise consents in writing, (a) any change in ownership or the legal status of Respondent, including any transfer of assets, or (b) any transfer of

property at the site of the alleged violations or any property needed to implement the actions required by this AOC, does not alter Respondent's obligations under this AOC.

6. Respondent shall provide notice of this AOC to its officers and directors, and to the employees, agents, contractors, subcontractors, and other persons responsible for authorizing, performing, or allowing any actions required by this AOC. Respondent is responsible for ensuring that such parties act in accordance with the terms of this AOC.

III. STATUTORY AND REGULATORY FRAMEWORK

7. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), makes it unlawful for a person to discharge pollutants, including dredged or fill material, from a point source into waters of the United States, except as authorized by a CWA permit. Under Section 404 of the CWA, 33 U.S.C. § 1344, the U.S. Army Corps of Engineers ("Corps") issues permits for the discharge of dredged or fill material into waters of the United States.

8. Section 502(5) of the CWA, 33 U.S.C. § 1362(5), defines "person" to mean "an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body."

9. Section 502(6) of the CWA, 33 U.S.C. § 1362(6), defines "pollutant" to include, inter alia, "dredged spoil," "biological materials," "rock," and "sand."

10. Section 502(14) of the CWA, 33 U.S.C. § 1362(14), defines "point source" to include "any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged."

11. Section 502(12) of the CWA, 33 U.S.C. § 1362(12), defines "discharge of a pollutant" to include "any addition of any pollutant to navigable waters from any point source."

12. Regulations codified at 33 C.F.R. § 323.2(c) define "dredged material" as "material that is excavated or dredged from waters of the United States." The term "discharge of dredged material" means "any addition of dredged material into, including any redeposit of dredged material other than incidental fallback within, the waters of the United States." 33 C.F.R. § 323.2(d)(1).

13. Regulations codified at 33 C.F.R. § 323.2(e)(1) define "fill material" as "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States."

14. Regulations codified at 33 C.F.R. § 323.2(f) define "discharge of fill material" as "the addition of fill material into waters of the United States," and includes, inter alia, placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, or other uses; causeways or road fills; dams and dikes; and levees.

15. Section 502(7) of the CWA, 33 U.S.C. § 1362(7), defines “navigable waters” as “waters of the United States, including the territorial seas.” See also implementing regulations at 33 C.F.R. §§ 238.3 and 40 C.F.R. §§ 232.2(1).

IV. **FINDINGS OF FACT AND DETERMINATIONS OF LAW**

16. Respondent, Peninsula Corridor Joint Powers Board, is the governing body for the Caltrain commuter rail transit service, organized under California law, and a “person” within the meaning of Section 502(5) of the CWA, 33 U.S.C. § 1362(5).

17. In 2023, Respondent undertook a bridge upgrade and replacement project, working within and around the Guadalupe River, south of Willow Street to Delmas Avenue, in San Jose, Santa Clara County, California. This reach of the Guadalupe River is considered habitat for Central California Coast (“CCC”) steelhead and Essential Fish Habitat (“EFH”) regulated under the Pacific Coast Salmon Fisheries Management Plan.

18. On January 30, 2023, the U.S. Army Corps of Engineers (“Corps”) verified nationwide permit 14 for Linear Transportation Projects (“NWP 14”) authorization for Respondent’s Guadalupe River Bridge Replacement Project (“Bridge Project”), which entailed replacing bridge MT-1, extending bridge MT-2, widening the river channel, stabilizing the banks, removing an existing outfall, and installing two new outfalls and bioswales. The NWP 14 authorization provided for specific temporary dewatering structures and three crane pads below the ordinary high water mark (“OHWM”), but did not authorize the discharge of dredged and/or earthen fill material in the Guadalupe River channel for equipment access or use as work pads.

19. During July 2023, Respondent discharged earthen fill into the Guadalupe River low-flow channel for equipment access and to use as work pads for its construction activities. In response to an August 30, 2024, San Francisco Regional Water Quality Board (“Regional Board”) Notice of Violation, Caltrain provided an estimate of the fill footprint as 150 feet in length, by 35 feet in width, which corresponds to an area of approximately 0.12 acres.

20. California state agency inspectors observed that not all of the unauthorized earthen fill had been removed by the October 28, 2023, deadline for removal of authorized temporary fill materials.

21. On March 8, 2024, the Corps issued a Notice of Noncompliance to Respondent, which identified the lack of authorization for the discharge of earthen fill to create a dirt work pad within the low-flow channel of the Guadalupe River, and apparent noncompliance with NWP 14 general conditions 6, 12, 13, and 25. The Notice of Noncompliance states that the discharges filled approximately 1600 square feet (0.036 acres) of waters in the Guadalupe River.

22. On July 24, 2024, inspectors from the EPA Region 9, the Corps, and the Regional Board inspected the Bridge Project area and observed that Respondent had conducted earthmoving activities that resulted in the discharge of earthen fill into the Guadalupe River, without authorization.

23. The earthen materials that Respondent discharged into the Guadalupe River constitute “pollutants” under CWA Section 502(6), 33 U.S.C. § 1362(6).

24. Respondent’s discharge of earthen fill material into waters of the United States constitutes a “discharge of pollutants” within the meaning of CWA Section 502(12), 33 U.S.C. § 1362(12).

25. The earthmoving equipment used by Respondent to discharge fill material to waters of the United States within the Project area were “point source[s]” within the meaning of Section 502(14) of the CWA, 33 U.S.C. § 1362(14).

26. The Guadalupe River flows approximately 9 miles from the Bridge Project site to the San Francisco Bay, which is an embayment of the Pacific Ocean. The Guadalupe River and the Pacific Ocean are “waters of the United States” within the meaning of Section 502(7) of the CWA, 33 U.S.C. § 1362(7), and implementing regulations.

27. Respondent’s discharge of earthen fill material into the Guadalupe River was not authorized by a permit, or otherwise, pursuant to Section 404 of the CWA.

V. FINDING OF VIOLATIONS

28. The EPA finds that, by discharging dredged and/or earthen fill material into waters of the United States without CWA permit authorization, Respondent violated Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

VI. ORDER FOR COMPLIANCE ON CONSENT

29. Based on the foregoing Findings of Fact and Determinations of Law and pursuant to the authority of Section 309(a) of the CWA, 33 U.S.C. § 1319(a), IT IS HEREBY ORDERED and AGREED that Respondent shall:

30. Prohibition of Discharge: Respondent shall not discharge any additional pollutants, including dredged and/or fill material, into any waters of the United States at the Bridge Project site except in compliance with this AOC or a permit issued pursuant to the CWA.

31. Mitigation Project: Respondent shall implement the mitigation project (“Mitigation Project”) described in the *Hicks Creek Mitigation Plan* of April 22, 2025 (Attachment 1), which provides for the rehabilitation and enhancement of upper Hicks Creek, a tributary of the Guadalupe River, located upstream from the Bridge Project. The Mitigation Project is intended to remove constructed hardscapes in and along the creek, restore and enhance native riparian and aquatic habitat, and promote fish passage.

32. The mitigation site is within the Sierra Azul Open Space Preserve, which is owned by the Midpeninsula Regional Open Space District (“Midpen”). Respondent is responsible for obtaining all permissions, including any applicable landowner requirements reflected in an agreement with the landowner, needed to complete the Mitigation Project. Respondent shall notify the EPA when Midpen approves or disapproves implementation of the Mitigation Project and provide the EPA a

copy of any agreements between Respondent and Midpen regarding implementation of the Mitigation Project.

33. Mitigation Plan: Respondent shall submit a final mitigation plan (“Mitigation Plan”) to the EPA, as set forth in paragraph 36. The Mitigation Plan shall include the final Mitigation Project design, an updated schedule, project success criteria, and a ten-year monitoring and maintenance plan.

34. Upon approval by the EPA, the Mitigation Plan (including implementation schedule), will be incorporated into this AOC. Respondent shall implement all measures set forth in the Mitigation Plan according to the approved schedule. Respondent shall submit Annual Status Reports on steps taken and any issues encountered during the implementation of the Mitigation Plan, as set forth in paragraph 36.

35. Corrective Measures: Respondent has submitted a summary of the improvements and corrective measures it has taken in response to the issues that arose with the Bridge Project (Attachment 2). Respondent shall include with its Annual Status Reports, a description of any changes to the list of improvements and corrective measures, and an assessment of their effectiveness, as set forth in paragraph 36.

36. Submission of Plans, Reports and Notifications: Respondent shall submit the following deliverables and notifications to the EPA representatives identified in paragraph 41:

- A. The **Mitigation Plan**, by December 1, 2025, unless modified pursuant to Section X (Modifications);
- B. **Construction Completion Report** for the Mitigation Project, within ninety (90) days of completion of construction and planting work, which provides a description and timeline of the actions taken by Respondent, and all required arrangements for the Mitigation Project’s long-term management;
- C. **Annual Status Reports** for implementation of the Mitigation Plan and the Corrective Measures, starting one year after submission of the Mitigation Plan, to be replaced by annual Monitoring Reports after construction and planting is complete; and
- D. The **Final Report** for the Mitigation Project, as set forth in paragraph 37, below.
- E. If Respondent becomes aware of any event which may delay the timely performance of any action, or require a material change to any action, that is required by this AOC (including any approved plans), Respondent shall notify the EPA as soon as practicable. Respondent shall provide the reasons for the delay or material change, the anticipated duration of any delay and measures to be taken to prevent or minimize the delay, and a description of how any material change will achieve the objectives of the AOC. This obligation applies whether or not Respondent seeks a modification under Section X of this AOC.

VII. **FINAL REPORT**

37. Within thirty (30) calendar days after Respondent believes it has fully implemented the compliance actions required by Part VI of this AOC, Respondent shall certify that all requirements have been completed and the success criteria have been met, and shall submit to the EPA a Final Report that includes a description and timeline of all of actions taken by Respondent to achieve compliance with this AOC.

38. If the EPA determines, after review of the Final Report, that all of the requirements of this AOC have been completed and implemented in accordance with this AOC, the EPA will provide notice to Respondent and this AOC shall be deemed terminated, except as provided for in paragraph 43 (Document Preservation).

39. If the EPA determines that any requirement has not been completed and implemented in accordance with this AOC, the EPA will notify Respondent, provide a list of deficiencies, and require Respondent to modify its actions as appropriate to correct such deficiencies. If so required, Respondent shall implement the modified requirement(s) and submit a modified Final Report. This AOC shall only be deemed terminated when EPA provides notice of termination to Respondent.

VIII. **REQUIREMENTS FOR DELIVERABLES AND COMMUNICATIONS**

40. Respondent shall submit all deliverables specified above, to the EPA in electronic form, unless otherwise specified by the EPA, in a format specified by the EPA.

41. Unless otherwise directed by the EPA, Respondent shall submit all deliverables and other written communications to the following individuals at the following e-mail addresses:

Scott McWhorter
U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division (ECAD-3-2)
McWhorter.Scott@epa.gov

Brett Moffatt
U.S. Environmental Protection Agency
Office of Regional Counsel (ORC-2)
Moffatt.brett@epa.gov

Submissions will be deemed made on the date the submission is sent electronically.

42. All deliverables required by this AOC shall be signed by a duly authorized representative of Respondent as specified by 40 C.F.R. § 122.22 and shall include the following statement:

"I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information

submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

IX. DOCUMENTS AND INFORMATION MANAGEMENT

43. Except as otherwise provided in this paragraph, Respondent shall preserve and retain, and instruct its contractors and agents to preserve and maintain, all documents and information that relate to the performance of the tasks in this AOC until five (5) years after submission of the Construction Completion Report. Respondent also shall maintain and preserve, and instruct its contractors and agents to maintain and preserve, all documents and information relating to Hicks Creek monitoring and maintenance activities for one (1) year after termination of this AOC.

44. Respondent is entitled to claim that all or part of the information submitted to the EPA under this AOC is Confidential Business Information (“CBI”) that is covered by 40 C.F.R. § 2.203(b). Respondent shall segregate all information or parts thereof submitted under this AOC which they claim is CBI and label them as “claimed as confidential business information” or “claimed as CBI.” Information that a submitter properly labels in accordance with the preceding sentence will be afforded the protections specified in 40 C.F.R. part 2, subpart B. If the information is not properly labeled when they are submitted to the EPA, or if the EPA notifies the submitter that the information is not entitled to confidential treatment under the standards of 40 C.F.R. part 2, subpart B, the public may be given access to such information without further notice to the submitter.

X. MODIFICATIONS

45. This AOC may be modified in writing by mutual agreement of Respondent and EPA.

46. If Respondent seeks permission to deviate from this AOC or any approved deliverable, Respondent shall submit a written request to the EPA for approval describing the proposed modification, including any impacts on the schedule of activities required by Section VI, and its basis. Respondent may not proceed with a requested deviation until written approval from the EPA.

47. No informal advice, guidance, suggestion, or comment by the EPA or its representatives regarding any requirement relieves Respondent of its obligation to obtain any written approval required by this AOC, or to comply with all requirements of this AOC, except as it is formally modified.

XI. RESERVATION OF RIGHTS

48. This AOC is not a permit or modification of any existing permit issued pursuant to any federal, state, or local laws or regulations, and shall in no way relieve or affect Respondent’s obligations under any applicable federal, state or local laws, regulations, or permits.

49. This AOC shall in no way affect the rights of the EPA or the United States against any person not a party hereto.

50. This AOC shall in no way limit or affect the EPA's authority to obtain information, and to enter, inspect, sample or monitor compliance under any law, permit, court order, or agreement.

51. Issuance of this AOC is not an election by the EPA to forego any remedies available to it under the law, including without limit any administrative, civil or criminal action to seek penalties, fines, or other appropriate relief. The EPA reserves all available legal and equitable rights and remedies to enforce any violations cited in this AOC, and the right to seek recovery of any costs and attorney fees incurred by the EPA in any actions against Respondent for non-compliance with this AOC.

XII. ADDITIONAL TERMS

52. **Waiver of Review.** Respondent consents to and agrees not to contest the EPA's authority or jurisdiction to issue and enforce this Section 309(a) AOC. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this AOC, including any right of judicial review under Chapter 7 of the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

53. **Failure to Comply.** Failure to comply with the terms of this AOC may result in liability for statutory civil penalties under Section 309(d) of the CWA, 33 U.S.C. § 1319(d), as modified by 40 C.F.R. Part 19. Upon suit by the EPA, a United States District Court may impose such penalties if the court determines that Respondent has violated the CWA as described above and failed to comply with the terms of this AOC. In determining the amount of any penalty, the court will consider the seriousness of the violations, the economic benefit (if any) resulting from the violations, any history that Respondent may have of such violations, any good faith efforts that Respondent has made to comply with legal requirements, the economic impact a penalty may have upon Respondent, and such other matters as justice may require.

54. **Headings.** The headings in this AOC are for convenience of reference only and shall not affect interpretation of this AOC.

55. **Severability.** The provisions of this AOC shall be severable. If any provision is declared by a court of competent jurisdiction to be unenforceable, then the remaining provisions shall remain in full force and effect.

56. **Signatories.** The undersigned signatory for Respondent certifies that he or she is authorized to execute this AOC and legally bind the Respondent. This AOC can be signed in counterparts.

57. **CBI.** By signing this AOC, Respondent acknowledges that this AOC does not contain any confidential business information (CBI), or waives any claim of CBI.

58. **Costs.** Each party shall bear its own attorney's fees and costs.

XIII. EFFECTIVE DATE

59. This AOC shall become effective on the date it is signed by the EPA.

IT IS SO AGREED AND ORDERED:

FOR RESPONDENT PENINSULA CORRIDOR JOINT POWERS BOARD:



Michelle Bouchard
Executive Director

07/18/25

Date

IT IS SO AGREED AND ORDERED:

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 9:

Amy C. Miller-Bowen, Director
Enforcement and Compliance Assurance Division

Of Counsel:

Brett Moffatt
Office of Regional Counsel
U.S. EPA Region 9

Attachment 1

Summary of the Hicks Creek Mitigation Plan

Introduction

The Peninsula Corridor Joint Powers Board (JPB), which operates the San Francisco Peninsula's Caltrain passenger rail service, is in the process of completing the Guadalupe River Bridge Replacement Project (GRBR Project). The GRBR Project is a critical infrastructure project that involves replacing two bridges (MT-1 and MT-2) over the Guadalupe River to address safety concerns. The Project was initiated in early 2023 but was paused in the summer of 2024 after the U.S. Army Corps ("the Corps" or "USACE") and state agencies notified JPB that they believed its implementation had violated conditions in federal and state permits, including the Section 404 verification issued by the Corps under the Clean Water Act. During settlement negotiations with EPA, JPB has learned that the Corps and EPA will require JPB to mitigate the impacts of the alleged non-compliance with the Section 404 verification on USACE jurisdictional waters. EPA and USACE have also informed JPB that off-site mitigation will be required for settlement.

The opportunities for off-site mitigation within the Guadalupe River watershed are limited as the result of many factors, including the limited amount of non-privately owned lands and related access issues. JPB and its environmental consultants conducted a thorough analysis of different off-site mitigation opportunities and identified the Hicks Creek Mitigation Project as the most promising option. **Figures 1 and 2** provide an overview of the project location. JPB previously provided a detailed draft Hicks Creek Mitigation Project plan to EPA and will provide an updated draft of the plan as soon as it is available.

Goals and Objectives

The primary goal of the Hicks Creek Mitigation Project is to mitigate for GRBR project impacts that cannot be mitigated on-site, including those identified by EPA and the Corps as resulting from JPB's alleged non-compliance with the Section 404 verification.

The environmental objectives of the project are to:

- Remove constructed hardscapes that restrict natural stream functions (geomorphic processes and fish passage);
- Create, restore, and enhance waters of the State and the U.S. and promote the establishment of a self-sustaining, native riparian and aquatic habitat; and
- Provide contiguous native riparian habitat to support desirable plant/wildlife species.

Figures 3-6 depict examples of existing environmental conditions that will be addressed by the project. JPB and Midpeninsula Regional Open Space District's (Midpen) determined the Hicks Creek site could fulfill mitigation requirements resulting from the GRBR Project's alleged

Section 404 non-compliance while also advancing several of Midpen's restoration priorities for the Guadalupe River watershed.

Site History

The project site for the Hicks Creek Mitigation Project is owned and managed by Midpen within their Sierra Azul Open Space Preserve in Santa Clara County, California. The site was purchased by Midpen in 2008. Prior to being purchased by Midpen, Hicks Creek site was likely used for ranching, mining, seasonal and leisure activities related to mineral and hot springs, home steading, and equestrian activities. Unfortunately, many concrete structures related to these past uses remain present in and along Hicks Creek (i.e., houses, barns, and a pool house). See, e.g., **Figure 5**.

Existing Conditions

Vegetation, Aquatic Habitat, and Wildlife: Hicks Creek is a high-gradient stream which flows year-round. The site is extremely steep with highly variable elevations. Existing habitat includes riparian vegetation (native California bay, white alder, red willow, and California buckeye) with coast live oak as the dominant species upslope. Many non-native plants species are present, including Himalayan blackberry, periwinkle, Oleander, Mexican fan palm, CA fan palm, and smilo grass. See, e.g., **Figure 3**. The highest level of disturbance and non-native plant species is downstream of Hicks Creek bridge. Federally listed steelhead occur in the watershed and may use Hicks Creek for spawning and juvenile rearing. In addition, several special status species may occur in proximity of the project area: northwestern pond turtle, CA red-legged frog, CA tiger salamander, foothill yellow-legged frog, Crotch's bumble bee, pallid bat, Santa Cruz black salamander, and CA giant salamander.

Stream Function and Structures: Historic land use has left concrete hardscapes within and along the stream (see, e.g., **Figures 4-6**), which has led to degraded aquatic habitat conditions, disconnected floodplain activation, reduced channel complexity, impaired stream function, and a confined stream channel. Concrete structures include a concrete-lined pool and wall, pool house foundations, a wooden bridge with a concrete bed, stone-lined creek channels and walls, a concrete box culvert/concrete bed, and a historic bath. **Figure 7** identifies existing structures that will be addressed by the project.

Proposed Mitigation

The proposed mitigation would include the removal of concrete and hardscape structures previously installed in the creek and riparian corridor, channel grading, installation of instream habitat features, and revegetation of the riparian corridor. **Table 1** includes the total area of potential off-site mitigation, broken down by habitat based on a conceptual level design. **Table**

2 details the beneficial uses and expected uplift with proposed mitigation. **Figure 8** provides the conceptual plan.

In its March 8, 2024, Notice of Non-Compliance, the Corps alleged that unpermitted dirt fill was discharged in the Guadalupe River to create a 1,600 square-foot (0.036 acre) work pad area during construction activities in 2023. As part of settlement negotiations between JPB and EPA relating to the alleged Section 404 non-compliance, JPB has agreed to mitigate for alleged unpermitted impacts of up to 5,250 square feet (0.12 acres) to the Guadalupe River. With the Hicks Creek Mitigation Plan, JPB is proposing approximately 33,150 square-feet (0.76 acre) of potential off-site mitigation (including 12,900 SF/0.29 acres of aquatic habitat) to offset the impact within the Guadalupe River watershed.

Table 1. Potential Off-Site Mitigation Areas within the Hicks Creek Mitigation Project Site

Habitat of Creation/Enhancement ¹	Area (ft ²)	Area (acres)
Aquatic Habitat (ID 1)	5,400	0.12
Active channel region (aquatic habitat) (ID 5)	7,500	0.17
Wetland/Floodplain (ID 3)	8,250	0.19
Riparian Forest (ID 4)	12,000	0.28
Total	33,150	0.76

Note: ¹ ID numbers are related to the features shown in **Figure 2**.

Aquatic Habitat/Active Channel: The mitigation project includes introducing meander to lower the slope of the site by constructing approximately 30 shallow cascades, chutes, and pools of water along the length of the creek, which would promote fish migration and passage, increase habitat complexity, preserve rare and endangered species, and improve fish spawning. Backwater habitat pockets are proposed to increase fish engagement and refuge. Natural stream bed material and perch/refugia features would be installed to increase aquatic species habitat and basking opportunities. Proposed designs may reduce habitat suitability for non-native species. Revegetation in the aquatic channel would be limited to the channel edges and would include native annual/perennial herbaceous species. Invasive species control would be implemented.

Wetlands/Floodplain: Inset floodplains are proposed at the top of the active channel inset side slopes and would produce and host wetland plant communities/habitats. The inset floodplains would maximize aquatic creation and introduce desirable backwaters for fish and are often included in steep stream projects. Wetland areas are expected to be seasonally inundated; the planting palette would be similar to the aquatic channel.

Riparian Forest: The riparian forest primarily occupies the sloped faces along the channel's upper banks. These areas would have ready access to groundwater and would be infrequently inundated. The riparian forest would provide the elevation changes necessary to establish

wider and more significant channels and pools. Existing native riparian trees would be preserved in place and prescribed plantings would fill in available space.

Table 2. Beneficial Uses and Expected Uplift with Proposed Mitigation

Beneficial uses	Existing Conditions	Proposed conditions and Beneficial Uses
Cold freshwater habitat Warm freshwater habitat	Concrete lined channel sections and in-channel pool feature limiting riparian shading. Low habitat complexity channel resulting from box culverts and confined stream channel sections	Restore natural streambed to promote vegetation growth along stream channel, increase riparian shaded area, and increase allochthonous input
Fish migration	Limited holding pools available over high-gradient channel.	Increase number of holding pools and addition of high flow refugia for migrating steelhead
Preservation of rare and endangered species	Limited access for steelhead migration and holding habitat	Overall improvement for steelhead access and rearing habitat, increase basking habitat for western pond turtle and promote native vegetation growth within stream channel to increase California red-legged frog egg deposition habitat
Fish spawning	High gradient channel with limited velocity breaks for spawning	Improve spawning habitat by creating pools and restoring section to natural stream bed
Wildlife habitat	Concrete lined channel section, non-native vegetation communities	Increase basking habitat for western pond turtle and promote native vegetation growth within stream channel to increase California red-legged frog egg deposition habitat. And replace non-native vegetation with native vegetation to support natural wildlife community.

Monitoring

Success criteria, including performance standards for revegetation (e.g., absolute cover of native vegetation, cover of target weeds) and conditions for geomorphic features and aquatic habitat features will be developed in coordination with regulatory agencies and Midpen. Monitoring will continue until either (1) the mitigation site has met the final success criteria or (2) the regulatory agencies determine that monitoring is no longer required. The monitoring plan, including timing, frequency, resources monitored, and the success criteria will be developed further when the design plans are prepared and reviewed by the EPA, Corps, and state agencies.

Next Steps

The proposed Hicks Creek Mitigation Project is developed to a conceptual level. Once JPB obtains support from EPA, the Corps, and the state agencies (as needed) that this Project has the potential to meet off-site mitigation requirements, JPB will further develop the final footprint and design in coordination with the agencies to ensure that the Project satisfies the mitigation needs as well as restoration and enhancement criteria detailed in the existing programmatic permits that Midpen holds from the various resource agencies. **Table 3** details the anticipated schedule.

Table 3. Anticipated Schedule

April 1, 2025	Received letter of support from Midpen Staff
June 11/June 25, 2025	Midpen Board approval
Summer 2025	Final design, mitigation monitoring plan, and environmental clearance documents
Fall 2025	MOU/MOA
Fall/Winter 2025	JPB Board and Midpen Board approval of MOU/MOA
2026	Start of construction

Figure 1. Hicks Creek Mitigation Project vicinity.

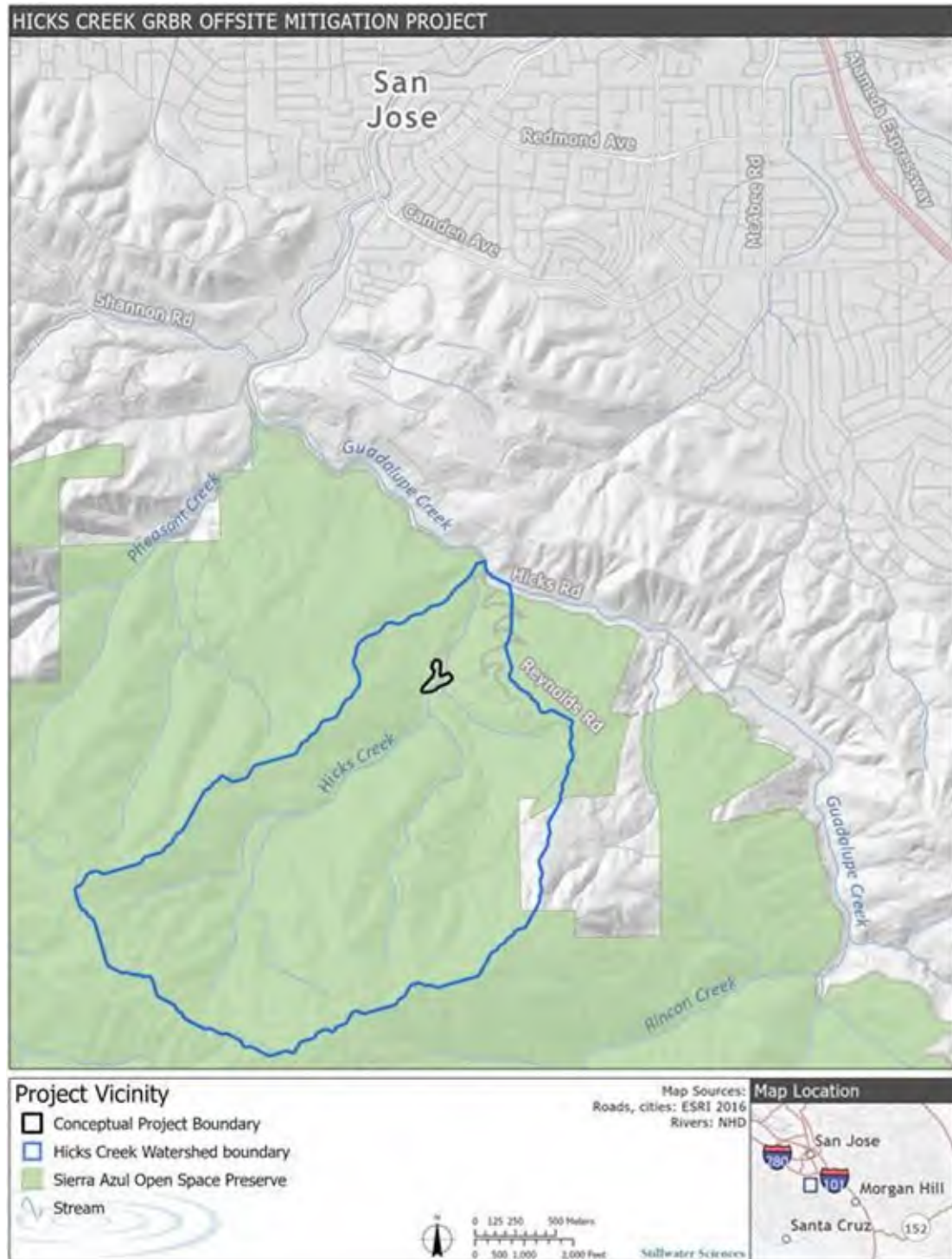


Figure 2. Hicks Creek Mitigation Project area.



Figure 3. Non-native Himalayan blackberry on left bank and concrete along right bank of Hicks Creek within project site.



Figure 4. Concrete channel lining stream bank on Hicks Creek in Project area.



Figure 5. Remnants of concrete swimming pool within Hicks Creek in the Project area, Himalayan blackberry in the foreground.



Figure 6. Stream channel lacking habitat complexity on Hicks Creek in Project area and rock wall along channel.



Figure 7: Existing Conditions and Features at the Hicks Creek Site

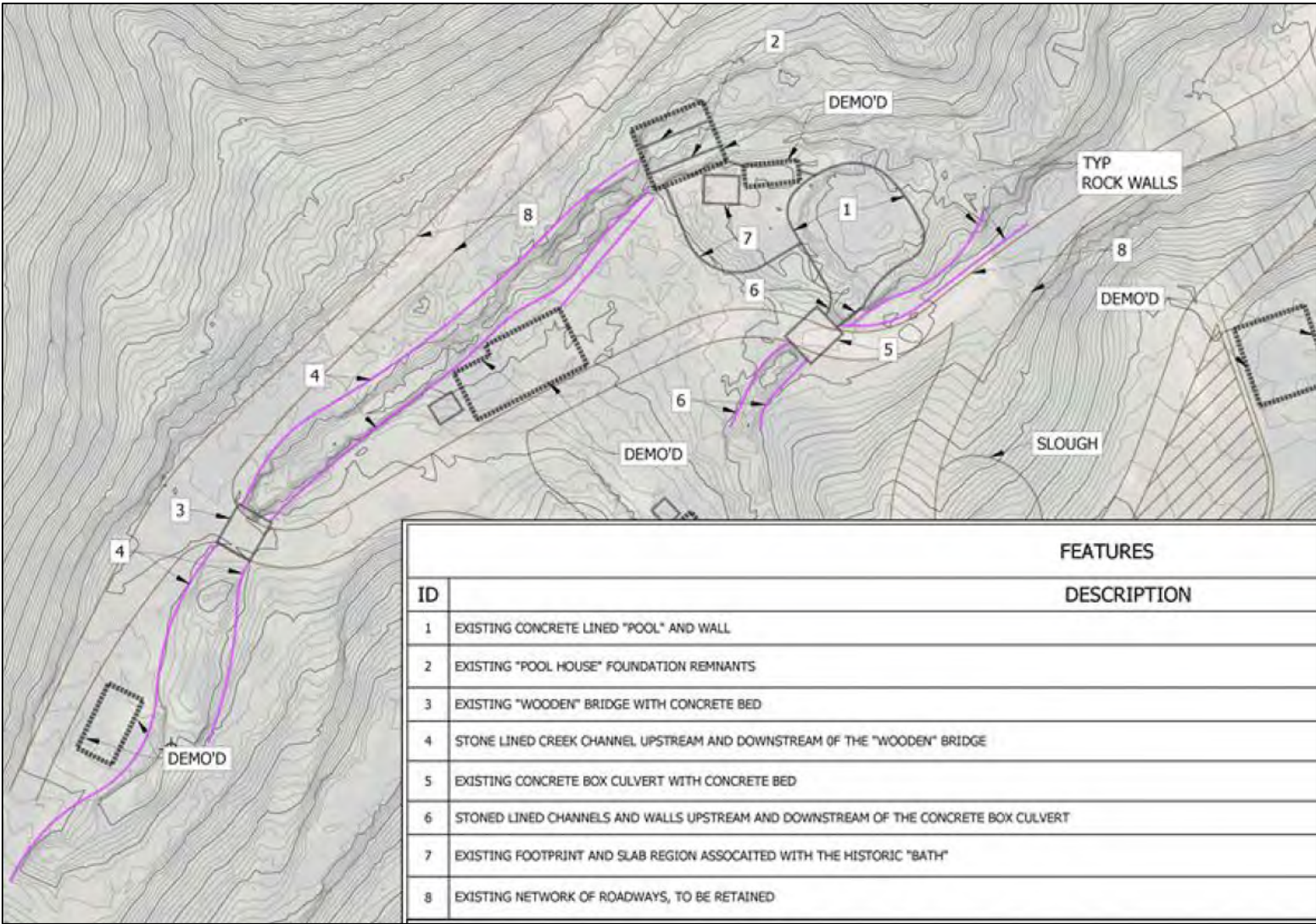
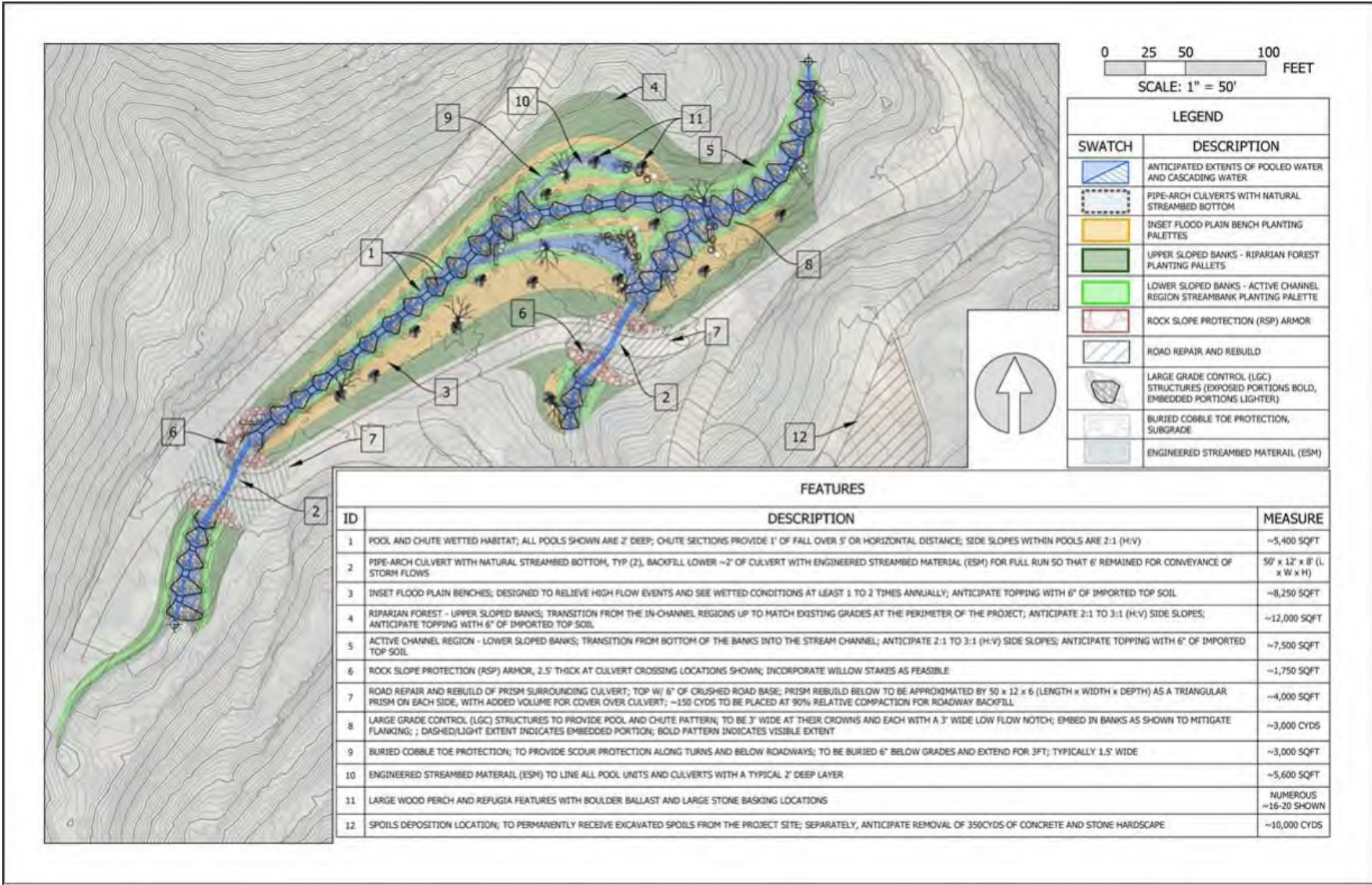


Figure 8: Conceptual design for the Hicks Creek Mitigation Project



Attachment 2

Improvements/Corrective Actions Undertaken As A Result of GRBR Project

Project-Level Communication/Coordination Improvements

1. Developed a biological resources monitoring plan.
2. Recording and distributing weekly biological monitoring summaries to all agencies.
3. Recording and distributing quarterly monitoring reports to all agencies.
4. Holding weekly check-ins between Caltrain Environmental Manager and Environmental Consultant.
5. Developed a communication ladder with resource agencies, along with regular check-ins at various levels.
6. Holding quarterly meetings with resource agencies.
7. Commenced Project Readiness Report for the remainder of the project.
8. Developed Program Controls Audit Checklist to assess project readiness to resume construction.
9. Closely coordinating with resource agencies on revised permit applications to address ambiguities in original plans and permits and to ensure work plan complies with permit conditions.
10. Implemented robust oversight of contractor to ensure project execution plans align with expectations of Caltrain/JPB and agencies.

Staffing Improvements – Caltrain/JPB

1. Hired full-time JPB Director of Capital Program Delivery.
 - Previously used outside contractor
2. Hired new full-time JPB Deputy Director of Environmental Compliance.
3. Designated a full-time Project Manager for GRBR Project.
 - Previously split between three projects (GRBR, San Francisquito, and Broadway Burlingame Grade Separation)
4. Designated a full-time Deputy Project Manager.
5. Replaced Resident Engineer.

Staffing Improvements – Contractor Team

1. Replaced Contractor's Regional Business Lead from project.
2. Replaced Contractor's Project Manager from project.
3. Onboarded a Quality Assurance Manager.
4. Onboarded a full-time Safety Officer.
5. Replaced Erosion Control Subcontractor.
6. Replaced Superintendent of project.
7. Retained additional full-time Environmental Site Compliance Monitors.
8. Retained full-time Construction Field Representative.

Organizational/Process Improvements

1. Developed a structured process and timeline for identifying and implementing Lessons Learned from all Caltrain projects.
2. Implemented review of internal processes and procedures to identify project implementation issues and prevent future occurrences.
3. Updated JPB/Caltrain processes and procedures based on Lessons Learned.
4. Implemented training for staff on updated processes and procedures:
 - Developed high-level environmental compliance training for Caltrain management.
 - Developed mid-level permit-specific environmental compliance training for resident engineer, site inspector, and site superintendent.
 - Developed site-level detailed environmental compliance training for all field staff.
 - Implemented SCVWD phytosphthora training for all field staff.
5. Implemented daily preconstruction environmental checklist (similar to preconstruction safety checklist previously used).
6. Conducted review of organizational structure with a focus on environmental function as a core Caltrain Value.
7. Implemented numerous Program Controls Improvements:
 - Scheduling function is now centralized in order to standardize Schedule development, monitoring, and reporting.
 - Project Estimating function is now centralized in order to have consistent approach to estimating, risk and contingency development, and reporting.
 - Project Risk and opportunity register is standardized and mandatory for all projects.
 - Project Phase Gate process improvement – including updates to defined checklist and requirements before gates are cleared.
 - i. As an example, checklist now includes completion of all permits approvals before project can progress to “Issued for Bid” status.
 - Manual updates and Training of Staff was initiated and is ongoing (updated Resident Engineer Manual, Project Management Manual, and Business Practices Manual).
 - Updated Manual Training:
 - i. Quality program – August 2024
 - ii. Lessons Learned process – Sept 2024
 - iii. Risk Based Hazard Analysis – Oct 2024
 - iv. Resident Engineer Manual updates - Feb 2025

EXHIBIT C

California Department of Fish and Wildlife, Amendment of Streambed Alteration Agreement Notification No. EPIMS-SCL-20973-R3 (June 13, 2025) for the Guadalupe River Bridge Replacement Project.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



June 12, 2025

Bonny O'Connor
Caltrain
1250 San Carlos Ave
San Carlos, CA 94070

AMENDMENT OF LAKE OR STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO., EPIMS-SCL-20973-R3, Guadalupe River Bridge Replacement Project

Dear Bonny O'Connor:

The California Department of Fish and Wildlife (CDFW) has received your request to amend the above referenced Lake or Streambed Alteration Agreement (Agreement) and the required fee in the amount of \$1,882.25, for a major amendment. Your request to amend the Agreement includes the following:

1. A revised dewatering plan that involves a number of impacts due to dewatering activities, temporary sheet pile shoring, and temporary construction access. A full description is attached as Exhibit C.
2. Addition of 0.239 acres of temporary fill placed within the main channel of the Guadalupe River to allow for changes to construction access, equipment work pad, cofferdam installation, and aquadam installation;
3. Addition of electro-fishing as an authorized fish relocation method;
4. Addition of nighttime activities in two week increments during the work period;
5. Additional compensatory mitigation for impacts not contemplated in the original Agreement.

CDFW hereby agrees to amend the Agreement with addition of the following changes to the Project Description and conditions (additions in bold italics, deletions in strikethrough):

The Project Description shall be amended to read:

The Project is limited to **the replacement or modification of two railroad bridges**, grading **and vegetation removal within bed, bank, and channel**, ~~to widening of the floodplain the river channel and to~~ reduce bed and bank erosion, **and restoration and erosion control to areas impacted by construction.** ~~and expansion or replacement of two railroad bridges to accommodate the wider channel as well as seismic retrofit.~~

Bonny O'Connor
EPIMS-SCL-20973-R3
June 12, 2025

~~The existing Main Track –1 bridge is a creosote-treated wood and concrete trestle built in 1935. The entire 187-foot-long existing bridge will be removed and replaced with a 265-foot-long concrete bridge. The bridge will have 3 bents with the center span being designed to avoid the low-flow channel. There will be 75 linear feet of temporary sheet pile cofferdams installed around the bridge structure on both banks above the ordinary high-water mark and below the top of bank.~~

~~The existing 154.5-foot-long Main Track –2 concrete bridge will be expanded by 90 feet on the southern end, including the construction of a new pier. There will be 60 linear feet of temporary sheet pile cofferdams installed above the ordinary high-water mark and below the top of bank.~~

In the original LSAA, Project designs were provided in the design plans titled, *Caltrain Guadalupe River Bridge Replacement, 100% Submittal* (HDR, September 30, 2021). For this Major Amendment (Amendment), the design plans are provided in the *Caltrain Guadalupe River Bridge Replacement, Conformed April 21, 2025 Rev. 1*, attached to this Amendment as 100% Project Designs, Exhibit D. The remaining Project work authorized by this Amendment includes the demolition and reconstruction of the MT-1 bridge, seismic retrofitting the foundations of the MT-2 bridge, and widening of the river channel. To support those tasks, this Amendment covers dewatering activities, temporary sheet pile shoring, temporary construction access, and implementation of the Project's on-site mitigation measures. The authorized Project activities are described in detail below:

MT-1 Bridge Replacement and MT-2 Foundation Retrofitting

The existing 187-foot-long MT-1 bridge will be demolished, including the existing piers 6 and 7, and replaced with a new, 265-foot long, pre-cast concrete structure. The new MT-1 bridge will be supported by two new abutments and Bents 2, 3, and 4. Each new bridge pier will consist of two, 5- to 8-foot diameter, cast-in-drilled-hole piles. Pier placement has been optimized through hydraulic analysis to avoid pier placement in the low-flow channel of the Guadalupe River (River). A reinforced concrete superstructure, 110-foot long center span, will be built on the abutments and bridge piers.

In 2023, the MT-2 bridge was extended by 90 feet at its southern end, resulting in a new total bridge length of 248.5 feet. To accommodate this extension, the existing MT-2 Abutment 5 was removed and replaced by a new pier, and the channel was widened. The northern Abutment 1 and Piers 2, 3, and 4 remained in place. The remaining work on MT-2 consists of seismic retrofitting of Pier 2, Pier 3, and Pier 4.

Bonny O'Connor
EPIMS-SCL-20973-R3
June 12, 2025

The MT-1 and MT-2 bridges are designed to accommodate future channel widening associated with implementation of Reach 7 of the Guadalupe River Flood Control Project (Reach 7 Project). The south abutments on each bridge are designed to function as future piers if the bridges must be lengthened to accommodate the Reach 7 Project.

River Channel Widening

The Project will widen the River channel by approximately 75 feet, at the downstream end of the Project reach, to create a connection to the upstream end of the floodplain and to the high-flow channel that was created as part of the Santa Clara Valley Water District (Valley Water) Reach 6 Project, which is immediately downstream (north) of the Project site. The channel widening will allow river flows to dissipate on the widened high-flow channel, which will reduce flow velocities and decrease the risk of future bank failures in the Project reach.

Riprap Stabilization in Bed, Banks, or Channel

Approximately 752 cubic yards of existing rock riprap, covering an area of about 0.15 acres, will be removed or repurposed in the Project's rock slope protection features if the rock meets appropriate sizing specifications.

Riprap placement will total approximately 0.72 acres and extend along about 418 linear feet. This includes 0.167 acres of riprap associated with the new bridge piers and abutments extending 74 linear feet, and 0.553 acres of riprap placed within the bed, bank, or channel, including the floodplain, covering 344 linear feet.

Rock of various sizes will be placed along the bed of the main channel to enhance habitat for fish and stabilize the grade of the channel. This rock includes 30-inch boulders placed for rock riffle crest/keyway structures, 12-inch engineered streambed material (ESM) for rock riffle faces, 12- to 24- inch boulder/cobble material for the toe of slope.

The soil surface will be stabilized with hydroseeded grasses, herbs, and graminoids. The buried rock armoring is intended to protect the new slope of the River bank and provide scour protection at the bridge piers (See Sheets C121 – 123 in Exhibit D).

Stormwater Infrastructure

Three existing storm drain outfalls will be protected in place, one existing outfall will be removed, and two new outfalls will be constructed.

Site Restoration and On-Site Habitat Mitigation Installation

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The Project will result in temporary and permanent impacts to the bed, bank, channel, and adjacent upland areas of the River. To address some of these impacts, on-site mitigation will be implemented on Peninsula Corridor Joint Powers Board and Valley Water properties. On-site mitigation will avoid encroaching on mitigation provided by Valley Water for the Reach 6 Project and areas that are expected to be impacted by the Reach 7 Project. On-site mitigation will also avoid locations where access routes will be necessary to implement the Reach 7 Project, Valley Water maintenance roads, and City of San Jose property.

Off-Site Mitigation

The Project's on-site mitigation does not fully mitigate the Project's impacts to the bed, bank, channel, and adjacent upland areas of the River. To provide additional mitigation, Permittee will enter into a Participating Special Entity (PSE) Agreement with the Santa Clara Valley Habitat Agency and pay the applicable fees to the Santa Clara Valley Habitat Plan. The Permittee will also submit a revised mitigation and monitoring plan (MMP) on appropriate habitat as approved in writing by CDFW. Once approved, the MMP will be attached to this agreement as Exhibit I. Permittee will implement the MMP within 18 months of the date this Amendment was finalized.

Project Phasing

Project construction activities will be implemented in eight phases:

Phase 1 – River Diversion Installation (starting June 2025)

Temporary 2025 Pump Bypass System

To start dewatering of the River channel for construction activities, a temporary pumped bypass system will be implemented for approximately 2 weeks.

First, fish exclusion nets (or screens) will be installed upstream and downstream of the Project site. The nets will be secured to the channel substrate and riverbanks. The nets' mesh will be no greater than 1/8-inch diameter. While in place, the nets will be regularly checked and cleaned of debris to permit free flow of water. The nets will remain in place until the stream flow is diverted through temporary diversion pipes. After the nets are installed, fish relocation efforts will be conducted to capture and relocate fish from the River between the nets. A Fish Relocation Plan is attached as Exhibit F. CDFW approved Qualified Biologists will use multiple passes with seine nets and/or backpack electrofishing equipment to capture and relocate fish out of the dewatered section of the River channel. Captured fish will be relocated to a suitable location downstream of the Project site. Each electrofishing session will begin with all settings (voltage, pulse width,

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and pulse rate) set to the minimums needed to capture fish. If needed, electro-fisher settings may be gradually increased only to the point where fish are immobilized and captured. The Qualified Biologists will minimize handling of fish, and when handling is necessary will always wet their hands or nets prior to touching fish. Captured fish will be held in a container that contains cool, shaded water that will be continuously aerated with an external bubbler. Fish will not be subjected to jostling or excess noise and will not be overcrowded in containers. Young-of-the-year fish will be held separately from larger fish to avoid predation. Capture activities will periodically cease to prevent holding captured fish for periods over 60 minutes. For all captured individuals the biologist will identify species, assign to 50-millimeter size bins, enumerate, and then relocate to the nearest appropriate site downstream of the work area.

Water quality measurements including temperature, dissolved oxygen, and conductivity will be recorded during each day of fish relocation activities.

Next, temporary coffer dams will be installed upstream to intercept River flows and downstream to block River backwater from entering the work site. These coffer dams will be constructed from gravel bags or aquadams. Minor excavation will occur between the upstream fish exclusion net and the upstream temporary coffer dam to allow for temporary pump installation (See sheets C300 and C301 in Exhibit D).

The pumps for the bypass system will be installed upstream of the upstream coffer dam to divert the River and just downstream of the upstream fish exclusion net. Pumps will include appropriate fish exclusion nets. Diversion piping for the pumped water will be constructed along the River's north (left) bank, to a discharge point downstream of the downstream fish exclusion net. The bypass system will run continuously for 24 hours a day, seven days a week until the high-density polyethylene (HDPE) 36-inch diameter-fused pipes (described in the section below) are installed in the River and the gravity flow diversion system is operational.

Concurrent with bypass system operation, fish relocation within the dewatered area will occur. Fish relocation will be led and completed by Qualified Biologists. A team will be comprised of a combination of backpack electro-fishers, beach seining, and netters. Backpack electro-fishing is expected to be most effective fish collection method, based on habitat complexity and in channel structure (e.g., woody debris, cobble, rip rap) with the project area. Backpack electro-fishing will follow NMFS (2000) guidelines for electro-fishing for anadromous salmonids.

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Sweeps of the channel will be completed as water levels decrease. Captured fish will be held in containers of cool shaded river water and equipped with aerators. Fish of different sizes classes will be held separately to reduce changes of predation. Fish will be identified and enumerated by genus and species to the extent feasible. Fish will not be subjected to jostling, excessive handling or noise and will not be overcrowded in containers. Fish will be relocated to the nearest appropriate site downstream of the work area. The Qualified Biologist will determine the relocation site based on size of the water pool and presence of woody debris, vegetation, and/or boulders.

2025 River Diversion System (36-Inch Diversion Pipes)

With the pump bypass system in place, Permittee will construct the 2025 river diversion system. An access roadway will be excavated from the McLellan yard. Permittee will install interior coffer dams, constructed of gravel bags or aquadams, to completely dewater the 2025 dry season work area.

Concurrent with interior coffer dam installation, three 36-inch diameter-fused HDPE diversion pipes will be installed in the main River channel. The diversion pipes will be installed from above the upstream interior coffer dam to below the downstream interior dam and will follow the River's approximate thalweg alignment. The upstream invert of the diversion pipe will be placed at an elevation of approximately 87.4 feet with the low flow cell placed 6 inches lower. The downstream invert will be placed at an elevation of approximately 84.4 feet. The 36-inch diversion pipes will not be netted to allow for continued movement of water and migration of downstream fish through the work area. The diversion pipes will be arranged with slightly varying elevations and starting positions to assist fish passage during low flows.

Additional pumps will be installed in the construction area to dewater the active work area from nuisance river water seepage beneath the coffer dams. This water will be pumped through an Active Treatment System (ATS) prior to discharge back to the River (See sheets C302, and C320 – C323 in Exhibit D).

Phase 2 – 2025 Dry Season Work Condition (June – September 2025)

Dewatered Area Site Preparation

Imported 3-inch crushed rock gravel will be placed over the three 36-inch diameter diversion pipes to create a gravel land bridge. A one-foot-thick layer of spawning bed gradation gravel will be placed in the River channel to separate the 3-inch gravel from the native stream bed. The gravel bridge will facilitate construction access and create a work pad for demolition of the MT-1 bridge, reconstruction of the new MT-1 foundations, and retrofit of the MT-2 foundations.

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After the gravel is placed, the upstream and downstream exterior temporary coffer dams will be removed, and the bypass system's pumps will be removed. Water will be diverted via gravity flow through the three 36-inch diversion pipes. Fish passage will be permitted downstream through the diversion pipes, but not upstream.

Bridge and Channel Construction Activities

The existing MT-1 bridge will be demolished. Temporary shoring installed in 2023 will be removed at Abutment 1 and Bent 4. Bridge bracing and wood bent frames will be removed, and pile caps will be excavated and demolished.

As MT-1 is dismantled, the MT-2 bridge foundations (Piers 2, 3, and 4) will be retrofitted. The new MT-1 bridge Abutments 1 and 5 and Bents 2, 3, and 4 will be constructed, along with retaining walls and wing walls. Rock riprap scour protection will be installed at the piers and the Riverbank for stabilization. Any groundwater encountered while drilling piers will be pumped to the ATS prior to discharge to the River. See sheets C114, C120 – C121, and C302 – C303 in Exhibit D.

Phase 3 – Late Dry Season 2025 (Late September –October 15, 2025)

While the River flow is diverted, portions of the temporary sheet pile walls will be installed along the right and left banks of the River channel to a top elevation above the 100-year flood elevation. These temporary sheet pile walls will be installed along the north and south banks to provide isolation of work areas from flow in the River in future construction phases. Sheet piles will be installed using a vibratory hammer to the greatest extent feasible and as necessary driven to full depth using an impact hammer (See sheet C304 in Exhibit D).

Near the end of the 2025 dry season, the temporary pump bypass system will be reestablished by placing temporary coffer dams upstream and downstream, and river flow will be re-routed through the temporary bypass, as described in Phase 1. With the temporary bypass system in place, the gravel fill, interior coffer dams, and three 36-inch diversion pipes will be removed. Upon removal of the gravel fill, the one-foot layer of spawning gravel placed on the Riverbed will be partially removed, leaving at least a 6-inch-thick layer of spawning gravel in the Riverbed. The remaining sheet pile along the right bank will be installed. To provide flood protection for the work zone in the winter season, an aquadam barrier will be placed along the south end perimeter of the Reach 6 Project's floodplain. The temporary aquadam barrier and sheet pile walls will remain in place for Phase 4. The coffer dams, pump bypass system, and diversion pipes will be removed by

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the end of the 2025 dry season, and river flow will be returned to the main River channel.

Phase 4 – Winter Season 2025/2026 (October 16, 2025 – June 15, 2026)

The temporary sheet pile shoring and aquadam installed in *Phase 3* will isolate work areas from wet season River flow. Any stormwater runoff in the work area will be pumped to the ATS and discharged to the San Jose sanitary sewer system.

During Phase 4, the concrete girders between MT-1 Bent 3 and Bent 4, and between Bent 4 and Abutment 5, will be set. Bridge construction will continue, including MT-2 Pier 4 retrofit completion and MT-1 foundation, pier, and superstructure construction. Grading and partial restoration work for the MMP (Exhibit I) in the downstream right overflow channel and bank behind the sheet pile wall will be performed.

In preparation for the 2026 dry season, three 36-inch diameter diversion pipes will be partially installed along the right bank, in the overflow channel behind the sheet pile wall. Gravel fill will be placed over the pipes to allow construction access over the pipes. See sheets C114, C304 and C305 in Exhibit D.

Phase 5 – 2026 River Diversion Installation (starting June 15, 2026)

The temporary bypass system described in Phase 1 will be re-established, diverting the river flow around the work area and discharging flow downstream. Fish relocation will occur within the dewatered area, consistent with the description in Phase 1 (See sheet C306 in Exhibit D).

After the pump bypass system is operational, the right bank sheet pile wall will be extended upstream and across the main channel to block flow from entering the work area. The top of the sheet pile will be placed at an elevation above the 100-year flood elevation. With the sheet pile in place across the stream, the three 36-inch diversion pipes installed in *Phase 5* will be extended upstream beyond the new sheet pile. After the pipes are installed, gravel will be placed over the pipes to prepare a work surface in the overflow channel, as described in Phase 2 (See sheet C307 in Exhibit D).

The aquadam barrier in the Reach 6 Floodplain installed in Phase 3 will be removed. The HDPE pipes installed in winter 2025/2026 will be extended through the Reach 6 Project's floodplain to discharge downstream of the work area. The pipes will be supported by existing ground or on temporary gravel fill to maintain the specified slope for the pipes through most of the floodplain. At the location of the existing Valley Water mitigation area, an overhead support system will

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suspend the HDPE pipes above the ground surface to avoid impacting Valley Water's mitigation plantings. Upstream of the Valley Water mitigation area, the HDPE pipes will be supported on gravel bag piers. Cofferdams for the gravity diversion system will be installed at the upstream and downstream ends of the HDPE pipes.

Once the diversion pipe installation is complete, the pumped bypass system will be removed, and the previously installed temporary sheet pile walls will be used to divert flow into the three diversion pipes by gravity flow. Fish passage will be permitted downstream through the diversion pipes, but not upstream. The gravity diversion for the 2026 dry season will divert flow to the east of the River's main channel, passing through the final overflow channel alignment and will return water to the River downstream. This will enable the construction of habitat improvements (e.g. riffles, scour pools) within the main River channel. Any nuisance river water seepage will be pumped to the ATS (See sheets C308 and C330 – C335 in Exhibit D).

Phase 6 – Dry Season 2026 (July – August 2026)

With the river diverted from the existing river channel, in-channel MMP and channel grading work will be completed. The downstream left bank failure will be repaired. By August 2026, work in the River channel will be completed (See sheet C308 in the Design Sheets).

Phase 7 – Late Dry Season 2026 (August – October 15, 2026)

The left bank sheet pile wall will be removed after grading and MMP work in the River channel are completed. Permittee will remove the downstream temporary coffer dam, upstream coffer dam, and bypass system to return flow to the existing channel. The three 36-inch diversion pipes, aquadam, and temporary sheet piles will be removed. Final grading and channel stabilization will be completed.

Phase 8 – Winter Season 2026/2027 (Starting October 16, 2026)

By October 15, 2026, grading and MMP installation will be complete, and the remaining sheet pile wall will be removed. Mitigation planting will continue into the 2026/2027 winter season.

