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## STAFF REPORT: REGULAR CALENDAR

**Application No.:** 1-21-0074

**Applicant:** California Department of Transportation (Caltrans)

**Location:** At the Highway 1 crossing of Pudding Creek (at post mile 62.12), near the north end of the City of Fort Bragg, Mendocino County.

**Project Description:** Widen the existing Highway 1 bridge over Pudding Creek and its north and south roadway approaches to widen shoulders and add new pedestrian railings on both sides of the bridge with connecting sidewalks on both sides of the roadways approaching the bridge, upgrade bridge railings and guardrails, and relocate utility lines.

**Staff Recommendation:** Approval with Conditions

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## SUMMARY OF STAFF RECOMMENDATION

The California Department of Transportation (Caltrans) proposes to undertake the Pudding Creek Bridge Widening and Bridge Rail Upgrade Project. The Highway 1 bridge is located at the north end of the City of Fort Bragg. The proposed project would replace outdated 1950s-era bridge railings and widen the bridge to enable "complete streets" active transportation improvements, including two eight-foot-wide shoulders for improved cycling access and two six-foot-wide pedestrian walkways with new bridge railings meeting current safety standards. On the north and south ends of the bridge,

new 6-foot-wide sidewalks and eight-foot-wide shoulders would also be constructed on both sides of the highway for pedestrian access onto the bridge. These improvements require widening the existing bridge abutments and modification of the existing drainage system. The project would also include upgrading guardrails, new rail lighting, and the relocation of utility lines that cross the bridge.

The primary Coastal Act issue raised by the project is the adequacy of the proposed mitigation to minimize the anticipated impacts to riparian wetlands caused by the widening of the southern abutment, increased shading, and construction activities. Recommended special conditions would require various mitigation measures to minimize adverse environmental effects, including the submittal of a final Onsite Revegetation Plan (Special Condition 7) that provides compensatory mitigation in substantial conformance with a draft Onsite Revegetation Plan submitted by the applicant (Exhibit 8) to restore former wetland habitat overtaken by non-wetland invasive plants by replacing the invasives with riparian vegetation and weeding invasives from surrounding buffer areas. Commission staff is recommending that the final plan include certain implementation details to better ensure the long-term success of the mitigation such as the establishment of success standards for invasive removal from the buffer areas to minimize the chances for invasives to take over the mitigation area again.

Construction activities will include temporary lane closures on the bridge, but the public access impacts would not be significant as public access to Pudding Creek and Pudding Creek Bridge would be maintained, except for very limited temporary complete closures. Overall, the project will permanently enhance public access by providing separated pedestrian walkways and expanded shoulders for cyclists on both sides of the bridge connected to new sidewalks to be installed along the bridge approaches. In addition, the new bridge railings would be more see-through than the existing railings and are designed to be consistent with other bridge rails approved by the Commission.

The project is within an area subject to seismic and possible tsunami hazards. The bridge was seismically updated in 1998 and Caltrans has designed these improvements consistent with its current seismic and tsunami design criteria. However, recent tsunami mapping data has highlighted the potential for risks from extremely rare tsunami and seismic events. Therefore, Special Condition 12 would require Caltrans to submit a Seismic and Tsunami Hazard Response Plan that provides measures to warn the public of hazardous conditions, close the bridge and reroute traffic to alternate routes as necessary, inspect the bridge for damage, and shut off any damaged utility lines attached to the bridge. The plan must be developed in coordination with the City of Fort Bragg and other appropriate local entities.

Staff believes that the project, as conditioned, includes all feasible mitigation measures necessary to find the project consistent with the Chapter 3 policies of the Coastal Act. The Motion to adopt the staff recommendation of Approval with Conditions is found on page 4.

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[Exhibit 4: Excerpts from Project Construction Plans](#)

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[Exhibit 7: Habitat Maps](#)

[Exhibit 8: Draft Onsite Revegetation Plan \(excerpt\)](#)

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[Exhibit 10: Map of Staging Area](#)

## I. Motion and Resolution

### A. Motion

I move that the Commission **approve** Coastal Development Permit Application No. 1-21-0074 pursuant to the staff recommendation.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in conditional approval of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

### B. Resolution

The Commission hereby **approves** the Coastal Development Permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either (1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or (2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

## II. Standard Conditions

This permit is granted subject to the following standard conditions:

- 1. Notice of Receipt and Acknowledgment.** The permit is not valid, and development shall not commence, until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3. Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

- 5. Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

### III. Special Conditions

This permit is granted subject to the following special conditions:

1. **Final Construction Plans.** NOT LESS THAN 30 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit for the review and written approval of the Executive Director, final site and construction plans that are consistent with the Project Description (Exhibit 3 of the Commission Staff Recommendation) and that substantially conform with the plans submitted to the Commission in the permit application and consistent with all special conditions of this CDP.
  - A. The plans shall include, at a minimum the following required components:
    - i Final plan and profile architectural drawings for all elements of construction.
    - ii Final specific locations of all construction areas, staging areas, and construction access corridors in site plan view.
    - iii Final specification of all visual elements of the project including design, colors, and other aesthetic treatments of the guardrails, bridge rails, retaining wall, signage and any other visual elements.
    - iv Final construction schedule.
    - v Final specification of all construction methods to be used to keep the construction areas separated from public recreational use areas (e.g., using unobtrusive fencing or equivalent measures to delineate construction areas), all of which shall be clearly identified on the construction site map and described in a narrative description.
    - vi The Final Transportation Management Plan, which shall limit lane closures and the use of public access shoulder areas for construction staging or operations in substantial conformance with such limitations proposed in the Project Description (Exhibit 3 of the Commission Staff Recommendation) to the maximum extent feasible and provide for full and continuous access for pedestrians and cyclists through the work corridor, except during limited complete closures.
    - vii The final construction plans shall include a narrative cover letter demonstrating that the final plans are consistent with all relevant terms of this Special Condition and any other relevant term or condition of this CDP. The narrative cover letter shall indicate both how the final construction plans conform with the conditions of this CDP and how the

requirements of this CDP will be communicated to any contractor(s) implementing work under the plans.

- B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission approved amendment to this CDP unless the Executive Director determines that no amendment is legally required. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.
  - C. The permittee shall notify staff of the Coastal Commission's North Coast District Office (1) at least three working days in advance of commencement of construction, (2) immediately upon completion of construction, and (3) of any significant anticipated changes in the schedule based on site conditions, weather, or other unavoidable factors.
2. **Construction Responsibilities.** The permittee shall undertake development in compliance with the following Avoidance and Minimization Measures (AMMs) and Best Management Practices (BMPs) proposed in the CDP application, unless supplemented or modified herein:
- A. **Construction Timing.** All work that has the potential to directly impact surface waters (including grading, cutting, and filling on the banks of Pudding Creek, hoe-ramming, and pile driving) shall take place between June 15 and October 15. To avoid impacts to nesting birds, vegetation removal and riparian planting may be conducted during any time of year, if performed consistent with all special conditions of this permit.
  - B. **Environmental Awareness Training.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, a qualified biologist shall provide a pre-construction meeting with the contractor, consisting of a briefing on environmental permit conditions and requirements relative to each stage of the proposed project, including but not limited to work windows and construction site management within the project area.
  - C. **Pre-Construction Biological Surveys.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, and during construction if required by the conditions herein, a qualified biologist shall survey for roosting bats, nesting birds, and northern red-legged frogs, consistent with Special Conditions 3-5, below, and all other applicable conditions of this CDP. The biologist shall document and provide the results of all pre-construction surveys and the measures taken to avoid impacts, as required by the conditions of this CDP.
  - D. **Flagging of Biologically Sensitive Areas.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, a qualified biologist shall identify with flagging, orange construction barrier fencing, or other similar temporary means, the boundaries of wetlands and other types of Environmentally Sensitive Habitat Areas (ESHAs)

within and adjacent to the project area, as well as any areas to be avoided as identified by the surveys mentioned above. Construction equipment staging and laydown areas and all other project activities and authorized development shall avoid encroachment into delineated sensitive areas, except as specifically authorized by this CDP. Demarcated areas shall be inspected throughout construction to ensure that they are visible for construction personnel.

- E. **Limiting Areas of Temporary Impact.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall identify with flagging, cones, or other similar temporary means, the boundaries of temporary staging and stockpiling areas for construction equipment, supplies, personnel parking, and other ancillary functions within the project area. Areas delineated for this purpose shall avoid encroachment into wetlands (except as specifically authorized by this CDP), ESHAs, and culturally sensitive areas identified by the biological, archaeological, and Tribal monitors.
- F. **Water Pollution Prevention.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall ensure all temporary erosion, runoff, and sediment control BMPs are in place in accordance with the approved final Stormwater Pollution Prevention Plan, required to be implemented by Special Condition 9.
- G. **Spill Prevention.** Fuels, lubricants, solvents, and other hazardous materials shall not be allowed to enter coastal waters or wetlands. Hazardous materials management equipment shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials cleanup/remediation service shall be locally available on call. Any accidental spill shall be rapidly contained and cleaned up consistent with the final Stormwater Pollution Prevention Plan mentioned above.
- H. **Invasive Species Prevention.** Construction equipment shall be cleaned prior to entering the work site to minimize the potential for the transport of non-native vegetation seeds and plant material. Rock, sand, or any material used for soil erosion control shall originate from local sources to avoid the inadvertent introduction of non-native plant species to surrounding environmentally sensitive areas.
- I. **Trash/Debris.** During construction, all trash and debris shall be properly contained, removed from the work site, and disposed of on a regular basis to avoid contamination of habitat during construction activities. Any debris inadvertently discharged into coastal waters or surrounding habitats shall be recovered immediately and disposed of consistent with the requirements of this CDP. All construction debris shall be disposed of in an upland location outside of the coastal zone or at an approved disposal facility pursuant to the final debris disposal plan required by Special Condition 11.
- J. **Plastic Netting Prohibition.** To minimize wildlife entanglement and plastic debris pollution, the use of temporary rolled erosion and sediment control products with plastic netting (such as polypropylene, nylon, polyethylene,

polyester, or other synthetic fibers used in fiber rolls, erosion control blankets, and mulch control netting) is prohibited. Any erosion-control associated netting shall be made of natural fibers and constructed in a loose-weave design with movable joints between the horizontal and vertical twines.

- K. **Revegetation.** Consistent with the final approved Onsite Revegetation Plan required to be submitted by Special Condition 7, any temporarily disturbed areas shall be appropriately stabilized and revegetated following construction utilizing only regionally appropriate or locally grown or collected native plant seeds and shall not include any species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or the State of California.
  - L. **Biological Monitoring.** A biological monitor shall be present onsite during initial equipment mobilization, site preparation, vegetation removal, ground disturbance, impact hammer activities, concrete pours, final construction demobilization, and all other actions that may reasonably result in adverse impacts to sensitive species, marine resources, and water quality, to advise the contractor on and to ensure compliance with the required sensitive resource protection measures of this permit. The monitor shall be a qualified biologist with the ability to recognize sensitive species and habitats in the project vicinity. The monitor shall have the authority to stop work activities in any area if required to avoid adverse impacts to sensitive resources. The monitor shall maintain records of activities, observations, and communications with the permittee and/or construction personnel. The daily logs shall be retained and made available for agency review upon request and shall be submitted to the Executive Director following completion of construction.
  - M. **Night Lighting.** If night work is required (i.e., due to accelerated work schedule to meet permit deadlines or reaching a critical juncture in work at a time when it would be infeasible to stop construction), the use of artificial lighting shall be temporary and of short duration and lighting shall be directed away from the channel and focused specifically on the portion of the bridge actively under construction to reduce potential disturbance to sensitive species.
3. **Protection of ESHA for Raptors and Special Status Bird Species.** The permittee shall undertake development in compliance with the following mitigation measures to protect nesting habitat areas of raptors and special status bird species:
- A. **Measures the Permittee Shall Implement Within the Coastal Zone as Proposed in the Application:**
    - i NOT MORE THAN 15 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, a qualified biologist shall complete pre-construction surveys for active raptor nests within one-fourth mile of the project area. Areas to be surveyed shall include areas subject to increased disturbance as a result of construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-



related disturbance need not be surveyed), including Pudding Creek bridge, the cypress tree immediately northwest of the bridge, the groves of eucalyptus trees to the south of the southeast staging area, and trees along the Pudding Creek banks within one-fourth mile of the project footprint.

- ii Vegetation removal shall be restricted to the period outside of the bird breeding season (September 16 through January 31) or, if vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist NOT MORE THAN SEVEN DAYS PRIOR TO VEGETATION REMOVAL in all areas where vegetation removal is required.
- iii Partially constructed and unoccupied nests within the construction area shall be removed and disposed of on a regular basis throughout the nesting season (February 1 to September 15) to prevent their occupation. Nest removal shall be repeated weekly under the guidance of a qualified biologist to ensure nests are inactive prior to removal.

**B. Additional Measures the Permittee Shall Implement Within the Coastal Zone:**

- i If work is conducted during the nesting season (February 1 to September 15), NOT MORE THAN SEVEN DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, a qualified biologist shall survey the project site for sensitive bird ESHA (i.e., active nesting areas of raptors and special status bird species) in and adjacent to the construction area according to current California Department of Fish and Wildlife (CDFW) recommended survey protocol(s). The minimum survey area shall include areas within 100 feet of the construction footprint and, where there is the potential for nesting raptors, in areas within 300 feet of the construction area footprint. Surveys shall also be repeated any time construction activities have ceased for more than seven days.
- ii If any ESHA (i.e., an active nesting area) for raptors and special status bird species is detected, the biologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest, and construction in the buffer zone shall be delayed until after the young have fledged, as determined by additional surveys conducted by a qualified biologist. The construction-free buffer zone shall be a minimum of 300 feet for nesting raptors and a minimum of 100 feet for other bird species that are species of special concern.

C. The permittee shall submit to the Executive Director the results of the surveys required in subparts A and B above, including a map that locates any bird nesting habitat for raptors and special status bird species identified by the surveys and delineates any required construction-free buffer zones, and a narrative that describes proposed nesting bird disturbance avoidance measures.

4. **Protection of Roosting Bat ESHA.** The permittee shall undertake development in compliance with the following mitigation measures to protect roosting bat ESHA:
  - A. If any work on the Pudding Creek Bridge will occur between March 1 and August 31, the bridge shall be surveyed by a qualified biologist NOT LESS THAN SEVEN DAYS AND NOT MORE THAN FOURTEEN DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION to determine if roosting bats are present.
  - B. The permittee shall submit survey results to the Executive Director prior to commencement of construction. Submitted results shall include details on surveyor qualifications, date(s) of survey(s), and a map of any detected roosting bat ESHA.
  - C. If roosting bats are observed, bat exclusion measures shall be installed outside of the bat maternity season (prior to May 1 or after September 1), as long as night temperatures remain above 50 degrees Fahrenheit. If bridge work occurs outside the May through August bat maternity season, then no protective measures are required. Any installed exclusion measures shall be removed after construction is complete.
  
5. **Protection of Northern Red-legged Frog.** The permittee shall undertake development in compliance with the following mitigation measures to protect northern red-legged frogs (NRLF):
  - A. NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit for the review and written approval of the Executive Director an Aquatic Species Relocation Plan that substantially conforms with the Project Description (Exhibit 3 of the Commission Staff Recommendation) and is consistent with all special conditions of this CDP. The plan shall include at a minimum the following required components:
    - i NOT MORE THAN 48 HOURS PRIOR TO THE START OF CONSTRUCTION, a qualified biologist shall perform a pre-construction survey for NRLF (adults, subadults, tadpoles, or egg masses) according to current CDFW recommended survey protocols. Survey areas shall include the riparian wetlands on both banks of the creek where vegetation would be disturbed as well as the borders of the adjacent estuarine wetlands.
    - ii The permittee shall submit survey results to the Executive Director prior to commencement of construction. Submitted results shall include details on surveyor qualifications and date(s) of survey(s).
    - iii Any frogs, tadpoles, and egg masses found during the initial survey shall be netted by the biologist and relocated to suitable habitat downstream of the project area prior to conducting project activities within the banks of Pudding Creek. The biologist shall also be present during all phases of construction activities with the potential to impact surface waters, to assist with frog relocation efforts as they arise.

