ADDENDUM TO THE MITIGATED NEGATIVE DECLARATION

FOR THE

PENINSULA CORRIDOR JOINT POWERS BOARD

GUADALUPE RIVER BRIDGE REPLACEMENT PROJECT

February 2025

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1.0 BACKGROUND AND CEQA OBLIGATIONS

BACKGROUND

The Peninsula Corridor Joint Powers Board (JPB) operates the San Francisco Bay Area's Caltrain passenger rail service. This document is JPB's California Environmental Quality Act (CEQA) (Public Resources Code §§21000 *et seq.;* 14 CCR §§15000 (CEQA Guidelines) addendum to the Guadalupe River Bridge Replacement Project (the Project) Initial Study/Mitigated Negative Declaration that the JPB adopted in February 2021 (State Clearinghouse #2020110323) (MND). The Federal Transit Administration (FTA) also evaluated the Project's potential environmental effects pursuant to the National Environmental Policy Act (NEPA) and in April 2021 issued a concurrence that the project meets the criteria for a Documented Categorical Exclusion.

As previously approved by the JPB in 2021, the Project involves the demolition and reconstruction of the MT-1 bridge and the expansion and seismic retrofitting of the MT-2 bridge. The 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 (NOD), the JPB prepared final project design plans and a Habitat Mitigation and Monitoring Plan (HMMP), obtained permits from the California Department of Fish and Wildlife (CDFW) and San Francisco Bay Regional Water Quality Control Board (RWQCB), and initiated construction. CDFW issued a Streambed Alteration Agreement for the Guadalupe River Bridge Replacement Project (EPIMS-SCL-20973-R3) pursuant to the California Fish and Game Code (SAA), and the RWQCB issued a Clean Water Act Section 401 Water Quality Certification and Order for the Guadalupe River Bridge Replacement Project (Reg. Meas. 446940; Place ID 879929) pursuant to the federal Clean Water Act (Certification). The U.S. Army Corps of Engineers (USACE) also issued a nationwide permit verification for the Guadalupe River Bridge Replacement Project (SPN-2007-00817) (NWP Verification) and 408 permission (408-SPN-2022-0002) (408 Permission).

Major Project construction activities were paused after 2023, and in accordance with CEQA, JPB has prepared this addendum to the MND (Addendum) as the CEQA lead agency to evaluate proposed changes to the Project, that will include amendments to the CDFW, RWQCB, and USACE permits (Public Resources Code §21067; CEQA Guidelines §15367). CDFW and RWQCB are responsible agencies under CEQA (Public Resource Code §21069; CEQA Guidelines §15381).

The "Modified Project" as described in this Addendum includes changes or refinements to: the HMMP; Project construction duration and sequencing; Project construction limits; construction nighttime activities; construction site access, dewatering, and temporary use of sheet pile shoring; and potential use of impact hammers.

CEQA OBLIGATIONS

This Addendum documents the JPB's consideration of the environmental effects associated with the Modified Project, including changes described above, as well as amendments to the SAA, NWP Verification, Certification, and 408 Permission. As noted, the JPB previously prepared and adopted the MND for the Project in February 2021. 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.

(Pub. Resources Code, §21166; CEQA Guidelines, §15162(a); *Friends of College of San Mateo Gardens v. San Mateo County Community College District*, 1 Cal. 5th 937, 949 (2016)).

Based upon the information provided in Sections 3.0 and 4.0, implementation of the Modified Project would not result in new significant impacts or substantially increase the severity of impacts previously identified in the 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) shall consider the addendum with the MND prior to making a decision on the Modified Project. Once adopted, the addendum, along with the original MND, is placed in the administrative record, and an NOD is filed with the County Clerk and State Clearinghouse.

2.0 MND PROJECT DESCRIPTION

The purpose and need for the Project as described in the MND is to provide critical safety updates to the MT1- and MT-2 bridges. The Project description in the MND includes widening the channel; replacing the MT-1 bridge with a new, longer bridge; and extending the MT-2 bridge. The MND-described Project limits extend from 140 feet south of Willow Street to Delmas Avenue northwest along the existing JPB right-of-way (ROW). Highway 87 is located to the west; residential areas are located east of Mclellan Avenue; and the Valley Water Reach 6 bypass channel is located downstream.

The MND evaluated replacing the existing 187-foot MT-1 bridge with a new 265-foot pre-cast concrete structure. The center span over the main channel would be 110-feet long, and the pier placement optimized through hydraulic analysis to avoid pier placement in the low-flow channel. The Project-approved bridge piers consist of two 48-inch-diameter cast-in-drilled-hole piles. 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/Valley Water Reach 7 bypass channel is constructed.

As described in the MND, the Project includes extending the existing MT-2 bridge by 90 feet at the southern end, resulting in a new total bridge length of 244.5 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 Project leaves existing northern abutment 1 and piers 2, 3, and 4 in place. Similar to the MT-1 bridge, the southernmost abutment is designed to function as a pier to accommodate the USACE/Valley Water Reach 7 bypass channel when it is constructed.

The Project widens the Guadalupe River channel by approximately 75 feet to create a connection to the existing Valley Water 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 MND, the work includes temporarily relocating fiber optic cables located on the MT-1 bridge and permanenting 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 Project (and Modified Project) would be constructed primarily within existing transportation and utility ROW owned by JPB and Valley Water, and on California Department of Transportation (Caltrans), the City of San José, and Valley Water land under temporary construction easements. These temporary easement areas would be located on approximately 152,300 square feet (sf) of land on portions of 20 parcels included in the MND as part of the Project area.

The Project includes two bioretention post-construction stormwater treatment areas – one located north of the MT-1 bridge on the east side of the tracks, and the other one south of MT-2 bridge on the west side of the tracks -- to address runoff from the replacement of the MT-1 bridge and the extension of MT-2 bridge. In total, the Project MND evaluated a 2,950-sf increase in impervious surface area. The post-construction stormwater treatment areas (including sizing and plant species) would be designed in accordance with requirements set forth in the Santa Clara Valley Urban Runoff Pollution Prevention Program (2016) C.3 Stormwater Handbook.

As explained in the MND, construction activities would occur for approximately 2 years. Key construction activities comprise the MT-1 bridge replacement; the MT-2 bridge extension, riverbank stabilization and improvements; floodplain widening; and fiber optic cable removal and relocation. In general, the MND explained that most construction activities affecting the channel would occur between June 15 and October 15 to minimize impacts to special-status fish species after the river was dewatered, and at the end of the construction season, the dewatering infrastructure would be removed, and water flow would be restored over the winter. This would generally be repeated in June of the following year. During the MT-1 bridge replacement, train service would operate on the MT-2 bridge while the MT-1 bridge is out of service, and during the MT-2 bridge extension work, train service would operate on the MT-1 bridge. At the conclusion of construction, the riverbanks would be stabilized and revegetated in accordance with an HMMP.

As explained in the MND, the Project included dewatering an approximately 400-foot section of river. The MND anticipated dewatering would be done using two 48-inch diameter pipes placed along the channel margin, and a temporary cofferdam would be built around them. The MND indicated that diversion pipes would be integrated into the coffer dam during construction while a series of pumps would be installed

upstream of the coffer dam to divert water around the work area until both the upstream and downstream coffer dams are installed. The MND stated that once the coffer dams and diversion pipes are in place, the pumps would be turned off and water would be diverted through the pipes. Following the completion of in-channel work, streamflow would be restored to the dewatered section of channel.

The MND did not anticipate construction would involve the use of impact hammers. The MND did anticipate some potential nighttime construction activities, but the extent of potential nighttime activities were not known.

3.0 DESCRIPTION OF THE MODIFIED PROJECT - PROPOSED CHANGES TO PROJECT

The purpose and need for the Modified Project is the same as described in the MND for the Project.

UPDATED HABITAT MITIGATION AND MONITORING PLAN

The MND identified impacts to waters, wetlands, and riparian areas regulated by federal and state law. To mitigate for those impacts, the MND identified development and implementation of an HMMP in Mitigation Measure BIO-07:

> **Mitigation Measure BIO-07: Develop an HMMP.** Compensatory mitigation for unavoidable impacts on wetland/riparian areas will be provided through development of an HMMP. The HMMP will include a conceptual riparian mitigation 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.[1] The HMMP will be incorporated in JPB's permit applications to USACE, RWQCB, and CDFW.

JPB developed an HMMP and submitted it with permit applications in 2022, and the implementation of the HMMP is a condition of the SAA, NWP Verification and Certification. The HMMP included enhancements to the Guadalupe River within the JPB right-of-way, as well as within adjacent areas that are owned by Valley Water). Therefore, implementation of the HMMP also required an encroachment permit from Valley Water.

Since major construction activities paused in 2023, JPB coordinated with Valley Water regarding HMMP design to avoid Valley Water's existing mitigation area in Reach 6 and maintenance needs. In addition, the extended Project construction period (described in more detail in the Project Duration and Sequencing below) resulted in reclassification of a portion of the temporary impacts to permanent impacts due to the duration of construction. These additional considerations resulted in further revisions to the grading, access, and mitigation areas. A 2025 Updated HMMP provides revised impact calculations that reflect individual agency definitions of permanent and temporary impacts as well as updated mitigation to reflect regulatory permit requirements and specifications for mitigation set forth in a CDFW notice of violation.

Like the original Project, the Modified Project would result in impacts on resources under the jurisdiction of USACE, RWQCB, and CDFW. See **Table 1**, which provides a summary of impacts to each agency's jurisdiction, mitigation ratios, and mitigation requirements. The HMMP provides definitions of impacts, a detailed breakdown of impacts to each jurisdictional water type, and proposed on-site mitigation (**Appendix B**).

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[1] Pursuant to requirements of the Santa Clara Valley Water District encroachment permit, no native soils may be re-used on site. Therefore, topsoil is not proposed to be reused in the Modified Project.

Onsite mitigation would be implemented on JPB and Valley Water properties. On-site mitigation would avoid encroaching on prior Reach 6 Valley Water mitigation areas and maintenance roads, avoid use of City of San Jose property, and avoid encroaching on areas of the potential future Reach 7 widening as part of the Upper Guadalupe River project or locations where future access is needed to implement the Upper Guadalupe River project.

JPB and Valley Water are currently working on a term sheet to accommodate the on-site mitigation.

Off-Site Mitigation

As indicated in the HMMP, agency jurisdictional impacts not fully mitigated onsite would be mitigated offsite. JPB has identified potentially suitable off-site mitigation opportunities. See **Appendix D** for further details.

PROJECT DURATION AND SEQUENCING

As analyzed in the 2021 MND, JPB previously proposed widening the channel, replacing the MT-1 bridge with a longer bridge, extending the MT-2 bridge, and restoring the site and installing the HMMP enhancement and planting plans. The MND anticipated that all of the construction work would be completed during 2022 and 2023, and the HMMP restoration would be completed by October 2023, at the end of the 2023 dry season. JPB completed the extension of the MT-2 bridge and some of the HMMP upstream channel widening in 2023, but has not demolished the MT-1 bridge, started building the new MT-1 bridge, completed the channel widening, completed the final grading, or implemented the HMMP restoration measures. The Modified Project changes the construction approach to resume construction in 2025, continue construction during 2026, and finish in winter 2026–2027. Therefore, the Modified Project has a construction duration of 4 years, instead of the 2 years analyzed in the MND.

For the remainder of construction, activities below top of bank would take place during two dry seasons (June 15 – October 15, 2025, and June 15 – October 15, 2026) and one wet season (October 16, 2025, to June 14, 2026). Construction over the wet season would be made possible through the use of temporary sheet piles that provide isolation of the work area from the flowing river, further described in *Site Access, Dewatering, and Temporary Sheet Pile Shoring*, below. The phasing is summarized in **Table 2**.

Table 1. Summary of jurisdictional impacts, mitigation ratios, and mitigation requirements.

Jurisdiction	Description	Impacts (acres)		Mitigation ratio	Mitigation requirement[1] (acres)	Mitigation (acres)	
		Permanent	Temporary			On-site	Off-site[2]
USACE	Waters and wetlands	<0.001	1.224	3:1	<0.001	0.335 (surplus of 0.334)	None needed
RWQCB		0.583	0.931	2:1	1.166	1.168 (surplus of 0.002)	None needed
CDFW		0.977	0.593	3:1	2.931	1.168 (deficit of 1.763)	≥1.763
RWQCB	Uplands below top of bank	0.240	0.242	1:1	0.240	0.412 (surplus of 0.172)	None needed
CDFW		0.324	0.157	3:1	0.972	0.412 (deficit of 0.560)	≥0.560
CDFW	Uplands above top of bank within riparian canopy	–0–	–0–	3:1	–0–	–0–	None needed

1 Based on the total area of permanent impacts.
2 Based on present calculations in applications. May change depending on agency negotiations. Agency jurisdictional impacts not fully mitigated onsite would be mitigated offsite.

Table 2. General Construction Schedule

Phase	Months	Activities
1	Starting June 15, 2025)	Temporary pump bypass system installation Settlement basin installation 2025 river diversion system installation Temporary pump bypass system removal
2	June–Sept. 2025	Dewatered area site preparation MT-1 complete demolition MT-1 abutments 1 and 5; piers 2, 3, and 4 construction MT-2 foundation (piers 2, 3, 4) retrofit
3	Sept.–Oct. 15, 2025	Temporary pump bypass system installation Temporary sheet pile installation on left and right banks 2025 river diversion system removal Dewatered area site restoration Site winterization (outside sheet pile) Temporary pump bypass system removal
4	Oct. 16, 2025 – June 14 2026	Work conducted behind installed sheet pile Set MT-1 concrete girders MT-1 foundation, pier, and superstructure construction completed MT-1 Pier 4 retrofit completion Grading and partial HMMP restoration installation Partial installation of 2026 river diversion pipe
5	Starting June 15, 2026)	Temporary pump bypass system installation Extension of right bank sheet pile wall upstream and across the main channel Extension of the 2026 river diversion pipe upstream and downstream to the main channel Placement of RSP and gravel over diversion pipes Temporary pump bypass system removal
6	July – Aug. 2026	Repair downstream left bank failure In-channel HMMP enhancements and grading
7	Aug. – Oct. 15 2026	Remove left and right bank sheet pile wall, finish HMMP enhancements Remove river diversion and temporary pump infrastructure Final grading and channel stabilization
8	Oct. 16, 2026 – Winter 2026-2027	Final HMMP planting

REVISED LIMITS FOR CLEARING AND GRUBBING, GRADING, AND EROSION CONTROL

Under the Modified Project, JPB refined the limits for clearing, grubbing, and erosion control to reflect the refined designs, including avoidance of Valley Water's existing mitigation area in Reach 6, as well as to encompass the necessary river diversion infrastructure to protect sensitive habitats during the proposed river dewatering in 2025 and 2026. Impacts to waters, wetlands, and riparian habitats, and proposed site restoration and compensatory mitigation, for these revised limits are described in the Updated HMMP, discussed above.

ACTIVITIES THAT COULD OCCUR AT NIGHT

No nighttime activities would occur from November 1 – June 14. However, under the Modified Project, the following three nighttime activities would be required during the dry season (and through October 31 if authorized by CDFW and RWQCB (June 15 – October 31[2]):

- Operating channel pumps overnight during the following periods:

Period	2025	2026
Mid- June	14 days	14 days
Early-October	14 days	14 days

- Operating Nuisance water pumps during dewatered dry season
- Emergency activities

These activities are described below, followed by an explanation of biological resource monitoring and inspection for nighttime activities.

Operating Channel Pumps

The activities that would occur during these periods would involve pumping water around the work site while the creek diversion pipes are being installed (beginning mid-June) and again when they are being removed (beginning early October). During each of these periods, water would be pumped around the work site for 24 hours a day. Once the pumping is initiated (during the day), the operation would continue through the night, every night for the duration of the two-week (14 days) period.

Once set up, the pumping would operate passively, and one or two crews would monitor the process daily during the two-week period. Due to the passive nature of this activity, no artificial lighting is proposed to be used during the pumping process. Instead, if it is necessary to check the pumps at night, workers would use flashlights to occasionally monitor the pumps and other diversion elements to ensure they are working properly. Equipment that would run overnight would be limited to two generators that would power 3 - 6 pumps. The pumps would be situated on the upstream side of the river, and the pump generators would be positioned along the west perimeter of the Willow Street yard. Each of these generators are estimated to produce 71 decibels (dBA) of sound (76 dBA for all three pumps) at 23 feet with a frequency of 60 kilohertz (kHz). To minimize noise produced by the generators, they would be staged in an area surrounded by sound dampening walls and housed in wooden boxes. Sound-dampening materials, such as 1-inch-thick Styrofoam, would be adhered to the walls. All generators would be placed outside any no work buffer established by the biological monitor and a minimum of 50-feet from any active bird nest. If it is not feasible to locate a generator at least 50 feet from the active nest or outside the buffer, whichever is greater, additional noise buffer controls, such as noise blankets mounted on a chain-link fence, would be installed around the generators and generator box in addition to the sound deadening materials in the box.

Operating Nuisance Water Pumps

Up to four pumps would be staggered along the dewatering area to carry nuisance river water seepage from the construction area to a settlement basin adjacent to the McLellan yard. These pumps would also run overnight and would be powered by a third generator, if needed, housed with the other generators along the west perimeter of the Willow yard.

[2] The permitted in-channel work season extends until October 15; however, this project description incorporates potential agency approval of extensions through the end of October.

Emergency Activities

Although not anticipated, emergency operations that could come up that would necessitate additional activities at night may include:

1. Removing forms and construction materials from a flooded or overtopped river diversion;
2. Fixing a “form blowout” after a concrete pour;
3. Removing damaged equipment;
4. Cleaning spills from equipment or operations; or
5. Fixing/repairing/removing and replacing a water pump.

In the event of an emergency during the nighttime pumping operation, additional equipment that may be used includes a forklift, light plant tower, air compressor, or excavator. If a light plant or air compressors are needed for emergency work, the noise levels produced by the engines powering the equipment would be minimized using noise blankets or other BMPs. If a gas compressor is used, JPB would implement additional controls such as use of an intake silencer to reduce the pitch of the compressor, keeping the compressor door closed to reduce noise levels, and placing noise-dampening materials around the compressor. To the extent feasible, use of construction equipment and vehicles (i.e., F-250, forklift) for emergency night work would be minimized. Use of horns for communication would be minimized to only what is necessary to perform work and maintain safety standards for workers.

If a light plant tower is required, lighting would be positioned so that it is directed toward the work areas only and is directed away from upstream and downstream portions of the river and the surrounding natural habitat areas, so that lighting trespass, including glare, is minimized in the surrounding river, riparian, wetland, and other natural areas. Similarly, lighting would not be directed upward into the night sky. Only the necessary amount of lighting needed to illuminate the work areas for workers to safely perform their work would be used. The contractor would confer with the biologist and understand where active nests or roosts are present so that lighting is not directed at the nest or roost.

If emergency work is required underneath the middle span of MT-2 or within a 20-foot buffer on either side of this portion of the bridge, the biological monitor would determine the presence of bat species. If bats are present, no lighting equipment would be placed underneath the middle span of MT-2 and no lighting would be used to illuminate the area directly underneath the middle span of MT-2 or within a 20-foot buffer on either side of this portion of the bridge when bats are roosting there. Any lighting that is used outside the buffer would be positioned so that it is directed away from MT-2 unless the biological monitor has determined no bats are present.

Biological Resource Monitoring and Inspection

A biologist would monitor active bird nests of special-status and common species each morning following nighttime activities to assess the status of the nest. If active nests appear disturbed, the monitor would establish or re-evaluate no-work buffers and adjust as needed, as well notify CDFW of any buffers or adjustments made to the buffers and report on the efficacy of the adjusted buffer.

The contractor or construction management site representative would inform the lead biologist as soon as possible when an emergency arises that requires additional nighttime activities. The biologist would then determine if additional monitoring at night is required, depending on the location of active nests in the vicinity.

In addition, if more than two weeks has passed since the pre-construction nesting bird survey was done before the overnight work begins, an additional nest survey would be done no more than two weeks before the start of the nighttime work, and appropriate buffers created as needed.

Based on incidental observations in the 2023–2024 winter, the middle span of MT-2 supports a Mexican free-tailed bat fall/winter colony. Starting in mid-September, a qualified biologist for bats would conduct daily inspections of MT2 to determine if the colony has arrived. Upon the colony's arrival, a 50-foot generator noise buffer would be implemented around the middle span of MT-2. This means that generators would be positioned at least 50 feet from the edge of the span where the colony is found to be roosting regardless of what time of day or night they are operated. To ensure that the 50-foot buffer is sufficient to avoid disturbing the winter bat colony, the qualified biologist would monitor the colony for signs of disturbance during the work activities. If the colony appears disturbed, the biologist would adjust the no-disturbance buffer and notify CDFW of any adjustments made to the buffers and report on the efficacy of the adjusted buffer.

SITE ACCESS, DEWATERING, AND TEMPORARY USE OF SHEET PILE SHORING

Plans Analyzed in MND

The design plans analyzed in the MND included a preliminary draft dewatering plan showing two gravel bag coffer dams connected by two 48-inch HDPE pipes. Vehicular access areas and roadways are shown both upstream and downstream of the railroad bridges, and a temporary bridge is shown spanning the river. See **Figure 1** and **Figure 2**.

2021 Design Plans

The dewatering and construction access plans were refined as the design progressed. In the 100% design plans included in the environmental permit applications, sheets C110, C111, C112 and C113, show access roadways for construction throughout the Project site, including above top of bank on both the western and eastern sides of the river, down the river banks, and below top of bank along the length of the dewatered area. The 2021 design sheets depict a stabilized rock access road extending from McLellan Avenue (east of the river), through the temporary construction storage areas on the eastern side of the Project, down the bank, and across the river adjacent to MT-1. Design sheets C115 and C116 depict the diversion pipes, supported by gravel bags. See **Figure 3** through **Figure 8**.

JPB prepared and submitted a 2023 dewatering plan to CDFW in May 2023 that depicted only fill below the diversion pipe at various points along its length, as well as fill above the diversion pipe in the detail of the upstream opening of the diversion pipe (see **Figure 9**, which includes a cross-section of the 2023 dewatering plan and the Detail of the Upstream Opening).

2023 Implementation

As part of the 2023 construction, JPB covered the length of the diversion pipes with native soils from the Project site and other materials (e.g., clean gravel bags). JPB placed an estimated 490 cubic yards of material made up of native soil fill (soil excavated from other locations within the Project site), clean imported gravel bags, and rip rap, above the diversion pipes and around the piers, with the gravel bags at the end of the diversion pipes where the cofferdams were installed. The material was placed in locations corresponding to the "access areas & roads" depicted in the 2021 design drawings and plans. This created a work pad that JPB used to cross the river and access work areas beneath both of the MT-1 and MT-2 bridges that were not otherwise accessible by the required heavy-duty construction machinery.