~~There will be 1.406 acres of grading within the creek bed and banks, with a majority of this being excavation of the eastern bank to widen the river channel by 75 feet. There will be placement of 2.95 acres of rip rap, including 2.54 acres that will be buried with soil and 0.41 acres that will not be buried. There will be removal of 0.15 acres of rip rap, resulting in a net 2.80 acres of new rip rap.~~

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~~There will be 0.471 acres of permanent impacts and 0.138 acres of temporary impacts to Fremont cottonwood forest, 0.289 acres of permanent impacts to freshwater perennial marsh, 0.730 acres of temporary impacts to seasonal wetland, and 0.001 acres of permanent impacts and 0.527 acres of temporary impacts to grassland.~~

There will be 0.78 acres of temporary impacts and 1.46 acres and 692 linear feet of permanent impacts to the bed, bank, channel, and adjacent upland areas from the remaining Project activities.

Permittee also incurred 0.3 acres of permanent impacts as a result of the unauthorized activities documented in the Notice of Violation dated September 13, 2024.

The Project Impacts shall be amended to read:

Existing fish or wildlife resources that the Project could substantially adversely affect include:

Scientific Name	Common Name	Status
Invertebrates		
<i>Bombus crotchii</i>	Crotch's bumblebee	SCE
Multiple species	Native invertebrates	
Fish		
<i>Oncorhynchus mykiss</i>	Central California DPS steelhead trout	FT, SSC
<i>Entosphenus tridentatus</i>	Pacific lamprey	SSC
<i>Hesperoleucus symmetricus</i>	California roach	SSC
<i>Oncorhynchus tshawytscha</i>	Central Valley fall-run Chinook salmon	SSC
Multiple species	Native and non-native fishes	
Amphibians		
<i>Rana draytonii</i>	California red legged frog	FT, SSC
Multiple species	Native amphibians	
Reptiles		
<i>Emys marmorata</i>	Northwestern pond turtle	FT, SSC
Multiple species	Native reptiles	
Birds		
<i>Elanus leucurus</i>	White tailed kite	SFP
<i>Agelaius tricolor</i>	Tri colored blackbird	ST
Multiple species	Native birds, nesting birds	
Mammals		

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<i>Antrozous pallidus</i>	Pallid bat	SSC
<i>Lasiurus blossevillei</i>	Western red bat	SSC
Roosting bats	Native bats	
Multiple species	Native mammals	

Plants

Multiple species	Native plants
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Notes: FC = federal candidate species under ESA; FE = federally endangered under ESA; FT = federally threatened under ESA; FP = federally protected under ESA; SE = state endangered under CESA; SCE = state candidate for listing as endangered under CESA; SCT = state candidate for listing as threatened under CESA; SFP= state fully protected; SSC = state species of special concern; ST = state threatened under CESA; California Rare Plant Ranks (CRPR) ranking system: 1B= plants rare, threatened, or endangered in California and elsewhere; 2B= plants rare, threatened or endangered in California, but common elsewhere. Threat ranks: .1= seriously threatened in California; .2= moderately threatened in California ([Special Vascular Plants, Bryophytes, and Lichens List](#), April 2025).

- ~~— White-tailed kite (*Elanus leucurus*) – State Fully Protected~~
- ~~— American peregrine falcon (*Falco peregrinus anatum*) – State Fully Protected~~
- ~~— Tricolored blackbird (*Agelaius tricolor*) – State Threatened~~
- ~~— Western pond turtle (WPT) (*Emys marmorata*) – State Species of Special Concern~~
- ~~— Steelhead (*Oncorhynchus mykiss irideus* pop. 8), Central California Coast Distinct Population Segment (DPS) – Federally Threatened~~
- ~~— other aquatic and terrestrial wildlife species~~

The Measures to Protect Fish and Wildlife Resources shall be amended as follows:

1.5 Notification of Commencement and Completion of Work. Permittee shall notify CDFW within five (5) working days of beginning work and within five (5) working days of completion of work for each construction season covered in this Agreement. Notification shall be made to ~~Kristin Garrison~~ **Melony Wood**, Environmental Scientist, at ~~707-944-5534~~ **(707) 428-2002** or ~~kristin.garrison@wildlife.ca.gov~~ melony.wood@wildlife.ca.gov.

1.6 Unauthorized Take. **This Agreement does not authorize “take” (defined under Fish and Game Code section 86 as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill), including incidental take, of any State or federally listed rare, threatened, or endangered species, or of species that are otherwise protected under Fish and Game Code. Permittee may elect to, as prescribed in the California and U.S. Endangered Species Acts, obtain take coverage for State and federally listed species prior to commencement of the Project. Any unauthorized take of listed species may result in prosecution and**

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nullification of this Agreement. Permittee, biological personnel, or any representative thereof, are not authorized to handle, in any form, species listed as endangered, threatened, candidate, or a rare plant species, unless an Incidental Take Permit has been issued for the Project. ~~This Agreement does not authorize the take, including incidental take, of any state or federally listed threatened or endangered species, or of species that are otherwise protected under FGC. Permittee may be required, as prescribed in the California Endangered Species Act (CESA) and U.S. Endangered Species Act (ESA), to obtain take coverage for State and federally listed species prior to commencement of the Project. Any unauthorized take of listed species may result in prosecution and nullification of this Agreement.~~

2.2 Work Period Modification. If Permittee needs more time to complete Project activities, work may be authorized outside of the work period and extended ~~on a day-to-day basis~~ **based on the National Weather Service 5-day weather forecasts** by CDFW representative, ~~Kristin Garrison~~ **Melony Wood**, at 707-944-5534 or ~~kristin.garrison@wildlife.ca.gov~~ **melony.wood@wildlife.ca.gov**, or if unavailable, through contact with the CDFW Bay Delta Regional Office by mail or by phone at (707) 428-2002.

If Permittee requests a work period modification, Permittee shall submit such a request in writing to the CDFW Bay Delta Office. The request shall: 1) **demonstrate compliance with all other measures of the original Agreement and this Major Amendment;** 2) describe the extent of work already completed; 3) detail the activities that remain to be completed; 4) detail the time required to complete each of the remaining activities; and 5) provide photographs of both the current work completed and the proposed site for continued work. **Any work period variance request should consider the effects of increased stream flows, seasonal behavior patterns of biological resources, rain delays, increased erosion potential, limited Project site access due to saturated soil conditions, and limited growth of native seed application due to cool weather.** The work period modification shall be issued at the discretion of CDFW. CDFW reserves the right to require additional measures to protect biological resources as a condition for granting the modification. ~~CDFW shall have 7 calendar days to review the proposed work period modification.~~

2.5 Notification of Changes to Plans. The Permittee has provided final design plans, dated **April 21, 2025**. ~~September 30, 2021~~. Permittee shall notify CDFW in writing of any modifications made to the final Project construction plans/designs a **minimum** of 30 ~~business~~ days prior to the changes being implemented. Any modification to plans or designs shall be subject to CDFW review and written acceptance. **CDFW reserves the right to and may require**

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Permittee to submit an additional request for amendment to the original this Agreement, or re-notify for the work.

Dewatering

2.7 Dewatering. The Project activities **that** will occur within the wetted channel and bank **will require the following protective measures**. ~~If water is present within the stream channel, Permittee shall provide a dewatering plan to CDFW for review and acceptance at least 30 days prior to construction. To isolate the work area, a water tight coffer dam shall be constructed. Coffers dams shall be constructed of a non-erodible material which does not contain soil or fine sediment. Coffers dams shall be installed at low tide or during periods of low flow to reduce the potential for the presence of aquatic species within the work area. The coffer dam shall remain in place and functional throughout the construction period. If the coffer dams or stream diversion fail, they shall be repaired immediately. The minimum footprint feasible for the coffer dam placement shall be utilized to lessen the impact to flow within the channel.~~

2.7.1 Dewatering Device Oversight and Channel Dewatering. The Qualified Biologist and/or Fisheries Biologist as defined in Measure 2.28 and 2.28.1 (can be the same person) shall direct the installation, removal and dewatering efforts of all dewatering device structures. During the period of active dewatering, the Fisheries Biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops and until active dewatering concludes. All stranded aquatic life in the dewatered areas shall be immediately relocated to habitat outside of harm's way. Dewatering device(s) shall remain in place and functional during Project-related activities. Dewatering device(s) that fail for any reason shall be repaired immediately. Except as otherwise authorized by this Major Amendment, all materials used in dewatering device construction shall be removed from the Project site once the dewatering device(s) are no longer needed.

Block nets must be placed at the upper and lower extent of the areas from which aquatic life will be relocated. Block net mesh shall be sized to ensure aquatic species upstream or downstream do not enter the areas proposed for dewatering between passes with the seine or nets.

2.7.2 Dewatering Device Material. Permittee shall construct dewatering devices using only clean sheet pile walls, gravel, aquadams, diversion pipes, and/or gravel bags. Sheet plastic may be used to achieve a seal in conjunction with other materials as described. Concrete, asphalt, soil, sediment, or construction spoils/waste shall not be used. Upon Project completion, gravel bags and any sheet plastic shall be removed from the

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stream. Clean river run gravel may be left in the stream channel, provided it does not impede stream flow or fish passage, and conforms to natural channel morphology without significant disturbance to natural substrate.

2.7.3 Daily Checks for Stranded Aquatic Life. A Qualified Biologist or Fisheries Biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. If a special status aquatic species is found within the dewatering area, Project activities shall halt, and work shall not resume until the individual leaves the Project work area under its own volition. If a special status aquatic species is discovered at any time within the Project work areas, then all Project activities shall halt until CDFW has been notified and Permittee can demonstrate compliance with CESA. If take of state-listed fishes is expected to occur as a result of Project-related activities, then an Incidental Take Permit (ITP) from CDFW may be obtained to avoid further disruptions to Project activities.

2.7.4 Dewatered Area Bypass Flows. When bypassing stream flow around work area, stream flow below the construction site shall be maintained similar to the unimpeded flow at all times.

2.7.5 Work Area Seepage or Upwelling. The work area shall be periodically pumped dry of seepage. Permittee shall place pumps in flat areas, away from the stream channel. Pumps shall be secured by tying off to a tree or staked in place to prevent movement by vibration. Pump intakes shall be fitted with fish screens meeting CDFW criteria to prevent entrainment or impingement of small fish and amphibians. CDFW fish screen criteria can be found online at [Fish Screen Criteria](#). Pump intakes shall be periodically checked for impingement of fish or amphibians that shall be relocated according to the approved measures outlined for each species below. Any turbid water pumped from the work site itself to maintain it in a dewatered state shall not be discharged directly into any waterway. All pumped seepage water shall be discharged to the City of San Jose municipal storm drain.

2.11 Spoils. Permittee shall not place spoil where it may enter a stream, riparian or wetland area, or other vegetation except as described in this Agreement or specifically disclosed to and approved by CDFW in writing. Spoil shall be hauled offsite or stockpiled in an upland location where it shall be covered with plastic sheeting or visqueen **and weighed down with sandbags** whenever it is evident that rainy **or windy** conditions threaten to erode loose soils into sensitive habitats.

2.16 Spill of Material Deleterious to Fish, Wildlife and Plants. ~~Hazardous Spill Plan. A hazardous spill plan will be developed prior to construction. The~~

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~~plan will describe what actions will be taken in the event of a spill. The plan will also incorporate preventative measures to be implemented, such as vehicle and equipment staging, cleaning, maintenance, and refueling; and contaminant (including fuel) management and storage. In the event of a contaminant spill, work at the site will immediately cease until the contractor has contained, and mitigated the spill. The contractor will immediately prevent further contamination and notify appropriate authorities, and mitigate damage as appropriate.~~
Permittee and all contractors shall be subject to the water pollution regulations found in Fish and Game Code Sections 5650 and 12015. In the event of a hazardous materials spill into the stream (e.g., grout, epoxy, etc.), Permittee shall immediately notify the California Office of Emergency Services State Warning Center by calling 1-800-852-7550 and immediately provide written notification to CDFW by emailing CDFW (see Contact Information section).

Permittee shall take all reasonable measures to document the extent of the impacts and affected areas including photographic documentation of affected areas, injured fish and wildlife, or where the affected area could impact protected plants. If dead fish or wildlife are found in the affected area, Permittee shall collect carcasses and immediately deliver them to CDFW. Permittee shall meet with CDFW within 10 days of the reported spill in order to develop a resolution including: site cleanup, site restoration, and compensatory mitigation for the harm caused to fish, wildlife, and the habitats on which they depend as a result of the spill. Permittee shall be responsible for all spill cleanup, site restoration, and compensatory mitigation costs. Spill of materials to waters of the State that are deleterious to fish and wildlife are in violation of Fish and Game Code Section 5650 et seq., and are subject to civil penalties for each person responsible. CDFW reserves the right to refer the matter to the District Attorney's Office if a resolution cannot be agreed upon and achieved within a specified timeframe, generally six months from the date of the incident.

2.16 a Emergency Spill Response Plan. An emergency response plan shall be prepared and submitted to CDFW prior to the start of Project related activities. This plan shall be limited to three pages in length and may be presented in prose, table, or bulleted list format. This plan shall identify the actions which would be taken in the event of a spill of cementitious products, petroleum products, sediment, or other material harmful to fish, wildlife, plant resources, or the habitats thereof. This plan shall also identify the emergency response materials which shall be kept at the site to allow the rapid containment and cleanup of any spilled material. Permittee may substitute a Stormwater Pollution Prevention Plan

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in place of the emergency spill response plan. The emergency response or stormwater pollution prevention plan shall also be submitted in the final construction report.

2.16 b Storage and Handling of Hazardous Materials. Any hazardous or toxic materials that could be deleterious to fish, wildlife, plant resources, or the habitats thereof shall be contained in watertight containers or removed from the Project site. Such materials include, but are not limited to, debris soil, silt, bark, rubbish, chemically treated lumber products, cementitious products or washings thereof, paint or other coating material, and oil or other petroleum products. These materials shall be prevented from contaminating the soil and/or entering the stream. Any such materials, placed within or where they may enter stream, by Permittee or any party working under contract, or with permission of Permittee, shall be removed immediately.

2.16 c Spill Containment and Spill Kits. All activities performed in or near State waters shall have absorbent materials designated for hazardous materials spill containment and cleanup activities onsite for use in an accidental spill. Permittee shall immediately initiate the cleanup activities in the event of a hazardous materials spill. Prior to entering the work site, all field personnel shall know the location of spill kits and trained in their appropriate use.

2.16 d Water Pollution. Permittee and all contractors shall be subject to the water pollution regulations found in Fish and Game Code Sections 5650 and 12015.

2.17 Containment of Cementitious Products Leachate. ~~Concrete Exclusion From Wetted Channel. Poured concrete shall be excluded from the wetted area of a stream for a period of 30 days after it is poured. During that time, the poured concrete shall be kept moist, and runoff from the concrete shall not be allowed to enter the stream. Commercial sealants or curing accelerant may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. However, pH testing of water exposed to uncured concrete shall be performed to ensure that the pH range shall remain between 6.5 and 8.3. If sealant is used, water shall be excluded from the work site until the sealant is cured. Any sealant or accelerant to be used shall first have the material safety data sheets (MSDS) for all active chemical ingredients submitted and accepted by CDFW before application in construction. All MSDS shall include environmental toxicity information.~~ **Containment of cementitious products (concrete, grout, mortar, cement, etc.) shall adhere to the following best management practices:**

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- 2.17.1 Any and all concrete surfaces that may contact, directly or indirectly, with channel flows including subsurface water, shall be poured a minimum of 30 days prior to the authorized work period final date. Permittee shall notify CDFW 14 days prior to the final date of allowed for application if work is expected to exceed such final date.**
- 2.17.2 Water that has come in contact with uncured products shall not be allowed to enter the stream channel until the pH of the water is between 6.5 and 8.0 pH units. Water shall be diverted around uncured concrete structures, and the areas around poured concrete shall be dewatered.**
- 2.17.3 Unsealed structures shall be allowed to cure (dry) for at least 28 days before flows are reintroduced.**
- 2.17.4 To shorten the curing period, Permittee may use a non-toxic sealant designed for use in aquatic environments. Prior to use, Permittee shall submit the product safety data sheet to CDFW for review and approval. If a product has potential for, or lacks information on, environmental toxicity it shall not be used. If a sealant is to be applied, structures shall be allowed to cure for at least seven days prior to application and for an additional three days following application of the sealant before flows are reintroduced.**
- 2.17.5 Curing compounds shall not be used within 25 feet of any waterway, except as authorized by the original Agreement or this Major Amendment.**
- 2.17.6 Washdown water from delivery trucks, pumping equipment, and other tools and equipment shall not be allowed to enter a stream channel and shall be removed from the site for treatment following work. No wash areas or staging areas for cementitious products shall be placed on the banks or in a location where they could be carried into the channel by wind or runoff.**

~~2.19 Concrete Wash Area. Permittee/contractor shall not allow concrete washwater and debris to enter the active stream. Concrete wash area facilities shall be inspected daily and following heavy rains to check for leaks and identify any damage to plastic linings and/or sidewalls.~~

2.20 Installation of Sheet Piles. The Permittee shall install the sheet piles using a vibratory pile driver, and an impact hammer as needed. Permittee shall complete pile driving activities including the installation and removal of sheet piles during the specified work period outlined in Measure 2.1.

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~~make reasonable effort to install and remove sheet piles during months in which the channel has low water levels.~~

2.21 Rock Slope Protection (RSP). Un-grouted RSP shall consist of clean rock, competent for the application, sized, and properly installed to resist washout. RSP slopes shall be supported with competent boulders keyed into a footing trench with a depth sufficient to properly seat the footing comprised of coarse boulders and prevent instability. RSP slopes and footing trenches shall feature an underlayment of appropriate grade geo-textile fabric on slopes less than 1:1, or gravel blanket on slopes greater than 1:1. The rock slope protection shall be placed in a smooth curve along the natural bank alignment, shall not project out into the channel beyond the limits of the natural bank, and shall not include any “barbs” or “groins”, or other features which will deflect the flow against the opposite bank, or cause the formation of downstream eddies. Any other bank stabilization method is subject to CDFW written approval.

2.21 a Geotextile Fabrics. If non-biodegradable geotextile fabrics must be used to ensure the engineered stability of the rock slope protection, it shall be monitored for the life of the project to ensure that it is never exposed to the stream. If the geotextile fabric is exposed to the stream, CDFW must be notified, proper permits acquired, and the rock slope protection structure must be repaired immediately. This may require additional permits from CDFW.

2.24 a Post Construction Walkthrough. Permittee shall contact CDFW to participate in a post construction walkthrough of the Project site within 30 days of Project completion to ensure the Project has been constructed as designed, and that erosion control measures and restoration efforts have been implemented. Upon request from CDFW, Permittee shall immediately address and implement any corrections documented during the walkthrough within a mutually agreed upon time period.

2.26 Erosion Control Materials. Permittee shall place erosion protection in areas where vegetation cannot reasonably be expected to become re-established. Permittee shall not use erosion control materials containing plastic monofilament netting (erosion control matting) or similar material containing netting within the Project area or mitigation areas due to documented evidence of amphibians and reptiles becoming entangled or trapped in such material. Acceptable substitutes include coconut coir matting, straw/coconut fiber erosion blanket, straw wattles, or tackified hydroseeding compounds. These materials shall be placed in a manner so that erosion protection is provided, but that the materials blend with the natural contours of the stream bank. **Seeding shall be covered with broadcast straw, jute netting, coconut fiber blanket or similar**

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erosion control blanket. Erosion control measures shall be monitored during and after each storm event. Modifications, repairs and improvements to erosion control measures shall be made whenever they are needed.

~~2.27 Erosion Control Installation Time Period. Permittee shall install all erosion control plantings, seeding, and materials soon as possible after Project activities in those areas cease. Seeding placed after October 15 shall be covered with broadcast straw, jute netting, coconut fiber blanket or similar erosion control blanket.~~

2.28.1 CDFW-Approved Fisheries Biologist. A Fisheries Biologist is an individual who shall have a minimum of five years of academic training and professional experience in aquatic ecology, ichthyology, marine biology or closely related field, has at least two years of direct experience handling at least one of the special status fish species that may occur within the Project work area, is in possession of appropriate State and Federal permits to handle special status species of fish that may occur within the Project work area, and has been provided written authorization from CDFW to act as a Fisheries Biologist under this Agreement.

2.28 a Qualified Biologist Onsite Monitoring Requirements. A Qualified Biologist shall be present at the Project site for the duration of the following Project activities:

- Deployment of exclusion measures
- Vegetation modification or removal
- Work involving cementitious products
- Dewatering device installations and removals
- During dewatering of work areas from beginning to completion of dewatering
- Installation and removal of fish screens
- Initial ground-disturbing and excavation activities
- Any fish or wildlife salvage/relocation activities
- Portions of the Project where burrows may be impacted

2.30 Pre-Construction Fish and Wildlife Surveys. Within 48 hours prior to each phase of construction work within the Project area, the CDFW-approved qualified biologist shall conduct pre-construction surveys for presence of special-status fish and wildlife species within all construction areas, staging areas, and access routes, herein referred to as the Project Work Area. Permittee shall survey for species included under Project Impacts section of this Agreement as well as other native fish and wildlife species that could be found in the area. Surveys shall be conducted at the appropriate time of day and in habitat suitable for each of the species. If state or federally listed species are found, work shall

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cease and the qualified biologist shall contact CDFW ~~and the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)~~ for further guidance and approval to continue work. If any State special-status species are found, the biologist shall contact (or leave a message for) ~~Kristin Garrison~~ **Melony Wood**, at 707-944-5534 or ~~Kristin.Garrison@wildlife.ca.gov~~ melony.wood@wildlife.ca.gov, or the Bay Delta Region office at (707) 428-2002 within 4 hours. CDFW reserves the right provide additional measures to this Agreement designed to protect special-status species.

2.30.1 Permittee shall utilize the methods and follow the visual encounter protocol described in the Draft USGS Western Pond Turtle Visual Survey and Monitoring Protocol for the Southcoast Ecoregion (2006), available online at [Survey and Monitoring Protocols and Guidelines](#), and shall record the location of any WPT that are observed on the Project site, or in nearby areas. Permittee shall include information about WPT in the Worker Environmental Awareness Training. Permittee shall monitor for WPT prior to and during Project construction activities. All observations of WPT shall be documented and reported to CDFW. WPT encountered in the work area shall be protected, monitored by an approved biologist and allowed to move out of the work area on its own. WPT shall not be handled without appropriate permits.

2.30 a General Cease Operations Authority. The Qualified Biologist or Biological Monitor shall have the independent authority to stop all Project activities if any special-status species enters the Project area, if Project activities pose imminent threat to fish and wildlife resources, or if Project activities are out of compliance with the measures outlined in this Agreement. If a special-status species is observed within the Project site, then all work shall halt and not continue until the wildlife leaves the area on its own volition.

If the Qualified Biologist or Biological Monitor witnesses a violation of this Agreement, they shall contact CDFW immediately. Permittee shall not enter into non-disclosure agreements with biological personnel or otherwise implement penalties or disincentives restricting direct communication with CDFW. Failure to consult immediately with CDFW on violations shall constitute grounds for CDFW to revoke the biological personnel's monitoring authority and require Permittee to stop work until other biological personnel have been approved.

2.31 a Bats. For all project activities planned in potential bat roosting habitat such as bridges and/or involving woody vegetation modification or removal of any and all trees, the Qualified Biologist shall conduct daytime and evening acoustic surveys in addition to extensive visual surveys for

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bats and potential habitat for bats at least 14 days prior to initiation of construction activities. If bats are found on-site, the Qualified Biologist shall identify the species, estimated quantity present, roost type, and roost status, but shall avoid disturbing bats during surveys. Permittee or the Qualified Biologist shall notify CDFW within 24 hours if bats are found during surveys. The Qualified Biologist shall submit a Bat Mitigation and Monitoring Plan at least seven days prior to the start of project activities for CDFW review and written approval. Project activities may not start until CDFW written approval has been provided to Permittee. The Bat Mitigation and Monitoring Plan shall include: (1) an assessment of all project impacts to bats, including noise disturbance during construction; (2) effective avoidance and minimization measures to protect bats; (3) compensatory mitigation for permanent impacts to maternity roosts if impacted. Upon CDFW written approval, the Bat Avoidance and Monitoring Plan shall be attached as Exhibit G to this Agreement. Non-maternity roost trees slated for removal shall be removed in accordance with the following methodology:

2.31 a.1 To ensure that bats have left potential roosting trees, trees 24 inches DBH and greater shall be removed over the course of two days. On the first day, limbs from the identified trees shall be removed in the late afternoon. This disturbance should cause potentially roosting bats to seek other roosts during their nighttime foraging. The remainder of the tree can then be removed on the second day as late in the afternoon as feasible. If bats are found injured, or if bat mortality occurs during the course of tree removal, the Qualified Biologist shall immediately notify CDFW of the event, the species recorded, and the number of individuals documented.

2.31 a.2 Tree limbing or removal shall not be performed under any of the following conditions: a) during any precipitation events, b) when ambient temperatures are below 4.5 degrees Celsius, c) when windspeeds exceed 11 miles per hour, and/or d) any other condition which may lead to bats seeking refuge.

~~2.36 WPT - Vegetation Removal. Permittee shall remove grassland, wetland, and understory vegetation prior to mechanical removal of woody shrubs and trees so that presence of special-status species can be assessed prior to machinery being brought on-site. Removal of vegetation should begin farthest away from suitable WPT habitat and move towards this suitable habitat so that any WPT present can passively relocate into suitable habitat. Permittee shall remove grassland, wetland, and understory vegetation only with non-mechanized hand tools (i.e. trowel, hoe, rake, and shovel). Motorized~~

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~~equipment, including weed wackers or lawn mowers, shall not be used to remove this vegetation.~~

2.36 a Avoidance of Crotch's Bumble Bee. The Permittee is responsible for ensuring that Project activities do not result in take of Crotch's bumble bee while a candidate species, or if Crotch's bumble bee becomes listed as threatened or endangered under CESA during the term of this Agreement. For all work proposed that may include ground disturbance, dewatering, or vegetation removal (excluding pruning, limb removal, and overhead trimming) within the geographic range of Crotch's bumble bee, the Permittee shall implement the Crotch's bumble bee avoidance measures identified in this Amendment to ensure that no Crotch's bumble bees are taken during project implementation. All Crotch's bumble bee measures may be amended by CDFW, as more information on the species becomes available.

2.36 b Crotch's Bumble Bee Surveys and Work Restrictions. Prior to ground disturbing, dewatering, and/or vegetation removal Project activities, excluding pruning, limb removal, and overhead trimming, during the Colony Active Period and Gyne Flight Season (generally April 1 to August 31), the Qualified Biologist shall conduct a visual survey for Crotch's bumble bee within a 100-foot buffer of the project site(s) with the use of a camera (to identify species). The survey shall be conducted no more than 14 days prior to start of project activities, assessing all areas of suitable habitat for nesting and foraging. The survey shall be conducted at least two (2) hours after sunrise and at least two (2) hours before sunset, within a temperature range of 60°F and 90°F, with no rain, and with sustained wind speeds less than 10 mph. Detections shall be submitted to CDFW's California Natural Diversity Database (per Measure 4.5). If Crotch's bumble bee nests are found, a 50 foot no-work buffer shall be implemented around the nest until the nest senesces. The Qualified Biologist shall not capture or handle bumble bees unless authorized under an MOU in accordance with Fish and Game Code 2081(a). This authorization does not include take caused by project-related activities. The MOU authorization would allow bumble bees to be netted, chilled, and photographed for identification purposes.

2.36 c Crotch's Bumble Bee Survey Methods. At minimum, bumble bee survey methods, as outlined in CDFW's Surveys Considerations for CESA Candidate Bumble Bees¹ shall include the following:

¹ <https://wildlife.ca.gov/Conservation/Survey-Protocols#377281281-invertebrates>

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Search areas with flowering plants for foraging CBB.

Survey burrows and other possible nesting habitat including manmade objects, for nest activity by systematically walking areas and looking for bee activity. If a nest is suspected, a vial or jar can be placed over the hole for 5 – 30 minutes to confirm activity if authorization under an MOU is granted.

Look and listen for concentrated bumble bee activity. Although different bumblebee species may have different habitat affinities and may favor the flowers of different plant species, bumble bees are generalists and CBB frequently occur in the same areas, and often use the same flowering plants, as other bumble bee species.

If bumble bees are observed, capture a photo of the bees for documentation, and to verify the species. Photos must be identified by a taxonomist or person(s) deemed qualified by CDFW.

Photographs shall be taken with an appropriate camera (e.g., a DSLR camera with a telephoto lens) from multiple angles, if possible, and be in focus.

Surveyors shall record the date and time of survey; location; weather (temperature, wind speed, and cloud cover); a general description of suitable floral resources and nesting sites (See Habitat Evaluation below); a description of observed bumble bee activity, including the bumble bee species observed; and a determination of whether the survey observations suggest a CBB nest may be present or whether construction activities could harm the species.

If CBB and/or CBB nests are detected, surveyors shall record the location of the nest; nest substrate, slope, aspect, and distance to nearest forage if known; number of CBB observed; and vegetation used by individuals.

If a CBB nest is detected, a 50-foot no-disturbance buffer shall be demarcated around the nest unless a Qualified Biologist determines that a greater buffer distance is warranted. A Biological Monitor shall monitor the nest long enough to determine the buffer was effective in protecting the nest (i.e., the nest is not getting disturbed, and the contractor is aware of the prohibited work area).

If a CBB is detected on the site but no nest is found during focused nesting surveys, a qualified Biological Monitor shall be onsite during any ground disturbance, dewatering, and vegetation removal activities that occur when CBB are present within the activity footprint. A 25-foot no-work buffer will be implemented around CBB not nesting within the area. Biological monitoring shall continue until the CBB leaves the area on its own.

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Because bumble bees are generalists, the removal of floral resources where CBB are present could impact the health of the colony by limiting their food source. During the CBB flight season (February to October), if CBB are present and floral resources that are in bloom must be removed, and no floral resources of similar quality are present nearby, the removal of those flowers shall occur in a patchy manner (as directed by a Qualified Biologist) so that suitable flowers for foraging CBB remain present.

If any sign(s) of a bumble bee nest is observed and the nest cannot be avoided, and if it cannot be established the species present is not Crotch's bumble bee, then construction shall not commence until the nest senesces. Typically, if three (3) consecutive days does not result in observances of bees entering or exiting the nest for 1 hour, the nest may be considered senesced.

The CDFW representative shall be notified if detections of any CBB and/or their nests are detected.

2.36 d Onsite Bumble Bee Monitoring. If a Crotch's bumble bee nest or adults are detected during the survey or incidentally, biological monitoring shall be required. If a nest is present, a Qualified Biologist or monitor shall monitor the nest long enough to determine the 50-foot buffer is effective in protecting the nest. If CBB are present, a Qualified Biologist or monitor shall monitor work in the areas where bumble bees were observed until they are no longer present onsite.

2.36 e Bumble Bee Injury or Death. If a suspected Crotch's bumble bee is killed or injured during the source of survey efforts, or during Project activities, the Qualified Biologist or monitor shall stop all work and immediately contact the CDFW representative for guidance. The Qualified Biologist shall take clear, focused photographs of the injured or dead bee from multiple angles, collect the bumble bee into a vial, freeze it, record the date, location, GPS coordinates, project name, collector, and any other relevant information related to cause of death or injury (e.g., chilling container may have been too cold; extreme shifts in temperature during collection, vehicle strike, etc.). If the bumble bee is determined to be Crotch's bumble bee, the specimen shall be sent to CDFW for further assessment.

[\[1\] https://wildlife.ca.gov/Conservation/Survey-Protocols#377281281-invertebrates](https://wildlife.ca.gov/Conservation/Survey-Protocols#377281281-invertebrates)

2.37 ~~WPT~~ Exclusion Fence and Monitoring. When the qualified biologist (Measure 2.28) has determined that there are no special-status species are present within the Project Work Area (Measure 2.30 **and 2.30.1**), the Permittee

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shall install an exclusion fence to prevent re-entry of individuals within the Project area. The fence shall be a minimum of 2 feet tall and the base shall be buried 4 inches. The qualified biologist shall conduct a daily inspection within the exclusion fence prior to the start of construction activities. Exclusion fencing shall be inspected for holes and gaps and repaired immediately after detection. If sensitive species are found, Project work shall cease and the qualified biologist shall contact CDFW to determine the correct course of action.

2.38 a Fish Relocation Plan. Prior to initiation of Project-related activities, Permittee shall develop and submit to CDFW a Fish Relocation Plan for rescue and relocation of non-special status aquatic organisms as a result of dewatering and dewatering device deployment. Once approved, the Fish Relocation Plan shall be attached as Exhibit F.

2.38 b Relocation Protective Measures. The Qualified Biologist or Fisheries Biologist shall capture and relocate non-special status fish and native amphibian species out of the isolated dewatered area. Take of State-listed species of fish, amphibians or other aquatic organisms is not authorized under this Agreement (see Measure 1.6). Permittee shall avoid harm and mortality to fish and amphibians resulting from relocation activities, as follows:

2.38 b.1 Capture Methods. Acceptable methods of capture include seine nets, electrofishing, fish landing nets, dip nets and buckets operated by hand. Captured aquatic life shall be released immediately into the closest suitable habitat adjacent to the work site as outlined in Measure 2.38 b.3.

2.38 b.2 Relocated Species Records. A record shall be maintained of all relocated fish. The record shall include, at minimum, the date of capture and relocation, the method of capture, the location of the relocation site in relation to the project site, and the number and species of fish captured and relocated. The record shall be provided to CDFW within two weeks of work season closure or Project completion, whichever occurs first.

2.38 b.3 Release Location Criteria. Prior to capturing fish and amphibians, the most appropriate release location(s) shall be determined, using the following criteria: water temperatures shall be similar to those at the capture location; ample habitat for the captured fish shall be present; relocation areas must be within 1,000 feet of the capture site, contain suitable habitat, not be affected by project activities to the best of the Qualified Biologist or Fisheries Biologist's knowledge. In the unlikely event that amphibian egg

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masses are found after July 1, the Qualified Biologist or Fisheries Biologist shall make every attempt to wait until the egg masses hatch to transport them. There shall be a low likelihood for relocated individuals to re-enter the work site or become impinged on exclusion nets or screens.

2.38 b.4 Seining Restrictions. Seine mesh shall be adequately sized to ensure fish are not gilled during capture. There shall be a minimum number of three passes with the seine to ensure a maximum capture probability of fish within the proposed area to be dewatered.

2.38 b.5 Proper Holding Technique. The Qualified Biologist or Fisheries Biologist shall temporarily hold fish and amphibians in cool, shaded, aerated water in a flow-through live car or a bucket with aerators. The Qualified Fisheries Biologist shall protect fish and amphibians from jostling and noise and shall not remove fish from this container until time of release.

2.38 b.6 Water Temperatures and Water Changes. The Qualified Biologist or Fisheries Biologist shall measure air and water temperatures periodically. A thermometer shall be placed in holding containers and, if necessary, partial water changes conducted as necessary to maintain a stable water temperature. If water temperatures reach or exceed 20° Celsius in the holding containers, all captured individuals shall be released and rescue operations halted.

2.38 b.7 No Overcrowding. Overcrowding in containers shall be avoided by having at least two containers and segregating young-of-year (YOY) fish and amphibians from larger age-classes to avoid predation. If fish are abundant, the capturing of fish and amphibians shall cease periodically and captured individuals shall be released at the predetermined locations.

2.38 b.8 Timing of Initial Fish Relocation. The Qualified Biologist or Fisheries Biologist shall conduct initial fish and amphibian relocation efforts during Project-related dewatering activities. The Qualified Biologist or Fisheries Biologist shall conduct additional rounds of sampling immediately prior to construction to ensure no remaining individuals remain within the isolated coffer dam area.

2.38 b.9 Excessive Mortality. If mortality during relocation exceeds more than three percent (3%) of the captured animals, capturing

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efforts shall halt and Permittee shall immediately consult with the appropriate agencies for additional guidance.

2.38 b.10 Conduct Relocations During Cool Temperatures. The Qualified Biologist or Fisheries Biologist shall conduct relocation activities while temperatures are cooler to minimize fish exposure to conditions causing stress or injury, such as temperature extremes.

2.38 c Report Mortalities to Agencies Immediately. If any special status species are found dead or injured during relocation activities or other construction-related actions, the Qualified Biologist or Fisheries Biologist shall notify the appropriate regulatory agencies within 24 hours. Written notification to CDFW shall be provided pursuant to the Contact section of this Agreement. As appropriate, regulatory agency staff will review the activities resulting in take and determine if additional protective measures are required. All mortalities shall be retained, placed in an appropriately-sized sealable plastic bag, labeled with the date and location of collection, fork length, and be frozen as soon as possible. Frozen samples shall be retained by the biologist until specific instructions are provided by CDFW.

Vegetation

2.43 a Tree and Shrub Mitigation Ratios. Trees will be replaced using the following ratios (number of trees replanted: one tree removed). All diameters are measured at diameter at breast height (dbh), which is 4.5 feet from ground level.

Permittee shall be responsible for replacing all removed native trees, with the exception of oaks and willows (specified below), that are equal to or greater than 3 inches dbh. Individual native trees that will be removed shall be replanted at) 3:1 for trees 3 - 6 inches dbh; and ii) 6:1 for trees greater than 6 inches.

Willows equal to or greater than 3 inches dbh shall be replanted at 3:1 ratio.

Permittee shall be responsible for replacing all removed oak trees that are equal to or greater than 2 inches dbh. Individual oak trees that will be removed shall be replanted at native tree ratios above, excepting that trees greater than 24 inches dbh shall be replaced at a 10:1 ratio. If acorns are used for replanting, the mitigation ratio shall be at a minimum 15:1 ratio.

Non-native trees greater than 3 inches in diameter shall be replaced at a 1:1 ratio with a native tree species.

Native shrubs shall be replaced at a 3:1 ratio.

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2.43 b Type of Plants to be Used. Trees and shrubs planted shall be of the same species of tree that was removed. If non-native species are removed, then native species similar to those found in the immediate area shall be replanted. Revegetation plantings shall consist of saplings, locally-collected seeds, stakes, or other suitable nursery stock, as appropriate and shall be native species adapted to the lighting, soil and hydrological conditions at the replanting site.

Replacement oaks may come from acorns gathered locally, preferably from the same watershed in which they are planted. If acorns are used for replanting, a minimum of 3 acorns shall be planted per hole to increase success rate. Plant spacing shall be approximately 20 to 25 feet apart (minimum of 8 to 10 feet). Tubex (tree shelters) shall be installed to protect acorns and seedling from animal predation.

2.43 c Phytophthora and Nursery Stock. Permittee shall ensure that the following sanitation and nursery guidelines are implemented to minimize the potential for spreading *Phytophthora* spp. pathogens, to the maximum extent practicable.

If contract-grown container plants are used for revegetation efforts, the contract nursery is required to implement the Guidelines to Minimize *Phytophthora* Pathogens in Restoration Nurseries (Nursery Guidelines) http://www.suddenoakdeath.org/wp-content/uploads/2016/04/Restoration.Nsy_Guidelines.final_092216.pdf prepared by the Working Group for *Phytophthoras* in Native Habitats.

If using locally collected plants, the plants must be tested for *Phytophthora* spp. pathogens and additionally will be inspected to ensure they are healthy and vigorous by a qualified biologist prior to delivery to the restoration site. Planting should occur as close to the delivery date as possible. If plants cannot be planted close to the delivery date, plants must be stored according to the holding facility guidelines in the Nursery Guidelines.

2.43 d Revegetation Timeframe. Erosion control revegetation (Measure 2.25) shall occur as soon as possible after construction activities in those areas cease and no later than October 31. Restoration plantings and/or seed shall be applied immediately prior to the first rain event following the completion of construction. Restoration planting shall be done by December 31 but may be postponed until February 28 of the year immediately following the completion of the construction impacts if there is insufficient rainfall prior to December 31 to ensure survival of plantings.

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2.43 e Revegetation Remediation. If success criteria are not met, the Permittee is responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same parameters and success criteria as original plantings/revegetation.

2.43 f Invasive Plant Control. In conducting invasive plant control, the Permittee shall use non-chemical manual removal to the fullest extent feasible. Only herbicides registered with the California Department of Pesticide Regulation (DPR) shall be applied. Localized spot treatments such as the cut-stump method should be used, when feasible. All herbicides shall be applied in accordance with regulations set by DPR, used according to labeled instructions, and approved for use in an aquatic environment (e.g. Rodeo®). Labeled instructions for the herbicide used shall be made available to CDFW upon request. Herbicide application shall be conducted on calm days only with wind less than five (5) miles per hour to prevent airborne transfer of herbicide. Pesticide mixing sites shall be located at existing road sites outside of the stream, riparian or wetland areas. No herbicides shall be used where CESA and/or federally listed species have been documented to occur.

3.1 Mitigation and Monitoring Plan (MMP). ~~The Permittee has provided a draft MMP, dated January 2022. At least 30 days prior to the commencement of Project activities, the Permittee shall submit a revised draft Mitigation Monitoring Plan to CDFW for review and written approval. The final MMP that has received written approval from CDFW shall be the plan that is implemented. The MMP should address the following:~~

The MMP should describe temporary, semi-permanent, and permanent impacts. Temporary impacts are those that can be returned to pre-Project conditions within one year of the impact. Semi-permanent impacts are those that can be restored within two years of the impact. Permanent impacts include, but are not limited to, vegetation that is fully removed even if the area is to be revegetated but that cannot be restored to pre-Project conditions within two years.

The MMP shall include habitat mitigation a 3:1 ratio for permanent impacts (area replanted: area impacted). Tree replacement ratios shall be as listed in Measure ~~3.22.43~~ **a.** The MMP shall include monitoring of grass revegetation of construction areas over a 1-year period, wetlands over a 3-year period, shrubs over a 5-year period, oaks over a 10-year period, and other trees over an 8-year period, commencing with the completion of revegetation activities. The MMP shall include a list of the species to be used for revegetation, success criteria (such as percent survival and percent cover), monitoring, reporting (Measure 4.2 and 4.3), anticipated invasive species control, and corrective actions to be taken when success criteria are not met.

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Monitoring may occur in the late spring or early summer, after foliage has emerged. Photos from designated photo stations shall be included in the MMP annual reports.

Permittee shall not plant, seed or otherwise introduce invasive plant species within the Project area. Prohibited invasive plant species include those identified in the California Invasive Plant Council's inventory database, which is accessible at: <http://www.cal-ipc.org/ip/inventory/weedlist.php>.

3.1 a Santa Clara Valley Habitat Plan. The Permittee shall provide the SCVHP application including the Certificate of Approval, or similar documentation showing fees paid and conditions to be implemented, to CDFW. The SCVHP application should also include the Reporting Form for Public Projects with the Habitat Plan Application File Number. The application should include identification and quantification of all habitat impacts, temporary and permanent, and associated fees paid.

~~3.2 Tree and Shrub Mitigation Ratios. Trees will be replaced using the following ratios (number of trees replanted: one tree removed). All diameters are measured at diameter at breast height (dbh), which is 4.5 feet from ground level.~~

~~Permittee shall be responsible for replacing all removed native trees, with the exception of oaks and willows (specified below), that are equal to or greater than 3 inches dbh. Individual native trees that will be removed shall be replanted at) 3:1 for trees 3—6 inches dbh; and ii) 6:1 for trees greater than 6 inches.~~

~~Willows equal to or greater than 3 inches dbh shall be replanted at 3:1 ratio.~~

~~Permittee shall be responsible for replacing all removed oak trees that are equal to or greater than 2 inches dbh. Individual oak trees that will be removed shall be replanted at native tree ratios above, excepting that trees greater than 24 inches dbh shall be replaced at a 10:1 ratio. If acorns are used for replanting, the mitigation ratio shall be at a minimum 15:1 ratio.~~

~~Non-native trees greater than 3 inches in diameter shall be replaced at a 1:1 ratio with a native tree species.~~

~~Native shrubs shall be replaced at a 3:1 ratio.~~

~~3.3 Type of Plants to be Used. Trees and shrubs planted shall be of the same species of tree that was removed. If non-native species are removed, then native species similar to those found in the immediate area shall be replanted. Revegetation plantings shall consist of saplings, locally collected seeds, stakes, or other suitable nursery stock, as appropriate and shall be native species adapted to the lighting, soil and hydrological conditions at the replanting site.~~

Bonny O'Connor
EPIMS-SCL-20973-R3
June 12, 2025

~~Replacement oaks may come from acorns gathered locally, preferably from the same watershed in which they are planted. If acorns are used for replanting, a minimum of 3 acorns shall be planted per hole to increase success rate. Plant spacing shall be approximately 20 to 25 feet apart (minimum of 8 to 10 feet). Tubex (tree shelters) shall be installed to protect acorns and seedling from animal predation.~~

~~3.4 Phytophthora and Nursery Stock. Permittee shall ensure that the following sanitation and nursery guidelines are implemented to minimize the potential for spreading *Phytophthora* spp. pathogens, to the maximum extent practicable.~~

~~If contract-grown container plants are used for revegetation efforts, the contract nursery is required to implement the Guidelines to Minimize *Phytophthora* Pathogens in Restoration Nurseries (Nursery Guidelines) http://www.suddenoakdeath.org/wp-content/uploads/2016/04/Restoration.Nsy_.Guidelines.final_.092216.pdf prepared by the Working Group for *Phytophthoras* in Native Habitats.~~

~~If using locally collected plants, the plants must be tested for *Phytophthora* spp. pathogens and additionally will be inspected to ensure they are healthy and vigorous by a qualified biologist prior to delivery to the restoration site. Planting should occur as close to the delivery date as possible. If plants cannot be planted close to the delivery date, plants must be stored according to the holding facility guidelines in the Nursery Guidelines.~~

~~3.5 Revegetation Timeframe. Revegetation shall occur during the same construction season as the impacts occur. Erosion control revegetation (Measure 2.25) shall occur as soon as possible after construction activities in those areas cease and no later than October 31. If feasible, plantings and/or seed shall be applied immediately prior to the first rain event. Planting shall be done by December 31 but may be postponed until February 28 of the year immediately following impacts if there is insufficient rainfall prior to December 31 to ensure survival of plantings.~~

~~3.6 Revegetation Remediation. If success criteria are not met, the Permittee is responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same parameters and success criteria as original plantings/revegetation.~~

~~3.7 Invasive Plant Control. In conducting invasive plant control, the Permittee shall use non-chemical manual removal to the fullest extent feasible. Only herbicides registered with the California Department of Pesticide Regulation (DPR) shall be applied. Localized spot treatments such as the cut-stump method should be used, when feasible. All herbicides shall be applied in accordance with regulations set by DPR, used according to labeled instructions, and approved for use in an aquatic environment (e.g.~~

Bonny O'Connor
EPIMS-SCL-20973-R3
June 12, 2025

~~Rodeo©). Labeled instructions for the herbicide used shall be made available to CDFW upon request. Herbicide application shall be conducted on calm days only with wind less than five (5) miles per hour to prevent airborne transfer of herbicide. Pesticide mixing sites shall be located at existing road sites outside of the stream, riparian or wetland areas. No herbicides shall be used where CESA and/or federally listed species have been documented to occur.~~

EXHIBITS

~~Exhibit A: Figure 1, Guadalupe River Bridge Replacement Project Location~~

Exhibit A – Location Map

Exhibit B – Site Map

Exhibit C – Project Description [prepared by Permittee and dated April 25, 2025]

Exhibit D – 100% Project Designs [prepared by HDR and dated April 21, 2025]

Exhibit E – Revised Dewatering Plan [prepared by Permittee]

Exhibit F – Fish Relocation Plan [prepared by Stillwater Sciences]

Exhibit G - Bat Avoidance and Monitoring Plan [prepared by Permittee]

Exhibit H – Erosion Control Plan [prepared by Permittee]

Exhibit I – Mitigation and Monitoring Plan (MMP) [provided by Permittee]

Exhibit J – Tree Replacement Plan [provided by Permittee]

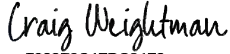
All other conditions in the Agreement remain in effect unless otherwise noted herein.

Please sign and return one copy of this letter to acknowledge the amendment. Copies of the Agreement and this amendment must be readily available at project worksites and must be presented when requested by a CDFW representative or agency with inspection authority.

If you have any questions regarding this letter, please contact Melony Wood, Environmental Scientist, at (707) 428-2002 or by email at Melony.Wood@Wildlife.ca.gov.

Bonny O'Connor
EPIMS-SCL-20973-R3
June 12, 2025

Sincerely,

DocuSigned by:

7988F8C4FDC24F2...

Craig J. Weightman
Environmental Program Manager

ec: California Department of Fish and Wildlife

Jason Faridi, Senior Environmental Scientist (Supervisor)
Melony Wood, Environmental Scientist
Nancy Snodgrass, Senior Hydraulic Engineer

Bonny O'Connor
EPIMS-SCL-20973-R3
June 12, 2025

ACKNOWLEDGEMENT

I hereby agree to the above-referenced amendment.

Print Name: Michael Tauchen

Date: 6/13/2025

Signed by:
Signature: Michael Tauchen
2D0E22F3C26F4AD...

EXHIBIT D

Guadalupe River Bridge Replacement Project Off-Site Mitigation Plan, dated July 2026.

HICKS CREEK OFF-SITE MITIGATION PROJECT HABITAT MITIGATION AND MONITORING PLAN

PREPARED FOR:

Peninsula Corridor Joint Powers Board
166 N. Rollins Road, Fourth Floor
Millbrae, CA 94162
Contact: Michael Tauchen
Email: TauchenM@caltrain.com

PREPARED BY:

ICF
595 Market Street, Suite 950
San Francisco, CA 94105
Contact: Rich Walter
Email: Rich.Walter@icf.com

July 2026



ICF. 2026. Hicks Creek Off-Site Mitigation Project. Habitat Mitigation and Monitoring Plan. July (ICF 103689.0.015.01.004) San Francisco, CA.
Prepared for Peninsula Corridor Joint Powers Board, San Carlos, CA.

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Acronyms and Abbreviations

Acronym	Definition
CDFW	California Department of Fish and Wildlife
GRBR Project	Guadalupe River Bridge Replacement Project
Habitat Agency	Santa Clara Valley Habitat Agency
JPB	Joint Powers Board
Midpen	Midpeninsula Regional Open Space District
NHD	National Hydrography Dataset
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Associates
OHWM	ordinary high water mark
Project	Hicks Creek Mitigation Project
PSE	Participating Special Entity
RWQCB	Regional Water Quality Control Board
SWPPP	Stormwater Pollution Prevention Plan
USACE	US Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
Valley Plan	Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan

Chapter 1 Introduction

1.1 Purpose of the Offsite Habitat Mitigation and Monitoring Plan

The Peninsula Corridor Joint Powers Board (JPB), which operates the San Francisco Bay Area's Caltrain passenger rail service, is in the process of completing the Guadalupe River Bridge Replacement Project (GRBR Project). The GRBR Project includes replacing the MT-1 bridge and extending the MT-2 bridge, both of which cross over the Guadalupe River corridor in an area with developed land and upland plant communities, as well as riparian, wetland, and aquatic habitats. Impacts resulting from the project require both onsite mitigation as well as offsite mitigation. Onsite mitigation is described in a separate onsite Habitat Mitigation and Monitoring Plan. This habitat mitigation and monitoring plan (HMMP) describes the proposed off-site mitigation site on Hicks Creek (Figures 1-1 and 1-2).

The GRBR Project includes areas within multiple agency jurisdictions including the US Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). Mitigation for all impacts within the USACE jurisdiction were achieved on-site; however, there is a need for offsite mitigation to satisfy the Administrative Order on Consent (AOC) between the U.S. Environmental Protection Agency (USEPA) and the JPB concerning resolution of the Clean Water act Section 404 Notice of Violation (NOV). Due to various limitations (e.g., property boundaries), the GRBR Project site can only accommodate a portion of the mitigation required for impacts under RWQCB and CDFW jurisdictions. Once the onsite HMMP is finalized, the JPB will be providing RWQCB and CDFW with a mitigation memo describing the final proposed onsite mitigation and the offsite mitigation related to this project. One part of the mitigation for RWQCB and CDFW jurisdiction impacts is the proposed Hicks Creek project. That mitigation memo may identify additional proposed mitigation beyond Hicks Creek as and if necessary to meet mitigation requirements.

To provide mitigation for impacts to CDFW and RWQCB jurisdiction and the need for mitigation to satisfy the USEPA AOC, JPB explored several options for off-site mitigation opportunities. JPB contacted several local land managers to identify the availability and type of off-site mitigation opportunities available. Local land managers contacted included:

- Santa Clara Valley Habitat Agency (Habitat Agency)
- Midpeninsula Regional Open Space District (Midpen)
- Santa Clara Valley Water District (Valley Water)
- Santa Clara Valley Open Space Authority
- Land Trust of Santa Clara Valley

While all land managers expressed interest, the most promising offsite mitigation project location was identified in the upper Guadalupe River watershed on Hicks Creek which is a tributary to Guadalupe Creek. The Project site of the Hicks Creek Mitigation Project is owned by the

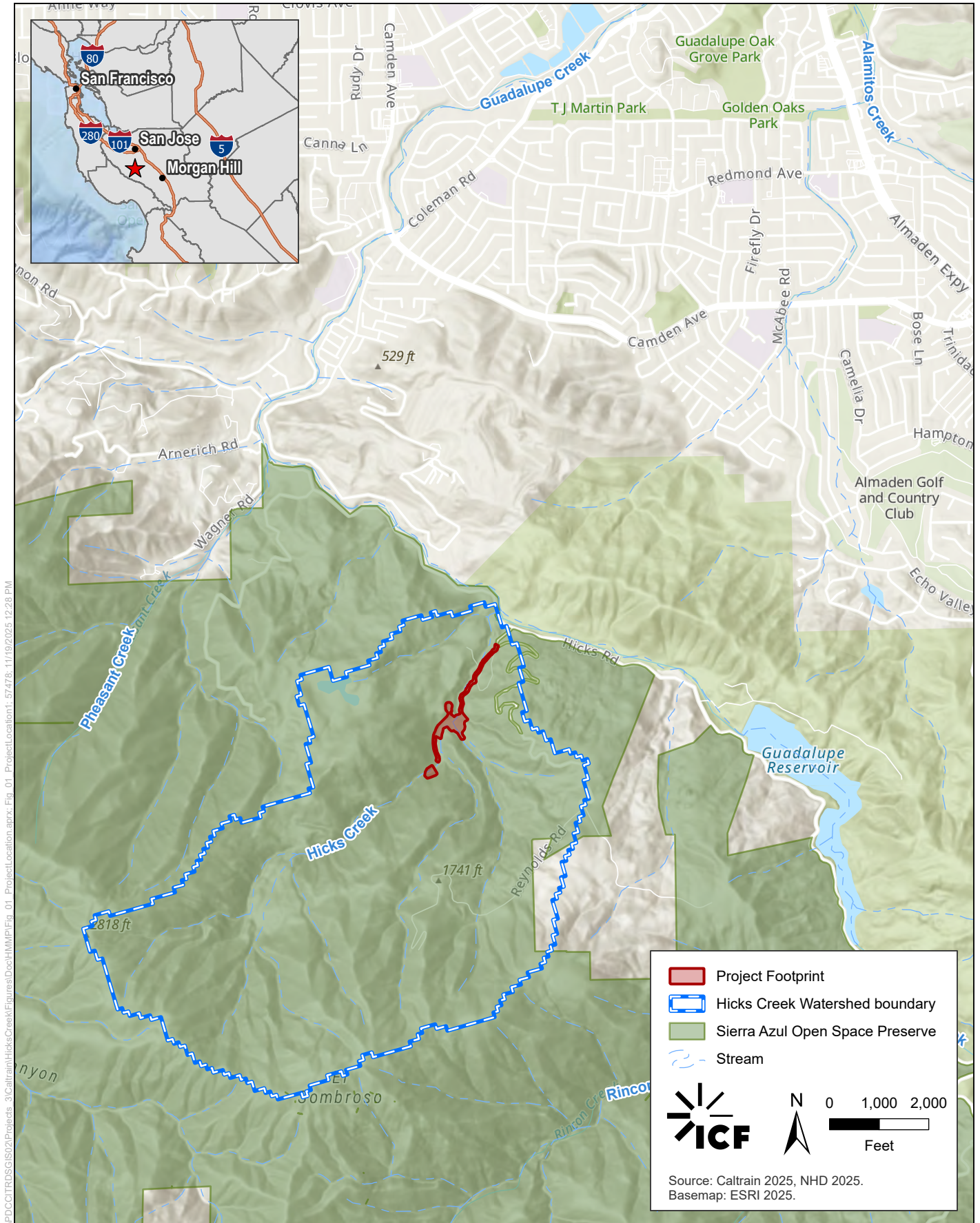


Figure 1-1
Project Vicinity

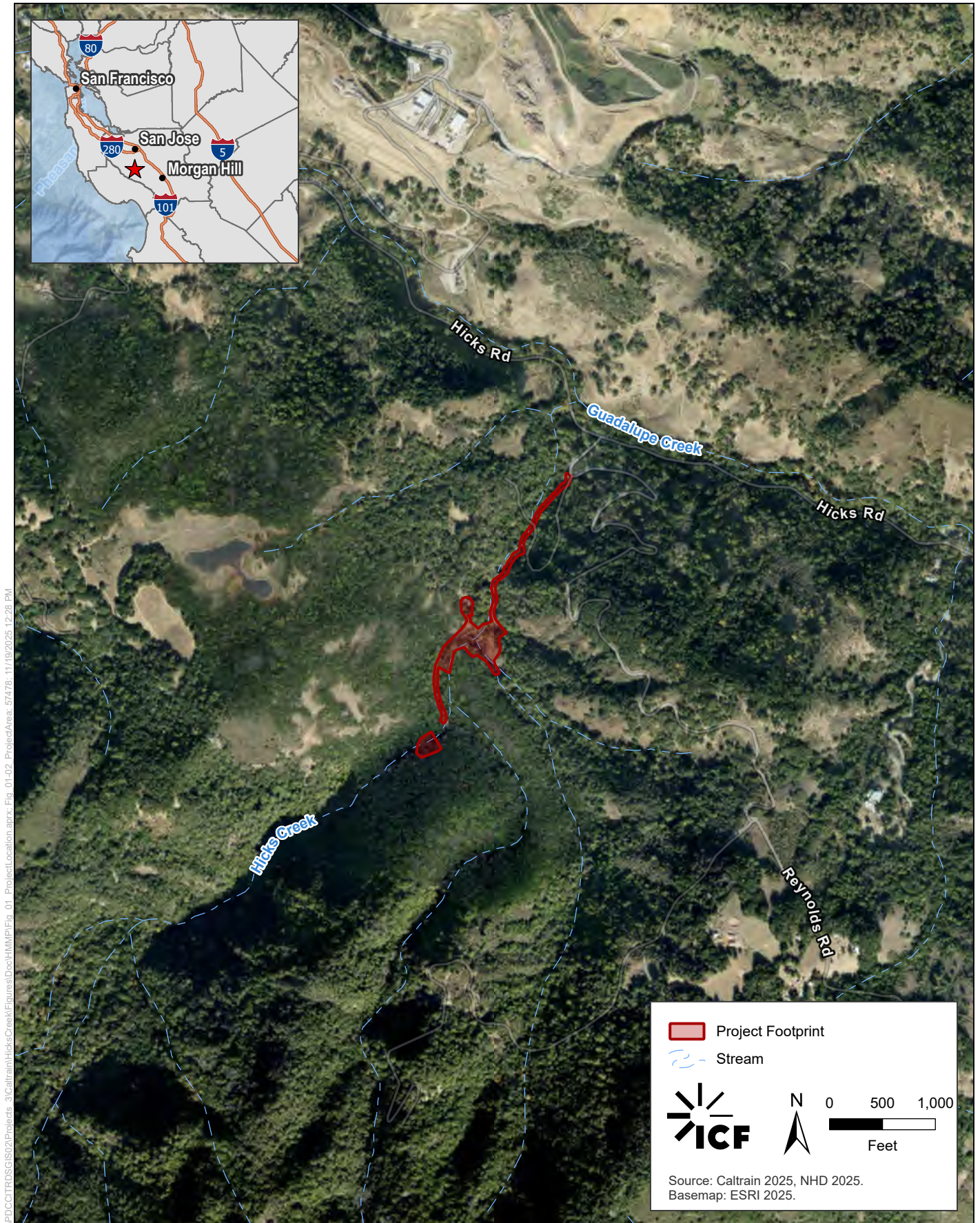


Figure 1-2
Project Area

Midpeninsula Regional Open Space District (Midpen) and is planned to provide mitigation for RWQCB jurisdiction impacts, a portion of the CDFW jurisdiction impacts, and mitigation for the USEPA AOC. The remaining CDFW mitigation that is not addressed either onsite or by the Hicks Creek Mitigation Project is anticipated to be mitigated by entering into a Participating Special Entity (PSE) Agreement with the Santa Clara Valley Habitat Agency (Habitat Agency) and paying the applicable and established fees. CDFW is a signatory to the Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (Valley Plan), and providing mitigation in accordance with the Valley Plan is anticipated to mitigate remaining potential impacts. Table 1-1 describes habitat mitigation planned to be provided by the Hicks Creek Mitigation Project including both restored habitat and enhanced habitat.