- iv To prevent the inadvertent entrapment of NRLF, all excavated, steep-walled holes or trenches more than one foot deep shall be covered at the close of each working day by plywood or similar materials. If it is not feasible to cover an excavation, one or more escape ramps constructed of earthen fill or wooden planks shall be installed.
  - B. The permittee shall undertake development in accordance with the approved final Aquatic Species Relocation Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission approved amendment to this CDP unless the Executive Director determines that no amendment is legally required. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.
- 6. **Protection of Archaeological Resources.** The permittee shall undertake development in compliance with the following mitigation measures to protect archaeological resources:
  - A. AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF ANY GROUND-DISTURBING CONSTRUCTION ACTIVITIES, the permittee shall (i) notify the Tribal Historic Preservation Officer (THPO) appointed by the Sherwood Valley Band of Pomo (ii) invite Tribal representatives to be present and to monitor ground-disturbing activities; and (iii) arrange for a qualified archaeological monitor to be present to observe ground-disturbing activities. The monitor(s) shall have experience monitoring for archaeological resources of the local area during excavation projects, be competent to identify significant resource types, and be aware of any recommended Tribal procedures and state and federal requirements for the inadvertent discovery of archaeological resources and human remains.
  - B. Should any cultural resources be encountered during any construction, the permittee shall cease all construction activities that have the potential to uncover or otherwise disturb cultural deposits in an area not less than a 60-foot-wide buffer around the discovery. Potential cultural resources include, but are not limited to, concentrations of prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites (midden with or without shell), concentrations of fire-altered rock and/or burned or charred organic materials, etc. The monitor shall immediately notify the representatives of the relevant Tribes. An “exclusion zone” where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone as recommended by the monitor(s). Construction may continue outside of the exclusion zone area.
  - C. A permittee seeking to recommence construction within the sensitive area following discovery of the archaeological resources shall submit a Supplementary

Archaeological Plan for the review and written approval of the Executive Director. The Supplementary Archaeological Plan shall be developed in consultation with the representatives of the relevant Tribes. The Executive Director shall review the Supplementary Archaeological Plan for conformance with the terms and conditions of CDP 1-21-0074 and with the Coastal Act requirements for the protection of coastal resources. If the Executive Director approves the SAP and determines that the SAP's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence after this determination is made by the Executive Director in writing. If the Executive Director approves the SAP but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission.

**7. Onsite Revegetation and Mitigation for Wetland Impacts.**

**A. Final Onsite Revegetation Plan (ORP).** NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, a final revised ORP for revegetation of temporarily disturbed areas and mitigation for temporal loss of riparian wetland function and permanent riparian wetland fill. The final ORP shall clearly identify all measures to mitigate for such impacts and to monitor mitigation success over time. The ORP shall substantially conform to the draft Onsite Revegetation Plan titled "Onsite Revegetation Plan for the Pudding Creek Bridge Widening and Rail Upgrade Project," dated July 2021 and attached as Exhibit 8 of the Commission Staff Recommendation, except that the plan shall include the following:

- i The final plan shall include a revised map of the revegetation areas, distinguishing between the areas set forth to buffer the areas proposed for mitigation credit against invasive species re-invasion following removal.
- ii The final plan shall include a planting palette that reflects the surrounding area, and planting densities shall be two feet on center for woody species, unless the Executive Director determines that a different planting density would achieve greater revegetation success and would provide equivalent protection against the proliferation of nonnative species.
- iii The final plan shall specify that annual monitoring reports will be submitted by December 31 of each year of the monitoring period, which shall begin the first full growing season after planting. A monitoring report is not required for Year 3.
- iv The final plan shall include interim success criteria to be used to evaluate progress during years 1, 2, and 4 of the monitoring period.
- v The final plan shall include revised revegetation goals and final success criteria for the areas proposed for mitigation credit to add, at a minimum, in all three revegetation areas ("quads"), cover of Cal-IPC rated "High"

and “Moderate” invasive species, excluding non-native grasses, will be less than or equal to 2% by Year 5.

- vi The final plan shall include success criteria for the buffer areas including, at a minimum, cover of Cal-IPC rated “High” and “Moderate” invasive species, excluding non-native grasses, will be less than or equal to 2% by Year 5.
- B. The permittee shall undertake development in accordance with the approved final ORP. Any proposed changes to the approved final ORP shall be reported to the Executive Director. No changes to the approved final ORP shall occur without a Commission approved amendment to this CDP unless the Executive Director determines that no amendment is legally required. The Executive Director may approve minor adjustments to these terms if the Executive Director determines that the adjustments (1) are de minimis in nature and scope, (2) are reasonable and necessary, (3) do not adversely impact coastal resources, and (4) do not legally require an amendment.
- B. **Final Impact Validation Report.** Within 90 days of completion of construction, the permittee shall submit a final report comparing the extent and nature of impacts as estimated by the permittee in the draft ORP with those actually observed following construction. If the Executive Director determines it to be necessary, the permittee shall submit an updated ORP for the review and approval of the Executive Director with the most accurate numbers consistent with the final impact validation report, which will be the final compensatory mitigation requirements for monitoring and success criteria.
- C. **Monitoring and Reporting.** Monitoring for survival counts, species cover will occur every year for five years; and the permittee shall submit annual monitoring reports to the Executive Director for review and approval for years 1, 2, and 4, beginning the first year after planting of vegetation and consistent with the monitoring schedule in the final approved ORP. Each report shall document the condition of the revegetation with photographs taken from the same fixed points in the same directions; a “performance evaluation” section where monitoring results are used to evaluate the status of the revegetation efforts in relation to the interim and final success criteria in the final approved ORP; and a work plan for the subsequent year, including any necessary recommendations to facilitate mitigation success.
- D. **Final Monitoring Report.** A final monitoring report for Year 5 shall be submitted for the review and approval of the Executive Director at the conclusion of all mitigation efforts. The final monitoring report shall be prepared by a qualified restoration ecologist and must evaluate whether the revegetated and buffer areas conform to the goals, objectives, and success criteria set forth in the approved final ORP. The final monitoring report shall summarize prior reports and provide a timeline of the overall progress and success and include sufficient detail to evaluate comprehensive mitigation compliance with the mitigation program and specified goals and success criteria set forth in the approved final ORP.

- E. **Provision for Possible Further Action.** If the final monitoring report indicates that the mitigation effort has been unsuccessful, in part or in whole, based on the approved success criteria, the permittee shall submit within 90 days a revised or supplemental ORP for the review and approval of the Executive Director to compensate for those portions of the original program which did not meet the approved success criteria. The revised or supplemental ORP shall be prepared by a qualified restoration ecologist and shall specify measures to remediate those portions of the original approved ORP that have failed or have not been implemented in conformance with the original approved ORP. The revised revegetation plan shall be processed as an amendment to CDP No. 1-21-0074, unless the Executive Director determines that no amendment is legally required.
8. **Hydroacoustic Monitoring Plan.** NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the applicant shall submit, for the review and written approval of the Executive Director, a Hydroacoustic Monitoring Plan. At a minimum, the plan shall include the following:
- A. The plan shall be based on the “dual metric exposure criteria” and shall state that exceedance of either criterion shall be deemed injurious or lethal to exposed fish and non-compliant with the conditions of the CDP.
- 1) The permittee shall avoid hydroacoustic noise at or above 187 dB cumulative SEL.
  - 2) During pile-driving, the peak sound pressure level (SPL) within the Pudding Creek aquatic environment shall not exceed 205 dB and the accumulated sound exposure level (SEL) shall not exceed 187 dB at 10 meters distance from pile-driving or at any other location in the creek.
  - 3) If the accumulated SEL approaches 187 dB at 10 meters distance from pile-driving, pile-driving will be stopped to avoid exceeding the criterion and shall not recommence for at least 12 hours.
  - 4) In the event of an exceedance of either criterion of the dual metric exposure criteria, pile-driving operations shall be immediately stopped and shall not recommence unless the Executive Director, in consultation with the fisheries biologists of the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, so authorizes based on the deployment of additional sound attenuation or other measures deemed likely by qualified technical experts to return the pile-driving to conformance with the dual metric exposure criteria.
- B. A description of the method of hydroacoustic monitoring that will continuously assess the actual conformance of the proposed pile driving with the dual metric exposure criteria up- and down-stream of the pile-driving locations on a real-time basis, including the field locations of hydroacoustic monitoring stations and the number, location, distances, and depths of hydrophones and associated monitoring equipment.

- C. Provisions to continuously record pile strikes in a manner that tracks the time of each strike, the number of strikes, and the interval between strikes.
  - D. Provisions for real-time identification and reporting of any exceedance of the dual metric exposure criteria, clear action and notification protocols to stop pile driving in case of such exceedance, including the authority of the sound monitor to order pile driving to stop immediately, and procedures to notify pertinent parties including the Executive Director and other pertinent state and federal agencies immediately after any exceedance of the dual metric exposure criteria.
  - E. Provisions for a monitoring and reporting program that includes daily summaries of the hydroacoustic monitoring results of pile driving to the Executive Director and to other agencies requesting such summaries.
  - F. The permittee shall undertake development in accordance with the approved final Hydroacoustic Monitoring Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally required.
9. **Stormwater Pollution Prevention Plan.** NOT LESS THAN 30 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the Executive Director's review and written approval, a Stormwater Pollution Prevention Plan. The plan shall include written confirmation that the plan complies with the terms and conditions of this CDP. The plan shall include, at a minimum, the following required components:
- A. A construction site map delineating the construction site and the location of all temporary construction-phase BMPs (such as silt fences, fiber rolls, straw wattle dikes, compost berms, and inlet protection), staging and stockpiling areas, vehicle and equipment maintenance and fueling areas, concrete washout areas, and dewatering facilities;
  - B. A description of the BMPs that will be implemented to minimize erosion and sedimentation, control runoff, and minimize the discharge of other pollutants resulting from construction activities; and
  - C. A schedule for the management of all construction-phase BMPs (including installation and removal, ongoing operation, inspection, maintenance, and training).
10. **Lead Compliance Plan.** NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the Executive Director's review and written approval, a lead compliance plan that shall include protocols for environmental and personnel monitoring, requirements for personal protective equipment, other health and safety protocols, and procedures for the handling of lead impacted soil.
11. **Debris Disposal Plan.** NOT LESS THAN 60 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the

review and approval of the Executive Director, a plan for the disposal of excess construction debris and materials (e.g., excavated soils).

- A. The plan shall include, at a minimum, the following:
- i A description of the specific locations, methods, and procedures for staging, stockpiling, managing, characterizing, testing, and disposing of soil, groundwater, and waste material expected to be encountered during construction;
  - ii Provisions for ensuring that all staging, stockpiling, management, and disposal of waste is consistent with all special conditions of this CDP;
  - iii BMPs for dust control, including, but not limited to, measures to reduce the potential for exposure of staged and stockpiled materials to wind and stormwater runoff; and
  - iv Provisions for proper waste disposal at authorized facilities capable of receiving the waste(s). The plan shall list the names of all authorized disposal site(s) where materials will be lawfully disposed of.
- B. The permittee shall undertake development in accordance with the approved final Debris Disposal Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

12. **Seismic and Tsunami Hazard Response Plan.** WITHIN ONE YEAR OF COMMENCEMENT OF CONSTRUCTION, the permittee shall submit, for the review and approval of the Executive Director, a plan for mitigating the risks to the public from the potential impacts of extreme tsunami and seismic events on the widened bridge. At a minimum, the plan shall identify the steps that would be taken in the event of a tsunami and/or seismic event to: (a) warn the traveling public of possible hazardous conditions, (b) physically close the bridge, if necessary, (c) detour traffic to alternate routes, (d) inspect the bridge for damage, and (e) inspect the attached sewer and water lines for damage and, as necessary, shut off the flow of sewage and water to prevent discharges to Pudding Creek and repair or replace the structural supports affixing the utility lines to the bridge. The plan shall be developed in coordination with emergency response agencies, including the City of Fort Bragg, Mendocino County, and other relevant local governments.

13. **Bioswale Maintenance.** Routine visual inspections and maintenance of the bioswale shall be conducted annually, at a minimum, throughout the life of the project, consistent with the following:

- A. Any erosion or damage to the bioswale, such as ruts or holes, shall be repaired using a suitable soil that is properly tamped and seeded.



- B. All vegetation planted within the bioswale shall be maintained in a dense, healthy growing condition and shall be promptly replaced with new vegetation whenever necessary.
  - C. The bioswale shall be maintained in a condition free of litter, weeds, accumulated sediment, and other debris.
  - D. The use of landscaping chemicals (i.e., pesticides, herbicides, and fertilizers) in maintenance of the bioswale shall be minimized to the extent feasible, to minimize the discharge of pollutants to coastal waters.
14. **Other Agency Approvals.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, or authorizations for the approved project have been granted by all other applicable agencies, including at a minimum the California Department of Fish and Wildlife (CDFW), the Regional Water Quality Control Board (RWQCB), and the U.S. Army Corps of Engineers (USACE), or evidence that no such authorizations are required from each of these entities. The permittee shall inform the Executive Director of any changes to the project required by any other authorizations. Any such changes shall not be incorporated into the project until the permittee obtains an amendment to this CDP, unless the Executive Director determines that no amendment is legally required.
15. **Assumption of Risk, Waiver of Liability, and Indemnity Agreement.** By acceptance of this permit, the permittee acknowledges and agrees (A) that the site may be subject to hazards from waves, tsunamis, storms, flooding, erosion, earth movement, and other natural hazards, many of which will worsen with future sea level rise; (B) to assume the risks to the permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (C) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (D) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.
16. **Liability for Costs and Attorneys' Fees.** By acceptance of this permit, the Applicant/Permittee agrees to reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees that the Coastal Commission may be required by a court to pay that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Applicant/Permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission. PRIOR TO COMMENCEMENT OF ANY DEVELOPMENT, the permittee shall enter into a separate written agreement with the Executive Director agreeing to reimburse the

Coastal Commission for all court costs and attorney's fees, consistent this condition.

#### **IV. Findings and Declarations**

##### **A. Project Description and Construction Process**

The California Department of Transportation (Caltrans) proposes to widen the Pudding Creek Bridge (Bridge No. 10-0158), upgrade bridge railing and adjacent guardrail, add new sidewalks, and relocate utility infrastructure on Highway 1 within the City of Fort Bragg, Mendocino County.

The existing bridge structure spanning Pudding Creek was built in 1959 and was seismically retrofitted in 1998. The purpose of the proposed project is to bring the Pudding Creek Bridge up to current design standards. The rails on the structure have been identified as deficient with concrete spalls and exposed and corroded rebar. The structure is listed on Caltrans' list of eligible bridges for rail upgrades and is identified in Caltrans' Structure Replacements and Improvement Needs Report (STRAIN). Additionally, the existing two-foot shoulder width does not provide adequate room to safely accommodate bicycles, disabled vehicles, or evasive maneuvers by vehicles to avoid collisions. The bridge also lacks separated pedestrian walkways.

