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STAFF REPORT: CDP HEARING

Application Number: 3-19-1199

Applicant: California Department of Transportation (Caltrans)

Project Location: Northbound Highway 1 at the crossing of Toro Creek, approximately 0.5 miles north of the City of Morro Bay and 0.5 miles south of unincorporated Cayucos, San Luis Obispo County.

Project Description: Deconstruct the existing, two-lane northbound bridge and replace it with a new bridge with two traffic lanes, standard bridge railings and shoulders, and a Class III bicycle lane.

Staff Recommendation: Approval with Conditions.

SUMMARY OF STAFF RECOMMENDATION

The California Department of Transportation (Caltrans) proposes to replace the northbound Highway 1 bridge over Toro Creek, located between the city of Morro Bay and the community of Cayucos in San Luis Obispo County. The existing bridge is seismically deficient and has sub-standard shoulders and bridge railings, all of which collectively pose a public safety hazard. The proposed bridge would comply with current seismic, hydraulic, and structural standards. The proposed bridge would maintain the existing bridge's approximately 130-foot length and two lanes of northbound highway traffic, and would provide public safety improvements including standard bridge railings and standard shoulders that will accommodate a Class III bicycle path. The bridge approaches would be modified to match the existing roadway with the proposed bridge.

Roadside guardrails in the northbound outside shoulder and median would be upgraded and reconfigured to improve public safety. The project also includes relocation of existing utilities, and minor drainage improvements.

The proposed project would result in a total of 0.1 acres of impacts to coastal wetlands and riparian habitat within, and adjacent to, Toro Creek. Staff has concluded that (1) the fill associated with the public safety improvements to the existing highway is for an incidental public service purpose, a permissible use under Coastal Act Section 30233(a)(4); (2) there are no less environmentally damaging feasible alternatives to the project as recommended; and (3) the development, as conditioned, includes all feasible mitigation measures to minimize the environmental impacts of the proposed fill activities. Regarding alternatives, staff recommends the Commission find that there is no feasible less environmentally damaging alternative to the proposed project as conditioned because the other identified alternatives would result in more significant impacts to wetlands, habitat, public access, and visual resources. Caltrans will perform mitigation on site for habitat and wetland impacts, including seed application, the use of container plants with irrigation during the period of plant establishment, and various forms of erosion control. To ensure that the mitigation meets the proposed performance standards, the project is conditioned to require Caltrans to submit annual monitoring reports to the Executive Director for five years following implementation.

In order to be found consistent with the coastal hazards policies of the Coastal Act, it is critical to assess sea level rise vulnerabilities over the entirety of a development's design life, especially for critical public infrastructure. In this case, based on best available science, the proposed bridge has minimal risk to be impacted by SLR-related impacts during its 75-year design life. However, given that SLR will pose a threat to the highway corridor between northern Morro Bay and southern Cayucos (including the highway and the bridge), and may impact the proposed bridge toward the end of this century, the project is conditioned to require Caltrans to assume the risk of development and to undertake long-term sea level rise adaptation planning for the project area in coordination with the Coastal Commission, San Luis Obispo County, and the City of Morro Bay. In the near term, the proposed bridge will provide the necessary public safety improvements with minimal impacts to coastal resources, and does not preclude Caltrans from any future adaptation strategies.

In short, the proposed bridge replacement is necessary and appropriate to provide safe public access to and along the shoreline; it will avoid and otherwise limit adverse impacts to coastal wetlands, riparian and in-stream habitat, marine resources, and water quality; it will ensure long-term resilience of the highway corridor; and it will protect and enhance public access, visual resources, archaeological resources, and other coastal resources to the maximum extent feasible, as described in more detail in this staff report. Thus, staff recommends that the **Commission approve a CDP with conditions**. The motions and resolutions to act on this recommendation follow below on page 4.

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EXHIBITS

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Exhibit 2 – Project Site Aerial Photos

Exhibit 3 – Project Site Photos

Exhibit 4 – Project Plans (Excerpts)

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Exhibit 6 – Project Impacts Map

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I. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a CDP for the proposed development. To implement this recommendation, staff recommends a **YES** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion: *I move that the Commission **approve** Coastal Development Permit Number 3-19-1199 pursuant to the staff recommendation, and I recommend a **yes** vote.*

Resolution to Approve CDP: *The Commission hereby approves Coastal Development Permit Number 3-19-1199 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 an extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or 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 Project Plans.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two full-size sets of the Final Project Plans to the Executive Director for review and written approval. The Permittee shall undertake development in accordance with the approved Final Project Plans. Any proposed changes to the approved Final Project Plans shall be reported to the Executive Director. Minor adjustments to the approved Final Project Plans may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary by the Executive Director; and (2) do not adversely impact coastal resources.
2. **Final Stormwater Pollution Prevention Plan.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two copies of the Final Stormwater Pollution Prevention Plan (SWPPP) to the Executive Director for review and written approval. The SWPPP shall include all housekeeping, source control, and treatment control best management practices (BMPs) that will be used during construction and will be updated as needed to reflect progression and phasing of the project. The Permittee shall undertake development in accordance with the approved SWPPP. Minor adjustments to the approved SWPPP may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary by the Executive Director; and (2) do not adversely impact coastal resources.
3. **Other Agency Approvals.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review a copy of a valid permit, letter of permission, or evidence that no permit is necessary from all other entities with review authority over the proposed project, including at a minimum the Regional Water Quality Control Board and the California Department of Fish and Wildlife. The Permittee shall inform the Executive Director of any changes to the project required by any other such 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.
4. **Construction Requirements.** The Permittee shall undertake construction in accordance with the following construction requirements:
 - (a) **Construction Areas.** Areas within which construction activities and staging are to take place shall be minimized in size and shall be sited and designed to avoid impacts on coastal waters and marine life, and to the extent feasible, public access to the water and shoreline. Construction (including but not limited to storage of materials and/or equipment) is prohibited outside of the defined construction, staging, and storage areas.
 - (b) **Construction Methods and Timing.** Methods shall be used to keep the construction areas, separated from public recreational use areas (including using unobtrusive fencing or equivalent measures to delineate construction areas).

During construction, in-stream work shall only take place between June 1st and October 31st in any given year, when the surface water within drainages is likely to be dry or at seasonal minimum. Deviations from this work window may only be made with written permission from the Executive Director.

- 5. Biological Mitigation Monitoring Reports.** Following the initial implementation of the proposed biological mitigation, and by December 31st of each year for five (5) years, the Permittee shall submit, for Executive Director review and written approval, an annual monitoring report prepared by a qualified biologist. Each monitoring report shall document progress toward meeting the performance standards contained in the Mitigation and Monitoring Plan, and describe any corrective measures taken to ensure success and consistency with the Mitigation and Monitoring Plan.
- 6. Coastal Hazards Analysis and Adaptation Planning.** By 2040, the Permittee shall submit, for review and approval by the Executive Director, a site-specific analysis to determine when and under what conditions the Highway 1 bridges over Toro Creek will be at risk of damage resulting from coastal hazards (e.g., sea level rise, flooding, erosion) under a variety of scenarios using the best available science. The analysis shall also consider a range of adaptation options to address identified vulnerabilities that will ensure continued access along the Highway 1 corridor and will minimize impacts to coastal resources. All such analysis and considerations shall be conducted in a collaborative, multi-agency planning process including the Permittee, the Coastal Commission, San Luis Obispo County, the City of Morro Bay, and others as necessary, as set forth in State planning guidelines and the Caltrans and Coastal Commission Plan for Improved Agency Partnering. If the analysis determines that the bridges require modifications to minimize hazards and ensure structural stability, then the Permittee and Commission staff shall collaborate to develop plans for such modifications so as to ensure continued access through the corridor while protecting coastal resources as required by the Coastal Act, and the Permittee shall submit an application seeking authorization for such modifications, as necessary.
- 7. Coastal Hazards Risk.** By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns, to all of the following: (a) that the site may be subject to coastal hazards, including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, tsunamis, tidal scour, coastal flooding, landslides, bluff and geologic instability, bluff retreat, liquefaction and the interaction of same, many of which may 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.

IV. FINDINGS AND DECLARATIONS

A. Project Location and Description

Project Location

The proposed project is a bridge located along northbound Highway 1 where it crosses Toro Creek (at postmile (or PM) 32.61), approximately 0.5 miles north of Morro Bay and 0.5 miles south of Cayucos in San Luis Obispo County. The existing northbound bridge is approximately 130 feet long and spans Toro Creek, with a similar bridge located approximately 50 feet to the west serving southbound Highway 1. The one-mile segment of Highway 1 through this corridor (i.e., from PM 32.2 to 33.2) between northern Morro Bay and southern Cayucos is a four-lane divided highway, with twelve-foot-wide lanes and shoulders that are generally around 10 feet wide. Landscaping in the highway right-of-way is minimal to moderate, and mostly consists of scattered trees, shrubs, and naturalized grasses. This stretch of Highway 1 is located on a gently-sloped marine terrace situated between the Pacific Ocean and a series of low foothills rising up to the Santa Lucia mountain range. The vegetation of the surrounding open space is predominantly denuded grassland and scattered coyote brush, with natural stands of oak, sycamore, and pine trees at lower elevations primarily on the north and east-facing slopes.

Highway 1 generally parallels the coastline in this area and serves as the primary transportation corridor between the communities of Morro Bay and Cayucos, while also providing access to the beaches of northern Morro Bay. Highway 1 intersects with Toro Creek Road (approximately 1,000 feet north of the bridges) and Hill Plant Road (approximately 450 south of the bridges), which both run inland up into the coastal mountains. Public beach parking is located on the seaward side of southbound Highway 1 at each of these intersections, and such parking is accessible from the northbound highway via left turn lanes.