Table 1-1. Aquatic and Riparian Habitat Mitigation Provided by the Hicks Creek Mitigation Project

Habitat Type	Offsite Mitigation Areas Provided by Hicks Creek Mitigation Project (acres)(1)	Linear Feet	Jurisdiction
Wetlands, Waters, and Other Aquatic Habitat			
Stream habitat (below OHWM)	0.207	600	USACE, RWQCB, CDFW
Floodplain wetland	0.037	N/A	USACE, RWQCB, CDFW
Emergent Wetland	-0.041	N/A	RWQCB
Total Aquatic Habitat	0.244	600	USACE, CDFW
Total Aquatic Habitat	0.203	600	RWQCB
Riparian	0.599	600	RWQCB, CDFW
Total Jurisdictional Habitat	0.244	600	USACE
Total Jurisdictional Habitat	0.802	600	RWQCB
Total Jurisdictional Habitat	0.843	600	CDFW

(1) These acreages includes area of restored habitat as well as enhanced habitat. See details in Section 4.3.

This offsite HMMP is prepared to satisfy the following:

- Condition 22 of Water Quality Certification and Order issued by the RWQCB on May 19, 2025, pursuant to Section 401 of the Clean Water Act and Porter-Cologne Water Quality Control Act (RWQCB 2025)
- Measure 3.1 of Streambed Alteration Agreement (Notification No. EPIMS-SCL-20973-R3) between the JPB and CDFW dated June 12, 2025 (CDFW 2025).
- Condition 31 of the Administrative Order on Consent (AOC) , Docket NO. CWA-309(a) 0-09-25-011, U.S Environmental Protection Agency, Region 9, July 28, 2025 (USEPA 2025).

The purpose of the offsite HMMP is to describe offsite mitigation for temporary and permanent impacts associated with the GRBR Project and offsite temporary impacts associated with the Hicks Creek Mitigation Project. The Project will occur along a ~500 foot segment of Hicks Creek and a 100-foot segment of a tributary stream. Portions of Project site were formerly developed as part of amenities associated with a former homestead. The Project reach also includes two bridge crossings; one on Hicks Creek and another on the tributary stream. The mitigation of project impacts includes debris removal, expansion of creek corridor area, restoration of physical (e.g., sediment

transport) and biological (e.g., plant growth) processes, and revegetation. This HMMP was prepared consistent with the guidance provided in the USACE/U.S. Environmental Protection Agency's Compensatory Mitigation for Losses of Aquatic Resources, Final Rule (73 Federal Register 19594). The HMMP describes the site preparation, seed and plant material, installation methods, maintenance and monitoring required until the performance standards are met, and contingency measures as necessary.

Offsite habitat mitigation proposed under this HMMP includes a variety of habitat elements including removal of concrete retaining walls, removal of grouted rock retaining walls, channel bed enhancements, in-channel rock enhancements, tributary realignment, and channel bank laybacks to create new riparian habitat. In addition to channel and bank improvements, this offsite HMMP also details implementation steps for the offsite mitigation including site preparation; maintenance; mitigation monitoring, including performance standards for the revegetation; and contingency measures.

1.2 Relationship to Other Planned Projects

Due to its location in the upper Guadalupe River watershed the Hicks Creek offsite mitigation project is in a somewhat remote area within Midpen's Sierra Azul Open Space Preserve. No known Midpen construction projects or other projects by independent entities are proposed to occur in the vicinity of the Hicks Creek Mitigation Project.

Chapter 2

Responsible Party/Permittees

The responsible party/permittee for implementation of this offsite HMMP is:

Peninsula Corridor Joint Powers Board
1250 San Carlos Avenue
San Carlos, California 94070
Contact: Michael Tauchen
Phone: (650) 730-4847
Email: Tauchenm@caltrain.com

This HMMP was prepared by:

ICF
595 Market Street, Suite 950
San Francisco, CA 94105
Contact: Rich Walter
Phone: (510) 290-1860
Email: Rich.Walter@icf.com

Implementation of this HMMP requires approval from the following agencies:

U.S. Army Corps of Engineers, Regulatory
1455 Market Street
San Francisco, CA 94103
Contact: Sarah Firestone
Phone: (415) 503-6776
Email: Sarah.M.Firestone@usace.army.mil
Approval Action: CWA Section 404 Amendment

San Francisco Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Contact: Brian Wines
Phone: (510) 622-5680
Email: Brian.Wines@waterboards.ca.gov
Approval Action: Satisfies 401 Cert, 2025 Amendment, Condition 17

California Department of Fish and Wildlife
7329 Silverado Trail
Napa, CA 94558
Contact: Emily Galli
Email: Emily.Galli@wildlife.ca.gov
Approval Action: Satisfies SAA, 2025 Amendment, Condition 3.1

Peninsula Corridor Joint Powers Board

Responsible Party/Permittees

Midpeninsula Regional Open Space District
5050 El Camino Real
Los Altos, CA 94022
Contact: David Liefert
Email: dliefert@openspace.org
Approval Action: Landowner

Chapter 3

Description of the Hicks Creek Mitigation Project

3.1 Project Summary

The Hicks Creek Mitigation Project (Project) site is managed by Midpen within their Sierra Azul Open Space Preserve in Santa Clara County, California. Midpen is an independent special district that protects native habitats, plants, wildlife and fisheries resources by preserving more than 70,000 acres of land in the greater Santa Cruz Mountains region.

In an effort to find offsite mitigation for the GRBR Project, JPB contacted Midpen about possible mitigation projects on Midpen land in the Guadalupe River watershed in November 2024. Midpen had no in-kind restoration projects currently prepared for execution within the Guadalupe River watershed; however, the Hicks Creek site was identified as a possible mitigation site. After visiting the site, JPB and Midpen determined the Hicks Creek site could help to fulfill the GRBR Project offsite mitigation needs while also aligning with several of Midpen's restoration priorities. In coordination with Midpen, JPB considered prioritization of restoration goals and strategies that are in alignment with, and anticipated to be most beneficial to, the programmatic restoration approaches of Midpen.

Specifically, the project objectives includes the following

1. Restoration of natural habitat in a creek in the Guadalupe River watershed that is important to salmonids.
2. Restoration and enhancement of waters of the U.S. under USACE jurisdiction and waters of the State under RWQCB and CDFW jurisdiction
3. Promote the establishment of a self-sustaining, native aquatic and riparian habitat, resulting in a net increase of aquatic and riparian acreage in alignment with the goals and policies of Midpen.
4. Enhance stream function and native riparian habitat which is anticipated to support local communities of desirable fish, wildlife and plant species.

These objectives will be implemented by removing constructed hardscapes that restrict natural stream functions such as geomorphic processes and fish passage, as well as realignment of a tributary to Hicks Creek to improve natural stream functions and fish passage.

The preliminary schedule for the Hicks Mitigation Project is as follows:

- ✓ Agency Review Package Submitted to Resource Agencies – 12/1/25
- ✓ Permit Applications Submitted to Permitting Agencies – June 2025
- ✓ CEQA Addendum/NEPA Reevaluation – Q3 2026
- ✓ Final Design Package (Drawings, HMMP, BDR) submitted to Resource Agencies – May 2026
- ✓ Permits Expected from Permitting Agencies – Q3 2026
- ✓ Procurement of Contractor – Q3 2026 to Q4 2026
- ✓ Construction – Q2 2027 to Q3 2027
- ✓ Planting – Q3 2027 – Q1 2028

3.2 Project Location

The Project site is part of the Mt. Umunhum Area of Midpen's Sierra Azul Open Space Preserve in Santa Clara County, California. The 90-acre Hicks Creek Ranch property is located off Reynolds Road in the Sierra Azul Preserve (18711 Reynolds Road). The property was purchased by Midpen in 2008 and gives Midpen control of Hicks Creek and the surrounding land from Hicks Road upstream to the upper boundary of the watershed. The property's development footprint is clustered in the northwest corner of the property along Hicks Creek. The project site of the Hicks Creek Mitigation Project is owned by Midpen and is planned to provide offsite mitigation for RWQCB jurisdiction impacts, a portion of the CDFW jurisdiction impacts, and to satisfy mitigation requirements in the USEPA AOC.

At the time of Midpen's purchase, the property included several existing structures including four residential units, pool house, changing room, pool and tub, storage barn, and shop building, the above ground portions of which have been removed by Midpen. The embedded building foundations, rock walls lining the stream channel, concrete-lined pool and tub, and surrounding contiguous portions of hardscapes, were left in place. Much of this in place existing hardscape is within the active channel of Hicks Creek, its confluence with an unnamed tributary, and the surrounding banks and environment, which interferes with the natural functions of the stream and has substantial impacts to the creek's geomorphology.

Hardscape features downstream of the two bridge crossings, with the exception of one section of concrete wall adjacent to the Tributary channel, will be removed as part of the project. The concrete retaining wall is being retained because of its proximity to an existing road. Removal of this portion of retaining may destabilize the bank below the road. The Tributary channel will also be realigned to the north, away from the concrete retaining wall, so the wall will no longer be within the riparian area of the Tributary. The existing bridge crossings will remain in place due to the high cost of removal relative to the mitigation benefit if they were removed. Stacked rock retaining walls upstream of each crossing will also be retained because they are setback from the channels and are not affecting aquatic habitats. The locations of all hardscape features and whether they will be removed or preserved is shown on the demolition plan sheets in the construction drawing set (See Sheet G-2).

There is a dam upstream and outside of the Project site that is full of sediment, does not permanently trap upstream sediment supply and is a fish barrier to further upstream migration. Because it is outside of the Project site, it is not included in the proposed project actions.

3.3 Land Cover Types on the Project Site

Land cover types on the project site consist of a combination of wetland and aquatic habitats and upland and riparian habitats as well as developed and disturbed areas. Land cover types were observed and recorded during a site visit on October 8, 2025. The riparian community along Hicks Creek and the unnamed Tributary is dominated by native tree species including white alder (*Alnus rhombifolia*) and red willow (*Salix laevigata*). The upland plant community is dominated by mixed oak-bay woodland and non-native annual grassland. Non-native and invasive Himalayan blackberry (*Rubus armeniacus*) is a dominant species in some portions of the creek corridor. Table 3-1 and Figure 3-1 identify the aquatic, riparian, and upland land cover types present in the Project site.

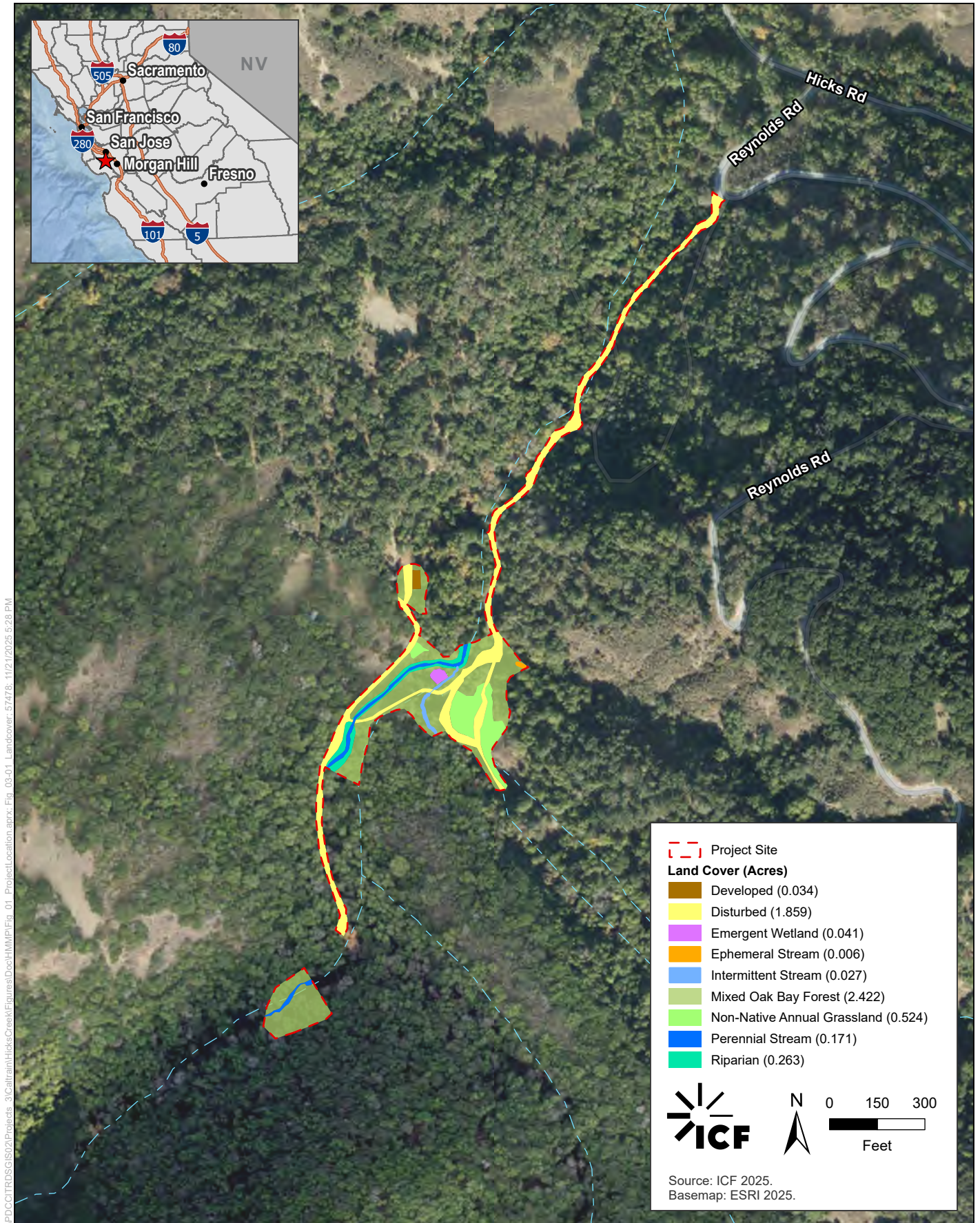


Figure 3-1
Land Cover Types in the Project Site

Table 3-1. Land Cover Types in the Project Area

Habitat type	Area (acres)	Percent of Project Site
Perennial stream	0.171	3.20%
Intermittent stream	0.027	0.50%
Ephemeral stream	0.006	0.11%
Emergent wetland	0.041	0.77%
Non-native annual grassland	0.524	9.80%
Mixed oak bay woodland	2.422	45.29%
Riparian	0.263	4.92%
Developed	0.034	0.64%
Disturbed	1.859	34.77%
Total	5.348	100%

Note: Includes areas upstream (south) of the Project site that will not be affected by the project.

3.3.1 Aquatic Habitat

Hicks Creek is a high gradient stream in the headwaters of the Guadalupe River watershed which flows year-round due to upstream inputs from Cherry Springs (Midpen 2008). A total of 0.262 acres (11,409 square feet; 1,196 linear feet) of aquatic resources were delineated within the approximately 5.348-acre project area consisting of four aquatic resource types. Aquatic resources were classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). Table 3-2 presents all aquatic features delineated within the Project site, by feature type. Figures 3-2, 3-3, and 3-4 identify the aquatic land cover types present in the project site.

Table 3-2. Mapped Aquatic Resources within the Project Area

Feature Identification Number	Cowardin Classification	Area		
		Acres	Square Feet	Linear Feet
Perennial Stream				
PS-1	Riverine, Upper Perennial (R3)	0.130	5,682	640
PS-2	Riverine, Upper Perennial (R3)	0.057	2,498	245
Perennial Stream Subtotal		0.188	8,179	885
Intermittent Stream				
IS-1	Riverine, Intermittent (R4)	0.027	1,172	274
Intermittent Stream Subtotal		0.027	1,172	274
Ephemeral Stream				
ES-1	Riverine, Ephemeral (R6)	0.006	276	37
Ephemeral Stream Subtotal		0.006	276	37
Emergent Wetland				
EW-1	Palustrine, Emergent (PEM)	0.041	1,782	N/A
Emergent Wetland Subtotal		0.041	1,782	N/A
Total Aquatic Resources		0.262	11,409	1,196

Note: Includes areas upstream (south) of the Project site that will not be affected by the project.



Figure 3-2
Aquatic Resources Delineation Map



Figure 3-3
Aquatic Resources Delineation Map





Figure 3-4
Aquatic Resources Delineation Map

3.3.1.1 Perennial Stream

There are two mapped perennial streams within the Project site, constituting reaches of the named stream, Hicks Creek. Mapped portions of Hicks Creek within the Project site encompass 0.188 acre (8,189 square feet) and extend 885 linear feet (Table 3-2). Hicks Creek was observed as flowing during the field investigation on October 8, 2025. These mapped features can be classified as *Riverine, Upper Perennial*, according to the Cowardin classification system (Cowardin et al 1979). These features were mapped based on the presence of an ordinary high water mark (OHWM), primarily changes in sediment size, sediment sorting, water marking, wrack lining, and other fluvial processes above and below the OHWM. While the OHWM data was collected along an intact, historic bank and bed configuration, much of the mapped reaches occur within concrete banks. The southern reach, PS-2, is impounded by a constructed dam; however, this feature appears to flow over the impoundment in a typical year due to the dam currently being filled in with sediment upstream of it, and this feature also underflows during low flow conditions and drains out the dam at its low-level outlet. The mapped perennial streams support a permanent surface connection with the Guadalupe River which drains into San Francisco Bay, a tidal water.

3.3.1.2 Intermittent Stream

There is one mapped intermittent stream within the Project site, encompassing 0.027 acre (1,172 square feet) and extending 274 linear feet (Table 3-2). This intermittent channel is the Tributary stream that is part of the Project site design. This mapped feature is unnamed, identified as a dotted blue line on a USGS map, and classified as intermittent according to the National Hydrography Dataset (NHD). This feature was observed as flowing during the field investigation on October 8, 2025. This feature can be classified as *Riverine, Intermittent*, according to the Cowardin classification system (Cowardin et al 1979). Much of this feature is confined by concrete banks. This stream drains into Hicks Creek via a relic swimming pool and is referred to as the Tributary.

3.3.1.3 Ephemeral Stream

There is one mapped ephemeral stream within the Project site, encompassing 0.006 acre (276 square feet) and extending 37 linear feet (Table 3-2). This mapped feature is unnamed, identified as a dotted blue line on a USGS map, and classified as ephemeral according to NHD. This feature was observed as not flowing during field investigation on October 8, 2025. This feature can be classified as *Riverine, Ephemeral* according to the Cowardin classification system (Cowardin et al 1979). Much of this feature is confined by concrete banks. This feature drains into a culvert, which discharges into Hicks Creek outside of the Project site. This ephemeral stream is outside of the Project site and no work is planned here.

3.3.1.4 Emergent Wetland (Former Concrete Swimming Pool)

There is one mapped emergent wetland within the Project site, encompassing 0.041 acre (1,782 square feet) (Table 3-2) located in the area of an existing (but no longer functional) concrete pool. This feature can be classified as *Palustrine, Emergent*, according to the Cowardin classification system (Cowardin et al 1979). This feature is concrete-lined and used to function as a swimming pool, but is no longer subject to any maintenance and has become a relatively permanent part of the landscape. This feature supports dominant wetland vegetation including rabbitsfoot grass (*Polypogon monseplensis*), Himalayan blackberry, and broadleaf cattail (*Typha latifolia*). While there is a restrictive layer made of concrete, this feature still supports approximately four to eight inches

in depth hydric sandy soils with prominent redoximorphic features. This feature also supports primary hydrology indicators including algal matting and salt crusting. A water mark along the concrete walls of this feature was also observed. This feature is likely completely fed by rainwater and appears to be isolated from any other mapped aquatic feature within the Project site.

3.3.2 Riparian Habitat

Riparian areas within the Project site occur along a perennial creek, Hicks Creek, which is discussed further above. There is 0.263 acre of riparian habitat in the Project site (Table 3-1). This vegetation community supports a tree canopy dominated by white alder and red willow and is dominated in the understory by non-native and invasive greater periwinkle (*Vinca major*) and Himalayan blackberry.

3.3.3 Upland Habitat

3.3.3.1 Mixed Oak-Bay Woodland

Mixed oak-bay woodland occurs throughout much of the Project site. There is 2.422 acres of mixed oak-bay woodland habitat in the project area (Table 3-1). This vegetation community supports a tree canopy dominated by valley oaks (*Quercus lobata*) and California bay tree (*Umbellularia californica*). This vegetation also supports a diverse and patchy understory, ranging from dominating native shrubs such as coyote brush (*Baccharis pilularis*), California blackberry (*Rubus ursinus*) and poison oak (*Toxicodendron diversilobum*), to non-native and invasive greater periwinkle and Himalayan blackberry. Other, less dominant tree species also occur and contribute to the tree canopy within the vegetation community such as California buckeye (*Aesculus californica*), Mexican fan palm (*Washingtonia robusta*), and English walnut (*Juglans regia*).

3.3.3.2 Non-Native Annual Grassland

Non-native annual grassland within the Project site is an herbaceous vegetation community dominated by non-native annual grasses and forbs. There is 0.524 acre of non-native annual grassland habitat in the project area (Table 3-1). Dominant species include soft chess (*Bromus hordeaceus*), oat (*Avena* sp.), smilo grass (*Stipa milaceae*), rose clover (*Trifolium hirtum*), and yellow star thistle (*Centaurea solstitialis*). Non-native annual grasslands within the Project site also support some coyote brush individuals.

3.3.4 Developed and Disturbed Areas

There is one developed area within the Project site which consists of a barn. There are also remnant foundations from former structures within the Project site. Developed areas total 0.034 acre and disturbed areas total 1.859 acres in the project area. The concrete and rock walls lining the steam channel, concrete-lined pool and tub, and surrounding contiguous portions of hardscapes, were left in place by Midpen. Much of this intact existing hardscape is within the active channel of Hicks Creek, its confluence with an unnamed Tributary, and the surrounding banks and floodplain, which interferes with the natural functions of the stream and has substantial impacts to the creek's geomorphology. These areas do not support riparian, wetland, or upland vegetation. The locations of all hardscape features and whether they will be removed or preserved is shown on the demolition plan sheets in the construction drawing set.

Disturbed areas within the Project site consist of pervious rocky roads. These areas are managed to limit vegetation establishment and are subject to regular maintenance by Midpen.

3.4 Jurisdictional Delineation

The Project site was assessed to determine the presence or absence of jurisdictional Waters of the U.S. and State within the Project site, include perennial stream (Hicks Creek; 0.188 acre), intermittent stream (0.027 acre), ephemeral stream (0.006 acre), an isolated emergent wetland (0.041 acre) and riparian areas (0.263 acre).¹ Of these mapped resources a total of approximately 0.215 acre consisting of mapped perennial and intermittent streams, will likely be subject to USACE, RWQCB, and CDFW jurisdiction. The mapped 0.041-acre emergent wetland will likely be subject to RWQCB jurisdiction. The mapped 0.006-acre ephemeral stream and 0.263 upland riparian areas will likely be subject to RWQCB and CDFW jurisdiction. This analysis is summarized below in Table 3-3. Note, this analysis should be considered preliminary, subject to approval in writing by the above-mentioned agencies.

Table 3-3. Waters of the U.S. and State Located Within the Project Area

Feature	Total Waters of the U.S. under USACE Jurisdiction (acres)	Total Waters of the State under RWQCB Jurisdiction (acres)	Total Waters of the State under CDFW Regulatory Authority (acres)
Perennial Stream	0.188	0.188	0.188
Intermittent Stream	0.027	0.027	0.027
Ephemeral Stream	0.000	0.006	0.006
Emergent Wetland	0.000	0.041	0.000
Riparian	0.000	0.263	0.263
Total	0.215	0.525	0.484

Notes:

CDFW = California Department of Fish and Wildlife

RWQCB = Regional Water Quality Control Board

USACE = U.S. Army Corps of Engineers

Note: Includes areas upstream (south) of the Project site that will not be affected by the project.

3.5 Fish Habitat

Hicks Creek is within the Central California Coast (CCC) steelhead distinct population segment (DPS), which encompasses naturally spawned steelhead (*Oncorhynchus mykiss*) populations in watersheds from the Russian River south to and including Aptos Creek in Santa Cruz County, and the drainages of San Francisco and San Pablo Bays eastward to and including the Napa River (62 Federal Register [FR] 43944; August 18, 1997). NMFS listed the CCC steelhead DPS as threatened in 1997 and issued a final listing determination for the species in 2006 (71 FR 834; January 5, 2006).

NMFS designated critical habitat for the CCC steelhead DPS in 2005; however, Hicks Creek is not included in the critical habitat designation for the species (70 FR 52488-52627, September 2, 2005).

¹ Mapped based on the extents of the topographic top of bank, or the extent of the riparian canopy dripline, whichever was greater.

In the Guadalupe River watershed, only the lower Guadalupe River from South San Francisco Bay upstream to the confluence with Los Gatos Creek is designated as critical habitat for the species (70 FR 52570, September 2, 2005).

The historical occurrence of steelhead in the Hicks Creek is well documented and includes observations from the 1950s (Leidy et al. 2005). Historical accounts include a California Department of Fish and Game (now California Department of Fish and Wildlife) comment in reference to a proposed watershed project that steelhead were known to spawn in Hicks Creek (Leidy et al. 2005). In November 2024, biologists with Valley Water documented the presence of *O. mykiss* within the Hicks Creek Project site (Valley Water 2025a). During a reconnaissance survey of Hicks Creek in September 2025, an ICF fish biologist observed numerous juvenile *O. mykiss* in Hicks Creek upstream and downstream of the project site. Based on the presence of a partial barrier in Hicks Creek downstream of the project site, it is unknown whether the *O. mykiss* recently observed were the offspring of resident (i.e., rainbow trout) or anadromous (steelhead) adults.

Even though development in the Hicks Creek watershed is minimal, modifications to the landscape have been made that have created fish passage impediments and alter natural geomorphic processes and channel condition. Alterations in the watershed include confinement of the channel and floodplain by rock walls; realignment of a tributary stream; roads and bridges; and a channel-spanning rock weir that impedes fish passage, all of which have contributed to habitat fragmentation and reduced habitat quality. Additional information on fish passage impediments in Hicks Creek is provided below in Section 4.2.1.1.

Other fish species documented to occur in Hicks Creek include riffle sculpin (*Cottus gulosus*) and southern coastal roach (*Hesperoleucus venustus subditus*), although the latter were collected near the confluence with Guadalupe Creek and not in the Project site (Valley Water 2025a). During a reconnaissance survey of Hicks Creek in September 2025, an ICF fish biologist observed one dead sculpin in Hicks Creek in the vicinity of the downstream boundary of the project site. Pacific lamprey (*Entosphenus tridentata*) has not been documented in Hicks Creek; however, Hicks Creek is within the range of the species and Pacific lamprey are known to occur in the Guadalupe River which is downstream of Hicks Creek (Moyle 2002; Valley Water 2025b).

Chapter 4

Mitigation

To develop the mitigation elements for this offsite HMMP, ICF used design criteria informed by the Central Coast NMFS Programmatic Biological Opinion (National Marine Fisheries Service 201) and the USFWS Statewide Restoration Programmatic Biological Opinion (USFWS 2023), and described in detail in the Basis of Design Report (BDR). Due to the steep profile of Hicks Creek and its Tributary, and the proximity of infrastructure around the site, the 100-year flow event was used to size substrate and evaluate channel stability. A reference reach was also identified and used to develop the project design. To reduce stream energy and increase habitat complexity, the design aimed to lay back the streambanks and incorporate large wood into the channel and floodplain. Habitat quality was to be enhanced by removing non-native vegetation and man-made structures, revegetating floodplain and riparian areas with native plants, and by reusing onsite alluvial materials in the channel construction.

4.1 Mitigation Purpose and Objectives

The purpose of the offsite mitigation Project is to mitigate for GRBR project impacts that cannot be mitigated on-site. Mitigation will be provided by improving instream habitats on Hicks Creek to provide habitat for anadromous fish and other aquatic species.

The objectives of the Hicks Creek Mitigation Project include:

- Restoration of natural habitat in a creek in the Guadalupe River watershed that is important to salmonids.
- Restoration and enhancement of waters of the United States under USACE jurisdiction and waters of State under RWQCB and CDFW jurisdiction.
- Establishment of a self-sustaining, native riparian and aquatic habitat, resulting in a net increase of riparian acreage in alignment with the goals and policies of Midpen.
- Enhancement of stream function and native riparian habitat which is anticipated to support local communities of desirable fish, wildlife and plant species.

These objectives will be achieved by implementing the following activities:

- Removal of constructed hardscapes including concrete, grouted rock, sac-crete, and wood retaining walls that restrict natural stream functions such as geomorphic processes and fish passage.
- Removal of a constructed four foot vertical drop in Hicks Creek, which impedes fish passage and alters channel grade. Reconstruction of channel to re-establish equilibrium channel grade and enhance fish passage.
- Removal of remnant building foundations and other areas of past development and restoration of streamside riparian and adjacent upland habitats.

- Realignment of a tributary to Hicks Creek to improve natural stream functions and fish passage.

4.2 Project Mitigation Plan

ICF was retained by JPB to provide mitigation design services for the Project. The project intends to provide offsite mitigation for in-water and riparian impacts from JPB's GRBR project. Offsite Project actions identified for mitigation include removal of constructed infrastructure in the Hicks Creek channel and an associated tributary, including removal of concrete and rock masonry retaining walls along channel banks and realignment of the Hicks Creek Tributary through an existing swimming pool. Additionally, the project proposes fish passage improvements including removal of a constructed 3.4-foot drop in the channel.

Riparian and upland plantings are proposed throughout the Project site and impacted areas, as well as invasive plant removal and replacement with native species.. The plan set prepared for the Project is provided in Appendix A for reference.

4.2.1 Habitat Elements

This offsite HMMP includes the following habitat elements, which will be described in detail in the Basis of Design Report and described in the following subsections:

- Demolition and excavation of existing foundations and structures including removal of concrete and mortared rock retaining walls;
- Removal of Himalayan blackberry and greater periwinkle stands as well as other nonnative trees and shrubs;
- Channel bank restoration including riparian plantings, gravel placement, and the addition of large wood structures to the channel banks;
- Enhancement of the active channel bed, including pool and riffle habitat to improve fish passage and rearing conditions. In-channel work will also include the placement of boulders and construction of step-pool step-run channel morphology;
- Installation of revegetation plantings to restore temporarily impacted riparian, wetland, and upland plant communities; and
- Revegetation and/or seeding of temporary staging areas.

4.2.1.1 Demolition of Foundations and Structures

The Project includes removal of concrete pads and hardscape structures previously installed on the floodplain and in the riparian corridor. Features to be removed include concrete pads and foundations, wood retaining walls and concrete and rock walls Appendix A includes a plan view drawing and a table that identify the site features to be removed or preserved. Debris generated from demolition activities will be disposed of offsite at an authorized disposal site.

Table 4-1. Habitat Gained from Demolition of Foundations and Structures

Structure # ¹	Type	Length (ft)	Width (ft)	Total Area (acres)	Land Cover Gained ²
3	Rock and Concrete Wall	250	1.2	0.0069	Perennial Stream

4	Rock and Concrete Wall	250	1.2	0.0069	Perennial Stream
5	Concrete Pad	22	8	0.004	Mixed Oak Bay Forest
6	Concrete Wall	97	1.2	0.0027	Perennial Stream
7	Wood Wall	56	0.1	0.00013	Riparian
8	Wood Lid	7.5	9.8	0.0017	Riparian
10	Concrete Wall	26	1.2	0.00072	Riparian Floodplain
11	Concrete Wall	172	0.4	0.0016	Riparian Floodplain

¹From Plan and Design, Sheet *Demolition G-2* in HMMP (Attachment D)

²Land cover type conversion during restoration efforts at structure location

4.2.1.2 Nonnative and Native Plant Removal

Himalayan blackberry is a dominant understory species in some portions of the creek corridor and excludes populations of native vegetation. Approximately 0.31 acre of Himalayan blackberry was mapped in the Project site and will be removed as part of site clearing operations. Himalayan blackberry and greater periwinkle clearing will include cutting and removal of above ground vegetation and vines, and in some locations excavation of root masses.

Himalayan blackberry has a California Invasive Plant Council [CAL-IPC] invasive plant rating of “High” and greater periwinkle has a CAL-IPC invasive plant rating of “Moderate” (California Invasive Plant Council 2026. Available: <https://www.cal-ipc.org/plants/inventory>). Prior to beginning work, an invasive plant species survey will be performed to identify and map any other invasive plant species present in the project site. This would include CAL-IPC high rated species, red alert species, and early detection rapid response species known to occur onsite.

Several nonnative tree species occur in the Project site. Nonnative trees will be removed as part of site clearing operations. Nonnative tree species to be removed consist of English walnut (*Juglans regia*), cherry plum (*Prunus cerasifera*), and Mexican fan palm (*Washingtonia robusta*). In addition to nonnative species, an estimated 7 native trees will need to be removed and additional native trees pruned to implement the mitigation actions. The number of native trees to be removed or be pruned will be determined as the site grading plans are refined. Native trees will be replaced at a 1:1 replacement ratio.

The location of Himalayan blackberry and nonnative and native trees will be depicted on subsequent versions of the construction drawings (Appendix A).

4.2.1.3 Channel Bank and Floodplain Restoration

Instream woody material, in the form of large wood placement, will be incorporated into sections of the channel banks where concrete and rock walls are removed. These structures are intended to provide increased channel roughness and instream habitat diversity and will enhance habitat complexity including pool scour and increased gravel retention/sorting. Wood structures will also provide instream and overhead cover for fish and high-velocity refuge during high-flow events. Large wood will be added and partially buried into the streambank to achieve a low angle of placement and contact with the wetted edge of water, but will not be cabled or anchored. The approximate location of instream woody material and cross-sectional details will be depicted on the construction drawings (Appendix A).

4.2.1.4 Enhancement of Active Channels

The proposed channel design includes recreating and enhancing a step-pool / step-run pattern profile within the active channel in a sequence that is appropriate for the existing channel slope and valley confinement. The channel bed profile of Hicks Creek will also be modified in select areas to address areas that are currently barriers to fish passage. The unnamed Tributary to Hicks Creek will be realigned to improve channel sinuosity and modify the channel profile to improve fish passage conditions (Appendix A). In addition to the large wood mentioned in the previous section, in-channel improvements will also include boulder placement to increase channel complexity, provide high-flow refugia, and to promote bed scour and sediment transfer. A streambed mix consisting of appropriately sized spawning gravels will be placed along the creek corridors to improve spawning habitat conditions. Spawning gravels placed as part of project implementation may be a short-term benefit due to scour as materials are redistributed throughout the channel. However, spawning gravels are expected to be naturally replenished from upstream sources, as the upstream dam is filled with sediment and naturally routes sediment from the upper watershed into the Project site.

The approximate location of instream channel improvements will be depicted on the construction drawings and details (Appendix A).

4.2.1.5 Revegetation of Temporarily Affected Habitats

Implementation of the Project design will include the removal of hardscape features and nonnative tree, shrub, and vine species on channel banks and adjacent floodplain surfaces as well as the laying back of channel banks following removal of concrete and rock retaining walls. These temporarily affected areas will be revegetated following completion of in-channel work. The proposed planting zones include floodplain riparian in the vicinity of the realigned tributary; riparian along the laid-back channel banks and restored floodplains; and mixed oak-bay woodland at higher elevations on the south side of Hicks Creek. The approximate locations of the revegetation areas are depicted on the construction drawings and details (Appendix A).

Table 4-1 identifies the preliminary plant palettes for each planting zone. Site-specific seed mixes were also developed and are presented in Table 4-2.

4.2.1.6 Revegetation of Staging Areas

Temporary construction staging areas will be required during the construction phase of the Project. The staging areas are currently vegetated by herbaceous species. Pre-Project vegetation in these areas is predominantly nonnative species; however, post-Project conditions are designed to include a diversity of native annual and perennial herbaceous species and native and naturalized grasses. Site-specific plant and/or seed mixes will be developed for each staging area as part of subsequent construction drawing sets (Appendix A).

Table 4-2. Preliminary Plant Palettes for Riparian and Upland Planting Zones

Planting Zone	Species Name	Common Name
Riparian	<i>Acer macrophyllum</i>	Big-leaf maple
	<i>Alnus rhombifolia</i>	White alder
	<i>Artemisia douglasiana</i>	Mugwort
	<i>Baccharis salicifolia</i>	Mulefat
	<i>Carex barbarae</i>	Santa Barbara sedge
	<i>Rubus ursinus</i>	California blackberry
	<i>Salix laevigata</i>	Red willow
	<i>Salix lasiolepis</i>	Arroyo willow
Floodplain Riparian	<i>Alnus rhombifolia</i>	White alder
	<i>Baccharis salicifolia</i>	Mulefat
	<i>Carex barbarae</i>	Santa Barbara sedge
	<i>Rubus ursinus</i>	California blackberry
	<i>Salix laevigata</i>	Red willow
	<i>Salix lasiolepis</i>	Arroyo willow
Mixed Oak-Bay Woodland	<i>Aesculus californica</i>	California buckeye
	<i>Frangula californica</i>	Coffeeberry
	<i>Heteromeles arbutifolia</i>	Toyon
	<i>Quercus agrifolia</i>	Coast live oak
	<i>Quercus lobata</i>	Valley oak

Table 4-2. Preliminary Seed Mixes for Riparian and Upland Planting Zones

Seeding Zone	Species Name	Common Name	Hydroseed Rate (lbs/PLS/acre)
Riparian Seed Mix	<i>Elymus triticoides</i>	Creeping wildrye	10
	<i>Symphyotrichum chilense</i>	Pacific aster	1
	Total		11
Upland Seed Mix	<i>Achillea millefolium</i>	Yarrow	0.2
	<i>Asclepias fascicularis</i>	Narrowleaf milkweed	2
	<i>Bromus sitchensis</i>	California brome	13
	<i>Clarkia unguiculata</i>	Woodland clarkia	0.5
	<i>Elymus glaucus</i>	Blue wildrye	7
	<i>Eriogonum nudum</i>	Naked buckwheat	0.5
	<i>Eschscholzia californica</i>	California poppy	1
	<i>Lupinus microcarpus</i>	Chick lupine	5
	<i>Trifolium ciliolatum</i>	Foothill clover	2
	Total		31.2

4.3 Project Impacts to Jurisdictional Areas

The Project will result in temporary impacts to Waters of the U.S. and permanent impacts to Waters of the State due to removal of concrete and hardscape channel banks, realignment of a tributary stream, channel grading, floodplain grading associated with removal of remnant foundations and other areas of Project disturbance, and habitat restoration activities along Hick's Creek. The intention of the design is to improve instream habitats on Hicks Creek to provide more suitable habitat for anadromous fish and other aquatic species.

Impacts to areas under the jurisdiction of USACE, RWQCB, and CDFW are summarized the following sections. In addition, existing trees that cannot be avoided will be removed and mitigation will be required for their removal under the Santa Clara County tree ordinance, the Water Code, and the Fish and Game Code. Grading and planting plans for the Project site are included in Appendix A.

4.3.1 Waters of the U.S.

The Project will create new and enhance existing USACE jurisdictional waters compared to existing conditions resulting in a net increase in jurisdictional waters. Temporary impacts are defined as those as areas under USACE regulatory authority that will be returned to pre-Project conditions. Permanent impacts are defined as impacts that are not returned to pre-impact topography and vegetation within one year of the impact. Permanent impacts for this project area considered to be expansion and enhancement areas of perennial and intermittent stream and the creation of the floodplain wetland. USACE jurisdictional waters within the Project site, as well as the temporary and permanent impacts, are summarized in Table 4-3. USACE jurisdictional features pre- and post-project are shown in Figures 4-1 and 4-2, respectively.

Table 4-3. Permanent and Temporary Impacts to USACE-Jurisdictional Waters

USACE Jurisdictional Water	Total Waters of the U.S. under USACE Jurisdiction (acres)	Temporary Disturbance (acres)	Permanent Areas of USACE jurisdiction with project (acres)	Permanent Restored Habitat with Project (acres)	Enhanced Habitat with Project (acres)	Enhanced Habitat with Project (linear feet)
Perennial Stream	0.130	0.001	0.180	+0.050	0.130	500
Intermittent Stream	0.027	0.001	0.027	N/A	0.027	100
Floodplain Wetland	N/A	N/A	0.037	+0.037	N/A	N/A
Total	0.157	0.002	0.244	+0.087	0.157	600

Notes:

USACE = U.S. Army Corps of Engineers

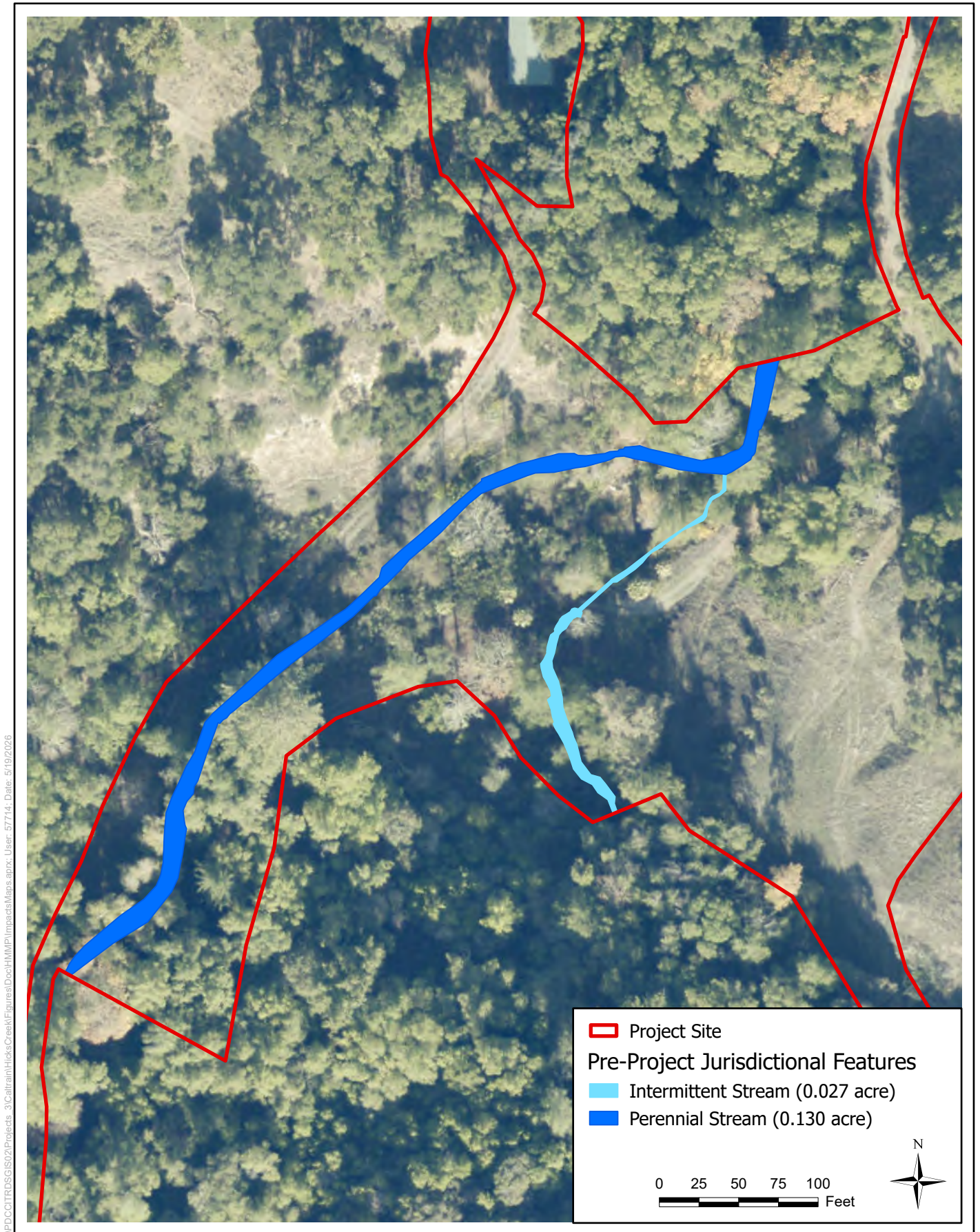


Figure 4-1
Pre-Project USACE Jurisdictional Features

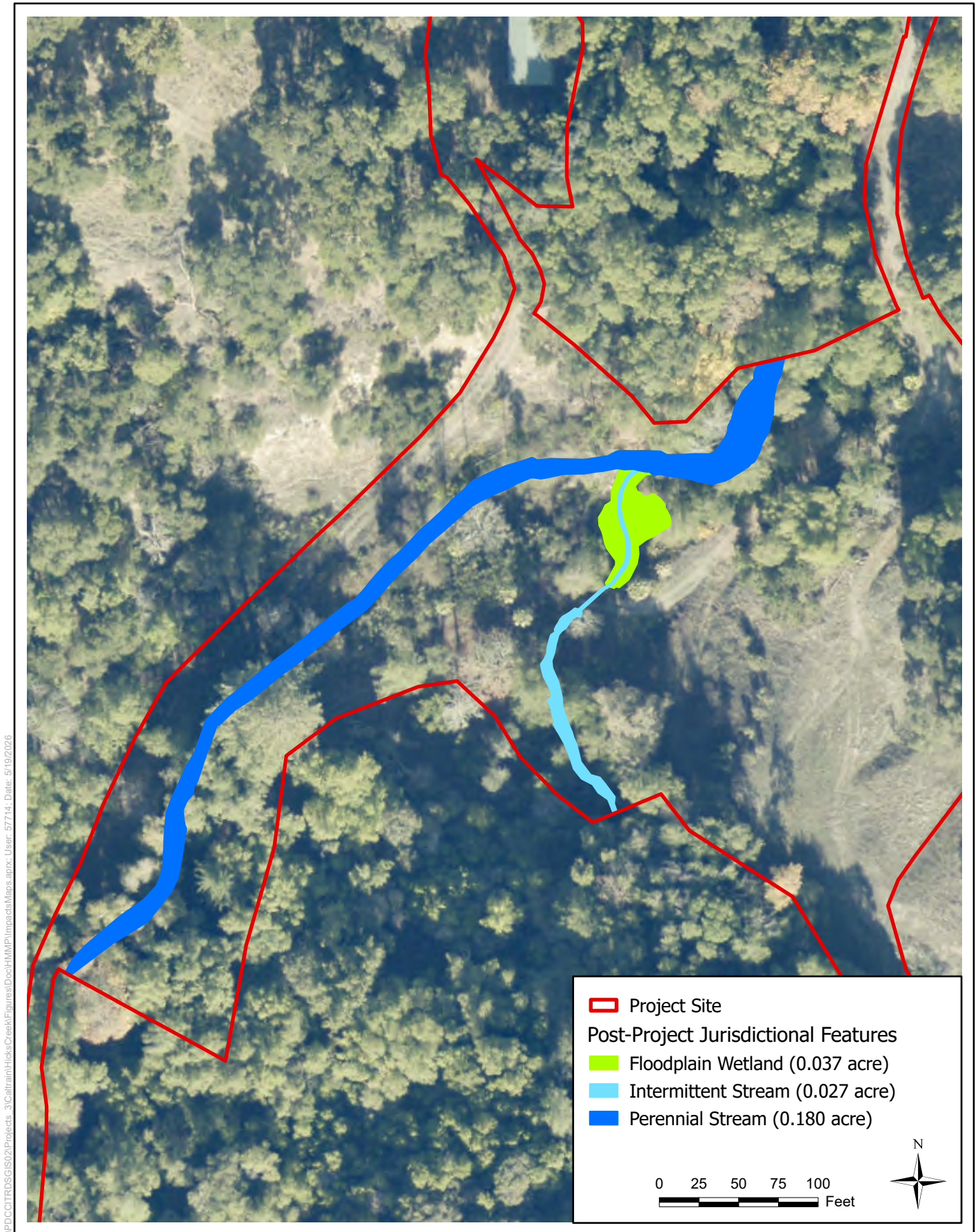


Figure 4-2
Post-Project USACE Jurisdictional Features

4.3.2 Waters of the State

4.3.2.1 Regional Water Quality Control Board jurisdiction

The Project will result in permanent impacts to Waters of the State under the jurisdiction of the RWQCB, including the open water of Hicks Creek and associated areas below top of bank. Under RWQCB jurisdiction, permanent impacts for this project are the areas of expanded and enhanced perennial and intermittent creek and riparian areas as well as the loss of the emergent wetland and creation of the floodplain wetland. Temporary impacts are defined as those as areas under RWQCB regulatory authority that will be returned to pre-Project topography and vegetation within 1 year of the impact. The temporary impact areas do not include areas that will be disturbed due to construction but enhanced due to project changes and planting, such a riparian areas where invasive vegetation will be removed and native vegetation planted or where new permanent areas of jurisdictional habitat are created (or lost). RWQCB jurisdictional waters and wetlands within the Project site and permanent and temporary impacts are summarized in Table 4-4. The realigned intermittent creek will have approximately the same length as the existing.² Alignment. Approximately 600 linear feet of creek would be enhanced with improvements to the channels and riparian areas.

Table 4-4. Permanent and Temporary Impacts to RWQCB-Jurisdictional Waters

RWQCB Jurisdictional Water	Total Waters of the State Under RWQCB Jurisdiction (acres)	Temporary Disturbance (acres)	Permanent Areas of RWQCB jurisdiction with project (acres)	Permanent Restored Habitat with Project (acres)	Enhanced Habitat with Project (acres)	Enhanced Habitat with Project (linear feet)
Perennial Stream	0.130	0.001	0.180	+0.050	0.130	500
Intermittent Stream	0.027	0.001	0.027	N/A	0.027	100
Emergent Wetland (1)	0.041	N/A	N/A	-0.041	N/A	N/A
Riparian	0.263	N/A	0.599	+0.336	0.263	600
Floodplain Wetland	N/A		0.037	+0.037	N/A	N/A
Total	0.461	0.002	0.843	+0.382	0.420	600

Notes²

(1) The emergent wetland is at the location of the existing concrete swimming pool and consists of a thin layer of sediment over concrete in which emergent vegetation is growing.

RWQCB = Regional Water Quality Control Board

RWQCB jurisdictional features pre- and post-project are shown in Figures 4-3 and 4-4, respectively.

4.3.2.2 California Department of Fish and Wildlife Regulatory Authority

The Project will result in permanent and temporary impacts to Waters of the State under regulatory authority of CDFW. Permanent impacts are defined as including the areas of expanded and enhanced

² The existing tributary within the project site is approximately 105 feet long. The new tributary will be approximately 102 feet long. The language of “approximately the same length” is accurate.

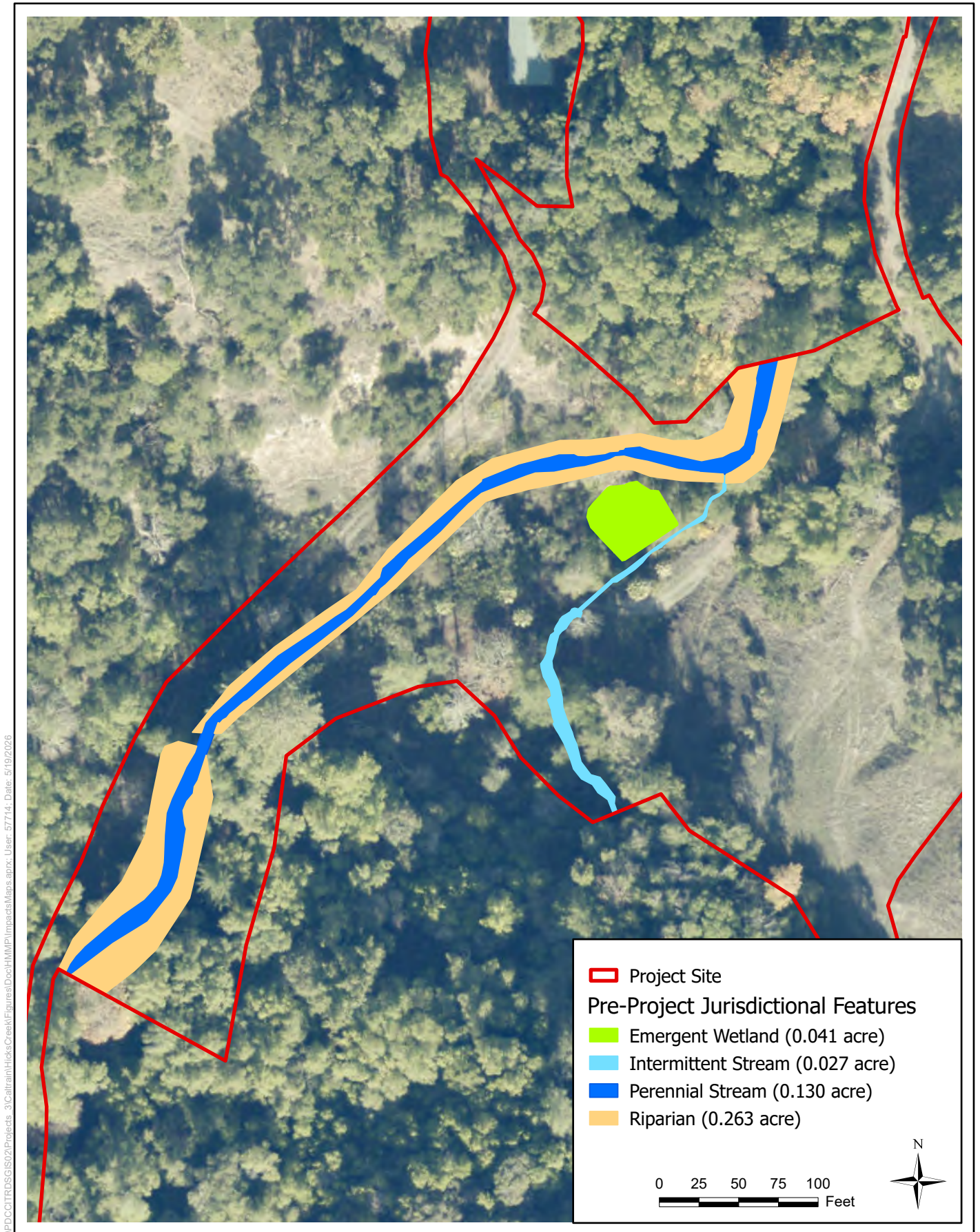


Figure 4-3
Pre-Project RWQCB Jurisdictional Features

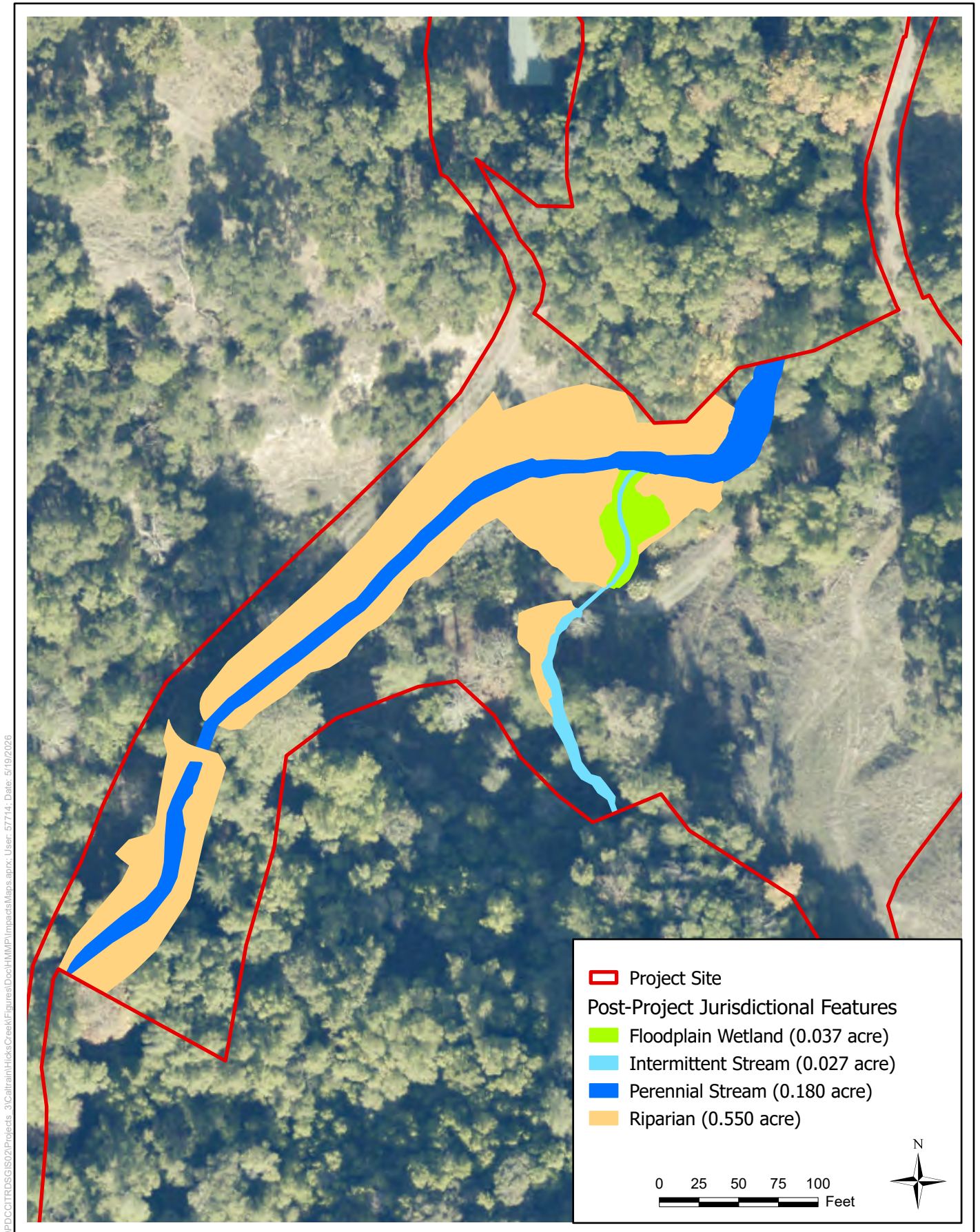


Figure 4-4
Post-Project RWQCB Jurisdictional Features

perennial and intermittent creek and riparian areas as well as the creation of the floodplain wetland. Temporary impacts are defined as those as areas under CDFW regulatory authority that will be returned to pre-Project conditions within 1 year of the impact. The temporary impact areas do not include areas that will be disturbed due to construction but enhanced due to project changes and planting, such a riparian areas where invasive vegetation will be removed and native vegetation planted or where new permanent areas of jurisdictional habitat are created. Waters, wetlands, and riparian areas within the Project site subject to CDFW's regulatory authority and permanent and temporary impacts are summarized in Table 4-5. The intermittent creek would be realigned with approximately the same linear feet as existing. Approximately 600 linear feet of creek would be enhanced with improvements to the channels and riparian areas.