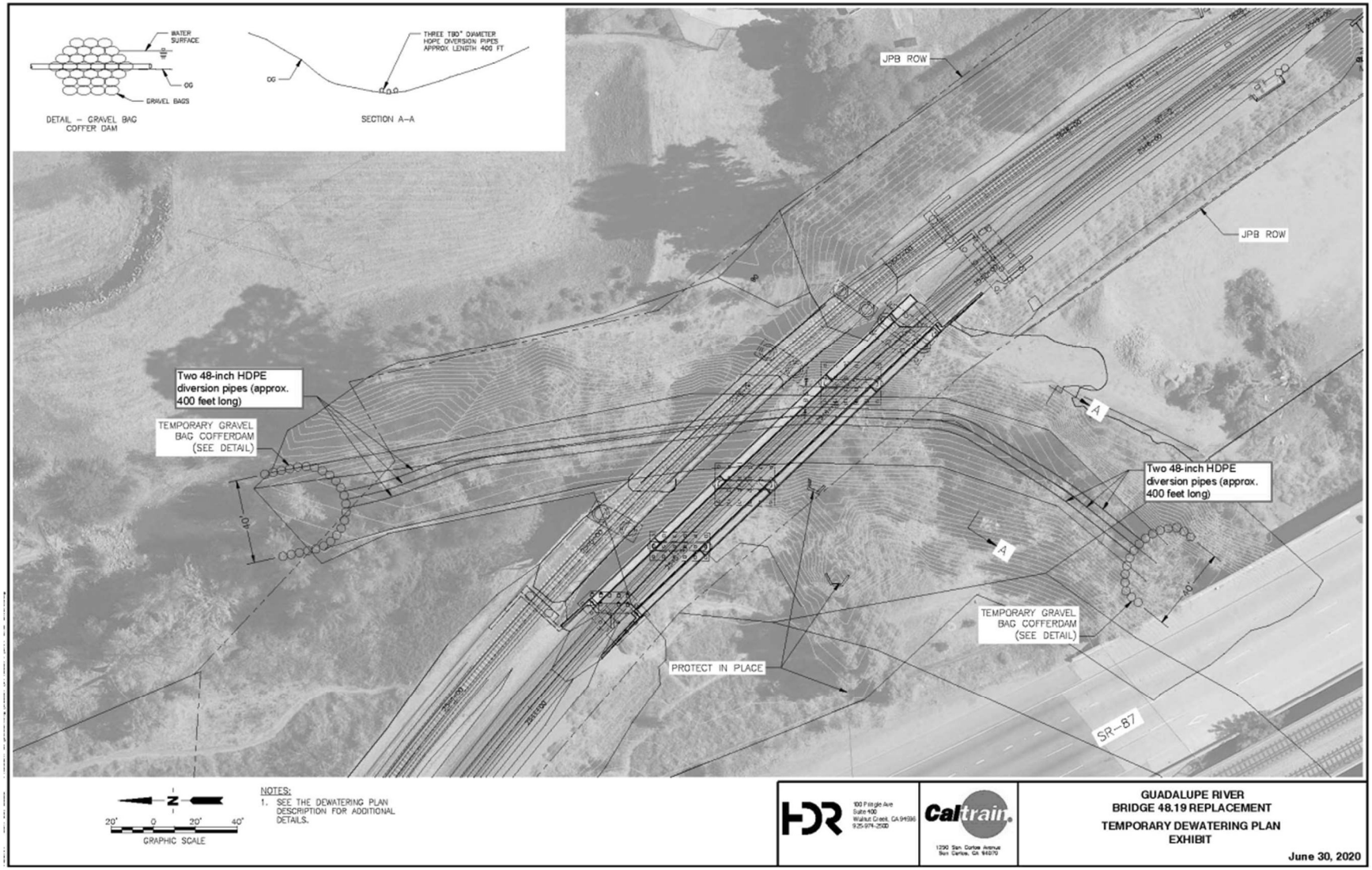


Figure 1: Dewatering Plan Analyzed in MND

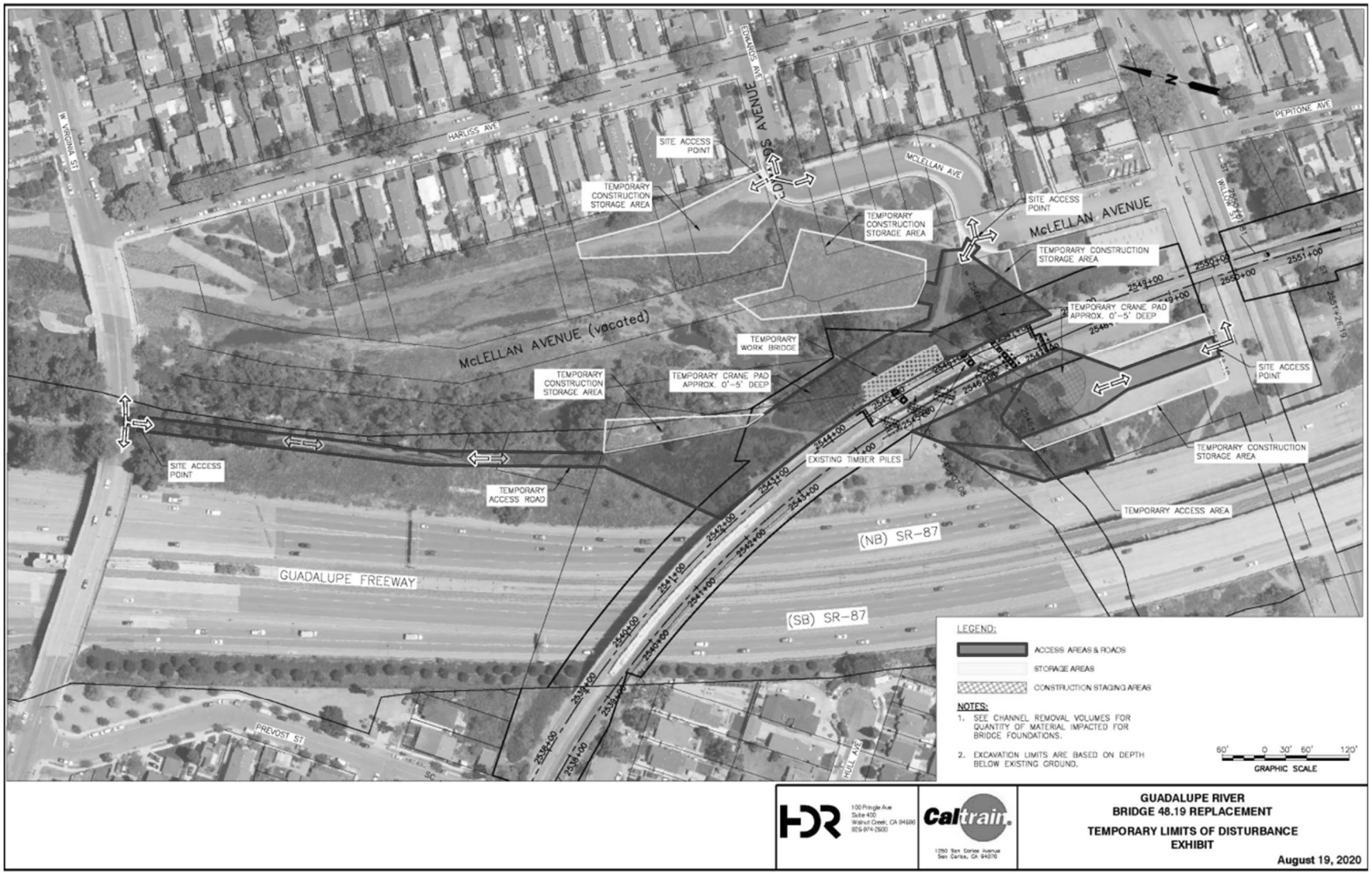


Figure 2: Construction Access Plan Analyzed in MND

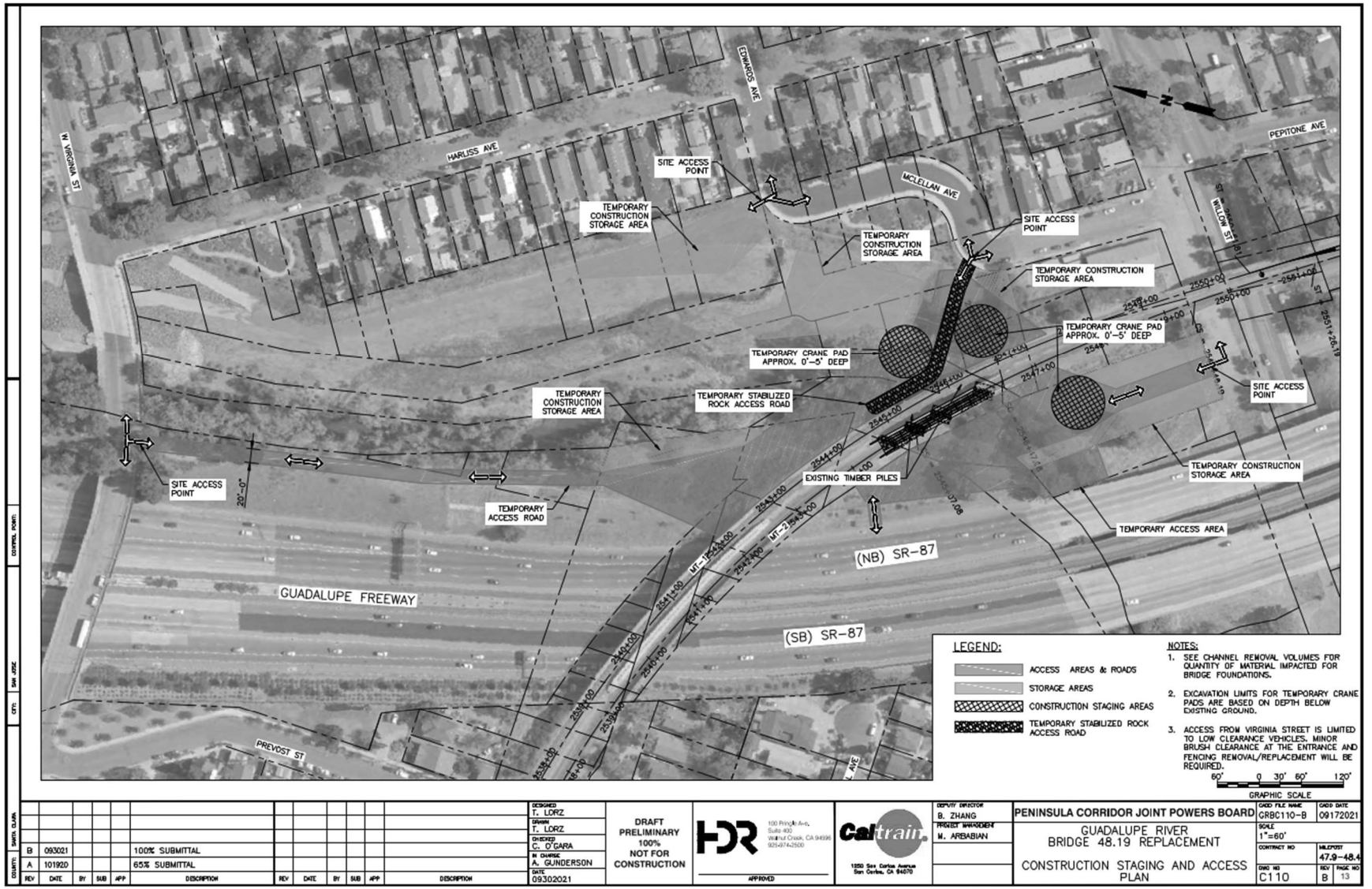


Figure 3: Construction Access Plan in 2021 100% Design: Sheet C110

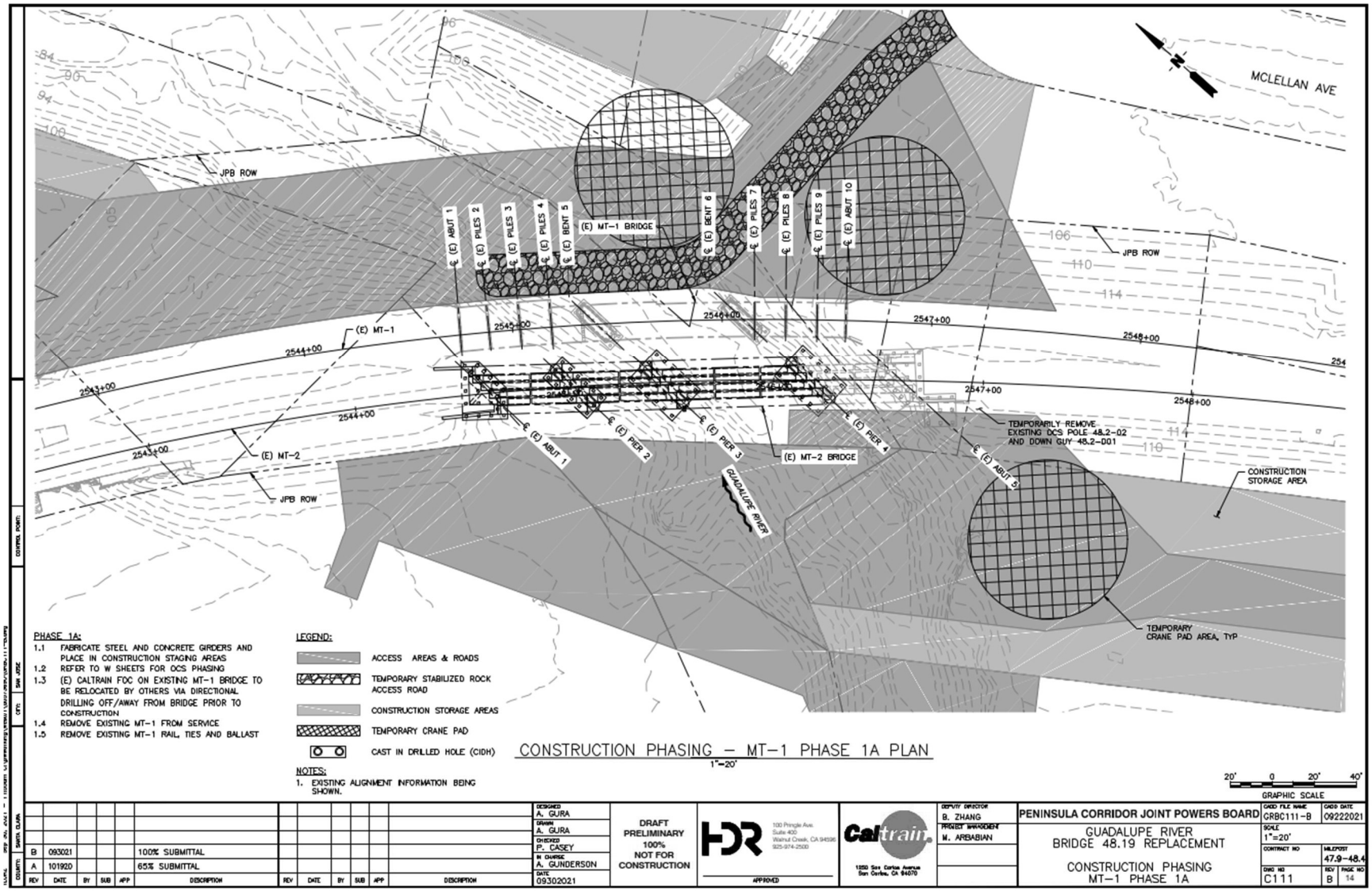


Figure 4: Construction Access Plan in 2021 100% Design: Sheet C111

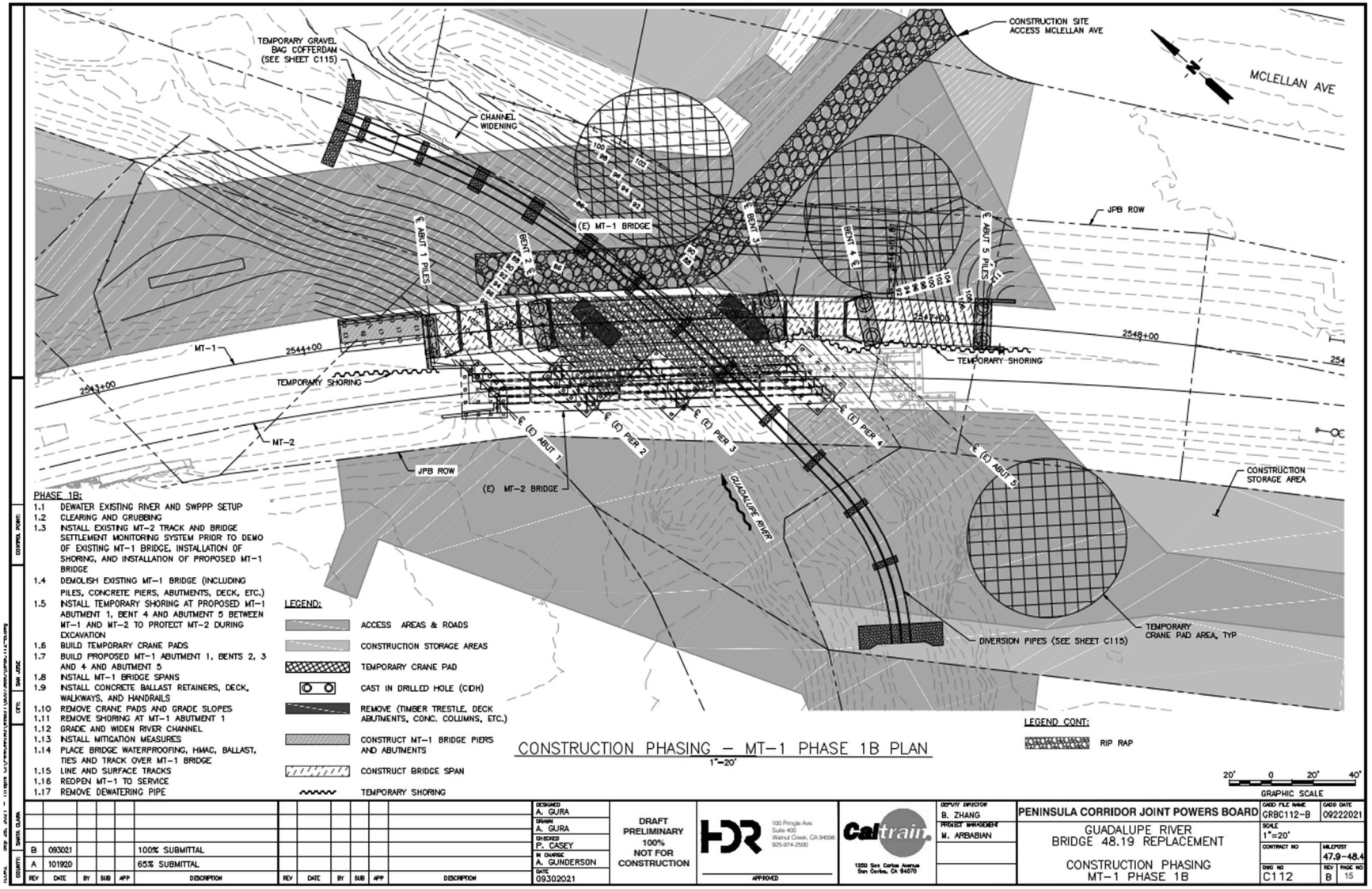


Figure 5: Construction Access Plan in 2021 100% Design: Sheet C112

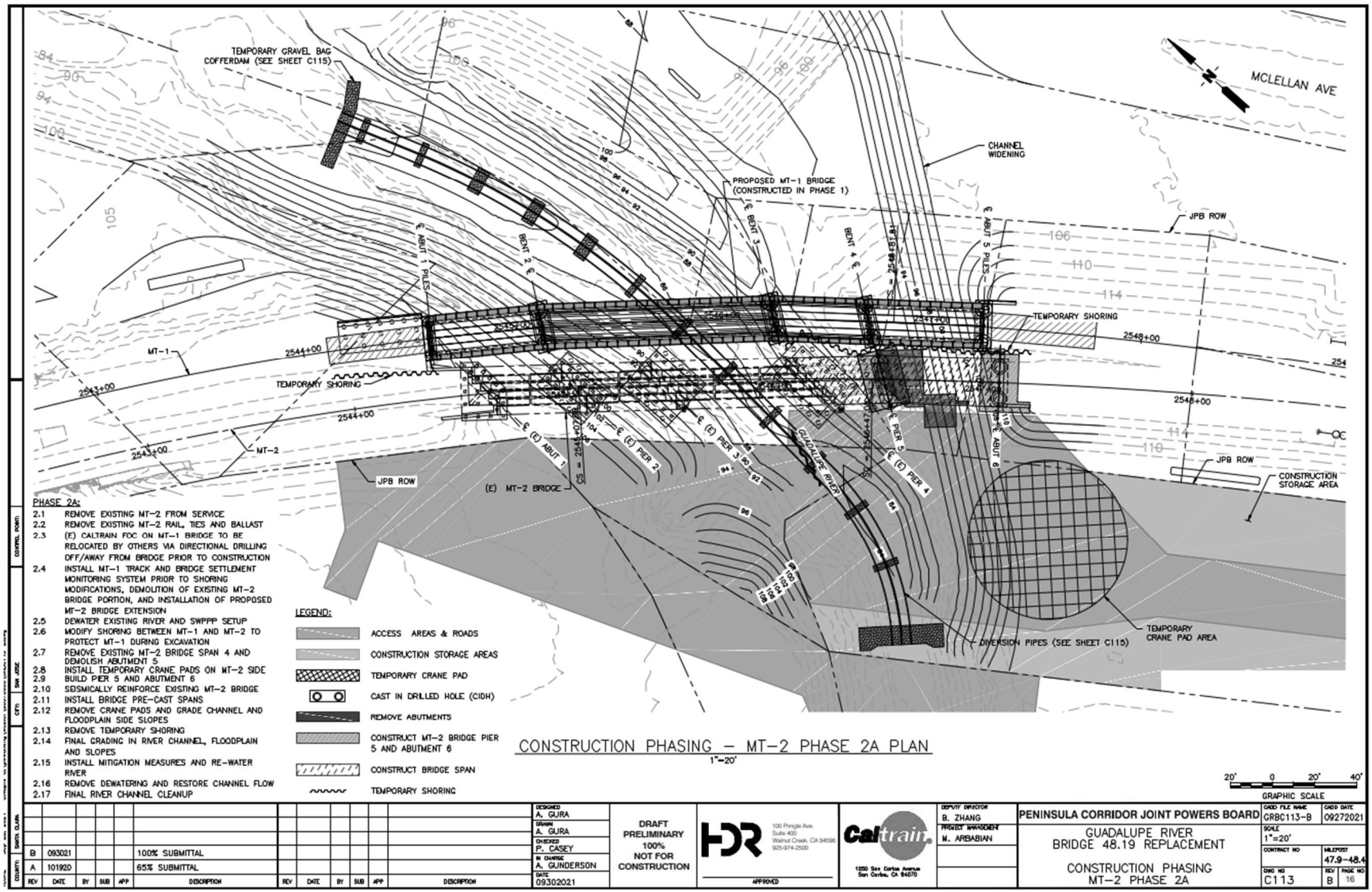


Figure 6: Construction Access Plan in 2021 100% Design: Sheet C113

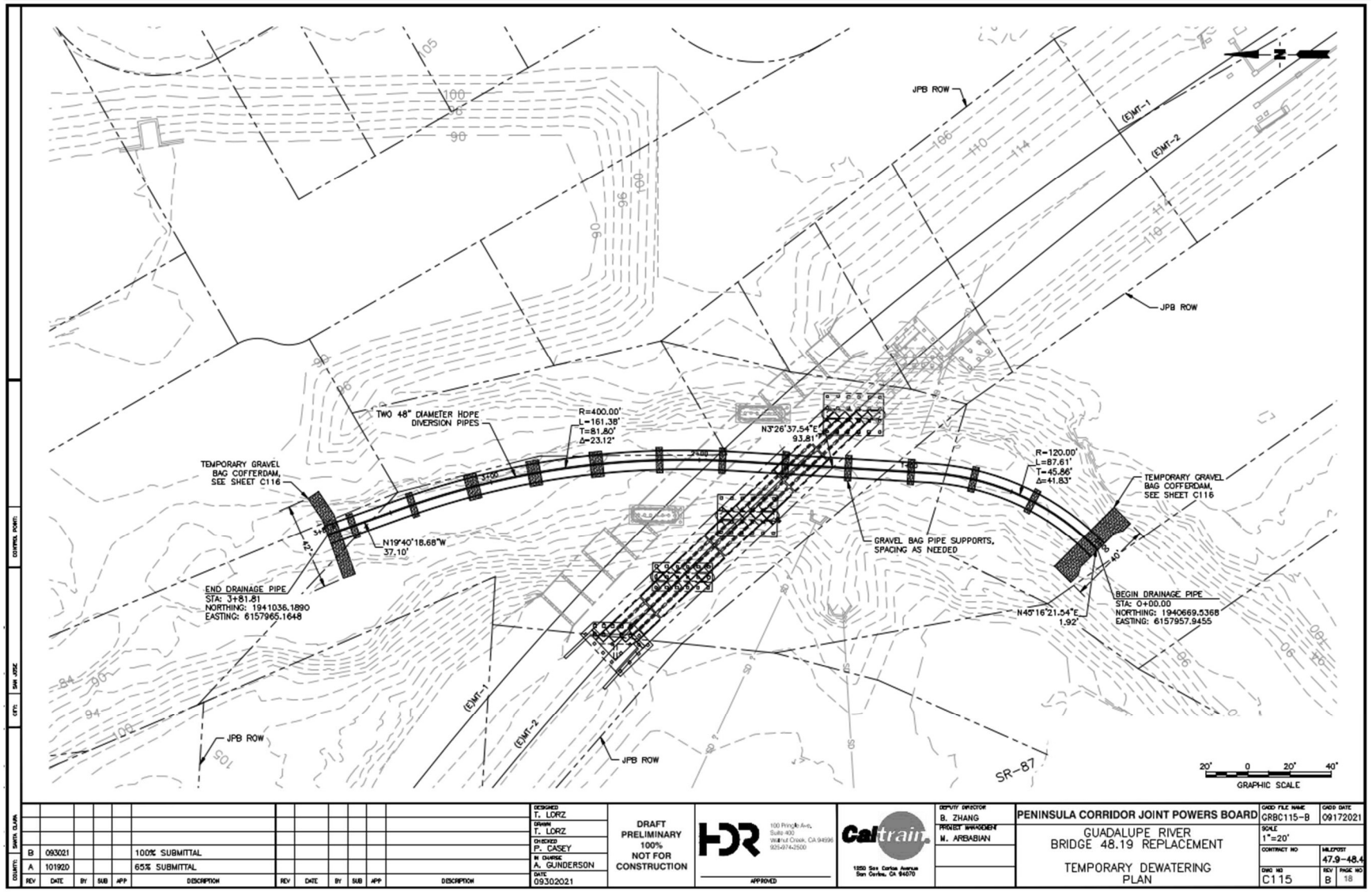


Figure 7: Construction Access Plan in 2021 100% Design: Sheet C115

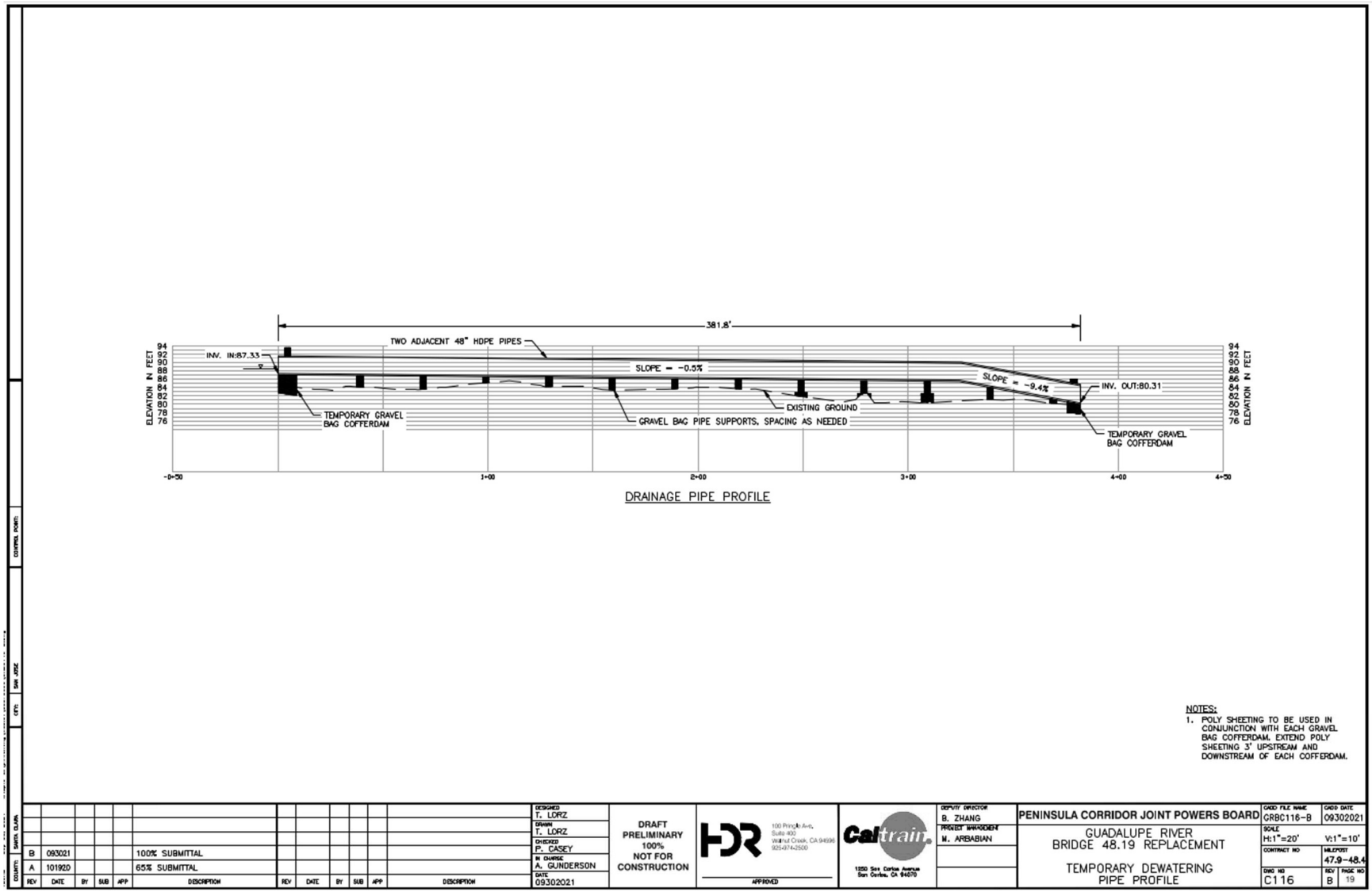


Figure 8: Construction Access Plan in 2021 100% Design: Sheet C116

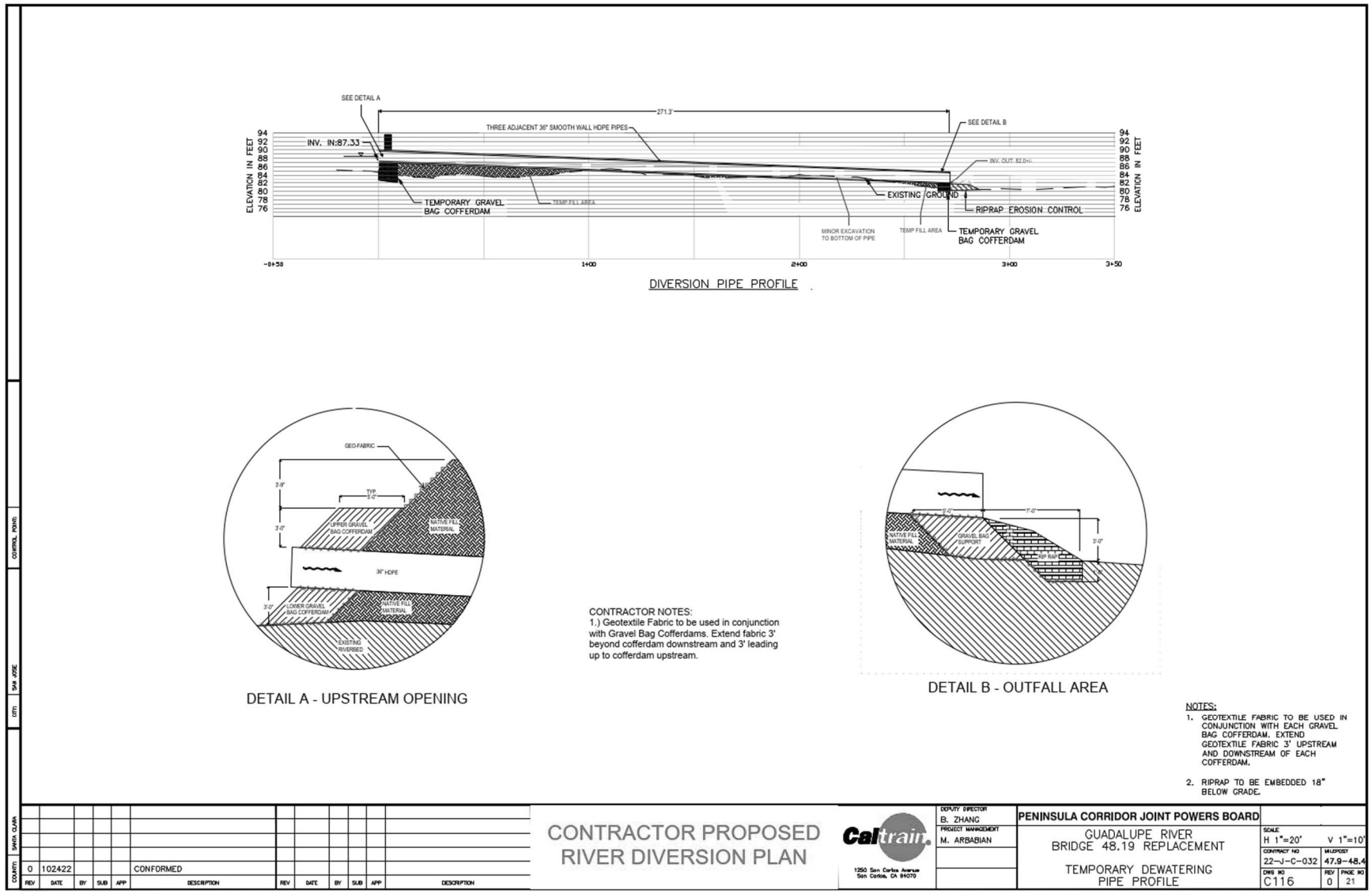


Figure 9: Cross-Section of Diversion Plan Submitted to CDFW in 2023

In Fall 2023, JPB removed approximately 254 cubic yards of this material. Approximately 110 cubic yards remains behind sheet piles, and approximately 96 cubic yards of material, including native soil and gravel bags, remain in the channel.[3] As part of the Modified Project, the JPB would remove this soil and gravel bags, which was not anticipated to remain in the river as part of the original Project. During removal, soils would be stockpiled on geotextile mats or in containers above and away from the top of bank. After all soil is removed from the channel, it would be exported from the Project site.

Modified Project Access, Dewatering, and Temporary Shoring Plans

Through a robust collaboration among JPB and its contractor and design team, aided by JPB's environmental team, JPB developed a construction phasing plan to complete the remainder of the Project. This phasing plan is the result of development of alternative approaches, evaluation for feasibility, and qualitative evaluation of relative environmental impact of each approach. (See **Appendix I**). The selected phasing plan incorporates reasonable methodologies and duration assumptions consistent with standard design and construction scheduling practices. For purposes of description, construction activities have been split into eight phases:

- Phase 1 – River Diversion Installation
- Phase 2 – Dry Season Work Condition
- Phase 3 – Late Dry Season 2025
- Phase 4 – Winter Seasons 2025 / 2026
- Phase 5 – 2026 River Diversion Installation
- Phase 6 – Dry Season 2026
- Phase 7 – Late Dry Season 2026
- Phase 8 – October 16, 2026 – Winter Season.

Phase 1 – River Diversion Installation (starting June 15, 2025)

Temporary 2025 Pump Bypass System

To begin the process of diverting the river for in-bank construction activities, a temporary pump bypass system (bypass system) would be used over a period of approximately 2 weeks (beginning no earlier than June 15, 2025). First, fish exclusion nets would be installed upstream and downstream of the Project site. Qualified biologists[4] would intercept, capture, and safely relocate fish from the upstream coffer dam to downstream. Fish exclusion nets placed downstream would prevent fish from traveling upstream back into the work area.

Second, temporary coffer dams would be installed upstream to intercept river flows and downstream to block river backwater from entering the work site. These coffer dams would be constructed from clean gravel bags or commercially available aquadams.

[3] Approximately 30 cubic yards of material is unaccounted for.

[4] A qualified biologist is an individual who shall have a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience conducting surveys for each special-status species that may be present within the project area. During or following academic training, the qualified biologist shall have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology and habitat requirements. A biological monitor is an individual who shall have academic and professional experience in biological sciences and related resource management activities as it pertains to the project, experience with construction-level monitoring, be able to recognize species that may be present within the project area and be familiar with the baits and behavior of those species. Pursuant to requirements of the Streambed Alteration Agreement, JPB would submit the names and resumes for all biologists and biological monitors involved in conducting survey and/or monitoring work to CDFW for review and written approval.

Third, a temporary settlement basin would be constructed by utilizing the Valley Water Reach 6 floodplain and an aquadam barrier. The settlement basin would function as a weir-type filter and is intended to allow for sediment to settle out of any flows to provide improved water quality from pumping of nuisance water, explained in the "2025 River Diversion System" section, below. The settlement basin would also protect the construction zone from possible river backflow should it occur. The settlement basin was designed in accordance with the Caltrans Stormwater Quality Handbook to manage diversion flows with a controlled outfall release structure.

Minor excavation would occur between the upstream fish exclusion net and the upstream temporary coffer dam to allow for temporary pump installation.

The Modified Project's Phase 1, river diversion temporary pump bypass system is shown on sheets C300, C310, and C311 in **Appendix A: Revised 100% Design Set**.

The pumps for the bypass system would be installed upstream of the upstream coffer dam to divert the river, just downstream of the upstream fish exclusion net. Pumps would include appropriate fish exclusion devices. The system would pump up to 50 cubic feet per second using six 10-inch pumps. Pump diversion piping would run from the pumps along the north (left) bank of the river, to a discharge point downstream of the downstream fish exclusion net.

Diesel generators would be located 150 feet from the riverbank and placed within a polypropylene spill containment berm. Generator noise would be mitigated by housing the generators in wooden boxes with sound dampening materials (i.e., Styrofoam) adhered to the walls and would be surrounded on three sides by a 6-foot soundwall.

After these components are in place, the bypass system pumps would be started, powered by the generators. The bypass system pumps would divert the river water through pipes placed along the left bank to discharge downstream of the downstream coffer dam. The weather forecast and planned upstream reservoir releases would be monitored during the pump diversion period; if higher flows are anticipated, then the pumps would be pulled and the river permitted to flow naturally through the channel. Pump intakes would be periodically checked for impingement of fish or amphibians, which if found, would be relocated to a safe location downstream of the dewatered channel segment.

The bypass system would run continuously (24 hours a day, seven days a week) until the high-density polyethylene (HDPE) diameter-fused pipes (described in the section below) are installed and the river diversion system is operational. This process is not anticipated to last longer than 2 weeks. No artificial lighting would be installed; crew would use flashlights to monitor the pumps and other diversion elements. One to two crew would monitor the bypass system pumping process.

The Modified Project's pump bypass system is shown on sheet C301 in **Appendix A: Revised 100% Design Set**.

Fish relocation within the dewatered area would occur concurrent with bypass system operation. Fish relocation would be led and completed by qualified biologists. The team would include people experienced in backpack electro-fishing, beach seining, and netting. 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) within the Project area. Backpack electro-fishing would follow NMFS (2000) guidelines for electro-fishing for anadromous salmonids. As captured in the NMFS 2021 Letter of Concurrence, NMFS doesn't expect the Project activities to adversely affect Central California Coast steelhead DPS (*O. mykiss*) ("steelhead") primarily because steelhead are not expected to be at the Project site during the in-water work period and when electro-fishing would be used.

Sweeps of the channel would be completed as water levels decrease. Captured fish would be held in containers of cool shaded river water and equipped with aerators. Fish of different size classes would be held separately to reduce predation. Fish would be identified and enumerated by genus and species to the extent feasible. Fish would not be subjected to jostling, excessive handling or noise and would not be overcrowded in containers. Fish would be relocated to the nearest appropriate site downstream of the work area. The qualified biologist would 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, JPB would construct the 2025 river diversion system by the first week of July. The access roadway from the McLellan yard would be constructed, which would comprise a mix of excavation and import of spawning gravel laid over rock slope protection (RSP) fabric. JPB would install interior coffer dams to completely dewater the 2025 dry season work area. The coffer dams would be gravel bags or aquadams.

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

Additional pumps would be installed in the construction area to dewater the active work area from nuisance river[5] water seepage beneath the coffer dams. These pumps would be powered by the generators enclosed in the upland containment area, described above. This water would be discharged to the settlement basin. The pumps would operate during both daytime and nighttime activities throughout the dry season.

See sheets C302, C320, C321, C322, and C323 in **Appendix A: Revised 100% Design Set**.

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

Dewatered Area Site Preparation

Additional gravel would be imported and placed over the three 36-inch diversion pipes to create a rock gravel bridge (land bridge).[6] RSP fabric would be placed in the river channel to separate the 3-inch rock from the native stream bed. The 3-inch crushed rock gravel bridge would facilitate access and create a work pad for demolition of the MT-1 bridge, reconstruction of the MT-1 foundations and bridge girders, and retrofit of the MT-2 foundations.

After all gravel is in place, the upstream and downstream exterior temporary coffer dams would be removed. Thereafter, the bypass system's pumps would be turned off and removed, and water would be diverted via gravity flow through the three 36-inch diversion pipes. Fish passage would be permitted downstream through the diversion pipes, but not upstream.

[5] "Nuisance water" is water encountered between the coffer dams in the river channel. It is assumed to be river flow.

[6] Spawning gravel will be available for re-use in mitigation habitat feature installation.

Bridge and Channel Construction Activities

With the 36-inch river diversion pipes and rock pipe-crossing in place, bridge construction activities would commence. The focus of activities would be on the bridge foundations and superstructure within the limits of the dewatered area.

The existing MT-1 bridge would be demolished. Demolition would include removal of rail, ties, ballast, deck timbers, and deck steel. Temporary shoring installed in 2023 would be removed at Abutment 1 and Bent 4. Bridge bracing and frames would be removed, and pile caps would be excavated and demolished. Structural backfill would occur in the pile cap locations, and the remaining channel grading would be restored by mid-August.

As the old MT-1 bridge is dismantled, the MT-2 bridge foundations (Piers 2, 3, and 4) would be retrofitted. The new MT-1 bridge abutments (Abutment 1 and 5) and Bents 2, 3, and 4 would be constructed. Retaining wall and wing walls would be constructed. This work would be completed with cranes, excavators, loaders, forklifts, concrete pump trucks, and other construction equipment. Scour protection would be placed at the piers and bank for stabilization.

Groundwater may be encountered while drilling piers outside the existing river channel and below top of bank. The pumps would discharge this groundwater to the City of San Jose sewer.

The Modified Project's Phase 2, dry season work is shown on sheets C114, C120, C121, and C302-C303 in **Appendix A: Revised 100% Design Set**.

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

Near the end of the 2025 dry season, the temporary bypass system would be reestablished over approximately two weeks. By placing temporary coffer dams upstream to intercept river flows and downstream to block river backwater from entering the construction area, the river would be re-routed through the temporary bypass, as described in *Phase 1*.

While the river is diverted through the bypass system, temporary sheet pile walls would be installed along the right and left banks of the main river channel to a top elevation of 102 feet (more than 2 feet above the 100-year flood level). These temporary sheet pile walls would be installed along the north and south banks to provide isolation of work areas from the river in future phases, described below. Sheet piles would be installed using a vibratory hammer to the greatest extent feasible and the impact hammer would be used as necessary to complete sheet pile installation.[7] The sheet piles would be imbedded approximately 10 feet so that water cannot flow through below grade. Sheet piles would be designed and built to Caltrain standards, following the Caltrain trenching and shoring manual. It would interlock to prevent water pass-through.

The south-side (right bank) wall is intended to begin approximately 120 feet west of the existing MT-2 bridge along the Guadalupe River and would roughly follow the elevation 94 contour line at its base midway up the river's southern bank. At the MT-2 Pier 4 location, the wall would be gradually swept to the north, connecting to permanent sheet piling previously installed for scour protection during the 2023 construction season. The existing scour protection wall installed in 2023 would be temporarily extended up to the top of sheet pile wall elevation (elevation 102) by welding additional sheets onto the structure. The wall would terminate approximately 100 feet east of the MT-2 bridge after spanning across the future overflow area, which would be partially completed during the 2025 dry working season. At both upstream and downstream

[7] In 2023, JPB initially installed sheet pile using vibratory hammer. However, installation met resistance before reaching design depth. Therefore, to install sheet pile most efficiently to appropriate depth, impact hammers are proposed.

ends the wall would be run gradually in an up-slope direction such that the sheet pile wall terminates at the existing grade elevation 102 near the extents of the project grading limits.

On the north bank (left bank) of the Guadalupe River, a separate sheet pile wall would be installed in a "U-shape." The north side wall would begin from the top of slope between north side MT-1 and MT-2 bridge abutments. The wall would then turn east, enclosing MT-1 Bent 2 and MT-1 Abutment 1. It would sweep back up-slope and follow the existing 102-foot elevation line along the riverbank to the northeast of the MT-1 Bridge. Below top of slope, the top of wall would be held at an elevation of 102 feet similar to the south side wall. This wall is intended to protect the river from wet season work impacts, which cannot be completed during the 2025 Dry Season Working Window (*Phase 2* and *Phase 3*).

After the sheet pile walls are in place, the gravel fill, RSP fabric, interior coffer dams, and three 36-inch diversion pipes would be removed. The soil in the riverbed would be scarified to reduce the soil compaction from equipment crossings over the diversion pipes. A 6-inch layer of spawning bed gradation gravel would be placed in the riverbed.

The Modified Project's Phase 3, late dry season sheet pile alignment is shown on sheet C304 in **Appendix A: Revised 100% Design Set**.

By the end of the dry season, the coffer dams, pump bypass system, and diversion pipes would be removed. River flow would return to the main channel. The temporary aquadam barrier installed as part of the settlement basin would remain in place.

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

The temporary shoring installed in *Phase 3* combined with the aquadam installed in *Phase 1* would create work areas isolated from wet season water flows. The sheet piles would protect the work areas from flow in the main channel, and the aquadam barrier would prevent backflow from encroaching into the work area via the Reach 6 floodplain. JPB has undertaken hydraulic modeling of the effects of this temporary shoring during 100-year flows, as shown in **Appendix F**. Stormwater flowing into the work area would be pumped to the San Jose municipal sewer.

During Phase 4, the concrete girders between MT-1 Bent 3 and Bent 4, and between Bent 4 and Abutment 5, would be set. Bridge construction would continue, including MT-2 Pier 4 retrofit completion and MT-1 foundation, pier, and superstructure construction. This work would be completed with cranes, excavators, loaders, forklifts, concrete pump trucks, and other construction equipment. Bridge construction would be complete by May 2026. Grading and partial HMMP restoration work in the downstream right overflow channel and bank behind the sheet pile wall would be performed.

In preparation of the 2026 dry season, three 36-inch river diversion pipes would be partially installed through the right bank behind the sheet pile wall. RSP would be laid down, and gravel would be placed in the overflow channel, allowing travel over the pipes.

The Modified Project's Phase 4, winter season construction activities are shown sheets C114, C120, and C304-C305 in **Appendix A: Revised 100% Design Set**.

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

The temporary bypass system described in *Phase 1* (fish nets, pumps, and exterior temporary coffer dams) would be re-established, diverting the river flow around the work area and discharging downstream. Concurrent with bypass system operation, fish relocation within the dewatered area would occur, consistent with the description in *Phase 1*. As under *Phase 1*, fish would not be permitted to travel upstream or downstream during this period. Dewatering work would begin no earlier than June 15, 2026.

The Modified Project's temporary bypass system is shown sheet C306 in **Appendix A: Revised 100% Design Set**.

After the pump bypass system is operational, the right bank sheet pile wall would be extended upstream from the previously placed sheet pile protection and extend across the main channel to "close off" the existing river basin, lowering the possibility of flow-under or flow-around entering the construction zone during the 2026 Dry Season Work Window. The top of the sheet pile would be placed at an elevation of 102 feet, which would protect the work area from the 100-year flood events. The three 36-inch diversion pipes installed in *Phase 5* would be extended upstream beyond the new sheet pile. After the pipes are installed, gravel would be laid over RSP to prepare a work surface in the overflow channel.

The Modified Project's Phase 5 sheet pile installation is shown on sheet C307 in **Appendix A: Revised 100% Design Set**.

The pump bypass outlet location would be relocated to allow for the extension of the 36-inch diversion pipes downstream. The settlement basin installed in Phase 1 would be removed. In its place, a new settlement system would be installed using Baker tanks in the Reach 6 floodplain. The HDPE pipes installed in winter 2025-2026 would be extended through the Reach 6 floodplain to discharge downstream of the work area. The pipes would be supported on temporary gravel fill over RSP fabric through most of the floodplain. At the location of the existing Valley Water mitigation area in Reach 6, an overhead support system would suspend the HDPE pipes above the surface to avoid the mitigation plantings. Beyond (upstream) of the mitigation area, the HDPE pipes would be supported on gravel bag piers. Coffer dams for the gravity diversion system would be installed at the upstream and downstream ends of the HDPE pipes.

Once the gravity diversion pipe installation is complete, the bypass system (temporary coffer dam and pumps) would be removed, and the previously installed temporary sheet pile walls would divert the river into the three diversion pipes by gravity flow. Fish passage would be permitted downstream through the diversion pipes, but not upstream. While the 36-inch diversion pipes would be used in a similar manner to their operations in the 2025 working season, the gravity diversion for the 2026 Dry Season Working Window would bring water to the east of the current Guadalupe River Basin, passing through the final river overflow alignment and would eventually return water to the river downstream of grading limits. This configuration would enable the construction of habitat improvements within the main river channel. Nuisance river water seepage would be pumped to the settlement system (Baker Tanks), if necessary.

The Modified Project's Phase 5, river installation complete summer 2026 diversion system is shown sheets C308, C330, C331, C332, C333, C334, and C335 in **Appendix A: Revised 100% Design Set**.

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

With the river diverted from the existing river channel, all in-channel HMMP and channel grading work would be completed. The downstream left side bank failure would be repaired. By August 2026, work in the main river channel would be complete.

The Modified Project's Phase 6 work area is shown sheet C308 in **Appendix A: Revised 100% Design Set**.

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

The left bank sheet pile wall would be removed after grading, and HMMP work in the river channel would be finished. JPB would remove the downstream temporary coffer dam, upstream coffer dam, and bypass system pump equipment in order to direct river water into the existing channel. The three 36-inch diversion

pipes, aquadam, and temporary sheet piles would be removed. JBP would restore the area behind the sheet piles and perform the final grading and channel stabilization.