Toro Creek originates in the Los Padres National Forest approximately seven miles northeast of the project site. From its headwaters, Toro Creek flows roughly north to south, then northeast to southwest, passing just north of the defunct Chevron Estero facility, through the vicinity of the northbound and southbound Highway 1 bridges before reaching the Pacific Ocean. Toro Creek is a perennial stream and ranges seasonally from approximately 12 feet wide and 6 inches deep to as much as 50 feet wide and 3 feet deep. Habitat east (upstream) and below the bridges is primarily central coast scrub, willow riparian scrub, and coastal wetlands, and serves as potential habitat for multiple special-status species including south-central California coast steelhead, tidewater goby, and California red-legged frog. Habitat west (downstream) of the bridges is foredune and sandy beach. For a significant portion of the year, a sandbar blocks the mouth of Toro Creek from entering the ocean approximately 300 feet west of the northbound bridge, resulting in the formation of a small lagoon immediately west and below the highway bridges.

See **Exhibit 1** for a project location map, **Exhibit 2** for aerial photos of the project site, and **Exhibit 3** for other project site area photos.

Project Description

The proposed development includes replacement of the existing northbound Highway 1 bridge over Toro Creek (see **Exhibit 4** for excerpted project plans). The existing bridge is past its design life, having been built in 1942, and is seismically deficient by current design standards. In addition, the existing bridge roadway has only one-foot-wide shoulders, which are unusable by motorized, bicycle, and pedestrian traffic. The bridge also has non-standard bridge railings.

The Applicant proposes to construct a new northbound bridge with a 5-foot-wide inside shoulder, two 12-foot-wide lanes, and a 10-foot-wide outside shoulder.¹ The proposed bridge would maintain the existing two-lane northbound highway configuration and would meet modern safety standards for bridge railings and shoulder widths. The new 10-foot-wide outside shoulder would accommodate a Class III bicycle lane to provide bicycle connectivity along the northbound highway between Morro Bay and Cayucos, and would also allow vehicles to pull completely off of the roadway in an emergency. Collectively, the proposed improvements will increase highway safety for vehicular traffic and cyclists.

The highway lanes connecting to each end of the bridge would be repaved to conform to the new bridge's roadway. Roadside guardrails along the northbound outside shoulder and in the highway median would be upgraded and reconfigured to improve public safety. All existing guardrails immediately north and south of the bridge will be removed and replaced with a standard Midwest Guardrail System (or MGS) style guardrail, which is approximately three inches taller but maintains a similar visual profile to the existing guardrails. In the northbound outside shoulder at the southern approach to the bridge, the replacement guardrail will extend approximately 100 feet farther south than the existing guardrail. In the medians north and south of the bridge, the northbound and southbound guardrails will be reconfigured into a V-shape that gradually merges into a single median barrier (see pages 3, 4, and 8 of **Exhibit 4**).

The project also includes relocation of existing utilities, and minor drainage improvements to prevent erosion (see pages 10 and 14 of **Exhibit 4**). The Cayucos Sanitary District (CSD) owns two 12-inch sanitary sewer lines that currently are attached to the east side of the northbound bridge. These lines will be temporarily relocated to a crossing east of Highway 1 during the construction of this project. Permanent relocation of the lines is still under evaluation by the CSD. Chevron also owns a five-foot-diameter concrete culvert, an eight-inch-diameter oil pipeline, and a three-inch-diameter water line underneath the southwest corner of the northbound bridge. The CSD is taking ownership of the culvert, and Chevron will abandon or remove the oil and water pipelines.²

¹ When traveling on the highway, the right side shoulder is considered the "outside" shoulder, and the left side shoulder is considered the "inside" shoulder.

² CDP 3-19-0617 (Cayucos Sustainable Water Project).

Prior to bridge construction activities, Caltrans will clear and grub vegetation to provide access into the stream channel on either side of the bridge. Access to the streambed may involve grading the slope near the bridge to provide a temporary construction access ramp. Removal of vegetation along the streambed will be minimized to the extent feasible, but some removal is necessary to allow for equipment access, demolition of the existing bridge, and eventual pile, column, and new bridge construction.

Construction staging and storage areas would be located within the current alignment along Highway 1 and partially within already disturbed areas within the existing Caltrans right-of-way. Access to the stream for instream work would likely occur from the area southeast of the existing southern abutment of the northbound bridge. A 20-foot-wide temporary access ramp would be graded to provide access to the creek and bridge structure for materials, machinery, and workers. Construction access may also occur within the highway median between the northbound and southbound bridges.

Stream dewatering would be employed to isolate the work area from flowing water. To provide a temporary construction space elevated out of the active stream channel, Caltrans will construct a temporary gravel work pad for performing demolition and construction work (see pages 5-6 of **Exhibit 4**). Prior to installation of the gravel pad, qualified fisheries biologists will capture steelhead and other native aquatic species via nets and relocate these species to suitable habitat upstream or downstream. After fish capture and relocation have been completed, Caltrans will install straw gabion barriers immediately upstream and downstream of the bridge site, and will also install non-woven geotextile fabric across the dewatered creek bottom between the gabion barriers to protect creek substrate. Pass-through pipes on the creek bottom will be installed over the geotextile fabric to allow for water flow and fish passage during any dry season storm events that may result in temporary high water stream flows. Caltrans will then construct the gravel fill work pad over the geotextile fabric between the gabion barriers, which will cover the pass-through pipes and temporarily fill the project work site to an elevation above the ordinary high water mark.

After removal of the existing northbound bridge, two bridge piers would be installed in the creek bed to support the new bridge. Each bridge pier would be supported by four 24-inch-diameter piles, for a total of eight piles (see page 7 of **Exhibit 4**). Compared to the 21 16-inch-diameter piles supporting the existing bridge, the new piles will provide a 15% reduction in the footprint of fill in the creek bed. Piles would be installed using vibratory or oscillatory methods rather than by impact pile driving to minimize hydroacoustic impacts. Piles will be installed to a depth of 36 feet. Once the new foundation is in place, a new bridge with a pre-cast, pre-stressed concrete voided slab deck will be installed.³ The new bridge deck would be approximately 131 feet long, 48 feet wide, and 1.75 feet deep, with an area of approximately 6,288 square feet. Cranes

³ Using a pre-cast deck eliminates the need for falsework (i.e., temporary framework structures that support a separate structure while it is being built), and thus reduces the amount of construction that needs to be done on-site.

will be used to place the pre-cast bridge deck in three sections onto the completed bents and columns, followed by bridge deck post-tensioning.⁴

Prior to construction, the existing rock slope protection (RSP) located along the streambanks will be removed. After bridge construction, new RSP that will occupy approximately 0.02 acres of streambank will be placed to protect the new bridge from scour.

Once construction is complete, Caltrans will remove the gravel pad, the pass-through pipes, and the geotextile fabric from the streambed, and will restore the streambed to as close to pre-construction conditions as feasible. All in-stream work will be limited to the “dry” season (here defined as June 1st to October 31st) to minimize stream impacts.

The estimated total number of construction days is 270, with construction beginning in February 2021 and ending in October 2021. A median crossover will be in place for approximately 170 days of the total construction period to redirect all highway traffic over the southbound bridge, with one traffic lane moving in each direction (see pages 11-13 of **Exhibit 4**). Caltrans will implement a public awareness campaign prior to beginning construction and as needed during construction to ensure the public is aware of the construction activities and traffic lane changes. Temporary detours will be provided in order to maintain access along Highway 1 for all users. The project will not interfere with existing public access or existing roadside parking areas that provide public access to the shoreline. No construction staging will take place in the existing parking areas that provide for beach access immediately seaward of southbound Highway 1.

The proposed project will result in a total of approximately 0.1 acres of impacts to coastal wetlands and riparian habitat within and adjacent to Toro Creek. Following construction, Caltrans will perform mitigation on site for habitat and wetland impacts. This will be accomplished with seed application, irrigated container planting, and various forms of erosion control (see pages 15-19 of **Exhibit 4**). Caltrans will monitor and maintain the on-site mitigation areas for five years after planting to ensure that site conditions meet the success criteria established in the Mitigation and Monitoring Plan.

B. Jurisdiction and Standard of Review

Under Coastal Act Section 30601.3, when a project requires a CDP from both a local government with a certified Local Coastal Program (LCP) 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 consolidate the coastal permit processing. The legal standard of review for a consolidated CDP is Chapter 3 of the Coastal Act, with the policies of each relevant, certified LCP providing non-binding guidance.

⁴ Post tensioning is a technique for reinforcing concrete by applying tension (i.e., tightening) to reinforcing rods after the concrete is installed.

The proposed project includes development that is located within the LCP jurisdiction of the City of Morro Bay, the LCP jurisdiction of San Luis Obispo County, and the Commission's original, or retained, jurisdiction. On May 3, 2019, the City of Morro Bay requested that this project be reviewed through the consolidated CDP process under Section 30601.3 of the Coastal Act. On July 22, 2019, San Luis Obispo County requested the same. The Applicant has also requested a consolidated CDP for the portions of the project within the City and County's jurisdiction, and the Executive Director has agreed.

Therefore, the policies of Chapter 3 of the Coastal Act provide the legal standard of review for the proposed development. The policies of the City of Morro Bay certified LCP and the San Luis Obispo County certified LCP may be considered as non-binding guidance.

C. Wetlands, ESHA, and Water Quality

Existing Conditions

Toro Creek is a seasonally variable stream that ranges from approximately 12 feet wide and 6 inches deep to as much as 50 feet wide and 3 feet deep. Toro Creek provides habitat for the following Federal Endangered Species Act (FESA) listed species: tidewater goby (*Eucyclogobius newberryi*), California red-legged frog (*Rana draytonii*), and south-central California coast steelhead (*Oncorhynchus mykiss*), a distinct population segment. The project occurs within federally designated critical habitat for tidewater goby and south-central California coast steelhead. The riparian community along Toro Creek, which will be subject to grading during project construction, may also support least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*), both of which are federally listed as endangered. All of these resources are covered by protection measures identified in the Section 7 process and defined in the Biological Opinions for the project from the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS).⁵

In 2017, Caltrans conducted a wetland delineation of the project area based on the Ordinary High-Water Mark (OHWM) of Toro Creek. Riparian boundaries were measured from the channel bed to the top of a bank or to the outer edge of the riparian canopy, whichever was greater.