CDFW jurisdictional features pre- and post-project are shown in Figures 4-5 and 4-6, respectively.

Table 4-5. Permanent and Temporary Impact Areas Under CDFW Regulatory Authority

CDFW Jurisdictional Waters and Riparian Habitat	Total CDFW Jurisdiction (acres)	Temporary Disturbance (acres)	Permanent Areas of CDFW jurisdiction with project (acres)	Permanent Change with Project (acres)	Enhanced Habitat with Project (acres)	Enhanced Habitat with Project (linear feet)
Perennial Stream	0.130	0.001	0.180	+0.050	0.130	500
Intermittent Stream	0.027	0.001	0.027	N/A	0.027	100
Riparian	0.263	N/A	0.599	+0.336	0.263	600
Floodplain Wetland	N/A	N/A	0.037	+0.037	N/A	600
Total	0.420	0.002	0.843	+0.423	0.420	600

Notes:

CDFW = California Department of Fish and Wildlife

4.3.3 Protected Trees

The County of Santa Clara tree ordinance defines an ordinance tree as “any woody plant rising above the ground with a trunk which has a circumference of 37.7 inches or more (12 inches or more in diameter) measured at 4.5 feet above the ground or immediately below the lowest branch, whichever is lower, or in the case of multi-trunk trees a trunk size of 75.4 inches in circumference or more (24 inches or more in diameter).” A total of 33 trees meeting the definition of ordinance trees were identified within the Project site. Woody plants meeting the definition of a tree included native and non-native species and single trunk and multi-trunk trees (Table 4-6). Some ordinance trees within the channel and bank grading areas will need to be removed. The number of ordinance trees that will need to be removed will be determined following completion of the 60% design drawings. Ordinance trees and other native trees to be retained within the construction access/staging areas will be protected in-place during construction.

CDFW protects trees and shrubs located within areas under its regulatory authority, including all native trees equal to or greater than 3 inches DBH, nonnative trees greater than 3 inches DBH, and all native shrubs. Trees that meet the criteria for mitigation are provided in Table 4-5.

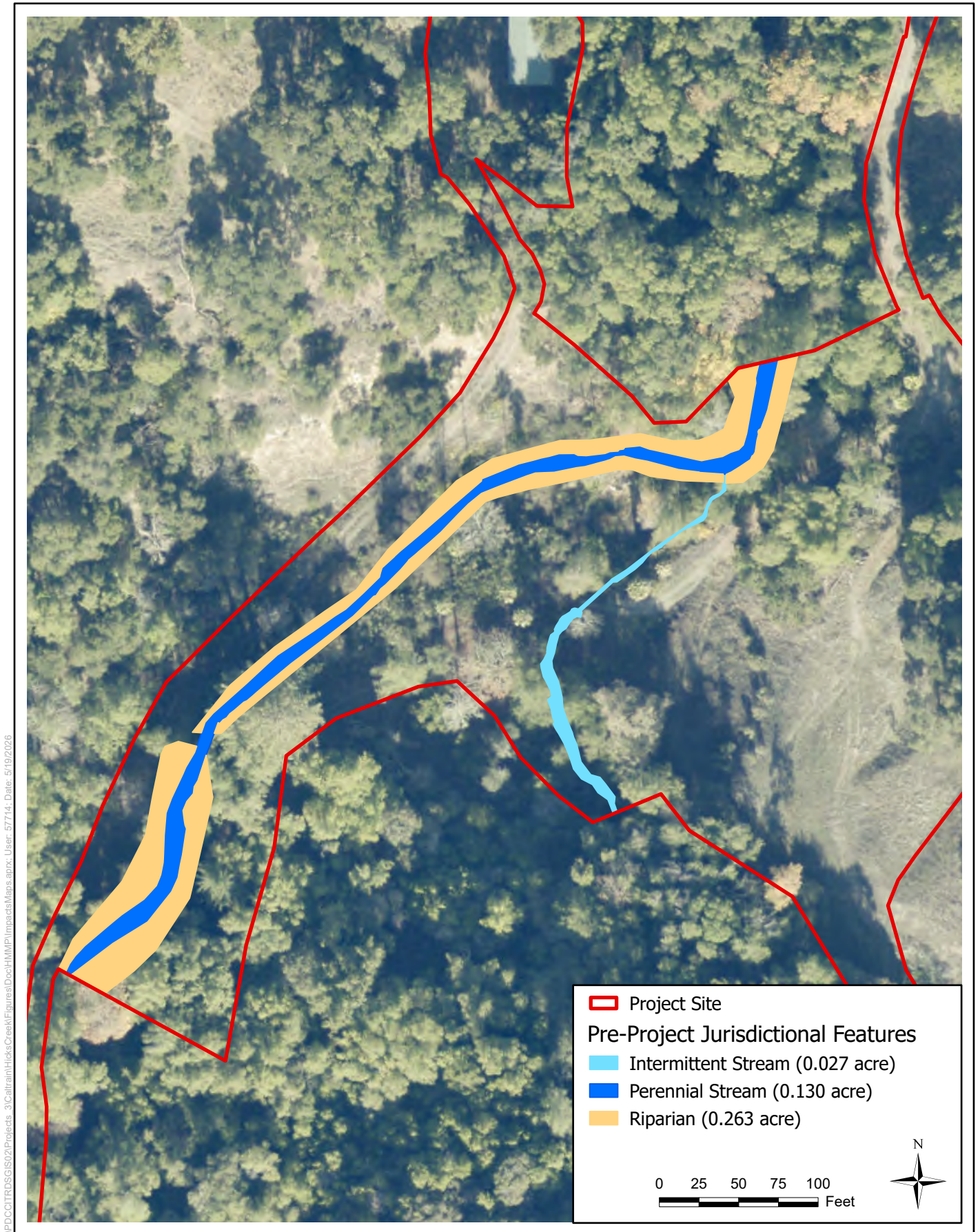


Figure 4-5
Pre-Project CDFW Jurisdictional Features

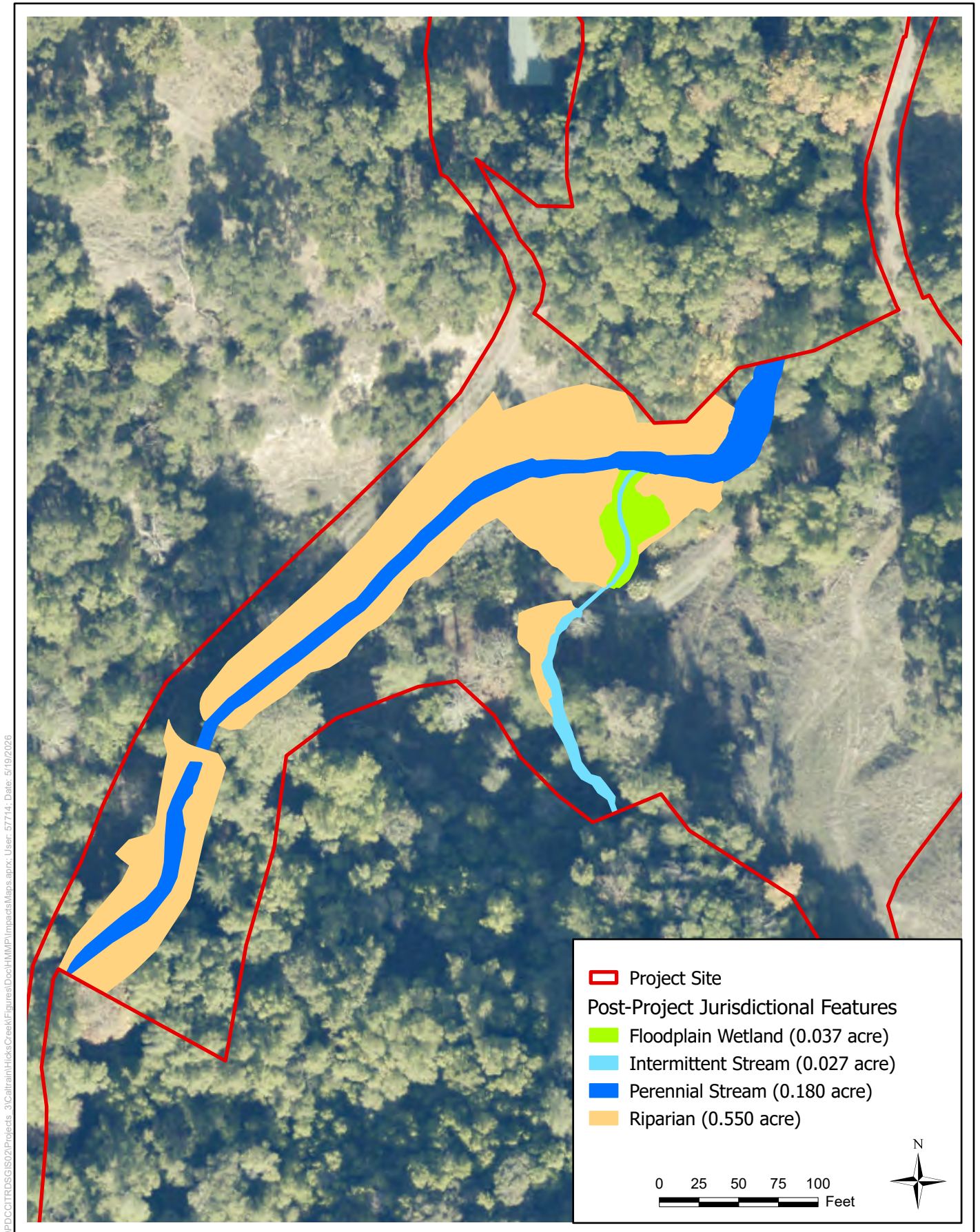


Figure 4-6
Post-Project CDFW Jurisdictional Features

In addition, RWQCB does not set a threshold on the size of riparian trees that require mitigation when they are impacted. Trees less than 3 inches DBH were not included in the tree survey performed to identify onsite tree resources. Riparian habitat, inclusive of trees less than 3 inches DBH, was mapped as part of the resource surveys and mitigation for these resources will be factored into the project permitting phase.

Table 4-6. Trees Greater Than 3-Inches Diameter at Breast Height in the Project Site

Common Name	Species Name	Diameter at Breast Height (DBH) Range (inches)	Multi-Trunk Tree (Y/N)	Number of Individuals	Number of Individuals Protected by Tree Ordinance	Native (Y/N)
<i>Acer macrophyllum</i>	Big-leaf maple	≥ 3 to 11 inch DBH	N	2		Y
		≥ 12 inch DBH	N	3	3	Y
<i>Alnus rhombifolia</i>	White alder	≥ 3 to 11 inch DBH	N	16		Y
		≥ 3 to 11 inch DBH	Y	2		Y
		≥ 12 inch DBH	N	7	7	Y
		≥ 24 inch DBH	Y	1	1	Y
<i>Juglans hindsii</i>	California black walnut	≥ 3 to 11 inch DBH	N	1		Y
<i>Juglans regia</i>	English walnut	≥ 3 to 11 inch DBH	N	1		N
		≥ 12 inch DBH	N	3	3	N
		≥ 12 inch DBH	Y	1		N
<i>Prunus cerasifera</i>	Cherry plum	≥ 3 to 11 inch DBH	N	2		N
<i>Quercus agrifolia</i>	Coast live oak	≥ 3 to 11 inch DBH	N	1		Y
<i>Quercus wislizeni</i>	Interior live oak	≥ 3 to 11 inch DBH	N	1		Y
<i>Salix laevigata</i>	Red willow	≥ 3 to 11 inch DBH	N	2		Y
		≥ 3 to 11 inch DBH	Y	3		Y
		≥ 12 inch DBH	N	1	1	Y
<i>Sequoia sempervirens</i>	Coast redwood	≥ 12 inch DBH	N	1	1	Y
<i>Umbellularia californica</i>	California bay	≥ 3 to 11 inch DBH	N	1		Y
		≥ 3 to 11 inch DBH	Y	2		Y
		≥ 12 inch DBH	N	3	3	Y
		≥ 12 inch DBH	Y	1	1	Y
		≥ 24 inch DBH	Y	2	2	Y
<i>Washingtonia robusta</i>	Mexican fan palm	≥ 12 inch DBH	N	11	11	N
Total trees				68	33	

Notes:

DBH = diameter at breast height

Chapter 5 Implementation Plan for the Offsite Mitigation Site

5.1 Rationale for Expecting Implementation Success

Implementation of the grading and planting plans described in Chapter 4 and presented in Appendix A will lead toward the successful establishment of fisheries habitat improvement and riparian and upland vegetation establishment. Project implementation will include the removal of in-channel, constructed features. ICF's restoration engineers have successfully designed fish passage improvements for similar projects in other regions and have brought that experience to this offsite mitigation project. ICF's landscape architects and restoration ecologists have likewise implemented successful restoration projects.

The proposed planting palettes (Table 4-1) consist of species that occur onsite or in the project vicinity and have performed well in habitat restoration programs. Attainment of the final performance standards is expected due to the presence of the target plant communities within the Project vicinity, the fast-growing nature of many of the mitigation plants, and the presence of adequate natural hydrology. Species that occur onsite under existing conditions will be planted at similar elevations above the expected groundwater table and in proximity to the channel as like species onsite. Increased inundation in the channel banks and floodplains will encourage the establishment and success of riparian habitats proposed for this area.

5.2 Responsible Parties

JPB, in compliance with Sections 401 and 404 of the CWA, the Porter-Cologne Water Quality Act, and Section 1602 of Fish and Game Code, will be responsible for implementing this HMMP pursuant to the regulatory permits issued by USACE, RWQCB, CDFW, and the encroachment permit issued by Valley Water. JPB can designate this responsibility to a restoration contractor but will retain ultimate responsibility for the mitigation success.

Peninsula Corridor Joint Powers Board
1250 San Carlos Avenue
San Carlos, California 94070
Contact: Michael Tauchen
Phone: (650) 730-4847
Email: TauchenM@caltrain.com

5.3 Financial Assurances

JPB will be financially responsible to ensure the Project has met the performance standards within this HMMP. The performance standards and success criteria are presented in Chapter 7.

5.4 Schedule

In-water work for implementation of this HMMP is anticipated to occur in summer 2027 and be completed within the same year. Planting and seeding will immediately follow in-channel work. The maintenance period will commence following acceptance of project construction by JPB and will continue for 3 years or until installed woody plants are established and capable to survive without supplemental irrigation. The monitoring period will begin in spring 2028 and will continue for 10 years, with monitoring being conducted in Years 1–6, Year 8, and Year 10 (Chapter 7).

5.5 Site Preparation

Site preparation will include channel dewatering and fish rescue, removal of all hardscaped features identified on the construction drawings, removal and treatment of Himalayan blackberry and greater periwinkle and other nonnative trees, shrubs, and vines, removal or pruning of select native trees and shrubs, and establishment of a staging area(s) (Appendix A). Site preparation will also include the installation of environmentally sensitive protection fencing and other best management practices to limit disturbance of surrounding habitats to be preserved. Fencing will be designed to prevent wildlife entrapment. This will be addressed in permit applications.

As part of site preparation and other onsite activities construction personnel, construction and biological monitors, and other site workers will follow the decontamination protocols for reducing the risk of spreading infectious amphibian diseases in freshwater systems and plant pathogens (Appendices B and C).

5.6 Stormwater Pollution Prevention Plan

Implementation of the mitigation will require a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will be prepared by the restoration contractor and will be approved by JPB and implemented prior to site clearing. Specific erosion control measures and BMPs will be provided in the SWPPP. All erosion control materials will be approved by Midpen prior to installation. Certified weed free straw certifications will need to be provided to Midpen prior to installation. Contractor will use certified weed free straw burlap wrapped wattles. No UV biodegradable netting wattles will be used as it can cause wildlife entrapment. JPB will review the contractor-prepared SWPPP for compliance with the mitigation construction plans and special provisions.

5.7 Weed Control

As discussed in Chapter 4, Himalayan blackberry is a dominant understory species in some portions of the creek corridor and excludes populations of native vegetation. Approximately 0.31 acre of Himalayan blackberry will be removed as part of site clearing operations. Himalayan blackberry clearing will include cutting and removal of above ground vegetation and vines and in some locations excavation of root masses. Greater periwinkle also occurs onsite and will be removed and

controlled in a similar manner. Maintenance control of invasive weeds is discussed below in Section 6.3.

Several nonnative tree species occur in the Project site. Nonnative trees will be removed as part of site clearing operations. The location of Himalayan blackberry and nonnative and native trees will be depicted on subsequent versions of the construction drawings (Appendix A).

5.8 Grading

The construction contractor will stake the limit of the work areas prior to grading and no grading shall occur until protection fencing and other site BMPs are installed. Grading will include laying back channel banks and slopes and floodplain grading following removal of hardscape features. Excavation and grading may also occur in Himalayan blackberry removal areas. The mitigation site will be graded as necessary using standard earth-moving equipment. Grading will only occur within the limits of work established on the construction drawings (Appendix A). Onsite soil spoils generated from laying back the channel banks may be used to fill portions of the floodplain where hardscape features and Himalayan blackberry were removed. Any remaining spoils will be placed in the spoils disposal area shown on the construction drawings (Appendix A). During construction, excavated material may be temporarily placed in other areas disturbed by the project. No spoils placement will occur in environmentally sensitive areas. If metal debris, contaminated soils, septic tanks or similar materials are located during grading operations, they will be removed from the Project site according to applicable regulations and disposed of offsite at an appropriate landfill as identified in the construction documents.

Cut and fill is not expected to balance onsite. No off-haul of spoils is anticipated. Excess soil will be managed onsite. All concrete, mortared rock, treated wood, and wood retaining walls generated as part of demolition activities will be disposed of offsite.

5.9 Plant Material Procurement

Container stock of native plant material and herbaceous seed mixes comprised of local ecotypes in Santa Clara County will be acquired from native plant nurseries and seed suppliers and installed by a contractor. Planting stock will be propagated from sources collected within or in the vicinity of the Project site or the Guadalupe River watershed. The selected nursery will collect propagation material during the appropriate time of year for each species. The nursery must be an accredited nursery in the Accreditation to Improve Restoration (AIR) Program (<https://airnursery.ucdavis.edu/participating-nurseries>) and will follow all BMPs for minimizing risk for introduction and spread of *Phytophthora* species as designated by the AIR Program, or more current guidance, as well as the Phytophthoras Guidelines developed by Midpen for use on their preserves (Appendix C). All nursery stock will be tested for *Phytophthora* sp., following AIR Program testing protocols, twice, one week apart prior to installation. Test results will be provided to Midpen prior to installation. The quantity and size of container stock will be shown on the construction drawings (Appendix A).

A direct seeding approach will be used for valley oak and buckeye planting sites. For other revegetation projects under Midpen's jurisdiction, oak and buckeye are direct seeded to minimize risk for introduction and spread of *Phytophthoras*. Acorns and buckeye seeds will be collected from

local ecotypes in Santa Clara County and will be acquired from native plant nurseries and seed suppliers and installed by a contractor.

Willow pole cuttings will also be collected onsite or in the Guadalupe River watershed. Willow stake collection and installation will follow BMPS concerning sanitization of collection tools. Pole cuttings will be approximately three to four feet long with a base diameter of approximate 1-inch and a top diameter of approximately 1/2-inch. Immediately after harvesting, the leaves, branches, and twigs will be carefully removed from each cutting to avoid damage to buds on the cutting. The cuttings then will be wrapped in burlap or other approved material that protects them from sunlight and allows air circulation within the bundle. The bundled cuttings will be maintained in cool, wet storage until just before planting and will be planted the same day as collection. If cuttings are stored in buckets, the buckets will be cleaned and sanitized prior to storing, 70% isopropyl alcohol is an approved sanitizing agent. Pole cuttings will be collected and installed during the species dormant period in the winter.

Seed mixes will be local ecotypes sourced from Santa Clara County as near to the Project site as possible based on the commercial availability of seed material. Seed mixes will consist of native species only. Seed mixes will be developed for each planting zone as well as upland staging areas and haul routes. All seed mixes must be approved by Midpen prior to installation. The species composition of each seed mix as well as the percent composition for each species and the seeding rate are provided in Appendix A.

5.10 Plant Installation

The location, quantity, and spacing of container plants and pole cuttings will be implemented as shown on the construction drawings and specifications (Appendix A). Container plants will be planted in fall/winter to avoid heat stress on young plants and to take advantage of winter rains. Container plants will be placed in a planting hole that is twice the width of, and no deeper than, the container. Planting holes will be hand-excavated or augered. If planting holes are augered, the sides will be scarified to allow roots to penetrate the surrounding soil more easily. Soil removed when the planting hole is created will be used as backfill and in constructing a watering basin. Pole cuttings will be installed so that approximately 2/3 of the cutting is below grade. Pole cuttings will be installed the same day as they are collected.

Before planting, the container plant's root mass will be inspected, and any matted, dead, diseased, or twisted roots will be pruned. Diseased plants should not be installed at the site. Inspection and testing of plants should occur at the nursery prior to being delivered to the site. Inspection and pruning will take place quickly because exposure to the air results in loss of root hairs. Care will be taken during pruning to avoid excessive loss of root mass.

Plant protection cages are not proposed during initial plant installation but may be installed during the maintenance period to minimize herbivory. If used, plant protection cages will be constructed of materials most appropriate to inhibit herbivory by large and small herbivores. Cages must be Midpen-approved wildlife friendly caging. Midpen uses 4-foot high 14 or 16-gauge welder wire with 2"x 4" grid, and two 5 foot medium duty steel tee posts or two 5 foot long, 1/2" diameter rebar (#4) for caging.

A 3-inch layer of bark mulch produced from healthy trees removed and chipped on site will be placed in each watering basin to reduce soil evaporation rates and help suppress weed growth. No

bark mulch will be imported to the site to minimize risk for pathogen and weed introduction and spread. If mulch is not available from healthy trees to be removed and chipped on site, certified weed free straw may be used.

Immediately after installation, all plantings will be thoroughly irrigated. If root crowns become exposed, additional soil will be placed throughout the planting hole to raise the soil to the correct level. As-built planting numbers will be documented, as a baseline against which to compare plant survival in future monitoring years

5.11 Seeding

Temporarily affected channel banks, floodplains, and staging area will be seeded with an erosion control seed mix. Seeding will be performed prior to plant installation. The seed mixes will be applied at the rates shown on the construction drawings (Appendix A). The seed mixes will be applied using standard hydroseeding techniques as will be outlined in the SWPPP or in the construction specifications. Midpen will need to review Hydroseeding specs prior to installation. Midpen requires video proof of hydroseed tank cleaning and sanitizing to minimize introduction and spread of weeds and pathogens. No fertilizer may be used, tackifier and mulch must be Midpen approved. Two passes will be required for hydroseeding. The first pass will be seed only with the second pass including mulch and tackifier.

After hydroseeding, mulch (e.g., certified weed-free sterile rice straw or an approved weed-free equivalent) will need to be applied to protect the seed until it germinates. Certification will be provided to Midpen prior to installation. The mulch material will be of high quality (i.e., not musty, moldy, caked, or otherwise of low quality). The use of mulch that contains invasive plants will not be permitted.

5.12 Erosion Control and Bank Stability

The loss of soil or sediment to erosion during and immediately after the completion of construction and before establishment of the erosion control seed mix will be minimized with the use of silt fencing, fiber rolls, jute matting and/or other erosion control measures, as identified on the construction drawings and/or in the SWPPP. All erosion control materials must be Midpen approved. The need for erosion control is expected to be necessary on graded channel banks and adjacent floodplain areas that will support water flow. Channel banks will be limited to a maximum of 2H:1V and to the extent feasible 3H:1V or flatter to reduce erosion potential, as indicated in the construction drawings (Appendix A).

5.13 Planting Plan

Temporarily affected areas will be revegetated following completion of in-channel work. The proposed planting zones include floodplain riparian in the vicinity of the realigned tributary; riparian along the laid-back channel banks and restored floodplains; and mixed oak-bay woodland at higher elevations on the south side of Hicks Creek. The approximate locations of the revegetation areas are depicted on the construction drawings and details (Appendix A).

Table 4-1 identifies the preliminary plant palettes for each planting zone. Site-specific seed mixes will also be developed for each planting zone. Information on plant quantities, plant spacing, and propagule types will be provided in subsequent versions of the planting plan (Appendix A).

5.14 Irrigation

Temporary installation of an irrigation system is anticipated to be needed for 1 to 3 years following plant installation to ensure plant establishment. Irrigation system will need to be Midpen approved. Irrigation will be used on an as-needed basis to maintain appropriate soil moisture and ensure plant establishment with supplemental watering if dry soil conditions develop during the maintenance and monitoring period. It is likely that water will need to be trucked in because of the site is in a relatively remote location and has limited surface water. An irrigation approach will be developed by the restoration contractor as a submittal due in advance of project initiation. The irrigation approach must be approved by JPB and Midpen before work occurs on the planting phase of the contract.

5.15 Trash Removal

The grading/restoration contractor will be responsible for maintaining the Project site free of non-organic trash and debris for the duration of the implementation period. Trash will be gathered and stockpiled onsite on an as-needed basis and removed offsite prior to project completion.

5.16 As-built Conditions

At the completion of mitigation site construction, Project as-built drawings will be prepared and submitted in accordance with permits issued for the Project. The as-built drawings will be used as a baseline for the monitoring phases, described in Chapter 7.

Chapter 6 Maintenance

The maintenance phase of Project will begin after the planting phase of the project is complete and will be provided for a period of 3 years. Mitigation site maintenance will be performed by the restoration contractor or another qualified restoration firm. Maintenance generally includes the following tasks, which are described in the following sections. Maintenance will involve regular inspections of all planting areas as well as actions based on the results of performance monitoring. Site maintenance will be performed according to the schedule in Table 6-1.

Table 6-1. Maintenance Schedule for Plant Maintenance Period

Activity	Schedule and Notes
Water mitigation plantings	Weekly inspections and applications April 15 through October 31 for Year 1. Inspection and application twice monthly April 15 through October 31 for Years 2 and 3.
Inspection erosion control features	Inspect all erosion control features based on schedule requirements to be provided in the SWPPP.
Control invasive plants	Two monthly inspections October through June. Monthly inspections July through September. Small infestations of invasive species removed immediately.
Control other nonnative plants	Two monthly inspections October through June. Monthly inspections July through September. Control of nonnative species in competition with mitigation plantings and native species cover.
Install replacement plants and supplemental seeding	Annual plant replacement (if needed) based on monitoring results; supplemental seeding as needed.
Conduct general assessment of offsite mitigation parcels	Monthly inspection; repairs as needed.

6.1 Maintenance Activities

Maintenance activities may include, but are not limited to, adjustments to the plant watering and schedule, erosion control maintenance, weed control, replacement planting, trash removal, and as-needed channel clearing. Maintenance will involve regular review of all planting areas as well as actions based on the results of performance monitoring.

6.1.1 Irrigation

Irrigation will be provided to all mitigation plantings for 1 to 3 years following initial plant installation to ensure survival and to achieve performance standards. An irrigation approach will be developed by the restoration contractor as a submittal due in advance of project initiation.

Newly installed plants will be kept sufficiently moist at a rate and frequency that ensures healthy, vigorous growth. Depending on the irrigation approach developed, plants may be watered using a hose attachment on a water truck, by hand, or by a temporary drip irrigation system. The mitigation

contractor will inspect the plantings to determine watering requirements; the approximate anticipated watering schedule is outlined below. Irrigation requirements will be based on average monthly evapotranspiration rates, sun exposure, topography, and soil conditions and adjusted based on weather conditions and plant success. If an irrigation system is installed, maintenance will include the repair, checking, adjusting the system to ensure delivery of the required amount of water.

It is anticipated that plants will be watered weekly, between April and October, during Year 1 and twice monthly during Years 2 and 3. Water application rates will be species dependent and may be adjusted by the mitigation contractor depending on site-specific conditions. Plantings may require weekly or twice weekly first few years of the maintenance period to ensure healthy, vigorous growth. Maintenance inspections will be undertaken weekly during Year 1 and twice monthly during Years 2 and 3 to determine whether the annual watering schedule and water application rate require adjustment based on site-specific soil moisture conditions or landscape-level conditions. The mitigation contractor will provide routine irrigation system inspections (if an irrigation system is used) to evaluate overall condition and to ensure that the system is operational and water delivery is occurring at the targeted application rates.

6.1.2 Erosion Control

The SWPPP erosion control treatments will be inspected and maintained during regular maintenance visits and after storm events. Channel banks and floodplain surfaces will be inspected for evidence of erosion. Some channel and bank erosion can be expected because it is part of natural stream and sediment transport processes. However, if necessary, erosion and damaged erosion control elements will be addressed by either fixing or implementing additional erosion control BMPs. Channel bank and floodplain erosion will also be assessed as part of the geomorphic monitoring program (Chapter 7).

6.1.3 Weed Control

Periodic removal of competing weedy vegetation will be required during the plant establishment and short-term maintenance periods. Weeds that are in direct competition with planted or seeded native vegetation and have the potential to displace or affect the vigor of desired species will be removed from the planting basins or in the immediate vicinity of mitigation plantings. Weed control techniques may include manual, mechanical, and chemical control methods.

All weed control techniques will be consistent with Midpen's current Integrated Pest Management (IPM) Program, including but not limited to, Midpen's IPM Best Management Practices and IPM Mitigation Measures.

Weeds will be removed inside plant protection screens (for woody plantings) and within the planting basins. Weeds occurring at these locations will be removed manually as needed to reduce weed competition throughout the maintenance period, or until such time that the JPB determines that planted and seeded species have become sufficiently established and that no further maintenance is required to ensure that the plantings meet the performance standards.

Targeted control of invasive species will also be provided throughout the entire planting areas. Invasive species include Himalayan blackberry, greater periwinkle, as well as other invasive species that may colonize the planting areas and have the potential to adversely affect the mitigation site.

Hand removal or use of small hand-powered or handheld equipment (such as a Weed Wrench) always should be the preferred method of removing invasive species from the mitigation properties. If hand-removal methods are found ineffective, or the problem is too widespread for hand removal to be practical, mechanical methods or chemical methods can be used. When using chemical control methods, herbicides will be applied by hand or mechanical means, by the mitigation contractor during the time of year and at an application rate that allows the least amount of herbicide use yet still eliminates the targeted species. Herbicide application will follow all Herbicide Use Conservation Measures described in the USFWS Programmatic Biological and Conference Opinion (USFWS 2025), including following the *Best Management Practices for Wildland Stewardship: Protecting Wildlife When Using Herbicides for Invasive Plant Management* (Cal-IPC 2015 or the most recent version). Additionally, the Contractor will only use herbicides with known toxicity that are identified in both the USFWS PBO measure VHDR-8, *Herbicide Application Reporting* and in Midpen's IPM Program Guidance Manual (September 2014) - i.e., aminopyralid, clethodim, clopyralid, glyphosate 1 (aquatic), and imazapyr. No other herbicides will be used. Mixing, loading, storing, and rinsing of equipment or containers will not take place in aquatic areas. BMPs that may be used to protect aquatic areas include, but are not limited to: (1) avoid applying herbicides under windy conditions; (2) use ground-based applicators, low tank pressures, and equipment calibration for larger droplet sizes; (3) avoid applying herbicides within 24 hours prior to, or during, rain.

Native herbaceous vegetation that is planted, seeded, or that naturally colonizes the mitigation/restoration site will be retained, although this herbaceous vegetation will be cleared from the woody plant species planting basins during the maintenance period to ensure establishment of the planted material.

6.1.4 Replacement Planting

Woody and herbaceous plantings will be inspected during annual vegetation monitoring surveys to determine whether replacement plants will be necessary to meet the performance standards. The annual monitoring reports will identify the causes of any plant mortality and any remedial measures that may be necessary. For example, if a particular species has a high mortality rate, a determination will be made about the cause of plant mortality and whether replacement by another species better suited to the microsite conditions is warranted.

During each annual maintenance period, necessary replacement plants will be provided, installed, and maintained by the mitigation contractor. Replacement will involve planting enough seedlings that the number of living plants meets or exceeds the performance standards. Plants will be propagated, procured, replaced, maintained, and monitored following the same procedures specified for initial plantings. Replacement plants will be as close as possible to the size of the original plant.

Plant survival performance standards are intended to assess the long-term survival of mitigation plantings. Therefore, only plants that were planted at least three years ago, for example, can be used to demonstrate attainment of year three performance standards. If replacement plants are required, the performance monitoring timeline will be reset to Year 0 for all replacements.

6.1.5 Supplemental Seeding

Seeded areas include the riparian, floodplain riparian and mixed oak-bay woodland planting zones, as well as areas disturbed during implementation of mitigation actions (e.g. staging areas). During

maintenance inspections, a general assessment of seeded area establishment will be performed to determine whether supplemental seeding will be necessary. The assessment will focus on identifying areas that have experienced low seed germination and seedling establishment. The SWPPP will be referenced to determine what areas and conditions warrant supplemental seeding. The annual monitoring reports will identify the causes of these conditions.

These seeded areas will be maintained during the maintenance period by the mitigation contractor. It is anticipated that the seeded areas will become vegetated by the seeded species and colonized by other herbaceous species that occur in adjacent areas. Seeding area maintenance will include reseeding large bare areas or other areas of concern identified by the mitigation contractor and in accordance with the SWPPP. Bare areas will be reseeded with the original seed mix at the rate specified in the construction documents.

6.1.6 Trash Removal

An effort will be made to remove non-organic trash and debris from the mitigation site during each maintenance visit by the maintenance contractor. Trash will be removed on an as-needed basis for the duration of the maintenance and monitoring period.

6.1.7 Channel Maintenance

Channel modifications are intended to improve long-term fish passage, spawning, and rearing habitat and create self-maintaining geomorphic processes. Channel maintenance activities will be provided during the 3-year maintenance period. After that time, the channel and channel bank conditions will be considered self-sustaining. Therefore, channel maintenance actions are not anticipated. In the event that large woody material falls into the channel during the plant establishment period, such occurrences will be evaluated on a case-by-case basis to determine if remedial actions are necessary to prevent erosion of channel banks, root wad structures, constructed weirs, instream boulders or other geomorphic features installed as part of the project.

6.2 Responsible Parties

The responsible party for maintaining the mitigation site is:

Peninsula Corridor Joint Powers Board
1250 San Carlos Avenue
San Carlos, California 94070
Contact: Michael Tauchen
Phone: (650) 730-4847
Email: TauchenM@caltrain.com

Chapter 7

Monitoring Plan

To ensure that the mitigation site is progressing toward the performance standards established in this HMMP, qualified biologists, geomorphologists, and fish biologists will monitor the mitigation using standard, easily reproducible monitoring methods that are known and accepted by the scientific community and regulatory agencies. Monitoring of the Project site will be performed by a qualified staff designated by JPB. This monitoring will ensure that the mitigation site is successfully established. Monitoring will be both qualitative and quantitative throughout the 10-year monitoring period.

7.1 Performance Standards

Performance standards for the Project are based on the goal to have self-sustaining native riparian and aquatic habitat by the end of the 10-year monitoring period. Quantitative monitoring will be conducted as described below for all areas where mitigation is required by USACE, RWQCB or CDFW. The revegetation portion of the mitigation project will be considered successful if the vegetation performance standards are met (Table 7-1). The seeded area portions of the revegetation plan will be considered successful if they meet the cover requirements set forth in the SWPPP (Table 7-1). The channel improvement portion of the mitigation project will be considered successful if the geomorphic performance standards are met (Table 7-2, Section 7.3.2.3). The fish passage portion of the mitigation project will be compared against performance standards (Table 7-3, Section 7.3.3) to inform the performance of the channel—not as measures of success, failure, or maintenance—as the proposed design is based on a reference (stream simulation) approach and these criteria are not required to be met.

Table 7-1. Vegetation Performance Standards for Hicks Creek Off-Site Mitigation Project

Planting Zone	Monitoring Metric	Monitoring Year	Performance Standard
Riparian	Plant Survival	1	90%
		2	80%
		3	70%
		4	60%
		5	60%
	Plant Vigor	1-4	Average vigor score, by species, greater than 1.0.
		5	Average vigor score, by species, equal to or greater than 2.0.
	Percent Woody Vegetation Cover	5	10%
		6	15%
		8	20%
		10	25%
Floodplain Riparian	Plant Survival	1	90%
		2	80%

Planting Zone	Monitoring Metric	Monitoring Year	Performance Standard
		3	70%
		4	60%
		5	60%
		1-4	Average vigor score, by species, greater than 1.0.
		5	Average vigor score, by species, equal to or greater than 2.0.
	Percent Woody Vegetation Cover	5	10%
		6	20%
		8	30%
		10	40%
Mixed Oak-Bay Woodland	Plant Survival	1	90%
		2	80%
		3	70%
		4	60%
		5	60%
	Plant Vigor	1-4	Average vigor score, by species, greater than 1.0.
		5	Average vigor score, by species, equal to or greater than 2.0.
	Percent Woody Vegetation Cover	5	5%
		6	8%
		8	10%
Seeded Areas	Percent Cover by Herbaceous Vegetation	1	50%
		2	60%
		3	70%
		4	80%
		5	90%
	Percent Cover by Target Invasive Species	1	10%
		2	5%
		3	0%
		4	0%
		5	0%

Table 7-2. Geomorphic Performance Standards for Hicks Creek Off-Site Mitigation Project

Monitoring Metric	Monitoring Year	Performance Standard
Cross-Sectional Average Elevation	1 – 3	A net change (i.e., aggradation or degradation based on the average channel bed elevation) of more than 1.0 foot relative to baseline monitoring may trigger a causal analysis to determine the cause(s) of the geomorphic alterations.
	5	(Same as Monitoring Years 1-3)
	7	(Same as Monitoring Years 1-3)
	10	(Same as Monitoring Years 1-3)
Cross-Sectional Area	1 – 3	Changes of $\pm 25\%$ in bankfull area relative to baseline monitoring also may trigger a causal analysis to determine the cause(s) of the geomorphic alterations.
	5	(Same as Monitoring Years 1-3)
	7	(Same as Monitoring Years 1-3)
	10	(Same as Monitoring Years 1-3)
Longitudinal Profile	1 – 3	A net change (i.e., aggradation or degradation based on the average channel bed elevation) of more than 1.0 foot relative to baseline monitoring may trigger a causal analysis to determine the cause(s) of the geomorphic alterations
	5	(Same as Monitoring Years 1-3)
	7	(Same as Monitoring Years 1-3)
	10	(Same as Monitoring Years 1-3)
Erosion Inventory	1 – 3	No significant increase in channel bed or bank stability and condition relative to post-construction monitoring (i.e., gullies, slumps, and/or headcuts)
	5	(Same as Monitoring Years 1-3)
	7	(Same as Monitoring Years 1-3)
	10	(Same as Monitoring Years 1-3)

Table 7-3. Fish Passage Performance Standards for Hicks Creek Off-Site Mitigation Project

Monitoring Metric	Monitoring Year	Performance Standard
Minimum Water Depth for Adult Steelhead	1 – 3	Average minimum water depth of 0.7 feet at 3 cubic-feet-per-second (cfs) during the adult migration period (December through April) in each monitoring year.
	5	
	7	
	10	
Minimum Water Depth for Juvenile Steelhead	1 – 3	Average minimum water depth of 0.4 feet at 1 cfs during the juvenile migration period (December through June) in each monitoring year.
	5	
	7	
	10	

Monitoring Metric	Monitoring Year	Performance Standard
Maximum Jump Height for Adult Steelhead	1 – 3	Maximum jump height of 1.0 foot at 3 cfs during the adult migration period (December through April) in each monitoring year.
	5	
	7	
	10	
Maximum Jump Height for Juvenile Steelhead	1 – 3	Maximum jump height of 0.5 foot at 1 cfs during the juvenile migration period (December through June) in each monitoring year.
	5	
	7	
	10	
Plunge Pool Depth	1 – 3	In each monitoring year, a minimum plunge pool depth of 1.0 foot or 1.25 times the height of the drop, whichever is greater, at flows of 3 cfs.
	5	
	7	
	10	

Quantitative monitoring will be conducted as described below for all areas where the project is providing compensatory mitigation for aquatic resource impacts of the GRBR project to satisfy RWQCB or CDFW permit requirements for the GRBR project. For areas where no mitigation is not being provided, monitoring will be qualitative only and will be restricted to confirming that cover of target weeds (e.g., Himalayan blackberry, greater periwinkle, and other nonnative trees, shrubs, and vines) does not exceed 10%.

7.2 Monitoring Schedule

Performance standard monitoring of woody and herbaceous plantings initially will focus on plant survival and plant vigor in Years 1–5 and then shift to percent vegetation cover by native woody species in Years 5, 6, 8 and 10 (Table 7-1). Percent cover of target invasive species will also be monitored. Vegetation monitoring will be performed in August – September of each monitoring year. This approach is appropriate because as riparian and mixed oak-bay woodland habitat develops and plants mature, a canopy begins to develop and individual plant assessment becomes less relevant to overall ecological success.

Geomorphic monitoring will be conducted immediately after construction is completed to establish a baseline conditions and then annually during the low-flow season (late summer/early fall) in monitoring Years 1-5, 6, 8 and 10 (Table 7-2). In addition, photo documentation of representative in-channel structures will occur after construction.

Fish passage assessment monitoring will be conducted immediately after construction is completed to establish baseline conditions and then annually during the December to June period in monitoring Years 1-3, 5, 7 and 10 (Table 7-3).

The duration of the monitoring period is expected to be 10 years. Monitoring may be extended as a contingency measure, as directed by the resource agencies, if performance standards are not met by the end of Year 10 (Chapter 9).

7.3 Monitoring Methods

The monitoring program will consist of a combination of qualitative and quantitative vegetation monitoring, as well as geomorphic monitoring, as described in the following sections.

7.3.1 Vegetation Monitoring

Vegetation monitoring and habitat assessments will be performed by qualified botanists and/or restoration ecologists as designated by JPB. Quantitative plant survival and vigor monitoring will occur for all planted woody and herbaceous plantings throughout the riparian, floodplain riparian, and mix oak-bay woodland planting zones. Percent cover by native woody species will occur along transects to be established prior to monitoring in Year 1.

7.3.1.1 Plant Survival

Plant survival monitoring will be conducted at the riparian, floodplain riparian and mixed oak-bay woodland planting zones. Results will be presented individually for each planting zone. Each plant that was planted as part of revegetation efforts will be monitored annually in Years 1-5 for survival (replacement plants are included in this monitoring). Naturally recruited plants will not be included as part of plant survival monitoring because inclusion will skew the monitoring results, which focus on survival of planted material.

Identifying individual species' survival rates will determine whether any single species is becoming dominant or does not appear to be well-suited for a particular mitigation unit. The determination of survival rates will be based on the total number of plants of that species originally planted at each mitigation site. Plants will be recorded as dead if no viable aboveground growth is visible. For example, if all the leaves on a tree are brown, but an examination of the stems and branches shows viable stem tissue, the plant will be considered alive, although it may be given a low vigor rating.

7.3.1.2 Plant Vigor

Plant vigor will be monitored concurrently with plant survival. Results will be presented individually for each species in each planting zone. Each plant that was planted as part of mitigation efforts will be monitored to assess vigor (replacement plants are included in this monitoring). Naturally recruited plants will not be included as part of plant vigor monitoring because inclusion will skew the monitoring results, which focus on vigor of planted material.

The determination of vigor will entail consideration of disease symptoms, low-density foliage, atypical leaf color, stem and foliar vigor (e.g., signs of desiccation, leaf curl), browsing or other wildlife-related damage, and vandalism. A vigor rating of *good*, *fair*, or *poor* (values of 3.0, 2.0, and 1.0, respectively) will be assigned to each plant. Dead plants will not be assigned a vigor rating. These ratings are defined below.

- **Good (3.0):** A plant with less than 25% of its aboveground growth exhibiting one or more of the factors listed above.

- **Fair (2.0):** A plant with 25–75% of its aboveground growth exhibiting one or more of the factors listed above.
- **Poor (1.0):** A plant with more than 75% of its aboveground growth exhibiting one or more of the factors listed above.
- **Dead:** A plant that does not appear capable of growth.

7.3.1.3 Percent Cover by Native Woody Plant Species

Percent vegetation cover by native woody plant species will be monitored in Years 5, 6, 8 and 10 at the riparian, floodplain riparian and mixed oak-bay woodland planting zones. Results will be presented individually for each planting zone. Naturally recruited native woody plants will be considered under percent vegetation cover monitoring because they will contribute to native riparian habitat cover.

The line-intercept method will be used to record the woody vegetation cover. Line intercept transects will be established in each riparian planting area along the project reach. The primary transect line will run perpendicular to the creek and will extend the length of the planting area. Because riparian tree and shrub growth rates vary and are anticipated to be slow, perpendicular transects, which extend from each planting areas top of back to toe of slope will be placed at 15-foot intervals along the primary transect. Wherever a native woody plant intersects the line transect, the distance the plant (or group of plants) spans on the measuring tape will be recorded. Areas with nonnative tree and shrub cover, as well as areas with no tree or shrub cover, will be recorded. This process will be repeated along the entire length of the transect.

7.3.2 Geomorphic Monitoring

Geomorphic performance standards for the Project are based on the goal to have self-sustaining aquatic habitat during and at the end of the monitoring period which is anticipated to support local communities of desirable fish species. Geomorphic monitoring will be used to support the projects underlying objective of improving post-construction, in-channel conditions over baseline conditions. The geomorphic monitoring strategy will be to assess channel cross-sections, longitudinal profile, bank erosion, and other channel features to ensure the project remains in a stable condition that allows for the enhanced passage of adult and juvenile salmonids.

The geomorphic monitoring and assessment will be conducted in the late summer or early fall to evaluate the bed and banks with the lowest amount of water possible. The monitoring will be conducted by a geomorphologist with expertise in channel and floodplain restoration, channel stability analyses, and topographic surveying techniques. The geomorphologist will be assisted by a staff member with similar expertise.

7.3.2.1 Erosion Inventory and Metrics

Erosion features within the Project site (i.e., Hicks Creek riparian corridor and adjacent floodplain, including the Tributary), if present, will be recorded on a tablet with a sub-meter GPS unit to assess overall Project site stability. They will also be photographed and described on a tablet data form. Although some erosion and undercut banks are expected to occur as part of natural stream processes, erosion inventory monitoring will primarily focus on erosional features that have the potential to adversely affect the establishment of constructed project features such as channel

banks, root wad structures, constructed weirs, instream boulders or other geomorphic features installed as part of the project. The root cause of the erosion feature and the potential for sediment to be delivered to the local channel network (or if such deposition has already affected the network) will be determined. The severity of the erosion feature will be ranked by size, impact, condition, and presence of stability and instability elements.

The erosion features inventory will focus on identifying erosion features within channels or other areas of concentrated flow (e.g., swales and channels), as well as the adjacent floodplains. Channels, other areas of concentrated flow, and streambanks will be emphasized, because in-channel erosion often contributes most of the sediment to the system, primarily from headcuts, bank erosion, and gully erosion. Features not always associated with concentrated flow conditions, such as stand-alone rotational slumps and tensile cracks on the streambanks will also be documented.

The erosion inventory will be completed for the entire length of the original surveyed longitudinal profile, a distance of approximately 750 linear feet (Figure 7-1).

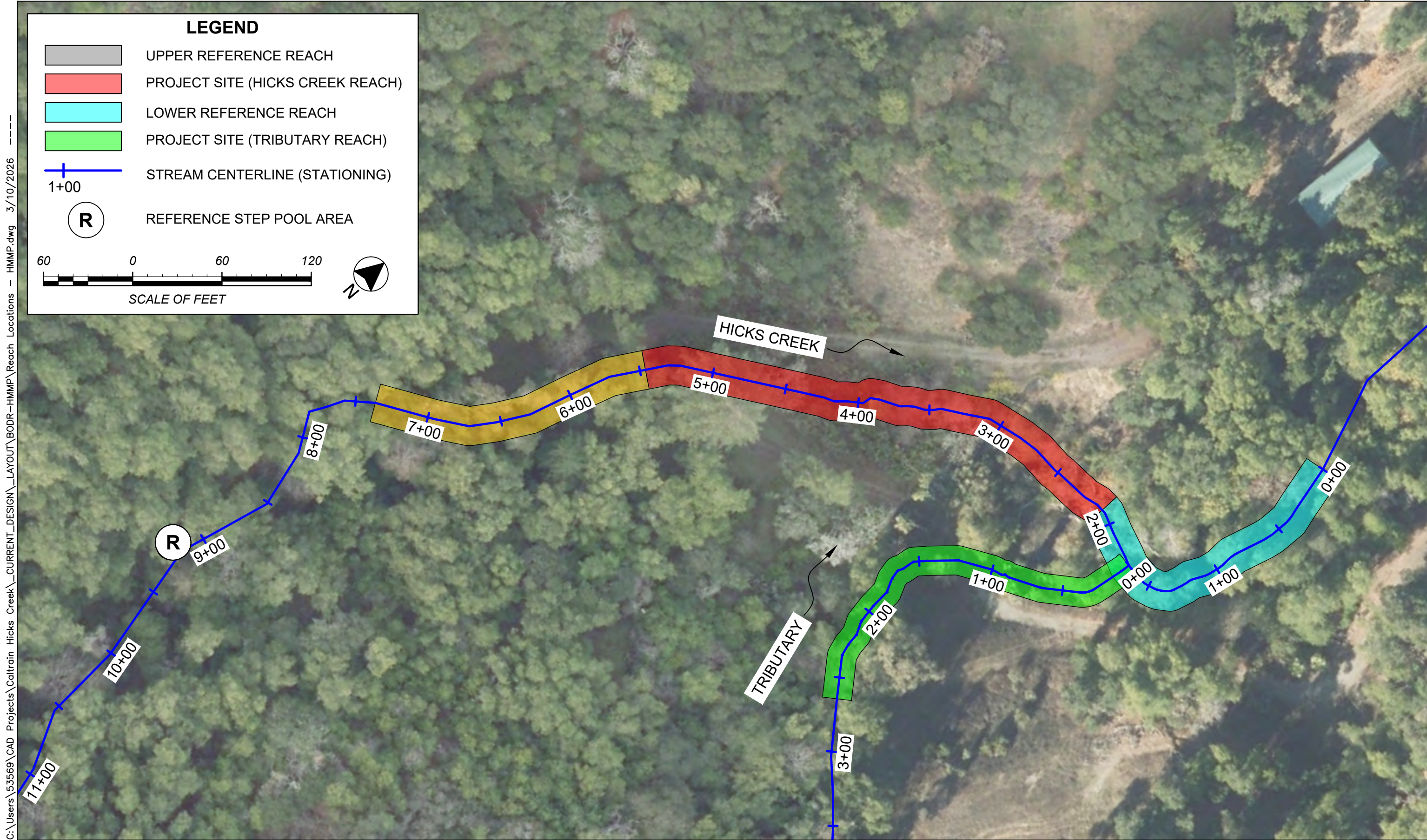
For the erosion inventory, a certain degree of scour or deposition (or perhaps even some surface movement, such as slumping) is to be expected after the initial restoration efforts; however, the performance standard for the erosion inventory will be “no significant increase in channel bed or bank instability and condition relative to post-construction monitoring.” If an identified erosion feature is identified as contributing significantly to localized channel or bank instability and/or water quality degradation, as related to the contribution of excessive sediment from erosion of native soil, then it should be fully analyzed and corrective actions to stabilize the erosion feature should be taken. Corrective actions could include either biotechnical stabilization or hardscaping, depending on the severity of the erosion feature.

Bank stability³ is defined as the natural streambank that has stable groundcover. Stable ground cover includes rooted trees, shrubs, herbaceous plants, and naturally occurring rocky substrates. The terms defined in Table 7-4 will be used to describe observed bank stability conditions, and banks will either be described as stable, potentially unstable, or unstable.

Table 7-4. Terms Used to Describe Bank Stability Conditions ^a

Category	Term	Definition
Streambanks	Stable streambank	Has 75% or more cover of live plants and/or other stability elements that are not easily eroded and has no instability elements
	Potentially unstable streambank	Has 75% or more cover, but has one or more instability element(s) ^b

³ The term bank instability refers to streambanks that are either actively retreating or have the potential to retreat in the near future. In brief, weakening processes are any bank or near-bank processes that act to erode or prepare streambanks for further erosion (Lawler 1992). The purpose of assessing this indicator would be to identify fluvial erosion (erosion associated with flowing water) and bank failure (erosion associated with gravitational forces and weakening processes). Fluvial erosion is closely related to boundary shear stress, which can be loosely approximated by unit stream power variations, and bank failure is collapse of all or part of the streambank in situ (Lawler 1995).



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Figure 7-1
Location of Project Site Longitudinal Profiles and Reference Reaches
Hicks Creek Off-Site Mitigation Project

Category	Term	Definition
Stability elements	Unstable streambank	Has less than 75% cover of live plants and/or other stability elements and/or one or more instability element(s) (unstable streambanks are often bare or nearly bare streambanks composed of non-cohesive soil that is susceptible to fluvial erosion; particle size may vary depending on streambank material)
	Live plants	Perennial herbaceous species, such as grasses, sedges, rushes; woody shrubs, such as willows; broadleaf trees, such as cottonwood and alder; conifer trees; and plant roots that are on or near the surface of the streambank and provide substantial binding strength to the streambank material
	Rock	Boulders, bedrock, and cobble/boulder aggregates that are combined to form a stable mass
Instability elements	Downed wood	Logs firmly embedded in streambanks
	Erosion-resistant soil	Hardened conglomerate or cohesive clay/silt streambanks
	Bank height	Moderately high to high bank height relative to surrounding streambanks
	Fracturing, blocking, or slumping	Cracks near the top of the streambank, slumping streambanks, and blocks of soil/plant material that have fallen off or slid down the streambank
	Mass movement	Bank failure from landslides and gravity erosion of over-steepened streambank slopes
	Undercutting	Frequent or continuous scour; significant to severe undercutting

^a Based on definitions of streambank conditions in the U.S. Forest Service Region 5 Stream Condition Inventory Guidebook.

^b Exception: Streambank will be classified as stable if bank height is the only instability element present.

7.3.2.2 Cross Section Surveys and Metrics

The purpose of the cross-section surveys will be to ensure channel morphology continues to remain similar to the as-built post-construction conditions via basic topographic surveying. Plotting the repeat cross section survey data on the same graph quickly illustrates where on the cross sections potential change is occurring. As part of this monitoring effort, the cross sections will be plotted with minimal vertical scale exaggeration to facilitate the interpretation of change. Large changes in cross section morphology visible on the plots will be confirmed to be truly due to erosion and deposition and not to differences in how the cross sections were surveyed (e.g., not consistently surveying bank profiles or wood or boulders in the channel).

At least five permanent cross sections will be established throughout the project site (within both Hicks Creek and the lower Tributary) perpendicular to the primary channel following the methodology of Harrelson et al. (1994). These topographic cross sections will be surveyed at evenly spaced locations throughout each channel. Each transect would be surveyed, relative to a common datum, using ground-based surveying equipment to capture and track channel morphology; elevations along the cross section would be collected at intervals close enough to capture slope breaks and distinct morphological features within the floodplain, and along the channel sides and bottom.

The location of each cross section will be permanently marked in the field using 4-foot-tall metal t-posts (to easily find the general transect location) and with rebar driven vertically into the ground

surface, capped with an appropriate cover to establish known permanent elevations (permanent monuments or benchmarks) on each end of the transect. The permanent benchmarks for each transect would be placed in a stable location above the active channel on the left (north) and right (south) banks (or terraces) of the channel. The location of transect endpoints (i.e., the permanent monuments) would be documented using the sub-meter GPS unit, and their precise elevations determined accordingly. Representative photographs from fixed photography points would be taken at each cross section.

Average channel bed elevation will be calculated for each cross section by taking the average of all surveyed ground points. In addition to the average channel bed elevations of each cross section, the bankfull and entire channel width-to-depth ratio and the bankfull cross-sectional area will be subsequently calculated for each cross section.

For cross sections, graphical cross section comparisons will be used to detect significant morphological changes between the as-built conditions and subsequent monitoring years. In addition, a net elevational change (i.e., aggradation or degradation based on the average channel bed elevation) of more than 1.0 foot relative to baseline monitoring may trigger a causal analysis to determine the cause(s) of the geomorphic alterations. Finally, changes of $\pm 25\%$ in bankfull cross-sectional area relative to baseline monitoring also may trigger a causal analysis to determine the cause(s) of the geomorphic alterations.

7.3.2.3 Longitudinal Profile Survey and Metrics

Comparison of thalweg elevations between monitoring surveys shows whether channel elevations are increasing, decreasing, or stable. Analysis of the thalweg profiles surveyed in each channel and the reference reaches will provide additional context on reach-scale trends in bed elevations. The upper reference reach begins at the upstream extent of channel grading on Hicks Creek and extends approximately 250 feet upstream. The lower reference reach begins at the downstream extent of channel grading on Hicks Creek and extends approximately 400 feet downstream. The upper and lower reference reaches are shown on Figure 7-1. The data will be used to analyze and evaluate bedform and habitat complexity, and to determine whether the bed slope has changed in response to sedimentation or erosion, and to assess potential headcut migration. Note that the profile of the channel where the grade was rectified to account for the 4-foot vertical drop was informed by a Vertical Adjustment Potential (VAP) analysis of the existing streambed for an overall slope of approximately 5%, consistent with the overall reach slope.

A longitudinal profile will be surveyed throughout the length of the channels (Hicks Creek and the lower Tributary) within the Project site, as well as, upstream and downstream reference reaches (Figure 7-1). The longitudinal profile on Hicks Creek will include the length of the original surveyed longitudinal profile (a distance of approximately 750 linear feet). The length of the longitudinal profile on the lower Tributary would depend on the linear feet of restored area, but at minimum, will extend from its confluence to the road crossing on the tributary. The longitudinal spacing between channel bed data points on each profile would vary depending on the complexity of the channel bed. Digital photographs will be taken in the upstream and downstream directions at various locations throughout the longitudinal profiles. The location of each cross section will be

surveyed on the longitudinal profiles for graphical plotting purposes. Sinuosity⁴, gradient, and average channel bed elevation of the longitudinal profile will be determined.

Similar to the cross sections, graphical longitudinal profile comparisons could be used to detect morphological changes between the as-built conditions and subsequent monitoring years. In addition, a net change (i.e., aggradation or degradation based on the average channel bed elevation) of more than 1.0 foot relative to baseline monitoring may trigger a causal analysis to determine the cause(s) of the geomorphic alterations.

7.3.2.4 Bankfull Width and Depth, and Wetted Width and Depth

In addition to topographic surveying of the five selected cross sections described in Section 7.3.3.2, bankfull width and depth measurements will be recorded to assess the hydraulic capacity of the channel. Bankfull width is a key design element of the proposed restoration effort in the design reach and the Tributary, and specific target bankfull widths have been incorporated into the restoration design to ensure that the design reach and the Tributary both connect seamlessly to the (undisturbed) upstream and downstream reaches. As such, determining any variations in the bankfull dimensions from as-built conditions will be important to detect overall reach adjustments, and whether these adjustments are transient, beneficial, or detrimental.