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

By October 15, 2026, grading and HMMP enhancement feature installation would be complete, and the remaining sheet pile wall would be removed, allowing future high flows to enter the overflow channel. HMMP planting activities may continue into the 2026/2027 winter season to facilitate plant growth.

Potential Use of Impact Hammers

The MND assumed that impact hammers would not be used. Under the Modified Project, JPB would install temporary sheet piles and bridge piers using vibratory hammers to the extent feasible. However, if piles meet refusal prior to achieving design depth, JPB may have to use impact hammers to complete installation. Impact hammer use would be done during the daytime hours.

4.0 UPDATED ENVIRONMENTAL IMPACT ANALYSES

This Addendum evaluates the proposed changes to the Project to identify and address any new potential environmental impacts that were not evaluated by the MND, 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 Modified Project changes would require substantial revisions to the MND. **Table 3** provides a summary of the resources unaffected by the changes to the Project that are reflected in the Modified Project. Following **Table 3**, this Addendum evaluates changes to the Project that have the potential to result in new or more severe environmental impacts to biological resources, hydrology and water quality, and noise and vibration.

Table 3. Unaffected Resources Impact Analysis Summary Table

Resource	2021 MND Analysis	2025 CEQA Addendum Analysis
Aesthetics	No impact.	The Modified Project would not result in any new or greater impacts on aesthetics; the site does not contain and is not near high value aesthetic resources, the Modified Project elements would be the same as those analyzed in the MND, and construction—including the potential for nighttime activities—would be substantially similar to those analyzed in the MND. *The Aesthetics impact conclusions from the MND remain unchanged.*
Agriculture and Forestry Resources	No impact.	*The Agriculture and Forestry Resources impact conclusions from the MND remain unchanged*; the site does not possess agricultural or forestry uses.
Air Quality	Less than significant impacts. Temporary emission impacts from construction equipment.	*The Air Quality impact conclusions from the MND remain unchanged*; construction activities and related emissions would be substantially similar to those analyzed in the MND.
Cultural Resources	No impact.	*The Cultural Resources impact conclusions from the MND remain unchanged*; the site does not contain any cultural resources.
Energy	No impact.	The Modified Project would not result in any new or greater impacts on energy consumption; construction activities and energy needs would be substantially similar to those analyzed in the MND. *The Energy impact conclusions from the MND remain unchanged.*
Geology and Soils	No impact.	The Modified Project would not result in any new or greater impacts on geology and soils; construction activities would be substantially similar to those described in the MND, and the Modified Project would be subject to the same erosion and sediment controls, including implementation of the Stormwater Pollution Prevention Plan (SWPPP). *The Geology and Soils impact conclusions from the MND remain unchanged.*
Greenhouse Gas Emissions	No impact.	The Modified Project would not result in new or greater impacts on greenhouse gas emissions; construction activities and emissions controls would be substantially similar to those analyzed in the MND. *The Greenhouse Gas Emissions impact conclusions from the MND remain unchanged.*
Hazards and Hazardous Materials	Less than significant impacts. Temporary construction impacts resulting in the potential for the excavation or handling of contaminated soil. Impacts mitigated.	The Modified Project would not result in any new or greater impacts on hazards and hazardous materials; construction activities and their related hazards, and protocols for the handling and disposal of hazardous materials, would be substantially similar to those analyzed in the MND. *The Hazards and Hazardous Materials impact conclusions from the MND remain unchanged.*

Resource	2021 MND Analysis	2025 CEQA Addendum Analysis
Land Use and Planning	No impact.	*The Land Use and Planning impact conclusions from the MND remain unchanged*; construction activities would be substantially similar to those analyzed in the MND, and existing land use plans and zoning allow for construction.
Mineral Resources	No impact.	*The Mineral Resources impact conclusions from the MND remain unchanged*; the site does not possess mineral uses.
Population and Housing	No impact.	*The Population and Housing impact conclusions from the MND remain unchanged*; no existing housing is present on the site.
Public Services	No impact.	*The Public Services impact conclusions from the MND remain unchanged*; the Modified Project would not affect population growth or demand for public services. Impact conclusions would be the same as analyzed in the MND.
Recreation	No impact.	*The Recreation impact conclusions from the MND remain unchanged*; the Modified Project would not affect recreational development or facilities.
Transportation and Traffic	No impact.	The Modified Project would not result in any new or greater impacts on transportation and traffic; the Modified Project footprint would be substantially similar to that described in the MND. *The Transportation and Traffic impact conclusions from the MND remain unchanged.*
Tribal Cultural Resources	No impact.	*The Tribal Cultural Resources impact conclusions from the MND remain unchanged*; there are no known tribal cultural resources on the site.
Utilities and Service Systems	Less than significant impacts. Solid waste and stormwater created by project construction. Impacts are temporary.	The Modified Project would not result in any new or greater impacts on Utilities and Service Systems; the Modified Project would not increase water demand or create wastewater, and solid waste created by construction activities would be substantially similar to what is analyzed in the MND. *The Utilities and Service Systems impact conclusions from the MND remain unchanged.*
Wildfire	No impact.	*The Wildfire impact conclusions from the MND remain unchanged*; the site is not in or near state responsibility areas or lands classified as very high fire hazard severity zones.

BIOLOGICAL RESOURCES

The MND found the Project would have less than significant impacts on biological resources with mitigation. The MND concluded that potential Project impacts on steelhead and essential fish habitat related to fish stranding and entrainment; fish migration; fish relocation activities; toxic or hazardous spills; increased sediment and turbidity, and aquatic habitat modification would be potentially significant, but impacts would be reduced to less-than-significant levels with the implementation of mitigation measures BIO-1 (in-channel work window) and BIO-3 through BIO-8 (biological monitoring, fish relocation, minimize fish stranding and entrainment, SWPPP implementation, HMMP implementation, construction BMP implementation). As it related to other special-status species, the Project's impact on western pond turtle and special status bird species were found to be potentially significant, but were reduced to less than significant with implementation of mitigation measures BIO-3 (biological monitoring), BIO-9 (nesting bird surveys and buffers), BIO-1 (in-channel work window), and BIO-12 (worker environmental awareness training).

The MND concluded that the Project would result in permanent and temporary impacts to jurisdictional wetlands and waters of the U.S. and State under the jurisdiction of USACE and RWQCB, respectively, as well as to riparian habitats under the jurisdiction of CDFW. The MND identified Mitigation Measure BIO-7, calling for preparation of an HMMP—approved by resource agencies—to mitigate the impacts. The MND concluded that the Project would not result in loss of San Jose heritage trees, and that impacts to ordinance trees would be mitigated through site restoration and implementation of the HMMP (Mitigation Measure BIO-7). The MND concluded that coverage under the Santa Clara Valley Habitat Plan is not necessary because federally listed species are not present, and no special-status species under the California Endangered Species Act would be impacted.

Updated HMMP

Implementation of the updated HMMP would not change the impact conclusions of the MND. Preparation, agency approval, and implementation of an HMMP were identified in the MND Biological Resources analysis as Mitigation Measure BIO-7. The HMMP **(Appendix B**) includes a planting plan, including species composition, success criteria, and a monitoring schedule. It includes tree replacement mitigation. The HMMP includes designs for in-channel improvements that allow post-construction fish passage, and a monitoring schedule for fish passage. Impacts related to the HMMP enhancements and mitigations activities are covered under the analysis of the Modified Project construction, below.

The Modified Project HMMP would not result in any significant new or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

Project Duration and Sequencing

The Modified Project duration would not result in new significant impacts on biological resources. The mitigation measures identified in the MND would reduce potential impacts to a less-than-significant level. Regarding potential impacts of two additional seasons of river diversion, consistent with the Project described in the MND and Mitigation Measure BIO-1, work in the main river channel would be limited to June 15 to October 15, and all work areas below top of bank would be dewatered to avoid impacts to fish and other aquatic species. Implementation of Mitigation Measures BIO-4 (fish relocation) and BIO-5 (fish stranding and entrainment) would ensure that impacts are reduced to a less-than-significant level.

Regarding impacts related to an overall longer construction duration, consistent with Mitigation Measure BIO-3, a biological monitor would be present for all in-water construction activities. Consistent with Mitigation Measures BIO-06 and BIO-08, a SWPPP and construction best management practices would be implemented for the duration of the Modified Project. Consistent with Mitigation Measures BIO-09 through

BIO-13, pre-construction surveys, worker training, and fencing would be implemented to identify biological resources and limit disturbance of habitats.

The Modified Project sequencing of construction, specifically completing the MT-2 extension prior to the MT-1 demolition and reconstruction, would not result in changes to the impact conclusions in the MND. The sequencing change does not affect the limits of work or biological resources present in the Project area, and applicable mitigation measures to minimize impacts on biological resources apply regardless of construction sequencing.

The Modified Project duration and sequencing would not result in any significant new or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

Modified Project Limits for Clearing and Grubbing, Grading, and Erosion Control

The design analyzed in the MND concluded that the Project would result in permanent and temporary impacts to jurisdictional wetlands and waters of the U.S. and State under the jurisdiction of USACE and RWQCB, respectively, as well as to riparian habitats under the jurisdiction of CDFW. See **Table 4**. The MND identified preparation of an HMMP—approved by resource agencies—to mitigate the impacts to these jurisdictions.

Table 4. Total Acres of Impacts Across All Habitat Types by Jurisdiction

Jurisdiction	Design Analyzed in MND	Design Analyzed in MND	January 2025 100% Design	January 2025 100% Design
	Temporary	Permanent	Temporary	Permanent (1)
USACE	1.687	0.001	1.626	0.00018
RWQCB	2.385	0.002	1.753	0.791
CDFW	2.522	0.002	0.147	2.483

(1) "Permanent" area include areas of impact that are truly permanent in addition to those that the RWQCB and CDFW consider "permanent" for the purposes of mitigation but are actually temporary impacts consisting of grading (RWQCB) or that have a duration of multiple years (CDFW).

As further explained in the HMMP (**Appendix B**), the Modified Project limits (comprising clearing and grubbing, grading, and erosion control) would result in changes to the total acres of impacts to these resources under the jurisdictions of USACE, RWQCB, and CDFW. Additionally, since publication of the MND in 2021, JPB has coordinated with resource agencies to re-classify impacts as temporary or permanent based on the latest agency definitions (e.g., RWQCB indicated that all grading areas should be treated for mitigation purposes as if they were permanent impacts, regardless of their eventual restoration). Finally, CDFW has indicated that some areas previously classified as temporary impacts must be classified for mitigation purposes as if they are permanent impacts due to the 4-year construction duration now planned by JPB.

Consistent with the MND Mitigation Measure BIO-07, JPB has prepared and updated an HMMP, included as **Appendix B**. As indicated in the January 2025 HMMP and summarized in **Table 1**, the HMMP provides on-site compensatory mitigation to compensate for impacts to USACE, RWQCB, and CDFW jurisdictions. Any agency jurisdictional Impacts not fully mitigated onsite would be mitigated offsite by Caltrain entering into a Participating Special Entity Agreement with the Habitat Agency and paying landcover fees, or Caltrain making a financial or in-kind contribution to another agency toward a) a specific physical project; or b) land or conservation easement acquisition.

The Modified Project limits would not result in any significant new or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

Activities that Could Occur at Night

The Modified Project would entail night activities. JPB has prepared an analysis of nighttime activity impacts (**Appendix H**), summarized here. The analysis assumes implementation of all mitigation measures identified in the MND and the precautions identified in the Modified Project description.

Noise, lighting, and human activity associated with night work could result in temporary disturbance of habitats that are used by birds, roosting bats, mammals, amphibians, and reptiles. Species considered in this assessment include those species that were determined to have some potential to occur on the site in the MND as well as common species inhabiting the Project site and surrounding areas. Those species include American peregrine falcon, burrowing owl, Cooper's hawk, northern harrier, osprey, tricolored blackbird, white-tailed kite, western pond turtle, and steelhead. Other resources included in this analysis are nesting birds and roosting bats. The following is a summary of potential impacts on these species.

Regarding impacts to special-status birds, white-tailed kite and Cooper's hawk have some potential to nest on the site, whereas the other species are only expected to occasionally roost or forage on the site. Noise and lighting could potentially cause abandonment of active nests if they are sufficiently close to the nighttime construction activities. Disturbances created by diversion or emergency work could also cause nesting adults and other non-breeding individuals to flush from active nests or roost sites, respectively, increasing the potential for predation by nocturnal predators. Pursuant to the Modified Project description and mitigation measures identified in the MND, pre-construction surveys for nesting birds would be implemented, and no-disturbance buffers would be in place to protect active nests. Biological monitors would monitor bird nests, if present, when night-time activities have occurred, and generator noise would be attenuated in wood house and other materials. Buffers may also be implemented to protect birds from generator noise. If emergency repairs are required, noise from air compressors, construction equipment, and vehicles would be minimized, and lighting would be directed toward work areas only.

Regarding impacts to roosting bats, only MT-2 supports a small number of day-roosting Yuma myotis bats. Generator noise associated with nighttime diversion pumping and potential emergency work would potentially disturb only a small number of non-reproductive common bats during the June night work period when the diversion pumps are running. Noise and lighting may cause day-roosting bats to delay their evening emergence in an attempt to avoid predators, which may result in reduced foraging time. Noise and lighting may also cause bats to delay or avoid returning to roost sites in the bridge near sunrise for the same reason. However, it is likely that these bats would move to alternative tree roost sites elsewhere in the river corridor if they are disturbed by the nighttime diversion and emergency work. Pursuant to the Modified Project description, generator noise would be attenuated in wood house and other materials. If emergency repairs are required, noise from air compressors, construction equipment, and vehicles would be minimize, and lighting would be directed toward work areas only.

The middle span of MT-2 also supports a large Mexican free-tailed bat fall/winter colony. Assuming that the colony returns to MT-2 around the same time each year, there could be some overlap of night work and colony presence during the mid-October night work period. As noted above, nighttime diversion and emergency work near the middle span of MT-2 could delay emergence and return times of the colony, thereby decreasing foraging times. Noise and lighting could also cause individuals to seek alternate roost sites which are a limiting resource for large colonies in urban environments. Failure to find suitable alternate sites could result in stress and possible loss of an unknown number of individuals in the colony. Pursuant to the Modified Project description, if a qualified biologist determines that bats are present at MT-2 in

October of each year, lighting would not occur in that location and a buffer would be implemented to protect the colony.

Regarding impacts to other species:

- Common mammals such as racoon and opossum tend to be more acclimated to artificial lighting and noise, but they may still avoid or flee from adjacent areas subjected to nighttime noise, lighting, and human activity. Thus, nighttime work could result in a loss of nesting and foraging habitat for these species. However, these habitats are not a limiting resource in the river corridor, and it is anticipated that these animals would be able to move away from nighttime disturbances and occupy other undisturbed areas upstream and downstream of the site.
- Noise and artificial lighting may negatively impact common, native amphibians such as nocturnal chorus frog and arboreal salamander. Noise may impact chorus frog communication by drowning out their mating and territorial calls, thus affecting reproductive success. Lighting onto the adjacent areas of the river corridor may deter frogs from these areas; thus, reducing the amount of habitat available to these species. Lighting and noise may also deter salamanders that live and forage near the Project site. These species are common and widespread in the region and such impacts would not affect their local populations.
- Western pond turtles are primarily active during the day, but may be nocturnal in the summer, and are known to construct nests in May through July in the early evening hours. Thus, noise and lighting in the early evening and nighttime could alter nesting behavior of pond turtles if they are present in aquatic and upland habitats surrounding the Project site.
- Pursuant to the Modified Project description, generator noise would be attenuated in wood house and other materials. If emergency repairs are required, noise from air compressors, construction equipment, and vehicles would be minimized, and lighting would be directed toward work areas only.

Impacts from work for temporary bypass pumping, as well as potential emergency repairs, would be less than significant. The Modified Project nighttime activities would not result in any significant new or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

Site Access, Dewatering, and Temporary Shoring

As analyzed in the MND, Project construction would involve use of a 2-pipe gravity diversion system and work bridge over the diversion system each of two dry seasons. No temporary sheet piles would be installed. The MND concluded that impacts related to fish stranding and entertainment, fish migration, fish relocation, toxic or hazardous spills, increase sediment or turbidity, and aquatic habitat modification would be less than significant with identified mitigation measures.

This Addendum evaluates whether changes to the Project, as reflected in the Modified Project 2025 and 2026 refined construction methodology described in the Modified Project description and shown in the 100% design drawings in **Appendix A** may result in new significant environmental impacts.

Fish Stranding and Entrainment

The Modified Project includes dewatering the main channel of the Guadalupe River using a three 36-inch-pipe gravity system in the dry seasons of 2025 and 2026, as well as use of a temporary pump bypass system for multiple 2-week periods during installation and removal of dewatering infrastructure. As indicated in the Beneficial Uses analysis prepared for the Modified Project (**Appendix G**), The temporary diversion structure would be limited to the June 15 to October 15 work window which is outside of the migration

season for fish species present in the Guadalupe River. The short-term pump-around system would restrict fish movement through or around the construction site while in place. This system would be in place for the shortest time possible to install the diversion structure and again to remove the diversion structure. The pumps would be limited to a maximum duration not to exceed two weeks during each event. Once the diversion pipes are in place, fish would be able to move downstream through the pipes. The diversion pipes are not expected to support upstream migration; however, all elements of the temporary diversion system would be removed prior to the migration season for fish in the Guadalupe River watershed and therefore are not likely to affect fish migration. Implementation of Mitigation Measure BIO-5 (fish stranding and entrainment) would ensure that impacts are less-than-significant.

Fish Relocation

There would be no changes in the proposed fish relocation activities from those analyzed in the MND. Fish relocation activities would follow NMFS electrofishing guidelines. Implementation of Mitigation Measure BIO-4 (fish relocation) would ensure that impacts are less-than-significant.

Toxic or Hazardous Spills

The revised construction methodology and approach would not affect JPB's existing protocols to address risks from accidental release of diesel fuel, lubricants, hydraulic fluid, and other potential contaminants. Construction-related BMPs would be implemented during construction as part of the Stormwater Pollution Prevention Plan. Consistent implementation of construction BMPs would ensure that any spills are immediately and effectively remediated.

Increased Sediment and Turbidity

The revised construction methodology and approach would result in turbidity and sedimentation impacts similar to those assessed in the MND. Turbidity and the concentration of total suspended solids (TSS) could temporarily increase during pumping associated with the channel dewatering activities. Similarly, re-watering the channel could increase turbidity and TSS when flows are restored to the dewatered section of river. Turbidity and increased TSS may directly affect special-status fish species by causing adverse physiological effects. Potential turbidity and TSS increases would be minimized by implementing construction-related BMPs, including implementation of the SWPPP, turbidity monitoring during dewatering activities, and implementation of r erosion control measures. Furthermore, effects on special-status species would be limited because the in-stream construction activities would occur outside the migration season for adult and juvenile steelhead when steelhead are not expected to occur within the study area due to poor habitat conditions. Wet-season work in the 2025/2026 season would occur only behind sheet pile walls, protecting the river.

Channel grading also could increase turbidity and TSS and could impair water quality conditions. Potential impacts from channel grading are expected to be addressed by dewatering the work area before working in the active river channel, implementing the SWPPP, and working only behind sheet pile walls in the 2025/2026 wet season.

Aquatic Habitat Modification

The revised construction methodology and approach would result in turbidity and sedimentation impacts similar to those assessed in the MND. Site preparation for work on MT-1 and downstream would require vegetation clearing around access routes and the bridge. As a result, site preparation activities are expected to result in the removal of vegetation that provide Shaded Riverine Aquatic (SRA) cover. SRA cover provides shelter, resting, rearing, and feeding areas to multiple fish species. The temporary loss of SRA

cover can negatively affect anadromous fish by removing protective cover for juveniles. Loss of SRA would be temporary and would affect a small amount of available SRA habitat compared to the total amount of SRA along the Guadalupe River. Any steelhead seeking cover in SRA habitat could find suitable SRA habitat nearby. Through site restoration and implementation of the HMMP, the site would be revegetated.

Summary

The Modified Project site access, dewatering, and temporary use of sheet pile shoring would not result in any significant new or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

Potential Use of Impact Hammers

As analyzed in the MND, impact pile driving was not proposed. Further, MND Mitigation Measure indicated the following:

> **Mitigation Measure BIO-02: Minimize Noise and Vibration.** The potential for noise and vibration disturbance of fish species will be minimized by using drilled piles for the new bridge piers, rather than impact pile driving.

Under the Modified Project, JPB would install temporary sheet piles and bridge piers using vibratory hammers to the extent feasible. However, if piles meet refusal prior to achieving design depth, JPB may have to use impact hammers to complete installation. Impact hammer use would be done during the daytime hours.

Regarding impacts to special-status wildlife nesting birds, and roosting bats, noise and vibration associated with impact hammering can cause abandonment of active bird nests if the nests are sufficiently close to the pile driving. Pursuant to mitigation measures identified in the MND (BIO-09, BIO-10, and BIO-11) pre-construction surveys would be implemented to identify such species, nests, and roosts and incorporate appropriate buffers, if necessary.

Regarding fish, impact hammering would not occur directly in the wetted channel. Regardless, sheet pile installation with an impact hammer has potential to cause sound vibrations which can travel through land and water. Noise levels from activities outside of water can be unpredictable and vary by location because it depends on site conditions, such as soil saturation and soil composition. Because of these uncertainties, noise levels are typically monitored by a trained hydroacoustic specialist during activities to identify when abatement is necessary. Noise thresholds for interim injury criteria for fish are summarized in **Table 5**.[8] Based on data compiled from various sources, sound pressure levels for impact hammers occasionally exceed 206 decibels (dB), which is the injury criteria for fish at 10 meters.[9] Depending on the number of strikes per day required to install the sheet piles at the Project site, the daily cumulative sound exposure level (SEL) (187 dB for fish ≥2 grams and 183 dB for fish < 2 grams) may also be exceeded beyond 10 meters.

Steelhead primarily use the Project area for migration periods that typically peak from December through April (for adults) and during January through May (for juveniles). Outside of these migration periods, habitat conditions are generally unfavorable for steelhead due to unsuitable water temperatures. Therefore,

[8] California Department of Transportation (Caltrans). 2015. Overview of the Evaluation of Pile Driving Impacts on Fish for the Permitting Process. Caltrans Engineering Technical Brief. October 16, 2015. Available at: Caltrans Engineering Technical Brief.

[9] National Marine Fisheries Service (NMFS). 2001. Multi-Species Pile Driving Calculator Tool. Version 1.0. Available at: Multi-Species Pile Driving Calculator Tool.

installing CISS piles and temporary sheet piles with impact hammers during the in-water work window (i.e., June 15 to October 15) and dewatering the channel prior to installation would ensure potential effects from elevated noise levels during construction would be insignificant and unlikely to reduce the fitness of individual fish or have lasting effects to listed fish salmonids present within the project area during proposed work periods.

Table 5. Interim Injury Criteria for Fish

Noise Affect Criteria	Threshold
Peak	206 dB
Cumulative SEL*	187 dB – for fish ≥2 grams 183 dB – for fish < 2 grams
Behavioral	150 dB_{RMS}**

* Cumulative SEL = the sum of sound energy associated with all pile strikes that occur over a given day
** RMS = Root-Mean-Square = the average sound energy associated with a single strike.

Regarding wildlife movement, wildlife species in the Guadalupe River corridor are acclimated to existing urban noise in the project area (Highway 87, the railway, and air traffic). However, wildlife that move through the river corridor are not acclimated to the intense noise created by an impact hammer. It is likely that wildlife that use riparian areas as movement corridors, particularly the most mobile species, birds, bats, and mesocarnivores (racoons, skunks), would temporarily avoid the Project vicinity or move out of the area during the hammering activities. All of these animals would be able to return to the Project vicinity after the hammering is completed. Similarly, the movement of these animals would not be impeded by the use of the impact hammer and animals in the area would be able to move around or over the impact hammer.

Impacts from the use of impact hammers would be less than significant. The Modified Project would not result in any significant new or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

Summary

The Modified Project would not result in new significant impacts on biological resources or more severe impacts to biological resources than the impacts analyzed and addressed in the MND.

HYDROLOGY AND WATER QUALITY

The MND concluded that the Project would result in no impact related to violation of water quality standards, groundwater supplies, surface runoff, stormwater drainage systems, flood flow, flood hazard, or conflict or obstruction of a water quality control plan. The MND concluded that the Project would result in a less-than-significant impact related to erosion or siltation due to temporary disturbance of construction activities, as well as a long-term increase in impervious surface area. That less-than-significant impact 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.

The Modified Project updated HMMP, duration and sequencing, nighttime activities, and the use of impact hammers would not result in any significant new or more severe impacts to hydrology and water quality than the impacts analyzed and addressed in the MND.

Regarding the Modified Project limits (clearing and grubbing, grading, and erosion control), as indicated in the MND, in accordance with NPDES General Permit requirements for construction a SWPPP was prepared. The SWPPP identifies BMPs to address pollutant source reduction and provide measures and

controls necessary to address potential pollutant sources. As applicable, the SWPPP would be revised to incorporate the construction phasing and duration anticipated for the Modified Project.

Based on samples taken of stockpiled soil removed from the channel in Fall 2023, the native soil remaining in the channel may contain constituents of ecological concern that exceed ecotoxicity screening levels provided by regulatory agencies. These soils are native to the Project site and have constituent levels consistent with surrounding soils in the Project area. As explained in the MND, the Project site is located in an urbanized area and therefore has the potential to encounter such constituents. In addition, the unhoused population that lives along the Guadalupe River continue to discharge waste into the moving waterway, which may introduce other chemicals of concern.

JPB would remove this soil in the 2025 dry season, when the river is diverted. During removal, soils would be stockpiled on geotextile mats or in containers above and away from the above the top of bank. After all soil is removed from the channel, it would be exported from the Project site to an appropriate disposal facility. During the soil removal, JPB would follow standard construction BMPs. Consistent with the Project analyzed in the MND, the Modified Project would result in a net removal of soil from the Project area to implement the river widening. There is no change in the net removal of soil between the Project analyzed in the MND and the Modified Project.

To analyze the potential effects of the revised grading plan on the river in 2025, JPB conducted hydraulic modeling of the refined 100% design, including the refined post-project grading and site restoration in the HMMP. Consistent with the model required by, and guidance from, Valley Water, modeling was performed for different site roughness values, with and without debris, under both baseline boundary conditions and under the condition of the USACE 100-year flow of 14,366 cubic feet per second. As indicated in **Appendix E**, the Modified Project would not result in an increase in average water surface elevation with the exception of a 0.1-foot average rise at the upstream face of MT-2 assuming a high site roughness (overgrown plantings). Water velocities in the main channel would generally slow due to increased vegetation, and water velocities downstream in the overflow channel (side channel) would increase due to the newly opened floodplain. These changes would not constitute an impediment or redirection of flows or alter area drainage patterns to the extent that would result in substantial erosion or result in flooding.

To analyze the hydraulic effects of the detailed construction phasing for 2025 and 2026, JPB prepared a hydraulic model of the proposed temporary shoring. As indicated in **Appendix F**, with the temporary shoring in place, during a 25-year flow event, there would be no increase in average water surface elevations as a result of the temporary shoring. The temporary shoring could cause increased water velocities upstream of MT-2 and at the upstream face of MT-2. These increased velocities could increase scour in the channel, but not to the extent that would impact the structural integrity of the bridge infrastructure. Any scour holes created during such flows would be restored to finished grade as indicated in the design plans.

The Modified Project would not result in any significant new or more severe impacts to hydrology and water quality than the impacts analyzed and addressed in the MND.

NOISE AND VIBRATION

The MND concluded that the Project would result in no long-term impacts to noise or vibration. Regarding construction noise, the MND analysis assumed night-time construction would occur, and it assumed that no impact hammers would be used during either daytime or nighttime construction. The MND concluded the Project would result in potentially significant noise impacts during night-time construction activities; these impacts were reduced to a less-than-significant level through implementation of Mitigation Measures NOI-1 (Turn of idling equipment), NOI-2 (Use newer equipment with improved noise muffling), NOI-3 (Develop and implement a noise mitigation plan), and NOI-4 (Community outreach program). Regarding

construction vibration, the MND concluded that construction vibration impacts would be less than significant for both vibration annoyance and for cosmetic damage, and the mitigation measures NOI-1 through NOI-4 would further reduce vibration impacts. The Project site is not in the vicinity of a private airstrip or airport.

Noise

The Modified Project would not affect operational noise. The Modified Project HMMP, duration and sequencing, limits (clearing and grubbing, grading, erosion control) and changes to dewatering and access would not substantially affect the conclusions of the MND regarding construction noise. The temporary noise increases would be similar to those already analyzed in the MND for construction activity. Therefore, this analysis focuses on nighttime activities and the use of impact hammers.

The MND evaluated potential construction noise levels using FTA criteria of 80 dBA hourly equivalent sound level [Leq(h)] during the nighttime (10 p.m. – 7 a.m.) and 90 dBA Leq(h) during the daytime (7 a.m. – 10 p.m.). Noise levels that *exceed* these values would be considered potentially significant.

Regarding nighttime activities, during dewatering activities when the river is diverted by a pump-around/bypass system, a generator would continuously run (24 hours a day, seven days a week), which would produce additional noise from the construction staging area. These generators are estimated to produce 71 decibels (dBA) each of sound (76 dBA for all three pumps) at 23 feet at a frequency of 60 kilohertz. Up to four pumps would be staggered along the dewatering area to carry nuisance water from the construction area to a settlement basin adjacent to the McLellan yard. These pumps would also run overnight and would be powered by a third generator, if needed, housed with the other generators along the west perimeter of the Willow yard. To minimize noise produced by the generators, they would be staged in an area surrounded by sound dampening walls and housed in wooden boxes. Sound-dampening materials, such as 1-inch-thick Styrofoam, would be adhered to the walls.

In the event of an emergency during the nighttime pumping operation, additional equipment that may be used includes the following:

One, extendable forklift	50 dbA at 50 feet
One, four-bulb light plant (tower)	NA
One, 185 CFM air compressor	80 dbA
Pick-up trucks	75 dbA
Excavator	84 dbA

The nearest residential receptors are located at 974 and 978 McLellan Avenue. These residences are on the eastern side of the railroad embankment. They are located approximately 400 feet from the proposed generator location, which is on the western side of the railroad embankment. At this distance, and with the attenuation provided by the railroad embankment, generator noise would not exceed FTA criterion of 80 dBA Leq(h). Similarly, these residences would be located more than 200 feet from the pumps themselves. Noise from emergency activity to repair the pumping operation is unlikely to exceed 80 dBA Leq(h) at that distance.

Regarding the daytime use of impact hammers, noise levels were modeled using FTA guidance for general construction noise, consistent with the methodology used in the MND. **Table 6** shows the predicted worst-case (loudest) daytime construction noise levels for the Modified Project, which are assumed to comprise use of an impact hammer concurrent with other construction equipment. The predicted daytime construction noise levels do not exceed the FTA daytime noise limit of 90 dBA Leq(h). The noise impact would be less than significant.

Table 6. Construction Noise Assessment Results

Construction Scenario	Daytime Noise Level, dBA Leq(h)	
	Predicted Noise Level at 974 McLellan:	**FTA Indicates Impact Would Occur if Noise Levels Exceed:**
MT-1 Construction Concurrent with Impact Pile Driving for Sheet Piles	90	90

JPB would implement mitigation measures identified in the MND. With implementation of these measures, construction noise impacts would be less than significant with mitigation.

The Modified Project would not result in any significant new or more severe impacts to noise impacts than the impacts analyzed and addressed in the MND.

Vibration

The Modified Project would not affect operational vibration. The Modified Project HMMP, duration and sequencing, limits (clearing and grubbing, grading, erosion control), nighttime activities, and changes to dewatering and access would not substantially affect the conclusions of the 2021 MND related to construction vibration. The temporary vibration would be substantially similar to those already analyzed in the 2021 MND for construction activity. Therefore, this analysis focuses on the use of impact hammers, which are a source of vibration. On each impact, the energy of the impact is imparted to the pile, and a portion of the energy is propagated through the surrounding earth materials as elastic waves.

The potential for temporary vibration impacts during construction of the Modified Project was evaluated in accordance with the *FTA Transit Noise and Vibration Impact Assessment Manual*.[10]

Two distinct types of impact criteria are necessary for the assessment of potential impacts from groundborne vibration during construction: (1) criteria for the onset of building cosmetic damage, and (2) lower thresholds addressing potential annoyance of building occupants.

Table 7 summarizes the building damage criteria recommended for various building types by the FTA guidance manual and the Caltrans Transportation and Construction Guidance Manual,[11] which are used as significance thresholds for the Modified Project.

Table 7. FTA and Caltrans Construction Vibration Damage Criteria

FTA	
Building/Structure Type	**PPV (in/sec)**
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2

[10] U.S.DOT, Federal Transit Administration, FTA Transit Noise and Vibration Impact Assessment Manual, September 2018. Available online: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

[11] Caltrans, Transportation and Construction Vibration Guidance Manual. April 2020. Available online: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

IV. Buildings extremely susceptible to vibration damage	0.12
Caltrans	
Building/Structure Type	**PPV (in/sec)**
Historic and some old buildings	0.5
Residential structures	0.5
New residential structures	1.0
Industrial buildings	2.0
Bridges	2.0

Building Damage Criteria

As indicated in the MND, for 974 Mclellan Avenue, which is the nearest residential structure to the proposed pile driving, the 0.3 inch per second (in/sec) peak particle velocity (PPV) was selected as the appropriate vibration damage threshold. For the existing MT-2 bridge structure, 2.0 in/sec PPV was selected as the appropriate vibration damage threshold based on Caltrans guidance.

Annoyance Criteria

Caltrans has developed construction vibration annoyance impact thresholds. For "transient" vibration sources, such as pile driving, Caltrans identified the following human reactions:

- 0.035 in/sec PPV – barely perceptible
- 0.24 in/sec PPV – distinctly perceptible
- 0.9 in/sec PPV – strongly perceptible
- 2.0 in/sec PPV – severe

For this Project site, the significance threshold for vibration annoyance to building occupants is 0.24 in/sec PPV, which is the level that would be "distinctly perceptible" according to Caltrans guidance.

Criteria from the FTA guidance manual were also reviewed to provide additional information on potential annoyance due to construction vibration. The FTA criteria are expressed in terms of root-mean-square vibration velocity levels (VdB). The FTA guidance manual states that evaluations of building occupant annoyance due to vibration (below damage thresholds) can use the long-term operation vibration criteria, which range from 72–80 VdB for residences depending on the frequency of vibration events. The 80 VdB threshold is reasonable for construction vibration impacts given the relatively short duration of pile driving in any one location.

Construction Vibration Building Damage Analysis

The changes to the Project introduce the use of an impact hammer to install temporary shoring and, if necessary, CISS piles. Vibration was estimated using Equation 1 from the Caltrans guidance, below:

Equation 1: Caltrans Impact Pile Driver Model

$$PPV_{Impact\ Pile\ Driver} = PPV_{Ref}\ (25/D)^{n}\ x\ (E_{equip}/E_{Ref})^{0.5} \quad (in/sec) \quad (Eq.\ 9)$$

Where:

PPV_{Ref} = 0.65 in/sec for a reference pile driver at 25 ft.

D = distance from pile driver to the receiver in ft.

n = 1.1 is a value related to the vibration attenuation rate through ground

E_{Ref} = 36,000 ft-lb (rated energy of reference pile driver)

E_{equip} = rated energy of impact pile driver in ft-lbs.

Table 8 summarizes the results of the building vibration damage assessment.

At the nearest residence to pile driving along Mclellan Avenue, the predicted PPV levels from impact pile driving of the temporary sheet piles, 187 feet away, would be well below the applicable damage threshold.

For the existing MT-2 bridge, impact pile driving is expected to occur within 10 feet of existing piers. The predicted PPV from impact pile driving on the existing MT-2 bridge is slightly higher than the impact criterion, so cosmetic damage could occur.

Table 8. Construction Vibration Cosmetic Damage Impact Assessment Results

Receptor	Distance to nearest sheet pile (feet)	PPV Impact Criterion (in/sec)	Predicted maximum PPV (in/sec)	Predicted Cosmetic Damage Impact?
Residence at 974 Mclellan Avenue	187	0.3	0.11	No
Pier of Existing MT-2 Bridge	10	2.0	2.57	Yes

It is standard project practice for Caltrain's contractor to fix any cosmetic damage caused by construction. During impact pile driving, JPB's contractor would monitor the cosmetic condition of the nearest MT-2 bridge pier for evidence of cosmetic damage, such as superficial cracks in the concrete. These would be documented for JPB repair. In addition, JPB regularly inspects the entire MT-2 bridge to ensure it meets JPB structural standards. Therefore, cosmetic damage impacts would not be significant.

Vibration Annoyance Analysis

The predicted PPV vibration levels discussed in the previous section are not directly comparable to FTA's VdB-based annoyance thresholds. Therefore, vibration annoyance in terms of VdB was calculated using the FTA manual equation assuming the "typical" 104 VdB at 25 feet for impact pile drivers. **Table 9** summarizes the results of the building vibration annoyance assessment.