Within the project site and just upstream (east) of the bridge, Caltrans found occasional fringes of coastal brackish marsh along the edges of the wetted portion of the channel. The primary vegetation communities of these marshy areas includes alkali bulrush (*Bolboschoenus maritimus*), common threesquare (*Schoenoplectus pungens*), and tall flatsedge (*Cyperus eragrostis*). Broad-leaf cattail (*Typha latifolia*) becomes dominant

⁵ The "Section 7 process" is the process required by Section 7 of the federal Endangered Species Act (16 U.S.C. § 1536) for federal agencies to ensure that their activities will not jeopardize the continuing existence of a listed species.

along the southern edge of the channel further upstream. The wetlands delineated along the northern edge of the channel included indicators for hydrology, hydric soils, and hydrophytic vegetation. Along the southern edge of the channel just upstream of the bridge, a vegetated sandbar is present, dominated by silver weed cinquefoil (*Potentilla anserina*), low bulrush (*Isolepis cernua*) and common threesquare. All of these areas are considered wetlands by the Coastal Commission.

On the northern bank of Toro Creek, central coast riparian scrub is the dominant vegetation community, composed of arroyo willow and marsh baccharis, with lesser amounts of small fruited bulrush (*Scirpus microcarpus*) and California blackberry (*Rubus ursinus*) as understory co-dominants. The edges of the banks of Toro Creek are vegetated by poison oak (*Toxicodendron diversilobum*), California blackberry, and various non-native grasses and forbs. An area of roughly 0.012 acres along the northern bank beneath both bridges is currently armored with rock slope protection (RSP). This RSP will be removed, and after completion of construction approximately 0.02 acres of RSP will be placed on both stream banks on either side of the bridge.

Chapter 3 Analysis

The Coastal Act protects the marine resources and habitat at this location and offshore. Section 30230 of the Coastal Act states:

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 maritime environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy population of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

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 effect of waste water discharges and entrainments, 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.

In addition, Section 30233 of the Coastal Act addresses the filling of coastal waters and states, in relevant part:

(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:

- 1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities;
- 2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basin, vessel berthing and mooring areas, and boat launching ramps;
- 3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities;
- 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;
- 5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas;
- 6) Restoration purposes;
- 7) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(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 30240 of the Coastal Act protects environmentally sensitive habitats and sensitive species:

- (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 recreation areas.

Section 30233 sets standards for diking, filling, and dredging of wetlands and open coastal waters. Coastal Act Section 30108.2 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.” The Commission has long considered grading, excavating, and other ground-disturbing activities in coastal wetlands and estuaries to be a form of dredging.⁶

Filling, diking, or dredging in wetlands is permissible under Section 30233 if: (1) it is for one of the seven allowable uses listed under Section 30233(a)(1)-(7), (2) there is no feasible less environmentally damaging alternative, and (3) feasible mitigation measures have been provided to minimize adverse environmental effects.

The proposed project consists of safety improvements within the existing highway corridor, namely the replacement of an aging, deteriorated bridge with a new bridge that meets current safety standards while decreasing the pile footprint in the creek. Although the new bridge will be wider in order to meet current safety standards, these highway safety improvements do not increase the overall highway service capacity or expand the highway to areas not already served by the existing system. No new highway lanes through the corridor are being added, and the project is not intended to allow for roadway expansion in the future. Rather, this project allows the existing capacity to operate more safely and with less impact to the surrounding environment. Given that the bridge replacement is driven by safety needs, combined with the fact that the overall number of highway lanes is not being increased and the amount of fill in the creek is being reduced, the Commission finds that the proposed project would not increase overall highway capacity, and that the fill (i.e., new pilings) is for an incidental public service purpose necessary to safely maintain existing capacity.

As discussed in the “Alternatives Analysis” section below, the Commission also finds that the proposed development is consistent with the second test of Section 30233(a) because there is no feasible less environmentally damaging alternative to the proposed project as conditioned. The Commission finds thus because the other identified alternatives would result in more wetland fill, would have significant other coastal resource impacts, and/or would fail to accomplish the necessary safety improvements in a manner that maximizes safe public access to and along the coast.

Therefore, the Commission finds that for the reasons discussed above, the wetland fill for the proposed project is for an incidental public service purpose, and thus, is an allowable use pursuant to Section 30233(a)(4) of the Coastal Act.

Fill and Allowable Uses

In the past, the Commission has determined that the fill for certain highway safety improvement projects that did not increase vehicular capacity could be considered an “incidental public service” pursuant to the requirements of Coastal Act Section 30233(a)(4). These actions have included road widening, road realignments, and bridge

⁶ E.g., CDPs 1-06-036 (McDaniel Slough Wetland Enhancement Project), 1-08-012 (Northcoast Regional Last Trust), 1-08-020 (Miller), 1-09-020 (Fickle Hill Creek Restoration), 1-09-030 (Lower Jacoby Creek Estuary Enhancement), and 1-10-032 (Humboldt County RCD).

replacements.⁷ That such highway safety improvements can be considered to be for incidental public service purposes under Section 30233(a)(4) is supported by the Commission's 1981 statewide interpretive guidelines ("Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas" (hereinafter, the "Guidelines")). The Guidelines analyze the allowable uses in wetlands under Section 30233, including the provision regarding "incidental public service purposes." In a footnote to that definition (no. 3) the Guidelines state: "When no other alternative exists, and when consistent with the other provision of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted." This interpretation was upheld by the Court of Appeal in *Bolsa Chica Land Trust et al. v. Superior Court ("Bolsa Chica")* (1999) 71 Cal.App.4th 493, 516, which agreed with Commission's interpretation in the Guidelines and the footnote definition.

Section 30233 has been interpreted to allow for dredging and fill of wetlands, despite impacts to ESHA, subject to certain criteria and importantly including that such projects incorporate feasible mitigation measures. As stated by the court in *Bolsa Chica*:

...the ESHA protections provided by section 30240 are more general provisions and the wetland protections provided by section 30233 are more specific and controlling when a wetland area is also an ESHA.... Section 30240, a more general policy, also applies, but the more specific language in the former sections is controlling where conflicts exist with general provisions of Section 30240. (*Id.* at 515.)

As such, the aspects of the proposed project which result in or are related to the dredging and fill of wetlands and open coastal waters that are also considered ESHA may be allowed if all requirements of Section 30233 are met.

As mentioned above, the proposed dredging and fill in the proposed project falls under one of the seven allowable uses listed under Section 30233(a)(1)-(7). Section 30233(a)(4) is the relevant allowable use here and authorizes wetland fill for: "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." To qualify as an incidental public service purpose, the fill of coastal waters being undertaken must demonstrate that: (a) it provides a "public service" insofar as it confers benefits to the public, either at large, or to those served by the public entity; and (b) is "incidental," within the meaning of that term as it is used in the Coastal Act (i.e., is ancillary and appurtenant to an existing public service purpose).

The purpose of replacing the northbound Toro Creek bridge is to improve public safety. The existing bridge is well past its design life, having been built in 1942, and is seismically deficient by current design standards. In addition, the existing roadway at the

⁷ See, e.g., CDP 1-18-1078 (Eureka-Arcata 101 Corridor Improvement Project), CDP 6-15-1975 (San Diego West Mission Bay Drive Bridge Replacement), CDP 1-07-038 (Alton Interchange), CDP 1-07-013 (Mad River Bridge Replacement), CDP 1-90-295 (Highway 1 Widening and Realignment).

bridge has only one-foot-wide shoulders, which are unusable by pedestrian and bicyclists, and by vehicles in case of an emergency. These narrow shoulders are also dangerous for pedestrian and bicycle traffic because they create a high risk of potential collision with highway traffic. The existing bridge's railings also do not meet current height safety standards.

The proposed fill in this project consists of the installation of eight piles to support the bridge.⁸ The fill in wetlands to make the highway infrastructure improvements is allowable under Coastal Act Section 30233(a)(4) because the fill is for an "incidental public service purpose." First, the proposed fill has a public purpose because it is being undertaken by a public agency to safely serve the public's transportation needs along this corridor. Secondly, the proposed fill is incidental to the primary public purpose of providing safe transportation on the existing highway.

Alternatives Analysis

For projects involving diking, dredging, and filling of wetlands, the Commission must ensure that the proposed 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."

Caltrans analyzed multiple alternatives to address the seismic, structural, and safety deficiencies of the current bridge. A number of fundamental decisions were evaluated through analysis of these alternatives, including (1) whether to leave the existing bridge in place, retrofit the existing bridge, or replace the bridge, (2) the least environmentally damaging feasible method for dewatering the project site, and (3) the optimal number of replacement bridge spans. Each of these considerations and the associated alternatives is discussed below.

No-Build, Retrofit, or Replacement

Upon identifying the purpose and need for the project, Caltrans' initial analysis evaluated whether to leave the existing bridge in place (the "no-build" alternative), to retrofit the existing bridge, or to replace the bridge. The no-build alternative would maintain the status quo and leave the existing bridge in place with no modifications. As discussed above, the existing bridge is well past its design life and is seismically deficient, which, without correction, could lead to bridge failure. The existing bridge shoulders and railings also fail to meet current design safety standards, posing safety risks to motorists, cyclists, and pedestrians. This alternative would not address these critical deficiencies but instead would allow the public safety risk to continue to increase over time. Therefore, Caltrans rejected this alternative.

⁸ As noted in the "Project Description" above, the proposed project will reduce the amount of fill (i.e., footprint of pilings in the creek) by 15% compared to the existing bridge.

A bridge retrofit alternative was also considered for this project. Caltrans prepared a detailed Advance Planning Study as a basis for comparing replacement and retrofit options for the existing bridge. The retrofit alternative would have involved replacing the guardrails, widening the bridge deck, and installing additional support structures to address the structural deficiencies of the existing bridge. The retrofit alternative would have required the installation of additional bridge elements (piles, footings, columns, bents, etc.) in the streambed, which would result in more soil disturbance and more environmental impacts when compared to the replacement alternative. Installation of additional bridge elements would have also further restricted water flow beneath the bridge, which would increase the chances of flooding and water backup upstream of the bridge. In addition, the retrofit alternative was similar in cost to the replacement alternative, yet would yield a lesser service life in addition to the significant coastal resource impacts. As a result, Caltrans rejected the retrofit alternative.