Specifically, a geomorphic or effective bankfull surface will be identified in the field. The geomorphic bankfull or effective surface is the surface that gets inundated by the discharge that performs the most geomorphic work on a system, typically a flow that occurs every 1.5 to 2 years (Knighton 1999). This discharge, known as the geomorphic bankfull discharge, is defined as that water discharged when stream water just begins to overflow into the active floodplain. The geomorphic bankfull or effective surface will be identified based on the methodology of Harrelson et al. (1994) and Hauer and Lamberti (1996). Once this surface is recognized, width and depth measurements will be recorded.

Similar to bankfull width and depth measurements, wetted width and depth measurements will be recorded. Specifically, the wetted surface will be identified in the field during the low-flow season (late summer/early fall), and once determined, width and depth measurements will be recorded. Wetted surface recognition will aid in determination of appropriate depths for aquatic species. In addition, the “active channel” width will be identified, which represents a typical low to moderate flow regime within the Project and, in the case of the Hicks Creek, is typically bounded by the bank toes. These indicators will be measured at the individual cross sections during low-flow season (late summer/early fall).

Because wetted width and depth is flow dependent, a stream gaging station (i.e., stilling well) outfitted with a continuous water level data logger (e.g., Onset Computer Corporation HOB0 water level logger) will be installed, along with a barometric pressure data logger on the streambank. Periodic stream flow measurements using standard flow measurement techniques will be conducted during each geomorphic monitoring event and throughout the year to support the analysis. The gaging station will also be used to provide supplemental data in support of fish passage

⁴ Sinuosity is defined as the ratio of actual channel distance between identified points compared to straight/down-valley distance. The following represent possible ratios that define sinuosity: straight (1); slightly sinuous (1.1–1.3); sinuous (1.4–1.7); meandering (1.8 and above). Due to the small footprint of the design reach, and the poor resolution air photos, sinuosity will be measured via compass bearings at fixed locations along the longitudinal profile.

monitoring (Section 7.3.3.1). The gaging station will be installed upstream of the confluence with the Tributary since most of the fish passage monitoring (and proposed restoration activities) will occur above this location.

7.3.2.5 Bank Instability and Bank Characteristics

Bank instability at the cross-section level will be determined using the methods described above under Section 7.3.2.1, *Erosion Inventory*.

In addition, the composition and the height of each bank will be determined in the field. Bank height will be measured from the toe of the bank (i.e., the location at the grade break between the channel bed and the bank) to the top of the bank. This information, in conjunction with the other indicators, will be used to detect where the channel may still be downcutting, as suggested by over-steepened banks, and describe the potential for the channel to laterally migrate and increase the risk of bank (and crossing) instability.

This indicator will be measured over the entire project site and at the individual cross sections.

7.3.2.6 Channel Bed Substrate Composition and Embeddedness

Substrate composition and embeddedness refer to the size of the substrate materials on the channel bed, and the degree to which these materials are embedded. A considerable amount of analysis has been put forth to correctly sizing the substrate sizes in the design reach within the Project site. Larger substrates are required for channel stability and providing a non-transient framework under the surface, while incorporation of smaller gravels is necessary for fish spawning and other aquatic organisms. Substrate composition and embeddedness will be measured using the methods described by Bunte and Abt (2001). At least 100 individual particles will be measured at each location.

This indicator will be measured at the individual cross sections.

7.3.2.7 Channel Complexity

In order to ensure that a diversity of habitat types are present within the Project site, channel or habitat units (e.g., riffle, flatwater, pool) will be delineated according to standard habitat mapping descriptions (in both Hicks Creek and the Tributary). The stream habitat inventory could occur simultaneously with the longitudinal profile survey and will be based on the methods described in the *California Salmonid Stream Habitat Restoration Manual* (Flosi et al. 2010). Stream habitats will be delineated into one of the 24 Level-IV habitat classification types (Table 7-5), based on morphological characteristics, including: over-all channel gradient, water velocity and depth, substrate, and, where applicable, the channel features (e.g., boulder, bedrock, woody material, converging flow) causing the formation of the habitat unit through scour and sediment deposition (Flosi et al. 2010). Ground-level images of each habitat unit will be taken with a high-resolution digital camera.

Table 7-5. Level-II, Level-III, and Level-IV Habitat Types

Level-II Habitat Type	Level-III Habitat Type	Level-IV Habitat Type	Abbreviation
Riffle	Riffle	Low Gradient Riffle	LGR

Level-II Habitat Type	Level-III Habitat Type	Level-IV Habitat Type	Abbreviation
Flatwater	Flatwater	High Gradient Riffle	HGR
		Cascade	CAS
		Bedrock Sheet	BRS
		Pocket Water	POW
		Glide	GLD
		Run	RUN
		Step Run	SRN
Pool	Main Channel Pools	Edgewater	EDW
		Trench Pool	TRP
		Mid-Channel Pool	MCP
		Channel Confluence Pool	CCP
		Step Pool	STP
		Scour Pools	CRP
		Corner Pool	CRP
	Backwater Pools	Lateral Scour Pool - Log Enhanced	LSL
		Lateral Scour Pool - Root Wad Enhanced	LSR
		Lateral Scour Pool - Bedrock Formed	LSBk
		Lateral Scour Pool - Boulder Formed	LSBo
		Plunge Pool	PLP
		Secondary Channel Pool	SCP
		Backwater Pool - Boulder Formed	BPB
		Backwater Pool - Root Wad Formed	BPR
		Backwater Pool - Log Formed	BPL
		Dammed Pool	DPL

Notes:

Habitat types hierarchy based on *California Salmonid Stream Habitat Restoration Manual* (Flosi et al. 2010).
This indicator will be measured project site wide.

7.3.2.8 Stage of Channel Evolution

A stream evolution model (Cluer and Thorne 2013) will be applied to provide a template for understanding geomorphic responses and processes within the immediate watershed. The stream evolution model of Cluer and Thorne (2013) revisits and updates two well-established channel evolution models (Schumm et al. 1984; Simon and Hupp 1987) in light of recent research and the authors' practical experiences.

This indicator will be measured project site wide, and will provide insight as to whether the stream is remaining in its current state of arrested degradation or evolving into a widening or deepening phase.

7.3.3 Fish Passage Assessment

The purpose of the fish passage assessment is to evaluate whether the channel in the design reach creates actual or potential barriers to migrating adult or juvenile steelhead. Potential barriers—including excessive vertical drops, inadequate water depth, or other channel modifications that may develop as the channel evolves—may occur after construction in response to seasonal high-flow

events. The fish passage assessment will be performed by qualified fish biologists or a qualified fish biologist and a geomorphologist/hydrologist.

The assessment will ensure that adult steelhead can reach upstream spawning habitat and that juveniles can safely migrate downstream or move within the stream during seasonal transitions. The analysis focuses on adult passage from December through April and juvenile passage from December through June, which aligns with the primary migration periods for these life stages.

No fish passage assessment is proposed for the July through November period because stream flows are typically insufficient to support fish movement—except during brief late-spring or early-fall storm events—and adult steelhead are not present in the system at this time.

All observed natural fish passage obstructions within the project site will be photographed, marked with a sub-meter GPS, and measured to determine their physical dimensions. These results will be shared by the California Passage Assessment Database, as appropriate. The initial fish passage impediment inventory could be conducted concurrently with the stream habitat inventories and the longitudinal profile surveys in early fall to facilitate the collection of detailed measurements of potential natural fish passage obstructions and to help focus the fish passage inventory in winter when stream flow is at the juvenile (1 cfs) and adult (3 cfs) minimum passage flow as described in Section 3.2.1 of the BDR. In addition, the early fall surveys will provide an opportunity to collect additional measurements (e.g., pool depth, drop height, water depth) at potential natural fish passage obstructions at lower flows to aid in evaluating the passability of the natural fish passage obstruction. The proposed stream gage described in Section 7.3.2.4 will facilitate conducting the fish passage assessment and interpreting results. Periodic stream flow measurements using standard flow measurement techniques (e.g., CDFW 2020) will be conducted during each fish passage assessment event to support the analysis.

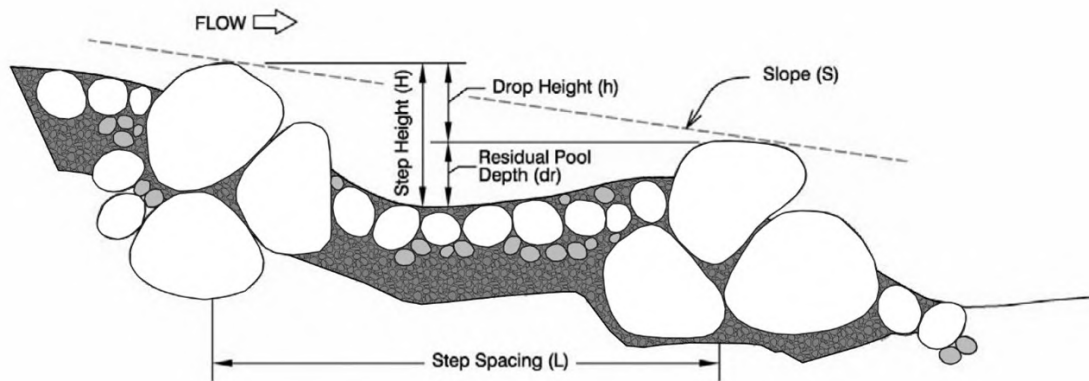
The fish passage assessment will focus on vertical barriers (e.g., steps) and locations between vertical steps with shallow water depths in the design reach where excessive jump heights and shallow water depths, respectively, may impede movement. The assessment will also include the lower reference reach (Figure 7-1), which will provide a baseline for understanding whether any barriers observed in the design reach represent natural conditions or project-related constraints. To ensure consistent evaluation, the methods used to assess each type of barrier are described below.

7.3.3.1 Assessment of Potential Vertical Fish Passage Barriers

Physical dimensions measured in the field at steps and potential or actual vertical barriers will include drop height, step height, horizontal jump distance, and plunge pool depth (Figure 7-2⁵). Step height is defined as the maximum height of the impediment or barrier from the streambed at the base of the impediment or barrier to the crest of the waterfall (e.g., lip of the boulder step). Drop height, or the vertical distance a fish must jump to successfully pass the impediment, is defined as the distance from the water surface elevation at the base of the impediment or barrier to the top of the impediment. Drop height is calculated by subtracting maximum pool depth at the point where water plunges into the pool from the step height. Residual pool depth is the depth of the pool at minimum streamflow and represents the depth of scour in the streambed. It is calculated by subtracting the water depth at the crest of the riffle or step that controls the water surface in the

⁵ Horizontal jump distance is not shown on Figure 7-1 but is the forward distance a fish must travel from the leaping point in the downstream pool to the crest of the waterfall (typically defined as the horizontal distance from the point where water plunges into the pool to the crest of the waterfall).

pool from the maximum water depth of the pool (i.e., it is the maximum pool depth independent of streamflow). Slope in the figure below refers to the angle of impediment of an individual barrier from its top to the downstream hydraulic control.



Source: Flosi et al. (2010).

Figure 7-2. Metrics Used for Passage Assessments

The passability of these impediments, if present, will be based on a comparison of the field measurements to the fish passage performance standards⁶ presented in Table 7-3.

7.3.3.2 Assessment of Potential Depth Fish Passage Barriers

Water depths along the thalweg will be measured at a set interval along a tape placed longitudinally along the creek that follows the thalweg. Measurements will be conducted over multiple days to capture different flow conditions or by taking multiple readings over the course of a single day during a rising or falling hydrograph to capture a range of flow conditions. Adequate water depths along the channel are necessary for passage of adult and juvenile salmonids through features with shallow depths. Field measurements will be compared to performance standards for minimum water depth (Table 7-3). After a minimum of three to six field sampling events—either separate visits or multiple measurements over the course of a day during a rising or falling hydrograph—have been completed along the longitudinal transect over a wide range of flows, a graph of stream flow rates versus the corresponding average channel depths will be used to determine whether fish passage conditions are being met for flows at and above the minimum passage flow for adult and juvenile life stages over the course of the respective evaluation periods for adults and juveniles (CDFW 2017). The assessment will also include the lower reference reach (Figure 7-1).

7.4 Photo Documentation

The progress of constructed terrestrial and aquatic habitats will be documented photographically during the annual monitoring surveys. The purpose of photo-documentation monitoring is to visually identify the sites terrestrial and aquatic habitat progress toward successful establishment.

⁶ Since the proposed design is presently based on a reference (stream simulation) approach, these performance standards will only be used as guidance, not measures of success, failure, or maintenance.

The locations of permanent photo-documentation stations will be determined prior to construction and the locations will be identified in the field, monumented, and mapped. Most photo-documentation stations will be recorded on a digital field map and a figure displaying the photo-documentation stations will be included in the annual monitoring reports. Annual monitoring photographs will be taken from the same location, focal length, aperture, bearing, inclination, camera, season, and time of day (Hall, 2002) A minimum of 12 photo-documentation stations are anticipated.

The number of photographs taken at a given photo-documentation station will vary, depending on the area and habitat. A sufficient number of stations will be established to ensure that the photographs provide a complete visual record of the mitigation sites. For riparian planting areas, photo-documentation stations will be located at the upstream and downstream ends of the planting areas. For instream habitats, photo-documentation stations will be established every 100 feet along the restored channel with photographs taken in both an upstream and downstream direction from each point. Photographs will be taken during monitoring activities (i.e., at least once a year during the summer). Additional representative photographs may be taken at other times of the year at the monitors discretion.

7.5 Annual Monitoring Reports

JPB will prepare a monitoring report at the conclusion of the first nine monitoring years and submit it to Midpen and the resource agencies by December 31 of each year. Each monitoring report will include the following information:

- The regulatory agencies' permit numbers.
- A description of the project location.
- A summary of the monitoring methods.
- A list of the names, titles, and affiliations of the people who prepared the content of the report and/or participated in monitoring activities that year.
- A summary and analysis of the monitoring results, including an evaluation of site conditions in the context of performance standards.
- A discussion of modifications made to the monitoring methods (if any).
- A discussion of the monitoring results.
- A discussion of maintenance efforts and any remedial actions implemented since submittal of the previous monitoring report.
- Management recommendations for the following year, including discussion of areas with inadequate performance and recommendations for remedial action.
- An appendix containing photo-documentation of all planting zones and fish passage improvements.

7.6 Final Monitoring Report

JPB will prepare a final monitoring report at the conclusion of the final monitoring year and submit it to Midpen and the resource agencies by December 31. Each monitoring report will include the information identified in Section 7.5, as well as summary of the data collected during Years 1 – 10 and a justification as to why or why not the Project site met the performance standards and should be accepted as complete by the resource agencies.

Chapter 8 Completion of Mitigation Plan

8.1 Notification of Completion

JPB will notify and coordinate with the appropriate resource agencies—USACE, RWQCB, and CDFW—to seek concurrence that the final performance standards have been met through the submittal of the Final Monitoring Report and a letter requesting a Notification of Completion. This request for concurrence will occur no sooner than the completion of Year 10. The Final Monitoring Report will include analysis of quantitative sampling data that indicate the final performance standards have been met. All temporary structures, fences, irrigation and similar temporary items must be removed from the Project site prior to filing the Notification of Completion.

8.2 Agency Confirmation

Following receipt of the Notification of Completion, the regulatory agencies may conduct a site visit with JPB to confirm the successful completion of the mitigation effort, or they may base their decision solely on the submitted reports. Whether or not a site visit is requested, once the concurrence is made that mitigation is successful, confirmation from the permitting agencies should be provided in writing to the JPB.

Chapter 9 Contingency Measures

9.1 Geomorphic Contingency Measures

The Project site is a dynamic hydrologic system and may be subject to a wide range of flow conditions during any given year and over the 10-year project establishment period. Therefore, it is not possible for this Project design to fully eliminate risk associated with this variable system. Implementation of this Project will include elements of ongoing geomorphic and fish passage monitoring and adaptive management to identify potential risks and contingency measures as the Project becomes established.

Conditions that could trigger contingency measures during the 10-year project establishment period include, but are not limited to:

- Inadequate sealing of the creek thalwegs by fines sediments resulting in flows going subsurface or being too shallow to support fish species.
- Settling or movement of constructed steps and step pools that result in conditions that affect fish passage.
- Areas of bank erosion that result in bank loss, potential for additional bank loss or erosion that could dislodge bank revetment materials.

Such conditions, should they occur, will be addressed by JPB on a case-by-case basis and in coordination with the resource agencies. Contingency measures may include the placement of additional fine sediment to further seal the channel thalwegs, adjustment or replacement of step pool features, or channel bank restoration.

9.2 Vegetation Contingency Measures

Successful vegetation establishment is required for long-term habitat restoration and erosion control within the Project site. However, establishing new vegetation can be challenging and make it difficult to achieve project performance standards. The revegetation and seeding plans were developed to incorporate native species known to occur at or in the vicinity of the Project site, and temporary erosion control measures will be implemented to reduce the risk of bank and floodplain erosion. Performance monitoring will be performed for a period of 10 years to assess revegetation success and inform any necessary adaptive management actions.

Conditions that could trigger contingency measures during the 10-year project establishment period include, but are not limited to:

- Inability of the Project site to meet the vegetation performance standards for plant survival, vigor, or vegetative cover.
- Significant and/or ongoing herbivory that results in low plant vigor and cover.

- Continued and persistent colonization of the Project site by invasive plant species. (e.g., Himalayan blackberry, greater periwinkle).
- Drought conditions that occur after the plant material is taken off initial plant watering and which result in reductions in survival, vigor or vegetative cover.
- High flow events that could affect plant establishment or cause plant scour.

Such conditions, should they occur, will be addressed by JPB on a case-by-case basis and in coordination with the resource agencies. Contingency measures may include the replacement planting with different species that may be better suited to site conditions, installation of plant protection cages or the use of chemical deterrents, implementation of more vigorous weed removal activities or the use of herbicides to control invasive species, supplemental watering, or replacement planting in areas affected by high flow events.

Chapter 10 References

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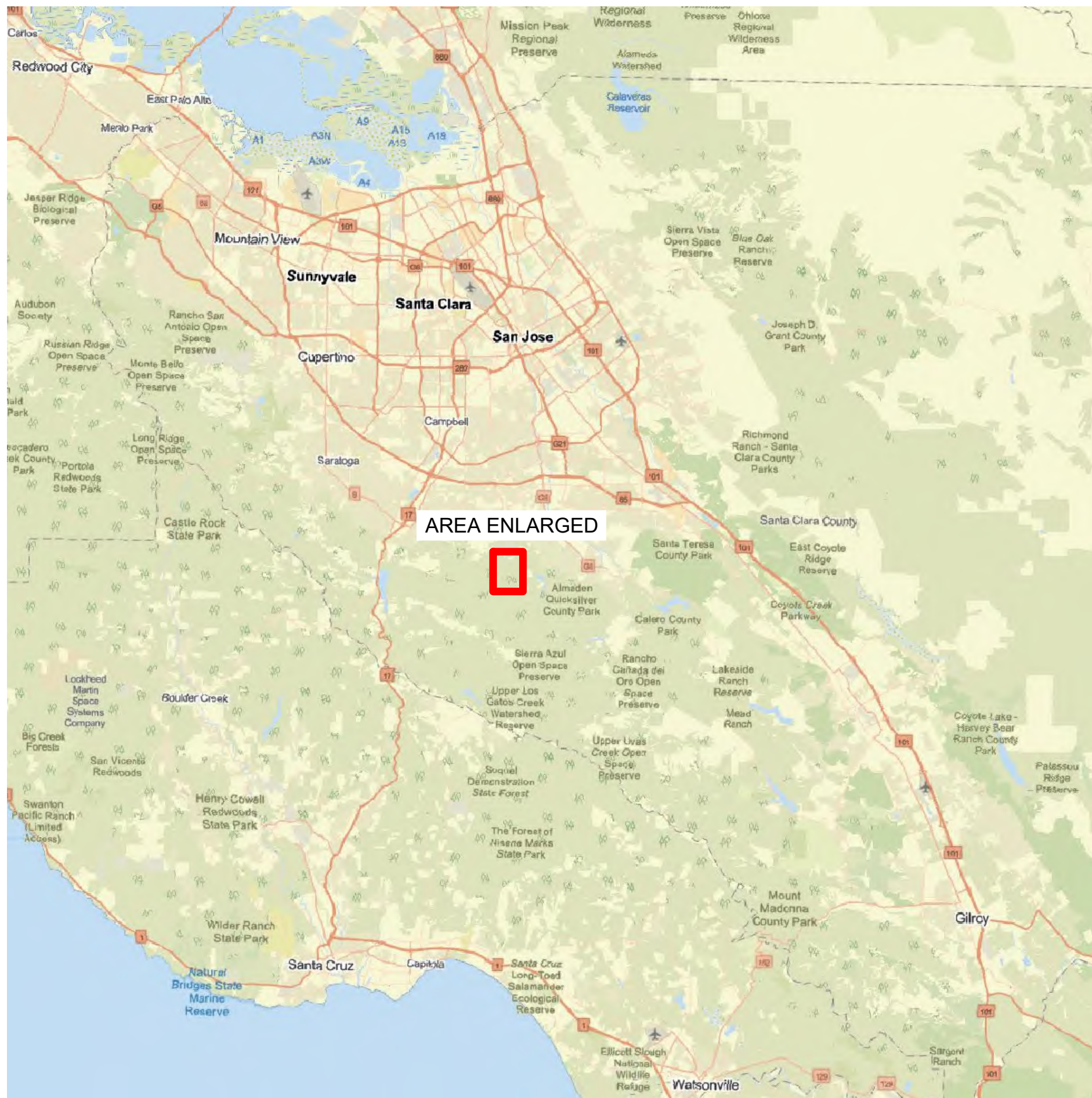
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Appendix A Project Design Drawings

HICKS CREEK MITIGATION PLAN AND DESIGN

**MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
HICKS CREEK OFF-SITE MITIGATION PROJECT**



SHEET LIST TABLE		
SHEET NUMBER	SHEET ID	SHEET TITLE
1	N-1	COVER
2	N-2	NOTES
3	N-3	EXISTING CONDITIONS
4	N-4	SITE PREP & ACCESS
5	N-5	ACCESS, TREE POINTS, CLEARING & GRUBBING
6	N-6	SITE PREP NOTES & TREE TABLES
7	N-7	SITE PREP DETAILS
8	N-8	WORK ISOLATION
9	N-9	BMP DETAILS
10	G-1	PROJECT OVERVIEW
11	G-2	DEMOLITION
12	G-3	HICKS CREEK GRADING & CHANNEL CONSTRUCTION
13	G-4	HICKS CREEK TYPICAL SECTIONS
14	G-5	HICKS CREEK STREAMBANK RESTORATION
15	G-6	HICKS CREEK SECTIONS
16	G-7	HICKS CREEK SECTIONS
17	G-8	HICKS CREEK SECTIONS
18	G-9	TRIBUTARY GRADING
19	G-10	TRIBUTARY SECTIONS
20	G-11	TRIBUTARY DETAILS
21	P-1	PLANTING PLAN & NOTES
22	P-2	PLANTING SCHEDULE AND DETAILS

PROJECT DESCRIPTION

ICF WAS RETAINED BY CALTRAIN TO PROVIDE MITIGATION DESIGN SERVICES FOR THE HICKS CREEK MITIGATION PROJECT (PROJECT), LOCATED ON THE RANCHO DE GUADALUPE AREA OF THE SIERRA AZUL OPEN SPACE PRESERVE, A PART OF THE MIDPENINSULA REGIONAL OPEN SPACE DISTRICT (MIDPEN) NEAR SAN JOSE, CALIFORNIA. THE PROJECT WILL PROVIDE OFFSITE MITIGATION FOR IN-WATER AND RIPARIAN IMPACTS FROM CALTRAIN'S GUADALUPE RIVER BRIDGE PROJECT. PROJECT ACTIONS IDENTIFIED FOR MITIGATION INCLUDE REMOVAL OF MANMADE INFRASTRUCTURE IN THE CHANNEL OF HICKS CREEK AND HICKS TRIBUTARY, INCLUDING CONCRETE AND ROCK MASONRY RETAINING WALLS ALONG CHANNEL BANKS AND A RELICT SWIMMING POOL ALONG THE HICKS CREEK TRIBUTARY. ADDITIONALLY, THE PROJECT PROPOSES FISH PASSAGE IMPROVEMENTS INCLUDING REMOVAL OF A MAN-MADE 4' DROP IN THE CHANNEL. RIPARIAN AND UPLAND PLANTINGS ARE PROPOSED THROUGHOUT THE PROJECT SITE AND IMPACTED AREAS, AS WELL AS INVASIVE PLANT REMOVAL AND REPLACEMENT WITH NATIVE SPECIES. PROJECT DESIGN CRITERIA CONSIDERS NMFs/NOAA AND USFWS PROGRAMMATIC BIOLOGICAL OPINION CRITERIA FOR RESTORATION ACTIONS, AS WELL AS PROJECT-SPECIFIC MITIGATION REQUIREMENTS.

PREPARED FOR:

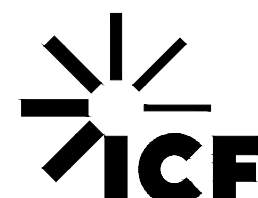


DAVID LIEFERT
MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
5050 EL CAMINO REAL
LOS ALTOS, CA 94022-1530
DLIEFERT@OPENSOURCE.ORG
(650)691-1200



MICHAEL TAUCHEN
CALTRAIN
1250 SAN CARLOS AVE
SAN CARLOS, CA 94070
TAUCHENM@CALTRAIN.COM
(650)730-4847

PREPARED BY:



ICF SAN FRANCISCO
1595 MARKET STREET
SAN FRANCISCO, CA, 94105
RICH WALTER
RWALTER@ICF.COM
(415)677-7167

DICK ROL

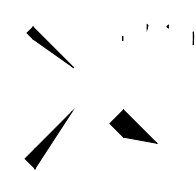
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NO. LA4783

DATE _____

SHEET 1 OF 22

HICKS CREEK MITIGATION PLAN AND DESIGN

**MIDPENINSULA REGIONAL OPEN
SPACE DISTRICT**



MADE BY

DESCRIPTION

DATE

DRAWN BY: T. ARTRUC, J. MAYO, C. SMITH
CHECKED BY: C. SMITH

FILENAME: COVER NOTES.DWG
PLOTTED BY: SMITH, CHRIS

PLOT DATE: 8/28/2026
PLOT TIME: 2:22 PM

SPATIAL REFERENCE

LIDAR: 2020 SANTA CLARA COUNTY

GPS RTK AND TOTAL STATION: SIEGFRIED ENGINEERING

HORIZONTAL PROJECTION: NSRS 2011 CALIFORNIA STATE PLANE, ZONE 3

SURVEY DATE: SEPETEMBER & OCTOBER 2025

HORIZ DATUM: NAD83 UNITS: US FEET

VERT DATUM: NAVD88 UNITS: US FEET

SUMMARY OF QUANTITIES

ITEM NO.	QUANTITY	UNITS	DESCRIPTION
1	LUMP SUM	LS	MOBILIZATION
2	LUMP SUM	LS	SURVEY
3	LUMP SUM	LS	CONTROL OF WATER
4	LUMP SUM	LS	EROSION AND SEDIMENT CONTROL
5	LUMP SUM	LS	TRAFFIC CONTROL PLAN AND IMPLEMENTATION
6	0.82	AC	CLEARING AND GRUBBING
7	0.32	AC	INVASIVE PLANT REMOVAL
8	24	EA	TREE REMOVAL
9	43	EA	TREE PROTECTION
10	12	EA	WORK ISOLATION - BULK BAGS
11	480	LF	WORK ISOLATION - GRAVITY PIPELINE
12	80	LF	WORK ISOLATION - BLOCK NETS
13	600	LF	WORK ISOLATION - SEDIMENT FENCE
14	932	CY	EARTHWORK - CUT
15	100	CY	EARTHWORK - FILL AND COMPACTION
16	832	CY	PLACE EXCESS CUT IN SPOILS AREA
17	260	CY	DEMOLISH AND EXCAVATE - CONCRETE STRUCTURES
18	20	CY	DEMOLISH AND EXCAVATE - WOOD STRUCTURES
19	260	CY	HAUL AND DISPOSAL - CONCRETE DEBRIS
20	20	CY	HAUL AND DISPOSAL - WOOD DEBRIS
21	160	LF	HICKS CREEK - ROUGHENED CHANNEL LABOR
22	250	CY	HICKS CREEK - STREAMBED MATRIX
23	90	EA	HICKS CREEK - BOULDERS
24	120	CY	HICKS CREEK - SEALING SAND AND GRAVELS
25	110	LF	STREAMBANK RESTORATION - LABOR
26	80	CY	STREAMBANK RESTORATION - TOE ROCK
27	127	EA	STREAMBANK RESTORATION - TOE LOG
28	212	EA	STREAMBANK RESTORATION - BRANCH BUNDLE
29	212	EA	STREAMBANK RESTORATION - LOG
30	127	EA	STREAMBANK RESTORATION - UPPER SLOPE WOOD
31	LUMP SUM	LS	TRIBUTARY - LARGE WOOD PLUG
32	15	CY	TRIBUTARY - TOE ROCK
33	78	CY	TRIBUTARY - STREAMBED MATRIX
34	57	EA	TRIBUTARY - SCOUR PROTECTION BOULDERS
35	0.06	AC	PLANTING - FLOODPLAIN RIPARIAN
36	0.15	AC	PLANTING - MIXED OAK BAY WOODLAND
37	0.35	AC	PLANTING - RIPARIAN
38	0.88	AC	SEEDING- UPLAND MIX
39	0.43	AC	SEEDING- RIPARIAN MIX
40	1.25	AC	DEMOBILIZATION

GENERAL NOTES

1.

ALL CONSTRUCTION ACTIVITIES SHALL BE CLOSELY COORDINATED WITH THE CONTRACTING OFFICER TO MINIMIZE IMPACTS TO NATURAL RESOURCES.

2.

WORK WILL NOT BEGIN UNTIL ALL NECESSARY PERMITS AND AUTHORIZATIONS HAVE BEEN RECEIVED. A COPY OF EACH PERMIT AND AUTHORIZATION SHALL BE MAINTAINED BY THE CONSTRUCTION FOREMAN/MANAGER ON THE PROJECT SITE FOR THE DURATION OF PROJECT ACTIVITIES.

3.

CALTRAIN TO PROVIDE BIOLOGICAL AND/OR CULTURAL RESOURCE MONITORS. BIOLOGICAL AND/OR CULTURAL MONITORS MAY MONITOR CONSTRUCTION WORK ON-SITE AND HAVE THE ABILITY TO STOP WORK AT ANY TIME TO AVOID DAMAGE TO RESOURCES. CONSTRUCTION CONTRACTOR WILL OBEY MONITORS AND REPORT ANY WILDLIFE OR CULTURAL ARTIFACT FINDINGS TO THE MONITORS.

4.

IN-WATER WORK WINDOW IS JUNE 15 - OCTOBER 31, OR UNTIL DESIGNATED BY CDFW, WHICHEVER COMES FIRST. NO WORK MAY PROCEED IN-WATER OUTSIDE OF THAT PERIOD.

5.

CONTRACTOR SHALL INSTALL WILDLIFE EXCLUSION FENCING (AS REQUIRED BY PERMITS), AND ENVIRONMENTALLY SENSITIVE AREA FENCING TO EXCLUDE AREAS NOT TO BE DISTURBED (I.E. AREAS OF NATIVE VEGETATION, RARE PLANTS, OR OTHER RESOURCES). FLAGGING OR FENCING SHALL ALSO BE INSTALLED TO DEMARCATE THE BOUNDARIES OF GRADING AREAS, STAGING, ACCESS, AND STOCKPILE AREAS PRIOR TO INITIATING CONSTRUCTION OR GRADING ACTIVITIES. FLAGGING OR FENCING WILL BE MAINTAINED IN GOOD REPAIR FOR THE DURATION OF PROJECT ACTIVITIES. SEE SHEETS N-4 THROUGH N-6. EROSION CONTROL FENCING MATERIALS MUST BE APPROVED BY MIDPEN PRIOR TO INSTALLATION

6.

THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL PROJECT MATERIALS, EQUIPMENT, AND PERSONNEL AT THE JOBSITE FOR THE DURATION OF THE PROJECT.

7.

EQUIPMENT, INCLUDING HEAVY EQUIPMENT AND HAND TOOLS, MUST BE WASHED AND DECONTAMINATED PRIOR TO ENTERING THE PROJECT SITE TO AVOID SPREAD OF INVASIVE PLANT SPECIES, AQUATIC INVASIVE SPECIES, AND SOIL PATHOGENS. DECONTAMINATION MUST CONFORM TO MIDPENINSULA OPEN SPACE DISTRICT DOCUMENTS "GUIDELINES FOR DECONTAMINATION" AND "GUIDELINES FOR MINIMIZING PHYTOPHTERA"

8.

CALTRAIN WILL PREPARE THE DEWATERING PLAN AND SUBMIT TO THE RESOURCE PERMITTING AGENCIES FOR APPROVAL. CONTRACTOR SHALL FOLLOW THE AGENCY-APPROVED DEWATERING PLAN. ANY PROPOSED CHANGE IN TECHNIQUES, MATERIALS AND/OR EQUIPMENT FROM THE AGENCY-APPROVED DEWATERING PLAN ARE SUBJECT TO PRIOR APPROVAL BEFORE IMPLEMENTATION BY THE CONTRACTING OFFICER AND MAY REQUIRE AGENCY-APPROVAL. CALTRAIN AND MIDPEN REVIEW AND APPROVAL DOES IN NO WAY TRANSFER LIABILITY, COST OR RISK TO THE CALTRAIN AND MIDPEN.

9.

CONTRACTOR SHALL MONITOR THE 72-HOUR FORECAST FROM THE NATIONAL WEATHER SERVICE AT HTTP://WWW.NWS.NOAA.GOV. WHEN THERE IS A FORECAST OF MORE THAN 50% CHANCE OF A RAIN EVENT THAT PRODUCES 0.25 INCHES OR GREATER OF RAIN IN 24 HOURS, THE PERMITTEE SHALL REMOVE ALL EQUIPMENT FROM AQUATIC AND RIPARIAN HABITAT AREAS PRIOR TO COMMENCEMENT OF THE RAIN EVENT. NO CONSTRUCTION, INCLUDING GRADING, EXCAVATION, TRENCHING, OR OPERATION OF HEAVY EQUIPMENT SHALL OCCUR DURING RAINFALL EVENTS. CONSTRUCTION MAY RESUME 24 HOURS AFTER PRECIPITATION CEASES AND WHEN THERE IS LESS THAN A 50% CHANCE OF PRECIPITATION OF 0.25 INCH OR MORE DURING A 24-HOUR PERIOD PROVIDED THE SITE HAS DRAINED SUFFICIENTLY TO PREVENT SEDIMENT TRANSPORT AND ALL PROTECTIVE MEASURES ARE VERIFIED TO BE OPERATIONAL.

10.

ALL EXCAVATED, STEEP-WALLED HOLES OR TRENCHES WILL BE COVERED WITH APPROPRIATE COVERS (E.G., THICK METAL SHEETS OR PLYWOOD) AT THE END OF EACH WORKDAY OR FITTED WITH ESCAPE RAMPS AT AN ANGLE NO GREATER THAN 30 DEGREES TO ALLOW ANIMALS TO EXIT.

11.

ALL SITE PREPARATION (INCLUDING DECOMPACTING OF SOILS, MULCH APPLICATION, SEEDING, AND COIR MAT INSTALLATION) SHALL BE COMPLETED AND APPROVED BY CALTRAIN AND MIDPEN PRIOR TO INITIATING PLANTING.

12.

GRADING SHALL BE PERFORMED TO TIE-IN SMOOTHLY WITH EXISTING GROUND, CREATING A FINAL GROUND SURFACE WITH A NATURAL AND ROUNDED APPEARANCE.

13.

CONTRACTOR TO VERIFY EXISTING GROUND SURFACE AND CONTROL POINTS PRIOR TO WORK.

EROSION CONTROL

1.

CONTRACTOR TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPs) FOR EROSION CONTROL AND MANAGEMENT OF WATER PRIOR TO CONSTRUCTION ACTIVITIES. EROSION CONTROL MATERIALS AND METHODS TO CONFORM TO MIDPENINSULA OPEN SPACE DISTRICT DOCUMENT "MIDPEN RESOURCE MANAGEMENT POLICIES".ALL EROSION CONTROL MATERIALS MUST BE MIDPEN APPROVED. CERTIFICATIONS FOR WEED-FREE MATERIALS MUST BE PROVIDED TO MIDPEN PRIOR TO INSTALLATION

2.

CONTRACTOR TO SUBMIT CONSTRUCTION SCHEDULE INCLUDING PHASING AND PLAN FOR BMPs AND WORK AREA ISOLATION PRIOR TO MOBILIZATION.

3.

EROSION CONTROL PROCEDURES SHALL CONFORM TO PROJECT PERMITS AND STORM WATER POLLUTION AND PREVENTION PLAN (SWPPP). THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE SWPPP AND COORDINATING ASSOCIATED SUBMITTALS FOR THE PROJECT'S NPDES PERMIT.

4.

THE CONTRACTOR SHALL PREVENT DISCHARGE TO HICKS CREEK DURING CONSTRUCTION AND CONTROL WATER POLLUTION AT ALL TIMES THROUGH THE USE OF BMPs.

5.

HAVE BACK-UP PUMPS AND WATER AND SEDIMENT CONTROL EQUIPMENT READILY AVAILABLE IN CASE EMERGENCY EROSION/POLLUTION SITUATIONS ARISE. IN ADDITION, HAVE A STOCKPILE OF EXTRA EROSION CONTROL MATERIALS FOR EMERGENCY SITUATIONS.

6.

THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND INSPECT DAILY SEDIMENT CONTROL MEASURES AND MAINTAIN RECORDS FOR REPORTING. THE CONTRACTOR SHALL STRICTLY ADHERE TO THE ACCESS, STAGING, AND STOCKPILE AREAS.

7.

THE CONTRACTOR WILL BE REQUIRED TO MOVE PERSONNEL, EQUIPMENT AND MATERIALS OUT OF THE CHANNEL, OVERBANK AREAS/FLOODPLAINS OR OTHER AREAS WITHIN THE PATH OF FLOW PRIOR TO A STORM EVENT OR OTHER TIMES IF IT'S ANTICIPATED THAT FLOWS MAY EXCEED CONTROLS PUT IN-PLACE BY THE CONTRACTOR

ABBREVIATIONS

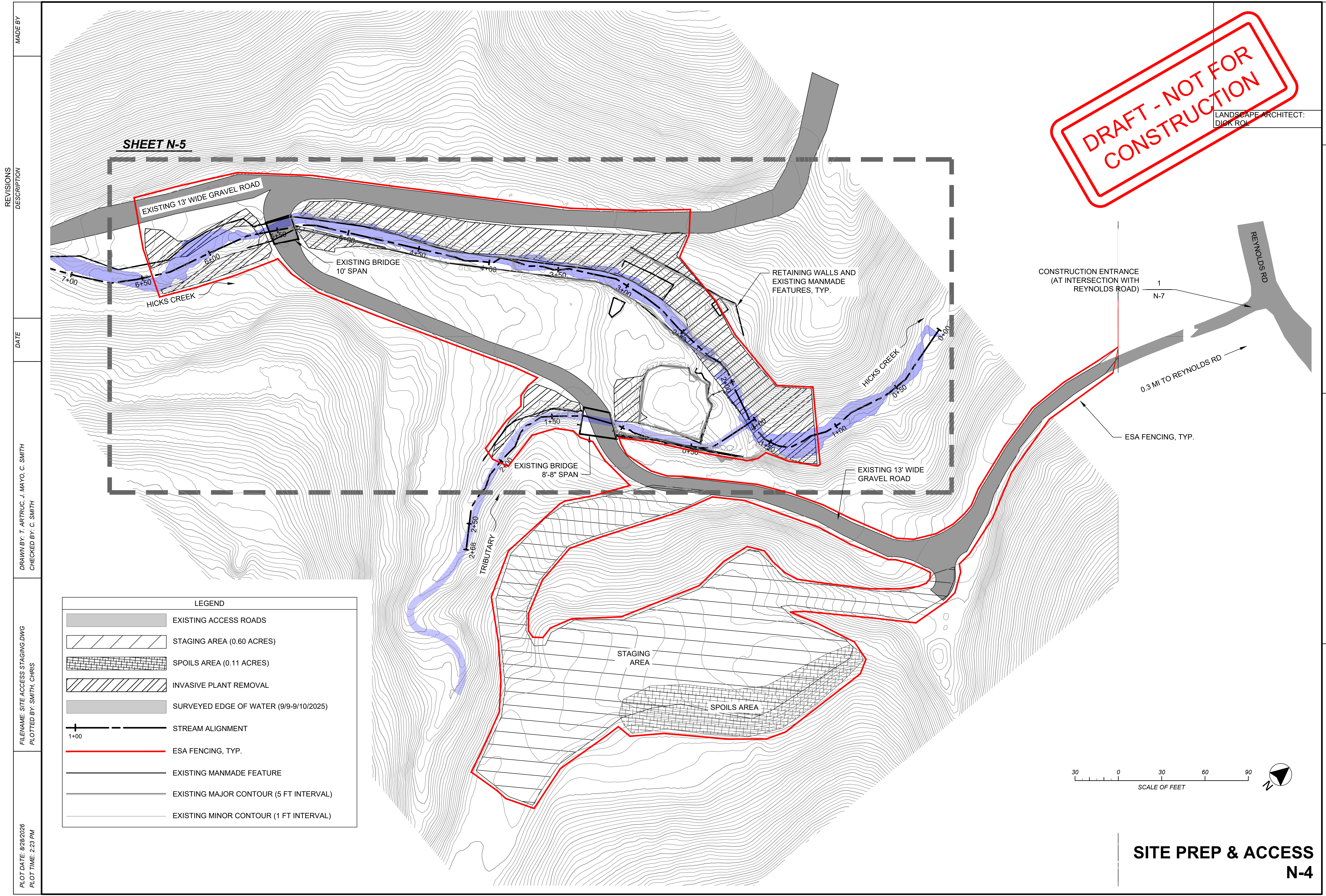
ABBREVIATION	FULL NAME
AC	ACRES
APPROX	APPROXIMATE
BMPs	BEST MANAGEMENT PRACTICES
CL	CENTERLINE
CY	CUBIC YARDS
DIMS	DIMENSIONS
EA	EACH
EG	EXISTING GRADE
ELEV	ELEVATION
ESA	ENVIRONMENTALLY SENSITIVE AREA
FT	FEET
GB	GRADE BREAK
LB	LEFT BANK- LOOKING DOWNSTREAM
LF	LINEAR FEET
LS	LUMP SUM
MIN	MINIMUM
NO	NUMBER
NTS	NOT TO SCALE

x

x

x

x

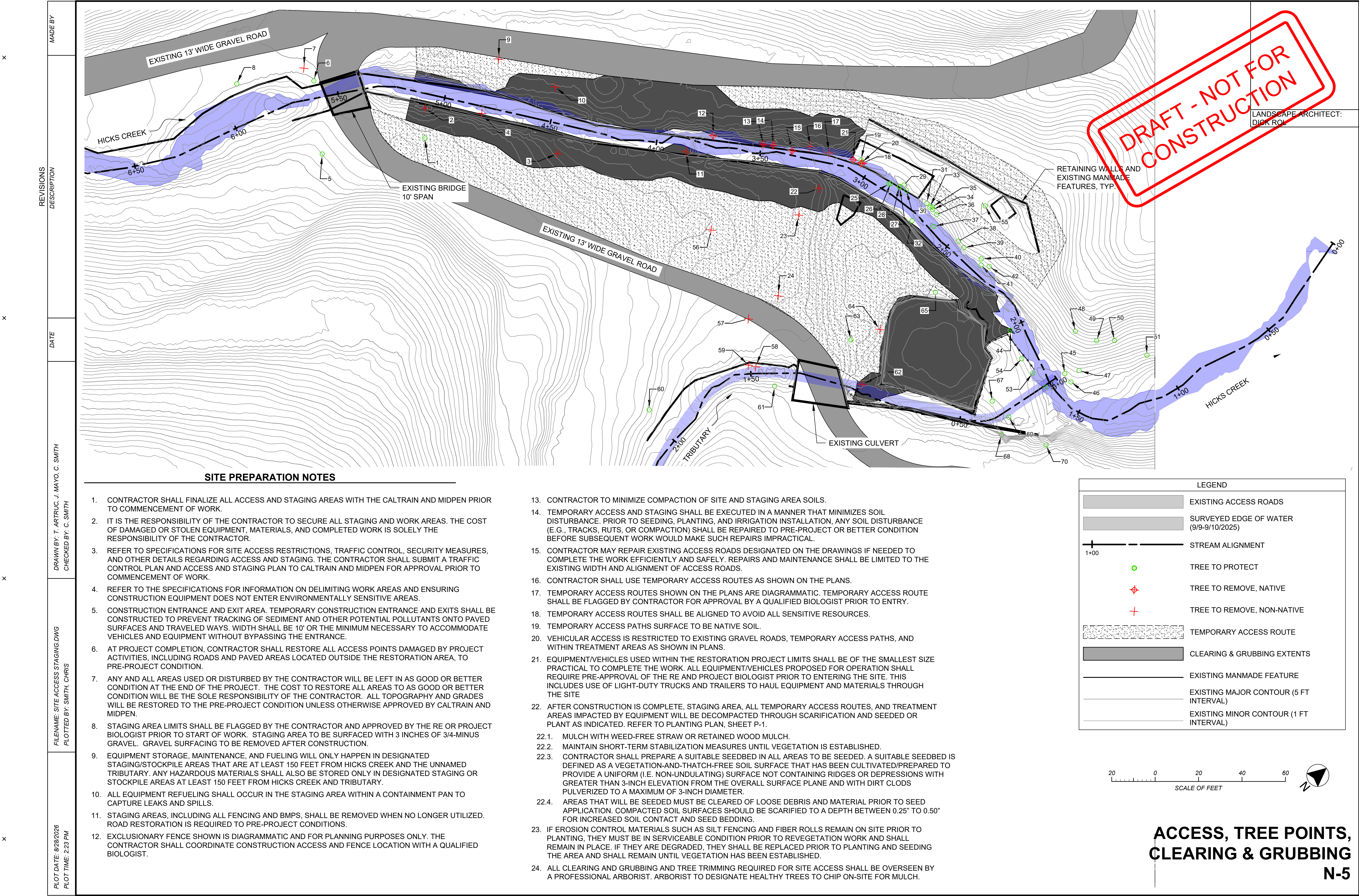


SHEET 4 OF 22

HICKS CREEK MITIGATION PLAN AND DESIGN
SOLICITATION

MIDPENINSULA REGIONAL OPEN
SPACE DISTRICT
HICKS CREEK OFF-SITE MITIGATION PROJECT





DENSITY ORANGE
YLENE SAFETY FENCE

72" T-POST DRIVEN
BELOW GRADE

ZIP TIES TO SECURE
FENCE TO POST

GRADE

DRAFT - NOT FOR
CONSTRUCTION

LANDSCAPE ARCHITECT
DICK ROE

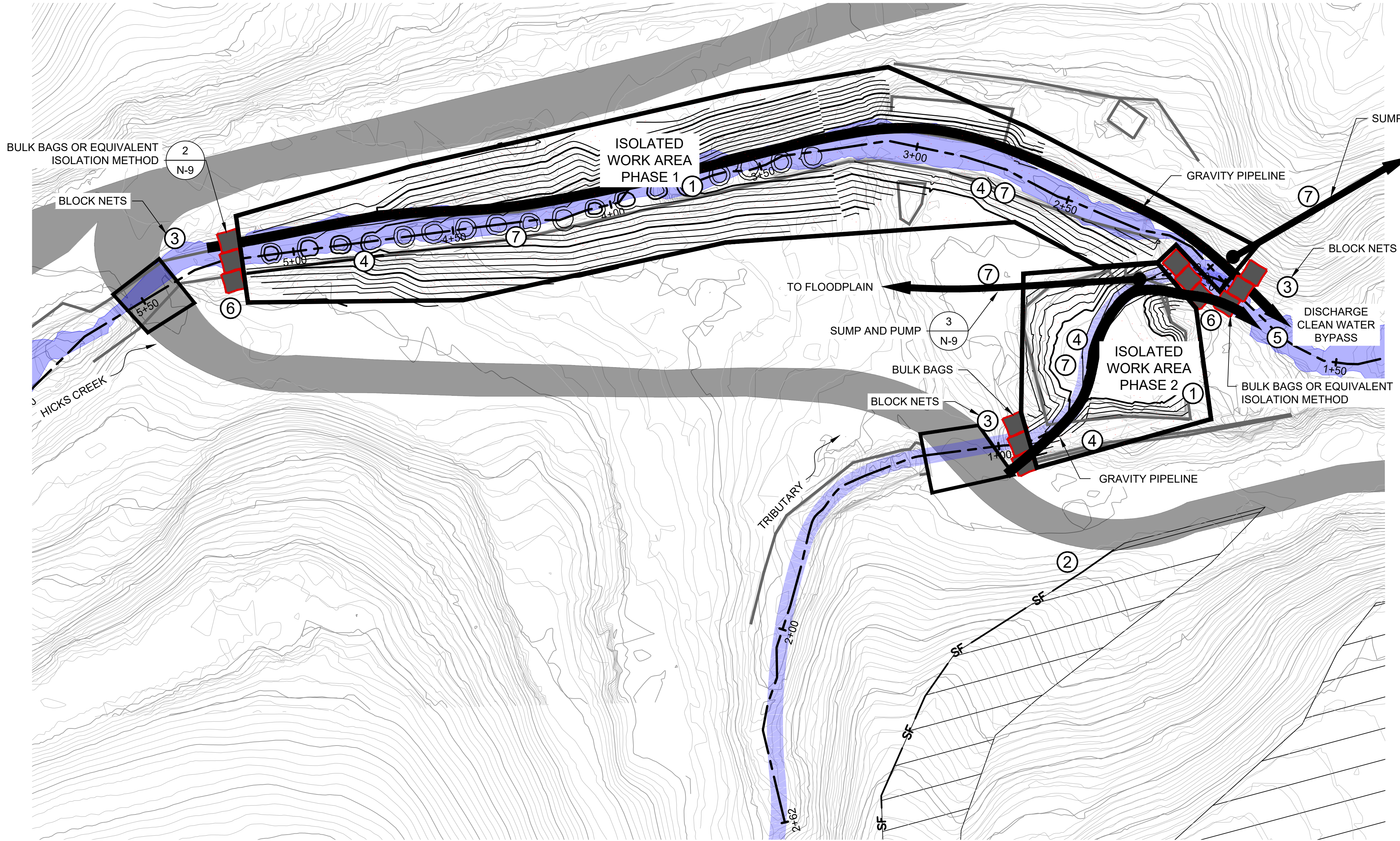
x

x

x

x

REVISIONS	DESCRIPTION	DATE	DRAWN BY: T. ARTRUC, J. MAYO, C. SMITH CHECKED BY: C. SMITH, D. ROL	FILENAME: WORK ISOLATION.DWG PLOTTED BY: SMITH, CHRIS	PLOT DATE: 9/28/2026 PLOT TIME: 2:23 PM	MADE BY



DRAFT - NOT FOR CONSTRUCTION



LEGEND	
	EXISTING ACCESS ROADS
	SURVEYED EDGE OF WATER (9/9-9/10/2025)
	STREAM ALIGNMENT
	EXISTING MANMADE FEATURE
	DESIGN MAJOR CONTOUR (5 FT INTERVAL)
	DESIGN MINOR CONTOUR (1 FT INTERVAL)
	EXISTING MAJOR CONTOUR (5 FT INTERVAL)
	EXISTING MINOR CONTOUR (1 FT INTERVAL)
	PROPOSED SILT FENCE

CONSTRUCTION NOTES

1. PHASE CONSTRUCTION TO ACCOUNT FOR SITE ACCESS. CONTRACTOR TO SUBMIT CONSTRUCTION PHASING AS PART OF WORK AREA ISOLATION PLAN SUBMITTAL.
2. INSTALL SILT FENCE DOWN SLOPE OF STAGING AREA AND ANY AREAS TO BE DISTURBED DURING CONSTRUCTION ACTIVITIES THAT ARE NOT ISOLATED FROM FLOWING WATER PER DETAIL 1/N-9.
3. INSTALL FISH BLOCK NETS UPSTREAM AND DOWNSTREAM OF ISOLATED WORK AREA. BLOCK NETS TO REMAIN INSTALLED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. CONTRACTOR WILL PROVIDE FISH BLOCK NET DETAILS IN THEIR SUBMITTAL.
4. CONDUCT FISH SALVAGE WITHIN THE CONFINES OF INSTALLED BLOCK NETS. SEE FISH SALVAGE NOTES THIS SHEET.
5. COFFER AND SEAL WORK AREA AND ISOLATE ACTIVE FLOW IN BYPASS PIPE. ROUTE CLEAN WATER DOWNSTREAM OF WORK AREA. THE CONTRACTOR SHALL FOR PROVIDE FOR A BYPASS PIPE THAT CAN HOLD TWICE THE ANTICIPATED WORK WINDOW FLOW.
6. INSTALL BULK BAG COFFER DAM PER DETAIL 2/N-9.
7. DE-WATER WORK AREA BETWEEN COFFER DAMS USING TRASH PUMP AND SUMP TO REMOVE SEEPATE PER DETAIL 3/N-9. WATER TO BE PUMPED TO ADJACENT FLOODPLAIN. THIS DEWATERING ACTIVITY IS SPECIFIC TO SEEPAGE IN ISOLATED AREA AND DOES NOT DIVERT STREAMFLOW.

WORK AREA ISOLATION

1. WORK AREA ISOLATION AND FISH SALVAGE MUST BE COMPLETED PRIOR TO IN-WATER WORK.
2. WORK ISOLATION DETAILS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY. CALTRAIN SHALL PROVIDE A DEWATERING AND WORK AREA ISOLATION (STREAM BYPASS) PLAN THAT LIMITS DEWATERED STREAM LENGTH FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION. ANTICIPATED FLOWS DURING CONSTRUCTION ARE LESS THAN 0.2 CFS FOR HICKS TRIBUTARY AND LESS THAN 0.5 CFS FOR HICKS CREEK.
3. THE PREFERRED WORK AREA ISOLATION TECHNIQUE SHALL INCORPORATE GRAVITY DEWATERING TECHNIQUES AS MUCH AS POSSIBLE. PREFERABLY A FORM OF COFFER DAM AND BY-PASS PIPE. DISSIPATE FLOW ENERGY AT OUTLET TO PROVIDE SAFE DOWNSTREAM REENTRY FOR FISH, PREFERABLY INTO POOL HABITAT WITH COVER.
4. STATIONARY POWER EQUIPMENT, SUCH AS GENERATORS, WITHIN 150-FEET OF THE WATER SHALL BE DIAPERED TO PREVENT LEAKS.
5. ALL POWER EQUIPMENT WITHIN 150-FEET OF THE WATER SHALL BE INSPECTED DAILY FOR FLUID LEAKS AND REPAIRED, PRIOR TO USE WITHIN 150-FEET, IF A LEAK IS DETECTED. THE CONTRACTOR MUST KEEP DAILY INSPECTION REPORTS IN A DIARY.
6. PUMPS USED FOR DEWATERING SHALL HAVE INTAKE SCREENS THAT MEET THE MOST CURRENT VERSION OF NMFS' FISH SCREEN CRITERIA OR BE OPERATED IN AN AREA WHERE FISH ARE NOT ABLE TO ENTER.
7. IF A WATER BODY IS TO BE TEMPORARILY DEWATERED BY PUMPING, INTAKES WILL BE COMPLETELY SCREENED CONSISTENT WITH NATIONAL MARINE FISHERIES SERVICE (2022) AND CDFW (2000) SCREENING GUIDELINES, OR LATEST UPDATES TO THOSE GUIDELINES. THE INTAKE WILL BE PLACED IN A PERFORATED BUCKET OR OTHER METHOD TO ATTENUATE SUCTION TO PREVENT SPECIAL-STATUS AMPHIBIANS FROM ENTERING THE PUMP SYSTEM.
8. AT COMPLETION OF PROJECT, RE-WATER THE CONSTRUCTION SITE SLOWLY TO PREVENT LOSS OF SURFACE FLOW AND TO PREVENT RELEASE OF SUSPENDED SEDIMENT.

GENERAL FISH SALVAGE NOTES

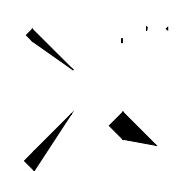
CALTRAIN TO PROVIDE WORK AREA ISOLATION AND FISH SALVAGE PLANS. CONTRACTOR TO COORDINATE WITH CALTRAIN AND MIDPEN TO REMOVE EXISTING FISH AT THE PROJECT SITE PRIOR TO ISOLATING THE AREA. CONTRACTOR TO PROVIDE WORK AREA ISOLATION. FISH SALVAGE TO BE PERFORMED BY CALTRAIN. REMOVE FISH FROM THE ISOLATED IN-WATER WORK SITE. A QUALIFIED FISH BIOLOGIST PROVIDED BY CALTRAIN WILL DETERMINE THE METHODS FOR FISH REMOVAL WITHIN THE ISOLATED IN-WATER WORK SITE PER PERMIT REQUIREMENTS.