The maximum vibration levels at the edge of the closest residence along Mclellan Avenue are predicted to be 0.11 in/sec PPV and 78 VdB. In terms of the Caltrans vibration annoyance criteria selected as the threshold of significance, analysis results indicate that vibration from impact pile driving would not exceed the threshold for "distinctly perceptible" vibration (0.24 in/sec PPV). And impact pile driving is expected to exceed the FTA long-term vibration criterion of 80 VdB, which indicates some level of annoyance, but not necessarily unacceptable or severe annoyance.

Table 9. Construction Vibration Annoyance Impact Assessment Results

Receptor	Distance to nearest pile (feet)	Annoyance Impact Criterion	Predicted maximum vibration	Predicted Annoyance Impact?
Residence at 974 Mclellan Avenue	187	PPV = 0.24 in/sec Vibration Level = 80 VdB	PPV = 0.11 in/sec Vibration Level = 78 VdB	No

Summary

The vibration assessment demonstrates that excessive groundborne vibration levels would not occur at the nearest residential receptor due to the changes in the Project. Construction noise mitigation measures also serve to attenuate vibration impacts to nearby residential receptors, such as the proactive community outreach program.

Groundborne vibration from impact hammers could result in cosmetic damage to the MT-2 piers; this cosmetic damage would be addressed through monitoring and documentation during impact pile driving, as well as regular bridge inspection. The Modified Project would not result any significant new or more severe vibration impacts than the impacts analyzed and addressed in the MND.

MANDATORY FINDINGS OF SIGNIFICANCE

With incorporation of mitigation measures as identified in the MND, the 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 Modified Project does not have impacts that are individually limited but cumulatively considerable, and the 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.

02/12/2025

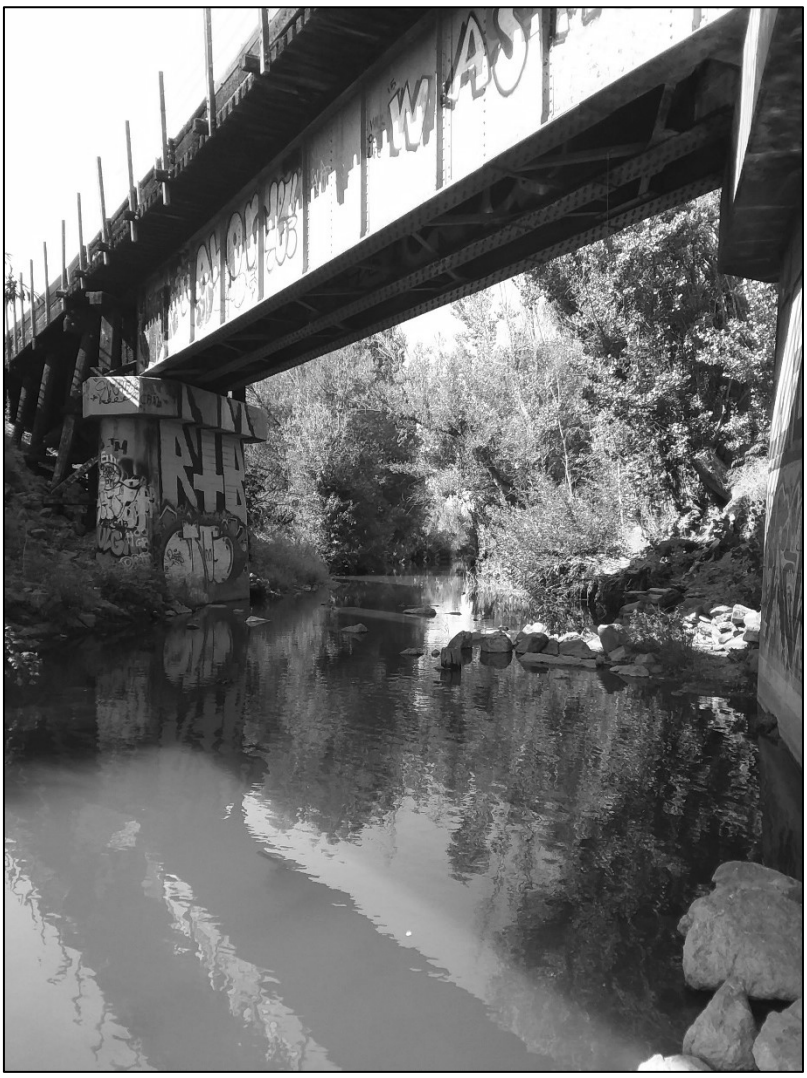
Signature

Date

Michael Tauchen, Deputy Director,
Environmental Compliance

FINAL INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

GUADALUPE RIVER BRIDGE REPLACEMENT PROJECT



Peninsula Corridor Joint Powers Board

State Clearinghouse No. 2020110323

January 2021

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Part I Environmental Checklist Form

1. Project Title:	Guadalupe River Bridge Replacement Project
2. Lead Agency Name and Address:	Peninsula Corridor Joint Powers Board
3. Contact Person and Phone Number:	Hilda Lafebre, Manager, Capital Projects & Environmental Planning (650) 622-7842
4. Project Location	City of San José, Santa Clara County, California
5. Project Sponsor's Name and Address:	Peninsula Corridor Joint Powers Board 1250 San Carlos Ave. San Carlos, CA 94070-1306
6. General Plan Land Use Designations:	City of San José: Transportation Right-of-Way**,** Mixed Use Commercial; Parklands and Habitat
7. Zoning:	City of San José: Light Industrial; Two-Family Residential (Up to Eight to Sixteen Dwelling Units per Acre); Single-Family Residential (Up to Eight Dwelling Units per Acre); Commercial Pedestrian

8. Description of Project:

The Peninsula Corridor Joint Powers Board (JPB), which operates the San Francisco Bay Area's Caltrain passenger rail service, proposes the Guadalupe River Bridge Replacement Project (the Project) in the City of San José, Santa Clara County, California.

Caltrain operates trains on two tracks, MT-1 and MT-2, over the Guadalupe River on two independent and immediately adjacent bridges, each carrying a single track. The downstream (Northerly) bridge (MT-1) consists of a wooden trestle bridge constructed in 1935; the upstream bridge (MT-2) consists of a concrete bridge constructed in 1990 as part of the Caltrans Highway 87 Project. In addition to Caltrain's passenger service, the railroad bridges are used by Union Pacific Railroad (UPRR) freight service, Amtrak passenger service, and the Altamont Commuter Express (ACE) and Capitol Corridor to reach the Tamien Yard.

The 1935 MT-1 bridge urgently 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 (including seismic criteria) and, as a result, is vulnerable to collapse in the event of a significant earthquake. The timber structure of MT-1 has been further damaged by multiple fires, most recently a large fire in November 2017.

The MT-1 and MT-2 bridges are located along a sharp meander of the Guadalupe River. The river exhibits a high degree of floodplain fill, channel confinement, and bank failures. Geomorphic issues directly affect the safety and reliability of the railroad bridges because the extent of bank erosion is approaching the bridge abutments. Riverbank failures at MT-2 occurred in 2017 and at both MT-1 and MT-2 in previous years, requiring emergency bank stabilization measures. To address these safety issues and protect the rail bridge asset, Caltrain proposes to 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 the southern side to help address geomorphic stability issues at the bridge abutments.

The U.S. Army Corps of Engineer (USACE) and Santa Clara Valley Water District (Valley Water) have proposed a separate and independent flood control project in the future, referred to as Reach 7 of the Upper Guadalupe River Flood Protection Project. Reach 6 of Upper Guadalupe River Flood Protection Project was completed in 2012 and ends just downstream of the railroad bridges. The Reach 7 flood control project includes construction of a bypass channel through the project area that would involve widening the river channel to accommodate a 100-year flood event. Because of a lack of available funding, the Reach 7 project has no definite schedule for completion at this time. However, JPB's design has incorporated several measures so as not to preclude potential future additional channel widening and bridge extensions for flood control purposes. JPB has coordinated with USACE and Valley Water during the development of the Project, including meetings and exchange of design information.

Project Location

Figure 1 shows the project location; the project study area is shown in **Figure 2**. The rail bridges are located immediately East of Highway 87, 0.5 miles South of I-280, and approximately 0.5 miles North of the Tamien Multi-modal station (comprising the Tamien Caltrain station to the East of Highway 87 and the Tamien Light Rail station to the West of the highway). The study area, also referred to as project area, includes all land areas that may be temporarily or permanently affected by the Project, including temporary construction access and staging areas. The project limits extend from 140 feet South of Willow Street to Delmas Avenue northwest along the existing JPB right-of-way (ROW). Highway 87 is located to the West; residential areas are located East of Mclellan Avenue; and the Valley Water Reach 6 bypass channel is located downstream.

Project Elements

Figure 3 is an overview map that shows the major elements of the Project, including future channel elevations. More details of the bridge structures are shown in **Figure 4** (the preliminary general plan for the Project based on 35% design).

The Project will replace the existing 187-foot MT-1 bridge with a new 265-foot pre-cast concrete structure. The center span over the main channel will be 110-feet long, and the pier placement has been optimized through hydraulic analysis to avoid pier placement in the low-flow channel. The bridge piers will consist of two 48-inch-diameter cast-in-drilled-hole piles. The new MT-1 bridge will continue to accommodate a single track. Channel widening will occur under the South side of the MT-1 bridge to reduce scour/increase flow capacity. The southern abutment will be designed so that it can potentially function as a pier without modification in the future if the USACE/Valley Water Reach 7 bypass channel is constructed.

The existing MT-2 bridge will be extended by 90 feet at the southern end, resulting in a new total bridge length of 244.5 feet. To accommodate this extension, the existing MT-2 abutment 5 will be removed and replaced by a new pier, and the channel will be widened. The existing northern abutment 1 and piers 2, 3, and 4 will remain in place. Similar to the MT-1 bridge, the southernmost abutment will be designed to function as a pier if the USACE/Valley Water Reach 7 bypass channel is constructed.

Figure 1: Project Location

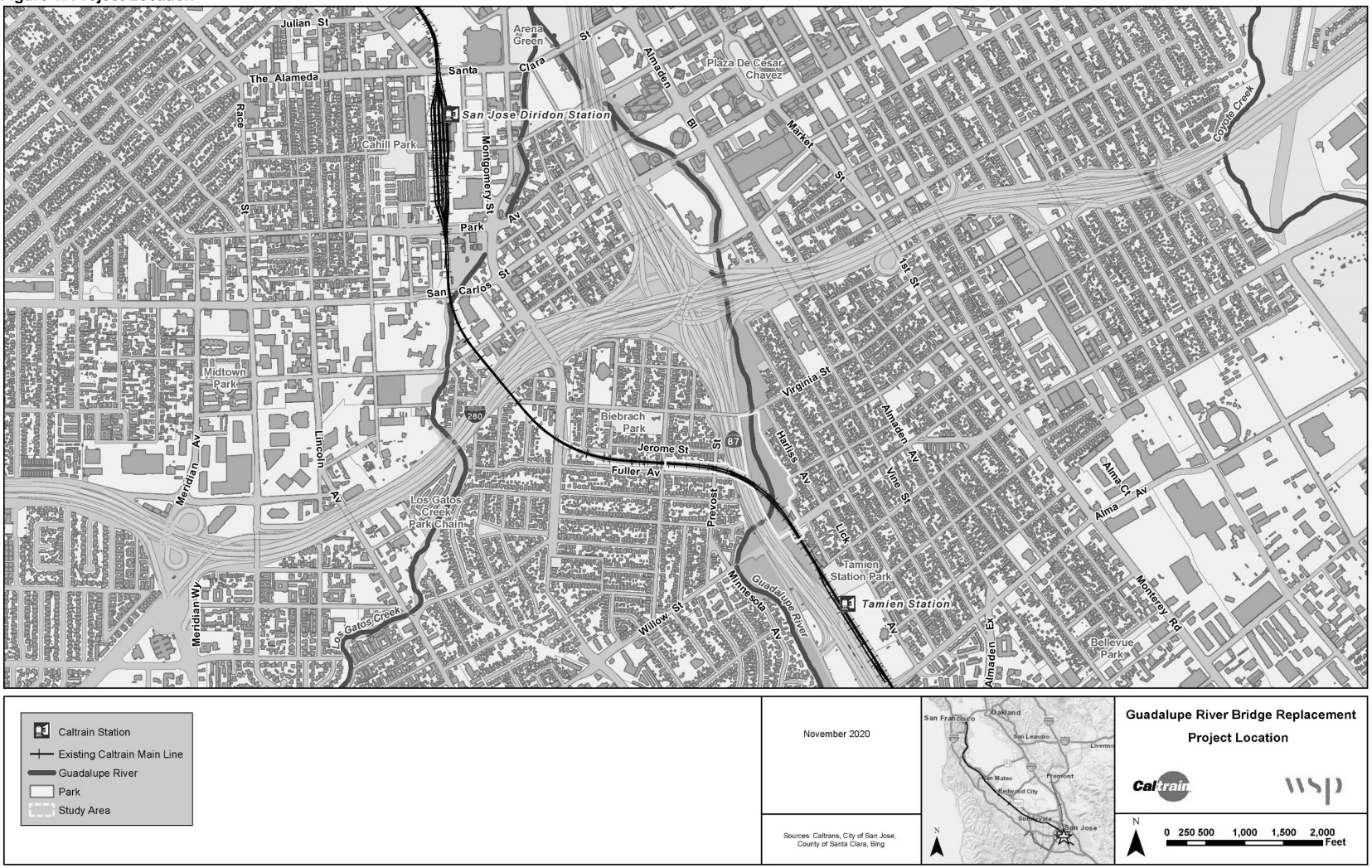


Figure 2: Project Study Area

Figure 3: Proposed Project Overview with Design Details

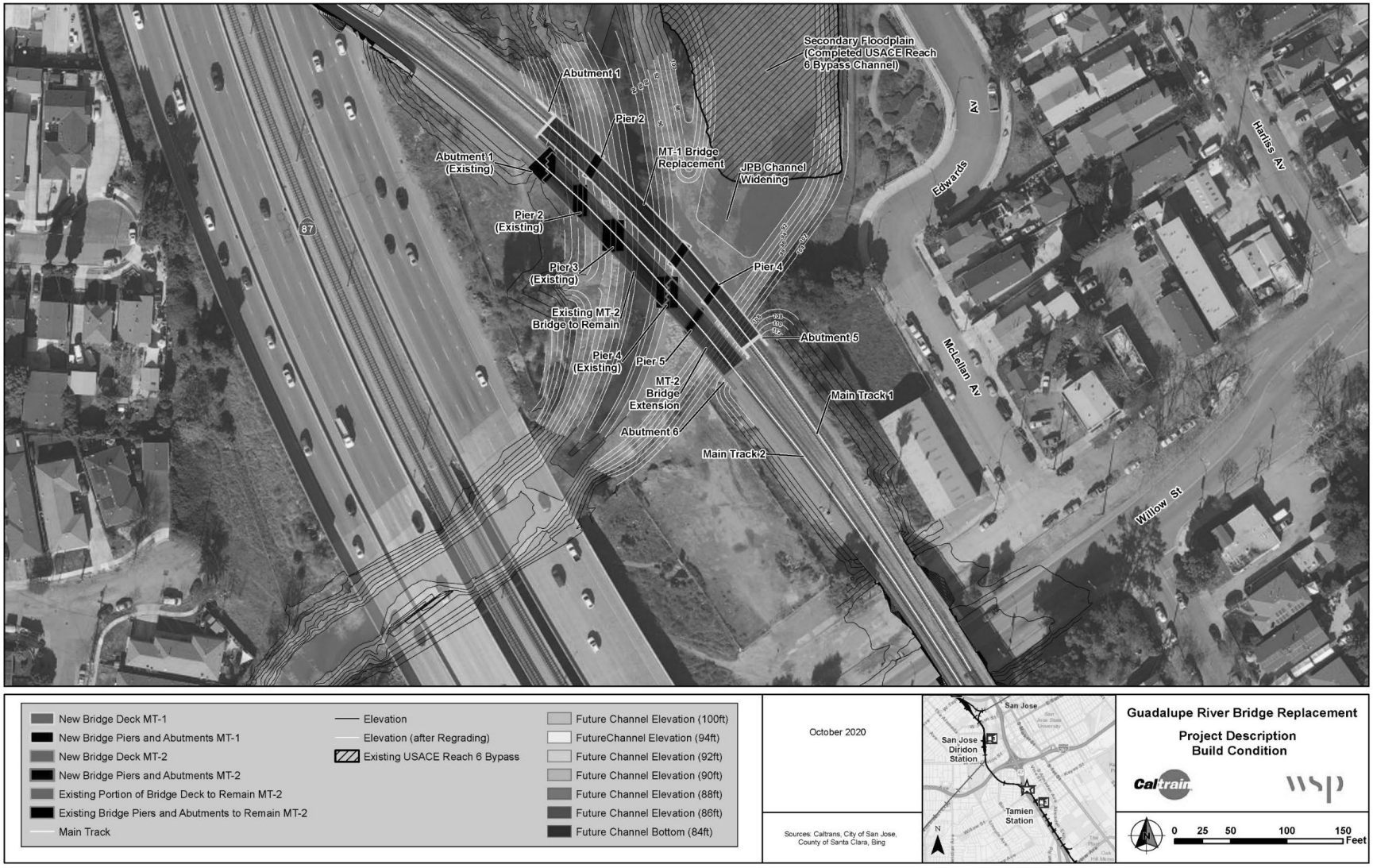


Figure 4a: Guadalupe River Bridge Replacement Preliminary Design - Sheet 1 of 2

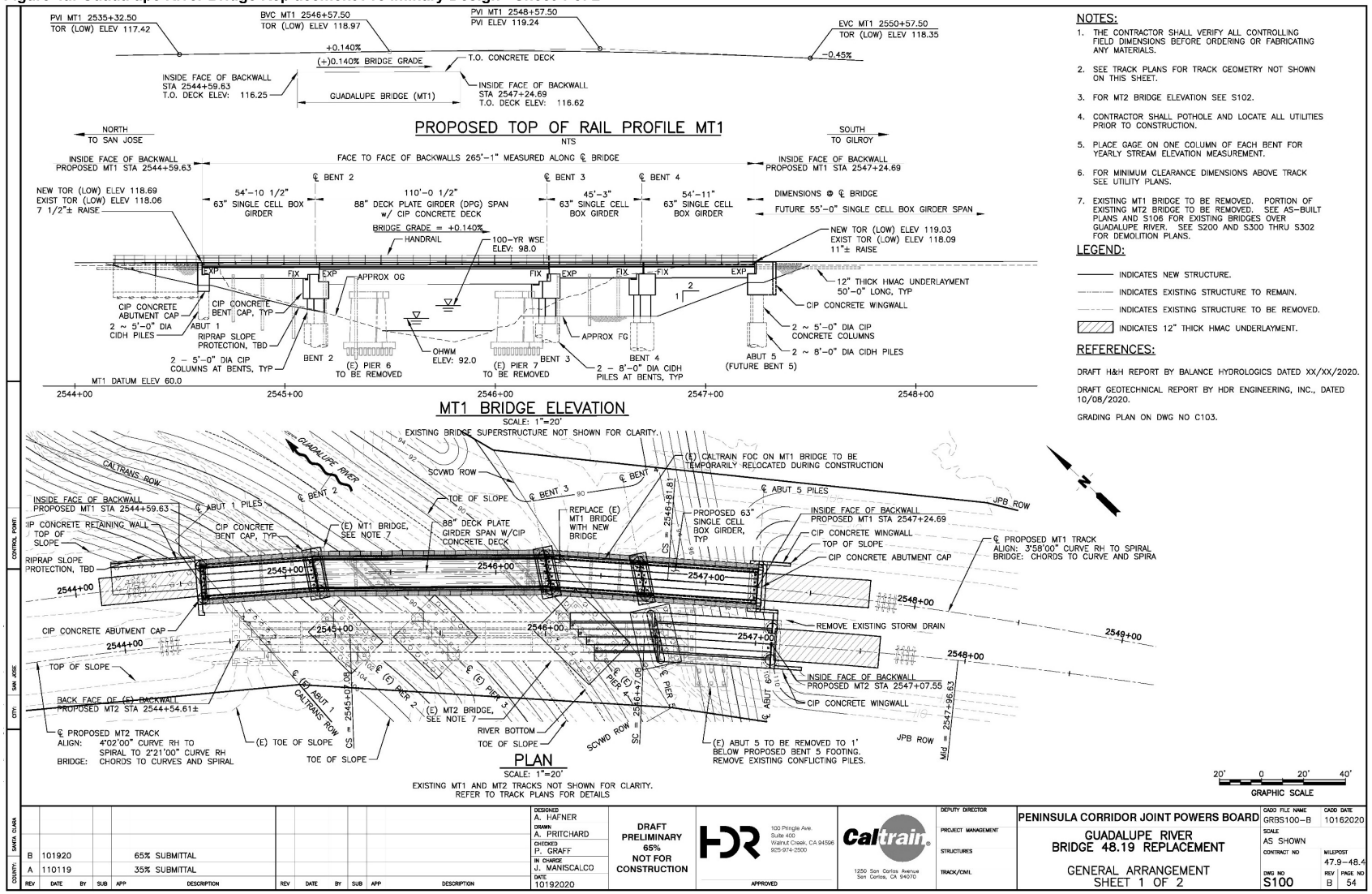
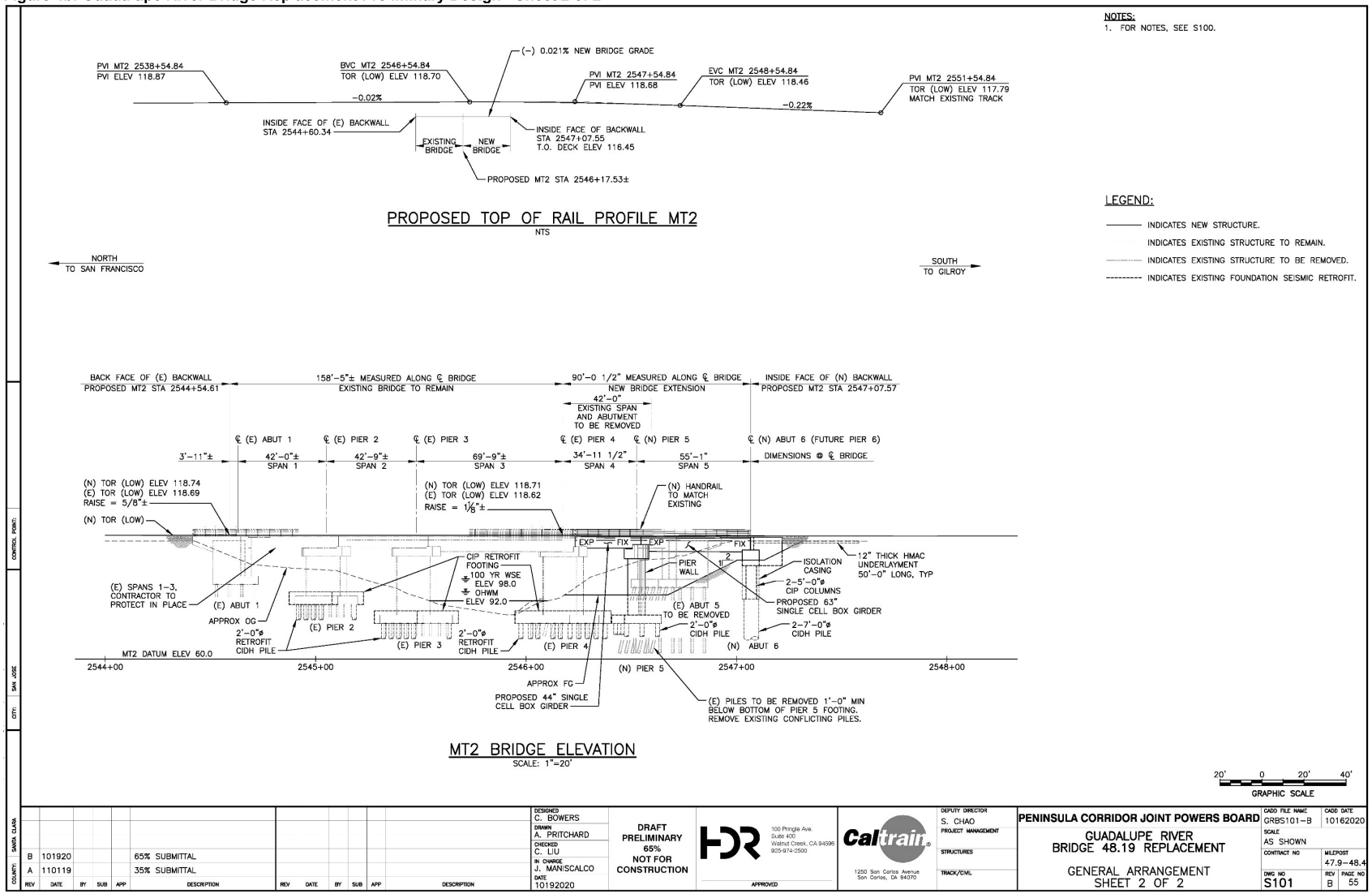


Figure 4b: Guadalupe River Bridge Replacement Preliminary Design - Sheet 2 of 2



The Guadalupe River channel will be widened approximately 75 feet to create a connection to the existing Valley Water Reach 6 bypass channel, which is downstream of the Project. The channel widening will reduce flow velocities during storm events and decrease the risk for further bank failure and scour problems.

The work will also include the temporary relocation of fiber optic cables located on the MT-1 bridge and the permanent relocation of an existing overhead catenary system pole that will be affected by the regrading and widening of the channel and MT-2 bridge extension. The overhead catenary system pole will be relocated to Pier 5 of the MT-2 bridge as part of the Project. The fiber optic cables will 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. Upon completion of the new MT-1 bridge, the fiber optic cables will be relocated to their permanent location on the eastern side of the MT-1 track.

The Project will be constructed primarily within existing transportation and utility ROW owned by JPB and Valley Water. Temporary easements from the California Department of Transportation (Caltrans), the City of San José, and Valley Water will be necessary to construct the Project. These temporary easements are necessary for construction access, construction laydown and staging, and mitigation; the easements will affect an estimated 152,300 square feet (sf) of land on portions of 20 parcels in the project area. Construction easement details are provided in Appendix A in graphic and tabular format.

Post-Construction Stormwater Treatment

The Project will include two bioretention/bioinfiltration post-construction stormwater treatment areas to address runoff from the replacement of the MT-1 bridge and the extension of MT-2 bridge. In total, the Project is estimated to result in a 2,950-sf increase in impervious surface area. One stormwater treatment area will be located North of the MT-1 bridge, on the East side of the tracks. The second stormwater treatment area will be located South of MT-2 bridge on the West side of the tracks. The post-construction stormwater treatment areas (including sizing and plant species) will be designed in accordance with requirements set forth in the *Santa Clara Valley Urban Runoff Pollution Prevention Program (2016) C.3 Stormwater Handbook*.

Construction Staging

Construction of the Project will occur over approximately 2 years. Key construction activities comprise the MT-1 bridge replacement; the MT-2 bridge extension, riverbank stabilization and improvements; floodplain widening; and fiber optic cable removal and relocation. In the first year of construction, between June 15 and October 15 (the in-channel work window for protection of special-status fish species), the river will be dewatered, the existing MT-1 bridge will be demolished, and the new MT-1 bridge will be constructed. Train service will operate on the MT-2 bridge while the MT-1 bridge is out of service. The dewatering infrastructure will be removed, and water flow will be restored over the winter. In the second year of construction, train service will operate on the new MT-1 bridge, and the MT-2 bridge will be extended during the June 15 to October 15 in-channel work window. At the conclusion of construction, the riverbanks will be stabilized and revegetated.

Construction sequencing details are provided in **Figures 5 and 6**; the temporary limits of disturbance and construction access points are shown in **Figure 7**. The construction sequencing plan for the first phase of MT-1 construction (Phase 1A) is illustrated in **Figure 5a**, followed by the plan for the second phase of MT-1 construction (Phase 1B) in **Figure 5b**.

Construction sequencing plan details for the MT-2 bridge extension construction phases (Phases 2A and 2B) are illustrated in **Figures 6a and 6b**, respectively.

As presented in **Figure 8**, dewatering is anticipated to occur within an approximately 400-foot section of river. Two 48-inch diameter pipes will be placed along the channel margin, and a temporary cofferdam will be built around them. Diversion pipes will be integrated into the coffer dam during construction while a series of pumps will be installed upstream of the coffer dam to divert water around the work area until both the upstream and downstream coffer dams are installed. Once the coffer dams and diversion pipes are in place, the pumps will be turned off and water will be diverted through the pipes. Following the completion of in-channel work, streamflow will be restored to the dewatered section of channel.

The dewatering system has been designed based on an analysis of peak flows during the June to October in-channel work window. Flow exceedance curves were developed based on the estimated maximum daily flows during June 1 through October 15 using 27 years of flow data covering 1993 through 2019.[1] While summer base flows in the project area are generally less than 10 cubic feet per second (cfs), short duration peak flow events often exceed 40 cfs (approximately 50% of the years analyzed) during storm events. To be conservative, this Project was designed to accommodate nearly all peak flow events that have occurred between June 1 and October 15 from 1993 through 2019 by sizing the diversion pipes to accommodate flows up to 520 cfs. Flow exceedance curves show peak flow events greater than 520 cfs have only occurred twice during the 27-year assessment period, a frequency that is less than 10%. Based on this analysis, there is a low likelihood that flows near or above the diversion capacity will occur during in-channel work when flows are being diverted.

[1] Balance Hydrologics, Inc. Ranked daily maximum streamflow (June through October): Guadalupe River at railroad bridges. September 2020.