The existing bridge is 41 feet wide and includes two 12-foot-wide lanes, two 2-foot-wide shoulders, two 6-foot-wide sidewalks, and two concrete barrier rails. The project would widen the Pudding Creek Bridge (symmetrically on both sides of the existing structure) to approximately 59 feet to accommodate two 12-foot-wide lanes, two 8-foot-wide shoulders, two 6-foot-wide pedestrian walkways with pedestrian railings, and two upgraded vehicle barrier railings meeting current design standards. New pedestrian rails with new bridge lighting would be installed along the outer edge of both walkways.

In addition to the work on the bridge structure, the roadway shoulders at the north and south approaches of the bridge would be widened to approximately eight feet to transition from the roadway to the proposed widened structure. The project also proposes additional "complete streets" improvements including the construction of new six-foot-wide sidewalks on both sides of the highway from Pudding Creek Bridge south 430 feet (approximately 200 feet north of Elm Street) and north approximately 250 feet along the west side of the highway and approximately 150 feet along the east side of the highway. To accommodate roadway widening and sidewalk installation, a 150-foot-long, two- to four-foot-high retaining wall would be constructed southeast of the bridge at the back of curb along the sidewalk. Additionally, to meet updated safety standards, the existing metal beam guardrail (MBGR) that transitions from the bridge would be replaced with slightly larger Midwest Guardrail System (MGS) with steel posts. There would also be new pavement markers, traffic lines, relocated signage.

The proposed project would modify existing drainage systems, including eliminating the existing scuppers on the bridge, installing and/or replacing new drainage inlets and corrugated steel pipes (culverts), and constructing a new bioswale for treating runoff.

The drainage system modification will require an existing utility pole located at the northeast corner of East Manzanita (immediately southeast of the bridge) to be relocated 25 feet south. Finally, the proposed project also includes relocating existing water and sewer lines, both of which are owned by the City of Fort Bragg. The existing 12-inch force sewer main currently located on the west side of the existing bridge structure would be relocated approximately nine-and-a-half feet further west to accommodate the widened bridge. The existing ten-inch water main currently crosses Pudding Creek Dam 700 feet east of Pudding Creek Bridge and would be relocated so that it crosses Pudding Creek attached to the eastern side of the proposed widened bridge structure.

Various types of heavy equipment would be used during construction, likely including pavers, cranes, hoe rams, pile drivers, vibratory hammers, excavators, backhoes, manlifts, cranes, pickup trucks, hauling and dump trucks, compactors, portable generators, boom trucks, concrete trucks, saws, pumps, jackhammers, site trailers, and storage boxes. Proposed staging areas will be discussed below in Finding H (Public Access).

### Construction Process

The existing sidewalk, bridge rails, asphalt concrete, and other bridge deck components would be removed first. To gain access to parts of the work area, temporary access roads and work pads would be constructed in each quadrant of the bridge, on the banks of Pudding Creek, adjacent to the existing bridge abutments and above the ordinary high water mark (OHWM). There would be no temporary access within the wetted channel of the creek; instead, the temporary work pads would be used to stage equipment. Construction would be phased to conduct work on one side of the structure before shifting to the opposite side of the structure.

While no new supporting in-water piers are proposed to accommodate the widened bridge deck, both bridge abutments would be widened approximately 14 feet and additional wingwalls would be constructed at the corners of the widened abutments. The area around the abutments would be excavated with a hoe ram and bucket attachment to the bottom of the existing footings, a maximum depth of approximately 12 feet. At Abutment 9, eight 10- to 14-inch diameter H-piles will be driven to a depth of approximately 55 feet by a diesel impact hammer. Next, structural concrete would be formed and poured around the widened abutments and wingwalls and the area would be backfilled and graded. The abutment fill slopes at the northeast and northwest corners of Abutment 9 would be constructed using geosynthetic reinforced embankment (GRE) to minimize the footprint for the newly constructed fill slope and to keep the toe of the fill slope above the OHWM.

New PC/PS inverted U-shaped girders would be installed to accommodate the additional bridge width. Next, a crane would place the new 26-foot-wide precast, prestressed bridge deck spans onto the widened abutments and the existing pier caps. Then the six-foot-wide separated pedestrian walkways with pedestrian railings and barrier rails will be constructed on each side of the bridge. Finally, existing joint seals

would be replaced and extended, and a polyester concrete overlay (PCA) would be placed on the bridge deck.

Relocation of the existing water and sewer lines would require trenching and the use of temporary bypass systems. The relocated pipes would be anchored to newly constructed concrete pedestals on the widened bridge structure using rollers and pipe straps.

Roadway widening, new sidewalk, and associated development would be undertaken concurrently with bridge widening and rail upgrade, therefore construction is planned to be completed in one season, from the spring of 2022 to the fall of 2022. Construction would generally occur 5 days per week during daylight hours. The project as proposed includes various best management practices and avoidance and minimization measures to mitigation potential adverse impacts to coastal resources, as discussed below.

Additional project details can be found in the applicant's project description attached as Exhibit 3.

## **B. Project Location and Environmental Setting**

The City of Fort Bragg had an estimated population of 7,291 in 2019 (U.S. Census Bureau). Pudding Creek is a 14.5-mile-long perennial stream that flows with low velocity in a westerly direction to a constructed low dam located 700 feet east of Pudding Creek Bridge. The dam includes a fish ladder but limits downstream flow and creates an impounded marsh behind it. Pudding Creek terminates in the Pacific Ocean less than 0.5 mile west of the Pudding Creek Bridge. A 17-acre tidally influenced brackish estuary exists between the dam and the ocean. The Pudding Creek Bridge crosses this estuary. During the dry season when freshwater flows decline, a sandbar forms across the mouth of the creek creating a lagoon and restricting saltwater/freshwater exchange, resulting in higher salinities and warmer water temperatures.

The Pudding Creek estuary is approximately 350 to 500 feet across with steep, densely vegetated banks approximately 50 to 65 feet high. Within the project area, the estuary bottom is comprised of sand, silt, and mud, with no cover or habitat complexity such as cobbles, boulders, or woody debris. Several mud flats are present within the project area, and the north and south banks of the creek exhibit sharp transitions between aquatic habitat and riparian vegetation. The vegetated banks surrounding the project area provide little to no shade to the creek due to their short stature. In general, the landscape within and around the project area has been highly modified by development.

Land uses surrounding the project area include residential, commercial, recreational, and timber harvesting uses. Lands to the south within the city are densely developed. Lands within two miles to the north and east are partially developed with local hotels and residences. Pudding Creek Beach lies directly west of the project area. The popular beach is part of MacKerricher State Park.

### Standard of Review

Portions of the proposed project will occur on tidelands within the Coastal Commission's retained CDP jurisdiction, while the remainder of the project is located within the City of Fort Bragg's permitting jurisdiction.<sup>1</sup> Under Coastal Act Section 30601.3, when a project requires a CDP from both a local government with a certified local coastal program and the Commission, the Commission may process a consolidated CDP application for the proposed development when the applicant, the local government, and the Commission's Executive Director agree to process the CDP as a consolidated CDP. In this case, the Fort Bragg City Council adopted a resolution authorizing the consolidated coastal development permitting process on February 24, 2020, Caltrans provided a copy of the resolution to Commission staff with the subject CDP application, and the Executive Director agreed to the consolidation.

### **C. Other Agency Approvals and Property Acquisitions**

#### National Marine Fisheries Service (NMFS)

The project requires Section 7 Consultation under the federal Endangered Species Act for potential impacts to coho salmon and steelhead trout. A Letter of Concurrence from NMFS dated September 15, 2020 has been provided.

#### U.S. Fish and Wildlife Service (USFWS)

The project also requires Section 7 Consultation for potential impacts to tidewater goby. A Biological Opinion from USFWS dated July 21, 2020 has been provided.

#### California Department of Fish and Wildlife (CDFW)

CDFW has regulatory jurisdiction over the project pursuant to the California Fish and Game Code and the California Endangered Species Act, and the project requires a Section 1602 Lake or Streambed Alteration Agreement. A copy of this agreement had not yet been provided; therefore, **Special Condition 14** requires that a copy of the necessary CDFW approval be submitted prior to commencement of construction.

#### North Coast Regional Water Quality Control Board (NCRWQCB)

The project requires a 401 Water Quality Certification from the NCRWQCB. A copy has not yet been provided; therefore, Special Condition 14 also requires submittal of a copy of the NCRWQCB approval prior to commencement of construction.

#### U.S. Army Corps of Engineers (USACE)

The project requires a Letter of Permission from the USACE, pursuant to Section 10 of the Rivers and Harbors Act. A copy has not yet been provided; therefore, Special Condition 14 also requires submittal of a copy of the USACE approval prior to commencement of construction.

#### California State Lands Commission (SLC)

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<sup>1</sup> Some minor components of the overall project occur outside of the coastal zone.

Caltrans has provided a letter from the SLC indicating that the project was referred to the SLC and does not require updates to Caltrans' existing SLC lease.

### Property Acquisitions

Most of the construction work will occur within the existing Caltrans right of way (ROW). However, temporary construction activities will occur on three adjoining parcels, and a portion of the proposed drainage system modifications will also be constructed on an adjoining parcel. Caltrans has obtained Temporary Construction Easements (TCEs) for the three adjoining parcels where temporary construction activities will occur and has also acquired fee title to the parcel east of its ROW where a portion of the proposed modifications to the drainage system will be constructed.

### **D. Coastal Wetlands**

Coastal Act Section 30233 states, in relevant part, as follows:

- (a) *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

[...]

- (4) *Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

[...]

- (b) *Dredging and spoils shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation...*
- (c) *In addition to the other provision of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...*

Section 30108.2 of the Coastal Act defines "fill" as "earth or any other substance or material, including pilings placed for the purposes of erecting structures thereon, placed in a submerged area." Additionally, the Commission has long considered grading, excavating, and other ground-disturbing activities in coastal wetlands and estuaries to be a form of dredging or fill.

The proposed project includes widening the existing bridge abutments on the banks of Pudding Creek. Widening of the southern abutment and construction of portions of the temporary access routes and work pads will result in the dredging and filling of riparian wetlands. Additionally, the widened bridge structure will result in limited shading impacts on riparian wetlands.

### Estuarine, intertidal wetlands

Estuarine, intertidal emergent persistent wetlands extend up the north and south bank of Pudding Creek in the project area. The estuarine wetland habitat is dominated by Pacific silverweed marsh (*Argentina egedii* Herbaceous Alliance). These wetlands provide habitat for sensitive species, including the federally listed tidewater goby and federally listed salmonids: coho salmon and steelhead. Coho salmon is also listed as state endangered. While the project proposes to avoid direct impacts to intertidal and estuarine wetlands by keeping all work above the ordinary high water mark (OHWM), construction activities have the potential to inadvertently impact these intertidal and estuarine wetlands and will be partially performed in other wetlands further upslope. However, the various avoidance and minimization measures and best management practices discussed below will protect these wetlands and waters.

### Riparian wetlands

Multiple patches of arroyo willow-dominated one-parameter riparian wetlands are found at the site, primarily on the southeast bank but also within other disjunct patches of the project site.

Clearing and grubbing that includes the removal of small trees followed by grading and layering of rock will be necessary within some of these riparian wetlands to allow for construction access. These excavation and fill activities for the purposes of construction access on the southern bank are anticipated to impact 0.095 acre of riparian wetlands. Additionally, Abutment 1 on the southern bank is immediately adjacent to an area of riparian wetlands and the widening of the abutment will result in 0.004 acre of permanent wetland fill. Furthermore, widening of the bridge structure on the southeast side is anticipated to result in shading that may prevent wetland vegetation that was removed for construction access from growing back. The shading is anticipated to result in an approximately 0.005 acre of additional permanent loss of riparian wetlands.

Once the abutments have been widened, the area around the widened southern abutment will be backfilled and graded. Revegetation will occur following bridge construction activities to minimize impacts to wetland habitat. However, impacts to any impacted habitat areas not restored to pre-project conditions within 12 months of the onset of construction are recognized as permanent impacts, and thus require a higher mitigation ratio, due to the temporal losses of habitat function. As the 0.095 acre of impacts for construction access would not be fully restored within 12 months of disturbance, these impacts are considered permanent for the purposes of mitigation requirements. Adding these permanent impacts to the 0.009 acre of permanent loss of wetland habitat described above for the abutment widening and shading from the widened bridge structure results in a total permanent net loss of 0.104 acres of riparian wetlands.

Pursuant to Coastal Act section 30233(a), the diking, filling, and dredging of wetlands (1) is limited to seven specific uses; (2) must be the least environmentally damaging feasible alternative; and (3) must provide feasible mitigation measures to minimize adverse environmental effects. In addition, under section 30233(c), such activities must maintain or enhance the functional capacity of the wetlands.

### **Allowable Use**

Coastal Act section 30233(a) limits the dredging and filling of coastal wetlands to seven specific, enumerated uses, one of which is under 30233(a)(4) for “incidental public service purposes.” The proposed dredging and fill in this case is allowable because it is an incidental public service purpose. The purpose of the project is to bring the Pudding Creek Bridge up to current design and safety standards by widening the existing structure and upgrading the bridge rails. The rails on the structure have been identified as deficient with exposed, broken concrete and corroded rebar. The structure is listed on Caltrans’ list of eligible bridges for rail upgrades and is identified in Caltrans’ Structure Replacements and Improvement Needs Report (STRAIN). The existing shoulder width on the bridge structure is two feet, which does not provide adequate room for disabled vehicles or maneuvers by a vehicle to avoid a collision, adequate shoulder width to safely accommodate bicycle traffic, or a separated walkway protected by a railing to safely accommodate pedestrians. The development would not add vehicular lanes or a new route or otherwise increase vehicular capacity. The Commission has in many past actions, including for bridge projects, made a similar determination that dredging and fill for road safety improvement projects that do not increase vehicular capacity is an “incidental public service” pursuant to Coastal Act section 30233(a)(4). Therefore, the proposed project qualifies as a public safety project incidental to the primary transportation service of the existing road.

As the proposed dredging and filling is being undertaken by a public agency to serve the public, and therefore has a public service purpose, and the public safety purpose is incidental to the primary transportation purpose of the existing highway, the Commission finds that the proposed wetland dredging and filling is for an incidental public service purpose, an allowable use pursuant to Coastal Act section 30233(a)(4).

### **Alternatives Analysis**

For projects involving dredging and filling of wetlands, the Commission must ensure that the approved project has no feasible less environmentally damaging alternative, consistent with section 30233 of the Coastal Act. Coastal Act section 30108 defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors.” In this case, alternatives include: (1) the “no project” alternative; (2) an alternative project design, specifically a smaller bridge superstructure; (3) alternative construction methods, including a smaller construction access area; and (4) replacement of the bridge on an alternative alignment.

#### ***The “no project” alternative***

The “no project” alternative means that no repairs or improvements would be made to the existing bridge and roadway. As described in Section A (Project Description and Construction Process), this project is needed because the shoulders, lanes, and barrier rails on Pudding Creek Bridge do not meet current Caltrans safety and design standards and show signs of aging, such as concrete cracks, spalls, and exposed and



corroded rebar, which are visible in the bridge rail. Additionally, the bridge was identified as currently lacking adequate, safe access for pedestrians and bicyclists.

If the “no project” alternative is followed for Pudding Creek Bridge, the bridge lanes, shoulders, and barrier railings would continue to be deficient and not meet Caltrans and local jurisdiction safety design standards and therefore not satisfy the stated purpose of and need for the project. While the “no project” alternative would avoid impacts to wetlands, the safety and operational deficiencies of the bridge would not be resolved.

Therefore, the Commission finds that the “no project” alternative is not a feasible less environmentally damaging alternative to the proposed project, as conditioned.