In summary, Caltrans identified that the bridge replacement alternative provided the necessary seismic and public safety improvements that the no-build alternative did not. Moreover, replacing the bridge would accomplish these improvements with roughly the same capital investment as the retrofit alternative, but would also yield a longer service life and result in significantly fewer coastal resource impacts than retrofitting the bridge. Thus, Caltrans selected the bridge replacement alternative. The Commission agrees with Caltrans' evaluation of these alternatives.

Stream Dewatering

Caltrans originally assumed that the in-stream construction zone could be completely isolated from the wetted channel through dewatering. A 2017 proposal stated that removal of water within the work site would be accomplished by pumping the water between temporary dewatering dam confines with low horsepower pumps and hoses. To capture waterborne sediment, water would be pumped to a temporary sediment basin or adjacent uplands, or a Baker tank system would be used for filtration. Dewatering discharge points would be placed downstream of the dewatered area at locations where the discharge would not result in erosion or scour. If a sediment basin was used, it would be maintained as necessary to ensure adequate functionality.

However, in late 2018 Caltrans' geotechnical staff determined that fully dewatering the site would be infeasible due to the large volume of water and the inability to manage continuous groundwater release into the channel. Caltrans discussed internally several other potential options for dewatering. These options and the reasons for their rejection as infeasible are included below:

- **Pumping water into Baker tanks for settling before discharge back into the channel:** Caltrans is restricted by right-of-way limits, and there is not enough available space for the number of Baker tanks (estimated to be 19-27 tanks) that would be needed to handle the volume of water. In addition, settling rates would likely take too long for water to become clean enough to be released back into the channel. Therefore, this alternative was rejected.

- **Pumping water downstream to an excavated retention basin on the beach:** This would require a very robust pumping system capable of pumping a large volume of water approximately 500 feet downstream. Caltrans concluded that obtaining an easement and access onto the beach to construct, monitor, and maintain the basin would likely not be feasible, so this alternative was rejected.
- **Installing temporary sheet pile cofferdams for partial dewatering:** Caltrans also considered the potential for installing sheet pile cofferdams along the outer limits of the RSP work areas along each bank and then dewatering out these areas prior to RSP work was discussed. However, Caltrans concluded that it may not be possible to install the cofferdams deep enough into the streambed to be “water-tight” due to the presence of RSP that extends out from the toes of the banks into the wetted channel. Thus, this alternative was rejected.

As a result of the infeasibility of these methods, Caltrans developed a conceptual plan to construct a pass-through gravel work pad, which would create a temporary work environment out of the water while minimizing impacts to aquatic species and water quality (see pages 5-6 of **Exhibit 4**). This dewatering method involves the following steps:

- Clear vegetation and install block nets on the east and west ends of work site limits.
- Relocate fish from the work area, using seine nets, dip nets, buckets, etc.
- Temporarily install non-woven geotextile fabric across the creek bottom within the limits of the block nets to protect substrate.
- Install pass-through pipes on the creek bottom over the geotextile fabric, strategically configured to avoid pile operations and accommodate the hydraulic context. This will allow for fish passage and convey water during sudden storm flows.
- Add reinforced straw bales (straw-filled gabions) at the east and west end of the project work site within the block net limits. Weigh the hay bales down by creating gabion cages that would encapsulate the hay while weighing it down with rocks to form a headwall around the pass-through pipe(s). The gabions would extend across the streambed from bank to bank. This would minimize transferring potentially muddy conditions upstream or downstream during gravel pad installation. Remove the block nets.
- Construct a gravel fill work pad on the geotextile fabric between the gabions and covering the pass-through pipe(s), temporarily filling the project work site to an elevation or grade above the OHWM.
- From the work pad, remove the existing bridge, RSP, and debris.

- Install new RSP, consisting of a 4-foot layer of 1-ton RSP over a 12-inch layer of gravel filter. No RSP fabric will be used. The RSP layer under the bridge will have a minimum of 3 feet of vertical clearance below the constructed bridge soffit.
- From the gravel working pad, begin necessary excavations to construct the new bridge using roll-off bins to contain and dewater excavated materials, replacing the bins as necessary when full of soil and rock solids. The water from the bins may be allowed to drain onto the gravel pad returning to the creek water regime.
- Continue to construct the bridge structure from the gravel pad.
- Remove the gravel pad, pass-through pipes, and bottom geotextile fabric from streambed upon completion of construction, returning streambed as close to pre-construction conditions as feasible.
- Revegetate and restore to mitigate for vegetation removed for construction.

A low-flow channel may be cut into the gravel pad if a significant rainfall runoff event is forecasted. However, the probability of a significant rainfall event occurring within the projected in-stream construction period (i.e., June 1 to October 31) is low. No equipment will be stored overnight on the gravel working pad during a storm or runoff event. Some pumping of small amounts of water may be needed in certain cases (e.g., residual areas of water after temporary gravel pad installation). If this becomes necessary, all standard Caltrans best management practices (BMPs) regarding dewatering shall apply.⁹

Number of Bridge Spans

Caltrans evaluated the optimal number of bridge segments, or “spans,” for constructing a new replacement bridge. Caltrans initially evaluated a single-span alternative, which would result in no piles being located in the bed of Toro Creek. However, it was determined that this alternative was infeasible for multiple reasons. First, a single-span structure would require a thicker bridge deck, approximately 6 to 8 feet thicker than what is current proposed, because the load would have to be distributed a farther distance to keep piers/piles out of the active creek channel. This would require raising the bridge elevation by approximately 5 feet. This, in turn, would require re-grading the highway roadway beyond the bridge limits by approximately 1,281 feet to the south and 1,180 feet to the north in order to conform the existing roadway’s profile to the elevated bridge surface.

Raising the roadway’s profile for the single-span structure would require approximately 600 feet of retaining walls and/or concrete barriers in the median and at the edge of the

⁹ In Appendix A, see BMP NS-02. Caltrans, *Toro Creek Bridge Replacement Water Quality Best Management Practices*, September 24, 2019.

shoulder south of the bridge, and approximately 573 feet of retaining walls and/or concrete barriers in the median and at the edge of the shoulder north of the bridge. This would eliminate left turns onto Hill Plant Road for those traveling southbound, would eliminate left turns into the beach parking area across from Hill Plant Road for those traveling northbound, and would also eliminate pedestrian access across Highway 1 at Hill Plant Road between the Chevron Property to the east and the beach access parking area to the west.

The single-span alternative would also impact existing transverse utility crossings and require utility relocation. It would also require additional drainage inlets and piping to facilitate drainage of roadway runoff due to the profile changes. The additional retaining walls, concrete barriers, and utility work required for a single-span structure would approximately double the capital cost of the project, which does not include the significant support costs that would be incurred for additional design, environmental analysis, and right-of-way work that would be required for the increased scope with this design. This additional work may also complicate the traffic control plan, thereby requiring more stringent traffic management resulting in increased traffic delays.

Caltrans also determined that the single-span option would result in greater visual impacts, primarily due to the required concrete median barrier and its direct effect on views of the Pacific Ocean from the northbound lanes; the required retaining wall in the median and its inherent urbanizing aesthetic effect; the visual inconsistency between elevations of the northbound and southbound structures; and the overall increase of built character and scale of the bridge and its resulting inconsistency with State Scenic Highway and National Scenic Byway visual quality principles. Given these significant adverse impacts, Caltrans rejected the single-span alternative. A two-span alternative carried the same concerns, albeit to a lesser degree, and was therefore also rejected.

Caltrans also evaluated a three-span alternative (i.e., the bridge would consist of three sections) for the replacement bridge, and that is the design currently proposed. While a three-span bridge would locate two rows of piles in the creek channel, this would still result in a 15% reduction in the overall footprint of piles in the streambed. Additionally, these piles would provide sufficient structural support such that the bridge's deck would be thin enough to be constructed at the existing roadway's profile. As a result, this alternative avoids the significant biological impacts associated with the roadway grading, retaining walls, and concrete barriers necessary to accommodate fewer bridge spans. The three-span alternative also maintains the current access configuration for traveling between the highway and adjacent intersecting roads and parking areas, which are critical for accessing the coast at this location, and would also have fewer temporary traffic impacts during construction. Furthermore, the three-span alternative maintains approximately the same visual profile as the existing bridge, and therefore avoids impacting views of the Pacific Ocean and the overall landscape aesthetic. For these reasons, in addition to the reduced capital cost compared to the single-span and two-span alternatives, Caltrans selected the proposed three-span alternative. For the same reasons, and taken in conjunction with the proposed mitigation discussed in the "Mitigation" section below, the Commission finds that the proposed new bridge design

minimizes disturbance to wetlands and enhances habitat, and is therefore the least damaging environmental alternative available under Section 30233(a).

Mitigation

Between March 2013 and July 2019, Caltrans performed 13 surveys of plant and animal wildlife in the project area to inform estimated project impacts and plans for mitigation. Caltrans also performed a wetland delineation of the project site in June 2016 to similarly inform impact estimates and mitigation for wetlands.

Based on these surveys, additional technical studies, and coordination with state and federal resource agencies, Caltrans estimates that the project will impact a total of approximately 0.1 acres of coastal wetlands and riparian habitat. Construction activities on the banks of Toro Creek would impact approximately 0.08 acres of willow riparian scrub habitat, including the permanent removal of up to 12 arroyo willow (*Salix lasiolepis*) trees with a diameter at breast height of between 4 and 12 inches, and two Monterey cypress (*Cypressus macrocarpa*) trees in order to construct the new bridge. Because all riparian vegetation represents an integral part of the stream ecosystem, it rises to the level of ESHA. Further, although unconfirmed, this riparian community may support two federally listed endangered species, least Bell's vireo and southwestern willow flycatcher. Therefore, because this area may provide habitat to two rare bird species, this vegetation community must also be considered ESHA.