Figure 5a: Construction Sequencing Plan – MT-1 Phase 1A

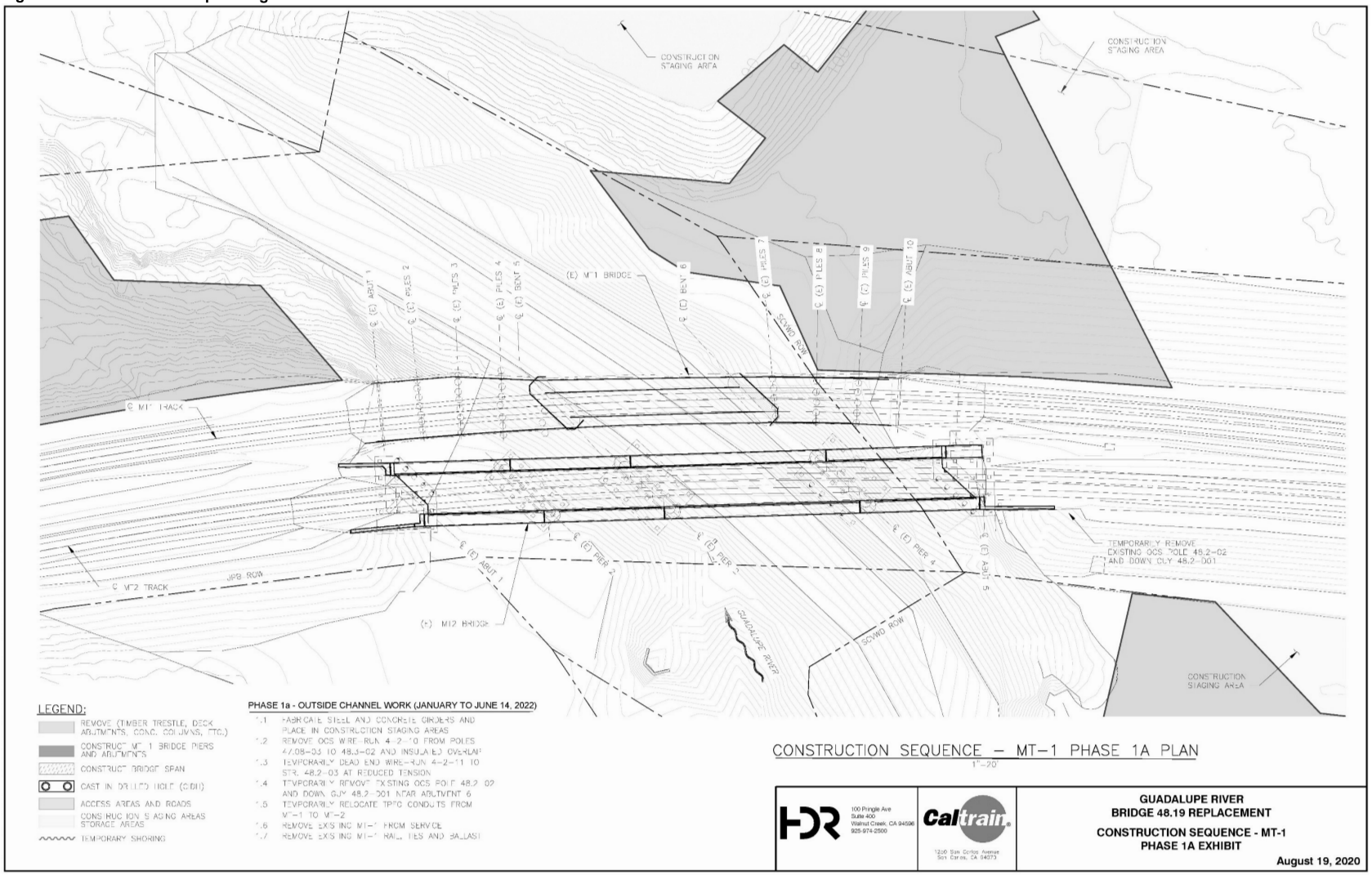


Figure 5b: Construction Sequencing Plan – MT-1 Phase 1B

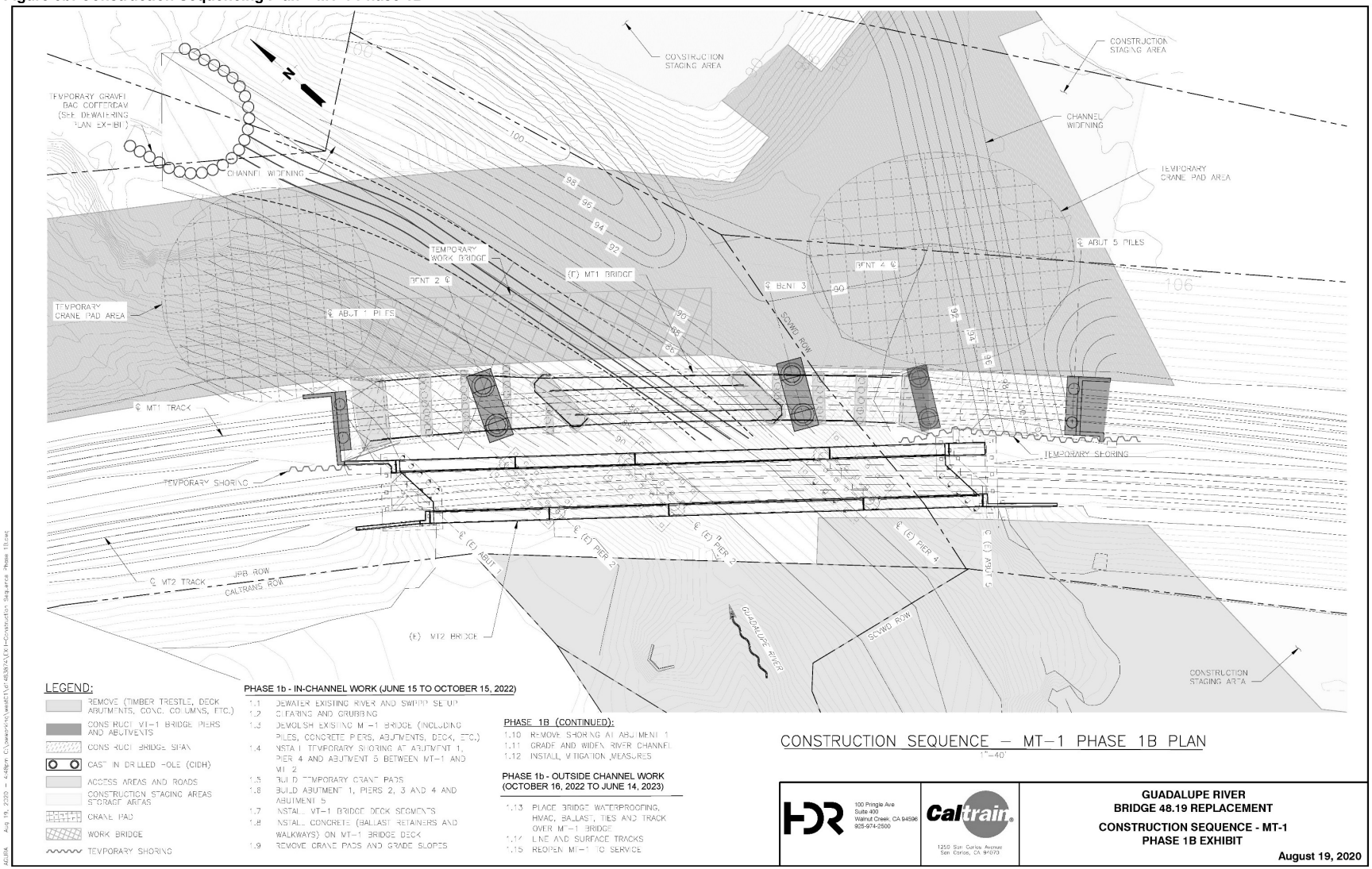


Figure 6a: Construction Sequencing Plan – MT-2 Phase 2A

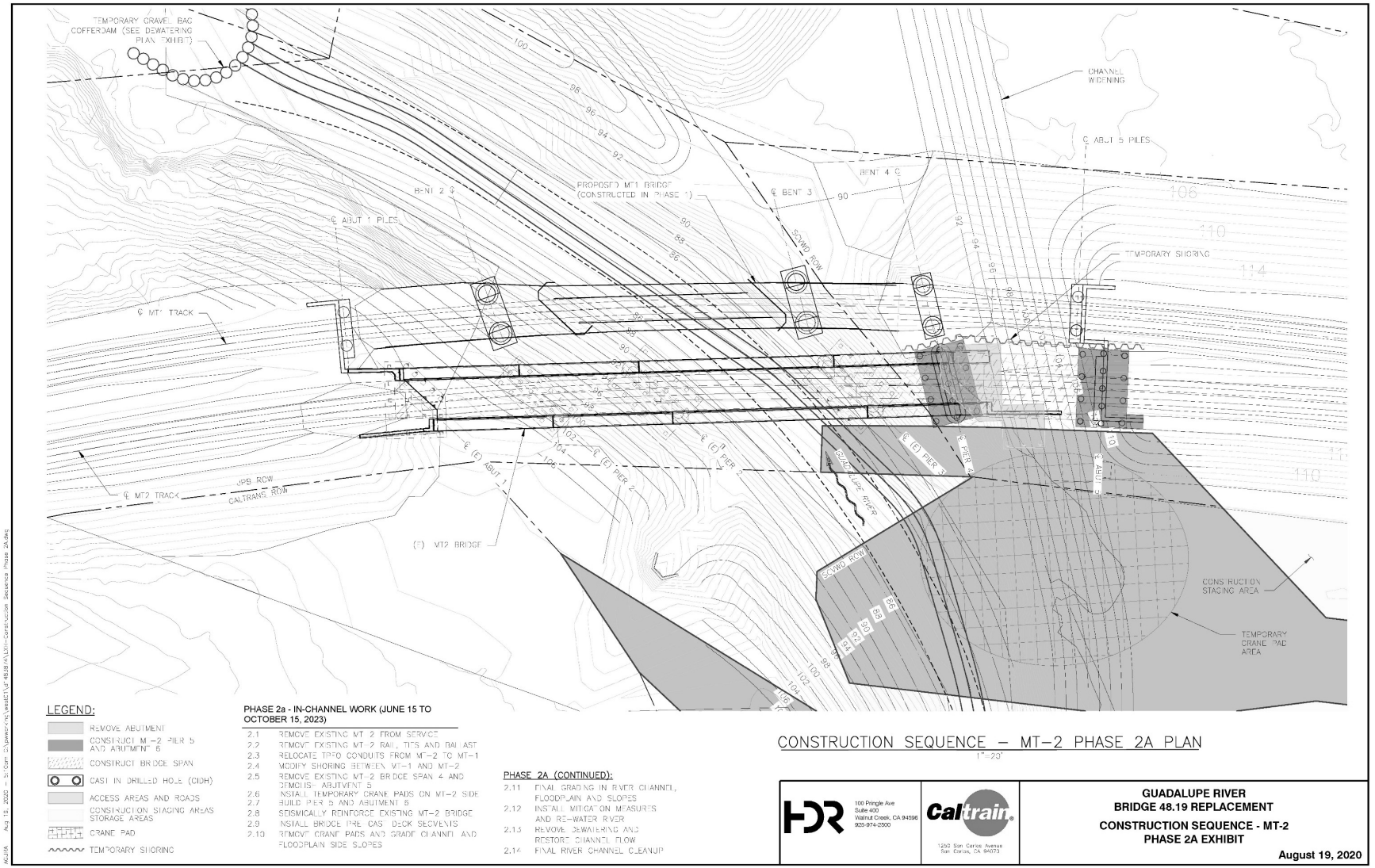


Figure 6b: Construction Sequencing Plan – MT-2 Phase 2B

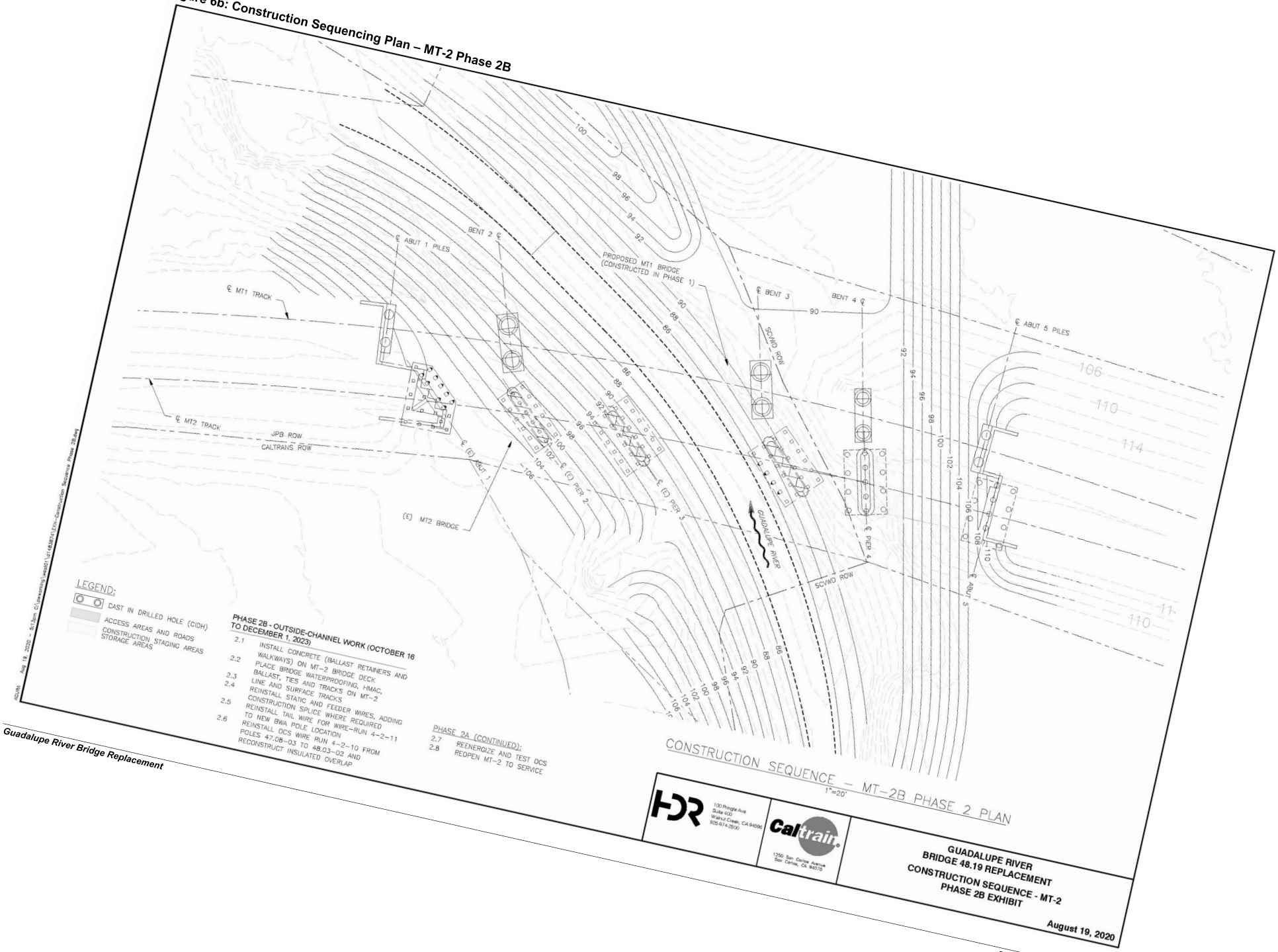


Figure 7: Temporary Limits of Disturbance

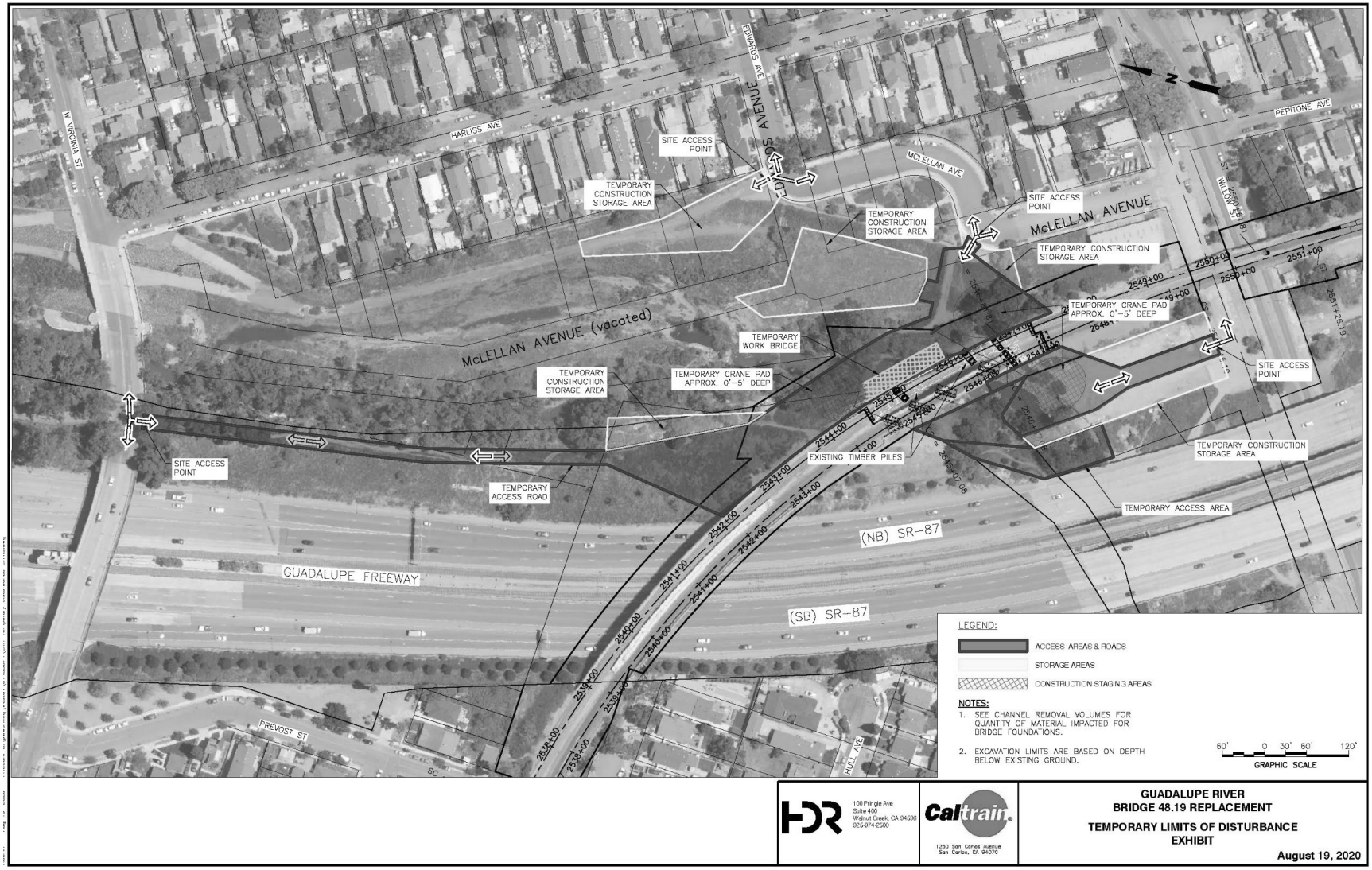
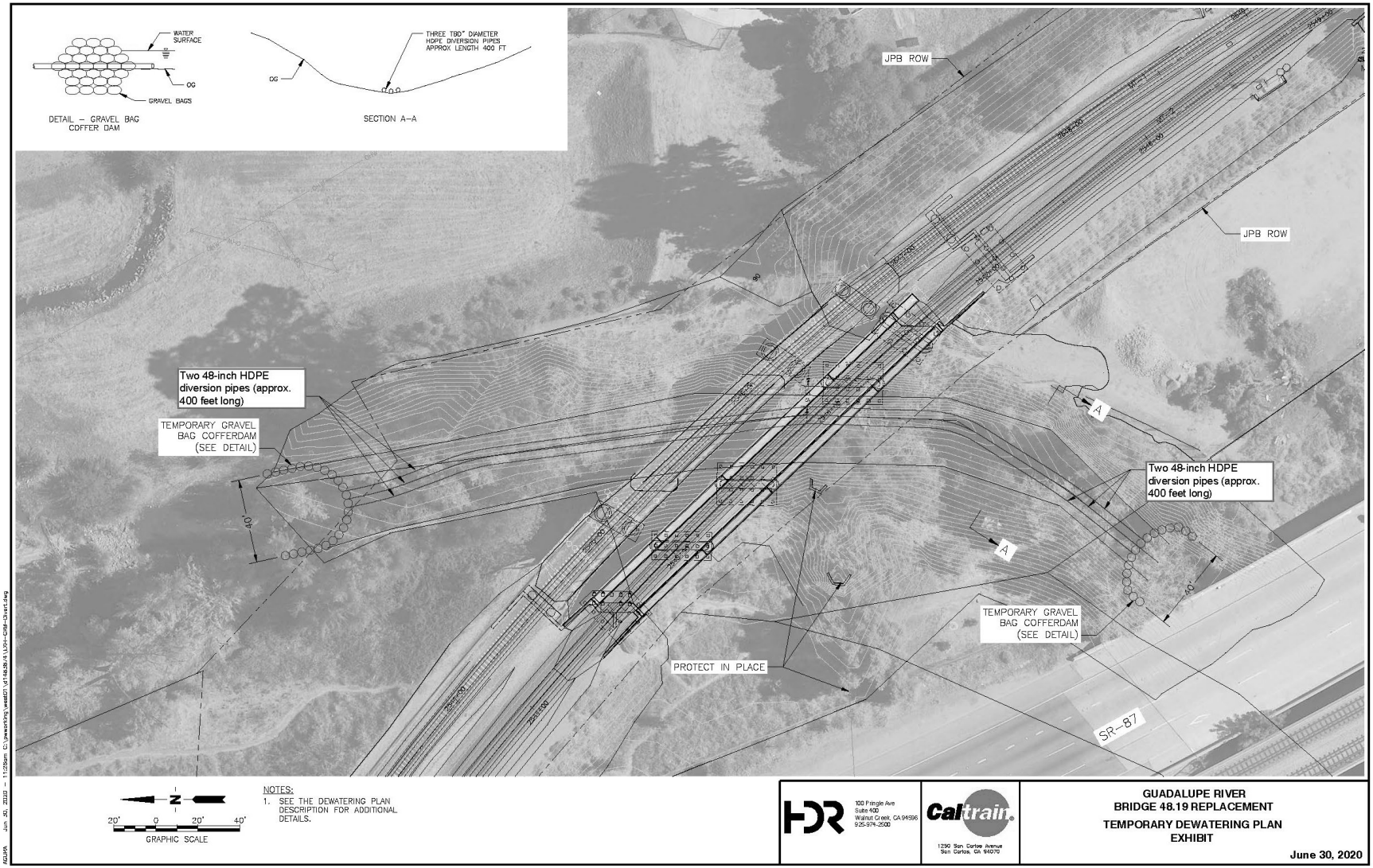


Figure 8: Proposed Dewatering Plan



Other Approvals Required

The following approvals and permits are anticipated to be required from other agencies for completion of the Project:

- Federal Transit Administration (FTA)—funding partner and federal lead agency for compliance with the National Environmental Policy Act
- USACE—Section 404 Nationwide Permit
- San Francisco Bay Regional Water Quality Control Board (RWQCB)—Section 401(c) Water Quality Certification and National Pollutant Discharge Elimination System (NPDES) Construction General Permit
- California Department of Fish and Wildlife (CDFW)—Lake and Streambed Alteration Permit
- National Marine Fisheries Service (NMFS)—Federal Endangered Species Act Section 7 consultation with FTA
- Santa Clara Valley Water District—Encroachment Permit (for temporary construction access)
- Caltrans—Encroachment Permit (for temporary construction access)

Consultation Pursuant to Public Resources Code Section 21080.3.1

JBP has not received any requests from California Native American tribes that are traditionally and culturally affiliated with the project area for consultation pursuant to Public Resources Code section 21080.3.1.

Purpose and Need

The purpose of the Project is to address the structural deficiencies of the MT-1 bridge and the geomorphic instability of the Guadalupe River channel in the vicinity of the MT-1 and MT-2 bridges to provide for long-term public safety and service reliability.

Without the Project, the structural condition of the MT-1 bridge presents an increasing safety hazard to all users. Replacing the MT-1 bridge is needed to meet the standards of safety and reliability required for current and future train loads to ensure that the bridge will continue to safely carry passengers (Caltrain and Amtrak) and freight (UPRR) well into the future (the bridges are also used for deadhead movements of ACE and Capitol Corridor trains). In addition, without extending the MT-1 and MT-2 bridges, the geomorphic condition of this reach of the Guadalupe River will continue to contribute to bank failure and scour, threatening the integrity of the transportation asset and requiring continual emergency repair interventions. Extending both bridges will reduce river flow velocities and minimize bank erosion. The structural and geomorphic needs for the Project are discussed below in further detail.

Need for the MT-1 Replacement

The existing 1935 Guadalupe River MT-1 rail bridge consists of a 70-foot steel girder main span (center-to-center of piers) with timber trestle bent approaches; it has a total structure length of approximately 187 feet. In 2018, JPB inspected the MT-1 bridge and found it to be in poor overall condition. Although the main steel spans were in good condition, the southerly timber

approach spans were damaged significantly by fires (in 1985 and 2017) and experienced moderate section loss. Moderate spalling of the concrete at the existing piers was reported.

The 2018 inspection found the MT-1 bridge to rate below the current and projected service loads as well as the JPB design criteria for live load capacity (Cooper E80) for new bridges. The bridge was also analyzed for seismic capacity and found to be vulnerable during significant magnitude earthquakes. In addition, second-hand steel girders were used to construct the bridge, contributing to the risk for the structural failure of the bridge. Bridge structure life is generally accepted to be 75 years—the MT-1 bridge has surpassed its useful service life.

As noted in the 2018 inspection report for the Guadalupe River MT-1 rail bridge, spans 1 through 6, spans 9 through 12, and piers 9 through 13 have been damaged by the fire (see **Photo 1**). Section loss as a result of fire damage ranges from 0.5 to 0.75 inches, with additional loss to stringers, piers, interior girders, and abutments (see **Photo 2**). Many of the pier piles have vertical splitting and cap splitting (see **Photo 3**), and 6 of the 13 abutments received failed ratings for bridge deck guard and handrails. In addition, failure of channel protection was documented at the northeast embankment (see **Photo 4**). Major cross base section loss was noted at pier 4, and a major split at pile 5; ballast retainer failure has been noted at the southeast corner of abutment 13.

Photo 1: Abutment 1 – Typical fire damage and leaking ballast.

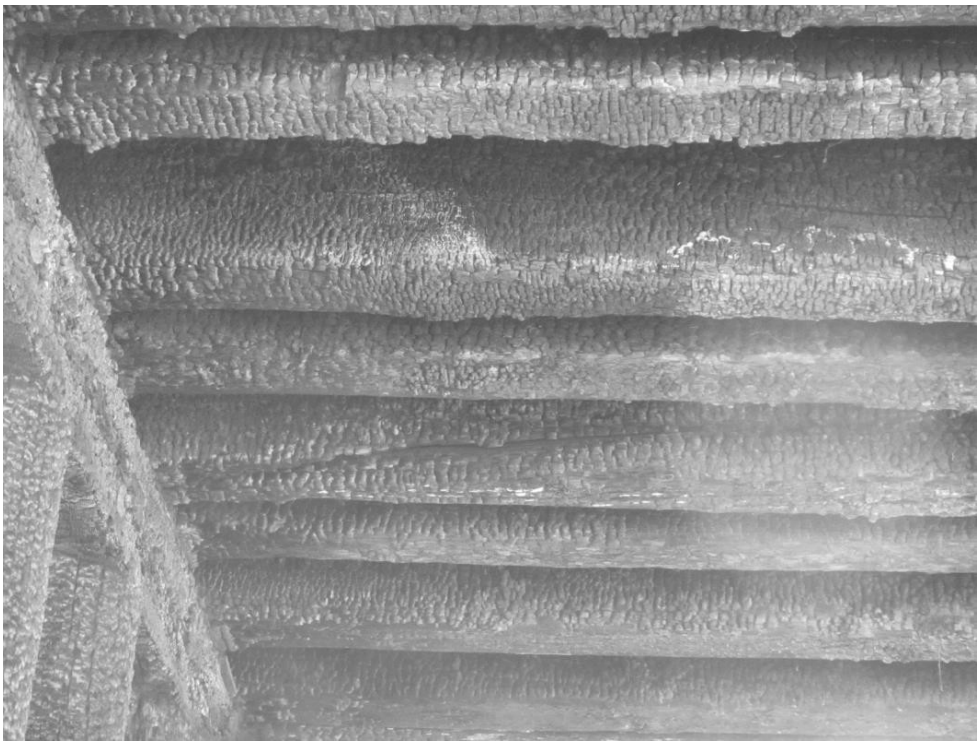


Photo 2: Typical stringer span fire damage.

Photo 3: Typical split columns (photo of pony bent at Pier 6).

Photo 4: Failing channel protection on northeast embankment.

In November 2017, the MT-1 bridge experienced a significant fire event (see **Photo 5**). Emergency repairs were made to the structure and it was determined to be serviceable. However, the vulnerability of the structure to seismic events has substantially increased, and thus the urgency of the bridge replacement for public safety has further increased.

The existing MT-1 bridge has exceeded the 75-year life for which it was designed. Because of its age, failure of bridge elements to meet current and projected service loads, and vulnerability in the event of a significant earthquake, the bridge needs to be replaced with a new structure.

Photo 5: November 2017 MT-1 Fire.

Need for the MT-1 and MT-2 Extension

The Guadalupe River bridges are located in an area subject to high erosion and bank failure. JPB has conducted emergency bank repair projects in the vicinity of the bridges since 2008. Riverbank failures close to the abutments of the two bridges occurred in December 2014 and during the 2017 winter. Following 2014–2015 heavy rain events, the stability of the MT-1 bridge abutment was threatened by bank erosion (see **Photo 6**). JPB completed an emergency interim repair in March 2015. This temporary repair measure entailed the placement of 30 cubic yards (cy) of gravel bags to protect the upper slope and restore the steep slope to 1:1. In 2016, another bank toe protection project was required to stabilize a scour at the toe of the bank where interim slope protection was installed in 2015. The 2016 bank toe protection employed bioengineering methods (placement of logs, river rock, and willow plantings) and was completed in late 2016. However, these interim measures have deteriorated with subsequent rain events, which have removed nearly all the gravel bags and some of the toe of slope protection measures (see **Photo 7**).

Photo 6: 2014 Bank failure at MT-1 downstream left bank required emergency repair.

Photo 7: 2018 Condition of MT-1 bridge and left bank. Note fire damage to timbers and deterioration of temporary stabilization measures.

In early 2017, heavy rain events resulted in high water flows that scoured and eroded the South bank just upstream of the MT-2 bridge, necessitating an emergency repair (see **Photo 8**). About 416 cy of riprap was placed along the eroded slope of the South bank in March 2017.

Photo 8: 2017 Bank failure at MT-2 that required emergency repairs.

In 2018, JPB completed a geomorphic assessment of the existing conditions of the Guadalupe River channel near the MT-1 and MT-2 bridges. Hydraulic modelling was completed to provide a quantitative assessment of existing conditions, including modeled hydraulic shear stress. The findings of geomorphic assessment support the need for extending both MT-1 and MT-2 bridges to reduce river flow velocities and address ongoing scour issues. Key findings of the study include the following:

- The geomorphology of the Guadalupe River channel has been altered over time, and the modern conditions seem to have created a more erosive river environment for riverbank and bed material.
- Widening and lowering of floodplain areas (as was done in Reach 6, just downstream) seems to create a less erosive and more depositional set of flow conditions.
- The highest shear stress locations are in the main channel under Highway 87 and near the MT-2 pier on the outside of the bend. The channel under the MT-1 bridge is

also a high shear stress location.
- Based on predicted shear stress for a 10-year storm, the 2017 riprap repair may be near the limit of stability for those shear stresses and velocities. This means the repair is vulnerable to failure in a greater than 10-year storm event.

Extension of the MT-1 and MT-2 bridges is necessary to address erosion and scour issues that continue to undermine bridge abutments and contribute to the risk of bridge structure failure. A longer structure for MT-1 is planned as part of the bridge replacement. The MT-2 structure does not require replacement for structural or safety issues. However, an extension of the MT-2 structure is required to accommodate mitigation of the channel geomorphic issues. Because MT-2 is upstream of MT-1, lengthening the MT-1 span alone will not address the scour issues at MT-2. Based on the geomorphic assessment and hydraulic modeling, lengthening the span of both bridges is necessary.

Hydraulic Study/Alternatives Analysis

In 2019, a hydraulic study was undertaken evaluate the effectiveness of various bridge design concepts.[2] Comprehensive hydraulic analyses were completed for a variety of flow velocities and conditions (e.g., USACE 2-, 5-year, 10- and 25-year storms; Federal Emergency Management Agency Flood Insurance Study 50-, 100- and 500-year storms). The design considerations for evaluation of alternatives in the hydraulic study included the following criteria:

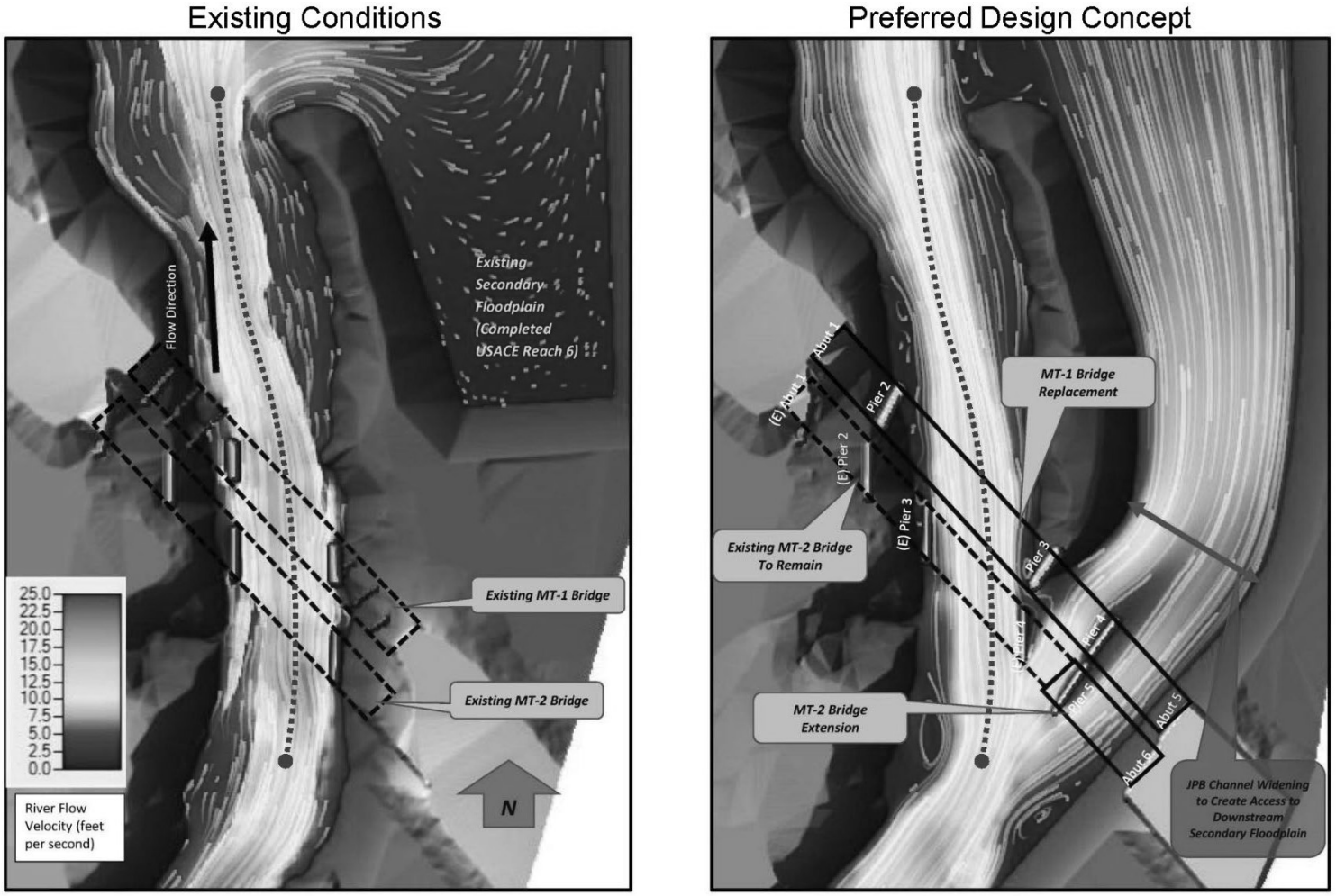
- Avoid placing a new MT-1 pier in the low-flow channel as requested in coordination with resource agencies.
- Meet current American Railway Engineering and Maintenance-of-Way Association (AREMA) and JPB design standards.
- Avoid new pile placement that requires removing or drilling through existing piles.
- Improve channel stability and reduce erosion risk as measured by event flow velocities.

The hydraulic study also determined the minimum extent of channel widening that needs to occur as part of the Project to address the geomorphic instability. The objective of determining the appropriate extent of channel widening was to ensure that the Project will remain a long-term, viable expenditure regardless of whether the USACE channel widening occurs in the future. Based on geomorphic concepts and hydraulic modeling results, a 75-foot wide floodplain is considered the minimum width needed to reduce velocities and resulting hydraulic forces on the riverbanks, thus reducing chances of bank failures. To achieve the 75-foot floodplain, the existing MT-1 bridge should be replaced with a reconstructed four-span bridge with a total bridge length of approximately 265 feet. The existing MT-2 bridge should be extended by 90 feet resulting in a new total bridge length of 244.5 feet. Widening the channel will protect bridge embankments and structures from erosion impacts in the long term.

The left side of **Figure 9** illustrates the hydraulic modeling under existing conditions for the 10-year flow event. The existing 10-year event flow velocities are unacceptably high (greater than 20 feet per second near the existing bridges) and result in bank failure/scour issues. The right side of **Figure 9** shows the hydraulic model results for the Project and the resulting reduction in flow velocities due to the improved pier placement and wider channel that will connect to the floodplain downstream of the bridges.

[2] Balance Hydrologics, Inc. Project Memo, Recommendation for Interim-Width Floodplain at Guadalupe River Railroad Bridge Crossing, August 7, 2019.

Figure 9: Hydraulic Model Run Results (10-Year Flow): Existing Conditions and Preferred Design Concept



Balance Hydrologics

Hydraulic modeling results, 10-year flow. Existing conditions (left) indicate higher velocities on the channel bed and banks than in the preferred design concept (right), where flows can dissipate energy onto the floodplain..

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project (i.e., the project would result in at least one potentially significant impact to the resource). Please see the checklist on the following pages for additional information.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☒ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation/Traffic	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

1/12/2021

Date

Hilda Lafebre, Manager, Capital Projects & Environmental Planning

Hilda Lafebre

Printed Name

1/12/2021

Date

Part II Evaluation of Environmental Impacts

This Final Initial Study (IS) uses the environmental checklist form presented in Appendix G of the CEQA Guidelines. The following terminology is used to evaluate the level of significance of impacts that would result from the Project:

- A finding of *no impact* is made when the analysis concludes that the Project would not affect the particular environmental issue.

- An impact is considered *less than significant* if the analysis concludes that there would be no substantial adverse change in the environment and that no mitigation is needed.

- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that there would be no substantial adverse change in the environment with the inclusion of the mitigation measure(s) described.

- An impact is considered *significant* or *potentially significant* if the analysis concludes that there could be a substantial adverse effect on the environment.

- *Mitigation* refers to specific measures or activities adopted to avoid an impact, reduce its severity, or compensate for it.

I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

The project area is surrounded by transportation, residential, mixed-use commercial, and open space land uses. The Guadalupe River rail bridges are located approximately 100 feet East of State Highway 87, and 450 feet North of Willow Street in the Willow Glen district of San José. Neither State Highway 87 nor Willow Street are designated Scenic Highways. **Photos 9 and 10** show views of the project area; **Photos 11 and 12** show typical views of the rail bridges and project area available from adjacent, publicly accessible areas.

The project area does not include any designated scenic vistas or scenic resources. An important characteristic of the visual environment in the project area is the Guadalupe River and associated riparian vegetation. The riparian area of the river is used extensively by homeless populations, and the visual quality of the area is impacted by trash and debris.

Residential neighborhoods generally do not have direct views of the existing MT-1 and MT-2 bridges because of intervening topography, vegetation, and existing development. Views of the existing bridges are available to limited portions of the residential area situated on the eastern side of Mclellan Avenue.

Photo 9: View of the project area and Guadalupe River bridges facing West.

Photo 10: View of Guadalupe River and project area facing South from under the eastern end of the MT-2 bridge.

Photo 11: View of the Guadalupe River bridges from the Valley Water mitigation area along the western side of Mclellan Avenue, facing West/Southwest. In general, the project area and river are not visible from surrounding residential areas (as demonstrated by the photo).

Photo 12: North/northwest view toward the project area and Guadalupe River bridges from the proposed construction staging area on the North side of Willow Street.

a. Have a substantial adverse effect on a scenic vista?

The Project will not occur in the vicinity of any scenic vistas. Therefore, there will be **no impact**.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated scenic resources in the project area. As discussed in the Cultural Resources section, the Project does not affect historic buildings. Therefore, there will be **no impact**.

c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Project entails the replacement/extension of existing railroad bridges along an existing rail corridor in an urbanized area. City zoning designations are not applicable to the Project. The new MT-1 bridge and extended MT-2 bridge will be consistent with the character and appearance of the existing bridges. The Project also includes widening the river channel to connect with the existing Valley Water bypass channel downstream. The appearance of the widened channel will be similar to and consistent with the existing character of the river channel and bypass channel. The Project will incorporate riparian habitat plantings as part of a Habitat Mitigation and Monitoring Plan that will enhance the visual quality of the project area over the long term (see Mitigation Measure BIO-07). Therefore, in the long term, the Project will have **no impact**.

Temporary impacts to visual character and quality will occur during construction of the Project from construction activity, views of construction equipment, and removal of riparian vegetation (approximately 0.7 acres of riparian tree cover). Once construction is complete, construction equipment will be removed, the site will be stabilized, and replacement vegetation will be installed. Riparian habitat will not permanently decrease as a result of the Project. The Project will remove existing degrading elements, including invasive plant species, trash, debris, and graffiti. Overall, visual character and quality will not be “substantially degraded” because of the temporary nature of construction in any one area and the highly urbanized character of the project setting.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The Project will not create a permanent new source of substantial light or glare. Thus, in the long term, the operation of the Project will have **no impact**.

During nighttime construction, there will be temporary illumination of the work zone. Temporary lighting will be directed at the work area and not at surrounding residences. Given the numerous other existing light sources in an urbanized area, the distance from the bridges to the nearest residence (approximately 225 feet), and the temporary nature of the work site lighting, the Project will not create substantial light impacting nighttime views.

II. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The project site and adjacent land are not currently used for agriculture; consequently, the Project does not entail converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance into non-agricultural uses. According to the California Department of Conservation Important Farmland Map Viewer, the land in the vicinity of the Project falls into the following category: Urban and Built-up Land.[3] Therefore, there will be **no impact**.

[3] https://maps.conservation.ca.gov/dlrp/ciff/

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Project will not conflict with any existing zoning for agricultural use or a Williamson Act contract. Therefore, there will be **no impact**.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The Project will not conflict with existing zoning for, or cause rezoning of, any forest land or timberland. Therefore, there will be **no impact**.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

The Project will not remove or convert any forest land. Therefore, there will be **no impact**.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Project does not involve changes that will result in converting farmland to non-agricultural uses. Therefore, there will be **no impact**.

III. AIR QUALITY:

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

The Project is in Santa Clara County, California. Santa Clara County is classified by the U.S. Environmental Protection Agency (EPA) as a nonattainment area for the federal 8-hour ozone standard and the federal 24-hour average fine particulates (PM2.5) standard.[4] Santa Clara County is classified as a nonattainment area for the California air quality standards for ozone, PM2.5, and coarse particulates (PM10).[5] The urbanized portions of Santa Clara County were formerly a federal carbon monoxide maintenance area (20-year maintenance plan has been completed). The project area is in attainment for all other pollutants regulated by federal and state ambient air quality standards.