### ***Alternative project design***

An alternative bridge widening design using a smaller bridge superstructure would require less abutment widening and result in less permanent wetland loss. A smaller bridge superstructure would also result in less vertical encroachment (shading) of wetlands.

While this alternative would have less impacts to wetlands, the narrower bridge design would not be sufficiently sized to allow the project’s proposed public access and multi-modal improvements, including the improved pedestrian sidewalks and wider shoulders for cyclists. These proposed improvements are designed to incorporate the minimum width required to meet design and safety standards, including the American Disabilities Act (ADA) guidelines, for pedestrians and cyclists. Overall, the selected alternative was designed to incorporate the smallest environmental footprint possible.

Therefore, the Commission finds that use of an alternative design is not a feasible less environmentally damaging alternative to the proposed project, as conditioned.

### ***Alternative construction method***

Wetland impacts from construction activities will be minimized to the maximum extent possible. By design, the proposed project minimizes disturbance by using existing access to the extent feasible. Existing disturbed areas with gravel or paved cover would be used for staging equipment and materials and the existing highway would be utilized for most of the bridge work. The selected alternative sizes the work pads and access pathways that must be located within coastal wetlands as conservatively as feasible based on type and size of construction equipment and the maneuvering room that will be required by the contractor to complete the work. Thus, no feasible alternative designs with lesser impacts have been identified.

Therefore, the Commission finds that the use of alternative construction methods is not a feasible less environmentally damaging alternative to the proposed project, as conditioned.

### ***Replacement of the bridge on an alternative alignment***

The proposed development maintains the existing road alignment. Replacing the bridge on an alternative alignment would not meet the Coastal Act definition of “feasible” as it would take an unreasonable period of time, would require significantly more public funds, could have significant social and technological issues. Even changing the bridge alignment within the immediate vicinity of the existing bridge would likely result in substantially more wetland impacts. A much greater portion of the adjoining wetland habitat would be affected by realigning the bridge as more of the 59-foot-width of the proposed bridge would need to be accommodated within the wetlands than just the widened portions of the existing bridge under the proposed project. In addition, realigning the bridge in the vicinity would require the installation of new supporting piers, creating more severe hydroacoustic impacts to fish species within Pudding Creek from pile-driving.

Therefore, the Commission finds that an alternative bridge alignment is not a feasible less environmentally damaging alternative to the proposed project, as conditioned.

Based on the above alternatives analysis, the proposed project is the project alternative with the least impacts to wetlands. As proposed, the bridge widening design would also meet the purpose and need of the project. Therefore, the Commission finds that the proposed new bridge design minimizes disturbance to wetlands and is the least environmentally damaging feasible alternative available, consistent with section 30233(a).

### **Minimization and Mitigation Measures**

Section 30233 further requires that feasible mitigation measures be provided to minimize adverse environmental effects of filling and dredging.

As described above, the proposed project involves work within and adjacent to riparian wetlands, as well as adjacent to estuarine wetlands. In addition to those direct impacts described above, project activities could result in direct and indirect impacts to sensitive species that rely on wetland and/or estuarine habitat, including frogs and nesting birds. Depending on the manner in which the proposed project is completed, the proposed dredging and filling within wetlands could have significant adverse environmental effects on the quality and functional capacity of riparian wetlands and impacts to wildlife.

Caltrans proposes various construction avoidance and minimization measures (AMMs) and best management practices (BMPs) that will be implemented to generally protect wetland habitat and species in the project area during wetland dredging and filling, including:

- environmental awareness training for construction personnel;
- biological monitoring by qualified personnel;
- use of debris containment equipment and methods;
- proper storage and disposal of construction waste;
- seasonal work window;

- preparation of a storm water pollution prevention plan; and
- maintenance of spill containment materials and equipment.

These and other minimization and mitigation measures are discussed below.

***Mitigation for direct impacts to riparian wetlands***

As discussed above, while impacts have been designed to be as minimal as possible, excavation and fill will occur within riparian wetlands on the southern bank of Pudding Creek. Caltrans has submitted a draft Onsite Revegetation Plan (“ORP”) (Exhibit 8) that discusses revegetation of disturbed areas, where feasible, and additional onsite mitigation to compensate for these riparian wetland impacts. The ORP applies to the direct footprint of riparian wetland disturbance, where feasible, with additional areas of invasive species removal and native planting to mitigate for the permanent riparian wetland habitat impacts discussed above, resulting from construction activities and the displacement of wetland habitat by abutment widening and bridge shading. All impacts are proposed to be mitigated at a 4:1 ratio.

The proposed revegetation goals of the draft ORP are to (1) initiate restoration of the riparian vegetation affected by clearing for construction access by allowing trimmed woody vegetation to resprout and replanting with self-sustaining, native plants that are appropriate to the region and habitat at Quads 1 and 2; (2) re-establish an arroyo willow Coastal Wetland on the south side of the bridge in Quad 3 in an area where the effects of previous land use and subsequent invasion by non-native Himalayan blackberry and poison-hemlock long ago displaced the historic willow dominated coastal wetland, providing mitigation at a 4:1 ratio for impacts to riparian wetlands; and (3) create conditions where invasive plant cover within the areas to be revegetated will be less than or equal 2% invasive plant coverage (Cal-IPC “High” rated species).

The project location is a highly impacted area and vegetation within and surrounding the Caltrans right-of-way (ROW) is currently infested with large amounts of invasive plants. Thus, disturbance from construction activities could potentially lead to the spread of invasive plant species that can outcompete the native plants within the areas to be disturbed by construction activities. As described in the draft ORP, revegetation will be conducted using California native, regionally- and habitat-appropriate native plant species, intended to closely resemble what is currently present, including a variety of woody and herbaceous coastal riparian plant species such as willows (FACW), twinberry (FAC), and thimbleberry (FACU). Caltrans would implement a program of invasive weed control in all areas of soil disturbance caused by construction, at a minimum, to improve habitat for native species within the project limits. Caltrans also proposes a number of measures to avoid the spread of invasive plant species during construction, including ensuring that all construction equipment will be weed-free prior to entering the project site; mulches used in erosion control will be weed-free; and seed mixes used to revegetate the site will be comprised of native species only. Additionally, all equipment will be properly cleaned prior to entering the project site.

The revegetation areas proposed to mitigate for riparian wetland impacts are distinguished in the draft ORP as three separate “quads”, as shown on the map in Appendix A of the draft plan (Exhibit 8) and described below.

Quad 1: This restoration area is on the northwest bank and currently consists of primarily ruderal non-native vegetation along the coastal bluff. Restoration in Quad 1 will provide 0.208 acre towards a 4:1 mitigation ratio for riparian wetland impacts. However, an additional 1.102 acre within this quad is available to be used to create a buffer of invasive weed removal around the planting area. The total size of Quad 1 is 1.31 acre, however only the 0.208-acre planting area is proposed to be held to revegetation success criteria and to contribute to the 4:1 mitigation ratio for riparian wetland impacts.

Quad 2: This restoration area is on the southeast bank and consists of an Arroyo willow stand classified as a coastal 1-parameter wetland. Revegetation in this area will only cover the areas disturbed by construction to avoid further disturbance of the surrounding coastal wetland vegetation. However, invasive plants outside the immediate planting area will be removed to the extent feasible to provide a buffer for restoration plantings. Restoration in Quad 2 will provide 0.07 acre towards the 4:1 mitigation ratio for riparian wetland impacts and is proposed to be held to revegetation success criteria.

Quad 3: This restoration area is on the southwest bank and the vegetation cover is predominantly Himalayan blackberry with some poison-hemlock on the margins. Due to historical land use, this area’s vegetation type was likely converted from a willow dominated coastal wetland, matching the adjacent plant composition of Quad 2, to ruderal non-native plant cover. All Himalayan blackberry within Quad 3 will be removed and this area will be replanted with coastal riparian plant species, such as willows, for a total restoration area of approximately 0.138 acre. A 10-foot strip inside the western ROW boundary will be used for a weed buffer zone. Including the buffer area, the total size of Quad 3 is 0.2 acre. However, only the 0.138 acre inside the weed buffer zone will count towards the 4:1 mitigation ratio and is proposed to be held to revegetation success criteria.

Caltrans proposes to monitor and maintain (including watering, weeding, and protecting resprouting native vegetation and volunteers) the revegetation areas for five years following completion of construction. Removing invasives over the five-year period would allow native vegetation to vigorously establish before it can most readily be outcompeted by invasives. Caltrans proposes that monitoring be conducted without formal report writing during Year 4. During the non-formal reporting year (Year 4), a qualified Revegetation Specialist would continue to botanically evaluate and maintain the site with the goal of achieving the success criteria by Year 5. Caltrans believes that the same net ecological goal can be achieved by Year 5 without formal monitoring and report writing during Year 4.

Caltrans proposes to evaluate the success of the revegetated mitigation areas based on survivorship of 85% of planted and volunteer individuals present within the revegetation areas proposed to contribute to the 4:1 mitigation ratio, and 2% or less

cover of Cal-IPC rated “High” invasive species present, by the fifth year following replanting efforts.

While certain specific additional measures discussed below are necessary to ensure the success of the mitigation, the proposed revegetation and invasive species removal program is largely acceptable and will adequately mitigate for the impacts to riparian wetlands. Restoration of riparian wetlands disturbed during construction in Quad 2 will minimize loss of riparian wetlands, and the substantial restoration of riparian wetlands in Quads 1 and 3 will offset the unavoidable loss of riparian wetlands from the widened southern abutment and bridge shading. Establishing riparian wetland vegetation in Quads 1 and 3 will also provide compensatory mitigation for temporal loss of riparian wetland habitat function resulting from the wetland impacts. In particular, the existing blackberry vegetation in Quad 3 does not provide any wetland habitat value, and replacing it with riparian vegetation such as Arroyo willows will provide suitable habitat for riparian wetland animal species and will adjoin and expand the existing wetland habitat in Quad 2, increasing overall wetland habitat value in the project vicinity. As (1) mitigating the 0.104 acre of riparian wetland impacts at a 4:1 ratio requires 0.416 acre of mitigation, and (2) Quad 1 will contribute 0.208 acre, Quad 2 will contribute 0.07 acre, and Quad 3 will contribute 0.2 acre for a total mitigation acreage of 0.416 acre, all riparian wetland impacts will be mitigated in kind at a 4:1 ratio and there will be net loss of wetlands.

As mentioned above, while the proposed mitigation measures are largely acceptable, in reviewing the draft ORP, the Commission’s staff ecologist determined certain specific revisions are necessary in order to more confidently ensure the success of the proposed revegetation and restoration, as discussed below.

As large amounts of invasive vegetation are present within and immediately surrounding the site, there is a significant risk of reinvasion by invasive plants, especially during the plant establishment period. As noted above, Caltrans proposes removing and monitoring only Cal-IPC species ranked as “high”; however, to more confidently ensure success, the final plan should include removing and monitoring Cal-IPC species ranked as “moderate” as well as “high”. Target percentages should be under 2% cover for both rankings. Additionally, Caltrans only proposes to hold the mitigation areas to this standard, and not the areas proposed to buffer the mitigation areas. However, due to the significant threat of reinvasion by surrounding invasives, the final plan should apply the same invasive plant cover success criteria to the buffer areas. The final plan should also include a planting palette that reflects the surrounding area, and the planting densities should be two feet for woody species, which is a greater density than proposed, but important for providing additional assurance that the native riparian vegetation will sufficiently reestablish to keep adjacent invasives species from invading. Additionally, the final plan should include a revised map of the revegetation areas (quads), distinguishing between the areas set forth to buffer the areas proposed for mitigation credit against invasives following removal.

To ensure that the plant establishment is progressing sufficiently to meet the final success criteria at the end of the five-year maintenance and monitoring period, the final

plan should also incorporate interim success criteria to be used to evaluate and discuss progress in the annual monitoring reports. The final plan should revise the years annual monitoring reports will be submitted to exempt Year 3, rather than Year 4 as proposed, as Year 3 is a less critical point in the overall maintenance and monitoring period. The final plan should also specify the date by which annual monitoring reports shall be submitted.

Therefore, to ensure that impacted areas are restored to pre-project conditions, the Commission attaches **Special Condition 7 (Final Onsite Revegetation Plan)**, which requires submittal of a final revised ORP to the Executive Director for review and approval prior to commencement of construction that substantially conforms with the proposed revegetation plan, but with the revisions discussed above to better ensure the success of the riparian wetland restoration proposed as mitigation for the riparian wetland impacts of the development.

The Commission finds that, as conditioned, the proposed onsite revegetation and invasive species removal will provide feasible mitigation to minimize the adverse environmental effects of the proposed filling and dredging (excavating) of riparian wetlands consistent with section 30233 of the Coastal Act.

### ***Measures to avoid significant adverse impacts to wildlife in wetlands***

Depending on the manner in which the proposed project is undertaken, as discussed above, the proposed development within wetland habitats at the project site could have significant adverse impacts on wildlife, such as northern red-legged frogs and nesting birds. The potential impacts to and measures to protect these sensitive species are discussed in greater detail in other sections, below. However, a few specific findings on the wetland species and the impacts from wetland disturbance are noted here.

#### Northern red-legged frog (NRLF)

Ground disturbance and vegetation removal within the riparian wetlands on the banks of Pudding Creek near the bridge could disturb NRLF utilizing the habitat in the project area and will impact dispersal and foraging riparian wetland habitat in the project site<sup>2</sup>. However, as discussed in greater detail in Section E (Marine Resources and Water Quality), below, project activities are not likely to adversely impact these species given the low risk of exposure (marginal habitat suitability) and various avoidance and minimization measures, including pre-construction surveys and biological monitoring.

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<sup>2</sup> Although no individual species have been observed, the project site contains foraging and dispersal riparian habitat for the NRLF, which is an environmentally sensitive habitat area under section 30240 of the Coastal Act. However, the project is consistent with the more specific wetlands protection policies and use limitations in section 30233 of the Coastal Act, and can be authorized as long as it does not result in any significant disruption of habitat values (section 30240(a)) and is designed to prevent impacts that would significantly degrade the habitat (section 30240(b)). For the reasons set forth in Section E (Marine Resources and Water Quality) of the staff report, and as conditioned to minimize and avoid impacts to riparian habitat and individual species during construction activities, the Commission finds that the project is consistent with the substantive standards of both sections 30233 and 30240 of the Coastal Act.

### Nesting Birds

Caltrans' Natural Environment Study developed for this project identified various bird species with the potential to be present in the project area for foraging or nesting during proposed construction. Removal of riparian wetland vegetation that may support bird nests could adversely impact sensitive bird species when conducted during the nesting season, which extends approximately February 1 to September 15.

However, potential adverse impacts to nesting birds as a result of the proposed wetland excavation and fill are not anticipated because Caltrans proposes to conduct surveys prior to vegetation removal, to establish appropriate species-specific buffer(s) around each active nest, and to exclude construction activities from these areas until birds have fledged, or the nest is determined to be unoccupied. These and other measures to protect nesting birds within and around the project area are discussed in greater detail in Section F (Environmentally Sensitive Habitat Areas), below.

Therefore, the Commission finds that the project as proposed and conditioned as described above provides feasible mitigation measures to minimize the project's adverse impacts to wildlife using the riparian wetland habitat, consistent with section 30233 of the Coastal Act.

### **Biological Productivity and Functional Capacity of Wetlands**

Another general limitation set by section 30233(c) of the Coastal Act is that any proposed dredging or filling in existing coastal wetlands must maintain or enhance the functional capacity of the wetland.