Impacts would primarily be due to vegetation trimming and limited grading of the creek banks, construction water management, and equipment access and staging during construction. Trucks, bulldozers, backhoes, compactors, clamshells, excavators, compressors, scrapers, pavers, water trucks, sweepers, and other equipment necessary in the course of construction would enter the stream channel via the graded creek bank to provide construction support from this vantage. Access to the streambed would likely occur from the area southeast of the existing southern abutment. A 20-foot wide temporary access ramp would be graded to provide access. Access may also occur via the median, with shoring and grading of the area in between the northbound and southbound bridges. Construction staging and storage would be within the current alignment along Highway 1 and in already disturbed areas within the existing Caltrans right-of-way. The median areas north and south of the bridge will be temporarily cleared and paved to accommodate the installation of the median crossover, which will temporarily redirect all highway traffic over the southbound bridge (see pages 11-13 of **Exhibit 4**). These areas contain highly disturbed ruderal vegetation, and thus do not present a significant coastal habitat.

The project would also impact coastal waters and approximately 0.02 acres of coastal wetlands within Toro Creek. These impacts would result from the temporary diversion of Toro Creek in order to minimize impacts to water quality while constructing the new bridge, removal of wetland vegetation, installation of the replacement bridge piers, and installation of approximately 0.02 acres of RSP on the creek's embankments. Wetland and riparian impacts will result from grading along the southern edge of the stream channel to provide access to the site. Despite these impacts to Toro Creek from

construction activities, the project is likely to benefit the creek channel in the long-term by decreasing the bridge's creek bed pile footprint by 15% (from 21 16-inch-diameter piles to 8 24-inch-diameter piles), which will increase the area of tidally influenced mudflat in the creek.

In addition to the enhancements in habitat provided by the replacement bridge (i.e., reduction of piling footprint in the creek), following construction Caltrans will perform mitigation on site for the project's habitat and wetland impacts (see **Exhibit 7**). This will be accomplished with the application of an appropriate native seed mix, installation of container plantings, and various forms of erosion control (see pages 15-19 of **Exhibit 4**). Riparian plantings will be installed to replace the vegetation that is cleared to allow for construction and will also be installed in adjacent areas to offset permanent riparian and stream impacts and enhance stream habitat. Removed trees will be replaced with appropriate native trees along with other native shrubs and herbaceous species to add stratification and complexity as well as habitat connectivity. Willow poles will be planted in new RSP to minimize long-term impacts to existing riparian areas and to enhance existing un-vegetated bank areas. Caltrans' contract specifications state that willow cuttings are to be taken from areas designated by the Caltrans Engineer in concert with the Caltrans Biologist, which will typically be in the project vicinity.

Wetland vegetation will be planted to restore the areas impacted by stream access during construction. The existing wetland is situated on a low shelf along the southern edge of the stream channel. This wetland will be temporarily impacted during construction and will be enhanced post-construction by native plantings. Native and location-appropriate hydroseed mixes will be used to stabilize areas disturbed by grading. All stabilized areas other than the streambed will be composted and hydroseeded with mixes of native grasses and forbs. Compost socks (i.e., biodegradable mesh tubes filled with composted material) will be situated where necessary to stabilize soil and provide erosion control until plants are sufficiently established.

Riparian plantings will include a one-year plant establishment period where Caltrans is required to ensure success of the plantings and provide a minimum of 70% cover on all disturbed soils. An irrigation system will be installed to supplement water as needed. Drip irrigation will provide a direct source of water for plantings and will be removed at the conclusion of the plant establishment period. Planting will likely be conducted in the fall, winter, or early spring months immediately following construction and either coinciding with or directly following irrigation installation. Each plant will be installed with mulch and drip irrigation.

Caltrans will monitor and maintain the on-site mitigation areas for five years after planting to ensure that site conditions meet the success criteria established in the Mitigation and Monitoring Plan. Plant establishment and maintenance will include watering, weed control, and replacement of dead and dying plants. Watering is proposed immediately after planting and then for the first summer and fall. The temporary irrigation system will be removed at the end of the 12-month plant

establishment period. In the third year, Caltrans will reassess performance standards in consultation with Commission staff. If success criteria for that year have not been met, Caltrans will perform any required remedial actions. Caltrans will be responsible for maintaining the restoration area after the attainment of success criteria and the completion of monitoring. Potential maintenance activities or remedial actions shall include reseeded, replacement plantings, re-treating areas to improve plant success, and weeding plant basins. Maintenance actions may also include activities such as erosion control and correction of problems caused by human activity.

To ensure that Caltrans implements the proposed mitigation and achieves the proposed success criteria, **Special Condition 5** requires Caltrans to submit a total of five annual monitoring reports to the Executive Director for review and approval. These reports will be submitted annually (by December 31st of each year) following implementation of the mitigation. The monitoring reports will document progress toward meeting performance standards and will identify any corrective measures taken. The monitoring and reporting will be performed by a qualified biologist.

Special Status Marine/Aquatic Species

The Federal Endangered Species Act (FESA) Section 7 effects determination found that the proposed project may affect, and is likely to adversely affect, the following federally listed species: south-central California coast steelhead (*Oncorhynchus mykiss irideus*), tidewater goby (*Eucyclogobius newberryi*) and California red-legged frog (*Rana draytonii*). The FESA Section 7 effects determination is that the proposed project may affect, and is likely to adversely affect, designated critical habitat for steelhead and tidewater goby. There is no critical habitat for California red-legged frog within the project site.

Installation of the temporary gravel pad in Toro Creek would temporarily alter the quality of aquatic habitat for steelhead, tidewater goby, California red-legged frog, coast range newt, western pond turtle, and other aquatic organisms. Vegetation removed to allow for installation of the gravel pad would be restored following construction. Erosion and sedimentation could also occur, which could directly or indirectly affect water quality, but these effects to upstream and downstream conditions would be minimized through the use of the straw gabions, which would serve as a barrier. Additional impacts to water quality could result from the removal of the temporary gravel work pad and its associated infrastructure, but methodical dismantling of the gravel pad and allowing muddy water to settle before removing the straw gabions will minimize potential impacts. While the placement of the gravel work pad would result in a loss of available habitat for aquatic species, the extent and effect of this would be short-lived and relatively minor. Impacts would only occur during the June 1st to October 31st in-stream construction season and would be rectified once pre-construction stream conditions are restored.

Although anticipated impacts to aquatic species would be minor and short-term, Caltrans has consulted with UWSFW and NMFS staff and will implement species-specific measures to further avoid and minimize impacts to listed fish species and habitat, including:

South-Central California Coast Steelhead (*Oncorhynchus mykiss irideus*):

- Prior to construction, Caltrans shall acquire incidental take authorization for steelhead from NMFS through a FESA Section 7 Biological Opinion and Incidental Take Statement.
- Prior to initiation of stream diversion/dewatering, a qualified biologist shall conduct an informal worker environmental training program, including by providing a description of steelhead, its legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating FESA and permit conditions.
- During construction, in-stream work shall take place between June 1st and October 31st in any given year, when the surface water within drainages is likely to be dry or at seasonal minimum. Deviations from this work window will only be made with written permission from the Coastal Commission's Executive Director (**Special Condition 4(b)**), in addition to the other regulatory/resource agencies.
- Prior to in-stream work, a qualified biologist shall be retained with experience in steelhead biology and ecology, aquatic habitats, biological monitoring (including dewatering), and capturing, handling, and relocating fish species. The biological monitor shall continuously monitor placement and removal of the temporary gravel work pad and its associated infrastructure in order to capture stranded steelhead and other native fish species and relocate them to suitable habitat as appropriate. The biologist shall capture and relocate steelhead to suitable in-stream habitat immediately downstream of the work area. This may include, but is not necessarily limited to: using block nets, seine-netting, dip-netting, and providing aerated water in buckets for transport and ensuring adequate water temperatures during transport. The biologist shall note the number of steelhead observed in the affected area, the number of steelhead captured and relocated, and the date and time of the collection and relocation.
- The biological monitor shall monitor erosion and sediment controls to identify and correct any conditions that could adversely affect steelhead or steelhead habitat. The biological monitor shall be granted the authority to halt work activity as necessary and to recommend measures to avoid/minimize adverse effects to steelhead and steelhead habitat.

Tidewater Goby (*Eucyclogobius newberry*):

- Prior to construction, Caltrans shall acquire incidental take authorization for tidewater goby from USFWS through a FESA Section 7 Biological Opinion and Incidental Take Statement.
- Prior to initiation of stream diversion/dewatering, a qualified biologist shall conduct an informal worker environmental training program, including by providing a

description of tidewater goby, its legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating FESA and permit conditions.

- Prior to initiation of stream diversion/dewatering, a USFWS-approved biologist(s) shall install 1/8-inch block nets outside the impact areas and across the stream a minimum of 20 feet above and below the locations proposed for stream diversion/dewatering. The nets shall be installed on the first day of work and monitored thereafter for the duration of the work.
- Once the block nets are secured, the USFWS-approved biologist(s) shall remove all tidewater gobies found between the block nets using a 1/8-inch seine and dip nets, and relocate tidewater gobies to suitable habitat outside of the proposed project site.
- During residual dewatering (if necessary), any pumps used shall be fitted with anti-entrapment device(s) to prevent tidewater gobies from being drawn into the pump or impinged on intake screening. As dewatering proceeds, a USFWS-approved biologist shall remove, by hand or net, all tidewater gobies found and relocate them to suitable habitat downstream of the proposed project site. Minnow traps may be used to increase capture success if approved by NMFS, USFWS, and CDFW.
- A USFWS-approved biologist shall remain onsite and observe for tidewater gobies and turbidity levels within the work areas during all creek dewatering activities, placement and removal of the temporary gravel work pad, its associated infrastructure, and any minor residual pump dewatering. A USFWS-approved biologist shall capture and relocate tidewater gobies to suitable habitat as necessary.
- Caltrans shall provide USFWS a written summary of work performed (including biological survey and monitoring results), BMPs implemented (i.e., use of biological monitor, flagging of project areas, erosion and sedimentation controls) and supporting photographs. Furthermore, the documentation describing listed species surveys and re-location efforts (if appropriate) shall include name(s) of the USFWS-approved biologist(s), location and description of area surveyed, time and date of survey, all survey methods used, a list and tally of all sensitive animal species observed during the survey, a description of the instructions/recommendations given to the applicant during the project, and a detailed discussion of capture and relocation efforts (if appropriate).