The Project will not result in long-term changes in emissions of air pollutants. The Project will result in temporary emissions from equipment exhaust and fugitive dust during the 2-year construction period. The following construction air quality best management practices (BMPs) will be incorporated into the Project to avoid and minimize construction-related impacts:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two 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 off-site will be covered.
3. All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 miles per hour (mph).
4. All trucks and equipment, including their 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.

[4] https://www3.epa.gov/airquality/greenbook/anayo_ca.html
[5] https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations

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 mph.
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 EPA 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 (i.e., for off-road equipment, include the California Air Resources Board-issued Equipment Identification Number) and documentation supporting the EPA 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.

a. Conflict with or obstruct implementation of the applicable air quality plan?

San José's 2040 General Plan was reviewed to identify potentially relevant air quality policies. Most of the General Plan policies are oriented to residential/commercial development projects as opposed to public transportation projects. The Project is consistent with the General Plan recommendation to use the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines (Policy MS-10.1) and incorporate BAAQMD construction air quality BMPs (Policy MS-13.1).

By maintaining critical public transportation facilities, the Project is consistent with policies encouraging public transportation as a method of reducing emissions (Policy MS-10.3). With respect to Toxic Air Contaminants (Policy MS-11.1), it should be noted that the Project does not change the frequency of train service or change the distance between sources and receptors. In addition, diesel locomotives will be phased out over the long term as part of the electrification of the rail corridor under the Caltrain Modernization Program. [6]

BAAQMD's Bay Area 2017 Clean Air Plan was reviewed for potentially applicable policies. [7] The Project is consistent with policies such as Transportation Control Measure 4: "Fund local and regional rail service projects, including operations and maintenance." Other policies of the Clean Air Plan are not applicable, including policies pertaining to automobile and truck sources (which

[6] https://calmod.org/
[7] https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

the Project will have no effect on) and policies pertaining to wood burning, stationary and area sources, or land use.

In conclusion, the Project is consistent with the applicable local and regional air quality policies, therefore there will be **no impact**.

a. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Long-Term Operation Impact

The Project will not change existing diesel locomotive emissions in the project area. The Project does not require a change in the existing track alignment. Diesel locomotives will be phased out as the corridor is electrified, resulting in improved air quality along the corridor. The Project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation; thus, there will be **no impact**.

Temporary Construction Impact

Significance thresholds for temporary construction air quality impacts were based on the 2017 BAAQMD CEQA thresholds.[8] Specifically, the significance thresholds are daily average construction emissions exceeding any of the following: 54 pounds (lbs)/day Reactive Organic Gases (ROG), 54 lbs/day nitrogen oxides (NOx), 82 lbs/day PM10 (exhaust only), or 54 lbs/day PM2.5 (exhaust only).

The period of highest construction equipment activity and emissions will occur during the construction of the new MT-1 bridge (including pile drilling, concrete pumping, excavation for widening the channel, and haul truck activity). Therefore, this construction phase (occurring during summer 2022) was the focus of the construction air quality analysis. Emissions during other portions of construction with less intense construction equipment activity will be lower than the peak phase. The approximate magnitude of construction emissions was estimated using EPA's Motor Vehicle Emission Simulator (MOVES) MOVES 2014b. Appendix B provides the details of the equipment assumptions and emission rates.

Average daily emissions of ROG, PM10, and PM2.5 will be well under the applicable significance thresholds. However, without incorporation of construction commitments, the BAAQMD NOx threshold of 54 lbs/day could be exceeded during the peak construction phase. With incorporation of BAAQMD basic and advanced construction air quality BMPs, the NOx threshold will not be exceeded (see **Table 1**). Specific to limiting NOx emissions, the air quality construction commitments include a requirement for the use of newer equipment with lower emissions (at least Tier 3 or alternatively 2010 or newer model year equipment over 50 horsepower). Therefore, temporary construction air quality impacts will be **less than significant**.

[8] https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Table 1. Temporary Construction Emissions with Construction Commitments

	NOx	Particulate Matter (Exhaust)	Total ROG
Peak Construction Mitigated Emissions Per Day (lbs)	50.8	5.1	4.3
BAAQMD CEQA Threshold (lbs/day)	54	54	54

b. Expose sensitive receptors to substantial pollutant concentrations?

Long-Term Operation Impact

As noted above, the Project will not change diesel locomotive operations or the distance to receptors. Therefore, there will be **no impact**.

Temporary Construction Impact

The nearest residential receptors are approximately 225 feet East of MT-1 (along Mclellan Avenue). However, given the extensive construction air quality BMPs incorporated into the Project, substantial concentrations of criteria pollutants will not occur near these receptors. In addition, it should be noted that most of the construction will occur during the daytime hours on weekdays, further limiting the duration of exposure. Therefore, the impact will be **less than significant.**

c. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Long-Term Operation Impact

The Project will not increase the total number of diesel trains operating on the Caltrain/UPRR tracks. Therefore, diesel-related odor emissions will not increase, and there will be **no impact**.

Temporary Construction Impact

During construction, the operation of heavy equipment will generate diesel odors on-site and in adjacent areas. Diesel odors will be limited in both temporal and geographic extent by the number of pieces of construction equipment operating at any one time and dispersed by prevailing meteorological conditions. Construction air quality commitments incorporated in the Project will also serve to minimize diesel exhaust emissions. Therefore, this will be a **less than significant** impact.

IV. BIOLOGICAL RESOURCES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

Existing Conditions

The project area is in the Guadalupe River corridor and is surrounded by residential and commercial development. The project area is within the South Bay Subregion of the San Francisco Bay Area California Region, which is part of the larger California Floristic Province.[9] The Guadalupe River lies within the Santa Clara Valley basin that ultimately drains into the San Francisco Bay. The headwaters originate in the eastern Santa Cruz Mountains, initially forming the Guadalupe Creek before its confluence with Alamitos Creek in the City of San José, where it becomes the Guadalupe River.

[9] Baldwin, B.G., D.H. Goldman, D. J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley.

The Guadalupe River has roughly 20 miles of main channel and a watershed area of 170 square miles.[10] Flows in the Guadalupe River increase rapidly in response to winter storms and are typically followed by steep declines in flow. Overall, the river is characterized by high winter flows and low summer baseflows, with stream dry back occurring during most drought years.[11]

The Guadalupe River has a highly confined and nearly uniform channel within the project area. This section of the river is characterized by a series of long, slow, flatwater habitat separated by short riffle sections. As noted in the Purpose and Need section, the project area has a history of scour and bank failure problems that the Project will help alleviate through channel widening and connection to the Reach 6 bypass channel downstream.

In addition to geomorphic instability issues, homeless encampments throughout the undeveloped portion of the Guadalupe River corridor affect habitats. Specific impacts include trash, channel alterations (e.g., rock weir placement/stream crossings), disturbance/removal of riparian vegetation, and erosion issues on the riverbanks.

Vegetation

The following vegetation/land use communities were mapped in the study area: (1) developed, (2) Wild Oats and Annual Brome Grassland, (3) Fremont Cottonwood Forest, (4) perennial freshwater marsh, (5) seasonal wetland, (6) ornamental woodland (7) aquatic habitat, and (8) Coast Live Oak Woodland (**Figure 10**). The Preliminary Delineation of Wetlands and Other Waters Report (Appendix C) provides a detailed list of the plant species observed during the field review.

Developed Land: Developed land within the top of bank includes areas that are covered in riprap or hardpacked soil that does not support vegetation. These areas were mapped under the bridge, adjacent to the abutments, and along the banks adjacent to the bridges. Outside the banks, developed land includes areas that are paved, graded, hardpack dirt, and gravel access routes. These areas were generally devoid of substantial vegetation cover but contained small patches of non-native vegetation.

Wild Oats and Annual Brome Grassland: This annual grassland habitat is dominated by non-native grasses, including wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), Mediterranean barley (*Hordeum murinum*), and smilo grass. Other species observed included non-native plant species that are characteristic of disturbed areas, including black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), Canada horseweed (*Erigeron canadensis*), field bindweed, Italian thistle (*Carduus pycnocephalus*), prickly lettuce (*Lactuca serriola*), and Russian thistle (*Salsola tragus*). Annual grassland was mapped within the top of bank of the Guadalupe River and the flood control basin as well as areas outside the banks of the river and basin.

[10] Leidy, R.A., G.S. Becker, and B.N. Harvey. 2005. Historical Distribution and Current Status of Steelhead/Rainbow Trout (*Oncorhynchus mykiss*) in Streams of the San Francisco Estuary, California. Center for Ecosystem Management and Restoration, Oakland, California.
[11] Santa Clara Valley Water District and Stillwater Sciences. 2018. Water Year 2017 Final Mitigation Monitoring Report for the Lower, Downtown, and Upper Guadalupe River Projects, San José, California. Prepared by the Santa Clara Valley Water District and Stillwater Sciences. San José, California.

Figure 10: Vegetation Communities Map

Fremont Cottonwood Forest (*Populus fremontii* – Salix *laevigata*, S. *lasiolepis* Alliance): The dominant trees in the riparian community included Fremont cottonwood and red willow (*Salix laevigata*) with lesser numbers of boxelder (*Acer negundo*). Within the study area, the canopy is intermediate to continuous. Dominant shrubs observed consisted of arroyo willow. Species observed in the open to dense understory above the Ordinary High Water Mark (OHWM) included sweet fennel (*Foeniculum vulgare*), curly dock (*Rumex crispus*), broadleaf cattail, smilo grass, white horehound (*Marrubium vulgare*), Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), tall flatsedge, poison hemlock (*Conium maculatum*), and giant reed (*Arundo donax*).

Perennial Freshwater Marsh: Perennial marshes are generally inundated or have high groundwater levels year-round or for extended periods, but surface water may be lacking during the summer and fall. The perennial marsh was mostly confined to a network of depressions within the flood control basin. The source of hydrology is surface flow from culvert C1 and likely from a high groundwater table. Dominant species observed included broadleaf cattail, arroyo willow, water primrose, and rough cocklebur (*Xanthium strumarium*).

Seasonal Wetland: Seasonal wetlands are generally inundated by shallow water or have high groundwater levels for variable periods from winter to spring, but they may be completely dry for most of the summer and fall. Dominant vegetation can include strongly hydrophytic vegetation when the wetland is inundated or saturated and non-hydrophytic, upland species after the wetland dries out. The seasonal wetlands extend from the edge of the perennial marsh up to the toe of the flood control basin banks. The main source of hydrology is likely from a high groundwater table. Dominant species observed included bristly ox-tongue, bird's foot trefoil (*Lotus corniculatus*), California mugwort (*Artemisia douglasiana*), and tall flatsedge (*Cyperus eragrostis*).

Ornamental Woodland: Ornamental woodland includes lands that have been planted with landscaping and are maintained on an ongoing basis. Such landscaping may include native and non-native plantings. Within the study area, ornamental woodland was found along both sides of the tracks in the eastern reach of the study area and includes the City of San José's Fuller Avenue Park in the western portion of the study area. Trees and shrubs observed included black locust (*Robinia pseudoacacia*), Chinese pistache (*Pistacia chinensis*), Australian pine (*Casuarina equisetifolia*), Canary Island pine (*Pinus canariensis*), and cotoneaster (*Cotoneaster franchetii*). Ornamental woodland was found along the top of bank of the flood control basin and McClellan Avenue in a small landscaped area owned by Valley Water. Trees and shrubs observed included blue elderberry (*Sambucus nigra* ssp. *caerulea*), valley oak (*Quercus lobata*), and California coffeeberry (*Frangula californica*).

Aquatic Habitat: The Lower Guadalupe River supports a diverse fish community, including native fish species such as steelhead (*Oncorhynchus mykiss*), Chinook salmon (*Oncorhynchus tshawytscha*), California roach (*Lavinia symmetricus*), hitch (*Lavinia exilicauda*), Sacramento sucker (*Catostomus occidentalis*), Pacific lamprey (*Lampetra tridentate*), and sculpin (*Cottus spp.*) along with several non-native fish species such as carp (*Cyprinus carpio*), mosquitofish (*Gambusia affinis*), bullhead (*Italurus spp.*), bass (*Micropterus spp.*), and sunfish (*Lepomis spp.)*. Aquatic habitat in the project area is characterized by a series of long slow flatwater habitat separated by short riffle sections. Low summer baseflows limit suitable rearing habitat for juvenile steelhead, while warm water temperatures in the project area are generally above stressful levels for steelhead during June through October. Average monthly water

temperatures typically exceed 20 degrees Celsius (°C) during the summer with maximum temperatures ranging from 26°C to 28°C from June through September.[12]

Coast Live Oak Woodland: Woodland habitat dominated by coast live oak (*Quercus agrifolia*) occurs in two areas within the study area. A small amount of the oak woodland canopy overhangs the top of bank in the northwest corner of the study area. Plants observed in the understory were the same as those observed in the Wild Oats and Annual Brome Grassland.

Wetlands/Waters Delineation

The wetland delineation for the study area was originally completed in December 2018 and was subsequently reviewed and updated in August 2020 (see Appendix C).

A summary of jurisdictional waters and habitats in the study area is provided in **Table 2** and **Figure 11**. The identification of jurisdictional areas differentiates between the requirements of three permitting agencies: USACE, RWQCB, and CDFW.

USACE is the permitting agency under Section 404 of the federal Clean Water Act. USACE jurisdiction includes the Guadalupe River itself (below the OHWM) and perennial freshwater marsh and seasonal wetlands within the Valley Water Reach 6 flood bypass channel. In total, 4.39 acres of USACE jurisdictional waters/wetlands are present in the study area (**Figure 11a**).

RWQCB is the permitting agency for the Clean Water Act Section 401(c) Water Quality Certification and California's Porter-Cologne Water Quality Control Act. RWQCB jurisdiction includes the wetlands/waters within USACE jurisdiction, plus additional habitats up to the "top of bank" line shown in **Figure 11b**. In total, 6.05 acres of RWQCB jurisdictional areas are present in the study area.

CDFW is the permitting agency for California's Lake and Streambed Alteration Program. CDFW's jurisdictional area includes the bed, bank, and channel, and overlaps both USACE and RWQCB jurisdictions; it also extends to adjacent riparian vegetation extending beyond the top of bank. In total, 6.67 acres of CDFW jurisdictional areas are present in the study area (**Figure 11c**).

Detailed technical information regarding the methodology and results of the wetland delineation (including soil samples and photos) is provided in Appendix C.

[12] Santa Clara Valley Water District and Stillwater Sciences. 2018. Water Year 2017 Final Mitigation Monitoring Report for the Lower, Downtown, and Upper Guadalupe River Projects, San José, California. Prepared by the Santa Clara Valley Water District and Stillwater Sciences. San José, California.

Figure 11a: Preliminay Identificaton of Jurisdictional Waters and Habitats and Project Impacts – USACE

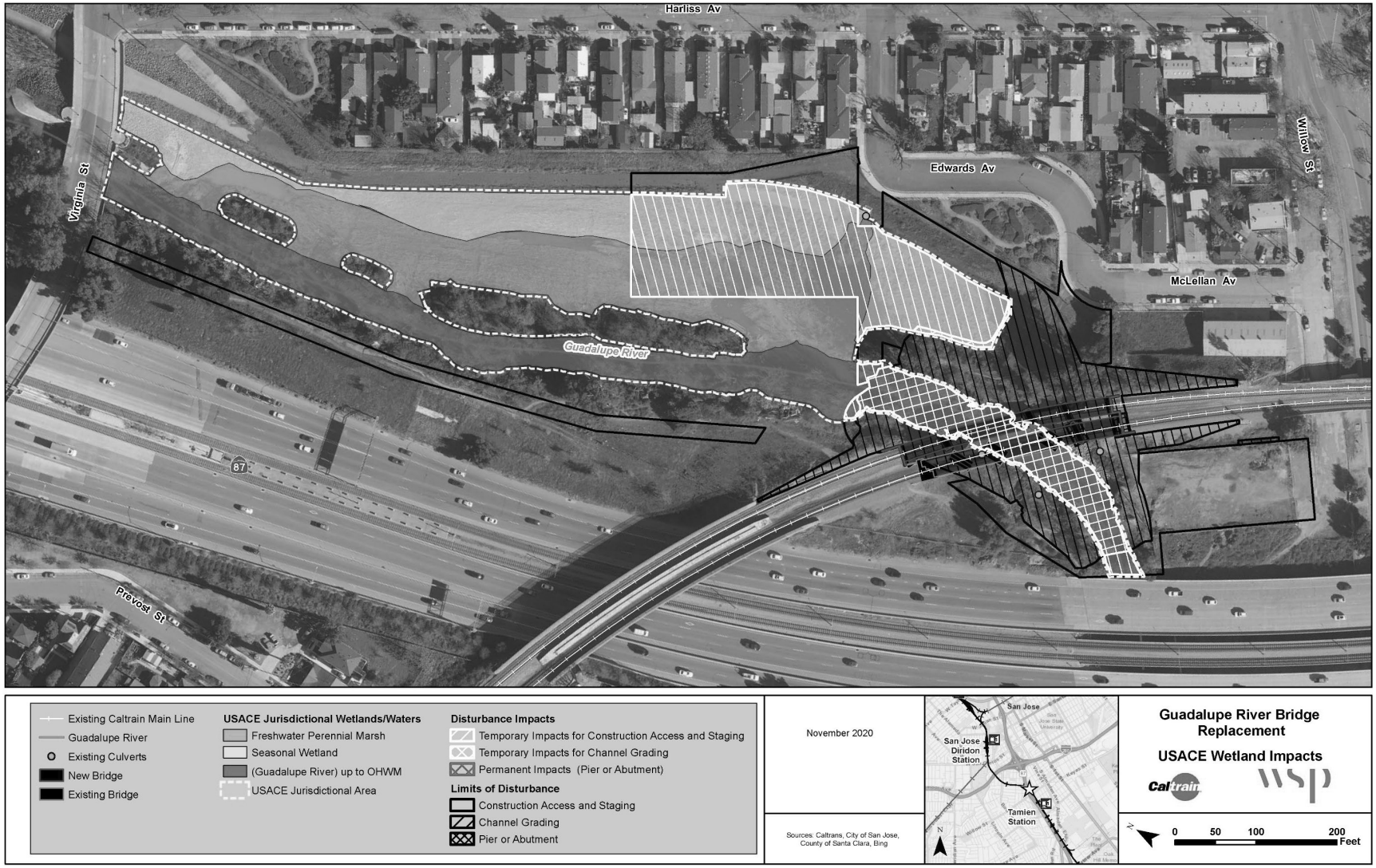


Figure 11b: Preliminay Identificaton of Jurisdictional Waters and Habitats and Project Impacts – RWQCB

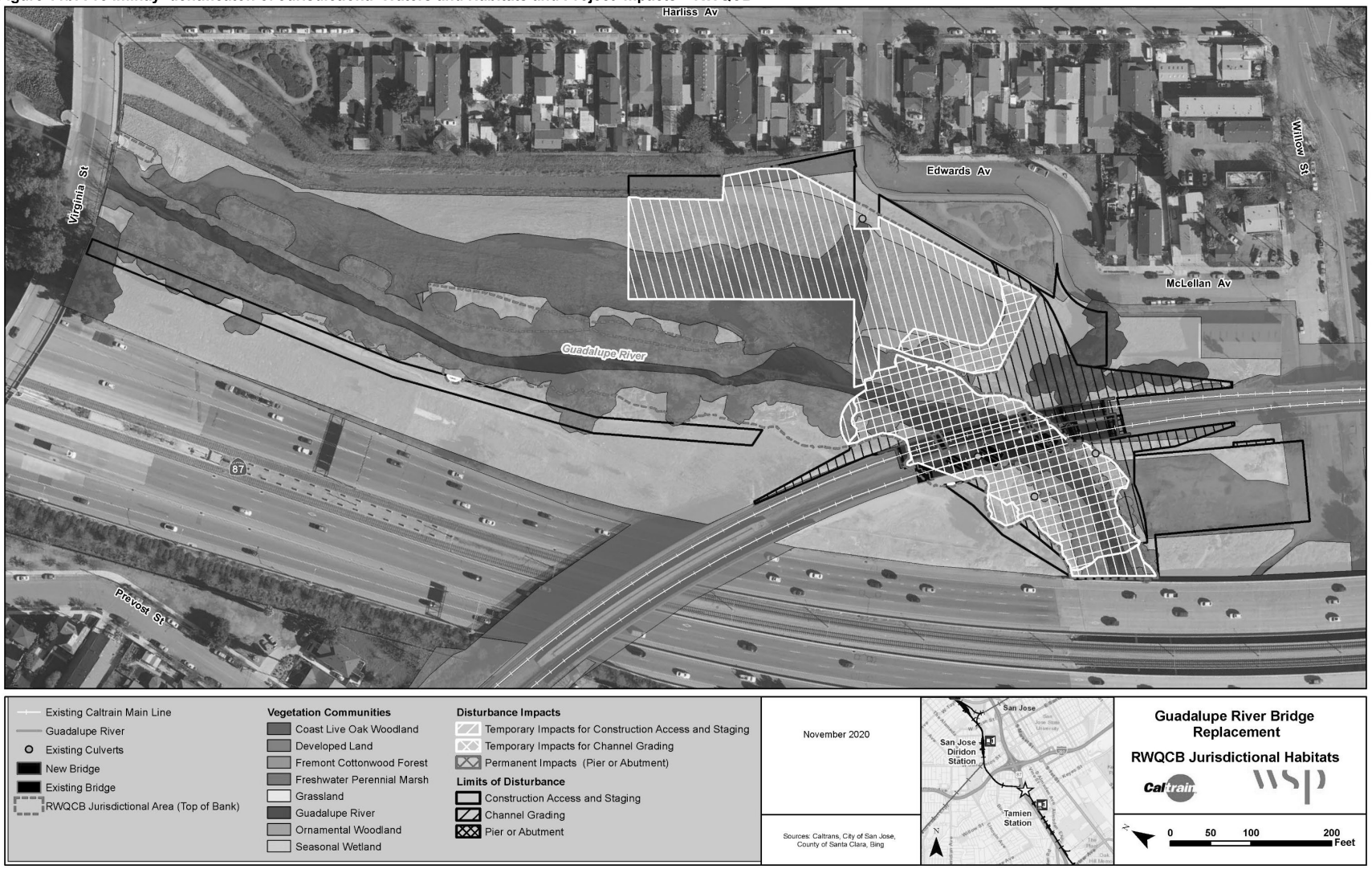


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Figure 11c: Preliminay Identificaton of Jurisdictional Waters and Habitats and Project Impacts – CDFW

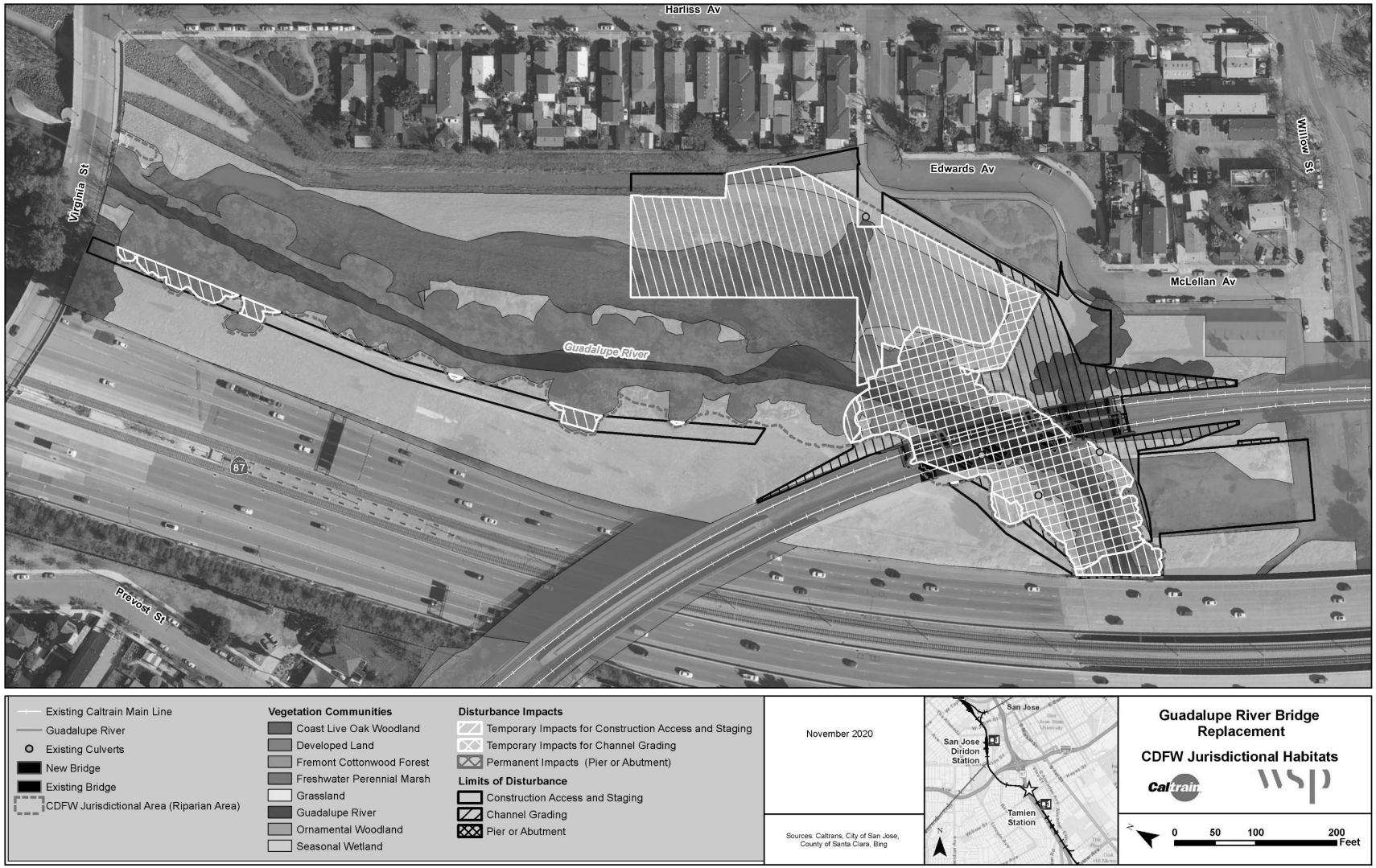


Table 2. Summary of Jurisdictional Waters and Habitats within the Study Area

Potentially Jurisdictional Waters and Habitats	Acres[a]
USACE Jurisdictional Total	**4.39**
Section 404 Other Waters	
Aquatic habitat	0.73
Fremont Cottonwood Forest (up to OHWM of the Guadalupe River)	0.72
Section 404 Wetlands	
Perennial Freshwater Marsh	1.61
Seasonal Wetland	1.33
RWQCB Jurisdictional Total	**6.05**
Aquatic Habitat	0.73
Fremont Cottonwood Forest (up to OHWM of the Guadalupe River)	0.72
Fremont Cottonwood Forest (up to the top of bank along the Guadalupe River)	0.79
Perennial Freshwater Marsh	1.61
Seasonal Wetland	1.33
Wild Oats and Annual Brome Grassland (up to top of bank of the Guadalupe River and the flood control basin)	0.67
Developed (up to the top of bank of the Guadalupe River and the flood control basin)	0.20
CDFW Jurisdictional Total	**6.67**
Aquatic Habitat	0.73
Fremont Cottonwood Forest	2.13
Perennial Freshwater Marsh	1.61
Seasonal Wetland	1.33
Wild Oats and Annual Brome Grassland (up to top of bank of the Guadalupe River and the flood control basin)	0.67
Developed (up to the top of bank of the Guadalupe River and the flood control basin)	0.20

[a] Values are approximate due to rounding.

Federally Listed Threatened and Endangered Species

A biologist conducted a site visit and database review in late 2018. A species assessment was completed in May 2020, and biologist made a follow up site visit in August 2020. No threatened or endangered species were observed during the field review.

A search of NMFS, U.S. Fish and Wildlife Service (USFWS) and CDFW species lists/databases was conducted (database search results are provided in Appendix D). The database results show no critical habitat is designated in or near the project area.

One federally listed species within the jurisdiction of NMFS was identified as having potential for occurrence in the study area: the Central California Coast steelhead Distinct Population Segment (. Steelhead have been observed throughout the mainstem Guadalupe River and several of its tributaries. Steelhead primarily use the study area during migration periods that typically peak from December through April (for adults) and during January through May (for juveniles). Outside these migration periods, habitat conditions are generally unfavorable for steelhead (because of excessive temperatures), and anticipated numbers within the study area are very low as demonstrated by Valley Water sampling data discussed further below.

Overall juvenile steelhead abundance in the study area is low, especially during periods of drought.[13] Annual monitoring efforts conducted in the Guadalupe River near the Project included three sites, each 100-feet long, located within an approximately 0.5-mile section of river between highway 280 and Park Avenue. As shown in **Table 3**, steelhead were only observed during 3 of the 15 years when sampling was conducted, and the number of juvenile steelhead captured during these efforts ranged from 0 to 10 fish while most years had 0 juvenile steelhead captured (including the most recent 4 years).

Table 3. Juvenile Steelhead Monitoring, 2004-2019

Sample Year	Total Juvenile Steelhead Captured
2004–2010[a]	0
2011	8
2012	10
2013	1
2014	0
2015	--[b]
2016	0
2017	0
2018	0[c]
2019	0[c]

Source: Santa Clara Valley Water District and Stillwater Sciences 2014, 2015, 2016, 2017, 2018, 2019, 2020 and Valley Water 2020

[a] 2004-2010 sampling was conducted at three locations with 0 steelhead captured.

[b] No sampling occurred in 2015.

[c] Two sites were sampled in 2018 and 2019.

The study area includes habitats that have been designated as Essential Fish Habitat (EFH) for Pacific salmon. The Central Valley fall-/late fall-run Chinook salmon evolutionarily significant unit (ESU) is the only Pacific salmon species that occurs in the study area. Fall-run Chinook salmon have been observed throughout the mainstem Guadalupe River and Los Gatos Creek. Santa Clara Valley Water District conducts spawning and carcass surveys from October to April and

[13] Santa Clara Valley Water District and Stillwater Sciences. 2014. Water Year 2013 Final Mitigation Monitoring Report for the Lower, Downtown, and Upper Guadalupe River Projects, San José, California. Prepared by the Santa Clara Valley Water District and Stillwater Sciences. San José, California.

has found that most of the fall-run Chinook spawning occurs within the downtown San José area, including the project area.

The USFWS species list identified eight threatened, endangered, or candidate species potentially present in the study area:

One plant:

- Robust spineflower (*Chorizanthe robusta* var. *robusta*; federal threatened)

Two Invertebrate Species:

- Bay checkerspot butterfly (*Euphydryas editha bayensis*; federal threatened)
- San Bruno elfin butterfly (*Callophrys mossii bayensis;* federal endangered)

Two amphibian species:

- California red-legged frog (*Rana draytonii*; federal threatened)
- California tiger salamander (*Ambystoma californiense*; federal threatened)

One Fish Species:

- Delta smelt (*Hypomesus transpacificus*; federal threatened)

Two Bird Species:

- California Ridgway's (Clapper) Rail (*Rallus longirostris obsoletus* also *Rallus obsoletus*; federal endangered)
- California least tern (*Sterna antillarum browni*; federal endangered)

As detailed in Appendix D, the study area was reviewed for suitable habitat for the USFWS listed species and was evaluated against the known occurrences of listed species. The study area does not provide suitable habitat for any of the eight species identified by USFWS, and none of the species are likely to occur in the study area.

Other Special-Status Species

In addition to federally listed threatened and endangered species, a comprehensive assessment was performed for other wildlife and plant species identified in a search of the California Natural Diversity Database (CNDDB). Tables summarizing an assessment of the potential for special-status species to occur in the project area are provided in Appendix D. No special-status plant species are expected in the project area based on available habitat conditions and known occurrences of each plant species. The following special-status wildlife species could occur in the project area:

- Western pond turtle (*Emys marmorata*). CDFW Species of Special Concern. Western pond turtle has low potential to occur in the study area because the study area is not within the mapped primary habitat for the species, is more than 3 miles from the nearest documented occurrence, and is isolated by urban development.

- American peregrine falcon (*Falco peregrine anatus*). CDFW Fully Protected Species. American peregrine falcon has low potential to occur in the study area. This species may occasionally roost or forage within the study area; however, there is no suitable high-elevation habitat available for nesting.
- Burrowing owl (*Athene cunicularia*). CDFW Species of Special Concern. The study area is generally either inundated with water or contains heavily saturated soils that are not suitable for small mammal burrow construction that is required for this species. A small amount of ruderal and park habitat dry enough for the species occurs in the southeast portion of the study area, adjacent to the curve of Mclellan Avenue. Because of the small area and urban location there is a low potential for burrowing owl to occur in the study area.
- Cooper's hawk (*Accipiter cooperii*). CDFW Watch List Species. The study area provides suitable forage, roost, and nesting habitat for this species, which seems adapted to urban environments, although the homeless encampments in this reach of the river may discourage nesting. The nearest documented occurrence of this species is more than 2.5 miles southwest of the study area. The overall potential for Cooper's hawk to occur in the study area is moderate.
- Northern harrier (*Circus cyaneus*). CDFW Species of Special Concern. There is low potential for the northern harrier to occur in the study area. This species may occasionally forage within the study area but is unlikely to nest because of the lack of large tracts of open grassland/marsh habitat and the presence of heavy adjacent urbanization. The nearest documented occurrence of this species is more than13 miles northwest of the study area.
- Osprey (*Pandion haliaetus*). CDFW Watch List Species. There is low potential for osprey to occur in the study area. This species may occasionally forage and/or roost within the study area. However, the intense urbanization surrounding the study area likely precludes heavy use by this species. The nearest documented occurrence of this species is 12 miles southwest of the study area.
- Tricolored blackbird (*Agelaius tricolor*). Threatened Species under California Endangered Species Act, CDFW Species of Special Concern. The Tricolored blackbird has low potential to occur in the study area because it lacks the large wetland habitat required by this species for nesting. Adults may occasionally forage within the study area. The nearest documented occurrence of this species is over 4.5 miles East of the study area.
- White-tailed kite (*Elanus lecurus*). CDFW Fully Protected Species. The white-tailed kite has moderate potential to occur in the study area. This species may forage and nest within the study area, although surrounding urbanization may preclude much use. The nearest documented occurrence of this species is at the San José Airport North of the study area.

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Federally Listed Threatened and Endangered Species

As discussed under Existing Conditions, above, no threatened or endangered species under the jurisdiction of USFWS are likely to occur in the study area. Therefore, the impact analysis for federally listed threatened and endangered species is focused on Central California Coast steelhead (*Oncorhynchus mykiss*) and the EFH used by Chinook salmon. Both species are under the jurisdiction of NMFS. As the federal lead agency, FTA is undertaking an informal consultation process with NMFS under Section 7 of the Endangered Species Act.

Potential impacts on steelhead and EFH will primarily result from construction activities; therefore, they will be short term and temporary in nature. By reducing scour and bank failure risks, the long-term impact of the Project on fish habitat quality will be beneficial. Potential construction impacts on steelhead and steelhead habitat resulting from the Project include the following, each of which is discussed in greater detail below:

1) Fish Stranding and Entrainment
2) Fish Migration
3) Fish Relocation Activities
5) Toxic or Hazardous Spills
6) Increased Sediment and Turbidity, and
7) Aquatic Habitat Modification

Fish Stranding and Entrainment

The Project includes dewatering approximately 400 feet of the Guadalupe River. Channel dewatering could strand steelhead residing in isolated pools and depressions within the work area. Although it is unlikely that steelhead will be present during dewatering because of the timing of the work and the poor quality of habitat conditions, any steelhead remaining within the dewatered section are likely to experience harmful habitat conditions, including elevated water temperatures, low dissolved oxygen levels, and increased risk of predation. Furthermore, any steelhead remaining within the dewatered section that survive the harmful habitat conditions are expected to be buried or crushed during planned channel grading activities. Several mitigation measures are included in the Project to directly address and minimize risks on steelhead associated with channel dewatering.

Mitigation measures that minimize the potential for fish stranding and entrainment include limiting in-water work to occur when steelhead are least likely to be present within the study area (Mitigation Measure BIO-01), having a qualified fisheries biologist on-site during dewatering activities to walk the site and look for stranded fish (Mitigation Measures BIO-03 and 05), screening pump intakes following NMFS screening criteria to prevent fish entrainment or impingement (Mitigation Measure BIO-05), and conducting a fish relocation effort prior to dewatering the channel (Mitigation Measure BIO-04).

Fish Migration

Installation of cofferdams and directing flow through diversion pipes could impede fish migration in the Guadalupe River. To minimize this impact, the timing of channel dewatering will occur outside the adult steelhead upstream migration period and the peak juvenile steelhead downstream migration season. Specifically, dewatering will be limited to the June 15 to October 15 in-channel work window (Mitigation Measure BIO-01). In the unlikely event that any juvenile steelhead are migrating downstream outside the peak migration season, the diversion pipes will not be screened to allow downstream fish passage (Mitigation Measure BIO-05).