Vegetation removal and ground disturbance within riparian wetlands on the banks of Pudding Creek have the potential to increase turbidity and sedimentation and thereby adversely affect water quality and impact the functional capacity of the wetlands as a result. However, the various BMPs to protect water quality proposed by Caltrans would minimize the magnitude and duration of any erosion and turbidity increases during construction and would provide for site stabilization post construction. Specific measures to protect water quality within the project area will be discussed further below, in Section E (Marine Resources and Water Quality). As discussed therein, Special Conditions of this CDP will ensure the use of BMPs to protect water quality and wetlands.

Additionally, while riparian vegetation disturbance and removal can result in increased water temperatures, the proposed reductions in riparian vegetation are minimal, do not present a significant loss of riparian shade, and a majority of the disturbed areas will be restored to pre-project conditions with implementation of the Onsite Revegetation Plan discussed above.

The mitigation measures incorporated into the project and required by the special conditions discussed throughout this report will ensure that the project will not have significant adverse impacts on coastal wetlands in and around the project vicinity.

Therefore, the Commission finds that the project, as conditioned, will maintain and enhance the functional capacity of wetlands consistent with the requirements of Coastal Act section 30233.

### **Conclusion**

For all of the reasons set forth above, the Commission finds that the project, as proposed and conditioned, is an allowable use, that there is no feasible less environmentally damaging alternative, that feasible mitigation will be provided to minimize all significant adverse impacts associated with the dredging and filling of coastal wetlands, that wetland habitat values will be maintained or enhanced, and that coastal water quality will be protected. Therefore, the Commission finds that the proposed development, as conditioned, is consistent with section 30233 of the Coastal Act.

### **E. Marine Resources and Water Quality**

Section 30230 of the Coastal Act states as follows:

*Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states as follows:

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 of the Coastal Act states as follows:

*Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

As described in Section B (Project Location and Environmental Setting), the proposed project involves work over and adjacent to a tidally influenced creek and both estuarine and riparian wetlands, as well as within some of the riparian wetlands, as discussed in Section D (Coastal Wetlands); thus, construction-phase activities and post construction stormwater management have the potential to impact marine resources and the



biological productivity and quality of coastal waters. Therefore, the Commission must find that the project is consistent with the provisions of sections 30230, 30231, and 30232.

Marine organisms that could be impacted include federally and/or state-listed fish that could be harmed, injured, or killed by exposure to hydroacoustic noise generated during pile driving. Fish and other marine organisms could also be indirectly affected if construction activities and/or post-construction stormwater management result in degradation of aquatic habitat and water quality. Avoidance, minimization, and mitigation measures for potential impacts to coastal waters and marine resources are discussed below.

### ***Avoidance of Construction-related Impacts to Water Quality***

The construction activities that have the potential to discharge pollutants to coastal waters include vehicle fueling and equipment maintenance, concrete pours, relocation of an existing sewer line, handling and disposal of construction debris and excavated soils; and erosion and sedimentation during construction activities.

#### General Construction Activities

To protect water quality and marine resources, Caltrans proposes various general BMPs and Avoidance and Minimization Measures (AMMs), including the following:

- A qualified biologist will monitor all construction activities near jurisdictional waters to ensure adherence to all environmental permit conditions and avoidance and minimization measures during construction. These activities include, but are not limited to, bridge demolition, hoe-ramming, pile-driving, and concrete pours.
- The biologist would provide a pre-construction meeting with the contractor, consisting of a briefing on environmental permit conditions and requirements relative to each stage of the proposed project, including but not limited to work windows and construction site management within the project areas.

To ensure that Caltrans undertakes development in compliance with the above and various other BMPs and AMMs proposed in the CDP application to protect coastal waters and marine resources, the Commission attaches **Special Condition 2 (Construction Responsibilities)**.

Additionally, before any ground-disturbing activities, Caltrans proposes to have its contractor prepare a Stormwater Pollution Prevention Plan (SWPPP) that includes erosion control measures and construction waste containment measures that would be taken so that coastal waters are protected during and after project construction. The SWPPP would identify the sources of pollutants that may affect the quality of stormwater; include construction site BMPs to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; and include routine inspections and a monitoring and reporting plan. At a minimum, the SWPPP would require the following temporary construction site BMPs:

- Temporary fiber rolls, silt fences, straw wattle dikes, and/or compost berms will be installed to control erosion and runoff.
- Clearing, grubbing, and excavation will be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Soil disturbing work would be limited during the rainy season.
- Vegetation reestablishment or other stabilization measures will be implemented on disturbed soil areas.
- Spill response equipment will be maintained and located where spills have the potential for occurring (e.g., at the points of connection of the sewer force main to the temporary bypass system).
- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.

Additionally, while vehicle fueling will occur on-site and minor equipment maintenance may also occur on-site, there will be no fueling or maintenance of equipment within 50 feet of coastal waters and drainages. Washing and cleaning of construction equipment will not occur on-site and any major equipment maintenance would only occur in staging areas.

To ensure that the SWPPP is prepared and implemented with the proposed BMPs listed above, at a minimum, the Commission attaches **Special Condition 9 (Stormwater Pollution Prevention Plan)**, which requires the applicant to submit for the review and approval of the Executive Director a stormwater pollution prevention plan that incorporates these and other measures required by the conditions of this permit. In addition, to ensure that vehicle fueling and equipment maintenance activities do not occur within 50 feet of coastal waters and drainages, as well as ESHA and marine resources, Special Condition 9 requires Caltrans to include a map with the plan that delineates where equipment maintenance and refueling may occur on site. The applicant must undertake development consistent with the approved plan.

As work would be occurring on the existing bridge structure over Pudding Creek, debris and contaminants could be inadvertently released into the creek during construction. Contaminants that could be inadvertently released into surface waters during construction of the proposed project include concrete and hydrocarbons. Potential construction debris that could result from the project includes metal, concrete, and asphalt debris. If introduced into the waters of Pudding Creek, this debris could impair water quality by reducing oxygen concentrations as the debris decomposes, or by introducing toxic materials into the aquatic habitat. Similarly, spills from the construction equipment can contaminate receiving waters and result in aquatic life/fish kills.

To avoid such pollutant discharges to Pudding Creek, containment measures will be installed prior to the start of deck work to prevent any bridge deck materials and construction debris from entering Pudding Creek. The containment system may consist

of a platform, net, tarp, or a combination of these items placed under the bridge. Scaffolding would be installed along the outside edge of the structure and attached to the side of the bent cap as fall protection for the workers. The containment measures and will not be placed in the creek. In addition, the BMPs to be employed are expected to effectively prevent the introduction of oils and similar substances into Pudding Creek.

### Sewer Line Relocation

As described in Section A (Project Description and Construction Process), the proposed development includes relocating the existing sewer line on the bridge structure approximately nine-and-a-half feet to the west to accommodate the bridge widening. The process of relocating the existing sewer line has the potential to inadvertently release sewage into the waters of Pudding Creek.

To protect coastal waters during the relocation process, Caltrans proposes to place plastic sheeting below and around the temporary bypass sewer connections and to enclose it with a dike utilizing straw wattles beneath the plastic sheeting to contain any spillage. Spill response equipment will also be maintained and positioned where spills have the potential for occurring, i.e., at the points of connection of the sewer force main to the temporary bypass system. Spill response clean-up kits are sized to provide adequate response capabilities to manage any unanticipated spill or release. Emergency response equipment will also be inspected periodically to ensure that the spill kits are complete. In the event of a significant spill, Caltrans would document the date, time and duration of the release, source and total volume of the release, spill cleanup procedures, personnel who discovered and/or participated in the spill remediation, equipment used during cleanup, waste disposal methods, agency inspections and photographs of the event and post site cleanup, and would report the incident to external agencies.

### Debris Management and Disposal

Caltrans anticipates disturbing approximately 2.45 acres of soil for the proposed project, with a total anticipated cut of 570 cubic yards and total anticipated fill of 690 cubic yards. Excavated material will either be used as needed backfill material during construction or hauled away to an authorized disposal site. Temporary storage of excavated material may also be necessary.

Caltrans and the Department of Toxic Substances Control (DTSC) have a Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils (Agreement). The Agreement applies to soils on the state highway system with elevated lead derived from leaded fuel tailpipe emissions. For the subject project, Caltrans completed an Aerially Deposited Lead (ADL) Site Investigation, consisting of thirty soil borings collected by hand auger to a maximum depth of three feet below ground surface at various locations throughout the project area. The investigation found that depending on the specific location, soil down to certain depths would qualify either for (a) unrestricted use as non-regulated material, (b) reuse only within Caltrans ROW, or (c) for classification as California hazardous soil based on lead content with limited reuse potential. Soil classified as hazardous will not be reused on site and will be disposed of

at an authorized facility, consistent with Caltrans' agreement with the California Department of Toxic Substances Control. Additionally, per Caltrans requirements, the contractor will prepare a project-specific Lead Compliance Plan to reduce worker exposure to lead-impacted soil. The plan will include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil. The Commission attaches **Special Condition 10 (Lead Compliance Plan)** to ensure that the Lead Compliance Plan is submitted to the Executive Director for review and approval prior to commencement of construction.

In addition to ADL, Caltrans anticipates disposing of approximately 10,500 pounds of treated wood waste during construction from the removal of existing guard rails. As with the ADL soil, Caltrans follows regulations adopted by DTSC when managing treated wood waste (TWW) to prevent releases of hazardous chemical preservatives, scavenging, and harmful exposure to people, aquatic life, and animals. Under their agreement with DTSC, Caltrans may dispose of TWW in a State Water Resources Control Board certified solid waste landfill, rather than a hazardous waste landfill.

Caltrans has not provided any specific details on debris disposal for the project, including the names of authorized disposal site(s) where materials may be lawfully disposed of and a schedule for when materials would be removed from the construction site, as this information normally is determined by the Caltrans contractor at the time of construction. Thus, to avoid potential adverse impacts to coastal waters and marine resources from discharges of debris, **Special Condition 11 (Debris Disposal Plan)** requires submittal of a plan for the review and approval of the Executive Director prior to the commencement of construction for the disposal of excess construction debris and hazardous materials. The plan must list the names of all authorized disposal site(s) where materials will be lawfully disposed of and that describes the manner and schedule by which the materials will be removed from the construction site and transported for disposal. Additionally, the SWPPP discussed above will include information on any temporary stockpiling areas and associated BMPs to minimize erosion and the potential discharge of pollutants.

#### Erosion and Sedimentation Control

As described in Section B (Project Location and Environmental Setting) construction, excavation, and vegetation removal will occur on the steep slopes of the creek channel, thereby raising concerns of erosion and sedimentation that could have adverse impacts on water quality and marine resources.

As discussed above, to avoid erosion and sedimentation concerns, Caltrans has proposed various BMPs and AMMs, including fiber rolls, silt fences, compost berms, and/or straw wattle dikes, to contain any sediment and runoff from areas of construction. Caltrans has also submitted plans that show where erosion controls will be installed. Final erosion control plans will be incorporated into the final stormwater pollution prevention plan required by Special Condition 9.

As noted above, to ensure that Caltrans undertakes development in compliance with the above and various other BMPs and AMMs proposed in the CDP application to protect coastal waters and marine resources, the Commission attaches **Special Condition 2 (Construction Responsibilities)**.

Although erosion and sediment control products classified as temporary are designed to degrade with time, several temporary erosion and sediment control products with plastic netting are commonly left in place permanently. The length of time it takes for plastic netting to begin to degrade depends on the netting composition and the environmental conditions, but the netting can remain intact many years after installation. When plastic netting does eventually fall apart, plastic fragments may be blown or washed into waterways and the ocean, creating an entanglement and ingestion hazard for marine life. Plastic netting also has been found to entangle terrestrial wildlife, including reptiles, amphibians, birds, and small mammals. Therefore, the Commission attaches **Special Condition 2-J (Plastic Netting Prohibition)**, which prohibits the use of temporary erosion and sediment control products (such as fiber rolls, erosion control blankets, mulch control netting, and silt fences) that incorporate plastic netting (such as polypropylene, nylon, polyethylene, polyester, or other synthetic fibers).

### ***Avoidance of Impacts to Sensitive Fish Species***

Pudding Creek contains special-status fish habitat for Coho salmon (*Oncorhynchus kisutch*), Steelhead (*Oncorhynchus mykiss*), and tidewater goby (*Eucyclogobius newberryi*). While all work would occur above the ordinary high water mark, construction activities could have indirect, adverse impacts on sensitive fish species in Pudding Creek.

Some of the potential impacts to fish species within the project areas include:

- Water quality - temporary increases in turbidity, suspended sediment, and contaminant risk during construction and demolition activities.
- General noise and visual disturbance - potential behavioral effects from general construction/demolition noise and visual disturbance (e.g., artificial light).
- Pile driving and excavation noise - potential injury and mortality of fish from exposure to impact pile driving and impact hammer noise exceeding established thresholds for the onset of injury.
- Habitat impacts - temporary and permanent losses of riparian habitat from clearing of vegetation for construction access.

To protect the most vulnerable life stages of sensitive fish species that occur within the project area, Caltrans proposes to restrict work that has the potential to directly impact surface waters to the period between June 15 and October 15. These activities include but are not limited to grading, cutting, and filling on the banks of Pudding Creek and hoe-ramming and pile-driving.

Perhaps the greatest risk to aquatic species could result from pile driving and demolition noise. As described in Section A (Project Description and Construction Process), H-piles will be used to widen Abutment 9, with four new piles installed at the two outside corners, for a total of eight new piles. Pile driving will be performed using a diesel impact hammer stationed on the northern roadway approach fill prism, approximately 41 feet upslope from the OHWM. Piles would be driven to a depth of approximately 55 feet and will require an average of 20 to 30 blows per foot to install in subsurface soils. The blow count at the beginning of each pile driving operation is expected to be significantly lower near the surface because the sandy substrate at the abutments will allow the weight of the driving hammer on the pile to sink the pile by several more feet. As the operation progresses, the blow count per foot will increase as the pile is driven deeper into the soil until the calculated average blow count per foot is reached.

Pile driving with an impact hammer generates hydroacoustic pressure impulses and particle velocities that can cause effects on fish ranging from altered behavior, hearing loss, and tissue injuries, to immediate mortality. These underwater sound impacts can be measured by "Peak Sound Pressure Level (SPL)," the maximum value of an instantaneous sound pressure, such as that generated by a single strike on a pile by a pile driver, and "Cumulative Sound Exposure Level (SEL)," the summation of the sound energy associated with all pile strikes that occur over a given day.

The pile driver will be used for a minimum of eight hours and a maximum of ten hours each day for up to four days total. It is assumed that under suitable conditions (weather, equipment) up to four piles can be driven per day. For excavating around the abutments, the hoe ram will be used for a minimum of two hours and a maximum of eight hours each day for up to four days at each abutment. Impact hammer activities will only occur at one abutment at a time, thus providing the opportunity for fish to disperse away from disturbance.

Even with the proposed seasonal work window and limited duration of impact hammer activities, the potential exists for sensitive fish species in Pudding Creek to be injured or killed by exposure to underwater noise and vibratory forces generated by construction-related pile driving and hoe ram (i.e., impact hammer) activity if unabated. However, potential underwater noise levels generated by planned construction activities determined the sound generated from pile driving at Abutment 9 and hoe ram demolition around the abutments are not expected to exceed currently adopted hydroacoustic noise thresholds for peak sound pressure levels known to cause injury to fish.