California Red-Legged Frog (*Rana draytonii*):

- Only USFWS-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
- A USFWS-approved biologist shall survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is

found, and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The USFWS-approved biologist shall relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with USFWS on the relocation site prior to the capture of any California red-legged frogs.

- Before any activities begin on a project, a USFWS-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished.
- During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- Without the express permission of USFWS, all refueling, maintenance and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. Environmentally sensitive areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.
- Caltrans shall attempt to schedule work for times of the year when impacts to California red-legged frogs would be minimal. Work that would affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall.
- Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent

possible; any imported material shall be removed from the streambed upon completion of the project.

- A USFWS-approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes from the project area, to the maximum extent possible and in compliance with the California Fish and Game Code.
- Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable.
- Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site; it will implement the following additional protective measures for the California red-legged frog: (a) Caltrans shall not use herbicides during the breeding season for the California red-legged frog; (b) Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use, and any found individuals shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur; (c) all precautions shall be taken to ensure that no herbicide is applied to native vegetation; (d) herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water); (e) foliar applications of herbicide shall not occur when wind speeds are in excess of 3 miles per hour; (f) no herbicides shall be applied within 24 hours of forecasted rain; (g) application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with implementation of all required and reasonable safety measures.
- All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the onset of work, Caltrans shall ensure that a plan is in place for a prompt and effective response to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

In addition to these species-specific measures, if any other special-status species are observed during construction, they will likewise be relocated to suitable habitat outside of the impact area by a qualified biologist. Furthermore, **Special Condition 4(a)** requires Caltrans to minimize the areas within which construction activities and staging are to take place, and to site and design construction areas to avoid impacts on coastal waters and marine life.

The riparian community along Toro Creek may also support least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax trailii extimus*), both of which are federally endangered. The proposed project area does not contain designated critical habitat for either species. Based on biological surveys and consultation with USFWS, Caltrans concluded, and USFWS concurred, that the project may affect, but is not likely to adversely affect, least Bell's vireo and southwestern willow flycatcher. Caltrans will implement the following measures to avoid and minimize any potential impacts to these and other nesting bird species:

- Prior to construction, vegetation removal shall be scheduled to occur from September 2nd to February 14th, outside of the typical nesting bird season if possible, to avoid potential impacts to nesting birds. If tree removal or other construction activities are proposed to occur within 100 feet of potential habitat during the nesting season (February 15th to September 1st), a nesting bird survey shall be conducted by a biologist determined qualified by Caltrans no more than three days prior to construction. If an active nest is found, Caltrans shall coordinate with CDFW to determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that juveniles have fledged.
- Prior to bridge widening work, unoccupied cliff swallow nests and other unoccupied nests under the existing bridge shall be knocked down between September 2nd and February 14th, prior to the typical nesting season, to discourage nesting activity. After February 14th, pre-construction surveys by a qualified biologist shall continue to determine if any new nesting activity has occurred under the existing bridge.
- During construction, active bird nests shall not be disturbed, and eggs or young of birds covered by the Migratory Bird Treaty Act and California Fish and Game Code shall not be killed, destroyed, injured, or harassed at any time. Exclusion zones where nests must be avoided within 100 feet of disturbance shall be established by a qualified biologist using readily visible fencing. Work in exclusion zones shall be avoided until young birds have fledged (permanently left the nest) or the qualified biologist has determined that nesting activity has otherwise ceased.
- If least Bell's vireo and/or southwestern willow flycatcher are observed within 100 feet of the Area of Potential Impact (API) during the course of construction, a qualified biologist shall implement an exclusion zone and work shall be avoided within the exclusion zone until the least Bell's vireo and/or southwestern willow flycatcher is located greater than 100 feet from project-related disturbance (see API delineation on page 2 of **Exhibit 6**). If an active least Bell's vireo and/or southwestern willow flycatcher nest is observed within 100 feet of the API, all project activities shall immediately cease and USFWS and Caltrans shall be contacted within 48 hours. Caltrans shall then reinitiate FESA Section 7 formal consultation with USFWS for least Bell's vireo and/or southwestern willow flycatcher and implement additional measures as necessary.

With the incorporation of avoidance and minimization measures, and the construction requirements imposed under **Special Condition 4**, the Commission finds that special-status species and riparian habitat would be protected against a significant disruption of habitat values, and thus, that the proposed project would be consistent with Section 30240 of the Coastal Act.

Hydroacoustic Impacts

During the early stages of project development, Caltrans concluded that bridge pile installation for the replacement bridge may require use of an impact hammer (i.e., “pile driving”). This would have posed potentially significant hydroacoustic impacts to steelhead and other aquatic species in the project area.

However, after further geotechnical investigation, Caltrans determined that all aspects of the bridge pile installation may be accomplished using vibratory or oscillatory methods. Following consultation with USFWS and NMFS staff, this change in project design resulted in the conclusion that pile installation will not result in significant adverse impacts to steelhead and other aquatic species, and that avoidance and minimization measures were no longer necessary.

Water Quality

The proposed project is not expected to cause significant permanent water quality impacts by altering the water discharge rates and patterns of Toro Creek because the replacement bridge will have roughly the same span as the existing bridge. The total disturbed soil area is approximately 1.50 acres, and the amount of new impervious surface is 0.1 acres, consisting primarily of the widening of the bridge deck and the placement of new RSP on the stream banks beneath the bridge to minimize erosion. Grading and paving to conform the highway roadway immediately north and south of the bridge to the new bridge deck and shoulders also have the potential to temporarily generate stormwater pollutants.

During construction, effective combinations of temporary and permanent erosion and sediment controls will be used to minimize impacts to water quality. Stormwater management for the site will be coordinated through the contractor with Caltrans construction personnel to effectively manage erosion from the project area by implementing a Storm Water Pollution Prevention Plan (SWPPP), and **Special Condition 2** requires it to be submitted prior to commencement of construction. The contractor is required to have a certified Qualified SWPPP Preparer/Qualified Stormwater Developer (QSP/QSD) prepare and oversee implementation of all temporary construction site best management practices (BMPs) during the project. The QSP/QSD’s contact information will be maintained on site for any member of the public or regulatory agency for review.

Caltrans will implement standard construction methods, waste management procedures, and stormwater BMPs as required by the Caltrans National Pollutant

Discharge Elimination System (NPDES) Permit.¹⁰ Temporary construction site measures included for this project in order to reduce or eliminate temporary water quality impacts during construction include preparation and implementation of a Water Pollution Control Program, temporary large sediment barriers near the bridge abutments during demolition and construction, a temporary concrete washout, and temporary fencing around environmentally sensitive areas. Material stockpiling, equipment and liquid container storage, vehicle and equipment washing, and fueling will be performed at least 100 feet from concentrated flows of stormwater, drainage courses, and inlets if within the floodplain, and at least 50 feet if outside the floodplain. Permanent erosion and sediment control BMPs will be applied to all disturbed soil areas near abutments, around piles or piers out of the active stream channel when soil disturbing activities are complete. Hazardous materials handling and spill prevention BMPs will also be implemented to minimize the risk of spills during construction. Any change to the approved project that is required by those agencies must be submitted to the Executive Director in order to determine if the proposed change requires an amendment to this CDP.

In conclusion, the proposed dewatering method and bridge construction present potential impacts to aquatic and marine resources, including multiple federally listed species, as well as coastal water quality and biological productivity. However, Caltrans will implement avoidance and minimization measures such that the project, as conditioned, protects these species and maintains the productivity of Toro Creek. Temporary water quality impacts are possible as a result of construction, but will be appropriately avoided, minimized, or contained via construction BMPs. Thus, the proposed project, as conditioned, is consistent with Sections 30230 and 30231 of the Coastal Act, which require protection of marine species of special importance and maintenance of the biological productivity of coastal waters.

Biological Productivity and Functional Capacity

The fourth general limitation set by Section 30233 of the Coastal Act is that any proposed dredging or filling in coastal wetlands or estuaries must maintain or enhance the functional capacity of the wetland or estuary. In addition, proposed development must maintain, enhance, and where feasible restore, the biological productivity and the quality of wetlands and waters consistent with the requirements of Sections 30230 and 30231.

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

Therefore, the Commission finds that the project, as conditioned, will maintain and enhance the biological productivity, quality, and functional capacity of coastal waters

¹⁰ In Appendix A, see Caltrans, *Toro Creek Bridge Replacement Water Quality Best Management Practices*, September 24, 2019.

and wetlands consistent with the requirements of Sections 30230, 30231, and 30233 of the Coastal Act.

D. Coastal Hazards

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

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 in an area subject to geologic and flood hazards including earthquakes, liquefaction, differential settlement, tsunami inundation, and flooding.

Seismic Hazards

The project area lies within the Coast Ranges Geomorphic Province, which is characterized by northwest trending mountain ranges controlled by movement along a system of similarly trending faults. There are no known active faults crossing the Highway 1 corridor between Morro Bay and Cayucos. However, the corridor is at risk of substantial seismically-induced ground shaking from nearby faults. Caltrans has identified several faults in the vicinity of the site considered capable of producing earthquakes of magnitudes between 6.0 and 7.0. Therefore, an earthquake on one of the active faults in the region has the potential to cause moderate to strong ground-shaking at the project site during the lifespan of the proposed development.

The project site is underlain by Quaternary-aged alluvial deposits. Geologic mapping of the area indicates that alluvial deposits are present in the existing creek channel and consist of cobble-pebble gravel, sand, silt, and clay. Based on test borings, the site is underlain by approximately 20 feet of alluvium in the creek channel, consisting of medium-dense sand with some silt and gravel. Underlying the alluvium are approximately 14 feet of terrace deposits consisting of firm clayey silt with some pebble gravel, terminating in dark gray shale at approximately 40 feet below the ground surface of the creek channel.