WORK ISOLATION
N-8

SHEET 8 OF 22

HICKS CREEK MITIGATION PLAN AND DESIGN
SOLICITATION

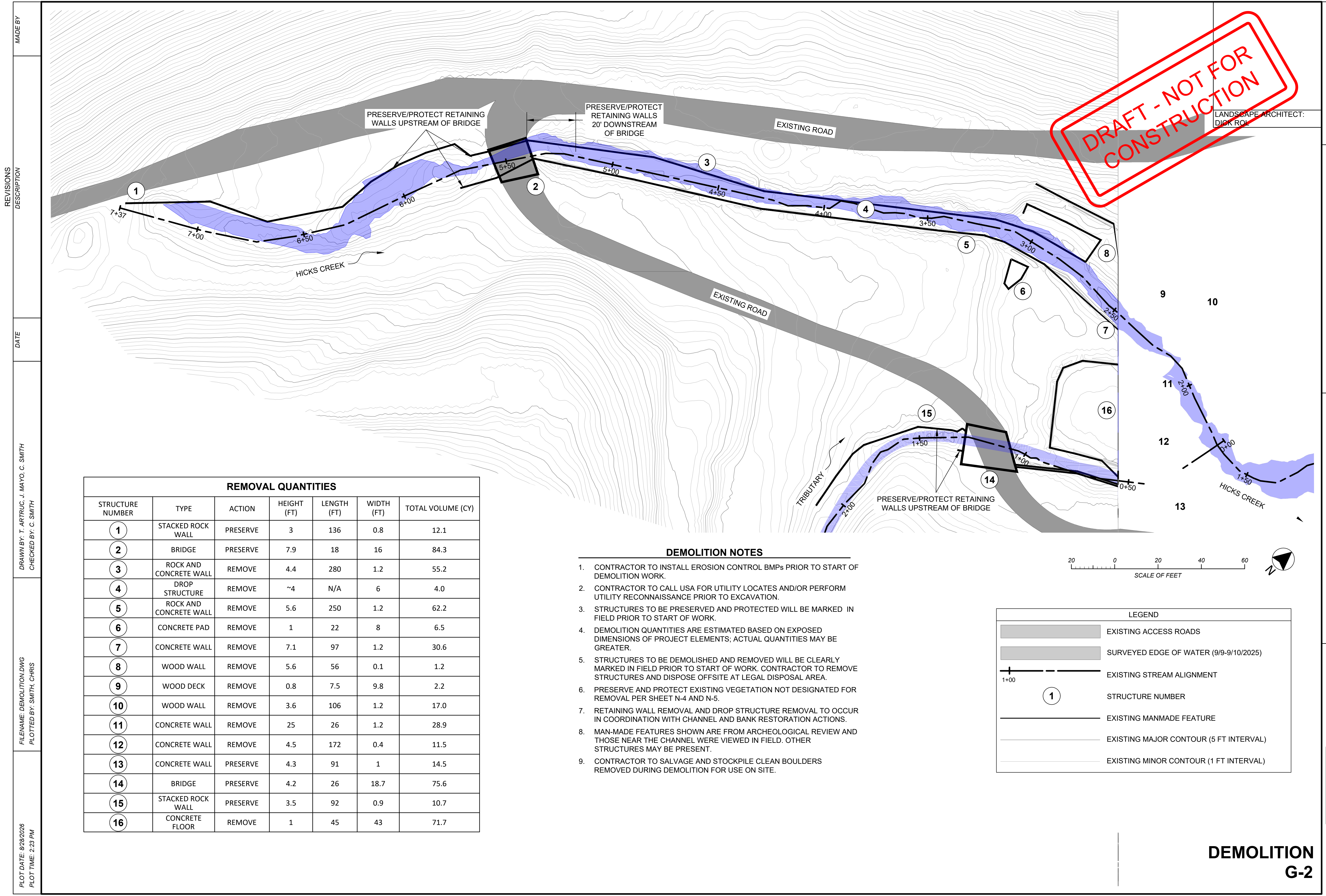
MIDPENINSULA REGIONAL OPEN
SPACE DISTRICT
HICKS CREEK OFF-SITE MITIGATION PROJECT



PLOT DATE: 8/28/2026
PLOT TIME: 2:23 PM

BMP DETAILS

N-9

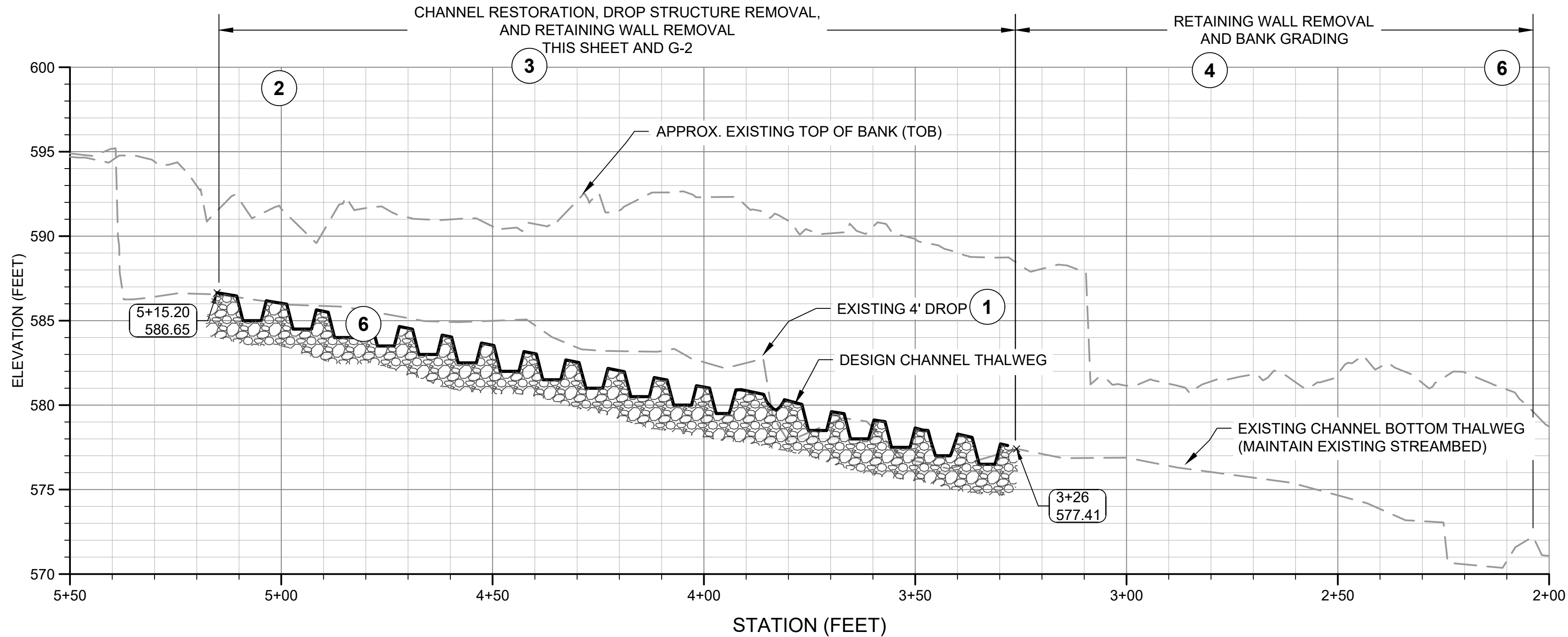


REMOVAL QUANTITIES						
STRUCTURE NUMBER	TYPE	ACTION	HEIGHT (FT)	LENGTH (FT)	WIDTH (FT)	TOTAL VOLUME (CY)
1	STACKED ROCK WALL	PRESERVE	3	136	0.8	12.1
2	BRIDGE	PRESERVE	7.9	18	16	84.3
3	ROCK AND CONCRETE WALL	REMOVE	4.4	280	1.2	55.2
4	DROP STRUCTURE	REMOVE	~4	N/A	6	4.0
5	ROCK AND CONCRETE WALL	REMOVE	5.6	250	1.2	62.2
6	CONCRETE PAD	REMOVE	1	22	8	6.5
7	CONCRETE WALL	REMOVE	7.1	97	1.2	30.6
8	WOOD WALL	REMOVE	5.6	56	0.1	1.2
9	WOOD DECK	REMOVE	0.8	7.5	9.8	2.2
10	WOOD WALL	REMOVE	3.6	106	1.2	17.0
11	CONCRETE WALL	REMOVE	25	26	1.2	28.9
12	CONCRETE WALL	REMOVE	4.5	172	0.4	11.5
13	CONCRETE WALL	PRESERVE	4.3	91	1	14.5
14	BRIDGE	PRESERVE	4.2	26	18.7	75.6
15	STACKED ROCK WALL	PRESERVE	3.5	92	0.9	10.7
16	CONCRETE FLOOR	REMOVE	1	45	43	71.7

- DEMOLITION NOTES**
- CONTRACTOR TO INSTALL EROSION CONTROL BMPs PRIOR TO START OF DEMOLITION WORK.
 - CONTRACTOR TO CALL USA FOR UTILITY LOCATES AND/OR PERFORM UTILITY RECONNAISSANCE PRIOR TO EXCAVATION.
 - STRUCTURES TO BE PRESERVED AND PROTECTED WILL BE MARKED IN FIELD PRIOR TO START OF WORK.
 - DEMOLITION QUANTITIES ARE ESTIMATED BASED ON EXPOSED DIMENSIONS OF PROJECT ELEMENTS; ACTUAL QUANTITIES MAY BE GREATER.
 - STRUCTURES TO BE DEMOLISHED AND REMOVED WILL BE CLEARLY MARKED IN FIELD PRIOR TO START OF WORK. CONTRACTOR TO REMOVE STRUCTURES AND DISPOSE OFFSITE AT LEGAL DISPOSAL AREA.
 - PRESERVE AND PROTECT EXISTING VEGETATION NOT DESIGNATED FOR REMOVAL PER SHEET N-4 AND N-5.
 - RETAINING WALL REMOVAL AND DROP STRUCTURE REMOVAL TO OCCUR IN COORDINATION WITH CHANNEL AND BANK RESTORATION ACTIONS.
 - MAN-MADE FEATURES SHOWN ARE FROM ARCHEOLOGICAL REVIEW AND THOSE NEAR THE CHANNEL WERE VIEWED IN FIELD. OTHER STRUCTURES MAY BE PRESENT.
 - CONTRACTOR TO SALVAGE AND STOCKPILE CLEAN BOULDERS REMOVED DURING DEMOLITION FOR USE ON SITE.

LEGEND

	OHW	ORDINARY HIGH WATER
		EXISTING MAJOR CONTOUR (5 FT INTERVAL)
		EXISTING MINOR CONTOUR (1 FT INTERVAL)
		DESIGN MAJOR CONTOUR (5 FT INTERVAL)
		DESIGN MINOR CONTOUR (1 FT INTERVAL)
		STREAM ALIGNMENT
	CUT	GRADING EXTENT
		EXISTING ACCESS ROAD



**HICKS CREEK GRADING &
CHANNEL CONSTRUCTION**

- 1 COMPLETE DEMOLITION ACTIVITIES ON SHEET G-2 PRIOR TO GRADING.
- 2 CONSTRUCT CHANNEL WITH WOOD TOE AND LOWER BANK, STA 4+75 TO 5+50, THIS SHEET AND DETAIL ON SHEET G-4, BANK RESTORATION DETAIL A.
- 3 CONSTRUCT CHANNEL WITH BANK RESTORATION STA 3+10 TO 4+75, THIS SHEET AND DETAIL ON SHEET G-4, BANK RESTORATION DETAIL B.
- 4 PERFORM BANK GRADING AND PLANTING RIGHT BANK, STA 2+00 TO 3+10, LEFT BANK 2+65 TO 3+10, THIS SHEET AND BANK RESTORATION DETAIL C ON SHEET G-5..
- 5 SLOPE BANKLINES TO MATCH AT HICKS TRIBUTARY JUNCTION, SEE SHEET G-9 AND G-5.
- 6 CONSTRUCT STEP FEATURES, THIS SHEET AND DETAIL ON SHEET G-4.

PLOT DATE: 8/28/2026
PLOT TIME: 2:23 PM

PLOT DATE: 8/28/2026
PLOT TIME: 2:23 PM

GENERAL NOTES

1. CHANNEL LAYOUT TO BE PROVIDED BY CALTRAIN AND MIDPEN. THE CONSTRUCTION SITE SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER OR EXCESSIVELY MUDDY CONDITIONS AS NEEDED FOR PROPER EXECUTION OF THE CONSTRUCTION WORK. SPECIAL ATTENTION SHALL BE TAKEN TO OPERATE EQUIPMENT IN A SAFE AND EFFICIENT MANNER WITH MINIMAL DISTURBANCE OUTSIDE OF GRADING LIMITS UNLESS OTHERWISE SPECIFIED. UTMOST CARE SHALL BE EMPLOYED TO ENSURE EXCAVATION AND CONSTRUCTION MATERIALS DO NOT ENTER STREAM OR INCREASE AMBIENT TURBIDITY LEVELS.
2. ROCK MATERIALS SHALL BE OF THE GRADATION SHOWN ON THE DRAWINGS. STREAMBED MIX SHALL BE SUBANGULAR TO ROUNDED WHERE INDIVIDUAL ROCK FRAGMENTS ARE FREE FROM SHARP ANGLES AND DEFECTS. ROCK SHALL BE FROM AN APPROVED SOURCE, AND SHALL BE SOUND, DENSE (SG=2.65) AND FREE FROM CRACKS, SEAMS OR OTHER DEFECTS CONDUCTIVE TO ACCELERATED WEATHERING. ROCK MATERIALS SHALL BE WASHED, "CLEAN", AND OTHERWISE FREE OF FINES PRIOR TO PLACEMENT SO THAT PLACEMENT ENSURES ROCK-TO-ROCK CONTACT.
3. STREAMBED MIX SEALING MATERIAL IS A RIVER SAND AND SMALL GRAVEL MIXTURE PLACED INTO THE STREAMBED MIX SEPARATELY. THE SEALING MATERIAL IS PLACED AFTER STREAMBED MIX PLACEMENT AND IS "WASHER" USING WATER. SEALING MATERIAL PLACEMENT AND WASHING TO CONTINUE UNTIL STREAMBED MIX NO LONGER ACCEPTS SEALING MATERIAL AND WASH WATER FLOWS OVER THE SURFACE OF THE STREAMBED.
4. COMPACTION SHALL BE PERFORMED BY SUCCESSIVE PASSES OF CONSTRUCTION EQUIPMENT TO A CONDITION WHERE DIFFERENTIAL SETTLEMENT OF THE LAYER IS MINIMIZED AND THE PLACED STREAMBED MIX MATERIAL IS CONSOLIDATED. STREAMBED MIX SEALING MATERIAL SHALL BE SPREAD ACROSS AND WORKED INTO THE PLACED STREAMBED MIX. PRESSURE WASHING SHALL BE PERFORMED TO DRIVE STREAMBED MIX PACK MATERIAL INTO STREAMBED VOIDS. SUCCESSFUL WASHING WILL BE DETERMINED BY MINIMIZATION OF VOIDS WITHIN PLACED STREAMBED MIX SUCH THAT PONDING OCCURS ON TOP OF LIFT WITH LITTLE TO NO PERCOLATION LOSSES OCCURRING THROUGH CONSTRUCTED STREAMBED. LAYER SHALL BE WORKED WITH EQUIPMENT TO ENSURE MINIMIZATION OF VOIDS AND TO PROVIDE COMPACTION.
5. CERTIFICATION OF CONSTRUCTED CHANNEL TO BE PROVIDED BY THE PROJECT ENGINEER PRIOR TO HABITAT BOULDER ELEMENT PLACEMENT. HABITAT BOULDER ELEMENT PLACEMENT SHALL BE PERFORMED AFTER STREAMBED MIX CONSTRUCTION IS COMPLETE.

CONSTRUCTION NOTES

1. OVEREXCAVATE STREAMBED TO COMPENSATE FOR STREAMBED MIX MATERIAL AND RIB BOULDERS. EXCAVATED FOUNDATION TO BE CLEAR OF ORGANIC DEBRIS, DEWATERED, AND UNIFORM TO FACILITATE STREAMBED MIX PLACEMENT.
2. BOULDERS ARE TO BE PLACED WITHIN THE STREAMBED AT SPECIFIED LOCATIONS AS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE PROJECT ENGINEER. EMBEDMENT OF CAP BOULDER SHALL BE 50% - 75% OF EFFECTIVE BOULDER DIAMETER. GAPS BETWEEN ADJACENT BOULDERS SHALL BE MINIMIZED.
3. THE STREAMBED MIX SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN A MANNER THAT PREVENTS DISPLACEMENT OF THE UNDERLYING MATERIALS. STREAMBED MIX ROCK SHALL BE PLACED IN A MANNER THAT WILL ENSURE THAT THE ROCK IS REASONABLY HOMOGENEOUS WITH LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT WITH ONE ANOTHER WITH GAPS LESS THAN TWO INCHES. SMALLER COBBLE (6"-MINUS) IN ADDITION TO THE STREAMBED MIX ROCK IS TO BE DEVELOPED ONSITE AND/OR IMPORTED AND GRADED TO FILL THE VOIDS BETWEEN THE LARGER ROCKS. INDIVIDUAL LAYERS SHALL NOT BE MORE THAN 12 INCHES BEFORE COMPACTION AND SEALING.
4. HABITAT BOULDERS ARE TO BE PLACED IN RANDOM PATTERNS THAT REPLICATE NATURAL STREAM CONDITIONS AND AS DIRECTED BY THE PROJECT ENGINEER. EMBEDMENT SHALL BE A MINIMUM OF 50% OF EFFECTIVE BOULDER DIAMETER. DISTRIBUTION EXTENT 30% OF CHANNEL SURFACE.

HICKS CREEK STREAMBED MIX GRADATION

PERCENT PASSING BY WEIGHT	AVERAGE PARTICLE SIZE (INCHES)
100	36
85	24
50	12
15	3

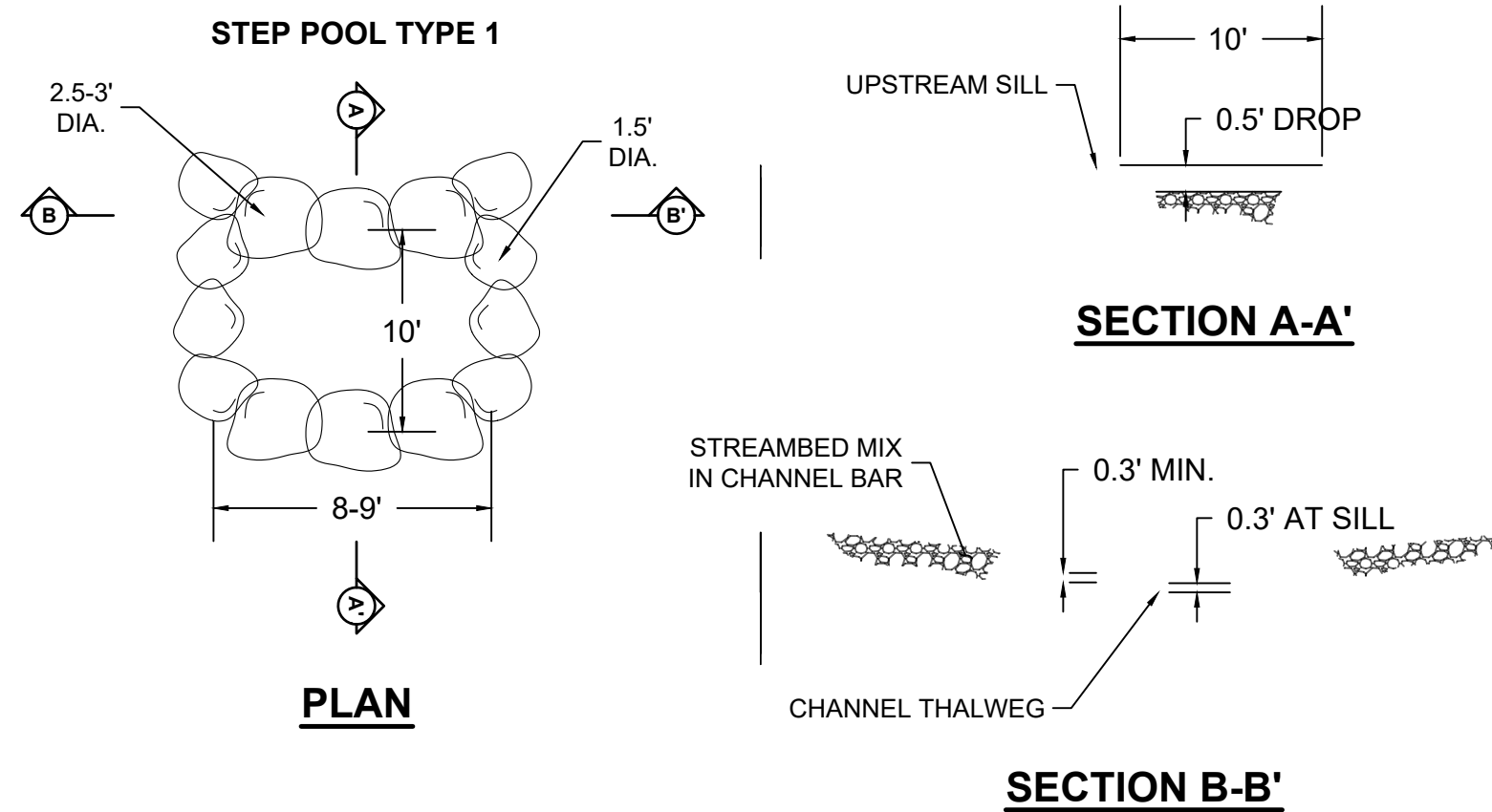
AVG. STREAMBED THICKNESS $\approx$ 36 IN
APPROX. VOLUME = 250 CY

HICKS CREEK STREAMBED MIX SEALING SAND AND GRAVELS

MATERIAL GRADATION	EST. VOL.
GRAVELS - 1" TO #10	60
SAND - #4 TO #200	60
EST SEALING TOT 120 CY	

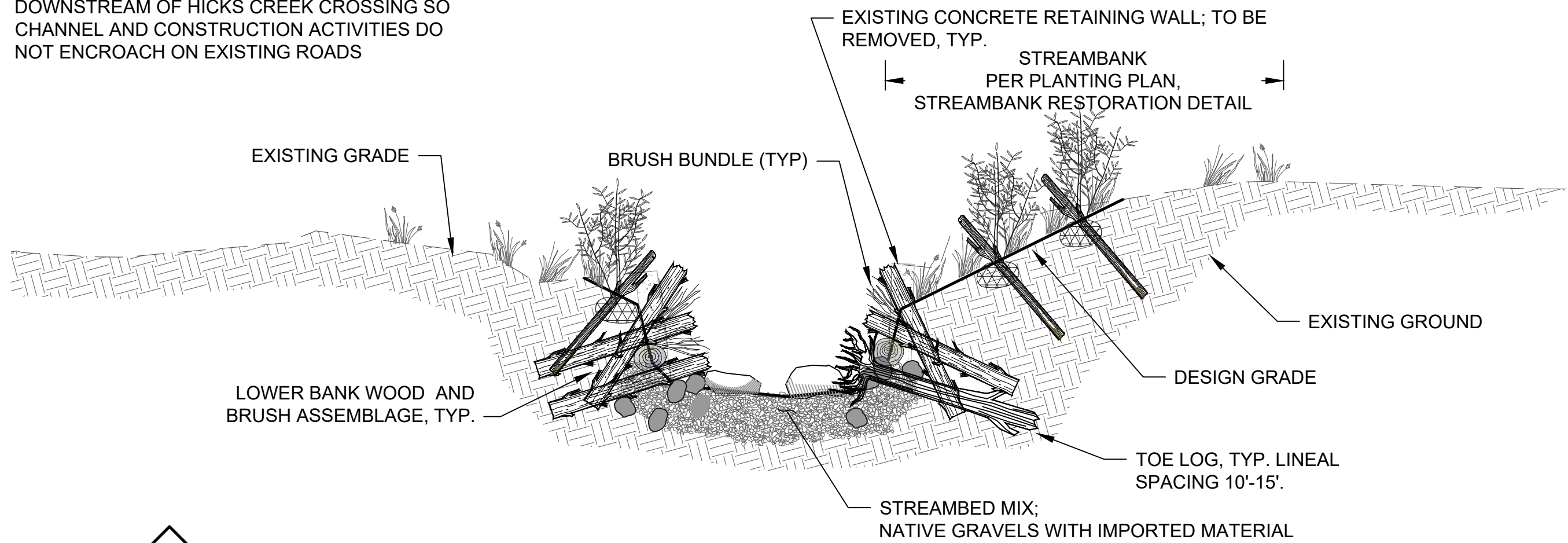
BOULDER SCHEDULE

BOULDER ELEMENT SIZE (IN.)	MIN. COUNT
30 - 36"	45
24 - 30"	45
MIN. EST. BOULDERS - 90	



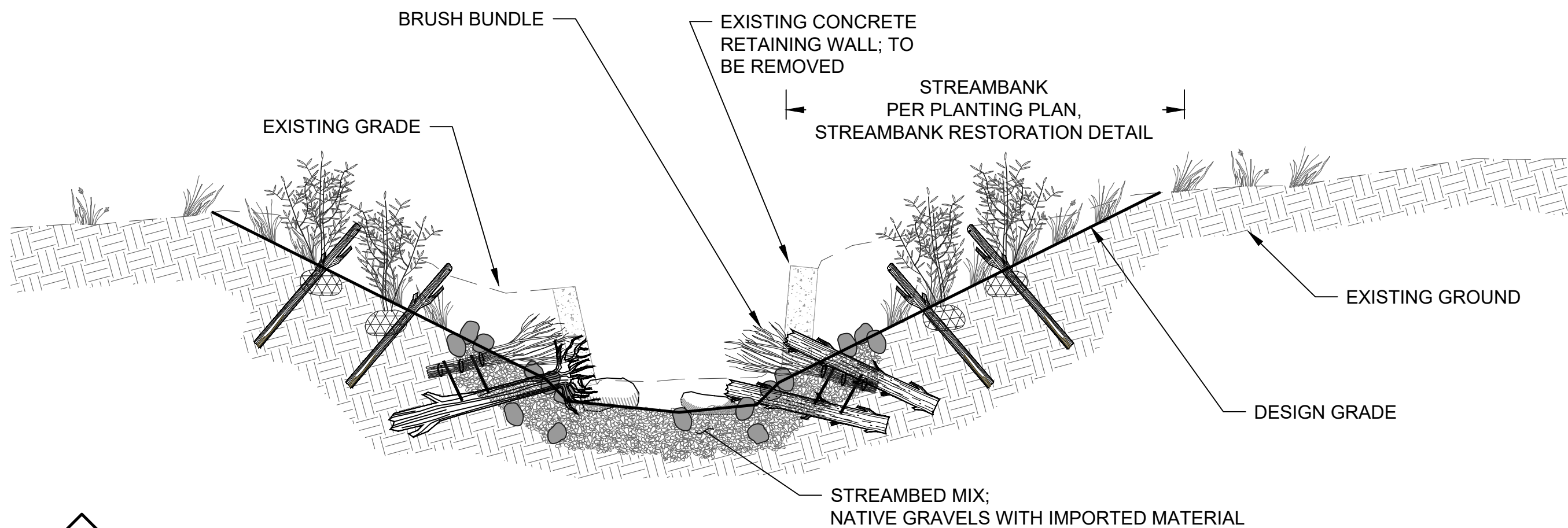
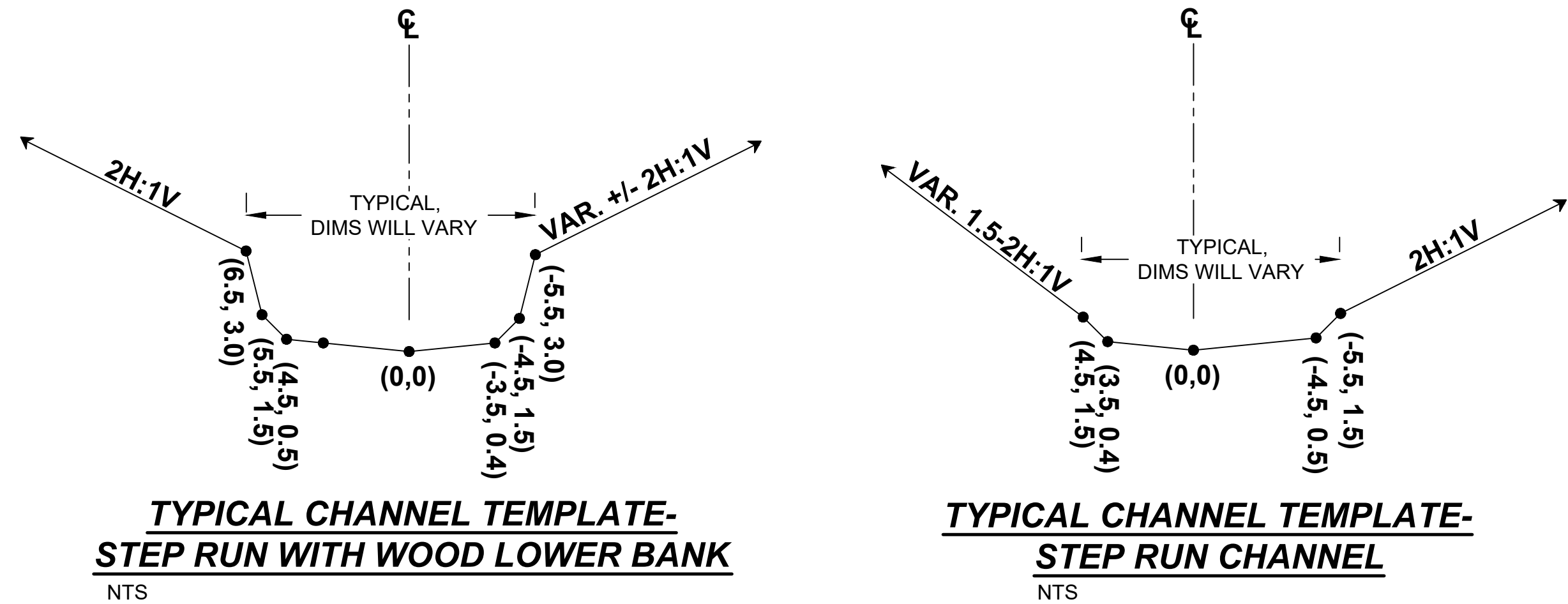
HICKS CREEK TYPICAL SECTIONS G-4

*NOTE: WOOD TOE SECTION PROPOSED IMMEDIATELY
DOWNSTREAM OF HICKS CREEK CROSSING SO
CHANNEL AND CONSTRUCTION ACTIVITIES DO
NOT ENCROACH ON EXISTING ROADS

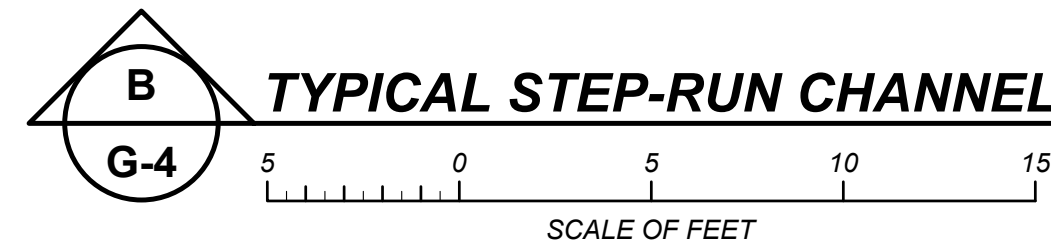


NATIVE GRAVELS WITH IMPORTED MATERIAL

 **TYPICAL CHANNEL CROSS SECTION WITH WOOD LOWER BANK STN 4+75 - 5+15**



TYPICAL STEP-RUN CHANNEL SECTION STN 3+10 - 4+75



PLOT DATE: 8/28/2026
PLOT TIME: 2:24 PM



CONSTRUCTION NOTES

- ① EXCAVATE THE FOOTPRINT OF WORK AREA TO LINES AND GRADES, THIS SHEET, AND AS STAKED IN FIELD. REMOVE ORGANICS, LOOSE OR FAILED SOILS, TRASH, DEBRIS, OR OTHERWISE UNSUITABLE MATERIALS. REMOVE RETAINING WALL PER SHEET G-2. DISPOSE OF ALL EXCAVATED MATERIAL IN DESIGNATED SPOILS AREA AND HAUL AND DISPOSE CONCRETE AT A LEGAL DISPOSAL AREA. THE EXPOSED SUBGRADE MUST BE OBSERVED BY THE PROJECT ENGINEER PRIOR TO PLACING FILL MATERIALS.
- ② TOE ROCK MIX TO BE PLACED, KEYED-IN, AND COMPACTED SO THAT ALL SIZES OF MATERIAL ARE PLACED IN THEIR PROPER PROPORTION AND DIMENSIONS, THIS SHEET AND STAKED IN FIELD.
- ③ PLACE TOE LOGS IN STREAMBED MIX AT VARIABLE ANGLES AND VARIABLE ELEVATIONS OVER FACE OF STREAMBED SURFACE. MEMBERS TO BE PLACED WITH APPROXIMATELY $\frac{2}{3}$ OF LOG LENGTH EMBEDDED, 5' SPACING, AND EXTEND 2-4' INTO CHANNEL.
- ④ PLACE BRUSH BUNDLES IN EXCAVATED BANK AT APPROXIMATE 3 FT LINEAL SPACING AND EXTEND 2-3 FT INTO CHANNEL. SEE DETAIL 5 ON SHEET P-2.
- ⑤ CONSTRUCT UPPER SLOPE BY EXCAVATING INTO RETAINED NATIVE SOIL, LINES AND GRADES THIS SHEET AND AS STAKED IN FIELD.
- ⑥ PLACE LOG MID-SLOPE AT VARIABLE HEIGHTS, APPROXIMATE $\frac{2}{3}$ OF LOG LENGTH EMBEDDED, 3 FT LINEAL SPACING, WITH 3-4 FT PROJECTION INTO CHANNEL.
- ⑦ PLACE UPPER SLOPE WOOD AT VARIABLE ANGLES, APPROXIMATE $\frac{2}{3}$ OF LOG LENGTH EMBEDDED, 5' LINEAL SPACING, WITH 3-4 FT PROJECTION INTO CHANNEL.
- ⑧ PLANT STREAMBANK PER PLANTING PLAN, DRAWING SHEETS P-1 AND P-2.

	DIA.	LENGTH	TOT. QTY
STREAMBED MIX			
TOE ROCK MIX			80 CY
LARGE WOOD MEMBERS			
TOE LOG	18"	10'	127
BRUSH BUNDLE	18"	8-10'	212
LOG	12"	8-10'	212
UPPER SLOPE WOOD	8-12"	8-10'	127

PERCENT PASSING BY WEIGHT	AVERAGE PARTICLE SIZE (INCHES)
100	36
85	24
50	12
15	3

AVG. MATRIX THICKNESS ≈ 24 INCHES
APPROX. VOLUME = 80 CY

HICKS CREEK STREAMBANK RESTORATION G-5



HICKS CREEK SECTIONS

G-7

~~LANDSCAPE ARCHITECT:
DICK ROL~~

x

x

x

x

MADE BY

REVISIONS

DESCRIPTION

DATE

DRAWN BY: T. ARTRUC, J. MAYO, C. SMITH
CHECKED BY: C. SMITH

FILENAME: GRADING.DWG
PLOTTED BY: SMITH, CHRIS

PLOT DATE: 8/28/2026
PLOT TIME: 2:24 PM

A **TYPICAL TRIBUTARY CHANNEL SECTION**

SCALE OF FEET

B **PROTECTION OF PRESERVED WALL**

SCALE OF FEET

C **WOODY DEBRIS PLUG**

SCALE OF FEET

D **TYPICAL TRIBUTARY CHANNEL - POOL AREA**

SCALE OF FEET

TRIBUTARY STREAMBED MIX GRADATION

PERCENT PASSING BY WEIGHT	AVERAGE PARTICLE SIZE (INCHES)
100	24
85	20
50	18
15	6

AVG. MATRIX THICKNESS ≈ 24 INCHES
APPROX. VOLUME = 78 CY

SCOUR PROTECTION BOULDER SCHEDULE

BOULDER ELEMENT SIZE (IN.)	MIN. COUNT
30 - 36"	22
18 - 24"	17

MIN. EST. BOULDERS - 39

TYPICAL CHANNEL TEMPLATE - TRIBUTARY

NTS

CONSTRUCTION NOTES

- VERTICAL POSTS TO BE PLACED AND EMBEDDED AT LEAST 1/2 LENGTH, AS STAKED IN THE FIELD.
- PLACE HORIZONTAL LOGS AT VARIABLE ANGLES, ELEVATIONS, AND ORIENTATIONS BETWEEN THE VERTICAL POST LOGS IN A MANNER TO ENSURE SELF-BALLASTING.
- WEAVE BRUSH PIECES THROUGH THE STRUCTURE AT VARIABLE ANGLES, ELEVATIONS, AND ORIENTATIONS BETWEEN THE VERTICAL POSTS AND HORIZONTAL LOGS TO CREATE THE SEMI-PERMEABLE PLUG.
- EMBED WILLOW CUTTINGS THROUGHOUT FACE OF STRUCTURE, MINIMUM EMBEDMENT 50% OF LENGTH.

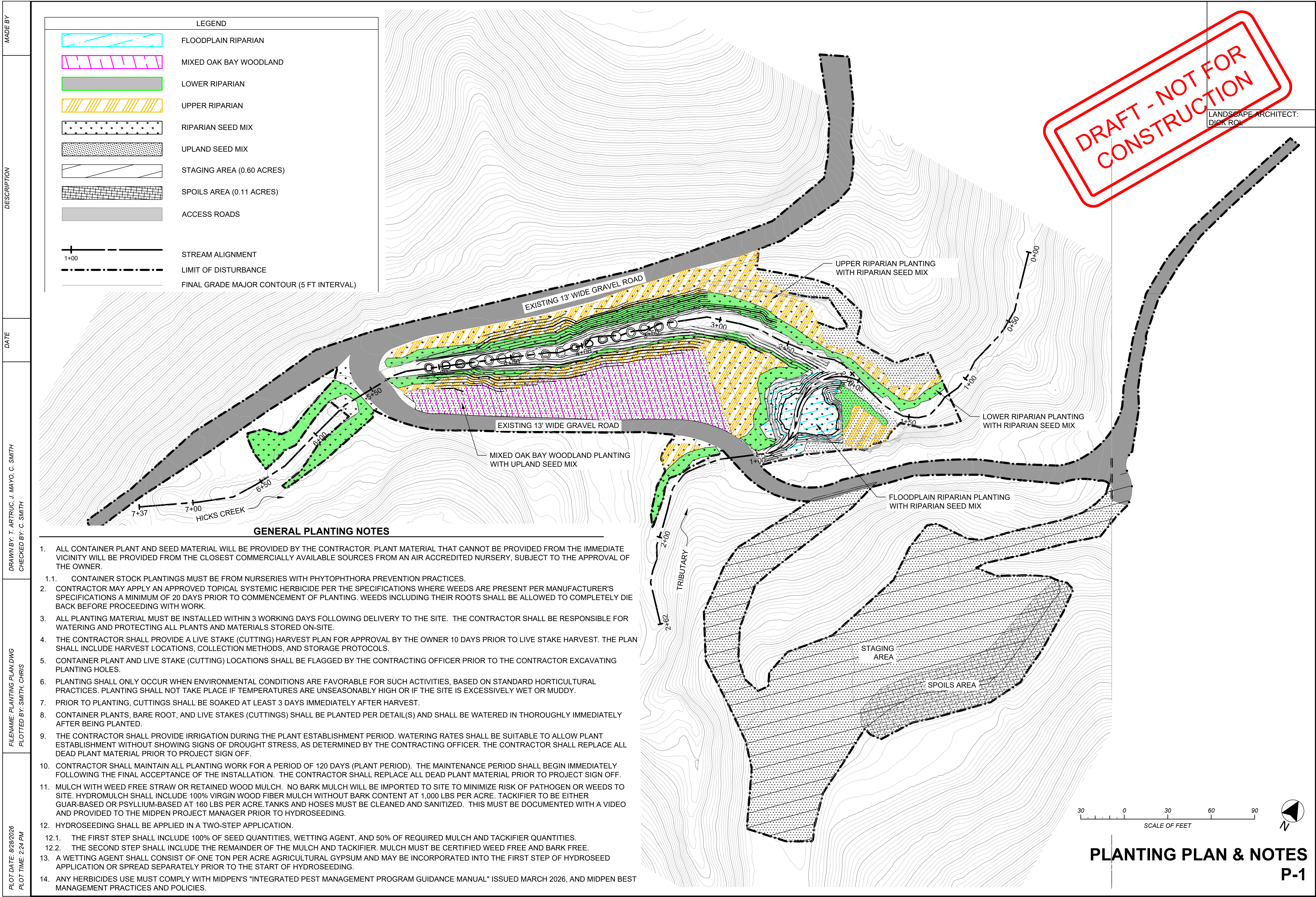
WOODY DEBRIS PLUG SCHEDULE

TYPE	LENGTH (FT)	DIAM. (IN)	MIN. COUNT
VERTICAL POST	7'	12"	5
HORIZONTAL LOG	6'	4"	15
BRUSH PIECE	2' - 4'	1" - 3"	55
WILLOW CUTTINGS	3' - 6'	1" - 2"	30

MIN. EST. WOOD PIECES - 75

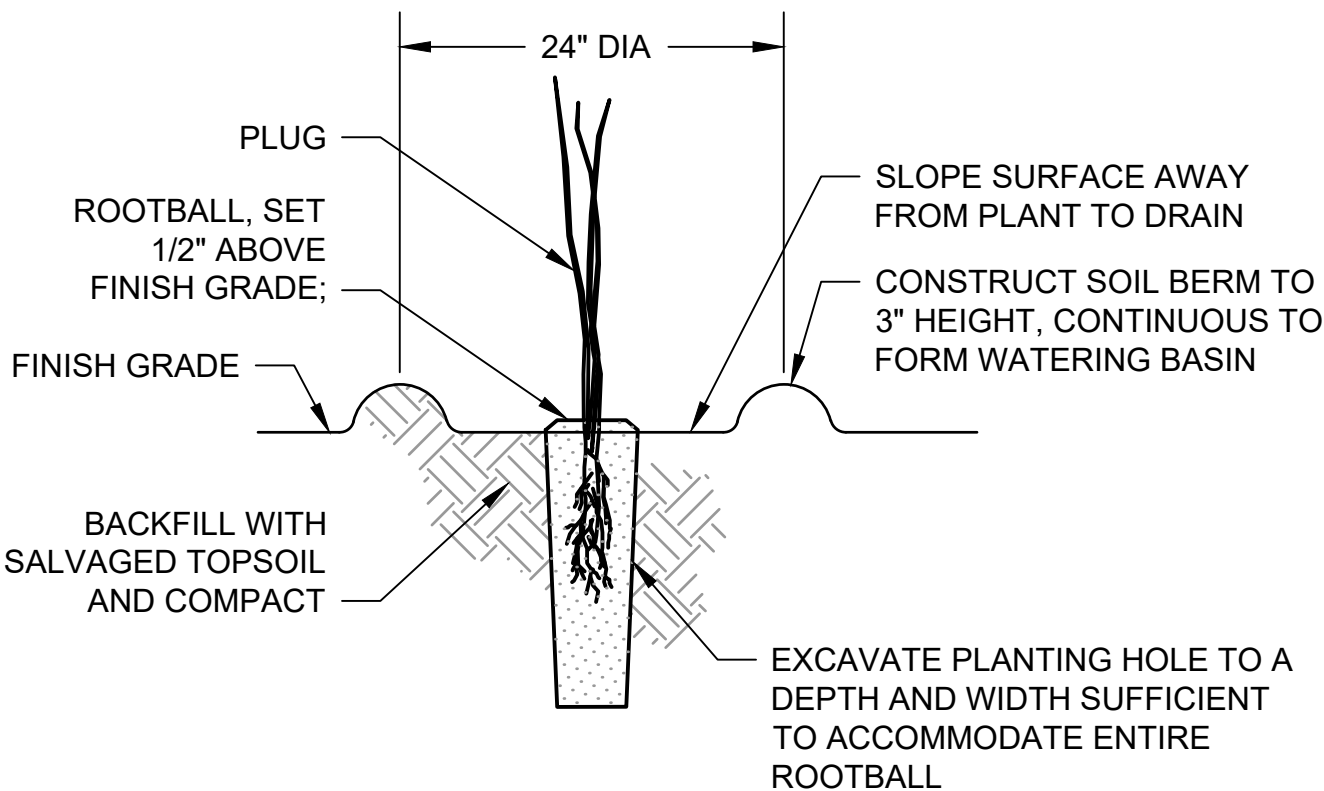
TRIBUTARY DETAILS

G-11



RIPARIAN SEED MIX				
SYMBOL	SPECIES	COMMON NAME	HYDROSEEDING RATE (LBS/PLS/ACRE)	PROJECT LBS/PLS (0.43 ACRE)
	<i>ELYMUS TRITICOIDES</i>	CREeping WILDrye	10	4.3
	<i>SYMPHYOTRICHUM CHILENSE</i>	PACIFIC ASTER	1	0.43

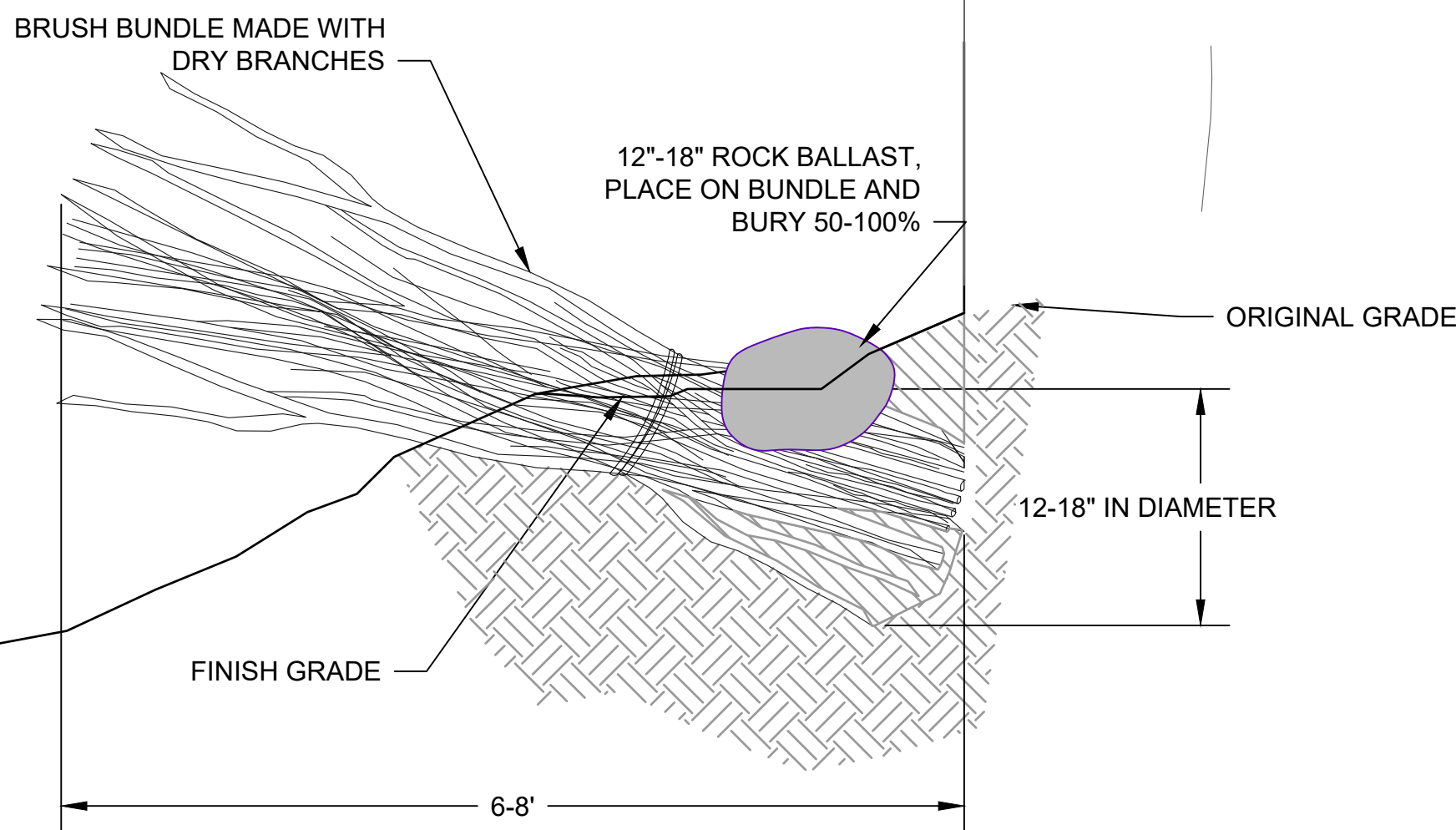
UPLAND SEED MIX				
SYMBOL	SPECIES	COMMON NAME	HYDROSEEDING RATE (LBS/PLS/ACRE)	PROJECT LBS/PLS (0.88 X ACRE)
	<i>ACHILLEA MILLEFOLIUM</i>	YARROW	0.2	0.176
	<i>ASCLEPIAS FASCICULARIS</i>	NARROWLEAF MILKWEED	2	1.76
	<i>BROMUS SITCHENSIS</i>	CALIFORNIA BROME	13	11.44
	<i>CLARKIA UNGUICULATA</i>	WOODLAND CLARKIA	0.5	0.44
	<i>ELYMUS GLAUCUS</i>	BLUE WILD RYE	7	6.16
	<i>ERIOGONUM NUDUM</i>	NAKED BUCKWHEAT	0.5	0.44
	<i>ESCHSCHOLZIA CALIFORNICA</i>	CALIFORNIA POPPY	1	0.88
	<i>LUPINUS MICROCARPUS</i>	CHICK LUPINE	5	4.4
	<i>TRIFOLIUM CILIOLATUM</i>	FOOTHILL CLOVER	2	1.76



NOTE

1. CLEAR BY HAND TOOLS A 24" DIAMETER WEED FREE ZONE AROUND EACH PLANT.

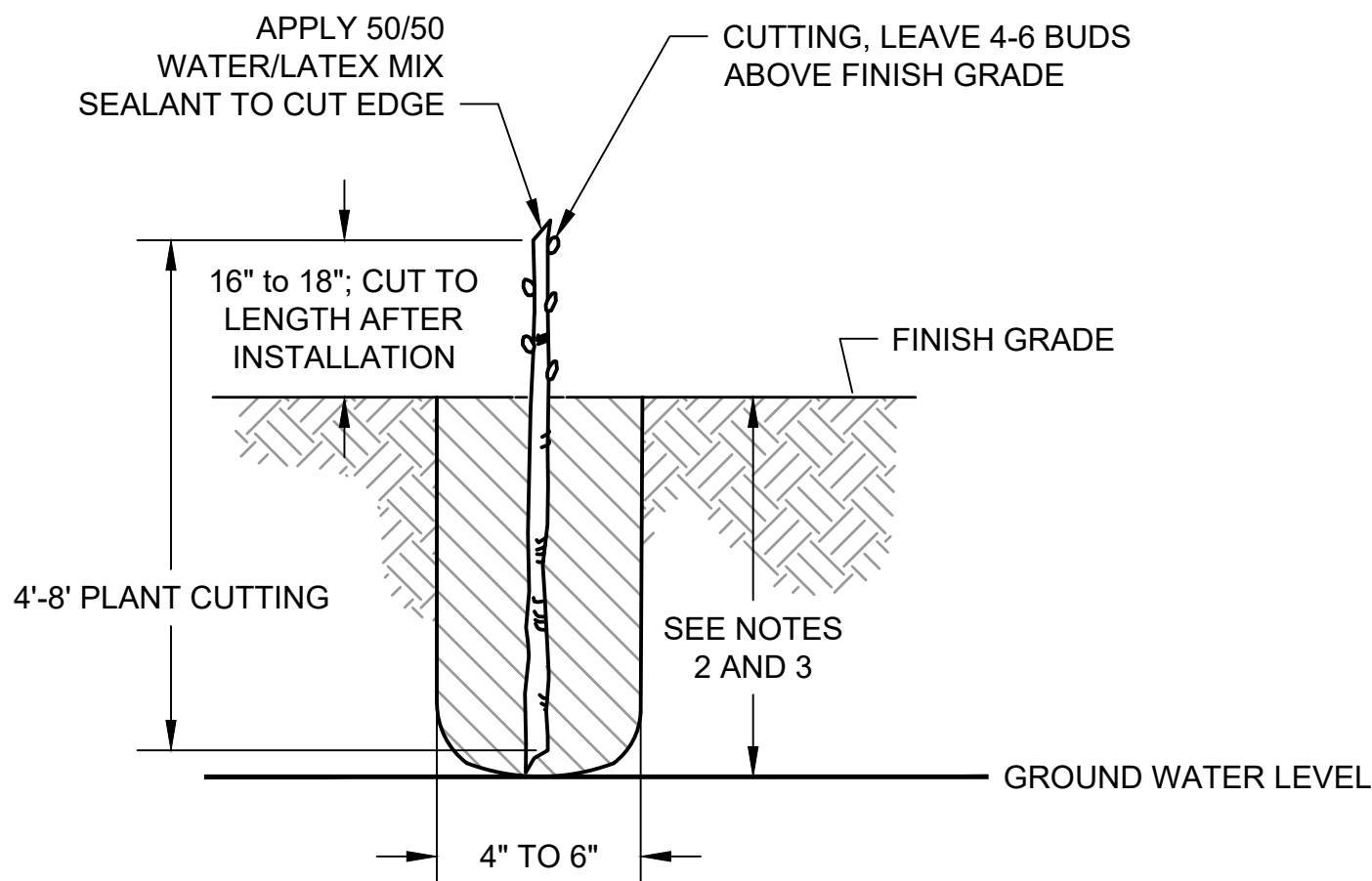
4 ***TYP. PLUG PLANTING***
P-2 NOT TO SCALE



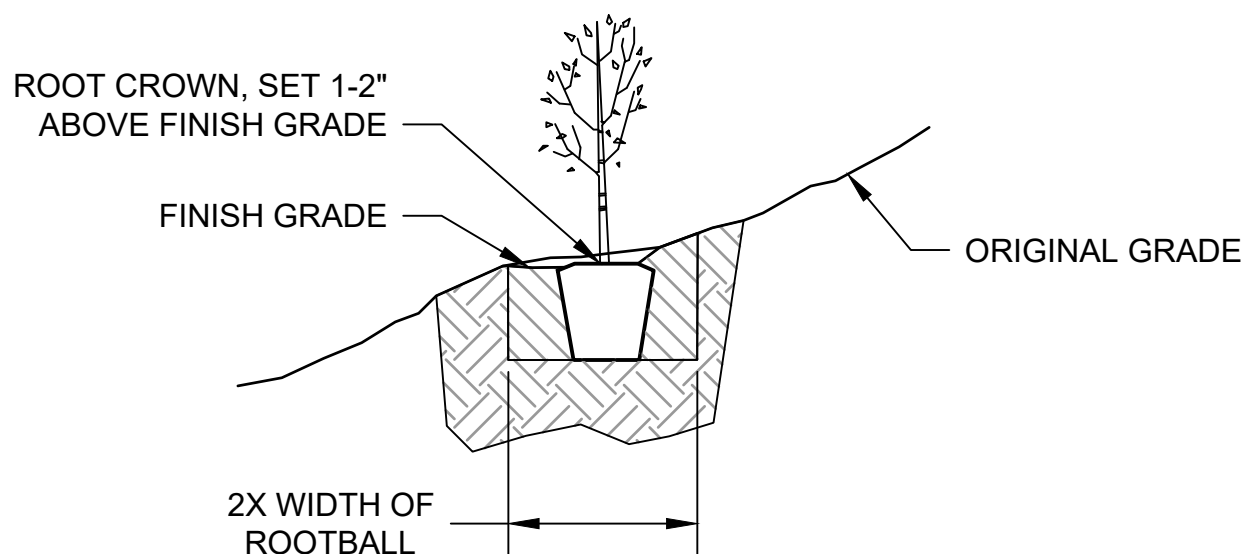
1. CLEAR BY HAND TOOLS AN AREA $\frac{1}{3}$ THE SIZE OF THE BRUSH BUNDLE
2. TIE BUNDLE WITH ONLY NATURAL FIBER TWINE.
3. EXCAVATE HOLE FOR BRUSH BUNDLE AREA BETWEEN 1.5' - 2' DEEP.
4. BURY TIED END OF BUNDLE 12"-18" DEEP.
5. ROUGHEN SURFACE, BACKFILL WITH NATIVE SOIL.
6. BUNDLE EMBEDMENT 30%-50% IN BANK, TYP.

5 **TYP. BRUSH BUNDLE**
P-2 NOT TO SCALE

PLANTING SCHEDULE								
SYMBOL	PLANTING ZONE	AREA (ACRES)	SCIENTIFIC NAME	COMMON NAME	AVERAGE SPACING (FEET ON CENTER)	QUANTITY	PROPOGULE TYPE/ CONTAINER SIZE	NOTES
	FLOODPLAIN RIPARIAN	0.06	<i>BACCHARIS SALICIFOLIA</i>	MULE FAT	5	105	D-16	
			<i>CAREX BARBARAE</i>	VALLEY SEDGE	5	105	D-16	PLANT IN CLUMPS OF 3
			<i>SALIX LASIOLEPIS</i>	ARROYO WILLOW	5	105	CUTTING	
	MIXED OAK BAY WOODLAND	0.15	<i>AESCULUS CALIFORNICA</i>	CALIFORNIA BUCKEYE	15	29	D-40	
			<i>FRANGULA CALIFORNICA</i>	COFFEEBERRY	15	29	D-16	
			<i>HETEROMELES ARBUTIFOLIA</i>	TOYON	15	29	D-16	
			<i>QUERCUS LOBATA</i>	VALLEY OAK	30	7	D-40	
	LOWER RIPARIAN	0.17	<i>ALNUS RUBRA</i>	RED ALDER	10	74	D-40	
			<i>ARTEMISIA DOUGLASIANA</i>	MUGWORT	10	74	D-16	PLANT IN CLUMPS OF 3
			<i>BACCHARIS SALICIFOLIA</i>	MULEFAT	10	74	D-16	
			<i>SALIX LAEVIGATA</i>	RED WILLOW	10	74	D-40	
			<i>SALIX LASIOLEPIS</i>	ARROYO WILLOW	10	74	STAKES	PLANT ALONG Q2 ELEVATION IN A LINEAR ORIENTATION
	UPPER RIPARIAN	0.21	<i>ACER MACROPHYLLUM</i>	BIGLEAF MAPLE	10	91	D-40	
			<i>ARTEMISIA DOUGLASIANA</i>	MUGWORT	10	91	D-16	PLANT IN CLUMPS OF 3
			<i>BACCHARIS SALICIFOLIA</i>	MULEFAT	10	91	D-16	
			<i>CAREX BARBARAE</i>	VALLEY SEDGE	10	91	D-16	
			<i>RUBUS URSINUS</i>	BLACKBERRY	10	91	D-16	PLANT IN CLUMPS OF 3



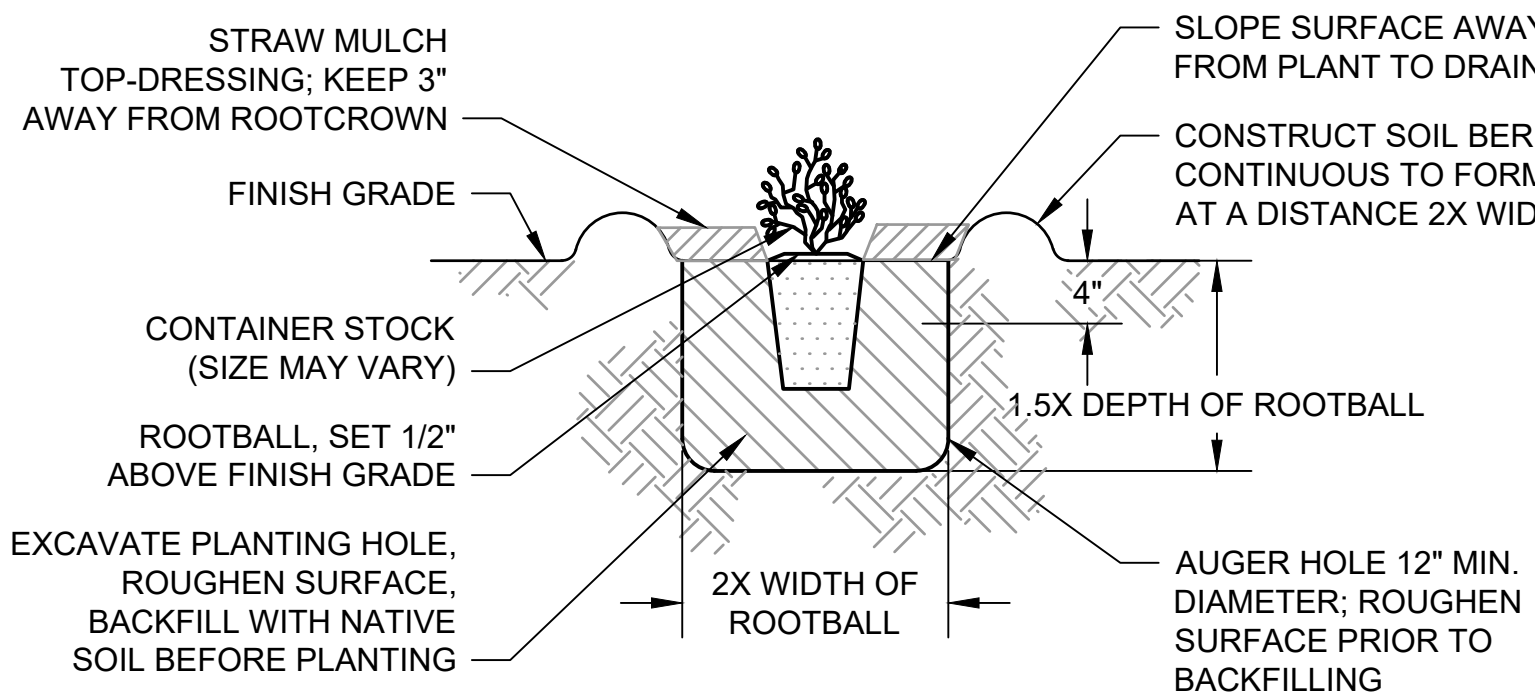
1 **TYP. CUTTING PLANTING**
P-2 NOT TO SCALE



NOTE

1. CLEAR BY HAND TOOLS A 24" DIAMETER WEED FREE ZONE AROUND EACH PLANT.
2. EXCAVATE PLANTING HOLE, ROUGHEN SURFACE, BACKFILL WITH NATIVE SOIL BEFORE PLANTING.