Caltrans proposes to prepare a hydroacoustic monitoring plan prior to construction that addresses the frequency of monitoring, positions that hydrophones would be deployed, and techniques for gathering and analyzing acoustic data, quality control measures, and reporting activities. Hydroacoustic monitoring will be conducted during all construction activities that have the potential to produce impulsive sound waves within the Pudding Creek water column, including pile driving and hoe ramming. The injury threshold for accumulated sound exposure levels (SEL) within the creek will be avoided by stopping

work prior to reaching the SEL threshold for injury to fish. For fish weighing two grams or greater this threshold is 187 decibels (dB). The SEL threshold for injury to fish weighing less than two grams, such as the goby, is 183 dB. There is recent evidence that both hydroacoustic thresholds are overly conservative (see Exhibit 9 for a hydroacoustic impact memo prepared by the Commission's staff ecologist).

In the case of Pudding Creek, Caltrans proposes to use the injury threshold of 187 dB SEL (cumulative) for all fish species, including tidewater goby. Stopping work at 187 dB SEL will minimize the amount of sensitive fish habitat that will be exposed to 183 dB SEL or greater and likely reduce fish take within the action area. The Commission staff ecologist that reviewed the relevant application materials agrees that it is unlikely that tidewater gobies or other sensitive fish species within the Pudding Creek will suffer barotrauma using the 187 dB threshold.

To ensure that the hydroacoustic monitoring plan is prepared and implemented with the proposed measures to protect sensitive fish species as described above, at a minimum, the Commission attaches **Special Condition 8 (Hydroacoustic Monitoring Plan)**. The special condition requires Caltrans to submit the plan prior to commencement of construction for the Executive Director's review and approval, including provisions for submitting hydroacoustic monitoring reports.

### ***Avoidance of Impacts to Northern Red-legged Frog***

The northern red-legged frog (NRLF) (*Rana aurora*) is a state species of special concern, occurring along the California Coast Ranges from Del Norte County south to Mendocino County, usually below 3,936 feet elevation. Northern red-legged frog habitat includes humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover. They are typically found in or near water but can be wide-ranging and highly terrestrial in damp woods and meadows during the non-breeding season. They require permanent water sources such as ponds and lakes for breeding, which occurs from late November through March. Egg masses are usually attached to herbaceous vegetation in areas with little or no flow.

While Caltrans did not conduct any species-specific surveys in and around Pudding Creek for NRLF, Caltrans does not anticipate any adverse impacts to NRLF or its habitat. NRLF has not been observed within the project footprint or 100-foot buffer area; the nearest California Natural Diversity Database (CNDDB) occurrence of NRLF from Pudding Creek Bridge is approximately 1,000 feet north of the project area and 100 feet east of Highway 1. Additionally, no breeding pond habitat for NRLF has been observed within the project area; however, the creek corridor may provide marginally suitable foraging and dispersal habitat.

Direct mortality to NRLF habitat and/or individual frogs could occur in both aquatic and upland dispersal habitat as a result of project-related construction activities. Individuals may be crushed by heavy machinery and vehicles, trampled by personnel, or buried during soil-disturbing activities. If construction occurs during sensitive breeding seasons, noise and ground vibration from construction activities may result in

physiological stress to breeding individuals, hampering their ability to find mates and reproduce. Soil disturbance during construction could result in sedimentation of Pudding Creek, lowering water quality through increased turbidity, and thereby indirectly impacting NRLF. While ground disturbance and vegetation removal on the banks of Pudding Creek near the bridge could disturb NRLF utilizing the habitat in the project area, project activities are not likely to adversely impact these species given the low risk of exposure (marginal habitat suitability) and the avoidance and minimization measures described below.

Potential impacts to NRLF will be avoided and minimized through implementation of the standard measures and BMPs discussed above, including temporary high visibility fencing to minimize disturbance in sensitive habitat areas. Additionally, prior to any work within the banks of Pudding Creek, Caltrans proposes to prepare an Aquatic Species Relocation Plan, including provisions for a pre-construction survey for NRLF by a qualified biologist. A qualified biologist will be present at the start of all construction operations on the banks of the creek to survey and relocate amphibians to suitable habitat outside of construction zones to avoid impacts to this species. Survey areas will include the riparian wetlands on both banks of the creek where vegetation will be disturbed as well as the borders of the adjacent estuarine wetlands. Any frogs, tadpoles, and egg masses found during the initial survey will be netted by the biologist and relocated to suitable habitat downstream of the project area prior to conducting project activities within the banks of Pudding Creek. The biologist will also be present during all phases of construction activities with the potential to impact surface waters, to assist with frog relocation efforts as they arise.

The Commission attaches **Special Condition 5 (Protection of Northern Red-legged Frog)**, which requires, in part, that the proposed Aquatic Species Relocation Plan be submitted for the review and approval of the Executive Director, to ensure that the various measures to protect NRLF are carried out as proposed. To prevent adverse impacts such as desiccation from accidental entrapment of NRLF during construction, Special Condition 5 also specifies that all excavated, steep-walled holes or trenches more than one foot deep shall be covered at the close of each working day by plywood or similar materials or, if that is infeasible, one or more escapes ramps constructed of earthen fill or wooden planks shall be installed.

### ***Post-Construction Stormwater Management***

The proposed bridge widening project will increase impervious surfaces by approximately 20,909 square feet, resulting in a total post-project impervious area associated with the bridge of 78,844 square feet. Existing drainage patterns will mostly be perpetuated. However, modifications to the drainage system features are proposed, including a new bioswale. Proposed drainage systems, as well as the drainage areas and flow patterns, are depicted in the applicant's Drainage Plan and Watershed Maps, included in the CDP application for this project.

Caltrans proposed to construct a flow-based bioswale north of the bridge and along the west edge of the paved area that will be used for staging equipment during construction,



opposite Pudding Creek Road. The bioswale will treat a portion of the roadway runoff from the northern bridge approach, specifically the area around the Pudding Creek Road intersection with Highway 1. Bioswales are vegetated, typically trapezoidal, channels that receive and convey stormwater flows while meeting water quality and flow criteria. Pollutants are removed by filtration through vegetation, uptake by plant biomass, sedimentation, absorption to soil particles, and infiltration through the soil. The design specifications of the proposed bioswale are 109.25 feet long, two feet deep, with a 2-foot bottom width and a 4:1 side slope trapezoidal channel at a 0.5% slope. The bioswale will be vegetated with a native seed mix selected by a Caltrans Landscape Architect and will have a rock slope protection (RSP) apron, consisting of three cubic yards of RSP, to prevent erosion.

The bioswale will treat 0.45 acres of onsite (within Caltrans' right-of-way) impervious area, which includes the area from where the proposed southbound sidewalk ends to approximately 150 feet north of Pudding Creek Road. In this same area the bioswale will accept flow from 0.48 acres of onsite pervious area on either side of the highway. The bioswale will also treat some offsite areas, including 0.21 acres of impervious area on Pudding Creek Road and 0.41 acres of pervious area. All runoff flowing to the bioswale flows to either of two inlets along the southbound dike line and through a culvert under the paved shoulder area and to the bioswale. The proposed bioswale has been designed, sized, and located to effectively capture and treat all runoff using an engineering bioswale design program with an appropriate slope, Hydraulic Residence Time, and capacity to convey and contain peak flows. The bioswale was sized and modeled with calculations of the flow and depth during both a water quality sizing event and during a 25-year event, and these plans and calculations were reviewed for approval by the Commission's staff water quality analyst. With the proposed specifications, the proposed bioswale meets Caltrans' treatment and capacity standards.

Caltrans proposes to mow and inspect the bioswale annually in order to maintain its function. To ensure the bioswale is constructed and maintained as proposed, the Commission attaches **Special Condition 13 (Bioswale Maintenance)**.

Runoff from the bridge pedestrian walkways will drain off the bridge and run off the curb ramps to the embankment slope on either side of the roadway on the north end of the bridge. At the south end of the bridge, the northbound roadway longitudinal drainage system will continue to discharge to the existing ditch adjacent to the northbound shoulder, and southbound roadway runoff will flow through curb inlets (cutouts or pass throughs) to the unpaved area west of the highway. This drainage area includes the newly constructed sidewalks and widened roadway on the southern approach. These discharges will overland flow down the bank of Pudding Creek and eventually into Pudding Creek. Stormwater treatment BMPs requires runoff to move slowly to infiltrate or allow pollutants to settle out. Due to roadway safety and design standards, and constructability issues (e.g. the slope of the southern creek bank being too steep), the runoff from most of the bridge's southern approach is not proposed to be treated by a stormwater BMP.

Commission staff explored with Caltrans staff whether there are other potential alternatives for treating the runoff from the areas where the installation and/or use of a bioswale is not feasible, including installing screens that could filter the runoff or piping the runoff to the proposed bioswale in the northwest quadrant of the project area. Caltrans staff responded that the maintenance issues associated with a possible filter screen, such as water ponding on the roadway when the filter is clogged, make this alternative infeasible. Additionally, stormwater cannot be piped across the highway where the low points on the bridge deck are located due to the lack of a sufficient slope to accommodate gravity flow. However, runoff that will not be collected and treated by the bioswale will mostly flow overland down the vegetated banks of Pudding Creek and undergo natural filtration to some extent before reaching Pudding Creek.

For all the reasons discussed above, the Commission finds that the development, as conditioned, will maintain marine resources and the biological productivity and quality of coastal waters consistent with Coastal Act sections 30230, 30231, and 30232.

#### **F. Environmentally Sensitive Habitat Areas**

Section 30240 of the Coastal Act states as follows:

*(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

*(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas.*

Caltrans searched online databases and literature and conducted field surveys to identify existing habitat types and natural communities, rare species, and factors indicating the potential for rare species (i.e. presence of suitable habitat) within the project footprint and within a 100-foot buffer around the entire project footprint. As discussed below, environmentally sensitive dune habitat area exists as close as 36 feet away from a staging area proposed for the project on the north side of Pudding Creek west of the highway but will be avoided. Although the project site could provide potential environmentally sensitive nesting habitat for bats, raptors, and other special status bird species, none has been discovered at the site. No special status plant ESHA or Western Bumblebee ESHA has been discovered at the site.

#### **Dune ESHA**

Dune ESHA is situated approximately 36 feet west of Highway 1 on the north bank above the OHWM of Pudding Creek. This dune habitat is highly disturbed and is dominated by the non-native, highly invasive species European beachgrass (*Ammophila arenaria*). Due to the presence of European beachgrass along this stretch of dunes, habitat use by native species is limited. Although degraded, this dune habitat

is considered ESHA due to its restricted distribution compared to their historical extent along the California coast.

Equipment staging would occur within approximately 36 feet of this ESHA; however, no impacts are anticipated with incorporation of proposed standard measures and BMPs, including temporary high visibility fencing and/or flagging, and reinforced by various conditions of this CDP, in particular Special Condition 2 (Construction Responsibilities).

### Roosting Bat ESHA

Many bat species in California either use or are likely to use bridge structures. Bats use bridge cavities for roosting during the day and for bearing and rearing young (i.e., maternal roost) typically from May through August. They may also use bridges in winter as hibernacula. At night, bats often roost in the open on the concrete undersides of bridges. The Pudding Creek Bridge provides potentially suitable bat roosting habitat between the girders on the underside of the bridge.

Caltrans consulted the CNDDDB records of special status bat occurrences within the project footprint or buffer area at Pudding Creek Bridge and found no occurrences on record. Caltrans' surveys have also shown no signs of bat activity. Daytime surveys on August 6 and August 10, 2020, were conducted for habitat suitability at the bridge and for indicators of roosting bats, such as smell and sight of guano and urine deposits, and visual or noise observation of any bats themselves. On August 6<sup>th</sup>, a kayak was used to visually inspect (with binoculars) crevices in the bridge structure directly over the creek for these indicators. No signs of urine or guano staining were present in any of the gaps in the cement girder structure. On August 10<sup>th</sup>, biologist used the same methods and a spotlight and were searching for the same indicators of presence of bats but focused on the north and south abutments which were accessible by land. Again, no signs of urine or guano were present, and no bats were present.

However, to ensure the development would avoid any potential bat roosting ESHA, the Commission attaches **Special Condition 4 (Protection of Roosting Bat ESHA)**, which requires pre-construction surveys, submittal of survey results, and, if any roosting bats are observed, the installation of bat exclusion measures outside of the bat maternity season to prevent seasonal nesting habitat from becoming established during the construction period.

### Sensitive Bird ESHA

During nesting season (generally February 15 - August 31), vegetation removal and elevated noise from construction could interfere with avian mating and territorial defense calls, possibly inhibiting or delaying breeding. Construction noise and activities and human presence could result in nest abandonment or neglect or could disrupt foraging activity, reducing reproductive success. Proposed pile driving and hoe ram activity at Pudding Creek Bridge would produce airborne noise above ambient noise levels, and this elevated noise has the potential to lead to temporary hearing loss. Additionally, pile driving and hoe ramming would occur between June 15 and October 15, during the majority of the bird breeding season.

Surveys for active and remnant bird nests on the bridge were conducted on August 6, 2020. The bridge was surveyed by scanning with binoculars from below using a kayak and from the sides using a kayak and standing at the abutments during the middle of a sunny day with good lighting. No active or remnant bird nests were observed on the bridge structure.

To avoid sensitive nesting bird ESHA, Caltrans proposes the following specific measures:

- Vegetation removal would be restricted to the period outside of the bird breeding season (September 16 through January 31) or, if vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist no more than one week prior to vegetation removal in all areas where vegetation removal is required.
- To minimize the potential for temporary hearing loss or behavioral effects (such as nest abandonment) during the breeding season, migratory bird surveys would be conducted by a qualified biologist no more than one week prior to the initiation of pile driving to identify nesting birds within a 50-foot buffer of pile driving activities.
- Pre-construction surveys for active raptor nests within one-fourth mile of the project area would be conducted by a qualified biologist within 15 days prior to the initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance because of construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed), including Pudding Creek bridge, the cypress tree immediately northwest of the bridge, the groves of eucalyptus trees to the south of the southeast staging area, and trees along Pudding Creek banks within 0.25 mile of the project footprint.
- Partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 to September 15) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal.
- If an active nest were located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

To ensure that Caltrans will undertake development in compliance with the various proposed measures and that the proposed development does not encroach into environmentally sensitive nesting bird habitat areas and that development adjacent to sensitive nesting bird habitat will prevent impacts that would significantly degrade the sensitive nesting bird habitat and be compatible with its continuance of the habitat and the Commission attaches **Special Condition 3 (Protection of ESHA for Raptors and**

**Special Status Bird Species).** This condition requires that the buffer areas around discovered nests would be a minimum of 300 feet for raptors and 100 feet for other special status bird species.

#### Special Status Plant ESHA

Botanical surveys were conducted to document probable absence or presence of sensitive plant species within the project footprint as well as a 100-foot area around the project footprint. These surveys were initially conducted in April, June, and September 2014, and were repeated in May and July 2019. Although the California Native Plant Society (CNPS) inventory indicates several rare plants occur in the project region, none were observed in the project footprint or the surrounding surveyed area during the seasonally-appropriate floristic surveys.

#### Western Bumblebee ESHA

The Western bumblebee (*Bombus occidentalis occidentalis*) lives in annual colonies late February to early November that comprise a queen, workers, and reproductive members. The Western bumblebee has recently declined in abundance and distribution and is no longer present across much of its historic range (Xerces Society 2012). In California, populations of this bee are currently largely restricted to high elevation sites in the Sierra Nevada (Xerces Society 2012), though there are a few occurrences on the northern California coast (Xerces Society 2017).

The Western bumblebee sometimes inhabits bare soil areas and areas of ruderal grassland and herbaceous cover. The CNDDDB does not contain any records of Western bumblebee being collected in Fort Bragg since 1950. In addition, as the current vegetation at the Pudding Creek Bridge is degraded and routinely disturbed by mowing and road grading, no Western bumblebee habitat is likely to exist onsite.