In 2014, Caltrans performed two cone penetrometer test (CPT) soundings at each end of the bridge to assess liquefaction potential and provide soil strength parameters for use in foundation design. Groundwater elevations were estimated by observing the level of the water in the creek and sounding the open holes with an electronic water level logger after withdrawing the cone. Groundwater was determined to be at approximately

the elevation of the creek, or elevation 9 feet on the date of the subsurface investigation.

Soils must be below the groundwater table for liquefaction to occur. Liquefaction is the loss of support strength that can occur in loose, saturated soil during or following seismic shaking. Liquefaction can produce a number of ground effects, including lateral spreading, boils, ground lurching, and settlement of fill material. Soils with a potential for liquefaction are loose cohesionless soils below the groundwater table. Based on soil types and site conditions encountered at the project site, Caltrans determined that potential for liquefaction is high due to the loose nature of the soils and the depth of groundwater. Therefore, structural components of the proposed development remain at risk to strong earthquake shaking and liquefaction, which can result in the cracking, spreading, and settlement of embankment material; the failure of embankments and natural slopes; and structural distress to bridges.

To minimize seismic risks, Caltrans designed the proposed bridge in accordance with Caltrans' Seismic Design Criteria. Under these criteria, Caltrans has implemented a "Strong Beam – Weak Column" approach for the design. This design philosophy allows for the capacity-protected features (superstructure and deep foundations) to remain essentially elastic while other members (pier columns) are intentionally designed for energy dissipation and damping during a seismic event. This approach is intended to ensure minimal probability of collapse during an extreme event, and to ensure that any damage is minimal, evidently visible, and repairable.

Sea Level Rise, Erosion, Flood, and Inundation Hazards

Given the elevation of Highway 1 between Morro Bay and Cayucos, most of the highway corridor is currently at minimal risk of flooding or tsunami. However, the lower elevation where Toro Creek flows into the Pacific Ocean results in the northbound Toro Creek bridge falling within the FEMA 100-year flood zone and the identified tsunami inundation zone.¹¹ The flood risks are from both the Pacific Ocean to the west as well as the flow of Toro Creek from the east. Extreme tides, El Niño events, low pressure systems, stormwater runoff from the inland watershed, and storm surges can increase tidal elevations, particularly during winter. Along with flooding, the large flow of water in a tsunami over and around the bridge structure as the water rushes in and then recedes can lead to significant scour. Scour effects may be intensified given that the bridge is located over a creek, where the return flow from a watershed area is concentrated due to local topography. As a result, Caltrans has designed the proposed replacement bridge in compliance with its standard criteria in anticipation of these hazards. Caltrans has performed geotechnical testing and has concluded that the proposed bridge is designed to withstand the predictable hazards associated with its location to the

¹¹ FEMA'S 100-year flood maps are available at: <https://msc.fema.gov/portal/home>. California Emergency Management Agency, California Geological Survey, and University of Southern; Tsunami Inundation Map for Emergency Planning, Morro Bay North and South Quads; July 2009; https://www.conservation.ca.gov/cgs/Documents/Tsunami/Maps/Tsunami_Inundation_MorroBayNorthSouth_Quads_SLO.pdf.

maximum extent feasible. Nevertheless, it is not possible to remove all associated risk associated with the uncertainties of natural hazards.

As is true globally and along California’s coast, sea levels in the project area have been rising over time. Increased sea level rise (SLR) can lead to greater temporary flooding of coastal Highway 1 due to increased tidal elevations and elevated coastal water levels during extreme tidal events such as king tides, strong winds, and storm surges; as well as eventual permanent inundation of low-lying areas. Climate change may also lead to increased extreme storm events (in terms of intensity and/or rate of occurrence) and therefore increased incidence of flooding through extreme precipitation and storm water runoff events.

The State of California has undertaken significant research regarding changing sea level and possible consequences to coastal resources and important assets from increased sea levels. In April 2017, a working group of the Ocean Protection Council’s (OPC) Science Advisory Team released *Rising Seas in California: An Update on Sea-Level Rise Science*. This report synthesizes recent evolving research on sea level rise science, notably including a discussion of probabilistic sea level rise projections as well as the potential for rapid ice loss leading to extreme sea level rise. This science synthesis was integrated into the OPC *State of California Sea-Level Rise Guidance 2018 Update*. This guidance document provides high-level, statewide recommendations for state agencies and other stakeholders to follow when analyzing sea level rise. Notably, it provides a set of projections that OPC recommends using when assessing potential sea level rise vulnerabilities for various projects. Taken together, the *Rising Seas* science report and associated guidance document account for the current best available science on sea level rise for the State of California, and these projections accordingly have been incorporated into the Coastal Commission’s *Sea Level Rise Policy Guidance (2018 Science Update)*.

The OPC Guidance provides sea level rise projections for twelve California tide gauges, and recommends using the projections from the tide gauge closest to the project site. In this case, the Port San Luis tide gauge is the closest gauge. The following table depicts the projected SLR at Port San Luis under low, medium-high, and extreme risk aversion scenarios.

Year	Projected Sea Level Rise (in feet)		
	Low Risk Aversion	Medium-High Risk Aversion	Extreme Risk Aversion
2040	0.7	1.2	1.6
2050	1.0	1.8	2.6
2060	1.3	2.5	3.7
2070	1.7	3.3	5.0

2080	2.1	4.3	6.4
2090	2.6	5.3	8.0
2100	3.1	6.7	9.9

Given the range of many uncertainties incorporated into the models, these projections are not precise, but are intended to reflect a range of potential outcomes. The low risk aversion scenario has a 17% chance of being exceeded, and the medium-high risk aversion scenario has a 1-in-200 chance, or a 0.5% chance, of being exceeded. The extreme risk accounts for the extreme ice loss scenario and does not have an associated probability at this time. While this scenario is an area of ongoing research, the physical processes that would lead to the extreme scenario of sea level rise are predicted to be unlikely to occur before the latter part of the century.

As our understanding of sea level rise continues to evolve, it is possible that sea level rise projections will continue to change as well. While uncertainty will remain with regard to exactly how much sea levels will rise and when, the direction of sea level change is clear and it is critical to continue to assess sea level rise vulnerabilities when planning for future development. Importantly, maintaining a precautionary approach that considers high and extreme sea level rise rates and includes planning for future adaptation will help ensure that decisions are made that will result in a resilient coastal California. Here, the highway improvements comprise critical infrastructure serving the public where flooding or erosion could have significant coastal resource consequences. In such cases, the OPC Guidance and Coastal Commission Guidance recommend that applicants for critical infrastructure understand the risks associated with higher sea level rise projections and develop adaptation pathways for those higher scenarios.

On the California coast, the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore, which will result in increased flooding, erosion, and storm impacts to coastal areas. For fixed structures on the shoreline, such as bridges, an increase in sea level will result in long-term shoreline erosion and, in turn, an increase in scour, inundation of, and flood damage to structures. More shoreline structures generally will be inundated or underwater than are inundated now, and the portions of the structures that are now flooded part of the time will flood more frequently. Structures, such as bridges, that are adequate for current storm conditions may not be adequately protected in the future.

Changing conditions could also alter the anticipated impacts of development upon coastal resources. In particular, coastal resources such as beaches and wetlands that are located just inland of the sea could disappear if they are squeezed between rising sea levels and a fixed line of development on the shoreline, thus impacting habitats, public access, recreation, visual, and other coastal resources. Therefore, to be consistent with the Chapter 3 policies of the Coastal Act, proposed development must be sited, designed, and conditioned in such a way that considers the impact of the

development upon coastal resources over its full design life, and must avoid, minimize, and mitigate those impacts as required by the Coastal Act.

Evaluating whether proposed development minimizes risks of flood hazards in relation to SLR usually involves examining projected SLR over the design life or anticipated duration of the development, after which one can expect that the development would either be replaced, retrofitted, redeveloped at a different location, or removed. The exact amount of SLR that will actually occur over the design life or duration of the proposed development cannot be projected with certainty. While uncertainty exists, the general trend of rising sea level is clear and it is critical to assess sea level rise vulnerabilities over the expected duration of the development being approved, especially when the proposals involve critical infrastructure investments aimed at serving the public, such as a highway providing access up and down the coast.

Analysis

The replacement of northbound Toro Creek bridge will involve replacing the bridge deck at approximately its current elevation, with a roadway elevation of 22.9 feet and a soffit elevation of approximately 21.2 feet. The replacement bridge has a design life of 75 years (i.e., until 2095). In 2014, Caltrans completed a hydraulic report for the bridge site using FEMA's 2012 data for calculating base flood elevation (BFE) for a 100-year storm, which is 13 feet for the project site. Using this data, Caltrans determined that the proposed bridge elevation would not be impacted by a 100-year storm plus 5.5 feet of sea level rise (13ft. BFE plus 5.5ft. of SLR equals 18.5ft., lower than both the soffit and the bridge deck elevations). Applying the 2018 OPC Sea Level Rise Guidance projections to the 2012 FEMA BFE, the bridge would avoid overtopping beyond 2100 under the medium-high risk aversion scenario (6.7ft. of SLR). Under the extreme risk aversion scenario, some impacts to the bridge soffit may occur around 2090 (8.8ft. of SLR), and to the bridge deck around 2100 (9.9ft. of SLR). Using this data, Caltrans concluded that flood events would likely present impacts only under the extreme sea level rise scenario, and that these impacts would only occur toward the very end of the design life of the bridge, and only during extreme storm events.

In 2017, three years after Caltrans completed the hydraulic report, FEMA updated its base flood elevation data, increasing the 100-year storm flood elevation from 13 feet to 17 feet for the project site. At this elevation, the bridge soffit and deck could be vulnerable with only 4.2 and 5.9 feet of sea level rise, respectively. Using the updated BFE with the 2018 OPC projections for sea level rise, the proposed bridge deck would become vulnerable to flooding during a 100-year storm around 2095 under the medium-high risk aversion scenario (0.5% chance of being exceeded). This coincides with the end of the bridge's 75-year design life. Under the extreme risk aversion scenario, the proposed bridge would experience overtopping during a 100-year storm around 2080, with the potential for the bridge soffit to be impacted earlier. Erosion of the shoreline and creek bed may also influence these projected vulnerabilities, though it is uncertain to what extent.