2 ***TYP. TREE PLANTING ON HILLSIDE***
P-2 NOT TO SCALE



NOTE

1. PROVIDE WEED FREE ZONE AROUND PLANTING SITE ACCORDING TO THE SPECIFICATIONS.

3 ***TYP. CONTAINER PLANTING***
P-2 NOT TO SCALE

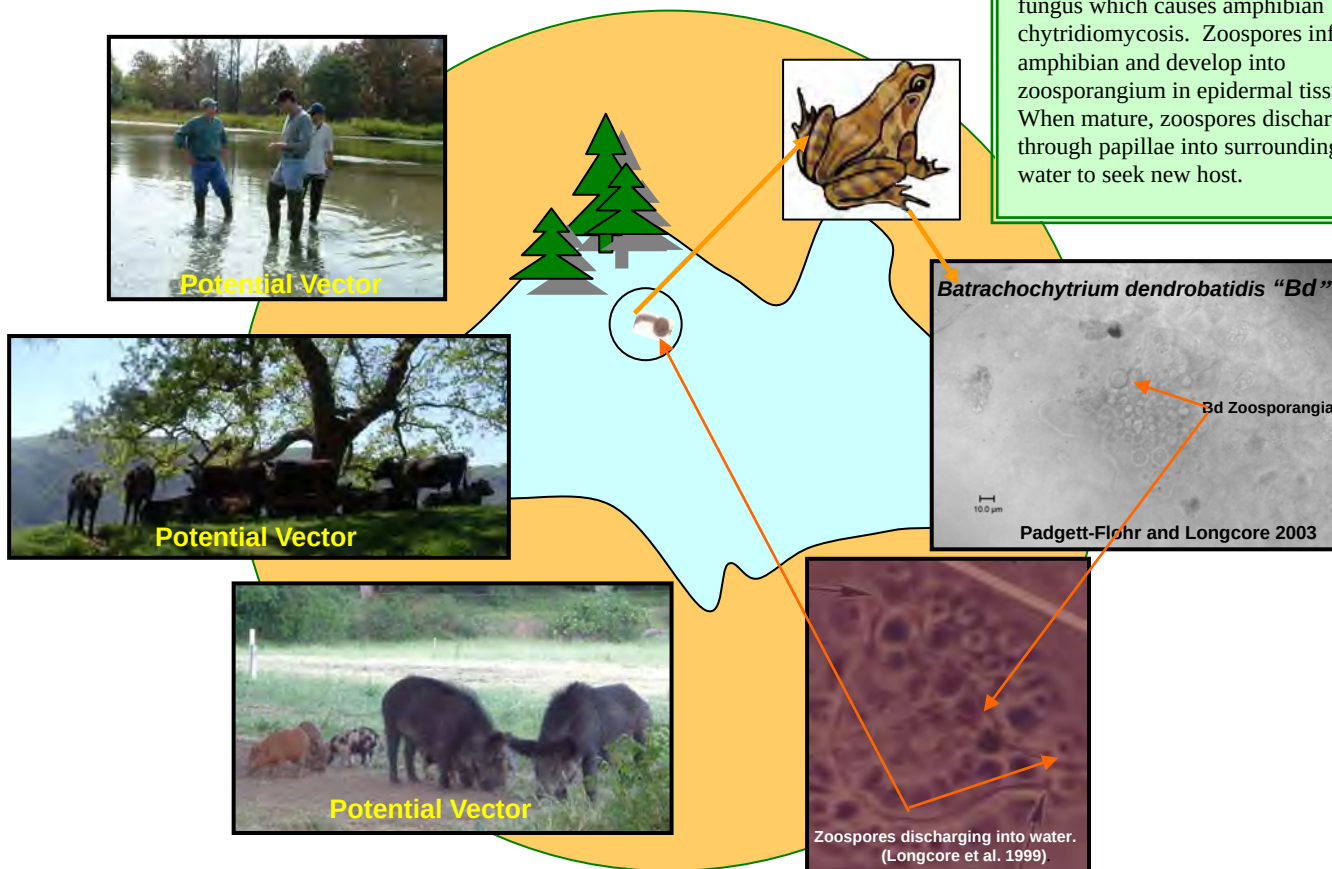
PLANTING SCHEDULE AND DETAILS P-2

Appendix B
**Decontamination Guidelines to Reduce the Risk of
Spreading infectious Amphibian Diseases in Freshwater
Systems**

DECONTAMINATION PROTOCOL TO REDUCE THE RISK OF SPREADING INFECTIOUS AMPHIBIAN DISEASES IN FRESHWATER SYSTEMS



Pathogens can be vectored within and between aquatic systems through a multitude of pathways and little human control can be exerted over most of them in the wild. Waterfowl, migratory birds, foraging ungulates, cats, dogs, domestic livestock, feral goats and pigs and even native terrestrial wildlife can act as vectors for a wide array of pathogenic microorganisms.



For microorganisms with a lifestage that can withstand dessication, the wind can be a vector. The single transport agent (i.e. vector) over which we have some control, and the only one which has the capacity for worldwide travel in a 24-hour period, is *Homo sapiens*. If you are a professional who regularly ventures into the field working in or around freshwater systems, it is imperative to decontaminate yourself and your equipment each and every time you go in the field (before **and** after your visit) in order to minimize your risk of transporting pathogens from one site to the next.



Located in the coastal foothills of Central California, Joseph D. Grant County Park is a 10,000-acre haven which boasts temporary and perennial ponds, lakes, and perennial and intermittent streams. Strict decontamination procedures are carried out during sampling by CCADC crew to ensure that pathogens are not transported from one waterbody to another.

Field conditions are a far cry from the environment of the human medical institution where sepsis and sterility are tightly controlled and monitored. Although we cannot duplicate **that** level of control while in the field, we **can** set standards and practices to ensure that we, as wildlife professionals, do not spread disease or act as vectors increasing the risk of disease outbreaks in new areas by transporting pathogenic agents between sites. **Remember that the outcome of a disease outbreak is based on the number of infectious particles contained in the initial inoculating dose.** The steps outlined in this protocol may not kill all the infectious particles; however a reduction in the environment of the number of infectious particles that can invade an amphibian or its habitat will provide an opportunity for a more positive outcome

The key to any decontamination procedure is PLANNING AHEAD. If you are surveying by yourself, even more forethought will be required to effectively decontaminate yourself and your equipment properly before leaving a site.

BASIC SUPPLIES**1. Granulated swimming pool chlorine in a puncture-proof container.**

Granulated chlorine bleach can be purchased at any swimming pool supply store in a variety of quantities, up to and including 40 pounds. Recent pricing (April 2004) for this chemical is approximately \$90.00 for 40 pounds and \$68.00 for 25 pounds.



Granulated chlorine bleach has the distinct advantage of being in dry form and is therefore much more portable than the gallons of liquid bleach currently being carted around by some folks. Besides being heavy and cumbersome, liquid bleach loses most of its effectiveness within 2 weeks of the container being opened. The abbreviated active life of opened liquid bleach solutions can mean that although folks are following the decontamination procedure—they are not accomplishing the task of killing pathogens if they are using bleach which has lost its effectiveness. Old liquid bleach is not decontaminating anything.

Storing disinfecting agents at home safely is hard enough, but trying to transport chemicals, even for the best of reasons, out into the field can be a real challenge. At the CCADC we have found the best container to store and transport the granulated bleach to be the Backpackers Cache®. This is a bear-proof container that is therefore puncture-proof and is light enough (2.7 pounds) to place in a backpack for easy transport into the field.



Chlorine granules are poured into gallon-size Ziploc® plastic bags, which are sealed and then placed in the Backpackers Cache® with a measuring cup for easy mixing of the disinfecting solution when on site. The Backpackers Cache® runs about \$70.00 and retailers carrying the item can be located by checking at <http://www.backpackerscache.com/dealers.asp>.



2. **Pop-up waterproof garden trimming container.** Although large, the best model we have found is manufactured by Fiskars, runs \$19.95 and is called the “Kangaroo Utility Container”. This container is waterproof, 22” X 28” and will fold down to a 3” stack. (A smaller version would be preferable, but at this time only the large version is available in waterproof form). The Kangaroo container can easily be attached to a backpack by the handles as it weighs less than 1 pound. It is available at: http://www.fiskars.com/en_US/garden/category.do?cat=5.



3. **Plastic tarp at least 8' x 8' in size.**
4. **Hard bristled scrub brushes (preferably with an extra long handle).**
5. **Plastic laboratory aprons.**
6. **Collapsible 1-gallon jugs (2-3).** These can be purchased relatively inexpensively at local camping or outdoor gear supply stores.
7. **Extra change of clothes in case your clothes get wet.** Bring the change of clothes in a plastic bag so that you can isolate your wet “contaminated” clothing in the bag after you have donned your dry clean clothes. If you are doing extensive field work, more than one change of clothes and extra plastic bags may be needed, so plan ahead!

FIELD DECONTAMINATION PROTOCOL

This protocol assumes that there is more than one individual going out in the field. We are also assuming that some type of sampling in or around a waterbody will occur during the field visit.

General Policies

1. **Always start your fieldwork with sterilized equipment.** Prior to going in the field decontaminate (“decon”) all equipment (dip nets, two-pole seines, hip boots, chest waders etc.) using a 5% bleach solution or Quat 128¹ (didecyl dimethyl ammonium chloride) diluted 1 oz/ 1 gal of water. **This means a two-minute soak in the sterilizing solution!** A 2-second dunk merely gets the item wet- it does not render it instantly sterile.



¹ Very effective, less corrosive on equipment. Can be obtained at any local medical supply store. Not effective on whirling disease of fish.

2. **Don't forget your field vehicle.** In published literature on veterinary medicine, vehicles have been identified as vectors spreading livestock diseases between ranches and farms. Careful cleaning of vehicles is routinely practiced by veterinary professionals traveling between populations of livestock. Wildlife populations are vulnerable to disease as well; therefore, for field biologists, scrubbing down the tires on the field vehicle is a necessary practice, especially if you have had to drive through a stream or creek. Scrubbing down your tires not only helps prevent spreading wildlife disease pathogens, it also assists in preventing the spread of plant diseases such as SODS (Sudden Oak Death Syndrome).



3. **In lentic (pond) habitats always work from the “cleanest” site to the “dirtiest” site.** Find out beforehand if there have been any disease occurrences detected in the area you will be working in and organize your sampling sites from clean to dirty.
4. **In lotic (stream) situations begin your surveys from the highest upstream point and work your way downstream.** If you do have to go from a downstream to an upstream area, decon after you have completed the downstream work and then proceed to the upstream site. Decon again after completing work at the upstream area.
5. **If no data are known- assume all sites are “contaminated”.** It is better to err on the side of caution. Few places have actually been specifically sampled for pathogens and/or disease occurrences. Of those places which have been sampled, the data are slow coming in. CCADC will continue to record and make available all reported occurrences (contact: gpadgettflohr@aol.com).
6. **Decontaminate all equipment and clothing between lentic water bodies.** It cannot be assumed that if one pond has been found to be positive for a specific pathogen or disease occurrence that all ponds in the vicinity are similarly afflicted. Therefore follow the “decon procedure” between ponds if you are visiting multiple sites.
7. **As the disease status of most amphibian populations is currently unknown, do not translocate amphibians of any lifestage at this time.** Given the current, very serious situation with newly emerging infectious diseases affecting amphibians worldwide, any translocations must necessarily involve a simultaneous testing of amphibian populations at both recipient and donor sites. Human initiated movements of frogs, toads and/or salamanders without testing the health of amphibians at both donor and recipient sites, have the potential to introduce pathogens and disease into otherwise healthy habitats and populations.

DECONTAMINATION SETUP AND PROCEDURE

When on-site- designate a “clean” crew and a “dirty” crew. The “dirty” crew enters the water for sampling and passes specimens to the “clean” crew who do not enter the water or muddy areas. It is helpful to have a couple of extra buckets, filled with pond water and placed next to the tarp to deposit animals into.

1. At the site the “clean” crew sets up the 8’ X 8’ tarp on the soil which will outline the clean work area. Any equipment (Pesola® spring scales, scalpels, scissors, etc.) used for sampling amphibians should be placed on the tarp. “Clean” crew dons plastic aprons to protect clothing from getting wet and they stay on the tarp for the duration of the sampling.
2. The pop-up Kangaroo container is opened up and placed at the edge of the tarp. The “dirty” crew members enter the water, fill the collapsible jugs with water and hand them to the “clean” crew who use it to fill the pop up container. The “dirty” crew members also fill the specimen buckets and place them between the pond and within reach of the “clean” crew on the tarp.
3. Once filled about 1/3 of the way with water, the “clean” crew adds approximately 1 cup of bleach granules to the water.



4. Sampling proceeds with the “dirty” crew doing the seining, electroshocking, and/or dipnetting etc. Animals to be examined can be taken directly from, and then replaced back into, the specimen buckets by “clean” crew members. The “dirty” crew members replace the contents of the buckets back into the ponds at the conclusion of sampling.

5. “Clean” crew members should disinfect hands after handling each animal and then rinse thoroughly before touching the next animal. Pond water is acceptable to rinse the hands if no other water source is available. *Gloves are not recommended due to the sensitive nature of amphibian skin.*
6. Use new individual Baggy® for each animal being retained. Bag up and toss out all used Baggies® at the end of your sampling.
7. When PIT-tagging or toe-clipping, use sterile instruments and disinfect them between animals. A small bottle of 70% ethanol can be kept handy to sterilize instruments between specimens. Seal wounds so there is no avenue for infection. Swab wound with 0.1% iodine then seal with medical grade cyanoacrylate.
8. Do not allow disinfectants to contact amphibians.
9. **Decontaminate all equipment before leaving any site.** The “clean” crew assists the “dirty” crew. To properly decontaminate means WASH AND SCRUB FIRST to remove **all** clumps of dirt. Lots of elbow grease!! **THEN DISINFECT.**





10. Don't forget to soak the plastic aprons, the specimen buckets, and the plastic tarp (2 minutes!). Everything should be clean when you leave the site.

11. If "dirty" crew clothing has gotten wet, clothing should be changed and the contaminated clothing bagged and isolated.

12. The last step is to dump out the bleach solution a safe distance from the waterbody.

13. WASH YOUR FIELD CLOTHES AFTER EACH VISIT.

***Note:** The photos used in this protocol show a county park vehicle with a hydraulic lift and a pumper truck to provide water for the decon solution mix. This is a fantastic setup, if available. The protocol described above assumes that specialized equipment like this is not typically available or may not have access to the site.*

Appendix C
**Guidelines for Minimizing Phytophthora Contamination
at Midpeninsula Regional Open Space District Preserves**

Guidelines for Minimizing *Phytophthora* Contamination at Midpeninsula Regional Open Space District Preserves

The goal of these guidelines is to minimize the contamination of Midpeninsula Regional Open Space District (MROSD) preserves with *Phytophthora*, a soil pathogen that kills plants. Once a site is contaminated, this soil pathogen can spread farther into wildland areas and can be difficult to eradicate. Prevention is the lowest cost and easiest method to manage contamination.

The best way to prevent the spread of this disease is to not move soil from one location to another by cleaning tools, equipment, and footwear.

Part of the District's mission is to protect and restore the natural environment. Within the last few years, planted restoration sites have unintentionally exposed preserves to soil pathogens brought in by nursery plants that were later found to be contaminated. Testing of former restoration sites on District preserves is now underway to determine which sites are contaminated and the necessary remedial actions.

Who should use these guidelines?

These guidelines are intended for use by field staff and Natural Resource (NR) staff who pose the highest chance of spreading soil *Phytophthora* via equipment and footwear. Several methods are provided on how and when to decontaminate tools and equipment depending on the site conditions (contaminated versus clean site) and staff activities (planting, other). Guidelines for contractors, consultants, volunteers and preserve visitors are under development. Consult NR staff (Amanda Mills, amills@openspace.org or x558, or Coty Sifuentes-Winter, csifuentes@openspace.org or x560) on which guidelines are best for your project.

When to use these guidelines?

Use these guidelines for any activity that contacts soil, water or plants on a known *Phytophthora*-contaminated site, on a formerly planted site, on a site with rare plants, or when preparing or planting a new restoration site.

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1. Overview

Remember to **Arrive Clean and Leave Clean**. The best way to prevent the spread of *Phytophthora* is to leave soil at its original location in the field. Equipment and footwear should be clean and sanitized before entering a site, especially for planting events where extra precautionary steps will be taken. Before leaving a site, especially at contaminated sites, it's crucial to clean and sanitize footwear and equipment.

Definitions:

Clean - remove soil and organic debris from tools and footwear

Sanitize - Use disinfecting agent such as alcohol or chlorine bleach.

Phytosanitary - control of plant pests and diseases especially in agricultural crops

1.1 What is Phytophthora?

- 1.1.1 *Phytophthora* (Fie-tof-thora) is a group of water molds that infect plants. There are many species, mostly notably *P. ramorm* (Sudden Oak Death), *P. infestans* (potato blight/ Irish potato famine) and *P. tentaculata* (nursery root rot).
- 1.1.2 Symptoms are similar to drought, making diagnosis difficult without testing.
- 1.1.3 Symptoms include leaf spots, branch die-back, cankers, trunk bleeding and death of whole plant.
- 1.1.4 Hosts include many native and nursery plants including oaks, bay laurel, madrones, sticky monkeyflower.
- 1.1.5 Brought to California through imported camellia and rhododendron nursery plants.
- 1.1.6 Mainly spreads from contaminated nursery stock, pots and soil. Can spread by foot traffic from contaminated footwear.

1.2 General Steps:

- 1.2.1 **What** - Items to be cleaned: Anything that comes into contact with soil, water or plants. This includes tools (shovels, hand trowels, hori-horis, rakes, tree cages, plant protection tubes etc.), footwear, equipment, wheeled equipment and vehicles.
- 1.2.2 **When** - Prior to the project day, field staff will be notified what items need to be cleaned and by which method. In general, tools and equipment should be cleaned at the field office before bringing them to the field site, and soil should be removed from footwear beforehand and more thoroughly cleaned at the entrance to the field site.
- 1.2.3 **Transportation** - Cleaned equipment should be transported in a truckbed from which all soil has been washed out, or cleaned equipment can be wrapped in a clean tarp before placed in a dirty truck.

1.3 Proper Disinfectants

All recommended disinfectants are considered pesticides. Personal protective equipment required by the State of California for anyone using disinfectants is eye protection with wrap-around and brow protection and 14 mil chemical resistant gloves. You can use smaller mil gloves if handling chemicals for 15 minutes or less.

- 1.3.1 The disinfectants listed in Table 1 are recommended by standard phytosanitary guidelines.
- 1.3.2 Other disinfecting agents or methods, such as Lysol or heat treatments, must be reviewed and approved by NR staff before use.
- 1.3.3 Disinfectants are most effective when surfaces are clean of soil and user follows label instructions.

Disinfecting Agent	Active ingredient	Contact time	Product shelf life	Proper Disposal	Health Risk	Personal Protective Equipment
Granular Chlorine Bleach (Leslies Chlor Brite, EZ Chlor)	Sodium dichloroisocyanurate dihydrate	2 min	Long if undiluted	Neutralizer (Vita-D-Chlor)	High	Eyewear, gloves; do not inhale
Liquid Bleach (Clorox)*	Sodium chloride	2 min	3-5 months	TBD	High	Eyewear, gloves; do not inhale
Rubbing Alcohol	Ethanol or Isopropyl Alcohol	1 min	Long	TBD	Med	Eyewear, gloves; flammable
Quaternary ammonium compounds (Quat 128 or Physan 20)	Dodecyl dimethyl ammonium chloride	10 min	Long if undiluted	TBD	Med	Eyewear, gloves; toxic to fish

Table 1: List of approved disinfecting agents. Always follow chemical label instructions.

*Liquid bleaches are generally not recommended as a disinfectant because they lose potency in storage.

2. Cleaning at the Field Office

Clean equipment, tools and footwear at the field office **before** arriving to the project site. This is the easiest way to prevent soil contamination. For those occasions where equipment and footwear must be cleaned at a field site, see Cleaning at Field Site (page 7).

2.1 Remove Soil from Equipment and Footwear

- 2.1.1 At the field office, scrape, brush, and wash off any soil or organic material. Take care to remove soil trapped in treads or cracks.
- 2.1.2 Pathogens can survive inside soil clods even after soaking because disinfectants may not completely penetrate large or clayey masses. Therefore, it is important to remove large clods of soil before soaking or otherwise treating with disinfectants.

2.2 Disinfect Tools With Bleach

Several disinfecting agents are available for treating Phytophthoras (Table 1). When many tools need treatment, use granular chlorine bleach at the field office. Spraying with rubbing alcohol is more appropriate for spot treatment at remote field locations.

NEVER MIX DIFFERENT DISINFECTING AGENTS.

ALWAYS FOLLOW LABEL DIRECTIONS.

FOLLOW REQUIREMENTS FOR PERSONAL PROTECTIVE EQUIPMENT WHEN USING DISINFECTING AGENTS.

List of Equipment for Disinfecting Tools:

- **Disinfectant** – most frequently, we expect to be using granular chlorine bleach such as EZ Chlor or Leslie's Chlor Brite when cleaning multiple tools at the field office. Carefully follow the directions below when using any [?] of the bleach disinfectants.
- **Vita-D-Chlor (chlorine neutralizer)** - This neutralizing product is only required if you used chlorine bleach as a disinfectant.
- **Waterproof container** - A large [minimum size?] plastic trashcan or waterproof pop-up garden trimming container in which to mix the water-based disinfectant and soak the tools.
- **Hard bristled scrub brushes and paint scrapers** - Grill brushes with scrapper attachment are handy tools to loosen soil from both flat surfaces and narrow cracks.
- **Personal Protective Equipment** Close-toed shoes, apron or coveralls, protective eyewear, 14 mil chemical resistant gloves (not leather or cloth).
- **Clean water source** - should not be cloudy or with a lot of organic material in it. Pressure washers or nozzles are helpful to remove soil quickly and get into small cracks.

- 2.2.1 Before using the disinfectant, remove soil as described in above section.

- 2.2.2 Fill waterproof container with 10 gallons of water. Use label instructions to add the right amount of disinfecting agent. For granular bleach, use one teaspoon in 10 gallons to get the desired 0.525% dilution.
- 2.2.3 Dunk tools in solution for required soaking time (see Table 1). For granular bleach, this is 2-minutes. Just getting tools wet does not mean they will be disinfected. Think of it as chemical cooking.
- 2.2.4 If you used chlorine bleach as a disinfectant, it needs to be neutralized after soaking. This ‘rinse cycle’ will deactivate the bleach so it does not corrode metal and so that it is safer to dispose of the soak water. Equipment sprayed with alcohol does not require this neutralization step.
- 2.2.5 In addition to tools, remember to disinfect the sanitation kit, gloves, tarps, or other miscellaneous items that have come into contact with soil.
- 2.2.6 Let tools dry. The hose lay is great for drying tarps.

2.3 Disinfect Wheeled Equipment/ Vehicles

Anything with wheels, including wheel barrels, ATV's, motorized carts that will be used at the field site needs to be cleaned and this is best done at the field office before the project. Vehicles that stay at the staging area do not have to be cleaned and sanitized. However, it is good phytosanitary practice to remove soil from wheels every time you leave a site.

- 2.3.1 Scrub down tires either by hand scrubbing or using a pressure spray wash.
- 2.3.2 Sanitize using disinfecting spray such as bleach (must be made weekly) or rubbing alcohol.

3. Cleaning at Field Site

Remember to **Arrive Clean and Leave Clean**. If equipment was cleaned and treated with a disinfectant at the field office and delivered in a clean truck, then on-site cleaning of equipment will only be required when leaving at the end of a work day. We recommend that everyone be encouraged to thoroughly clean their footwear of soil before arrival at the site, and then footwear be treated with alcohol upon arrival. Volunteers may not always be aware of this recommendation and may arrive with boots that need to be cleaned of foreign soil at the field site. Scraping all soil off equipment and footwear is required before leaving site, and sanitation of all footwear is usually recommended when leaving a site, especially for known contaminated sites. Rubbing alcohol is usually the preferred disinfectant in the field. Bleach products can be used in the field, but it is harder to mix and dispose of them properly in the field. See details below.

3.1 Cleaning at Start of Field Day

Tools:

Portable sanitation kits include the following items in a bin: 2 tarps, boot brush with scraper, 2 spray bottles of 70% isopropyl alcohol, 2 long-handled brushes, 2 paint scrapers, and instructions. On muddy days, also bring a basin and 2 jugs of water.

Alcohol 70% Ethyl alcohol (Ethanol) or 90% Isopropyl alcohol is fine. Called rubbing alcohol at drug stores.

Spray bottle - we take the nozzles from chemical resistant spray bottles and screw them directly into the rubbing alcohol bottle. Sometimes the stem needs to be trimmed. This allows you to have a spray bottle that is properly labeled with rubbing alcohol information and precautions.

- 3.1.1 Any equipment or footwear not cleaned and sanitized at the field office must be cleaned and sanitized before entering the site. Off-site soil should be considered contaminated.
- 3.1.2 Using the items in the portable sanitation kit, set up a staging area where equipment and footwear will be cleaned and sanitized. A paved parking lot or surface near the entrance to the work site is preferred.
- 3.1.3 Lay out 2 tarps, one labeled 'dirty' and one labeled 'clean'.
Remove any off-site soil from footwear and equipment onto the 'dirty' tarp. Try not to use water. If water is used, DO NOT dump potentially contaminated water onto on-site soil. Water can be dumped onto non-permeable pavement such as a road or parking lot in a low traffic area. This will UV-sterilize the dirty water (24 hr daylight cycle) as long as no clumps exist. Potentially contaminated soil in the 'dirty' tarp should be bagged in a trash bag and thrown away. DO NOT dispose of off-site soil at the new site.
- 3.1.4 Use the 'clean' tarp to sanitize soil-free footwear and equipment. Standing on the tarp, spray cleaned footwear and tools with 70% isopropyl alcohol, thoroughly wetting the surface. If the surface of your footwear or tools is already wet, spray extra alcohol to displace the water and allow the alcohol to soak the surface. Spray the footwear from the top down to avoid contamination.
- 3.1.5 Allow alcohol to evaporate (approx. 1 min) before starting work. You can stand on the tarp until your shoes are dry.
- 3.1.6 Footbath Alternative - we are investigating sanitizing mats where sanitizing only requires stepping on the mat. Gemplers.com, sanistride.com, and nelsonjameson.com sell both sponge mats and footbath mats for disinfecting shoes. Either chlorine bleach or non-evaporating disinfectants are used in these footbaths and the solution is changed weekly or as needed. Chemical strips are available to test if disinfectants are still effective. Caution should be taken if footbaths and solutions are transported to avoid spills.
- 3.1.7 Bleach alternative in the field. We are currently recommending that the bleach alternative be used at the field office and alcohol be used in the field. Bleach may be a better alternative in the field under some circumstances (large amounts of tools that must be disinfected in field), but will require special processes for safety and to properly dispose of the chlorine treatment water. Consult with the NR Department to determine best methods under these conditions.

3.2 Cleaning at End of Field Day

Tools:

Portable sanitation kits include the following items in a bin: 2 tarps, boot brush with scraper, 2 spray bottles of 70% isopropyl alcohol, 2 long-handled brushes, 2 paint scrapers, and instructions. On muddy days, also bring a basin & 2 jugs of water.

- 3.2.1 Sanitation of equipment and shoes is important for known or suspected contaminated sites. More leniency can be given for 'clean' sites.
- 3.2.2 Remove all soil and organic material from footwear and equipment. Leave soil onsite. Use the boot scraper, paint scraper and a stiff brush to remove any soil and plant material on both the top and bottom of footwear and from tools including the digging ends and handles. Make sure to clean out crevices. On muddy days, fill the basin with water to assist in rinsing off excess soil once the majority of debris has been removed.
- 3.2.3 Water helps in removing dried clods of soil. This water can be dumped on-site only if the soil originates from on-site.
- 3.2.4 Standing on the 'clean' tarp, spray cleaned footwear and tools with 70% isopropyl alcohol, thoroughly wetting the surface and allowing it to dry (approx. 1 min). If the surface of your footwear or tools is already wet, spray extra alcohol to displace the water and allow the alcohol to soak the surface.
- 3.2.5 Before leaving the site, shake soil off the scrapers, brushes and tarp.
- 3.2.6 At the field office, thoroughly clean the portable sanitation kit by washing out, spraying with alcohol and drying the container and all contents before storage. The portable sanitation kit must be clean before moving to a new site.

4. FAQ

Q. What do we do with left over soil?

A. Depends on the soil. Soil from off-site should be disposed of in a trash bag and thrown away--there's no knowing if off-site soil is contaminated or not. On site soil can be disposed of on-site back where it came from.

Q. What do we do with dirty water?

A. Pouring on pavement or another non-porous surface should disperse the contaminated soil enough to UV (sun) sterilize the water. If using bleach, use neutralizer and the water can be considered clean and safe enough to pour out anywhere. Don't pollute! Other disinfectants need proper disposal that isn't safe for dumping on the ground. Contact Natural Resources Department (Amanda Mills/Coty Sifuentes-Winter) or EH&S for safe disposal procedures.

Q. How do we use the tarps?

A. Two tarps, two purposes. Dirty tarp: use as a containment area to clean off soil clogs, especially offsite soil, for later disposal. Clean tarp: provides users a clean surface to sterilize (with alcohol or other sanitation liquid) shoes and equipment not cleaned at the Field offices.

Q. When will we need to sanitize or use the kits?

A. 1. Contaminated sites (list TBD) 2. Planting events-NR staff lead 3. When NR Staff recommend sanitation. Most of these will be NR staff lead, otherwise a leading crew member will advise on Phytosanitary BMP.

Q. Can we use hot water to sterilize?

A. Hot water can be used only if equipment bathes in 120-125° water for 30 minutes in order to be effective at killing both surface contaminants and internal infections.

Q. What about large equipment and Ranger lead projects?

A. TBD. Field staff will be trained on phytosanitary measures. For field crew lead projects, a crew member should be in charge of facilitating phytosanitary compliance.

Q. Why does this take so much time?

A. It's best to prevent rather than respond to contamination by *Phytophthora*. Once a natural area has been exposed to this soil disease, it can slowly spread and kill other plants. It is very difficult and expensive to kill all the pathogens in the soil of a natural area.

5. Sources

CalPhytos.org. "Guidelines to minimize *Phytophthora* Pathogens in Restoration Nurseries".

Suddenoakdeath.org. http://www.suddenoakdeath.org/wp-content/uploads/2016/04/Restoration.Nsy_.Guidelines.final_.092216.pdf

Kurowki, Chet. "Control Pathogen Spread through use of Disinfectants". Calseed.org.

<http://www.calseed.org/documents/Disinfectants%2004-22-14a.pdf>

Cornell University Institutional Animal Care and Use Committee "Cleaning and sanitizing equipment used in the transport of animals."

<https://ras.research.cornell.edu/care/documents/ACUPs/ACUP532.pdf>

http://agriculture.mo.gov/animals/pdf/animalag_guide4.pdf

6. Future Methods

Let us know how these guidelines worked for your project! We may adjust guidelines based on feedback.

RESOLUTION NO. 26-__**RESOLUTION OF THE BOARD OF DIRECTORS OF THE MIDPENINSULA
REGIONAL OPEN SPACE DISTRICT ADOPTING THE PENINSULA CORRIDOR
JOINT POWERS BOARD'S MITIGATED NEGATIVE DECLARATION FOR THE
GUADALUPE RIVER BRIDGE REPLACEMENT PROJECT**

WHEREAS, the California Environmental Quality Act ("CEQA") (Public Resources Code § 21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations, § 15000 et seq.) require public agencies to consider the environmental consequences of their discretionary actions; and

WHEREAS, the Peninsula Corridor Joint Powers Board ("Lead Agency") is the lead agency for the Guadalupe River Bridge Replacement Project ("GRBR Project") pursuant to CEQA Guidelines § 15367; and

WHEREAS, on February 4, 2021, the Lead Agency adopted a Mitigated Negative Declaration ("MND") and a Mitigation Monitoring and Reporting Program ("MMRP") for the GRBR Project; and

WHEREAS, the Lead Agency subsequently prepared an Addendum to the MND pursuant to State CEQA Guidelines Section 15164, dated March 6, 2025, to analyze minor changes or modifications to the Project; and

WHEREAS, the Lead Agency subsequently prepared a Second Addendum to the MND pursuant to State CEQA Guidelines Section 15164, dated April 2, 2026, to analyze minor changes or modifications to the Project; and

WHEREAS, the Lead Agency subsequently prepared a Third Addendum to the MND pursuant to State CEQA Guidelines Section 15164, dated August 6, 2026, to analyze off-site mitigation required for the GRBR Project, which will be performed in the Hicks Creek area of Sierra Azul Open Space Preserve ("Hicks Creek Mitigation"); and

WHEREAS, the Midpeninsula Regional Open Space District ("District") is the fee owner of the Hicks Creek area and retains discretionary approval authority over the non-regulatory aspects of the Hicks Creek Mitigation, which are described in a Cooperative Mitigation Agreement with the Lead Agency ("Mitigation Agreement"); and

WHEREAS, the District is a responsible agency for the GRBR Project pursuant to CEQA Guidelines § 15381, due to its discretionary approval authority over the Mitigation Agreement; and

WHEREAS, CEQA Guidelines § 15096 requires a Responsible Agency to consider the environmental effects of a project as shown in the Lead Agency's environmental documents before approving its portion of the project; and

WHEREAS, the District Board of Directors has reviewed and considered the MND, as amended by the First, Second and Third Addendums, and all supporting evidence regarding the environmental effects of the GRBR Project, including the Hicks Creek Mitigation.

NOW, THEREFORE, BE IT RESOLVED AND APPROVED by the District Board of Directors as follows:

- 1. The District, acting as a Responsible Agency under CEQA, has independently reviewed and considered the MND, as amended by the First, Second and Third Addendums, and the whole of the administrative record before it.
- 2. The District’s discretionary approval authority over the GRBR Project is limited to activities carried out in connection with the Hicks Creek Mitigation, as set forth in the Mitigation Agreement.
- 3. The District has considered the environmental effects of the GRBR Project as described in the MND, as amended by the First, Second and Third Addendums.
- 4. The District hereby finds the MND adequate for the District’s use under CEQA and adopts the MND, specifically the Third Addendum, for purposes of approving the Mitigation Agreement.

* * * * *

PASSED AND ADOPTED by the Board of Directors of the Midpeninsula Regional Open Space District on September 23, 2026, at a Regular Meeting thereof, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

ATTEST:	APPROVED:
Margaret MacNiven, Secretary Board of Directors	Zoe Kersteen-Tucker, President Board of Directors

APPROVED AS TO FORM:

Hilary Stevenson
General Counsel

I, the District Clerk of the Midpeninsula Regional Open Space District, hereby certify that the above is a true and correct copy of a resolution duly adopted by the Board of Directors of the Midpeninsula Regional Open Space District by the above vote at a meeting thereof duly held and called on the above day.

Maria Soria, District Clerk

Exhibit A: Third Addendum to the Guadalupe River Bridge Replacement Project MND

THIRD ADDENDUM TO THE MITIGATED NEGATIVE DECLARATION FOR THE PENINSULA CORRIDOR JOINT POWERS BOARD GUADALUPE RIVER BRIDGE REPLACEMENT PROJECT – HICKS CREEK OFFSITE MITIGATION

PREPARED FOR:

Peninsula Corridor Joint Powers Board
166 N. Rollins Road
Millbrae, California 94030
Contact: Michael Tauchen
Email: TauchenM@caltrain.com

PREPARED BY:

ICF
595 Market Street, Suite 950
San Francisco, CA 94105
Contact: Rich Walter
Email: Rich.Walter@icf.com

July 2026



ICF. 2026. *Third Addendum to the Mitigated Negative Declaration for the Peninsula Corridor Joint Powers Board Guadalupe River Bridge Replacement Project – Hicks Creek Offsite Mitigation*. July. (ICF 103689.0.015.01.005.) San Francisco, CA. Prepared for Peninsula Corridor Joint Powers Board, San Carlos, CA.

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Acronyms and Abbreviations

Acronym	Definition
APE	area of potential effect
BMPs	best management practices
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
GRBR Project	Guadalupe River Bridge Replacement Project
Hicks Creek HMMP	Hicks Creek Offsite Mitigation HMMP
Hicks Creek Offsite Mitigation	offsite mitigation at Hicks Creek
HMMP	Habitat Mitigation and Monitoring Plan
IPaC	Information for Planning and Consultation
JPB	Joint Powers Board
Midpen	Mid-Peninsula Open Space District
MND	Mitigated Negative Declaration
NEPA	National Environmental Policy Act
NWIC	Northwest Information Center
RWQCB	Regional Water Quality Control Board
SCVWD	Santa Clara Valley Water District
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S Army Corps of Engineers
USEPA	United State Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

Chapter 1

Introduction

1.1 Background

The Peninsula Corridor Joint Powers Board (JPB) operates the San Francisco Bay Area's Caltrain passenger rail service. This document is JPB's third California Environmental Quality Act (CEQA) (Public Resources Code §§21000 et seq.; 14 CCR §§15000 (CEQA Guidelines) addendum to the Guadalupe River Bridge Replacement Project (GRBR Project) Initial Study/Mitigated Negative Declaration (MND) that the JPB adopted in February 2021 (State Clearinghouse #2020110323) (Peninsula Corridor Joint Powers Board 2021). The Federal Transit Administration also evaluated the GRBR Project's potential environmental effects pursuant to the National Environmental Policy Act (NEPA) and in April 2021 issued a concurrence that the GRBR Project meets the criteria for a Documented Categorical Exclusion.

As previously approved by the JPB in 2021 and the February 2025 and April 2026 addendums, the GRBR Project involves the demolition and reconstruction of the MT-1 bridge and the expansion and seismic retrofitting of the MT-2 bridge. The GRBR Project provides critical safety improvements to the MT-1 and MT-2 bridges, which are necessary to provide safe crossing of the Guadalupe River for Caltrain passenger service, Union Pacific Railroad freight service, Amtrak passenger service, Altamont Commuter Express, and the Capitol Corridor passenger service. Following the JPB's approval of the Project and filing a Notice of Determination for the Project, the JPB prepared final project design plans and an onsite Habitat Mitigation and Monitoring Plan (HMMP), obtained permits from the U.S Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), San Francisco Bay Regional Water Quality Control Board (RWQCB), Santa Clara Valley Water District (SCVWD). Those permits were amended in 2025 and 2026, as necessary, to take account of changes in Project design, construction methods, timing, and mitigation.

In accordance with CEQA, JPB has prepared this third addendum to the MND as the CEQA lead agency to evaluate changes to the GRBR Project relative to implementing offsite mitigation at Hicks Creek (Hicks Creek Offsite Mitigation) in the Sierra Azul Open Space Preserve, which is owned by the Mid-Peninsula Open Space District (Midpen).

1.2 CEQA Obligations

This addendum documents the JPB's consideration of environmental effects associated with implementing the Hicks Creek Offsite Mitigation. As noted, the JPB previously prepared and adopted the MND for the GRBR Project in February 2021, a subsequent CEQA addendum in 2025, and a second addendum in 2026. Under CEQA, once a negative declaration has been adopted for a project, no subsequent environmental impact report or negative declaration shall be prepared unless the lead agency faced with a subsequent discretionary approval finds based on substantial evidence, one or more of the following:

- Substantial changes are proposed to the project that would require major revisions of the MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- Substantial changes occur with respect to the circumstances under which the project is being undertaken that would require major revisions of the previous environmental document in order to describe and analyze new significant environmental effects, or any changes that would cause a substantial increase in the severity of the previously identified significant effects.
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental document was approved, shows any of the following:
 - The project would have one or more significant effects not discussed in the previous MND;
 - Significant effects previously examined would be substantially more severe than shown in the previous MND;
 - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measure or alternative; or
 - Mitigation measures or alternatives which are considerably different from those analyzed in the previous MND would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measure or alternative.

Based upon the information provided in Section 3.0, implementation of the Hicks Creek Offsite Mitigation would not result in new significant impacts or substantially increase the severity of impacts previously identified in the GRBR Project MND, and there are no previously infeasible alternatives that are now feasible. None of the other factors set forth in Section 15162(a)(3) are present. As such, an addendum is appropriate, and this addendum was prepared to address the environmental effects of the Project modifications.

An addendum need not be circulated for public review, but it can be included in, or attached to, the MND. The decision-making body (JPB's Board of Directors) shall consider the addendum with the MND prior to making a decision on the July 2026 Modified Project (e.g. the project as modified through April 2026 plus the offsite mitigation). Once adopted, the addendum, along with the original MND, is placed in the administrative record, and a Notice of Determination will be filed with the Santa Clara County Clerk and State Clearinghouse.

Chapter 2

Project Description

2.1 GRBR Project Description

The purpose and need for the GRBR Project is to provide critical safety updates to the MT-1 and MT-2 bridges (**Figure 2-1**). The Project description in the 2021 MND widened the channel; replacing the MT-1 bridge with a new, longer bridge; and extending the MT-2 bridge. The MND-described the GRBR Project limits as extending from south of Willow Street to Delmas Avenue along the existing JPB right-of way.

The MND evaluated replacing the existing 187-foot MT-1 bridge with a new 265-foot pre-cast concrete structure. The new MT-1 bridge would continue to accommodate a single track. Channel widening would occur under the south side of the MT-1 bridge to reduce scour/increase flow capacity. The southern abutment is designed so that it can potentially function as a pier without modification in the future if the USACE/SCVWD Reach 7 bypass channel is constructed.

As described in the MND, the GRBR Project includes extending the existing MT-2 bridge by 90 feet at the southern end, resulting in a new total bridge length of approximately 245 feet. To accommodate this extension, the Project removes and replaces the existing MT-2 abutment 5 and replaces it with a new pier, and channel widening.

The GRBR Project widens the Guadalupe River channel by approximately 75 feet to create a connection to the existing SCVWD Reach 6 bypass channel, which is downstream of the Project. The channel widening would reduce flow velocities during storm events and decrease the risk for further bank failure and scour problems.

As described in more detail in the GRBR Project MND, the work includes temporarily relocating fiber optic cables located on the MT-1 bridge and permanent relocating an existing overhead catenary system pole affected by the regrading and widening of the channel to Pier 5 of the MT-2 bridge. The fiber optic cables would be temporarily relocated to the MT-2 bridge (either underground beneath the tracks or aerially over the tracks on poles) during the demolition and construction of the new MT-1 bridge and then installed at their permanent location on the eastern side of the MT-1 track.

The GRBR Project would be constructed primarily within existing transportation and utility right-of way owned by JPB and SCVWD, and on California Department of Transportation, the City of San Jose, and SCVWD land under temporary construction easements.



Figure 2-1. GRBR Project Study Area

As explained in the MND, key construction activities include the MT-1 bridge replacement; the MT-2 bridge extension, riverbank stabilization and improvements; floodplain widening; and fiber optic cable removal and relocation. As explained in the 2021 MND, the Project also included dewatering an approximately 400-foot section of river. Following the completion of in-channel work, streamflow would be restored to the dewatered section of channel.

2.2 Hicks Creek Offsite Mitigation

As discussed in the Hicks Creek Offsite Mitigation HMMP (Hicks Creek HMMP), an offsite mitigation area was identified in the upper Guadalupe River watershed on Hicks Creek to provide mitigation for GRBR Project impacts in addition to the proposed onsite mitigation. The Hicks Creek Offsite Mitigation area is managed by Midpen within their Sierra Azul Open Space Preserve in Santa Clara County, California. Midpen is an independent special district that protects native habitats, plants, wildlife and fisheries resources by preserving more than 70,000 acres of land in the greater Santa Cruz Mountains region (**Figure 2-2**)(Midpen 2026).

The offsite mitigation HMMP describes site preparation, seed and plant material, installation methods, maintenance and monitoring, and contingency measures as necessary. Offsite habitat mitigation includes a variety of habitat elements including removal of concrete retaining walls, removal of grouted rock retaining walls, channel bed enhancements, in-channel rock enhancements, tributary realignment, and channel bank laybacks to create new riparian habitat. In addition to channel and bank improvements, the offsite HMMP also details implementation steps for the offsite mitigation including site preparation; maintenance; mitigation monitoring, including performance standards for the revegetation; and contingency measures.

In coordination with Midpen, JPB considered prioritization of restoration goals and strategies that are in alignment with, and anticipated to be most beneficial to, the programmatic restoration approaches of Midpen. Specifically, the Project includes the following in-stream mitigation and riparian restoration elements:

1. Removal of constructed hardscapes that restrict natural stream functions such as geomorphic processes and fish passage.
2. Realignment of a tributary to Hicks Creek to improve natural stream functions and fish passage.
3. Restoration of natural habitat in a creek in the Guadalupe River watershed that is important to salmonids.
4. Restoration and enhancement of waters of the U.S. under USACE jurisdiction and waters of the State under RWQCB and CDFW jurisdiction.
5. Promote the establishment of a self-sustaining, native aquatic and riparian habitat, resulting in a net increase of aquatic and riparian acreage in alignment with the goals and policies of Midpen.
6. Enhance stream function and native riparian habitat which is anticipated to support local communities of desirable fish, wildlife and plant species.

The implementation schedule for the Hicks Creek Offsite Mitigation is listed in **Table 2-1**.

Table 2-1. Implementation Schedule

Stage	Timing ^a
Construction	Q2 2027 to Q3 2027
Planting	Q3 2027 to Q1 2028

^aQ=Quarter

2.2.1 Location

The offsite mitigation site is part of the Mt. Umunhum Area of Midpen's Sierra Azul Open Space Preserve in Santa Clara County, California (**Figure 2-3**). The 90-acre Hicks Creek Ranch property is located off Reynolds Road in the Sierra Azul Preserve (18711 Reynolds Road). The property's development footprint is clustered in the northwest corner of the property along Hicks Creek. The site of the Hicks Creek Mitigation is owned by Midpen and is planned to provide offsite mitigation for RWQCB jurisdiction impacts, a portion of the CDFW jurisdiction impacts, and to satisfy mitigation requirements in the United State Environmental Protection Agency (USEPA)'s Administrative Order on Consent concerning the GRBR Project.

At the time of Midpen's purchase, the property included several existing structures including four residential units, pool house, changing room, pool and tub, storage barn, and shop building, the above ground portions of which have been removed by Midpen. The embedded building foundations, rock walls lining the stream channel, concrete-lined pool and tub, and surrounding contiguous portions of hardscapes, were left in place. Much of this in place existing hardscape is within the active channel of Hicks Creek, its confluence with an unnamed tributary, and the surrounding banks and environment, which interferes with the natural functions of the stream and has substantial impacts on the creek's geomorphology.

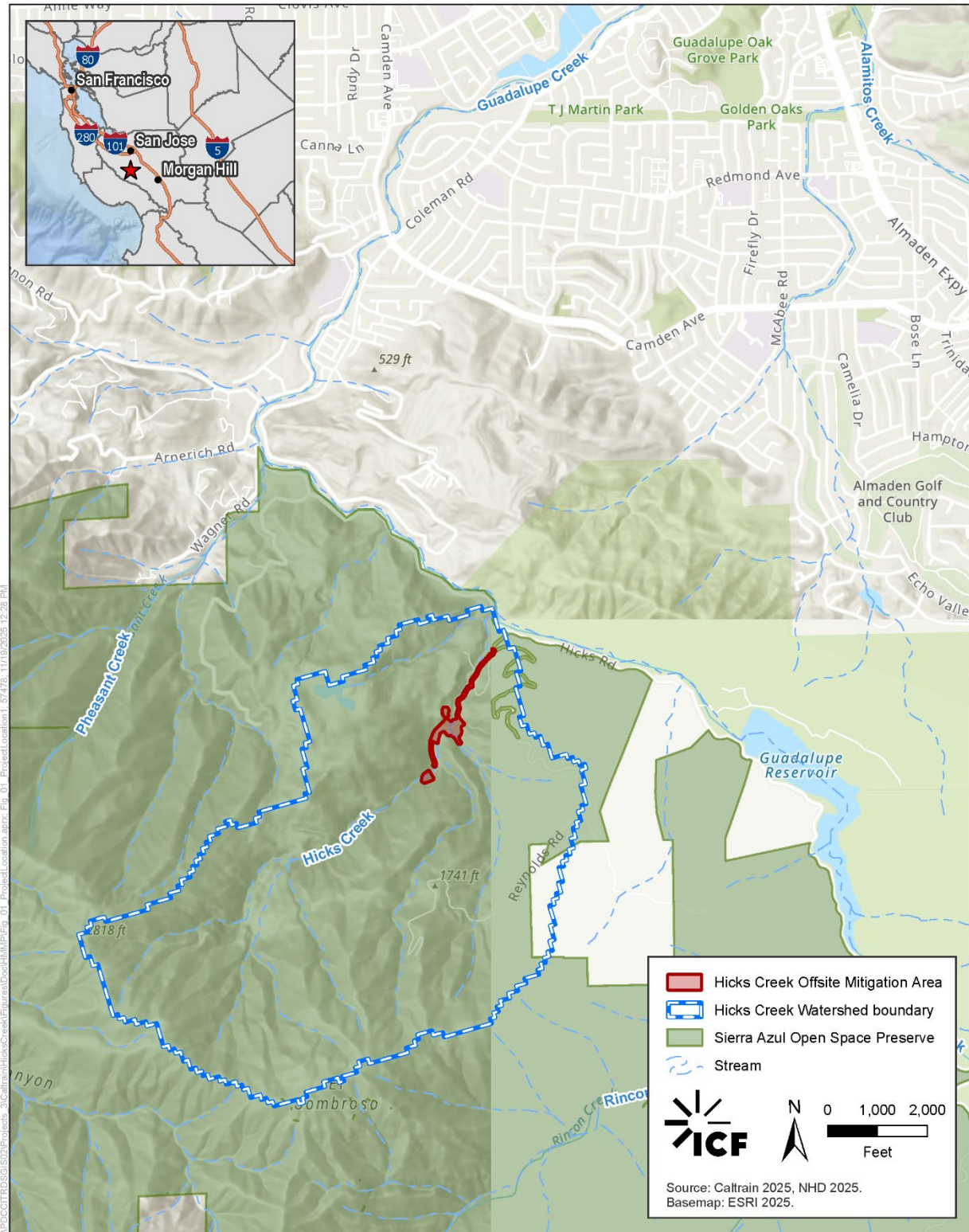


Figure 2-2. Hicks Creek Offsite Mitigation Property

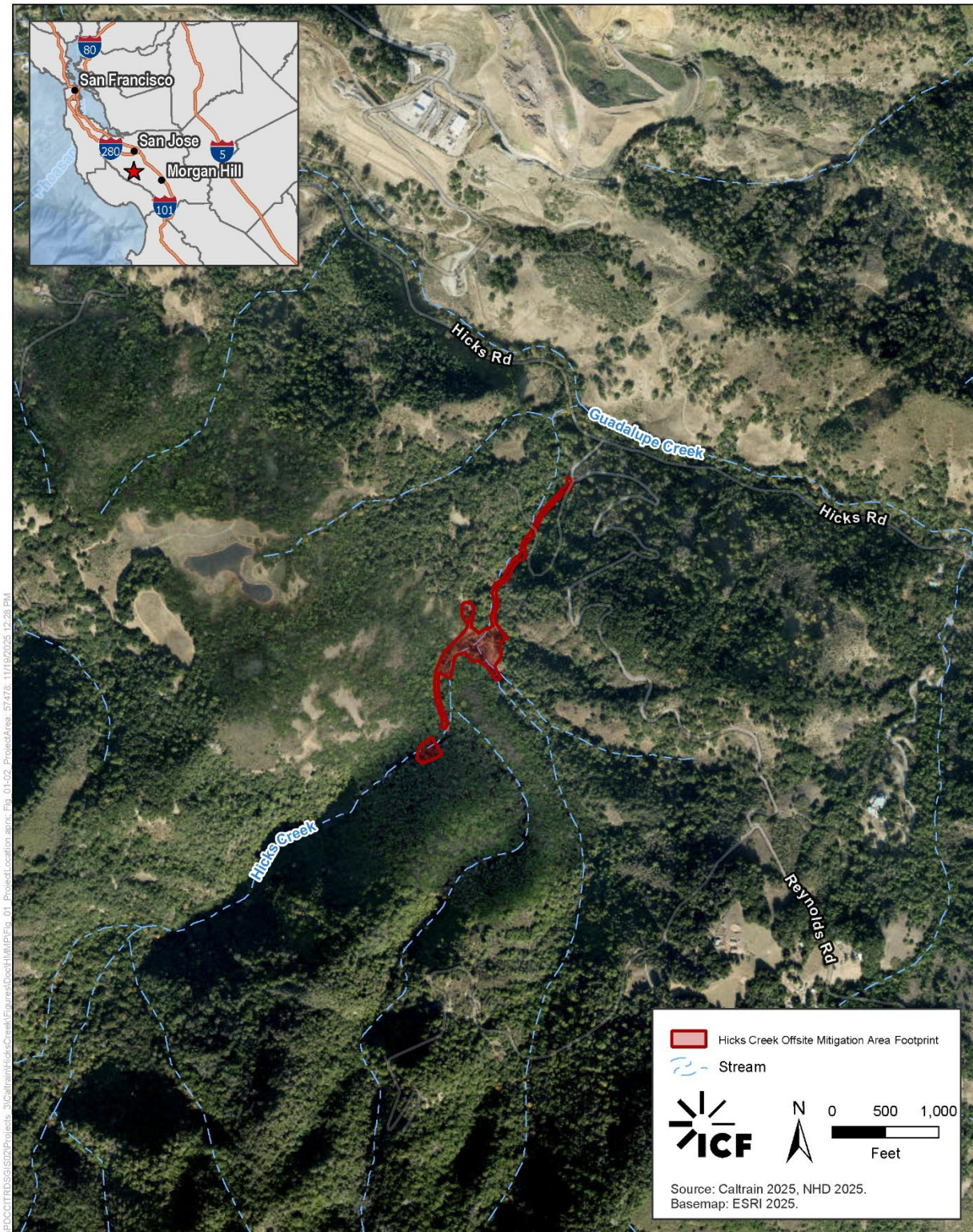


Figure 2-3. Hicks Creek Offsite Mitigation Property

Chapter 3

Updated Environmental Impact Analysis

This third addendum to the GRBR Project MND evaluates the proposed changes to the Project to identify and address any new potential environmental impacts that were not evaluated by the 2021 MND and the first and second addendums prepared in February 2025 and April 2026 respectively, determine the severity or magnitude of any new or more severe environmental impacts, and determine whether the new or more severe environmental impacts of the July 2026 Modified Project changes would require substantial revisions to the MND. **Table 3-1** provides a summary of the resources unaffected by the changes to the Project. Following **Table 3-1**, this addendum evaluates the offsite mitigation for the GRBR Project that may result in new or more severe environmental impacts on air quality, energy, greenhouse gas emissions, biological resources, hydrology and water quality, geology and soils, parks and recreation, and cultural resources.

Table 3-1. Resources not evaluated in Detail

Resource	2021 MND Analysis	July 2026 CEQA Addendum Analysis
Aesthetics	No impact	<u>The July 2026 Modified Project would not result in new or more severe impacts on aesthetics.</u> The Hicks Creek Offsite Mitigation area is located within a portion of the Sierra Azul Open Space Preserve that is not currently open to the public. The preserve offers views of grasslands, rocky and steep chaparral, dense stands of bay trees, shaded oak woodland forests, deep ravines and riparian corridors in the Santa Cruz Mountains. Proposed demolition of dilapidated infrastructure, realignment of the Hicks Creek tributary, and riparian and upland plantings would result in beneficial effects by improving the visual quality of the site.
Agriculture and Forestry Resources	No impact	<u>The Agriculture and Forestry Resources impact conclusions from the MND remain unchanged.</u> The Hicks Creek Offsite mitigation area does not possess agricultural or forestry uses. Implementation of the HMMP would not require conversion of forest land to non-forest uses.
Land Use and Planning	No impact	<u>The Land Use and Planning impact conclusions from the MND remain unchanged.</u> Implementation of the proposed offsite mitigation area in the Sierra Azul Open Space Preserve would not conflict with the existing land use onsite (hillsides, Other Public Open Lands, Regional Parks, Existing).
Mineral Resources	No impact	<u>The Mineral Resources impact conclusions from the MND remain unchanged.</u> The site does not possess mineral resource uses.
Population and Housing	No impact	<u>The Population and Housing impact conclusions from the MND remain unchanged.</u> No housing is present or proposed on the Hicks Creek Offsite Mitigation site.

Resource	2021 MND Analysis	July 2026 CEQA Addendum Analysis
Public Services	No impact	<u>The Public Services impact conclusions from the MND remain unchanged.</u> The proposed offsite mitigation would not affect population growth or demand for public services.
Transportation and Traffic	No impact	<u>The July 2026 Modified Project would not result in new or more severe impacts on Transportation and Traffic.</u> Construction-period truck trips would be limited due to the proposed reuse of excavated soil onsite for grading. Maintenance of the offsite mitigation property does not have the potential to affect transportation routes.
Utilities and Service Systems	Less than significant impacts. Solid waste and stormwater created by Project construction. Impacts are temporary.	<u>The Utilities and Service Systems impact conclusions from the MND remain unchanged.</u> The Hicks Creek Offsite Mitigation would not increase demand on Utilities and Service Systems. Solid waste created by construction activities would be repurposed for grading purposes onsite or disposed of offsite, resulting in a negligible volume of waste being recycled or diverted to landfills. No new utility service would be established onsite.
Wildfire	No impact.	<u>The Wildfire impact conclusions from the MND remain unchanged.</u> The Hicks Creek Offsite Mitigation area is located within a state responsibility area (SRA) high fire hazard severity zone. However, implementation of the HMMP would not expose people or structures to significant risk. Impacts would be less than significant.

Sources: County of Santa Clara. 1994 and 2026.