#### Conclusion

As described above, the only ESHA known to exist in the project area is dune habitat located as close as 36 feet from a proposed construction staging area. The AMMs and BMPs proposed by Caltrans and required by Special Condition 2 will prevent impacts that would significantly degrade the dune ESHA and ensure the development is compatible with the continuance of the habitat. In addition, although no environmentally sensitive bat, raptor, or other special status bird nesting habitat is known to exist at the site, the proposed mitigation measures and the conditions of approval of the CDP will ensure that the project does not encroach into any such habitat that might become established at the site and maintain buffers around the habitat to avoid degradation of the habitat. Therefore, this project is consistent with Section 30240 of the Coastal Act.

#### **G. Hazards**

Section 30253 of the Coastal Act states, in applicable part, as follows:

*New development shall do all of the following:*

- a. *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- b. *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs ...*

The proposed project entails development of critical infrastructure<sup>3</sup> in an area subject to high geologic and flood hazards, including strong earthquake shaking and tsunami forces. While there are no known active or potentially active faults within the project limits, an offshore section of the San Andreas Fault is located six miles from the project site, presenting the potential for seismic impacts in the project area. The project is also within the tsunami hazard zone, although the bridge is fairly protected as the existing superstructure is on a bluff ranging from 39 to 48 feet<sup>4</sup> in elevation.

To be found consistent with Coastal Act section 30253, the proposed development must be sited, designed, and conditioned in a manner that minimizes risks to life and property in an area of high geologic and flood risks. In addition, the development must assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. At the same time, the development must protect coastal resources in a manner consistent with the other policies of Chapter 3 of the Coastal Act.

As part of the CDP application, Caltrans prepared and submitted various reports and materials, including, but not limited to, a Hydraulic Report, Bridge Inspection Report, Preliminary Foundation Report, Seismic Analysis Report, and seismic design data sheets.

### Seismic Hazards

The existing structure was built in 1959 and a seismic retrofit was completed in 1998. The seismic retrofit in 1998 consisted of installation of 48-inch-diameter concrete piles at each pier, widening and prestressing all bent caps, installing shear keys, bolting the girders together, and strengthening the abutments.

In designing this bridge update with a wider bridge deck and wider abutments, Caltrans used engineering criteria consistent with its Highway Design Manual standards to guide the design of the structural project components to withstand seismic hazards, including ground-shaking and liquefaction. Under the current Highway Design Manual standards, Caltrans designed the proposed bridge to avoid collapse due to ground-shaking during a 975-year Average Return Period (ARP) earthquake event, as well as a 975-year ARP tsunami event. A “975-year ARP” event has a 5% probability of occurring within a 50-

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<sup>3</sup> Highway 1 is the major north-south transportation connection for the region and serves as a main street for the City of Fort Bragg and is therefore critical infrastructure for the region.

<sup>4</sup> Elevations throughout Section G are in reference to NAVD88.

year time period. Additionally, in a seismic analysis check of the existing bridge, liquefaction risks were determined to be negligible during a 975-year ARP event.

In designing the project consistent with its standards, Caltrans has prepared various reports, such as those mentioned above, which have been submitted as part of the CDP application; these materials were reviewed by the Commission's Staff Geologist, Staff Engineer and Senior Engineer. Commission staff concurs the proposed project is consistent with standard safety requirements of the 975-year ARP threshold.

Although the bridge is designed to current Highway Design Manual specifications, in certain situations, projects may need to consider seismic and tsunami events larger than the 975-year ARP event. The California Building Code requires that many structures considered to be critical, such as hospitals, communication facilities, utility infrastructure, and high-occupancy buildings, be designed to remain functional or return quickly to use for a 2,475-year seismic event. Tsunamis were added to the 2018 edition of the California Building Code, with critical facilities required to remain functional or return quickly to use following a 2,475-year ARP tsunami event. These requirements in the California Building Code do not extend to roads and bridges; however, Pudding Creek Bridge is the lynchpin of one of the few major routes into and out of Fort Bragg and may be critical to recovery following a major earthquake or tsunami. As such it is reasonable to consider the implications of these requirements for this bridge as critical infrastructure.

With respect to seismic loads, Commission staff discussed with Caltrans staff whether the bridge could be evaluated to threats from the 2,475-year ARP event. This would require a lengthy and costly reevaluation of seismic design risks, dependent on additional funding and funding cycles for Caltrans that would delay and potentially jeopardize the project overall, which does have important safety improvements. Therefore, Caltrans stated that this analysis could not be completed. As noted above, the bridge has previously been robustly seismically retrofitted and according to Caltrans has approximately 15 times the ductility required for Caltrans standards, indicating that the bridge has been designed beyond the standards required for a 975-year ARP seismic event. Nonetheless, there remains some uncertainty whether both the existing and updated portions of the bridge would remain usable following a larger, 2,475-year ARP earthquake, and this risk should be considered in disaster planning.

Additionally, the water main that is proposed to be relocated onto the widened bridge structure is also considered critical infrastructure for the City of Fort Bragg, particularly for the areas of the city north of the bridge. Cranes would be used to place the pipe on rollers and then the pipe would be strapped to the pedestals on the bridge structure. These rollers would allow for some expansion and contraction of the pipe to help prevent failure during seismic activity and, in conjunction with flexible expansion joints at each end, would add resiliency to the water main. The portion of the pipe attached to the bridge would also be lined with flexible hose material to provide further protection against seismic activity. Additionally, the liner is designed to remain intact even if the water main experiences minor failures. These design features would help protect the City's water main from significant damage from a seismic event. Nonetheless, the water

main remains dependent on the bridge for its structural integrity and thus may be vulnerable to damage or failure during a very large or extreme earthquake event (e.g., 2,475-year ARP event). Similarly, the City sewer line that is currently attached to the existing bridge structure is proposed to remain attached to the widened bridge structure, but relocated 9.5 feet to the west to accommodate the project updates, as described in Section A. Although specific information about the design of the sewer line is lacking, it too may be vulnerable to significant damage and/or failure during a very large earthquake.

### Tsunami Hazards

Tsunami events occur when an underwater disturbance triggers a series of waves. The potential hazard for bridges may include flooding, uplift forces, the additional static and dynamic loads on the bridge structure, and the potential for high velocities to cause scour and undermine the bridge foundations.

The existing bridge is located within an area subject to tsunami risks. As with seismic hazards, Caltrans designed the bridge update with the 975-year ARP standard. According to Caltrans' Hydraulic Report dated October 26, 2020, the maximum wave height (MWH) elevation is 24.6 feet for the 975-year tsunami event. To account for total wave height, the tsunami wave height of 3.5 feet is added to MWH, for a total tsunami wave elevation of 28.1 feet. As mentioned above, the elevation of the existing superstructure is on a bluff ranging from 39 to 48 feet. The existing soffit elevation ranges from 36 to 45 feet, and the lowest bottom of the bridge's existing bent-cap elevation is approximately 33.1 feet. Therefore, the 975-year ARP tsunami wave elevation is below the bottom of the existing bent caps by at least about five feet. Using Caltrans standards, because the tsunami wave does not reach the superstructure or bottom of bent-caps, flooding vulnerabilities associated with a 975-year tsunami event, such as buoyant forces, would not be a concern for this bridge.

Along with flooding, the large flow of water in a tsunami over and around foundations as the water rushes in and then recedes can lead to significant scour. Scour effects may be intensified if the bridge is located over a creek, river, or other site where the return flow from a watershed area is concentrated due to local topography. Per Caltrans standards for existing bridges, the seismic evaluation must be based on long-term scour plus each seismic hazard (considered separately where long term scour considers the remaining life of the bridge and the Hydraulics Report prepared by Caltrans staff for the project). According to the Hydraulics Report, long term scour depth at Bents 2-8 is 1.4 feet, while the tsunami scour depth is three feet. The seismic analysis that was completed for the bridge conservatively assumes that the piles at these bents can remain stable with as much as 12 feet of scour below original grade. For the bridge abutments, no scour or erosion is anticipated due to their relatively high elevation above OHWM as well as the limited magnitude of flow in the creek. Therefore, Caltrans has determined that the bridge is not scour critical and the foundations are stable.

As discussed above, the California Building Code, following American Society of Civil Engineers (ASCE) 7-16 standards, now requires critical facilities to be designed to



remain functional or to return quickly to use following a 2,475-year ARP tsunami event. As noted above, these standards of the California Building Code do not apply to roads and highways, however Pudding Creek Bridge is still critical infrastructure. The ASCE provides online maps of the 2,475-year ARP tsunami to be used to help with design for critical facilities. It is important to note that the ASCE maps, while a useful tool, lack the spatial resolution needed to best understand site specific tsunami hazards. However, according to the ASCE maps, the tsunami wave runup elevation at Pudding Creek Bridge for the 2,475-year event is approximately 51 feet, which is significantly higher than the bent elevations, bridge superstructure, and abutments. Therefore, the bridge could be vulnerable to a 2,475-year tsunami event, though this is uncertain without having additional engineering analysis.

As Caltrans designed the bridge in compliance with current Highway Design Manual specifications, Caltrans has not undertaken an analysis for any tsunamis beyond the 975-year ARP event. For the same reasons noted above in the discussion of the 2,475-year seismic event, Caltrans found it infeasible and unnecessary for the timeline of the proposed project to complete an analysis of the effects of a 2,475-year tsunami event on the upgraded bridge structure.

As there are potential risks from exposure to extreme seismic and tsunami events beyond those currently required by the Highway Design Manual, and because Pudding Creek Bridge is an important route for ingress and egress during and after emergencies, Commission staff asked Caltrans to provide information on steps that could be taken in the event of such a major event impacting the bridge. In general, in such emergencies, Caltrans will work in coordination with the local governments, local emergency services, and the state highway patrol, to close the bridge while it is evaluated for damage. If the bridge is determined to be safe, the highway is reopened, and otherwise repairs are undertaken. Additionally, Caltrans submitted a copy of the City of Fort Bragg's Tsunami Contingency Plan that directs the public to travel eastbound, rather than north/south along Highway 1. However, the City's Tsunami Contingency Plan also notes that many people will be traveling on major highways in an effort to escape the coast and acknowledges Highway 1 is a major escape route.

To reinforce these measures and address concerns that an extreme 2,475-year seismic and/or tsunami event could occur during the project's estimated lifetime, the Commission attaches **Special Condition 12 (Seismic and Tsunami Hazard Response Plan)**. Special Condition 12 requires Caltrans to submit a Seismic and Tsunami Hazard Response Plan within one year of commencement of construction. The Condition requires that the plan include procedures to respond to a major seismic and tsunami event that could result in damage to or closure of the Pudding Creek Bridge, including procedures to warn the traveling public of the possible hazardous conditions, ensure adequate alternative evacuation routes, and, afterwards, to evaluate the condition of the bridge and the utility infrastructure attached to the structure (i.e., the City's water and sewer lines).

#### Sea Level Rise and Flooding Hazards

Pudding Creek is subject to sea level rise, storm surge, and tsunami impacts at the Highway 1 crossing, located approximately 2,600 feet (roughly half a mile) inland from the shoreline. According to the Federal Emergency Management Agency (FEMA) flood zone maps, the project area is located in Flood Zone A, which is used for areas where there is a 1% annual chance of flooding (i.e., at risk of inundation during the 100-year ARP flood event). Caltrans determined that the 100-year flood elevation at Pudding Creek Bridge is 11.8 feet. Since the bridge is elevated on a bluff, with the soffit elevation exceeding 36 feet and the lowest bottom of the existing bent-cap elevation being 33.1 feet, the highway, abutments, and bridge superstructure would not be inundated during a 100-year flood event.

As the existing bridge is considered critical infrastructure, per the Ocean Protection Council (OPC) and Coastal Commission's sea level rise policy guidance, a range of sea level rise projections including the H++ scenario should also be considered in evaluating the proposed project's exposure to future flood risks. In completing a sea level rise vulnerability assessment, Caltrans appropriately used projections from the OPC guidance for the Arena Cove Tide Gauge.

The appropriate time horizon to use to evaluate sea level rise depends on the anticipated duration of development, after which the development is expected to be removed, replaced, or redeveloped. The original Pudding Creek Bridge was built in 1959; however, as a seismic retrofit of the bridge was completed in 1998, Caltrans considers the beginning of the bridge service life to be 1998. Caltrans assigns a 75-year service lifespan to bridge structures; therefore, the bridge service life is currently planned to end in 2073. Caltrans will complete regular bridge inspections and maintenance over the bridge lifespan and will conduct a life-cycle cost analysis when considering bridge replacement at the end of its service life. Regardless, the bridge has been designed with Caltrans standards to be safe from hazards and serviceable to at least the year 2070.

Under the extreme risk aversion scenario (i.e., the H++ scenario), projections of sea level rise at the Arena Cove tide gauge are 5.0 feet by the year 2070 and 9.9 feet by the year 2100. The current mean higher high water elevation at the bridge is approximately 6.3 feet. Therefore, even considering an extreme risk aversion scenario of 9.9 feet of sea level rise by 2100, the bridge's superstructure would not be flooded or permanently inundated over the expected project life.

Therefore, the project minimizes risks from flood hazards, including projected future sea level rise.

#### Assumption of Risk

Finally, considering the risks discussed above, the Commission attaches **Special Condition 15 (Assumption of Risk, Waiver of Liability, and Indemnity Agreement)**, which requires the applicant to assume the risks of hazards to the property and waive any claim of liability on the part of the Commission. Given that Caltrans has chosen to implement the project despite the tsunami and seismic risks, Caltrans must assume the

risks. Special Condition 15 notifies Caltrans that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires Caltrans to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards.

For all the above reasons, the Commission finds that the proposed project, as conditioned, will minimize risks to life and property from geologic and flood hazards, consistent with Coastal Act section 30253.

## **H. Public Access**

Coastal Act section 30210 states:

*In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act section 30211 states:

*Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act section 30212(a) states, in part:

*Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected.*

Coastal Act section 30214 states:

*(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*

*(1) Topographic and geologic site characteristics.*

*(2) The capacity of the site to sustain use and at what level of intensity.*

*(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*

*(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.*

*(b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution.*

Highway 1 serves as an essential transit corridor for residents of the Mendocino Coast, is considered a Main Street for many of the communities, and is the only north-south travel corridor along the coast. Pudding Creek Bridge is an important transportation link providing essential public access to numerous coastal recreation points north and south and to the center of Fort Bragg.

Highway 1 in Mendocino County is legislatively designated as part of the Pacific Coast Bike Route (PCBR). The PCBR is internationally known and is traveled extensively in the summer months by cyclists from multiple countries. The California Coastal Trail (CCT) follows sections of Highway 1 within Mendocino County, when separate trails are unavailable. At this location the CCT and the PCBR run parallel and the west of Highway 1 along Old Haul Road, over a wooden trestle bridge. However, as mentioned above, due to Pudding Creek Bridge's proximity to the center of Fort Bragg, the section of Highway 1 that includes Pudding Creek Bridge remains an important transit corridor for pedestrians and cyclists as it is a shorter and more direct route than the CCT route to the west, on Old Haul Road.

Currently, cyclists are allowed to use the existing bridge. However, no separate bike lanes exist and the existing shoulders are overly small for cyclists (approximately two-foot-wide), who are thus forced into the main flow of traffic. Pedestrians currently have access to a six-foot-wide concrete sidewalk on both sides of the existing bridge. However, the sidewalks are unprotected (no pedestrian railing) and there are currently no sidewalks on the northern and southern roadway approaches to the bridge.