Channel grading and channel widening activities as part of the Project are expected to improve long-term fish migration conditions. Channel grading will help define the low-flow channel, which is expected to increase juvenile fish passage; channel widening will allow high flows to dissipate over a wider area, thereby reducing water velocities within the project area compared to current conditions. Reduced channel velocities are anticipated to increase fish upstream migration conditions; widening the channel to create new floodplain habitat that connects to existing floodplain directly downstream is expected to provide juvenile steelhead and salmon refugia habitat from high-water velocities during peak flow events.

Fish Relocation Activities

Fish capture and relocation activities could harass, injure, or even kill fish. Since fish relocation activities will be conducted by a qualified fisheries biologist following NMFS guidelines, potential direct effects, including harassment or mortality, of steelhead during capture will be minimized to the greatest extent possible. Based on the low densities of steelhead observed in the Guadalupe River (only one observed in the past 5 years), poor habitat conditions, excessive temperatures, and the timing of the fish relocation activities occurring outside the migration season, it is unlikely that steelhead will be captured during fish relocation activities. Fish relocation activities will follow NMFS (2000) electrofishing guidelines[14] (Mitigation Measure BIO-04) and are therefore expected to minimize any potential impacts on steelhead. Based on the low abundance of steelhead observed in the study area (ranging from 0–3 fish/100 feet), the potential for impacts on Central California Coast steelhead is very low.

Toxic or Hazardous Spills

Releases of diesel fuel, lubricants, hydraulic fluid, and other potential contaminants from construction equipment could result in acute adverse impacts on fish directly via physiological impairment, the interruption of essential behaviors, or direct mortality. Hazardous spills may also impact invertebrates and fish habitat. The Project will adhere to strict mitigation measures regarding oil and fuel spills and will ensure that all personnel are aware of spill prevention and response procedures.

To address risks to listed species related to chemical and other hazardous spills, construction related BMPs will be implemented during the Project as part of the Stormwater Pollution Prevention Plan (SWPPP) (Mitigation Measure BIO-06), including appropriate construction BMPs to avoid and minimize potential effects from hazards and hazardous materials and measures to prevent, control, and minimize impacts from a spill of a hazardous, toxic or petroleum substance during construction of the Project. Following implementation of the

[14] National Marine Fisheries Service. 2000. Guidelines for electrofishing waters containing salmonids listed under the Endangered Species Act. NMFS Northwest Region, June 2000.

mitigation measures above, any potential leaks or spills of oil or other fluids from construction machinery will likely be small in volume and short in duration and, therefore, will contaminate only a small area. Proper execution of these plans and consistent implementation of construction BMPs will ensure that any spills are immediately and effectively remediated.

Increased Sediment and Turbidity

Turbidity and the concentration of total suspended solids (TSS) could temporarily increase during pumping associated with the channel dewatering activities. Similarly, re-watering the channel could increase turbidity and TSS when flows are restored to the dewatered section of river. Turbidity and increased TSS may directly affect special-status fish species by causing adverse physiological effects. Potential turbidity and TSS increases will be minimized by implementing construction-related BMPs identified in Mitigation Measures BIO-06 and BIO-08. Furthermore, effects on listed species will be limited because the activities will occur outside the migration season for adult and juvenile steelhead (Mitigation Measure BIO-01) when steelhead are not expected to occur within the study area due to poor habitat conditions.

Channel grading also could increase turbidity and TSS and could impair water quality conditions. Potential impacts from channel grading are expected to be addressed by dewatering the work area before working in the active river channel, developing a SWPPP (Mitigation Measure BIO-06) prior to construction, and implementing construction-related BMPs (Mitigation Measure BIO-08).

Aquatic Habitat Modifications

Site preparation will require vegetation clearing around access routes and bridges. As a result, site preparation activities are expected to result in the removal of vegetation that provide Shaded Riverine Aquatic (SRA) cover. SRA cover provides shelter, resting, rearing, and feeding areas to multiple fish species. The temporary loss of SRA cover can negatively affect anadromous fish by removing protective cover for juveniles. Loss of SRA will be temporary and will affect a small amount of available SRA habitat compared to the total amount of SRA along the Guadalupe River. Any steelhead seeking cover in SRA habitat could find suitable SRA habitat nearby. Overall, the project design is expected to increase habitat for juvenile steelhead and improve fish passage conditions. Furthermore, channel widening under the Project will help ensure long-term stability of SRA habitat because it will help prevent bank erosion that could result in long-term SRA habitat losses. The riverbanks will be revegetated and, in the long-term, the SRA habitat will be enhanced through implementation of a Habitat Mitigation and Monitoring Plan (HMMP) (Mitigation Measure BIO-07).

Conclusion

The Project will not have a substantial adverse effect on steelhead and Chinook salmon with the incorporation of protection measures. While there will be temporary impacts (on water quality/turbidity), appropriate protection and mitigation measures are included in the Project to avoid and minimize each type of temporary impact. In-water work will be limited to occur outside salmonid migration periods. This work window also coincides with periods of low precipitation when water temperatures are typically too warm in the Lower Guadalupe River to provide rearing habitat for juvenile steelhead or juvenile Chinook salmon. Sampling data show only one steelhead in the Guadalupe River in the past 5 years. As a result, juvenile salmonids are not likely to be present during in-water work. Similarly, direct and indirect effects on the Pacific salmon EFH will be short-term, localized, and minimized through the implementation of appropriate avoidance and minimization measures.

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.

Other Special-Status Species

The western pond turtle has low potential to occur in the project area. To avoid and minimize any potential impact on this species, Mitigation BIO-11 includes a western pond turtle pre-construction survey and construction biological monitoring. If western pond turtle is in the study area, CDFW will be contacted to determine appropriate measures to prevent significant impacts, including relocation to nearby areas outside the project construction site.

The following special-status bird species have low potential to occur in the project area during foraging but are not likely to nest in the project area: American peregrine falcon, northern harrier, osprey, and tricolored blackbird. Three special-status species could potentially nest in the project area: burrowing owl (low potential), white-tailed kite (low potential), and Cooper's hawk (moderate potential). To avoid and minimize the potential for construction vegetation removal to impact nesting birds, pre-construction nesting bird surveys will be undertaken by a biologist if construction begins in the nesting season, and appropriate measures will be taken if nesting birds are found during construction (Mitigation Measure BIO-09). In addition, a construction worker environmental awareness program (Mitigation Measure BIO-12) and biological monitoring will be implemented (Mitigation Measure BIO-03). With incorporation of these mitigation measures, potential effects on special-status species will be **less than significant**.

As discussed above, the overall effects of the Project on species of concern will be **less than significant with mitigation**.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Riparian habitat protected by the CDFW under Section 1600 of the California Fish and Game Code occurs within the study area. **Figure 11c** and **Table 4** summarize the permanent and temporary impacts of the Project on CDFW jurisdictional habitats. Permanent impacts associated with the bridge piers and abutments total 0.002 acres. Temporary impacts associated with grading to widen the river channel total approximately 1 acre. Temporary impacts associated with construction access roads and staging areas total 1.6 acres. Compared to existing conditions, in the long term, the Project will result in a net increase in the acreage of aquatic habitat in the study area as a result of widening the channel. Impacts on riparian habitat will continue to be minimized to the extent practicable as part of the final design and permitting process, in coordination with CDFW, RWQCB, and USACE.

In addition to Section 1600 of the California Fish and Game Code, riparian area protection is incorporated in numerous local and regional plans, including San Jose's Envision 2040 General Plan. **Table 5** summarizes the total vegetative cover impacts of the Project, including those areas outside the CDFW definition of adjacent riparian areas.

The temporary impact areas will be restored and replanted with native riparian vegetation at the completion of the Project as dictated by the HMMP (Mitigation Measure BIO-07). Mitigation Measures BIO-06, 07, and 08, described in the Mitigation Measures section below, will be

incorporated in the Project to avoid and minimize impacts on riparian habitat and other sensitive natural communities. Therefore, this impact is **less than significant with mitigation**.

Table 4: Permanent and Temporary Impacts on CDFW Riparian Habitat

	Permanent Impacts (acres)	Temporary Impacts for Channel Grading (acres)	Temporary Impacts for Construction Access and Staging (acres)	Total Temporary Impacts (acres)
Aquatic Habitat (Guadalupe River)	0.001	0.297	0.020	0.317
Freshwater Perennial Marsh	0	0	0.441	0.441
Seasonal Wetland	0	0.015	0.766	0.781
Fremont Cottonwood Forest	0	0.351	0.174	0.525
Wild Oats and Annual Brome Grassland	0.001	0.293	0.166	0.458
Total	0.002	0.956	1.566	2.522

Note: temporary impacts will be restored with native vegetation at the conclusion of construction.

Table 5: Permanent and Temporary Vegetative Cover Impacts

	Permanent Impacts (acres)	Temporary Impacts for Channel Grading (acres)	Temporary Impacts for Construction Access and Staging (acres)	Total Temporary Impacts (acres)
Aquatic Habitat (Guadalupe River)	0.001	0.297	0.020	0.317
Freshwater Perennial Marsh	0	0	0.441	0.441
Seasonal Wetland	0	0.015	0.767	0.782
Fremont Cottonwood Forest	0	0.351	0.174	0.525
Wild Oats and Annual Brome Grassland	0.002	0.650	0.771	1.421
Coast Live Oak Woodland	0.0001	0.132	0.066	0.198
Ornamental Woodland	0	0	0.007	0.007
Total	0.003	1.445	2.246	3.691

Note: temporary impacts will be restored with native vegetation at the conclusion of construction.

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Figure 11a and Table 6 summarize the permanent and temporary impacts of the Project on federally protected wetlands under Section 404 of the Clean Water Act. Permanent impacts on Section 404 wetlands/waters will total 0.001 acres and consist primarily of the new bridge piers. Temporary impacts on Section 404 wetlands/waters for channel grading and construction access staging will total 1.7 acres. Most of the temporary impacts will be on wetlands that have developed within the Reach 6 flood bypass channel.

Figure 11b and Table 7 summarize the permanent and temporary impacts on habitat within the jurisdiction of the RWQCB (top of bank). Permanent impacts within RWQCB jurisdiction will total 0.002 acres, and temporary impacts will total 2.4 acres.

For both USACE and RWQCB jurisdictional areas, the Project will result in a net increase in jurisdictional area in the long term from the widening of the river channel. The Project will also remove approximately 11,700 cubic yards of soil from the channel, plus the existing MT-1 timber piles, concrete piers, and the southern abutment of the MT-2 bridge. The new MT-1 bridge will be in the same location and have a similar width (17 feet) as the existing bridge. The MT-1 bridge will include a 2-foot-wide walkway on each side for maintenance access; however, this walkway will consist of steel grating that will not fully obstruct light in the same manner as a solid structure. Therefore, there is no potential for increased shading to an extent that would have an adverse impact on wetland vegetation. Similarly, the area underneath the MT-2 extension consists of soil that will be removed; therefore, the extension of the MT-2 bridge will not result in shading impacts on existing wetland vegetation.

JPB undertook all practicable measures to minimize wetland impacts in designing this Project; however, impacts are unavoidable because of the location and nature of the Project (bridge replacement, bridge extension and channel widening). The temporary impact areas will be restored and replanted with native riparian vegetation at the completion of the Project as dictated by the HMMP (Mitigation Measure BIO-07).

Work within wetlands is subject to regulatory oversight by USACE and RWQCB and will require permits from both agencies consistent with Sections 404 and 401 of the Clean Water Act. BMPs to minimize impacts on wetlands will be required from USACE and RWQCB as part of permit conditions.

To address the potential for impacts of stormwater runoff during construction in/adjacent to Section 404 waters and wetlands, a SWPPP will be prepared by a qualified SWPPP practitioner (Mitigation Measure BIO-06). The SWPPP will identify BMPs to be implemented during project construction activities, in compliance with the NPDES General Permit requirements. The Project will incorporate bioretention/bioinfiltration areas as post-construction stormwater quality treatment.

Overall, Project impacts on Section 404 waters and wetlands will be **less than significant with mitigation**.

Table 6. Impacts on USACE Jurisdictional Wetlands/Waters

	Permanent Impacts (acres)	Temporary Impacts for Channel Grading (acres)	Temporary Impacts for Construction Access and Staging (acres)	Total Temporary Impacts (acres)
Guadalupe River up to OHWM	0.001	0.423	0.041	0.464
Perennial Freshwater Marsh	0	0	0.441	0.441
Seasonal Wetland	0	0.015	0.767	0.782
Total	0.001	0.438	1.249	1.687

Table 7. Impacts on RWQCB Jurisdictional Wetlands/Waters/Habitat

	Permanent Impacts (acres)	Temporary Impacts for Channel Grading (acres)	Temporary Impacts for Construction Access and Staging (acres)	Total Temporary Impacts (acres)
Aquatic Habitat (Guadalupe River)	0.001	0.297	0.020	0.317
Perennial Freshwater Marsh	0	0	0.441	0.441
Seasonal Wetland	0	0.015	0.766	0.781
Fremont Cottonwood Forest	0	0.314	0.075	0.389
Wild Oats and Annual Brome Grassland	0.001	0.292	0.166	0.458
Total	0.002	0.918	1.467	2.385

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Refer to item a., above, for a discussion of potential impacts on fish migration. Incorporation of mitigation measures, such as on-site monitoring by a qualified biologist during all in-water construction activities (including dewatering and re-watering) and the use of fish exclusion netting or screens directly upstream and downstream of the channel segment to be dewatered, will minimize the potential for impacts. Mitigation measures that address or minimize the potential for fish stranding and entrainment include: limiting in-water work window to occur when steelhead are least likely to be present within the project area (Mitigation Measure BIO-01); having a qualified fisheries biologist on-site during in-water activities, including dewatering and re-watering (Mitigation Measure BIO-03); conducting a fish relocation effort prior to dewatering the channel (Mitigation Measure BIO-04); and implementing measures to minimize fish

stranding and entrainments, including inspecting dewatered areas for any stranded fish and relocating them to nearby suitable habitat (Mitigation Measure BIO-05). Therefore, the effects of the Project on fish movement will be **less than significant with mitigation**.

The removal of riparian vegetation during construction has the potential to affect nesting and migratory bird species protected by state and federal laws. To avoid and minimize this potential impact, the Project will include pre-construction nesting bird surveys, worker environmental education, and procedures to address nesting birds during construction (Mitigation Measures BIO-09 and BIO-12). Similarly, Mitigation Measure BIO-10 will protect roosting bats. Therefore, impacts on migratory birds and bats will be **less than significant with mitigation**.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

There are no trees on San José's heritage tree list in the study area.[15]

A City of San Jose ordinance tree is defined as a tree of 38 inches or more in circumference at 4.5 feet above ground (for trees with a single trunk) or a total circumference of 38 inches or greater at 4.5 feet above ground (for trees with multiple trucks).[16] Several trees meeting the definition of ordinance trees were identified within the study area, many of which consist of non-native species such as southern blue gum (*Eucalyptus globulus).* Ordinance trees within the channel grading areas will need to be removed. This includes four Fremont cottonwoods (*Populus fremontii*) located on the eastern riverbank, North of the MT-1 bridge. One Freemont cottonwood tree is dead (40 inches in diameter), and three are alive but in declining health (50 inches, 38 inches and 38 inches in diameter, respectively). Ordinance trees within the construction access/staging areas will be protected in-place during construction to the extent practicable.

As part of the Project, replacement trees and other riparian vegetation restoration measures will be incorporated in the HMMP (Mitigation Measure BIO-07).Native trees will be replaced at a 3:1 ratio, and non-native trees will be replaced with native trees at a 1:1 ratio. Therefore, the impact on ordinance trees will be **less than significant with mitigation**.

f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

The Project is within the Santa Clara Valley Habitat Plan HCP/NCCP area. The HCP provides an alternative means of compliance with federal Endangered Species Act requirements. However, as noted in the Existing Conditions section above, no USFWS-listed species are likely to occur in the project area, and the Project will have no effect on USFWS species under Section 7 (see Appendix D). NMFS is not a party to the HCP. Similarly, there are no threatened, endangered, or candidate species under the California Endangered Species Act likely to be impacted by the Project. Therefore, coverage under the HCP is not necessary for this Project.

[15] https://www.sanjoseca.gov/your-government/departments/transportation/roads/landscaping/trees/heritage-trees
[16] https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/tree-removal-permits#:~:text=Ordinance%2DSize%20Trees,inches%20or%20more%20in%20circumference

Although the Project is not seeking formal coverage under the HCP, the consistency of the Project with HCP policies was evaluated for purposes of CEQA compliance. Appendix D provides a technical assessment of the potential for each species covered in the HCP to occur in the study area. Most of the HCP species have no potential to occur in the study area. Two HCP species have low potential to occur in the study area: the western pond turtle and western burrowing owl. As discussed above under item a., mitigation measures such as pre-construction surveys, worker environmental awareness training, and biological monitoring will be incorporated in the Project to protect these species. Therefore, the Project will not have an adverse impact on the conservation of HCP species.

The purpose of the HCP is to protect and enhance ecological diversity and function. The Project is consistent with this purpose because it will result in long-term riparian habitat quality improvements, reduce erosion/bank failure risks, and improve water quality. The Project will have temporary impacts on riparian habitat; however, appropriate mitigation measures will be incorporated to address these impacts. Appendix E provides a table summarizing the consistency of the Project with the aquatic resource avoidance and minimization measures provided in Table 6-2 of the HCP. The applicable HCP recommended mitigation measures have been incorporated into the Project. Therefore, this impact will be **less than significant with mitigation**.

Biological Resources Mitigation Measures

To avoid and minimize potential adverse effects on biological resources, the Project includes the following mitigation measures:

- **Mitigation Measure BIO-01:** In-channel Work Window. All in-channel work will be limited to June 15 through October 15, a timeframe set by CDFW, USFWS, and NMFS as a time when special-status fish are least likely to be present.
- **Mitigation Measure BIO-02:** Minimize Noise and Vibration. The potential for noise and vibration disturbance of fish species will be minimized by using drilled piles for the new bridge piers, rather than impact pile driving.
- **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 western pond turtle, nesting birds, 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 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 15. 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 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. Coffer dams will be constructed using sand or gravel bags sealed with sheet plastic. Coffer dams 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 downstream 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 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). Compensatory mitigation for unavoidable impacts on wetland/riparian areas will be provided through development of an HMMP. The HMMP will include a conceptual riparian mitigation 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 HHMP 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 will 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 (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.

V. CULTURAL RESOURCES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

Built Environment Historic Resources

JPB conducted a cultural resources records search at the California Historical Resource Information System's Northwest Information Center on October 18, 2018.[17] The search revealed no California Register of Historic Places (CRHP) or National Register of Historic Places (NRHP)-listed or eligible resources within the project area. The 1935 MT-1 bridge was previously determined ineligible for NRHP during the environmental review of the Caltrain electrification project.[18]

The Guadalupe/Washington Conservation Area Historic District, which is recognized as historically significant by the city of San José through Local Ordinance, is located East of the project area (about 50 feet at the closest point).[19] The Historic District consists of late 19th and early 20th century National, Queen Anne, Neoclassical, Craftsman, and Minimal Traditional residences. There is no potential for the Project to have an indirect visual impact on the Historic District because of the distance of the Historic District from the Project, the presence of intervening vegetation, and the fact that the closest equipment would be at a substantially lower elevation than the residences (at the bottom of a staging area in the bypass channel).

Archaeological Resources

The cultural resources records search identified one previously recorded historic-era archaeological site in the project area near the MT-1 bridge, site SJ-H1 (P-41-002234). Site SJ-H1 consists of a redeposited historic refuse scatter. In 2009, surveyors observed ceramic vessels (bowls, plates, and mugs) of porcelain and white earthenware, as well as glass bottle fragments (brown, cobalt, green, clear, and aqua). Sawn bone fragments and metal were also observed. One dateable bottle (1936) was observed. While a formal determination of eligibility has not been made for the site, the original surveyors recommended that it was ineligible to the NRHP/CRHP because of its poor integrity and lack of potential to yield significant historic information. Therefore, Site SJ-H1 is not considered a historic resource for purposes of CEQA.

[17] Louis Berger U.S., *Cultural Resources Records Search Results for Guadalupe River Bridge Replacement Project*, May 31, 2019.
[18] Letter from California Office of Historic Preservation to Federal Transit Administration, Re: Caltrain Electrification Program, San Francisco, San Mateo and Santa Clara Counties, December 9, 2002.
[19] https://www.sanjoseca.gov/home/showdocument?id=23985

It should be noted that the project area downstream of the MT-1 bridge has been heavily disturbed by the construction of the Valley Water Reach 6 flood control project. No potentially significant cultural resources were uncovered during construction of the Reach 6 improvements.[20]

The Project is situated on the floodplain of the Guadalupe River, which is sensitive for buried prehistoric (i.e., Native American) archaeological sites. Because construction work will include deep excavation, an archaeological investigation was conducted (see Appendix F). Background research conducted as part of the archaeological investigation included a paleoenvironmental reconstruction, discussion of deeply buried archaeological sites in the Santa Clara Valley, and a buried site sensitivity assessment of the project area.[21] Prehistoric archaeological site identification efforts included drilling six cores within or adjacent to the proposed area of deep excavation. Cores were drilled to depths of 7.0 to 17.7 meters (23 to 58 feet) to reach a landform too old to harbor archaeology. Select samples from the cores (e.g., buried soils) were wet screened and/or flotation processed to test for the presence of prehistoric archaeological materials with negative results. Based on these findings, the area tested does not contain a prehistoric archaeological site, and no further prehistoric archaeological identification efforts are required.

a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

As described above, no historic resources meet the criteria of §15064.5 in the project area. Therefore, there will be **no impact**.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

As discussed above, based on the results of the cultural resources records research and geoarchaeological investigation, there are no known historic or prehistoric buried archaeological resources in the project area. Most of the ground disturbance associated with construction of the Project will be near the surface in modern fill/disturbed settings that have limited likelihood of disturbing previously undocumented archaeological sites. Deeper impacts (up to 90 feet) will be limited to the placement of new bridge piles. 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. Therefore, there will be **no impact.**

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

No known human burials or remains are within the area of proposed disturbance, and no evidence suggesting human remains may be present was identified in the geoarchaeological corings or the construction of the adjacent Valley Water Reach 6 flood control project in 2012. In the unlikely event that human remains are uncovered, JPB will stop work 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. Therefore, there will be **no impact**.

[20] https://www.valleywater.org/sites/default/files/E8%20-%20Upper%20Guadalupe%20River%20-%20Reach%206%20Gravel%20Augmentation%20Project%2C%20Final%20Initial%20Study%20Mitigated%20Negative%20Declaration.pdf

[21] Far Western Anthropological Research Group, Inc. *Subsurface Geoarchaeological Testing for the Caltrain Guadalupe River Bridge Replacement Project*, May 2020.

VI. ENERGY: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction of the Project will require a temporary and short-term increase in energy consumption relative to existing conditions. Construction energy consumption will include worker and truck trips and operation of construction equipment. Construction commitments incorporated into the Project for purposes of minimizing temporary construction air quality impacts will also serve to reduce energy consumption (e.g., restricting idling time to 2 minutes and requiring the use of newer construction equipment). The Project will have no effect on long-term energy consumption associated with the Caltrain/UPRR corridor. The construction and operation of the Project will not result in the inefficient or unnecessary energy consumption. Therefore, there will be **no impact**.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction and operation of the Project will not obstruct or conflict with local or state energy plans. Therefore, there will be **no impact**.

VII. GEOLOGY AND SOILS: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

According to the California Department of Conservation, California Geological Survey, the Project is not within an earthquake fault zone.[22] The project site is not located in a designated Alquist-Priolo Earthquake Fault Zone, and the nearest known active faults are the San José, approximately 1.5 miles to the West, and the Silver Creek fault, located approximately 2 miles to the East. Future rupture in the project area is not anticipated. Seismic design considerations will be incorporated in the final design of the Project. Therefore, there will be **no impact**.

[22] https://maps.conservation.ca.gov/cgs/EQZApp/.

ii. Strong seismic ground shaking?

The nearest known active fault line is located 1.5 miles from the project site. Seismic design considerations will be incorporated in the final design of the Project. Therefore, there will be **no impact**.

iii. Seismic-related ground failure, including liquefaction?

According to the Seismic Hazard Zones Map, the project area lies within an area where historic occurrence of liquefaction or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements.[23] Also, according to the California Department of Conservation, California Geological Survey, the project area, as well as large parts of the central area of the Santa Clara Valley, are in a liquefaction zone.

The potential for seismic-related ground failure is present at the project site, but the bridge replacements will not increase the potential for exposing people or structures to seismic-related ground failure, including liquefaction. Additionally, with inclusion of the appropriate seismic design parameters, there will be **no impact.**

iv. Landslides?

The project area is flat and well removed from any steep slopes that could reasonably affect the Project. The project area is outside the seismic landslide hazard zones maps published by the California Geologic Survey. Therefore, there will be **no impact** associated with landslides.

b. Result in substantial soil erosion or the loss of topsoil?

Temporary soil disturbance will occur during project construction; however, the Project will not result in substantial soil erosion or loss of topsoil. All disturbed areas will be treated with approved BMPs as construction is completed or prior to the onset of fall storms. In addition, construction projects resulting in the disturbance of 1.0 acre or more are required to obtain a NPDES permit issued by RWQCB. The Project's construction contractor will be required to prepare a SWPPP that identifies BMPs to limit soil erosion during project construction (see Mitigation Measure BIO-06). Adherence during construction to provisions of the NPDES permit and applicable BMPs contained in the SWPPP will ensure there is **no impact**.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The Project will not be located on any unstable soil or geologic units subject to landslide, lateral spreading, subsidence, or collapse. Therefore, **no impact** will occur.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The terrain of the project area is generally flat and underlain by alluvium derived from metamorphic and sedimentary rock and/or alluvium derived from metavolcanics. These types of

[23] San José West Quadrangle, California Division of Mines and Geology, 2002.

soils do not have a significant potential for shrink/swell movement. Therefore, there will be **no impact**.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

There are no septic tanks or wastewater disposal systems associated with the Project. Therefore, **no impact** will occur.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no known paleontological resources, sites, or unique geologic features within the area of proposed disturbance. If previously unidentified paleontological materials are unearthed during construction, work will be halted in that area until a qualified archaeologist can assess the significance of the find. Therefore, there will be **no impact**.

VIII. GREENHOUSE GAS EMISSIONS: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Long-Term Operation Impact

The Project will not result in any change in train operations or related energy consumption. Therefore, there will be **no impact** on greenhouse gas emissions.

Temporary Construction

The Project will result in temporary greenhouse gas emissions during the construction period. Temporary greenhouse gas emissions are not considered significant, the BAAQMD CEQA threshold for land use projects applies to long-term emissions only. Air quality construction BMPs such as idling restrictions and the use of newer equipment will serve to minimize temporary construction emissions of greenhouse gases.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

San José has adopted several greenhouse gas emission policies, including the 2030 Greenhouse Gas Reduction Strategy.[24] These policies generally do not pertain to temporary construction emissions, which is the only type of greenhouse gas emissions that the Project will cause. The Project will be consistent with the elements of the 2017 Clean Air Plan related to construction emissions (see the Section III, Air Quality). Therefore, there will be **no impact**.

[24] https://www.sanjoseca.gov/Home/ShowDocument?id=63605

IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The Project does not involve the routine transport, use, or disposal of hazardous materials. Hazardous materials may be transported through the project area by UPRR freight rail operations, but the Project will not increase hazards related to freight rail. Public safety in the rail corridor will be improved by the presence of bridges meeting current engineering standards. Therefore, there will be **no impact**.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Long-Term Operation Impact

The Project will not create conditions that would create a significant hazard as a result of accidents. Therefore, there will be **no impact** in the long term.

Temporary Construction Impact

The project site's historic and present use of rail service creates the potential for elevated quantities of petroleum hydrocarbons (TPHs), metals, and other chemicals commonly found

along rail corridors. These types of materials are routinely addressed in JPB construction projects through standard BMPs in accordance with federal and state regulations. Soil will be stockpiled and sampled for TPH prior to reuse in the project area. Any soils that would require disposal off-site will require chemical profiling prior to disposal.

The contractor performing demolition activities on the bridge structure will be required to comply with the California/Occupational Safety and Health Administration Lead in Construction Standards for protection of workers; properly control and contain paint dust and debris resulting from the demolition operation; and properly contain and dispose of the resulting paint chips, dust, and debris.

The contractor will be required to handle, store, and dispose of creosote-treated wood according to California Department of Toxic Substances Control's Alternative Management Standards for treated wood waste. The standards are an alternative to the full hazardous waste regulations and allow for treated wood waste to be disposed of at approved solid waste landfills (as opposed to special hazardous materials disposal facilities). Wood waste will not be stored near the Guadalupe River. Pile removal will be conducted in dry conditions to eliminate the risk of suspension of creosote-containing sediments.

Vehicles and equipment operating in and near the river channel will contain petroleum-based fuels, lubricants, and fluids that create the potential for release of petroleum products into the environment. Vehicles operated at or near the river channel will be checked daily for leaks, and vehicles and equipment will be parked on paved or previously disturbed areas to minimize the risk of pollutants entering the river. The spill prevention plan component of SWPPP will be implemented during project construction to minimize the potential for release of hazardous materials to the environment and ensure that any spills are promptly cleaned up. These measures require that vehicle fueling and maintenance occur outside the river channel, workers are properly trained in hazardous materials handling and management, and that spill prevention kits be located in proximity to the work areas. This impact will be **less than significant**.

Sediment in the Guadalupe River may contain high levels of mercury as a result of past mining activities in the upper watershed.[25] These sediments could be disturbed during grading of the river channel. To prevent hazards to workers, JPB will require the proper use of personal safety equipment during sediment movement. JPB will also implement construction commitments requiring the construction contractor to test excavated sediment or soil for the presence of mercury and to remediate excavated sediment or soil containing exceeding mercury levels. With application of these commitments, exposure of workers to mercury-contaminated sediments will be a **less than significant** impact.

Overall, with the incorporation of BMPs and compliance with state/federal regulations, the temporary impact is **less than significant**.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The following three schools are located within one-quarter mile of the project site: Bee Kids Childcare Wonderschool is located approximately 650 feet northeast of the project site on Harliss Avenue; Sacred Heart School is approximately 1,000 feet East of the project site at 310

[25] Santa Clara Valley Water District. *Final Environmental Impact Report/Statement for the Upper Guadalupe River Flood Control Project*. November 1999.

Edwards Avenue; and Rocketship Mateo Sheedy Elementary School is approximately 800 feet northeast of the project site at 788 Locust Street. Other than temporary handling of potential construction-related hazardous materials during construction, there will be no change in hazardous materials management as a result of the Project. The Project will not involve hazardous emissions or handling acutely hazardous materials. During construction, potentially contaminated materials will be handled in compliance with state and federal requirements to reduce their spread into the environment. Therefore, there will be **no impact**.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The project site is not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5.

A database review was conducted for the Project.[26] In addition, a review of historical documents, including topographic maps, Sanborn Maps, and aerial photos, was conducted to identify potential soil/water contamination issues.[27] [28] [29]No National Priorities List (NPL or superfund) sites and no delisted NPL sites are located within 1 mile of the project site. Four small-quantity Resource Conservation and Recovery Act generators are located between 660 feet and -.25 miles of the project site.

The closest site of concern is an automobile repair shop located approximately 20 feet East of the rail corridor and 180 feet South of the MT-1 bridge southern abutment (Bennetts Automotive Service, 385 Willow Street). The building currently housing the repair facility was constructed at this location between 1950 and 1956 and is identified in the database as a historic auto repair shop. This facility (Bennetts Automotive Service) appears on many of the regulatory databases, including Leaking Underground Storage Tank (LUST) and Historic LUST, hazardous waste storage, and historic Cortese site, among others. The case regarding a leaking oil storage tank was closed in 1993; however, it is possible that soil or groundwater hydrocarbon contamination remains in the vicinity of the site. The Bennetts Automotive Service property will not be directly affected by construction of the Project. All excavated soils will be sampled for hydrocarbons prior to reuse or disposal, and appropriate measures will be taken in compliance with federal and state law if contamination is encountered during construction.

Conclusion

The use of standard BMPs and compliance with applicable federal and state laws and regulations will reduce the potential for temporary impacts of handling contaminated soils during construction to **less than significant**.

[26] EDR, The EDR Radius Map™ Report with GeoCheck®, Guadalupe River Bridge 389 Willow Street, San Jose, CA 95110, April 29, 2020.
[27] EDR, EDR Historical Topo Map Report with QuadMatch™, Guadalupe River Bridge, April 29, 2020.
[28] EDR, Certified Sanborn® Map Report, Guadalupe River Bridge, April 30, 2020.
[29] EDR, The EDR Aerial Photo Decade Package, Guadalupe River Bridge, April 29, 2020.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The Project is located within 2 miles of the Mineta San José International Airport, but outside the Turning Safety Zone and all other safety zones described for the airport.[30] These airport safety zone land use restrictions are not applicable to the Project. Therefore, there will be **no impact**.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Long-Term Operation Impact

The Project does not propose changes that could impede implementation of or otherwise interfere with the Santa Clara County emergency response plan or emergency evacuation plan. Therefore, there will be **no impact**.

Temporary Construction Impact

During construction, emergency access to and in the vicinity of the project site could temporarily be affected by construction-related traffic. Traffic disruptions may be required temporarily during the delivery of materials to the construction site. This will be accomplished with construction flagman to guide traffic around the delivery zone. No temporary lane closures or detours or other major disruptions to traffic flow are expected to be required. Therefore, the impact will be **less than significant**.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

There are no designated Wildland Fire Hazards Area in or adjacent to the project area.[31] Therefore, there will be **no impact** associated with wildland fires.

[30] https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_SJC_CLUP.pdf
[31] https://egis.fire.ca.gov/FHSZ/

X. HYDROLOGY AND WATER QUALITY: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Long-Term Operation Impact

The Project will include post-construction stormwater treatment (bioretention/bioinfiltration areas) to reduce runoff volumes and provide water quality treatment. In addition, the Project will reduce river flow velocity during flood events, thereby reducing bank erosion and associated impacts on water quality. Therefore, the Project will have **no impact**.

Temporary Construction Impact

In accordance with NPDES General Permit requirements, an SWPPP will be prepared and implemented (Mitigation Measure BIO-06). The SWPPP will identify BMPs to address source reduction and provide measures and controls necessary to mitigate potential pollutant sources. Implementation of the SWPPP during construction will reduce temporary potential water quality impacts to **less than significant.**

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The Project will not use groundwater supplies or interfere with groundwater recharge. Therefore, there will be **no impact**.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would in a manner which will:

i) result in a substantial erosion or siltation on- or off-site;

The Project includes excavation of the right (East) bank of the Guadalupe River, as well as channel widening and grading, which will modify the existing drainage pattern. As indicated in the Guadalupe River Bridge Replacement – Post-Construction Stormwater Treatment Memorandum,[32] the replacement of the MT-1 bridge and extension of the MT-2 bridge will result in approximately 7,700 sf of impervious surface area, an increase of 2,950 sf over the existing impervious surface area. The additional impervious surface area could increase concentrated runoff over newly graded slopes if not addressed appropriately with stormwater treatment measures. In addition, the Project will modify stormwater control measures provided by the existing railroad berms (i.e., track ballast gravel forming the berm and vegetation along the railroad ROW). To reduce stormwater runoff, post-construction stormwater treatment for the Project will be provided via bioretention/ bioinfiltration areas that have been designed in compliance with the Santa Clara Valley Urban Runoff Pollution Prevention Program *C.3 Stormwater Handbook*. Implementation of the SWPPP and construction and stormwater BMPs during construction and the incorporation of post-construction stormwater treatment that meets stormwater runoff regulatory guidelines will reduce the potential for the Project to result in substantial erosion or siltation on- or off-site. Therefore, potential impacts will be **less than significant**.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

The purpose of the Project is to address structural integrity issues associated with the MT-1 bridge as well as existing bank scour and instability issues. The design of the new/expanded bridges and floodplain widening and grading is based on detailed hydraulic modelling and analysis, and will accommodate the 100-year flow value from the FEMA Flood Insurance Study for Santa Clara County, California, as well as the more conservative 100-year flow value from a recalculated hydrology report for the Guadalupe River watershed published by USACE in 2009. In addition to accommodating both FEMA and USACE 100-year event volumes, the hydraulic analysis demonstrates that relative to existing conditions, the Project will reduce channel velocities, lower water surface elevations, and increase freeboard.[33] Flooding related risks will be reduced as a result of the Project, therefore there will be **no impact**.

[32] HDR, Guadalupe River Bridge Replacement – Post-Stormwater Treatment Memorandum, July 24, 2020.
[33] Balance Hydrologics, Inc., Project Memo: Summary of 100-year Hydraulic Modeling for the Railroad Crossing as part of the Guadalupe River Bridge Replacement Project, February 6, 2020.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

As discussed above, because the Project will provide appropriate stormwater treatment, there will be **no impact.**

iv) impede or redirect flood flows?

The Project will widen the river channel, which will help accommodate flood flows through connection to the completed Reach 6 flood control channel downstream of the railroad bridges. Therefore, there will be **no impact**.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project site is in a flood hazard area but outside a regulatory floodway. The Project is designed to withstand inundation and will result in the release of pollutants.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project does not conflict with, nor will it hinder implementation of, a sustainable groundwater management plan or water quality control plan. Therefore, there will be **no impact**.