3.1 Air Quality, Energy, and Greenhouse Gas

The 2021 MND found that the GRBR Project would have a less-than-significant impact on air quality and no impact on energy and greenhouse gas emissions. The MND concluded that the Project would not result in long-term changes in emissions of air pollutants, would not conflict with implementation of San Jose's 2040 General Plan and BAAQMD's Bay Area 2017 Clean Air Plan, and would result in less-than-significant construction-related impacts with adherence to the following best management practices.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered 2 times per day or as needed to maintain a minimum soil moisture of 12%. Moisture content can be verified by lab samples or moisture probe.
2. All haul trucks transporting soil, sand, or other loose material offsite will be covered.
3. All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 miles per hour.
4. All trucks and equipment, including tires, will be washed prior to leaving the site.
5. Site entrances will be stabilized with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
6. All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

7. All vehicle speeds on unpaved temporary access roads will be limited to 15 miles per hour.
8. Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes. Clear signage will be provided for construction workers at all access points.
9. Heavy construction equipment and haul trucks over 50 horsepower must meet at least USEPA Tier 3 emission standards or be from model year 2010 or newer. Prior to construction, the contractor will submit to JPB a list of all proposed equipment and vehicles (off-road equipment will include the California Air Resources Board-issued Equipment Identification Number) and documentation supporting the USEPA tier rating for verification of compliance. If an unanticipated need for the use of equipment or a vehicle arises after construction has commenced, the contractor will provide the required documentation of compliance within 14 days after an identified emergency or when the need arises and prior to the use of the equipment or vehicle.
10. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.
11. A publicly visible sign will be posted with the telephone number and person to contact at JPB regarding dust complaints. This person will respond and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

Implementation of the updated HMMP, which includes offsite mitigation on Hicks Creek, would not change the air quality, energy, or greenhouse gas emissions impact conclusions of the MND. Construction activities at the mitigation property would include removal of concrete and rock masonry retaining walls along the channel banks, realignment of the Hicks Creek tributary through an existing swimming pool, and establishment of temporary construction staging areas. Additionally, implementation of the HMMP would include fish passage improvements through the removal of a constructed, 43.4-foot drop in the existing channel. Upon removal of constructed infrastructure in the Hicks Creek channel and associated tributary, riparian and upland plantings would occur throughout the property and impacted areas, as well as invasive plant removal and replacement with native species.

As stated in Section 5.8 of the HMMP, the mitigation site will be graded using standard earth-moving equipment. Onsite soil spoils generated from laying back the channel banks may be used to fill portions of the floodplain where hardscape features and Himalayan blackberry were removed. Given this, no off-haul of spoils is anticipated. Alternatively, all concrete, mortared rock, and wood retaining walls generated as part of demolition activities will be disposed of offsite, resulting in limited truck trips. Furthermore, the offsite mitigation property is located within the same air quality district as the GRBR Project, the Bay Area Air Quality Management district, and all construction activities would conform to the best management practices previously identified for the GRBR Project (BAAQMD 2026). Given this, construction emissions at the offsite mitigation property would not represent a substantial new source of emissions.

Once the demolition and planting phases of the HMMP are complete, operational emissions would be limited to periodic maintenance activities such as adjustments to the plant watering and schedule, erosion control maintenance, weed control, replacement planting, trash removal,

monitoring, and as-needed channel clearing. Given this, operational emissions at the offsite mitigation property would not represent a substantial new source of emissions.

The July 2026 Modified Project would not result in any new significant or more severe air quality impacts than those analyzed and addressed in the MND.

3.2 Biological Resources

The 2021 MND found that the GRBR Project would have less than significant impacts on biological resources with implementation of mitigation. The MND concluded that potentially significant impacts on steelhead and essential fish habitat (including fish stranding and entrainment, disruption of fish migration, fish relocation activities, toxic or hazardous spills, increased sediment and turbidity, and aquatic habitat modification) would be reduced to less-than-significant levels through implementation of Mitigation Measure BIO-1 and BIO-3 through BIO-8 (in-channel work window, biological monitoring, fish relocation, measures to minimize fish stranding and entrainment, SWPPP implementation, HMMP implementation, and construction best management practices [BMPs]). The MND also concluded that potentially significant impacts on western pond turtle and special-status nesting birds would be reduced to less than significant through implementation of Mitigation Measures BIO-3, BIO-9, BIO-11, and BIO-12 (biological monitoring, nesting bird surveys and buffers, in-channel work window, and worker environmental awareness training). The MND further concluded that the Project would result in permanent and temporary impacts on jurisdictional wetlands and waters of the U.S. and State and to riparian habitats (under the jurisdiction of the USACE, RWQCB, and CDFW), and that preparation and resource-agency approval of an HMMP (Mitigation Measure BIO-7)—together with site restoration—would mitigate those impacts, including impacts on ordinance-size trees; the MND also concluded the Project would not result in loss of San Jose heritage trees and would not require coverage under the Santa Clara Valley Habitat Plan because federally listed species covered under the HCP are not present and no special-status species under the California Endangered Species Act would be affected.

Similar to the GRBR Project, the Hicks Creek Offsite Mitigation area is located in the upper Guadalupe River watershed south of San Jose. Land cover types on the mitigation property consist of a combination of wetland and aquatic habitats and upland and riparian habitats as well as developed and disturbed areas (**Figure 3-1** and **Table 3-2**).

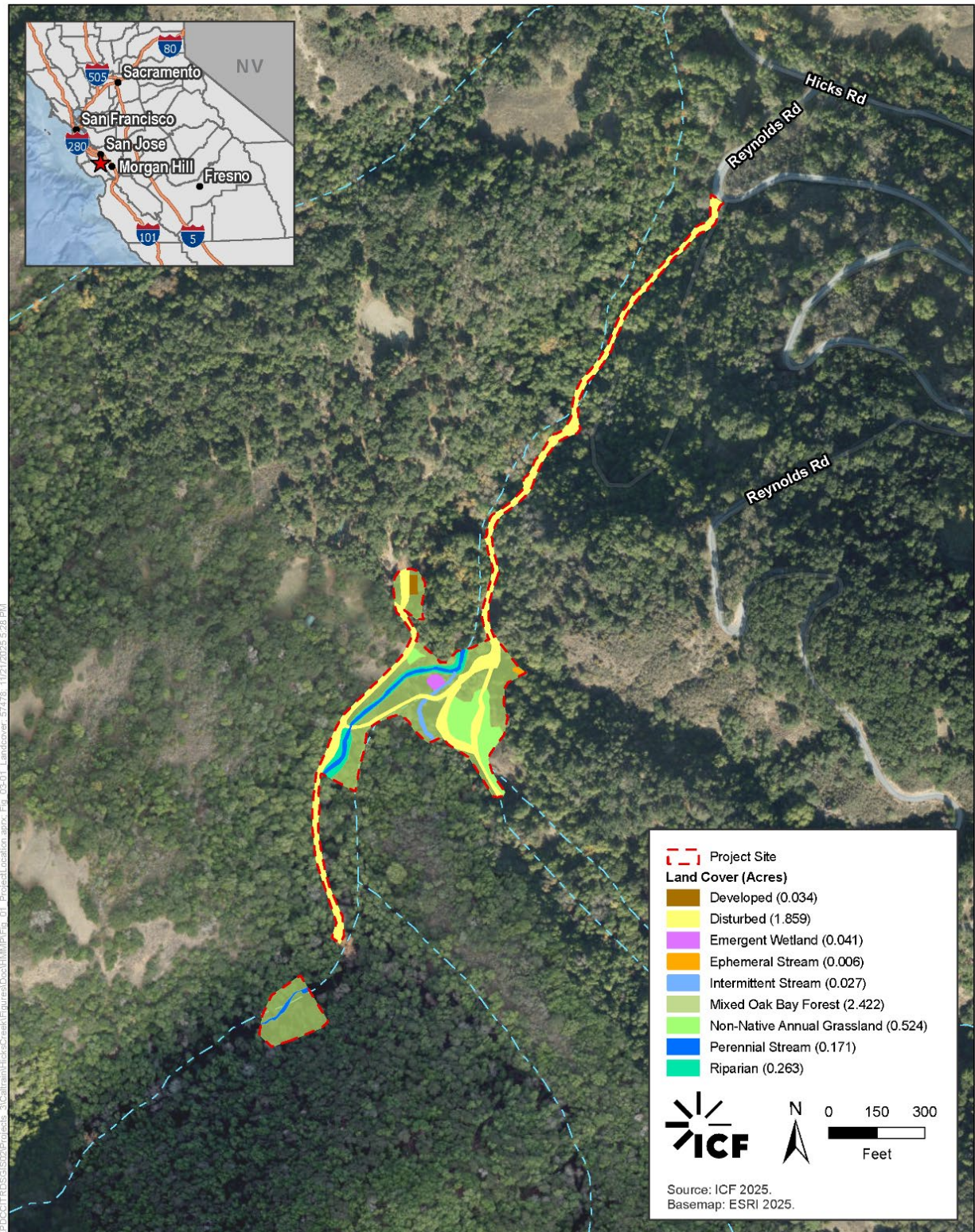


Figure 3-1. Landcover Types

Table 3-2. Land Cover Amounts Before and After Construction

Land Cover Type	Amount Before Construction (Acres)	Amount After Construction (Acres)	Amount Lost (-) or Gained (+) (Acres)
Disturbed	1.533	1.269	-0.264
Emergent Wetland	0.041	0.000	-0.041
Ephemeral stream	0.006	0.006	No change
Floodplain Wetland	0.000	0.037	+0.037
Intermittent stream	0.027	0.027	No change
Mixed oak bay woodland	1.595	0.976	-0.619
Native grassland	0.000	0.727	+0.727
Non-native annual grassland	0.389	0.165	-0.224
Perennial stream	0.130	0.180	+0.050
Riparian	0.263	0.599	+0.336
Total= 3.985 acres			
Net change in natural land covers: +0.266 acres			
Increase in aquatic and riparian habitats: +0.382 acres			
Area of enhanced aquatic and riparian habitats: 0.420 acres			

The proposed offsite mitigation plan proposes to remove legacy hardscape features installed prior to District ownership. The restoration design replaces these low-functioning, artificial in-channel structures with a naturalized stream corridor to support fish passage, backwater refugia, inset floodplain benches, and large wood and boulder structures that mimic natural geomorphic processes.

Work will primarily be confined to previously disturbed areas within the existing channel and adjacent riparian zone. Construction activities will follow BMPs developed under the District's Open Space Maintenance and Restoration Program, and regulatory permitting will be conducted in coordination with relevant state and federal agencies. JPB will conduct a minimum of 10 years of post-construction monitoring under a formal maintenance and monitoring plan. Monitoring will include both qualitative and quantitative assessments of revegetation success, channel stability, and aquatic habitat function. The plan includes adaptive management protocols to address unforeseen conditions and ensure the long-term success of the mitigation. District staff will review and approve the monitoring plan, and maintenance activities will be coordinated with the District to ensure consistency with its policies and ecological goals.

The proposed offsite mitigation would restore and enhance approximately 0.75 acre of aquatic, wetland, and riparian habitat on District lands within the Guadalupe River watershed, identified as a priority steelhead recovery area in the National Ocean and Atmospheric Administration Recovery Plan for Central California Coast Steelhead. The proposed restoration will provide year-round

rearing and migratory habitat for juvenile steelhead, reduce sediment delivery to downstream reaches, and expand native riparian vegetation. Key elements include:

1. Removal of existing in-channel concrete structures that disrupt stream hydrology and fish passage.
2. Regrading of incised banks and construction of a step-pool channel to restore hydrologic function and enable fish movement during low-flow periods.
3. Placement of large woody debris, coarse sediment, and floodplain benches to increase habitat complexity.
4. Removal of non-native vegetation and installation of native riparian and wetland vegetation to improve species composition, stabilize soils, and protect water quality.

Restoration actions include the removal of a concrete pool within the active stream channel, as well as the demolition of concrete and hardscape banks to reestablish a natural channel form. A section of chute-and-pool channel will be constructed to enhance fish passage and increase habitat complexity. These aquatic habitat improvements are intended to support multiple beneficial uses, including fish migration, spawning, preservation of rare and endangered species, and the enhancement of both cold and warm freshwater habitats. Inset floodplains are proposed along the channel and will become seasonally inundated, providing additional habitat diversity. The stream design also incorporates features specifically intended to improve conditions for amphibians and aquatic reptiles, such as the California red-legged frog and western pond turtle, both of which are known to occur near the offsite mitigation property.

Overall, the aquatic restoration design is primarily focused on improving habitat for steelhead, but it is also expected to benefit native herpetofauna by supporting their population viability over time. Additionally, the design may reduce habitat suitability for invasive predatory species such as bullfrogs, which are prevalent in the watershed. Revegetated areas within the Project will include aquatic habitats along the channel margins, freshwater emergent wetlands, and riparian plant communities. The selected plant palette is intended to enhance wildlife habitat quality and support a rich, diverse native understory.

Restoration work will be designed to enhance habitat in accordance with regulatory performance standards. The JPB will be responsible for design, construction, monitoring, maintenance, permitting, and CEQA compliance.

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) species list (USFWS 2025) identified eleven federally threatened, endangered, and proposed species that may occur in the Project location or may be affected by the Project. The CDFW California Natural Diversity Database (CNDDB) (CDFW 2025a) identified three additional federally threatened species within 5 miles of the offsite mitigation area. The IPaC and CNDDB lists are included as Appendix A (USFWS 2026). These species include:

Bird species:

- California condor (*Gymnogyps californianus*) – Endangered
- California Least Tern (*Sternula antillarum browni*) – Endangered

Invertebrate species:

- Bay checkerspot butterfly (*Euphydryas editha bayensis*;) – Threatened
- Monarch butterfly (*Danaus plexippus*) – Proposed Threatened
- Zayante band-winged grasshopper: (*Trimerotropis infantilis*) – Endangered

Amphibian species:

- California red-legged frog (*Rana draytonii*) – Threatened
- California tiger salamander (*Ambystoma californiense*) – Threatened
- Foothill yellow-legged frog (*Rana boylei*) – Threatened

Reptile species:

- Northwestern pond turtle (*Actinemys marmorata*) – Proposed Threatened

Fish species:

- Tidewater goby (*Eucyclogobius newberryi*) – Endangered
- Steelhead – Central California Coast DPS (*Oncorhynchus mykiss*) – Threatened

Plants species:

- Metcalf Canyon Jewelflower *Streptanthus albidus* ssp. *Albidus* – Endangered
- Robust Spineflower *Chorizanthe robusta* var. *robusta* – Endangered
- Santa Clara Valley Dudleya *Dudleya setchellii* – Endangered

The offsite mitigation area was reviewed for suitable habitat for the USFWS-listed species and was evaluated against the known occurrences of listed species. It was determined the offsite mitigation property provides suitable habitat for five federally listed or proposed species including California red-legged frog, California tiger salamander, foothill yellow-legged frog, northwestern pond turtle, and steelhead; therefore, these species have the potential to occur in the offsite mitigation area.

California red-legged frogs require ponds, lakes, or ponded areas within creeks or streams that hold water for a sufficient period of time to allow for completion of the breeding cycle. California red-legged frogs spend a considerable amount of time resting and feeding in riparian vegetation, but the species will utilize upland habitat with abundant mammal burrows within relative proximity to aquatic habitat. This species has been documented migrating overland up to one mile from breeding habitat and is typically found from sea level to 5,000 feet. Breeding for this species occurs from mid-October through June. The nearest CNDDB record for California red-legged frog (occurrence #1735) is located approximately 0.41 mile northeast of the offsite mitigation area near Guadalupe Creek. Hicks Creek and surrounding riparian habitat provided suitable habitat for this species. Breeding in the creek is unlikely; however, the concrete-lined pool, an emergent wetland, may provide potential breeding habitat for the species. Additionally, Hicks Creek is a tributary to Guadalupe Creek which has documented presence of this species. This species may occur in the offsite mitigation area.

California tiger salamanders require both aquatic and upland habitat at various stages of their lifecycle. Adults use ponds, vernal pools as well as other ephemeral and permanent water bodies that hold water for at least 12 weeks for breeding and larval development. Adults use small mammal burrows and underground passages constructed by California ground squirrel, and valley pocket gopher for shelter and protection from predators and desiccation. The nearest CNDDB record for

California tiger salamander (occurrence #443) is located approximately 0.39 mile north of the offsite mitigation property on the Guadalupe Waste Management Facility property. While suitable aquatic habitat is not present for this species in the Project area there is suitable upland habitat for this species. This species may occur in the offsite mitigation area.

Foothill yellow-legged frog is found in or near rocky streams and rivers in a variety of habitats between 0 and 5,000 feet in elevation. This species occurs in many different vegetation communities including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral and wet meadows. Breeding stream habitat is typically shallow, rocky and at least partially exposed to direct sunlight. This species is closely associated with streams and is rarely observed far from the water's edge. The nearest CNDDDB record for foothill yellow-legged frog record (occurrence #87) is located approximately 385 feet north of the offsite mitigation area at Guadalupe Creek. Hicks Creek and surrounding habitat provided suitable habitat for this species. Additionally, Hicks Creek is a tributary to Guadalupe Creek which has documented presence of this species. This species may occur in the offsite mitigation area.

Northwestern pond turtle occurs in permanent and semi-permanent aquatic habitats such as ponds, lakes, streams, wetlands, and irrigation canals with abundant vegetation and basking structures, in woodland, forest, and grassland habitats up to 6,700 feet in elevation. Females typically nest within 300 feet of aquatic habitat but may disperse up to 1,600 feet to access suitable nesting, overwintering, or additional aquatic habitat. The breeding season occurs from March through August. During overwintering, September through May, they typically bury in upland leaf litter. The nearest CNDDDB record for northwestern pond turtle (occurrence #1322) is located approximately 0.32 mile west of the offsite mitigation area at Cherry Springs Pond. While suitable aquatic habitat is not present for this species in the Project area there is suitable upland habitat for this species. This species may occur in the offsite mitigation area.

Steelhead occupy freshwater streams or lakes during spawning and then migrate back to the open ocean to live during their adult non-spawning phase of their life cycle. Steelhead spend most of the year in estuaries or open ocean and only return to freshwater to spawn. Steelhead begin migrating back to fresh water beginning in December and the primary spawning season is from February through April, in small streams and tributaries. There are CNDDDB records for steelhead in Hicks Creek and this species is expected to occur in the offsite mitigation area.

CNDDDB (CDFW 2025b) identified six California state threatened, endangered, or candidate species potentially present in the offsite mitigation area:

Bird species:

- Bald eagle (*Haliaeetus leucocephalus*) – Endangered
- Burrowing owl (*Athene cunicularia*) – Candidate Threatened or Endangered

Invertebrate species:

- Crotch's bumble bee (*Bombus crotchii*) – Candidate Endangered
- Western bumblebee (*Bombus occidentalis*) – Candidate Endangered

Amphibian species:

- California tiger salamander (*Ambystoma californiense*) – Threatened

- Foothill yellow-legged frog (*Rana boylei*) – Endangered

The offsite mitigation property was reviewed for suitable habitat for the CNDDB-listed species and was evaluated against the known occurrences of listed species. It was determined the offsite mitigation area provides suitable habitat for four state-listed species including California tiger salamander, foothill yellow-legged frog, Crotch's bumble bee and mountain lion; therefore, these species have potential to occur. Additionally, the Southern California/Central Coast Evolutionarily Significant Unit of mountain lion (*Puma concolor*), including the Central Coast North population, was listed as state threatened on February 12, 2026. CNDDB records are not expected for mountain lion given the Southern California/Central Coast Evolutionarily Significant Unit's recent listing. Although there are no CNDDB records for mountain lion within 5 miles of the offsite mitigation area, the species has potential to occur in the offsite mitigation area as the property is in range of the species, and the Sierra Azul open space where the mitigation property is located has a known population of mountain lion. Species not yet reviewed on the USFWS list above with the potential to occur are discussed in greater detail below.

Crotch's bumble bee is found primarily in California within the Mediterranean region, Pacific Coast, Western Desert, Great Valley and adjacent foothills in southern California as well as in southwest Nevada near the California border. This species is found in grasslands and shrublands preferring hotter, drier environments. Crotch's bumble bee is a short-tongued species generalist and is often associated with plants such as milkweeds, dusty maiden, lupines and other grassland species. Leaf litter and woody forest edge can provide overwintering habitat, but this species typically nests underground in abandoned rodent burrows, or sometimes above ground in tree cavities or old bird nests. They have also been found nesting in man-made structures such as walls, rubble or abandoned furniture. The nearest CNDDB record for Crotch's bumble bee record (occurrence #100) is located approximately 4.86 miles east of the Project site. There is non-native annual grassland present in the offsite mitigation area that provides suitable habitat for Crotch's bumble bee. This species may occur in the offsite mitigation area.

Mountain lion in California occurs in redwoods and mixed forests, coastal brushlands, mountains, and riparian corridors. Around 40% of California is considered suitable habitat for the species. Territories encompass up to 300 miles for females and 500 miles for males. Reproduction is not limited to a season for this species and females may produce offspring any time of year. Mountain lion diets mostly consist of large animals such as deer, elk, pronghorn, bighorn sheep, wild pigs, feral horses and burros. Feeding behavior may change in response to environmental conditions, prey availability, and competition with other large carnivores which may result in opportunistic hunting of other animals including poultry, small livestock, or pets. No CNDDB records for the species occur within 5 miles of the offsite mitigation area. All land cover types on the mitigation property are considered habitat for mountain lion and this species may occur.

3.2.1.1 Other Special-Status Species

In addition to state- and federally listed threatened and endangered species, a comprehensive assessment was performed for other wildlife and plant species identified in a search of CNDDB included in Appendix A. No special-status plant species including those with California Native Plant Society Rare Plant Ranks 1A to 4 are expected in the offsite mitigation area based on available habitat conditions and known occurrences of each plant species. It was determined that the mitigation area provides suitable habitat for five additional wildlife species designated as a species

of special concern or fully protected by the state; therefore, these species have the potential to occur. These species include:

Bird species:

- Golden eagle (*Aquila chrysaetos*) – Fully protected

Amphibian species:

- California giant salamander (*Dicamptodon ensatus*) – Species of special concern
- Santa Cruz black salamander (*Aneides niger*) – Species of special concern

Mammal species:

- Pallid bat (*Antrozous pallidus*) – Species of special concern
- San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) – Species of special concern

California giant salamander is endemic to Northern California and occurs in damp, coastal forests in both montane and valley-foothill riparian habitats within two regions. The first range is comprised of the counties of Sonoma, Napa, Marin, Southwestern Lake County, Western Glenn County, and Southern Mendocino County counties. Adults can develop into a terrestrial form or an aquatic form. The terrestrial form is found under surface litter and in tunnels, while the aquatic form is found most commonly in cool rocky streams but also occasionally in lakes and ponds. This is a primarily nocturnal species; however, diurnal activity can occur after the first rains following dry, during extend rain events, and during mating season within 150 to 200 feet of a water source. The nearest CNDDDB record for California giant salamander (occurrence # 104) is located 1.49 miles southeast of the offsite mitigation property near Rincon Creek. Hicks Creek and surrounding riparian habitat provide similar suitable habitat for this species. This species may occur in the mitigation area.

Golden eagle occurs in a wide variety of habitats, including open or partially open areas with high topographic relief such as mountains, rolling hills, and canyons. Breeding habitat is also varied and includes forest, woodland, prairie, grassland, chaparral, sagebrush, sage-juniper flats, and desert. Nests are typically placed on cliffs or large trees, and occasionally on manmade structures such as transmission towers. Foraging habitat includes both open terrain and forested landscapes. Golden eagles occur from sea level to 11,500 feet in elevation. The nearest CNDDDB record for golden eagle (occurrence #331) is located approximately 2.21 miles southeast of the offsite mitigation property in the Sierra Azul Open Space Preserve. There is moderate nesting habitat present in the offsite mitigation area and the surrounding vicinity. This species may occur in the mitigation area.

Pallid bat is found throughout California. Primary roost structures used by pallid bats include caves, crevices, and mines, and with occasional use of hollow trees, buildings, and bridges. This species forages in open habitats such as shrub-steppe grasslands, oak savannah grasslands, open ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. The nearest CNDDDB record for pallid bat (occurrence #100) is located approximately 1.47 miles northwest of the offsite mitigation property near Venture Christian Academy. The offsite mitigation area provides both suitable tree roosting habitat and manmade structures roosting habitat. This species may occur in the mitigation area.

San Francisco dusky-footed woodrat is a rodent species native to California, found in the Santa Cruz Mountains and the Bay Area within forest and shrubland communities. This species is known

for building large stick houses known as middens that can range from 2 feet to 5 feet in height with base diameters of up to 8 feet. Middens are also sometimes built within the crotches of trees and hollow logs. This species is an herbivore generalist and consumes a wide variety of nuts, fruits, foliage, fungi and some forbs. The nearest CNDDDB record for San Francisco dusky-footed woodrat (occurrence #34) is located approximately 4.42 miles east of the offsite mitigation property in Almaden Quicksilver Park. During a site visit conducted on October 9, 2025, and an ICF biologist observed one small midden outside of the work zones within the mitigation area. This species is expected to occur in the mitigation area.

Santa Cruz black salamander is endemic to California, with a limited range west of the San Francisco Bay and south of the San Francisco Peninsula in Santa Cruz County, western Santa Clara County, and southern San Mateo County. This terrestrial species does not inhabit streams or other bodies of water; however, it is rarely encountered very far from water. This species occurs within mixed deciduous woodland, coniferous forests, and coastal grasslands under rocks near streams, in talus, under damp logs, and other objects. Adults forage for small invertebrates on the ground at night during wet weather. Invertebrate prey species include millipedes, ants and termites. Reproduction is terrestrial followed by egg deposition below ground in moist cavities where the female remains until the young hatch. The young develop completely in the egg and hatch fully formed. The nearest CNDDDB records for Santa Cruz black salamander (occurrence #104) is located approximately 1.50 miles southeast of the offsite mitigation area near Rincon Creek. Hicks Creek riparian habitat provides similar suitable habitat for this species. This species may occur in the mitigation area.

The offsite mitigation may temporarily affect the species noted above with potential to occur at the offsite mitigation site during construction due to construction equipment activity and movement, temporary removal of vegetation, and temporary dewatering of Hicks Creek and the tributary. Once construction is complete and planting has occurred and matured, the offsite mitigation will provide benefits to native fish and wildlife species as it will result in a net increase and enhancement of native aquatic and upland habitats on site.

With implementation of Mitigation Measures BIO-01 and BIO-03 through BIO-14 identified in the Final IS/MND and MMRP and the avoidance and minimization measures from the application for the CDFW Incidental Take Permit (JPB 2026a), the application for the USFWS Programmatic Biological Opinion (JPB 2026b), and the application for the NMFS Programmatic Biological Opinion (JPB 2026c), the Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered species, or eliminate important examples of the major periods of California history or prehistory. In the long term, the impacts of the Project will be beneficial. Specifically, the Project will benefit steelhead and Chinook salmon by widening the channel, increasing floodplain habitat, increasing high velocity refuge habitat for juvenile salmonids, enhancing fish passage conditions, and reducing bank scour.

Mitigation Measures BIO-01 and BIO-03 through BIO-14 are described below.

Mitigation Measure BIO-01: In-channel Work Window. All in-channel work will be limited to June 15 through October 31, a timeframe set by CDFW, USFWS, and NMFS as a time when special-status fish are least likely to be present.

Mitigation Measure BIO-03: Biological Monitor. A qualified biologist with appropriate knowledge and experience in the biology, life history, and identification characteristics of fish that are likely to be encountered during Project activities will be present during all in-water construction activities. In-water construction activities are considered work within the active river channel and include all Project-related activities such as river diversion, dam installation and removal, channel dewatering, and fish relocation activities. This monitor will also be given the authority to halt any work they deem may be a cause for concern that may endanger fish or wildlife species or resources.

In addition, biologists with knowledge of the species with potential to occur on the site, and control of invasive species will be present during vegetation removal, dewatering, excavation, bank stabilization, and revegetation activities to monitor compliance with environmental requirements.

Mitigation Measure BIO-04: Fish Relocation. Prior to dewatering, fish relocation efforts will be implemented to reduce the likelihood of fish becoming stranded as water levels recede. Fish exclusion netting or screens will be installed directly upstream and downstream of the channel segment to be dewatered to prevent fish from re-entering the work area after relocation. The bottom edge of the net or screen will be completely secured to the channel bed. Mesh will be no greater than 1/8 inch (0.125-inch) diameter. While in place, the fish exclusion netting or screens will be regularly checked and cleaned of debris to permit free flow of water. Fish exclusion netting or screens will be installed prior to fish relocation activities and will be removed once streamflow is diverted through the temporary diversion pipes.

Fish relocation and dewatering activities will only occur between June 15 and October 31. Various methods may be used to capture fish (e.g., dip net, beach seine); however, backpack electrofishing is expected to be the most effective, based on habitat complexity and in channel structure (e.g., woody debris, cobble, riprap) within the Project area. Backpack electrofishing will follow NMFS (2000) guidelines for electrofishing for anadromous salmonids. All captured fish will be identified, enumerated, and relocated to the nearest appropriate site downstream of the work area. Fish may be temporarily held in 5-gallon buckets with cool, shaded, aerated water. Air and water temperatures will be measured periodically during fish relocation.

Any steelhead captured during the fish relocation effort will be held separately from other fish species. A thermometer will be placed in holding containers to ensure temperatures remain suitable. If steelhead appear stressed or if water temperatures become too warm, steelhead will be immediately released downstream of the work area.

Mitigation Measure BIO-05: Minimize Fish Stranding and Entrainment. To minimize risks to any special-status fish species that may be present in the Project site, a qualified fisheries biologist approved by CDFW, NMFS, and USFWS (as required) will be on-site during the dewatering process. Prior to dewatering, the best means to bypass flow through the work area to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic invertebrates will be determined. Cofferdams will be constructed using sand or gravel bags sealed with sheet plastic. Cofferdams will be located at the upstream and downstream end of the section of stream getting dewatered. When bypassing streamflow around the work area, streamflow below the construction site will be maintained similar to the unimpeded flow at all times.

Pumping will likely be required to temporarily divert flows around the work site during cofferdam construction prior to diverting flows through pipes. Pumps will be placed in flat areas, away from the stream channel, and secured by tying off to a tree or staked in place to prevent movement by vibration. Pump intakes will be screened following NMFS screening criteria to prevent fish

entrainment or impingement. Pump intakes will be periodically checked for impingement of fish or amphibians, which if found, will be relocated to a safe location downstream of the dewatered channel segment. Water pumped from the upstream end of the work site will be routed through long sections of hosing around the work site and returned to the river downstream of the coffer dam. The downstream end of the pump hoses will either be submerged in a deep-water section or positioned over a water-dissipating device to reduce scour and limit turbidity increases. A qualified fisheries biologist will be on-site during channel dewatering activities to inspect the dewatered area for any stranded fish and relocate them to nearby suitable habitat. Once the cofferdams are installed and the diversion pipes are in place, all streamflow will be diverted around the worksite through gravity fed diversion pipes. Diversion pipes will not be screened to allow downstream fish migration through the work area.

To minimize risks to any special-status fish species that may be present in the Project site during re-watering, a qualified biologist approved by CDFW, NMFS, and USFWS (as required) will be on-site during the re-watering process. The downstream cofferdam will be removed first. Clean river run gravel may be left in the stream channel, provided it does not impede streamflow or fish passage. After the downstream cofferdam is removed, the diversion pipes will be removed in sections beginning at the downstream end and working toward the upstream end. The upstream cofferdam will be removed last.

To the extent feasible, all temporary diversion structures and the supportive material will be removed within 48 hours after in-channel work for each work window is completed.

Mitigation Measure BIO-06: Develop a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP will be developed and implemented for the Project that includes BMPs for erosion and sediment controls such as protecting existing storm drain inlets and stabilizing disturbed areas. Specific BMPs that may be implemented to reduce the sediment load of stormwater runoff from the adjacent upland materials management areas include installing control devices (e.g., earth berms, asphalt curbs, silt fences/curtains, or other barriers) around the materials handling areas and protecting existing catch basins with silt fences, asphalt curbs, or gravel bags. Under the SWPPP, contractors will store fuel and chemicals in such a manner to prevent accidental spills from affecting stormwater (e.g., kept within secondary containment). The SWPPP will include a spill control plan, which will address spills of hazardous materials in the materials handling areas. A full complement of oil spill clean-up equipment will be on-site and available for immediate deployment should there be an accidental discharge of fuel, lubricant, or hydraulic oils. Specific elements of the SWPPP will include the following commitments.

- Fueling and servicing of mobile equipment will be restricted to at least 100 feet from the top of bank.
- Consideration will be given to maintaining a vegetated buffer strip between staging/excavation areas and receiving waters.
- Slopes with exposed soil will be stabilized (e.g., with erosion control blankets), and channels will be protected (e.g., using silt fences or straw wattles).
- Stockpiling or placement of erodible materials in waterways or along areas of natural stormwater flow where materials could be washed into waterways will be prohibited.
- Stockpiled soil will be stabilized with geotextile or plastic covers.
- Site ingress/egress locations will be stabilized.

- All trash from the site will be removed daily to avoid attracting potential predators. Personnel will clean the work site before leaving each day by removing all litter and construction-related materials.
- Fiber rolls used for erosion control will be certified as free of noxious weed seed. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Erosion control measures will be placed between the outer edge of the buffer and the Project site.
- Vehicles operated within and adjacent to streams will be checked and maintained daily to prevent leaks of materials that, if introduced to the water, could be deleterious to aquatic life.
- Washing of vehicles will be permitted only at approved areas.

Mitigation Measure BIO-07: Develop a Habitat Mitigation and Monitoring Plan (HMMP). The HMMP will include plans for the restoration and enhancement of aquatic and riparian habitats, including a planting plan, including species composition, success criteria, and a monitoring schedule. As part of the riparian planting plans, native trees affected by the Project will be replaced at a 3:1 ratio, and non-native trees will be replaced with native trees at a 1:1 ratio. The HMMP will also include conceptual designs for in-channel improvements (e.g., in-channel structures to improve fish habitat quality) and a post-construction fish passage monitoring schedule. The HMMP will include evaluation of bioengineered bank treatments that incorporate live vegetation. Maintenance of natural stream characteristics, such as riffle-pool sequences, riparian canopy, sinuosity, floodplain, and a natural channel bed, will be important considerations in the mitigation design. Topsoil and gravel material incorporated in the restoration of the channel will be reused from material removed during construction to the extent practicable. The HMMP will be incorporated in JPB's permit applications to USACE, CDFW, and RWQCB.

Mitigation Measure BIO-08: Implement Construction-related BMPs. To minimize impacts on water quality, the Project will include measures to avoid and minimize potential adverse effects on listed species. The following are specific measures relevant for the protection of steelhead.

- Construction will occur only during dry periods.
- Prior to storm events, all construction activities will cease, and appropriate erosion control measures will be implemented.
- Soil, silt, or other organic materials will not be placed, stockpiled, or stored where such materials could pass into surface water or surface water drainage courses during unexpected rain events.
- All areas disturbed by Project activities will be protected from washout or erosion prior to the onset of the rainy season.
- All temporarily affected areas will be restored to pre-construction contours and conditions upon completion of construction activities.
- Prior to initiation of any waterside work, erosion control measures will be used throughout all phases of operation where silt and/or earthen fill threaten to enter waters of the U.S and/or state.
- To prevent inadvertent entrapment of animals during excavation, all excavated, steep-walled holes or trenches more than 2-feet deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks.

Mitigation Measure BIO-09: Nesting Birds. If practicable, construction will be scheduled to commence outside the avian nesting season (e.g., prior to February 1 or after September 15).

If construction must occur within the avian nesting season (from February 1 to September 15), all suitable habitats located within the Project's area of disturbance, including staging and storage areas plus a 250-foot buffer around these areas, will be thoroughly surveyed, as feasible, for the presence of active nests by a qualified biologist no more than 5 days before commencement of any site disturbance activities and equipment mobilization. If Project activities are delayed by more than 5 days, an additional nesting bird survey will be performed. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys will be documented.

If pre-construction nesting bird surveys result in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), will take place within 250 feet of non-raptor nests and 1,000 feet of raptor nests, or as determined by a qualified biologist in consultation with CDFW, until the chicks have fledged.

The biologist will prepare a written record of survey results and implementation of any avoidance/minimization measures to be kept on file at the Caltrain office. The biologist will monitor any active nests to determine when young have matured sufficiently to have fledged.

Mitigation Measure BIO-10: Roosting Bats. A qualified biologist will conduct a preconstruction survey within 14 days prior to construction activities. If an occupied maternity or colony roost is detected, the biologist will contact CDFW to determine the appropriate buffer relative to the:

- proximity and noise level of Project activities;
- distance and amount of vegetation or screening between the roost and construction activities; and
- species-specific needs, if known, such as sensitivity to disturbance.

The buffer will remain in place until construction is completed. If the roost is in vegetation or in a structure that is planned to be removed, the qualified biologist will work with CDFW to devise a plan to exclude the bats and develop and implement any needed mitigation measures.

The biologist will prepare a written record of survey results and implementation of any avoidance/minimization measures to be kept on file at the Caltrain office. The biologist will recommend additional measures if a bat roost is found.

Mitigation Measure BIO-11: Western Pond Turtle. A qualified biologist will conduct pre-construction surveys for western pond turtle in the study area prior to the initiation of construction activities. If western pond turtle is found in the study area during pre-construction surveys, CDFW will be notified within 72 hours to determine the appropriate measures to prevent impacts on the species.

A qualified biologist will be present during vegetation clearing and during any dewatering activities. If any western pond turtles are observed in the construction area, including any dewatered areas, they will be captured and relocated to an appropriate location up or downstream of the construction area in coordination with CDFW. The qualified biologist will have the authority to stop construction until the western pond turtle can be safely relocated.

Mitigation Measure BIO-12: Worker Environmental Awareness Training. Before any construction activities begin, an approved biologist will conduct a training session for all construction personnel to discuss special-status species that may occur in the Project site (California red-legged frog, Foothill yellow-legged frog, California tiger salamander, Crotch's Bumblebee, mountain lion, pallid bat, San Francisco dusky-footed woodrat, California giant salamander, Santa Cruz black salamander, steelhead, western pond turtle and various nesting birds). The biologist will inform all construction personnel about the life history of the relevant species, the regulatory protections afforded each species, and protective actions to implemented if special-status species are observed during construction.

Mitigation Measure BIO-13: Environmentally Sensitive Areas. Clearing within the Project site will be confined to the minimal area necessary to facilitate construction activities. To ensure that construction equipment and personnel do not affect sensitive aquatic or terrestrial habitat identified within or adjacent to the Project boundary, bright-colored barrier fencing will be erected to clearly delineate the habitat to be avoided (environmentally sensitive areas). Fencing will also be used to mark ordinance trees to be protected in-place within temporary construction access/staging areas.

Mitigation Measure BIO-14: Control of Invasive Species. Invasive species within the limits of construction work will be removed under the supervision of a biologist to ensure removal and disposal methods minimize further propagation. Seed mixtures applied for erosion control will not contain invasive non-native species.

In addition, all of the avoidance and minimization measures (AMMs) from the application for the CDFW (concerning state-listed species), the application for the USFWS Programmatic Biological Opinion (concerning federal-listed wildlife species), and the application for the NMFS Biological Opinion (concerning federal-listed fish species), as modified in consultation with CDFW, NMFS, and USFWS, also apply to the offsite mitigation work and are incorporated by reference.

With implementation of Mitigation Measures BIO-1 and BIO-3 through BIO-14 and the AMMs from the CDFW Incidental Take Permit, the USFWS Programmatic Biological Opinion, and the NMFS Programmatic Biological Opinion (as modified in consultation with CDFW, USFWS, and NMFS), the July 2026 Modified Project would not result in any new significant or more severe impacts on biological resources beyond those analyzed and addressed in the MND.

3.3 Hydrology and Water Quality

The 2021 MND concluded that the GRBR Project would result in no impacts related to violating water quality standards or discharge requirements, groundwater supplies, surface runoff, stormwater drainage systems, flood flow, flood hazard, or obstruction of a water quality control plan. The MND concluded that the GRBR Project would result in less-than-significant impacts related to erosion or siltation due to temporary disturbance of construction activities, as well as a long-term increase in impervious surface area. Less-than-significant erosion and siltation impacts would be addressed through implementation of the SWPPP during construction and adherence to the Santa Clara Valley Urban Runoff Pollution Prevention Program C.3 Stormwater Handbook for post-construction stormwater management.

Implementation of the updated HMMP, which includes proposed offsite mitigation on Hicks Creek, would not change the impact conclusions of the MND (ICF 2026).

Similar to the GRBR Project, the HMMP would require a SWPPP to be prepared and implemented prior to site clearing. Construction activities onsite would include, but not be limited to, removal of concrete and rock masonry retaining walls along the channel banks, realignment of the Hicks Creek tributary, grading, and establishment of temporary construction staging areas. Grading activities will include laying back channel banks and slopes and floodplain grading following removal of hardscape features. The creek would be temporarily diverted during realignment. Subsequent to demolition and grading activities, riparian and upland plantings would occur throughout the property and impacted areas, as well as invasive plant removal and replacement with native species. Specific erosion control measures and BMPs would be implemented to offset the loss of soil or sediment to erosion during and immediately after the completion of construction and before establishment of the erosion control seed mix. Silt fencing, fiber rolls, jute matting and/or other erosion control measures and techniques would be implemented.

Once demolition and planting phases of the HMMP are complete, operational impacts on hydrology and water quality would be limited to irrigation, periodic maintenance activities such as adjustments to the plant watering schedule, erosion control maintenance, weed control, replacement planting, trash removal, monitoring, and as-needed channel clearing. Once implemented, the offsite mitigation would result in beneficial effects on Hicks Creek resulting from restoration of the natural stream functions and fish passage. Operational impacts at the offsite mitigation property would not have the potential to result in new or more severe impacts.

The July 2026 Modified Project would not result in any new significant or more severe hydrology and water quality impacts than the impacts analyzed and addressed in the MND.

3.4 Geology and Soils

The 2021 MND found that the GRBR Project would result in no impacts on geology and soils. The MND concluded that the Project site was not located in the vicinity of an earthquake fault zone and it would not be subject to impacts from high seismic ground shaking, seismic-related ground failure, liquefaction, or landslides. Construction-period soil erosion would be addressed through adherence to an NPDES Permit and SWPPP BMPs. Lastly, the MND concluded that the GRBR Project site was not located in a geologic unit or soil that is unstable, incapable of supporting the use of septic tanks or alternative waste water disposal systems, or subject to paleontological resources or sites that may be damaged or destroyed.

Implementation of the updated HMMP, which includes proposed offsite mitigation on Hicks Creek, would not change the impact conclusions of the MND.

Similar to the GRBR Project, the Hicks Creek Offsite Mitigation property is not located in close proximity to an earthquake fault zone. The closest of which is located over 6 miles southwest. However, the mitigation property is located in the larger San Francisco Bay Area which is susceptible to ground shaking, and the mitigation property boundaries also contain and or are located near areas subject to landslides and liquefaction (USGS. 2026). Implementation of the HMMP would involve demolition of infrastructure along the channel banks, realignment of the Hicks Creek tributary, riparian and upland planting, invasive plant removal, and monitoring. The mitigation plan would not construct new structures or infrastructure within the mitigation property. As previously noted, the Hicks Creek Offsite Mitigation would be required to adhere to BMPs identified in the SWPPP prepared for the Project. Implementation of these measures would avoid or reduce potential

impacts, and no new or more severe construction impacts are anticipated. Once constructed, maintenance of the site would not have the potential to introduce new or more severe impacts related to geology and soils.

The July 2026 Modified Project would not result in any new significant or more severe geology and soils impacts than those analyzed and addressed in the MND.

3.5 Parks and Recreation

The 2021 MND concluded that the GRBR Project would not result in impacts on existing parks or recreation facilities. Consistent with the GRBR Project, the proposed offsite mitigation does not include new residences and thus would not directly or indirectly induce population growth with the potential to exacerbate use of recreation areas and facilities. The Hicks Creek Offsite Mitigation area is managed by Midpen and is located within the Sierra Azul Open Space Preserve in Santa Clara County, California. The Sierra Azul Preserve is the largest open space area managed by Midpen and it protects more than 19,000 acres of wilderness in the Santa Cruz Mountains. The preserve is divided into four areas, two of which are open to the public, Kennedy-Limekin and Mount Umunhum. The Kennedy-Limekiln and Mount Umunhum areas were opened in 2017 after a nearly decade-long effort to restore the summit and remove abandoned military buildings and hazardous materials. The Cathedral Oaks and Rancho de Guadalupe areas are not presently accessible to the public but opening them is a priority for Midpen.

The preserve encompasses 26 miles of multiuse trails for hiking, dog walking, biking and horseback riding, and offers visitors views of serpentine grasslands, rocky and steep chaparral, dense stands of bay trees, shaded oak woodland forests, and deep ravines and riparian corridors.

Implementation of the offsite mitigation area within the Rancho De Guadalupe area aligns with Midpen's goals of restoring the preserve and removing dilapidated structures, resulting in a beneficial impact to the preserve. Construction activities would include removal of existing hardscapes located within the offsite mitigation area and realignment of Hicks Creek to improve natural stream functions and fish passage. Upon removal of constructed infrastructure in the channel and associated tributary, riparian and upland planting would occur throughout the property, improving the overall condition of the preserve for future recreational use. No temporary access impacts are anticipated because the Rancho De Guadalupe area is not currently open to the public. Following completion of the demolition and planting phases of the HMMP, operational impacts would be limited to routine maintenance, trash removal, weed control, and irrigation. Given this, no temporary or permanent impacts on recreational resources area anticipated, and a beneficial effect would occur related to future recreational use of the Rancho De Guadalupe area.

The July 2026 Modified Project would not result in any new significant or more severe parks and recreation impacts than the impacts analyzed and addressed in the MND.

3.6 Cultural Resources

The 2021 MND concluded that the GRBR Project would not result in impacts on cultural or tribal cultural resources. JPB conducted a cultural resources record search at the California Historical Resource Information System's Northwest Information Center on October 18, 2018, and the search

revealed no California Register of Historic Places or National Register of Historic Places-listed or eligible resources within the project area.. Based on the results of the cultural resources records research and additional geoarchaeological investigation that was conducted for the Project, the MND determined that no known historic or prehistoric buried archaeological resources, human remains, or resources anticipated to be culturally significant to a California Native American tribe were present in the project area and no impacts on cultural resources or tribal cultural resources were anticipated. Implementation of the updated HMMP, which includes proposed offsite mitigation on Hicks Creek, would not change the impact conclusions of the MND.

ICF conducted a geoarchaeological sensitivity analysis review, a records search at the California Historical Resources Information System's Northwest Information Center (NWIC) at Sonoma State University, and an archaeological and built environment field survey of the Hicks Creek Offsite Mitigation area in October 2025. Research and review of pertinent geologic and geoarchaeological studies of the approximately 5.6-acre area of potential effect (APE) included the following resources.

- Geologic Maps of California
- Far Western Anthropological Research Group's Geoarchaeological studies of California Department of Transportation District 4 and District10 (Meyer and Rosenthal 2007)

According to the archaeology sensitivity analysis, surface soils within the APE date from the Pre-Holocene Epoch (greater than 11,800 years), indicating that the APE has a low sensitivity for buried archaeological sites, since these landforms were formed prior to human occupation. The APE is not located within alluvial fan deposits, which tend to have a higher sensitivity for buried archaeological resources because alluvial fans are primarily Holocene-aged (11,800 to 2,000 years), thus decreasing the degree of sensitivity to a low potential for encountering buried archaeological resources. The combination of the analysis from Meyer and Rosenthal (2007), and geologic maps indicates that the potential for encountering buried archaeological deposits in the APE is low, resulting in limited potential to result in any new significant or more severe impacts on archaeological resources.

A cultural resource records search was conducted at the NWIC in Sonoma, California on October 7, 2025. The NWIC, an affiliate of the Office of Historic Preservation, is the official state repository of cultural resources records and reports for Santa Clara County. The NWIC record search identified three previously conducted cultural studies within a 0.50-mile radius of the APE (**Table 3-3**). None of the previous cultural resource studies intersect with the APE.

Table 3-3. Previous Cultural Resource studies within 0.50 mile of the APE

Agency Study #	Year	Author	Report Title
S-026188	2002	Robert Cartier	Cultural Resource Evaluation of the Hicks Creek Ranch Project in the County of Santa Clara
S-027070	2003	Robert Cartier	Cultural Resources Evaluation of the Guadalupe Creek Trail Project in the City of San Jose
S-037865	2011	Sunshine Psota	Archaeological Survey of an 100-Acre Southern Portion of 15999 Guadalupe Mines Road Near San Jose, Santa Clara County, California

The NWIC records search identified two previously recorded cultural resources within 0.50 mile of the APE (**Table 3-4**). Of the two previously recorded cultural resources, one is a precontact

archaeological site, and one is a historic-era district. No previously recorded resources were identified within the APE.

Table 3-4. Previously recorded Cultural Resources within 0.25 mile of the APE

Primary/Trinomial	Age	Archaeological/Built Environment	Description
P-43-002012/CA-SCL-000871	Pre-contact	Archaeological	Precontact midden site with fire-cracked rock and groundstone
P-43-002400/CA-SCL-000891H	Historic	Built Environment	Historic district consisting of the Guadalupe Mines and the associated town of Guadalupe.

ICF's archaeologist Shelby Caulder and architectural historian Nicole Felicetti conducted an intensive archaeological and built-environment survey of the proposed APE on October 13, 2025, to determine the presence of historic and pre-contact cultural materials within the APE. As a result of the pedestrian survey, no precolonial or historic-era archaeological resources were located within the APE. However, one headstone was identified approximately 45 feet west of a vehicle storage barn.

No historic-age buildings (those older than 45 years) were observed during the pedestrian survey. No buildings identified in Hicks Creek Property Historic Resource Evaluation (Garavaglia Architecture, Inc. 2014) were extant. ICF's architectural historian observed and photographed rock walls along the creek, which were captured in the previous documentation as part of the property's finding of no historic significance (Garavaglia Architecture, Inc. 2014:A2-A3, 56). Additionally, ICF's architectural historian observed and photographed one contemporary ancillary structure in a staging area. The ancillary structure was constructed circa 2006 and is therefore not a historic-age building). As a result of the intensive pedestrian survey, no built-environment resources were identified within the APE.

As a result of the surveys and archaeological study, no archaeological resources were observed or recorded within the APE, and the site sensitivity analysis determined that the APE is located on Cretaceous to Jurassic (201 million to 66 million years) geologic deposits with low potential to encounter subsurface archaeological deposits. The records search indicated that there is one precontact archaeological site located within 0.50 mile of the APE, however it will not be affected by the offsite mitigation activities. Implementation of the offsite mitigation plan at Hicks Creek would have limited potential to affect archaeological resources or human remains during grading. However, there is always a chance of encountering an archaeological resource during ground-disturbing activities. Additionally, the presence of a tombstone onsite signals potential for human remains. Procedures that would be implemented upon inadvertent discovery of archaeological resources or human remains must be implemented. With adherence to the environmental commitment included in the 2021 MND MMRP, described below, no new or more severe impacts on cultural resources are anticipated.

Environmental Commitment: Inadvertent Discovery. If an unanticipated archaeological resource is discovered during construction, construction will be halted in the area of the find until an archaeologist assesses the resource. If human remains are uncovered, construction will be halted in the area where burial finds are discovered, and conduct the notifications and coordination required by law with the County Coroner and California Native American Heritage Commission.

3.7 Mandatory Findings of Significance

With incorporation of mitigation measures as identified in the MND, the July 2026 Modified Project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. The Hicks Creek Offsite Mitigation would not result in impacts that are individually limited but cumulatively considerable, and the July 2026 Modified Project does not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. The impact determinations in the MND are unchanged.

Signature

Date

Chapter 4 References

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- . 2026a. Hicks Creek Offsite Mitigation Application for CDFW Incidental Take Permit. July.
- . 2026b. Hicks Creek Offsite Mitigation Application for USFWS Programmatic Biological Opinion. July.
- . 2026c. Hicks Creek Offsite Mitigation Application for NMFS Programmatic Biological Opinion. July.

**ATTACHMENT 3
EXHIBIT A**

Item #7.e.
8/6/2026

Peninsula Corridor Joint Powers Board

Updated Environmental Impact Analysis

U.S. Fish and Wildlife Service. 2026. *Information for Planning and Consultation (IPaC)*. Available: <https://ipac.ecosphere.fws.gov/>. Accessed: October 16, 2025.

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Appendix A
IPaC and CNDDDB 5-Mile Species Search



ATTACHMENT 3 EXHIBIT A Selected Elements by Common Name California Department of Fish and Wildlife California Natural Diversity Database

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Query Criteria: BIOS selection

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
American peregrine falcon <i>Falco peregrinus anatum</i>	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
arcuate bushmallow <i>Malacothamnus arcuatus</i> var. <i>arcuatus</i>	PDMAL0Q0E0	None	None	GNRT2	S2	1B.2
bald eagle <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S3	FP
Bay checkerspot butterfly <i>Euphydryas editha bayensis</i>	IILEPK4055	Threatened	None	G4G5T1	S3	
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	PDBOR01070	None	None	G3	S3	1B.2
black swift <i>Cypseloides niger</i>	ABNUA01010	None	None	G4	S3	SSC
black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010	None	None	G5	S4	
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California giant salamander <i>Dicamptodon ensatus</i>	AAAAH01020	None	None	G2G3	S2S3	SSC
California red-legged frog <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California tiger salamander - central California DPS <i>Ambystoma californiense</i> pop. 1	AAAAA01181	Threatened	Threatened	G3T3	S3	WL
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	PDAST4R0P1	None	None	G3T2	S2	1B.1
Crotch's bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G2	S2	
foothill yellow-legged frog - central coast DPS <i>Rana boylei</i> pop. 4	AAABH01054	Threatened	Endangered	G3T2	S2	
fragrant fritillary <i>Fritillaria liliacea</i>	PMLIL0V0C0	None	None	G2	S2	1B.2
golden eagle <i>Aquila chrysaetos</i>	ABNKC22010	None	None	G5	S3	FP
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
hairless popcornflower <i>Plagiobothrys glaber</i>	PDBOR0V0B0	None	None	GX	SX	1A



ATTACHMENT 3
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Selected Elements by Common Name
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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Hall's bushmallow <i>Malacothamnus hallii</i>	PDMAL0Q0F0	None	None	G2	S2	1B.2
hoary bat <i>Lasiurus cinereus</i>	AMACC05032	None	None	G3G4	S4	
Hom's micro-blind harvestman <i>Microcina homi</i>	ILARA47020	None	None	G1	S2	
Loma Prieta hoita <i>Hoita strobilina</i>	PDFAB5Z030	None	None	G2?	S2?	1B.1
most beautiful jewelflower <i>Streptanthus albidus ssp. peramoenus</i>	PDBRA2G012	None	None	G2T2	S2	1B.2
Mt. Hamilton thistle <i>Cirsium fontinale var. campylon</i>	PDAST2E163	None	None	G2T2	S2	1B.2
northwestern pond turtle <i>Actinemys marmorata</i>	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
obscure bumble bee <i>Bombus caliginosus</i>	IIHYM24380	None	None	G2G3	S1S2	
Opler's longhorn moth <i>Adela oplerella</i>	IILEE0G040	None	None	G2	S2	
osprey <i>Pandion haliaetus</i>	ABNKC01010	None	None	G5	S4	WL
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G4	S3	SSC
purple martin <i>Progne subis</i>	ABPAU01010	None	None	G5	S3	SSC
robust spineflower <i>Chorizanthe robusta var. robusta</i>	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
rock sanicle <i>Sanicula saxatilis</i>	PDAP11Z0H0	None	Rare	G2	S2	1B.2
Salinas kangaroo rat <i>Dipodomys heermanni goldmani</i>	AMAFD03065	None	None	G4T2T3	S2S3	
San Francisco collinsia <i>Collinsia multicolor</i>	PDSCR0H0B0	None	None	G2	S2	1B.2
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	AMAFF08082	None	None	G5T2T3	S2S3	SSC
Santa Clara red ribbons <i>Clarkia concinna ssp. automixa</i>	PDONA050A1	None	None	G5?T3	S3	4.3
Santa Clara Valley dudleya <i>Dudleya abramsii ssp. setchellii</i>	PDCRA040Z0	Endangered	None	G4T2	S2	1B.1
Santa Cruz black salamander <i>Aneides niger</i>	AAAAD01070	None	None	G3	S3	SSC
smooth lessingia <i>Lessingia micradenia var. glabrata</i>	PDAST5S062	None	None	G2T2	S2	1B.2



ATTACHMENT 3
EXHIBIT A
Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database

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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
snowy egret <i>Egretta thula</i>	ABNGA06030	None	None	G5	S4	
steelhead - central California coast DPS <i>Oncorhynchus mykiss irideus pop. 8</i>	AFCHA0209G	Threatened	None	G5T3Q	S3	SSC
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G4	S2	SSC
western bumble bee <i>Bombus occidentalis</i>	IIHYM24252	None	Candidate Endangered	G3	S1	
western leatherwood <i>Dirca occidentalis</i>	PDTHY03010	None	None	G2	S2	1B.2
western ridged mussel <i>Gonidea angulata</i>	IMBIV19010	None	None	G3	S2	
woodland woollythreads <i>Monolopia gracilens</i>	PDAST6G010	None	None	G3	S3	1B.2
yellow rail <i>Coturnicops noveboracensis</i>	ABNME01010	None	None	G4	S2	SSC
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i>	IIORT36030	Endangered	None	G1	S1	

Record Count: 50



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:

10/16/2025 19:10:29 UTC

Project Code: 2025-0157220

Project Name: Hicks Creek Restoration 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 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 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:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.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 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/program/migratory-bird-permit/what-we-do>.

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/library/collections/threats-birds>.

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/partner/council-conservation-migratory-birds>.

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: 2025-0157220
Project Name: Hicks Creek Restoration Project
Project Type: Bridge - Replacement
Project Description: Creek Restoration Project
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.199689899999996,-121.90011088591534,14z>



Counties: Santa Clara County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 11 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.

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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.

BIRDS

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern <i>Sternula antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered

REPTILES

NAME	STATUS
Northwestern Pond Turtle <i>Actinemys marmorata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</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/2891	Threatened
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
Foothill Yellow-legged Frog <i>Rana boylei</i> Population: Central Coast Distinct Population Segment (Central Coast DPS) There is proposed critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5133	Threatened

FISHES

NAME	STATUS
Tidewater Goby <i>Eucyclogobius newberryi</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/57	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat.	Proposed Threatened

ATTACHMENT 3
EXHIBIT A

Project code: 2025-0157220

Item #7.e.
10/16/2025 19:10:37
8/6/2026

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/9743	

FLOWERING PLANTS

NAME	STATUS
Metcalf Canyon Jewelflower <i>Streptanthus albidus ssp. albidus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4186	Endangered
Robust Spineflower <i>Chorizanthe robusta var. robusta</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/9287	Endangered
Santa Clara Valley Dudleya <i>Dudleya setchellii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3207	Endangered

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Foothill Yellow-legged Frog <i>Rana boylei</i> https://ecos.fws.gov/ecp/species/5133#crithab	Proposed

IPAC USER CONTACT INFORMATION

Agency: ICF
Name: Ross Wilming
Address: 595 Market Street
Address Line 2: Suite 950
City: San Francisco
State: CA
Zip: 94105
Email: rwilming@gmail.com
Phone: 4158468489