The purpose of the project is to bring the Pudding Creek Bridge up to current design and safety standards, ensuring it can continue to safely function as a needed public access transportation link. The project would include safety updates for active transportation and would have further public access improvements for bike and pedestrian users. The project would improve on current conditions by: (a) widening the shoulders within the project area (on the bridge structure and the northern and southern roadway approaches to the bridge) to eight feet, to provide adequate space for safe bicycle access and for automobile emergencies; (b) adding lighted pedestrian railings for improved and safer pedestrian access over the bridge; and (c) adding new six-foot-wide sidewalks on both sides of the highway from Pudding Creek Bridge south 430 feet to a point approximately 200 feet north of Elm Street and north approximately 250 feet

along the west side of the highway and approximately 150 feet along the east side of the highway.

### Traffic Impacts

Project construction may cause temporary delays during construction. As mentioned above, construction is anticipated to be completed in one season. Construction will occur eight hours per day, five days per week. Day work will typically begin as early as 6:00 a.m. and end by 6:00 p.m. to allow flexibility for the contractor depending on the type of work being performed on a given day. Construction will be conducted in a manner so that one half of the bridge will be closed at all times during construction to allow work on that side of the bridge, while the other side is kept open to the traveling public. Once the work on one side of the bridge is completed, the closed half of the bridge will be shifted to the opposite side. Therefore, a temporary signal system or flagging will be installed to provide one-way, reversible traffic control for 24 hours a day. These single lane closures are estimated to be needed for 115 working days.

Pedestrian and bicycle access will be maintained during construction. Pedestrians will be directed to the side of the bridge without active construction to use the existing or newly constructed sidewalk on the other side. Cyclists will be able to use the existing lane and shoulder open to vehicular traffic. Signs will be placed alerting motorists that the cyclists may use the full lane and cyclists will be instructed to join the vehicle queue during one-way-reversing traffic-control.

Caltrans also anticipates that the contractor will require 10-minute complete closures (stopping traffic in both directions, resulting in a maximum of 25-minute delays) to install and remove the temporary signal system, as well as for other minor activities, such as moving material or equipment, that may require a temporary traffic stop for public safety. Caltrans anticipates construction may require the road to be fully closed to all traffic up to 15 times for any activity that would impact public safety due to the size of the work area, the type of equipment, or the handling of materials. However, additional full closures may be needed for incidental purposes, Caltrans will also allow a full closure to occur on a Sunday through Thursday between 10pm and 4am (up to 6 hours). Emergency vehicles would continue to be accommodated during full closures. The contractor may request lane closures or full closures outside of the times listed in their contract with Caltrans for various reasons, such as to complete work sooner or to have materials delivered. These requests would be evaluated by Caltrans on a case-by-case basis during project construction and are not predictable.

Caltrans proposes to prepare a Transportation Management Plan (TMP) consistent with these terms, and subpart F of **Special Condition 1 (Final Construction Plans)** requires that the TMP be submitted for the Executive Director's review and approval. The TMP would include criteria for which a complete closure of the highway would be allowed.

### Staging Areas

Staging will primarily<sup>5</sup> occur on the southern portion of the paved shoulder connected to the road used to access Pudding Creek Beach from the highway, immediately north of the bridge and west of the highway. The northern portion of this paved shoulder is used as informal overflow parking, primarily for the public to access Pudding Creek Beach. The southern portion of this paved shoulder is generally used for staging of maintenance activities, although it is also occasionally used as an informal parking area. Caltrans proposes to limit staging for the project to the southern portion of this area north of the bridge (see Exhibit 10). While the southern end of the informal parking area can accommodate up to ten vehicles for parking, the public does not frequently park in this area, preferring to park at the northern end as this area provides more convenient access to Pudding Creek Beach. Additionally, there is formal parking for Pudding Creek Beach located nearby. To ensure that staging would be limited to and contained within the southern portion of the paved shoulder area north of the bridge, Caltrans proposes to install temporary fencing around the perimeter with gated entrances at the south and north end. This staging area is expected to be used by the contractor from December 2021 through at least December 2022.

Overall, the project will have minor, temporary impacts to public access through traffic delays and the use of paved roadway shoulder areas that can provide parking to access Pudding Creek Beach. The project retains informal parking near the bridge at the northern end of the paved shoulder near the access road to Pudding Creek Beach. Overall, the project improves public access by ensuring the safe and continued operation of this section of Highway 1, a vital coastal public access roadway; expanding shoulders for improved and safer cycling access; improving pedestrian access across the bridge; and creating new pedestrian sidewalk connections between north and south Fort Bragg, along the roadway approaches to the bridge. Therefore, the Commission finds that the proposed project, as conditioned, will not have a significant adverse effect on public access and is consistent with the requirements of Coastal Act sections 30210, 30211, 30212, and 30214.

## **I. Visual Resources**

Section 30251 of the Coastal Act states as follows:

*The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

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<sup>5</sup> Additional staging will occur outside of the coastal zone, on a privately owned equipment yard located immediately southeast of the bridge.

As described above in Section B (Project Location and Environmental Setting), Pudding Creek Bridge is located on Highway 1 at the northern end of the City of Fort Bragg in Mendocino County. The entire highway corridor within Mendocino County is known for enduring views of coastal bluffs and the Pacific Ocean. Highway 1 within the project limits is a rural-urban two-lane conventional highway and is functionally classified as a Minor Arterial Road. The posted speed limit south of the bridge is 35 miles-per-hour (MPH), and on the bridge and north is 45 MPH. The bridge crosses land that is classified by the City of Fort Bragg as open space with adjacent water recharge areas. The viewshed along Highway 1 in the Fort Bragg area changes at the Pudding Creek Bridge location due to the different landscape and land-use types south and north of the project site, from an urban setting to rural coastline. (See Exhibit 6 for photos of the existing bridge and landscape.)

The area around the bridge is vegetated with riparian mixed-shrub land cover. Riparian forest can also be seen further east in the creek corridor, as well as Pudding Creek Dam. The Pacific Ocean, coastal bluffs, beachline, and a wooden trestle bridge can be seen from the project site to the west. The wooden trestle bridge, which crosses Pudding Creek downstream, is highly visible from the project location and is a visual and historical resource to the area. As discussed above in Section H (Public Access), the wooden trestle bridge is part of Old Haul Road, which is part of the CCT. MacKerricher State Park is a unique dune system and inhabits a variety of wildlife, an important visual resource to the area that attracts nature watchers and recreationists. The project location is just south of the state park. High- and low-density housing can be seen on the bluffs in the midground west of the bridge, and hospitality services in the foreground to the east.

Caltrans has submitted a Visual Impact Assessment for the proposed project as well as a supplemental visual assessment for the proposed retaining wall. The proposed bridge upgrades will result in wider, eight-foot shoulders, separated pedestrian walkways, upgraded bridge rails, new pedestrian railings, new bridge lighting, and upgraded guardrail, among other more minor project components. Wider shoulders and separate pedestrian walkways will increase the scale of the bridge in the landscape when compared to existing conditions which are narrow and without a barrier between the traveled way and walkway. The proposed bridge structure will be 14 feet wider than the existing bridge.

#### Bridge Rail Design, Guardrail, and Permanent Lighting

The existing bridge has two "see-through" concrete barrier railings. Vehicle barrier railings will be upgraded to type ST-75 to meet current design standards and new pedestrian railings will be installed on both sides of the bridge. The proposed railing type is "see-through" and galvanized and will be painted or stained a burgundy-brown color, which will visually harmonize with the nearby wooden trestle bridge. The railing will also have context-sensitive architectural design elements (see Exhibit 6 for a rendering). While there would be wider openings on the new railings, there will be more horizontal and vertical lines than the current concrete barrier railings, particularly due to the addition of pedestrian railing, which will be a new visual element in the landscape.

Therefore, with the upgraded bridge railing and additional pedestrian railing, the new railings will be more noticeable in the landscape than the existing railings. However, due to the high see-through and aesthetic quality of both railings, it is anticipated that the visual character of the bridge will be enhanced, along with the increase in pedestrian and driver safety that the railings will bring.

Caltrans also proposes to install new bridge lighting in the new pedestrian rail. The bridge lighting will be recessed into the pedestrian railing and low to the ground, illuminating only the sidewalks and roadway. The lighting will be predominantly visible to viewers on the bridge and will light up the pedestrian walkway, increasing pedestrian safety, and highlighting the new decorative pedestrian rail. Neighbors who have views of the bridge will see a string of low-set lights illuminating the bridge. As there are other lights in the vicinity from residences, adjacent inns/hotels, and other businesses, the new bridge lights will not be incompatible with the existing visual character of the surrounding environment.

Existing guardrail at the ends of the bridge will be upgraded to the standard Midwest Guardrail System. The new guardrail will be approximately two inches taller than the existing guardrail and will be stained brown. As there is existing guardrail now, the overall length and size is short, and the guardrail will be colored, the guardrail upgrades will be compatible with existing conditions.

#### Retaining Wall

As described above in Section A (Project Description and Construction Process), to accommodate roadway widening and sidewalk installation, a 150-foot-long, two- to four-foot-high Type 6A standard plan retaining wall will be constructed southeast of the bridge, along the sidewalk from Manzanita Street southward to the first driveway. The proposed wall is a masonry style load bearing wall that will consist of individual concrete units that will be stacked in an alternating pattern and have a roughened surface face and color. The proposed wall will tie into an existing masonry type wall on Manzanita Street, adjacent to the location of the proposed wall. The existing wall is approximately two feet tall with a smooth grey block face texture and running bond pattern. There will be minor differences between the existing and proposed wall, including a slight color difference and rougher texture. The architectural design features for the proposed wall will maintain the visual quality along this section of Highway 1 and will be consistent with the visual character of other wall features within the city.

#### Vegetation Removal

As discussed in other sections of this report, the project will require the removal of existing vegetation, primarily on the banks of Pudding Creek, for various construction activities and components of the proposed project. However, existing vegetation within the project area is largely degraded with a significant number of non-native plants, and disturbed areas that will not be permanently filled would be restored and replanted with native vegetation with efforts to control invasive species after construction is complete (See Section D, above). Therefore, visual impacts from vegetation removal will be relatively minor and mostly temporary.



### Other Project Features

Some of the existing signage in the project area will be relocated to accommodate the road widening and new sidewalks, but no new signage is proposed. Thus, there are no associated visual impacts associated with signage. A utility pole will also need to be relocated to accommodate the project; however, it is currently located on the inland side of the Highway, southwest of the bridge, and will only be shifted 25 feet south. Due to the use of the paved shoulder northwest of the bridge as a staging area, there will be construction equipment and construction activity temporarily in the viewsheds of the project area; however, staging will occur for a limited period of time and the area occupied would be restricted via placement of temporary fencing. Additionally, the exposed sewer main and water main that will be attached to the widened bridge structure will be painted grey to match the concrete bridge structure and thus blend in visually, minimizing any associated visual impacts.

Overall, the proposed project will maintain scenic views in the project area and bridge upgrades will ultimately enhance the visual quality of the bridge due to more architecturally interesting and context appropriate railings and additional separated pedestrian walkways for the public to view the surrounding landscape. The proposed development as conditioned is consistent with section 30251, as the development will protect views to and along the coast, minimize the alteration of natural landforms, and will be compatible with the character of the surrounding area.

### **J. Archaeological Resources and Tribal Consultation**

Section 30244 of the Coastal Act states as follows:

*Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The project area lies within the traditional territory of the Northern Pomo, one of seven tribes who spoke languages of the Pomoan linguistic family. The Northern Pomo generally lived in the interior country but had favorite coastal temporary camps and food collecting areas. Northern Pomo territory extended from the west shore of Clear Lake to the Pacific Ocean, encompassing coastal lands from Cleone south to the Navarro River. Today, many Tribes reside in the larger geographic area, including but not limited to the Sherwood Valley Rancheria, the Potter Valley Tribe, Stewarts Point Rancheria, and Redwood Valley Rancheria.

As part of the CDP application, a registered professional archaeologist from Caltrans prepared and submitted a Historic Property Survey Report and an Archaeological Survey Report. The archaeological survey identified one cultural resource site located approximately outside of the area of the project's Area of Potential Effects, which was established as encompassing all areas of potential direct and indirect project impacts that could occur as a result of the proposed project. Due to the proximity of the cultural resource site to the project, it was incorporated into the Area of Potential Effects and

established as an Environmentally Sensitive Area (ESA), to ensure it would be temporarily fenced off and therefore protected during project construction.

Caltrans sent consultation initiation letters to the Tribes on the Native American Heritage Commission (NAHC) list of potentially interested Tribes and individuals and received a consultation request from the Sherwood Valley Band of Pomo. Due to the archaeological sensitivity of the general area of the proposed project, the presence of a cultural resources ESA, and at the request of the Sherwood Valley Band of Pomo, Caltrans has proposed to have both a Tribal monitor and a qualified archaeological monitor present during all soil movement activities associated with the proposed project. Additionally, if previously unidentified cultural materials are unearthed during construction, Caltrans proposes to halt work in that area until a qualified archaeologist can assess the significance of the find. In the unlikely event that fossils are encountered during project excavations, Caltrans would follow their standard procedure where all work within 60 feet would stop, the area around the fossil would be protected, and the Resident Engineer and all relevant Tribes would be notified.

In reviewing the subject application, Commission staff sent a referral package to the Tribal contacts recommended by the NAHC and additional potentially interested Tribes and individuals on June 18, 2021, including a project description and measures proposed by Caltrans to protect archaeological and Tribal resources. No responses have been received.

To reinforce Caltrans proposed measures to protect any sensitive archaeological resources in the project area, the Commission includes **Special Condition 6 (Protection of Archaeological Resources)**. **Special Condition 6** requires that an archaeological monitor be present during any ground disturbance activities and requires notification of the relevant Tribal representatives prior to commencement of ground-disturbing activities to invite a Tribal monitor to be present. To ensure protection of any archaeological resources that may be discovered at the site during project construction, Special Condition 6 also requires that if an area of cultural deposits or human remains is discovered during the course of the project, all construction must cease and a qualified cultural resource specialist, in consultation with the Tribe, must analyze the significance of the find. To recommence construction following discovery of cultural deposits or human remains, the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director and obtain a permit amendment for changes the Executive Director determines are not de minimis in nature and scope.

Therefore, the Commission finds that the development, as conditioned, is consistent with Coastal Act section 30244.

#### **K. Reimbursement of Costs and Fees**

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. See also 14 C.C.R. § 13055(g). Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP

application. Therefore, consistent with Section 30620(c), the Commission imposes **Special Condition 16** requiring reimbursement of specified costs and attorneys' fees the Commission incurs in connection with the defense of any action brought by a party other than the applicant/permittee challenging the approval or issuance of this permit.

#### **L. California Environmental Quality Act (CEQA)**

Caltrans served as the lead agency for California Environmental Quality Act (CEQA) purposes for the bridge widening project. Caltrans prepared an Initial Study and adopted a Negative Declaration for the project on October 6, 2020. Separately, as the lead agency for the water main relocation component of the proposed project, the City of Fort Bragg determined the water main relocation project to be categorically exempt from environmental review pursuant to section 15301(b) of the CEQA guidelines.

Section 13096 of Title 14 of the Commission's regulations requires Commission approval of CDP applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirement of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment. The Commission's regulatory program for reviewing and granting CDPs has been certified by the Resources Secretary to be the functional equivalent of environmental review under CEQA. (14 CCR § 15251(c).)

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. No public comments regarding potential significant adverse environmental effects of the project were received by the Commission prior to preparation of the staff report. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative, has no remaining significant environmental effects, either individual or cumulative, and complies with the applicable requirements of the Coastal Act to conform to CEQA.

1-21-0074 (Caltrans)

## **APPENDIX A**

### **SUBSTANTIVE FILE DOCUMENTS**

1. CDP Application File No. 1-21-0074
2. City of Fort Bragg Certified Local Coastal Program