XI. LAND USE AND PLANNING: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

The Project lies within the City of San José's incorporated area. Most of the project area is surrounded by residential, open space, mixed-use commercial, and mixed-use community land uses.

Figure 12 depicts San José's 2040 General Plan[34] land use designations for the project area. The Project is consistent with the General Plan and does not conflict with any of the Plan's stated goals and actions. The Project supports several Plan goals, including Environmental Resource (ER)-2 and ER-9, and Environmental Consideration (EC)-4 and EC-9, which are summarized below.

- *Goal ER-2 – Riparian Corridors:* Preserve, protect, and restore the City's riparian resources in an environmentally responsible manner to protect them for habitat value and recreational purposes.
- *Goal ER-9 – Water Resources:* Protect water resources because they are vital to the ecological and economic health of the region and its residents.
- *Goal EC-4 – Geologic and Soil Hazards:* Minimize the risk of injury, loss of life, and property damage from soil and slope instability including landslides, differential settlement, and accelerated erosion.
- *Goal EC-5 – Flooding Hazards:* Protect the community from flooding and inundation and preserve the natural attributes of local floodplains and floodways.

Recognizing the importance of parks, open space, and recreational facilities, the Plan identifies PR-1-11, "to develop an integrated parks system that connects new and existing large parks together through a network of interconnected trails and/or bike lanes/routes." An existing publicly accessible Valley Water mitigation area is located within the project area on the western side of Mclellan Avenue, and bike paths and trails border the project area, including the Guadalupe River Trail.

The Guadalupe River Trail begins just outside the project limits to the North, beginning at Virginia Street and continuing in a northeasterly direction along the Guadalupe River until reaching Alviso. The City of San José has plans to extend the trail further South along the river,

[34] https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/citywide-planning/envision-san-jos-2040-general-plan

crossing the study area.[35] The proposed trail extension generally follows existing and planned maintenance roads associated with the USACE Reach 7 flood protection project and would extend South from Virginia Street parallel to Highway 87 through the project area. The trail would then cross the river on a new pedestrian bridge that would connect to Mclellan Avenue. Mclellan Avenue would be converted to a one-way street from the Valley Water mitigation area to the abandoned section of Willow Street to accommodate the road-separated trail. The trail would then travel West on abandoned Willow Street[36] where it would connect to a proposed bridge over Willow Street (Willow Calle Pedestrian Bridge) to connect to the existing SR 87 Bikeway that begins on the southern side of Willow Street.[37]

Although the proposed Guadalupe River Trail would extend through limited portions of the project area, it would not cross the location where the rail bridges are proposed to be rebuilt/extended. The only crossing of the tracks is grade separated (at Willow Street). The Guadalupe River Trail extension project is not currently funded; therefore, it is unlikely that the portion of the trail located within the study area would be constructed prior to completion of the (Caltrain) Project. Coordination with the City of San José will occur throughout the Project development process to confirm the anticipated timing of the Guadalupe River Trail project.

a. Physically divide an established community?

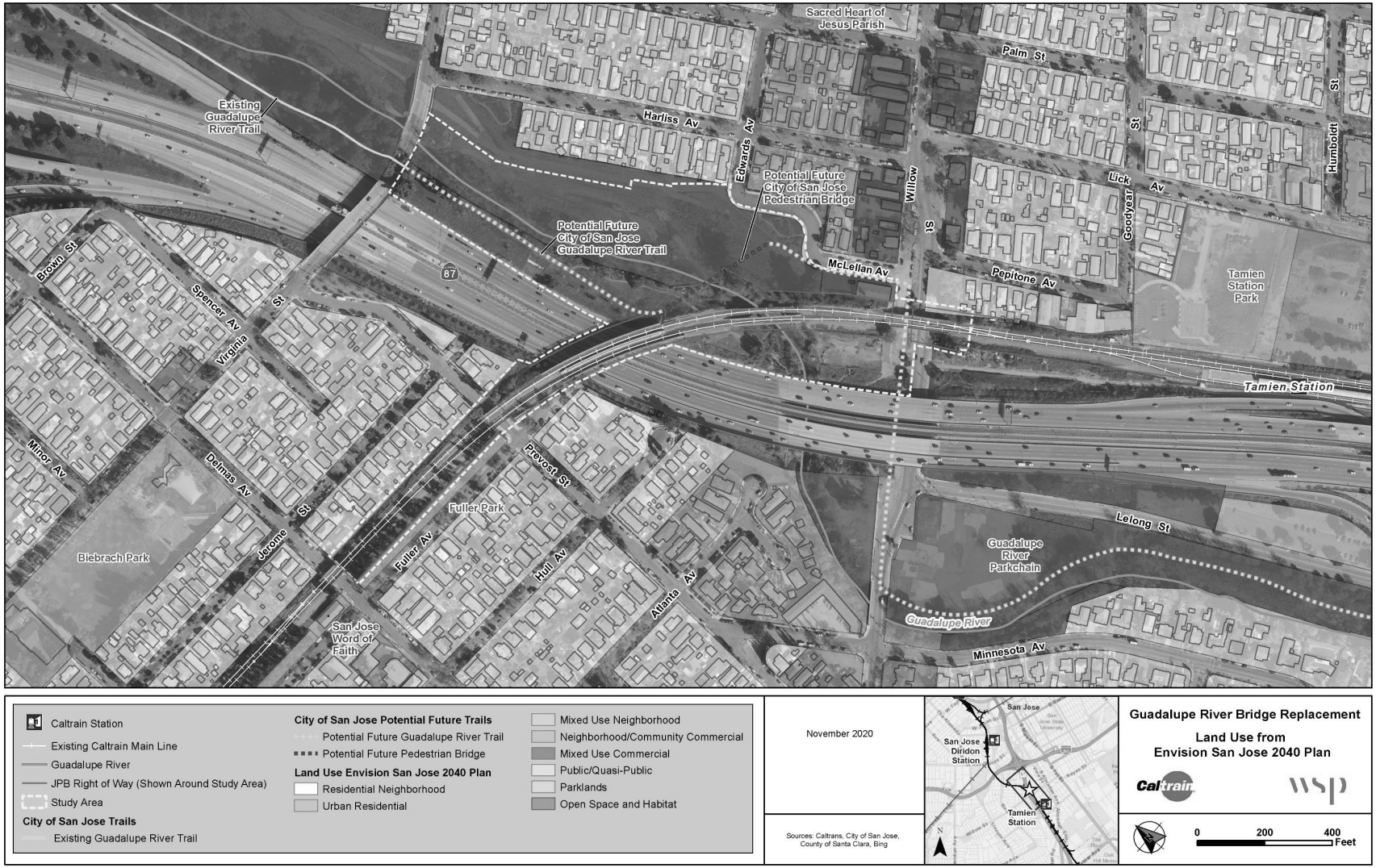
The Project is located along an existing active railroad corridor and will not introduce new buildings or infrastructure that would physically divide the community. Implementation of the Project will not result in any residential or business displacements or changes in access or use of nearby properties that could divide the community. Therefore, there will be **no impact.**

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Project will maintain all existing land uses, and will not conflict with local zoning, land use plans, or regulations adopted to avoid or mitigate an environmental effect. Furthermore, as discussed above, the Project will not conflict with the City's proposed extension of the Guadalupe River Trail. Therefore, the Project is consistent with land use plans, and there will be **no impact**.

[35] San José Parks, Recreation and Neighborhood Services. 2017. Draft Guadalupe River Trail Master Plan CEQA Mitigated Negative Declaration.
[36] The abandoned section of Willow Street refers to the abandoned ROW that begins West/Southwest of Mclellan Avenue's intersection with Willow Street, extends underneath the Caltrain underpass, and terminates East of the Highway 87 overpass.
[37] San José Parks, Recreation and Neighborhood Services. 2017. Guadalupe River Trail Downtown to South San José Virginia Street to Chynoweth Avenue Master Plan.

Figure 12: General Plan Land Use Map



XII. MINERAL RESOURCES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

and

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

There are no known mineral resources in the vicinity of the project area. Therefore, there will be **no impact.**

XIII. NOISE: Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The following noise descriptors are adopted for the computation and assessment of transit noise in this document:

- **The Hourly Equivalent Sound Level (Leq (h))**, which describes a receiver's cumulative noise exposure from all events over a 1-hour period. For assessment, Leq is computed for the loudest transit facility hour during the hours of noise-sensitive activity.
- **The Day-Night Sound Level (Ldn)** describes a receiver's cumulative noise exposure from all events over a full 24 hours, with events between 10:00 pm and 7:00 am increased by 10 decibels (dBs) to account for greater nighttime sensitivity to noise. Ldn is computed to assess transit noise for residential land uses.

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Long-Term Operation Impacts

The Project will not directly or indirectly increase freight or passenger train traffic, nor will it change track alignment. As such, train noise exposure will remain the same as existing conditions and will improve in the long term with electrification of the corridor. Thus, in the long term, there will be **no impact**.

Temporary Construction Impacts

Criteria

No standardized criteria have been developed for assessing construction noise impacts. Therefore, criteria must be developed on a project-specific basis unless local ordinances can be found to apply. According to the CEQA Guidelines Appendix G, a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project can result in significant adverse impacts.

For this Project, the FTA general assessment construction noise impact criteria were used to assess the potential for a "substantial" temporary increase in noise levels at sensitive receptors during project construction. The general assessment criteria are based on a worst-case 1-hour Leq noise level expressed in A-weighted decibels, or dBA Leq(h), corresponding to the hour with the loudest equipment operating. For residential areas, the criteria are 90 dBA Leq(h) during the day and 80 dBA Leq(h) at night. FTA also provides separate criteria for a more refined and detailed analysis based on 8-hour Leq and 30-day average Ldn noise levels. However, given the uncertainties in predicting the exact position and operations of construction equipment within the site over an 8-hour day, the 1-hour Leq general assessment criteria were determined to be appropriate for this Project and the most compatible with the use of reasonable worst-case assumptions regarding the distance between the equipment and receptors and the number of pieces of equipment assumed to be operating simultaneously.

Existing Conditions

This section explains how noise-sensitive land uses were identified and discusses existing noise conditions in the project area.

Inventory of Noise-Sensitive Land Uses: Noise sensitive land uses (residential areas, schools, parks, churches) adjacent to the project limits were identified through review of aerial photography.

The noise-sensitive area that was identified nearest to the Project includes the single-family residences along Mclellan Avenue, East of the rail bridges. This area includes three first-row residences within approximately 350-feet of the center of the construction site. The nearest residence to project construction, Receptor R-1 at 974 Mclellan Avenue, was selected to represent the worst-case conditions for this residential area in the noise assessment.

Noise Monitoring: To establish existing conditions in the project area, noise monitoring data collected within the project area for the California High Speed Rail (CAHSR) San José to Merced Project Section Draft Environmental Impact Report/ Environmental Impact Statement was reviewed.[38] The noise study for the CAHSR project completed noise monitoring adjacent to 974 Mclellan Avenue (site N83 in the CAHSR study) for a 48-hour period in May 2016.

The measurements showed that the average Ldn noise level was 66 dBA, and the loudest-hour Leq noise level was 63 dBA. Daytime hourly Leq noise levels ranged from 59 to 63 dBA; nighttime hourly Leq noise levels ranged from 52 to 63 dBA. These noise monitoring data are considered representative of the current existing noise environment because the existing rail operations, which were noted to be the dominant noise source in this area, have not changed significantly since the noise monitoring period.

Construction Impact Methodology

Construction noise was assessed using FTA guidance for a general construction noise. Input variables included the type of equipment, equipment usage factors, the number of pieces of equipment used concurrently, distances to nearby noise-sensitive receptors, and equipment noise emission levels from either the FTA or Federal Highway Administration Roadway

[38] https://hsr.ca.gov/docs/programs/san_jose_merced/Draft_EIRS_JM_V2-20_APP_3.4-A_Noise_Vibration_Technical_Report.pdf

Construction Noise Model databases. Consistent with FTA guidance, the equipment usage factor was assumed to be 1 (continuous operation) and the ground factor was assumed to be 0 (no ground absorption.) No additional acoustical shielding was accounted for. These assumptions result in a conservative prediction of potential construction noise levels.

Typically, the noisiest construction activities on a project of this type include demolition, excavation and grading, pile driving, extensive concrete pours, and the installation of heavy rail infrastructure using one or more cranes. Other activities, such as mobilizing for construction, relocating fences and overhead utilities, and demobilization require only a few pieces of equipment and are expected to be far less noisy.

The anticipated construction schedule and equipment usage for the Project was reviewed, and two worst-case noise scenarios were selected for analysis. Both anticipated worst-case scenarios will occur in June 2022 during Phase 1B of the MT-1 bridge construction.

The first scenario involves demolition of the existing MT-1 bridge including pile, piers, abutments, and deck. The loudest equipment expected to be operating for this scenario is a vibratory hammer (for pile removal), an excavator with a shear, and a track-mounted crane. This equipment could be operating during both daytime and nighttime periods.

The second scenario involves pile driving and concrete work for installation of drilled shafts for the new MT-1 bridge abutments and piers. The loudest equipment expected to be operating for this scenario is a vibratory hammer (for pile installation), a track-mounted crane, and a truck crane. This equipment could also be operating during both daytime and nighttime periods.

Noise levels were predicted for receptor R-1 at 974 Mclellan Avenue, which is the nearest residential receptor to the construction site. To estimate the distance from the equipment to the receptor, it was assumed that all equipment except for the track-mounted crane will be located at the center of the MT-1 bridge. The track-mounted crane location is shown in the temporary limits of disturbance drawing (**Figure 7)**.

Modeling Results

Table 8 shows the predicted worst-case (loudest) construction noise levels for the Project, which are expected during Phase 1B of construction in June 2022. Noise levels for other phases of construction, including the MT-2 bridge demolition and pile driving, are expected to be lower than the predicted noise levels in this assessment because either quieter equipment will be used or construction will occur farther from the residences.

Worst-case daytime and nighttime hourly Leq noise levels at receptor R-1 during MT-1 bridge demolition and pile driving activities are predicted to be 86 and 85 dBA, respectively. For both scenarios, the loudest piece of equipment used is expected to be a vibratory hammer.

The predicted daytime construction noise levels do not exceed the FTA daytime noise limit of 90 dBA Leq(h). The predicted nighttime construction noise levels exceed the FTA nighttime noise limit of 80 dBA Leq(h). Noise from nighttime construction activities could annoy the nearest residences in the community; however, the loudest conditions will be temporary and, with the mitigation measures discussed below implemented, the nighttime noise impact is expected to be less than significant.

It is important to note that the predicted construction noise levels are for outdoors, and the sound level experienced indoors will be substantially lower as a result of attenuation

through the building walls. The exterior-interior noise reduction factor for a typical masonry building with windows closed ranges from 25 to 35 dBA.

Table 8. Construction Noise Assessment Results

Construction Scenario	Daytime Noise Level, dBA Leq(h)		Nighttime Noise Level, dBA Leq(h)	
	Predicted Noise Level at Receptor R-1	FTA Impact Criteria	Predicted Noise Level at Receptor R-1	FTA Impact Criteria
Phase 1B – MT-1 Bridge Demolition	86	90	86	80
Phase 1B – MT-1 Bridge Pile Driving	85	90	85	80

Construction Noise Mitigation

During some nighttime construction periods, unmitigated noise levels emanating from construction equipment and processes could exceed the 80 dBA impact criterion, potentially generating community reaction and annoyance.

During final design, limiting nighttime construction activities will be reconsidered as a noise mitigation measure if it is feasible to incorporate into the construction schedule. Specifically, JPB will evaluate whether pile driving can be restricted to the daytime hours.

To address the potential nighttime noise impact and reduce construction noise to acceptable levels, the following noise mitigation requirements will be incorporated into the project specifications.

- **Mitigation Measure NOI-01:** Turn off idling equipment. When not in use, idling equipment will be turned off. Consistent with air quality construction commitments, all equipment will be turned off within 2 minutes of idling.
- **Mitigation Measure NOI-02:** Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators, intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment will be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices.
- **Mitigation Measure NOI-03:** Temporary perimeter noise barriers or curtains. Prior to the start of construction, the contractor will prepare a construction noise mitigation plan that incorporates noise mitigation measures to reduce ground-level nighttime noise at the first-row residences along Mclellan Avenue by at least 7 dBA. Noise mitigation options could include temporary perimeter noise barriers and/or installation of noise blankets or shrouds on pile drivers to provide additional attenuation. Different combinations of temporary noise mitigation measures may be needed during different project phases, and these details will need to be established in the noise mitigation plan. Noise mitigation must ensure that no vegetation removal outside the permitted limits of disturbance is required. The noise mitigation plan must also address temporary barrier maintenance issues, such as periodic graffiti removal or selection of materials that discourage graffiti.

- **Mitigation Measure NOI-04:** Implement a Community Outreach Program. JPB will keep residents informed regarding construction plans so residents can plan around periods of particularly high noise levels and to provide a conduit for residents to express any concerns or complaints. The Community Outreach Program may include a project hotline for receiving construction-related noise and vibration complaints and to assist in addressing them. Advance public notice will be provided to nearby residents regarding planned construction activities (such as demolition or pile driving) that must be performed at night or on weekends.

Appropriate noise mitigation measures will be integrated into the Project such that substantial temporary noise impacts in the vicinity of the project area will not occur during construction. Therefore, the project impact will be **less than significant with mitigation**.

b. Generation of excessive groundborne vibration or groundborne noise levels?

Long-Term Operation Impacts

Operation of the Project will not increase train frequency or alter the existing track alignment; thus, train noise and vibration exposure will remain the same as existing conditions. Therefore, project operations will not generate excessive groundborne vibration or groundborne noise levels in the long term, and there will be **no long-term impact**.

Temporary Construction Impacts

An overview of the construction vibration assessment is provided below.

Criteria

Two distinct types of impact criteria are necessary for the assessment of potential impacts from groundborne vibration during project construction: (1) criteria for the onset of building cosmetic damage, and (2) lower thresholds addressing potential annoyance of building occupants.

Building Damage Criteria: Table 9 summarizes the building damage criteria recommended for various building types by the FTA guidance manual (September 2018) and the Caltrans *Transportation and Construction Vibration Guidance Manual* (September 2013). For this Project, JPB has established its CEQA significance threshold for vibration damage during construction to be the same as the FTA criteria for buildings and the same as Caltrans criteria for bridges.

For the residence at 974 Mclellan Avenue, which is the nearest residential structure to project pile driving, 0.3 inches per second (in/sec) peak particle velocity (PPV) was selected as the appropriate vibration damage threshold. The building was likely constructed prior to 1960 without modern reinforced construction methods and does not appear to be a fragile structure. The selected impact threshold is consistent with the FTA recommendation for structures made from engineered concrete and masonry.

For the existing MT-2 bridge structure adjacent to the proposed MT-1 replacement bridge, 2.0 in/sec PPV was selected as the appropriate vibration damage threshold based on Caltrans guidance. The MT-2 bridge is a concrete structure constructed in 1990. The bridge meets seismic criteria and is not historically significant.

Table 9. FTA and Caltrans Construction Vibration Damage Criteria

FTA	
Building/Structure Type	**PPV (in/sec)**
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
Caltrans	
Building/Structure Type	**PPV (in/sec)**
Historic and some old buildings	0.5
Residential structures	0.5
New residential structures	1.0
Industrial buildings	2.0
Bridges	2.0

Annoyance Criteria: Construction vibration annoyance impact thresholds have been developed by Caltrans. For "transient" vibration sources such as pile driving, Caltrans identified the following human reactions:

- 0.035 in/sec PPV – barely perceptible
- 0.24 in/sec PPV – distinctly perceptible
- 0.9 in/sec PPV – strongly perceptible
- 2.0 in/sec PPV – severe

For this Project, JPB has established its CEQA significance threshold for vibration annoyance to building occupants to be 0.24 in/sec PPV, which is the level that would be "distinctly perceptible" according to Caltrans guidance.

Criteria from the FTA guidance manual were also reviewed to provide additional information on potential annoyance due to construction vibration. The FTA criteria are expressed in terms of root-mean-square vibration velocity levels (VdB). The FTA guidance manual states that evaluations of building occupant annoyance due to vibration (below damage thresholds) can use the long-term operation vibration criteria, which range from 72–80 VdB for residences depending on the frequency of vibration events. The 80 VdB threshold is reasonable for construction vibration impacts given the relatively short duration of pile driving in any one location.

Existing Conditions

This section provides a description of the existing structures in the project area and information on geologic/soil conditions pertaining to vibration propagation.

Description of Existing Structures: The following two structures near the proposed replacement bridge were identified as the most likely to potentially experience vibration impact from pile driving.

- Residence at 974 Mclellan Avenue – This single-family residence is the nearest residential building to pile drilling at the southern abutment of the MT-1 replacement bridge. The building has a stucco exterior along with gutters and downspouts and was likely constructed prior to 1960. Based on a desktop review using available street view imagery, the building appears to be in good condition with no signs of structural distress.
- Existing MT-2 Rail Bridge – The existing MT-2 bridge is directly adjacent to the MT-1 replacement bridge location and owned and operated by Caltrain. Pile drilling for the MT-1 bridge will occur near several of the existing MT-2 bridge piers. The MT-2 bridge is a concrete structure that was constructed in 1990 and will be extended South as part of the Project. This bridge does not require replacement and meets seismic criteria.

Geologic Conditions: Based on a review of the project soil borings and geotechnical report,[39] the subsurface conditions at the proposed bridge location consist primarily of fat clay, silty clay, and sandy gravel to a depth of 50 feet. The clays have consistencies from medium stiff to hard and the sandy gravel has a dense consistency. In general, stiff and hard clay materials tend to be more efficient in propagating ground borne vibration than looser and softer soils.

Vibration Building Damage Analysis

The Project intends to use drilled shafts with piles installed using a vibratory hammer. Vibration from vibratory pile driving during construction was estimated using Equation 1 below from the Caltrans *Transportation and Construction Vibration Guidance Manual* (September 2013).

Soil properties have an important effect on the propagation of vibration. The Caltrans equation suggests using an "n" value, which represents the vibration attenuation properties of soils, of 1.1 for a conservative assessment. Use of n = 1.1 for this vibration impact assessment is appropriate based on review of the available boring logs that show primarily medium stiff to hard clay soils underlying the construction site.

Equation 1: Caltrans Vibratory Pile Driver Model

$$PPV_{Vibratory\ Pile\ Driver} = PPV_{Ref}\,(25/D)^{n} \quad (in/sec) \qquad (Eq.\ 10)$$

Where:

PPV_{Ref} = 0.65 in/sec for a reference pile driver at 25 ft

D = distance from pile driver to the receiver in ft.

n = 1.1 (the value related to the attenuation rate through ground)

[39] HDR, Preliminary Foundation Report, Guadalupe River Bridge Replacement, Preliminary Engineering Design, PCJPB Work Directive No. 8041, San Jose, California, October 19, 2020.

Table 10 summarizes the results of the building vibration damage assessment. At the nearest residence to pile driving along Mclellan Avenue, the results show that the predicted PPV levels from vibratory pile driving will be well below the applicable damage threshold.

For the existing MT-2 bridge, pile driving is expected to occur within 10 feet of existing piers. The predicted PPV from vibratory pile driving at the existing MT-2 bridge is slightly lower than the impact criterion, so cosmetic damage is not expected.

Table 10: Construction Vibration Cosmetic Damage Impact Assessment Results

Receptor	Distance to nearest pile (feet)	PPV Impact Criterion (in/sec)	Predicted maximum PPV (in/sec)	Predicted Cosmetic Damage Impact?
Residence at 974 Mclellan Avenue	187	0.3	0.07	No
Pier of Existing MT-2 Bridge	10	2.0	1.78	No

Vibration Annoyance Analysis

The predicted PPV vibration levels discussed in the previous section are not directly comparable to FTA's VdB-based annoyance thresholds. Therefore, vibration annoyance in terms of VdB was calculated using the FTA manual equation assuming the "upper range" of 105 VdB at 25 feet for sonic (vibratory) pile drivers. **Table 11** summarizes the results of the building vibration annoyance assessment.

Table 11: Construction Vibration Annoyance Impact Assessment Results

Receptor	Distance to nearest pile (feet)	Annoyance Impact Criterion	Predicted maximum vibration	Predicted Annoyance Impact?
Residence at 974 Mclellan Avenue	187	PPV = 0.24 in/sec Vibration Level = 80 VdB	PPV = 0.07 in/sec Vibration Level = 79 VdB	No

The maximum vibration levels at the edge of the closest residence along Mclellan Avenue are predicted be 0.07 in/sec PPV and 79 VdB.

In terms of the Caltrans vibration annoyance criteria selected as the CEQA threshold of significance, analysis results indicate that vibration from impact pile driving will not exceed the threshold for "distinctly perceptible" vibration (0.24 in/sec PPV). Vibratory pile driving is also not expected to exceed the FTA long-term vibration criterion of 80 VdB (indicating some level of annoyance, but not necessarily unacceptable or severe annoyance).

Conclusion

The vibration assessment demonstrates that excessive groundborne vibration levels will not occur during construction and that temporary construction vibration impacts will be **less than significant**.

Some of the construction noise mitigation measures outlined above will also serve to mitigate vibration impacts, such as the proactive community outreach program. Because groundborne vibration impacts are not expected, no additional vibration mitigation measures are required.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Project is partially located within the Mineta San José International Airport Land Use plan and partially located within the 65 dB Community Noise Equivalent Level contour.[40] However, the Project will not add any new residential uses and will not expose project area residents or workers to excessive noise levels. Therefore, there will be **no impact**.

[40] Comprehensive Land Use Plan, Santa Clara County, Norman Y. Mineta San José International Airport. Adopted by Santa Clara County Airport Land Use Commission San José, California, May 25, 2011.

XIV. POPULATION AND HOUSING: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project entails the replacement of one existing railroad bridge and extension of a second existing railroad bridge along an active rail corridor and will not directly or indirectly induce population growth in the area. Therefore, there will be **no impact**.

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The construction and operation of the Project will not result in the displacement of any existing people or housing. Therefore, there will be **no impact**.

XV. PUBLIC SERVICES: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Because the Project will not induce population growth of the area or displace any housing or people, it will not increase demand for fire protection, police protection, schools, parks, or other public facilities or affect levels of those public services. **No impacts** to public services will result.

XVI. RECREATION:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Project will not include any residential or commercial development that could increase use of an existing park or recreational facility. Therefore, there will be **no impact**.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Project will not construct any new recreational facilities or expand any existing recreational facilities. Therefore, there will be **no impact**.

XVI. TRANSPORTATION: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3,subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

The Project will have no long-term impact on the transportation system. Construction of the Project will not require roadway detours or roadway closures. Temporary construction worker and truck trips will occur during construction. The primary construction site entrances for trucks will be at Virginia Street and Mclellan Avenue. From SR 87 Southbound, construction trucks will use Exit 4 and Lelong Street to Willow Street (see **Figure 13**). From I-280, the primary access route will be along Vine Street to reach Virginia Street or Willow Street. In terms of haul truck trips, the Project may involve truck trips in the range of 5 to 10 trips per day during peak periods for removal of the existing MT-1 bridge demolition debris and excess soil from channel widening. To minimize truck trips, excavated clean soil will be reused on-site to the extent practicable**.**

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Project will not conflict with the San José General Plan 2040; the San José bike plan 2020; or any other adopted policies, plans, and programs supporting active transportation. As discussed in Section XI, Land Use and Planning, the Project will not conflict with the City's proposed extension of the Guadalupe River Trail. The Project is supportive of transit system reliability, and the construction staging is designed to maintain Caltrain service throughout the construction period. Therefore, there will be **no impact.**

b. Conflict or be inconsistent with CEQA Guidelines § 15064.3,subdivision (b)?

Long-Term Operation Impacts

The operation of the Project will not generate trips, increase traffic congestion, or have any long-term effect on vehicle miles travelled. As such, the Project will not result in any transportation impacts and will not be inconsistent with CEQA Guidelines § 15064.3, subdivision (b). Therefore, there will be **no impact.**

Temporary Construction Impacts

There may be a negligible and temporary increase in vehicle miles travelled during construction of the Project. This potential short-term impact will be **less than significant**.

c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project will not create hazardous design features. The Project involves replacing the MT-1 bridge, extending the MT-2 bridge, and addressing existing geomorphic instability and erosion issues by widening the channel. The Project will also address existing hazards, including the MT-1 bridge and scour and erosion conditions. The Project will not introduce any incompatible or hazardous uses. Therefore, there will be **no impact**.

d. Result in inadequate emergency access?

Long-Term Operation Impacts

Emergency access will not be affected by the Project. Therefore, there will be **no impact**.

Temporary Construction Impacts

Temporary construction activity will not require street closures. Appropriate off-street construction storage and staging areas have been incorporated in the Project. Therefore, there will be **no impact**.

Figure 13: Construction Vehicle Traffic Routes

XVII. TRIBAL CULTURAL RESOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☒

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

There are no known tribal cultural resources listed or eligible for listing in the California Register of Historical Resources or in a local register of historic resources in the project area. Therefore, there will be **no impact**.

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

No resources in the project area are anticipated to be culturally significant to a California Native American tribe. As part of coordination under Section 106 of the National Historic Preservation Act, FTA contacted six Native American tribal representatives identified by the California Native American Heritage Commission as potentially interested in the project area. No specific information regarding tribal cultural resources was identified as a result of this coordination. In addition, no potential cultural material was identified in the subsurface testing conducted for the Project (see Section V, Cultural Resources). Therefore, there will be **no impact**.

XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The Project will not produce any wastewater. Therefore, there will be **no impact**.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The Project will not produce any wastewater or increase water demand. Therefore, there will be **no impact**.

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Appropriate post-construction stormwater treatment is included in the design; no additional stormwater facilities will be required. Therefore, there will be **no impact**.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The Project will not generate any new water demand. Water required for the Project during construction (e.g., for dust control) will be minimal. Therefore, there will be **no impact**.

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The Project will not produce any wastewater. Therefore, there will be **no impact**.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Solid waste generated by the Project will be limited to construction waste. Disposal of demolition and construction materials, including any hazardous wastes that may be encountered, will occur in accordance with federal, state, and local regulations. Disposal will occur at permitted landfills. Operation of the Project will not result in additional solid waste disposal needs. Therefore, the impact is considered **less than significant**.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

The Project will comply with all federal, state, and local laws and regulations related to the disposal of solid waste. Therefore, there will be **no impact**.

XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒

According to the California Fire Hazard Severity Zone Viewer,[41] the project area is located in a local responsibility area and is not near any state responsibility areas (SRAs) or lands classified as very high fire hazard severity zones (VHFHSZs).

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

The Project is not located near any VHFHSZs or SRAs and will not affect emergency response or evacuation plans. Therefore, there will be **no impact**.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project area is not proximate to VHFHSZs or SRAs; therefore, there will be **no impact**.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Project is not located near any VHFHSZs or SRAs; therefore, there will be **no impact**.

[41] https://egis.fire.ca.gov/FHSZ/.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to 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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

a. Does the project have the potential to 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?

CEQA Guidelines Section 15065(a) requires a finding of significance if a project “has the potential to substantially degrade the quality of the environment.” In practice, this is the same standard as a significant effect on the environment, which is defined in CEQA Guidelines Section 15382 as “a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the Project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” This Final IS, in its entirety, addresses and discloses all potential environmental effects associated with construction and operation of the Project. With incorporation of the mitigation measures identified in this document, no significant effects on the environment will occur, and the Project will not substantially degrade the quality of the environment.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The incremental effects of the Project have been analyzed in the context of past and current projects that have contributed to the existing environmental conditions and potential effects from other reasonably foreseeable future actions in the same area. The environmental factors on which the Project is anticipated to have no impact have not been considered in this analysis because there will be no project-related contribution to any potential cumulative impact. For this analysis, past and present projects are not quantified; rather, they are considered to have

contributed to the existing conditions outlined in this Final IS. The Caltrain Modernization Program and Caltrain/HSR blended system, the Valley Water Reach 7 flood control project, and the City of San Jose Guadalupe River Trail are the reasonably foreseeable future actions considered in this analysis.

Aesthetics

Several other projects in the project area will alter aesthetics. The Caltrain modernization program has already constructed support poles on the West side of the tracks that will subsequently be used for the overhead catenary system. The California High Speed Rail Authority's preferred alternative for the San Jose to Merced Project Section involves an additional track (MT-3) for Southbound high-speed rail service. The additional track would be located upstream of the MT-2 bridge and would require an additional bridge over the Guadalupe River, as well as bridges over SR-87 and local roadways.[42] Valley Water's Reach 7 flood control project could result in further widening of the channel and potential additional extension of the MT-1 and MT-2 bridges. Finally, the City of San Jose's trail project also includes a new pedestrian bridge over the Guadalupe River (downstream of MT-1). In the context of these other changes to the visual environment, the impact of replacing an existing railroad bridge with a longer structure and lengthening another existing railroad bridge would be less than cumulatively considerable. In the long term, the existing positive visual characteristics of the site (e.g., riparian vegetation) will be enhanced by the Project through stabilization of the riverbanks and installation of new native vegetation per the HMMP.

Air Quality

Other projects and policies, such as the long-term phase out of diesel locomotives under the Caltrain modernization program, are expected to improve air quality in the project area. Cumulative temporary construction period air quality impacts could occur if the numerous projects by others proceed into construction at the same time as the JPB Project. However, this is very unlikely given the current status of design and funding for the other projects. The schedule for completion of California High Speed Rail-related infrastructure in the project corridor is uncertain but is likely to occur around or after 2030 and therefore would not overlap with construction of the JPB Project.[43] Similarly, there is no defined schedule available for Valley Water Reach 7 flood control project or the City of San Jose's Guadalupe River Trail. Because of the urgent need to address the poor condition of the MT-1 bridge and the availability of dedicated funding, the JPB Project is likely to be completed before the other projects under consideration in the area. In addition, the Project incorporates numerous construction air quality BMPs to ensure the contribution of the Project is less than cumulatively considerable.

Biological Resources/Hydrology and Water Quality

Cumulative impacts on biological resources and hydrology/water quality due to overlapping construction schedules are unlikely given the uncertain status of the other projects as discussed above under Air Quality. Projects implemented by others would need to obtain state and federal permits (such as Clean Water Action Section 404 permits) and meet various consultation requirements (such as federal Endangered Species Act consultation with NMFS regarding potential impacts on steelhead). These permit processes would require avoidance, minimization and mitigation measures to be incorporated into the other projects. Similarly, mitigation measures have been incorporated in the JPB Project that would render the project-related

[42] https://hsr.ca.gov/docs/programs/san_jose_merced/Draft_EIRS_JM_V3-18_PEPD_Alternative_4_Book_4_A_Composite_Plan_Profile_and_Cross_Sections.pdf
[43] https://hsr.ca.gov/docs/about/business_plans/2020_Business_Plan.pdf

temporary incremental impacts to be less than cumulatively considerable. In the long term, the impact of the Project on biological resources, hydrology, and water quality will be beneficial because scour and bank failure risks will be reduced as a result of widening the channel and lengthening the bridges.

Hazardous Materials

All the construction projects proposed in the project area have the potential to encounter hazardous materials, as is routine for construction projects in urbanized areas. None of the projects involve creation of new permanent hazardous material exposure risks. During construction, the Project involves management of creosote wood waste and potentially contaminated sediments in accordance with regulatory requirements. With incorporation of appropriate BMPs and creation of a spill prevention and control plan as part of the SWPPP, the temporary contribution of the Project to hazardous materials exposure would be less than cumulatively considerable.

Noise

The construction of the JPB Project is likely to occur before construction of other projects in the area; therefore, cumulative impacts due to simultaneous construction noise sources are not anticipated. The Project includes a construction noise mitigation plan and community outreach plan, among other construction noise BMPs. With incorporation of these mitigation measures, the contribution of the Project to construction-noise related impacts would be less than cumulatively considerable.

The effect of increased service frequency under the Caltrain electrification program would be offset by the use of quieter electric trains. Based on analysis completed for the Caltrain electrification EIR, noise levels near the project area were predicted to decrease compared to existing conditions.[44] Noise impacts per Federal Railroad Administration criteria are predicted to result from the CAHSR Project for portions of the project area in the San Jose to Merced Project Section EIS/EIR.[45] However, the CAHSR Authority would implement a noise mitigation policy that would consider potential mitigation options such as noise barriers or building sound insulation in greater detail as the design for the CAHSR project is refined. The JPB Project will not contribute to cumulative operational train noise impacts because the MT-1 bridge will be replaced on the same alignment as the existing bridge, and no change in service frequency or operating characteristics (e.g., speed) will result.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The operation of the Project will have **no impact** on humans, either directly or indirectly, in the long term. The Project would result in temporary (construction-related) air quality, noise and vibration impacts; however, these are addressed through the previously outlined mitigation measures and construction commitments.

[44] https://www.caltrain.com/Assets/Caltrain+Modernization+Program/FEIR/3.11+Noise.pdf
Based on receptor 49 (456 Jerome St) as similar/representative to conditions in the project area.
[45] https://hsr.ca.gov/docs/programs/san_jose_merced/Draft_EIRS_JM_V1-12_CH_3.4_Noise_Vibration.pdf

List of Appendices