Ultimately, however, the northbound bridge is not the location between Morro Bay and Cayucos where impacts associated with sea level rise will occur first. Considering Toro Creek alone, any projected impacts from the combination of sea level rise, flooding, extreme tides, and erosion will initially impact the southbound bridge given its proximity to the ocean. The southbound bridge was constructed in 1962, twenty years after the northbound bridge, and is not currently slated for replacement, though future changes to address coastal hazards and sea level rise will need to consider how the two bridges operate together to ensure continued access along this corridor. Further, Highway 1 is the only north-south accessway between the communities of Cayucos and Morro Bay, thus serving as critical infrastructure for emergency access and public coastal access. Looking at the rest of the one-mile highway corridor between northern Morro Bay and southern Cayucos (i.e., from Postmile 32.2 to 33.2), nearer-term vulnerability also exists approximately 0.3 miles south of Toro Creek, the point where the highway corridor comes nearest to the shore. Based on modeling data from the Coastal Storm Modeling System (CoSMoS), which has been developed by the United States Geological Survey to allow more detailed predictions of coastal flooding due to both future sea level rise and storms integrated with long-term coastal change including beach changes and cliff/bluff retreat, the southbound highway at this location could experience flooding impacts during a 100-year storm with approximately 3.3 feet of SLR. Based on the 2018 OPC Guidance projections, 3.3 feet of SLR and the impacts associated with this amount of SLR have a low probability of occurring by 2070 or 2060 under the medium-high or extreme risk aversion scenarios, respectively.¹² The City of Morro Bay's 2018 Sea Level Rise Adaptation Strategy Report also acknowledges the future vulnerability of this stretch of highway.¹³ This vulnerability could result in increased damage to the roadway as well as potential loss of access if the roadway becomes impassable during flood events. Long-term erosion will also result in the loss of beach in this location as the beach is squeezed between the rising sea and the fixed location of the highway.

Strategies to address these additional vulnerabilities are not currently included in the proposed bridge project but directly relate to the overall analysis for ensuring the proposed project will minimize hazards and ensure continued access along this portion of the coast, as required by the Coastal Act. In this case, the proposed bridge project must provide the safety updates that are needed in the near-term to maintain the viability of this critical infrastructure link between Morro Bay and Cayucos while also considering possible adaptation actions that may be needed to address future vulnerabilities for this highway corridor, and to ensure that both near-term and long-term actions will fit together.

To that end, Caltrans performed a robust alternatives analysis to determine the best course of action for addressing the bridge's current public safety hazards while also considering future sea level rise risks and other coastal resource impacts. As described

¹² The CoSMoS online mapping tool is available at <http://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map>.

¹³ <http://www.morro-bay.ca.us/DocumentCenter/View/11753/Sea-Level-Rise-Adaptation-Report-January-2018>.

in the “Wetlands, ESHA, and Water Quality” section of this report, Caltrans ultimately concluded that replacement at the current bridge deck elevation (as opposed to a raised, single-span alternative) would provide the necessary public safety measures while minimizing impacts to coastal resources. Caltrans acknowledges that, based on the best available science, this alternative may leave the bridge vulnerable to sea level rise-related impacts in the final years of its design life, toward the end of this century. Further, Caltrans acknowledges that sea level rise poses future impacts to this stretch of Highway 1 as a whole, including at locations such as the southbound Toro Creek bridge and the southbound highway south of the bridge. Though the future adaptation measures for these locations are yet to be decided, replacement of one 130-foot-long bridge does not preclude the development of alternative adaptation strategies in the future, but rather is intended to address critical public safety hazards with minimal impacts to coastal resources.

To ensure that the long-term flood and erosion risks are addressed in a manner consistent with Section 30253 of the Coastal Act, the Commission imposes **Special Conditions 6 and 7**. **Special Condition 7** requires Caltrans to assume the risks of flooding and geologic hazards to the northbound bridge. As stated above, Caltrans acknowledges that the proposed bridge location is subject to potential seismic risks, which may include liquefaction, and that the bridge location could be subject to tsunami hazards as well. Further, the location of the bridge over a watercourse draining into the ocean renders it subject to the additional natural hazards posed by storms, floods, and erosion, all of which will increase over time with sea level rise. The condition also stipulates that the Commission is not liable for damage as a result of approving the permit for development, and 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.

Special Condition 6 requires Caltrans to perform a coastal hazards analysis to inform future decisions about what changes to the highway corridor should be made to minimize the risks of flood hazard. Specifically, the condition requires the analysis to determine when and under what conditions the Highway 1 bridges over Toro Creek will be at risk of damage resulting from coastal hazards (e.g., sea level rise, flooding, and erosion) under a variety of scenarios using the best available science. The analysis will also consider a range of adaptation options to address identified vulnerabilities that will ensure continued access along the Highway 1 corridor and will minimize impacts to coastal resources. Caltrans will collaborate with the Coastal Commission, the County of San Luis Obispo, and the City of Morro Bay in preparing the analysis, and will submit it to the Executive Director by 2040. The approach to this analysis will be based on State sea level rise planning guidelines, and the collaboration process will draw from the principles established in the Caltrans and Coastal Commission Plan for Improved Agency Partnering.¹⁴ If the analysis determines that the bridges require modifications to minimize hazards and ensure structural stability, Caltrans and Commission staff will

¹⁴ <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/iacc-improved-agency-partnering-agreement-a11y.pdf>

collaborate to develop plans for such modifications in a way that will ensure continued access through the corridor while protecting coastal resources. Caltrans will then submit an application to the Coastal Commission seeking authorization for such modifications, as necessary.

Together, **Special Conditions 6 and 7** will require Caltrans to analyze sea level rise and associated flooding and erosion impacts to the corridor and to collaboratively consider potential adaptation strategies that can protect the highway corridor for the long-term as the impacts of SLR likely increase. These conditions further ensure that the approved critical safety improvements that are needed in the short term are coordinated with the long-term solution for the corridor long before flooding begins to regularly impact the highway. As conditioned, the proposed development will minimize flooding risk and protect coastal resources consistent with the requirements of the Coastal Act. Therefore, for all of the above reasons, the Commission finds that the proposed project, as conditioned, will minimize risk to life and property from hazards, assure stability and structural integrity, and will neither create nor contribute significantly to erosion, geologic instability, or destruction of the surrounding area, consistent with section 30253(a) of the Coastal Act.

E. Archaeological Resources and Tribal Consultation

Construction activities that disturb soils (e.g., grinding, tilling, disking, and digging/excavating) could damage historical or archaeological resources. These activities could also inadvertently damage human remains. Section 30244 of the Coastal Act requires development projects to implement reasonable mitigation measures to protect identified archaeological or paleontological resources, and states:

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

In 2014, a Caltrans consultant prepared an Archaeological Survey Report for the proposed project.¹⁵ The Archaeological Survey Report identified that the proposed project area is located within the western boundary of archaeological site CA-SLO-879/H.¹⁶ CA-SLO-879/H is a large multicomponent site composed of a large prehistoric habitation/village site with multiple locations.¹⁷ In April 2017, further archaeological

¹⁵ At that time, the Toro Creek bridge project was bundled with two other bridge projects, and the Archaeological Survey Report covered all three bridges: northbound Toro Creek, Old Creek, and Trout Creek.

¹⁶ The report also identified Toro Creek Bridge as a potential historical resource. However, it is listed in the Caltrans Historic Bridge Inventory as a Category 5 bridge, meaning it is not eligible for listing in the National Register of Historic Places.

¹⁷ Chevron's Estero Marine Terminal Shore Plant is also part of CA-SLO-879/H and, though separate in time and function, represents a component of the historic resource. The Plant was established by Standard Oil Company in 1929 as a crude oil tanker loading facility, and was used and modified over

testing was conducted on the portion of the prehistoric component of CA-SLO-879/H that lies within the proposed project area. The results of the testing showed that this portion of the project area does not contribute to the site's archaeological significance, and therefore the project would have no substantial adverse impact on archaeological site CA-SLO-879/H.

On June 5, 2013, Caltrans requested from the Native American Heritage Commission (NAHC) a review of the Sacred Lands File to determine whether known cultural sites lie within or near the project area, and requested a list of interested Native American groups and individuals who might have information or concerns about the project.

NAHC responded to Caltrans in a letter dated June 6, 2013, which stated that no known Native American cultural resources are located within in the project area. The letter also included the names and addresses of Native American tribes, individuals, and organizations that may have knowledge of cultural resources in or near the project area.

On October 25, 2013, Caltrans sent a letter to the contacts identified by the NAHC as knowledgeable of Native American cultural resources in the project area. The letter initiated consultation under Section 106 of the National Historic Preservation Act. On November 18, 2015, Caltrans sent another letter to follow up on the project and to initiate consultation under Assembly Bill 52 (A.B. 52; Public Resources Code Section 21080.3.1). That letter included a copy of the final Archaeological Survey Report for the project.

Following these letters, Caltrans conducted consultation (consisting of meetings and correspondence) with the various contacts identified by the NAHC, including representatives of the Yak Tityu Tityu Northern Chumash, the Northern Chumash Tribal Council, the San Luis Obispo County Chumash Council, the Salinan Tribe of Monterey, the Salinan Tribe of Monterey and San Luis Obispo Counties, and the Salinan Nation Cultural Preservation Association. Communications between Caltrans and the tribes are confidential, and therefore the full record of those communications is not included here.

Through consultation with the tribes, and at the request of the tribes, Caltrans has agreed to implement measures for avoiding inadvertent impacts to the portion of archaeological site CA-SLO-879/H that lies just outside of the proposed project area. Avoidance will be based on the delineation of an Environmentally Sensitive Area (ESA). The delineated ESA will be depicted on project plans, defined in the construction contract's Standard Special Provisions, and physically demarcated by erecting ESA barriers prior to construction activities. No project-related activities (planting, maintenance, equipment parking, etc.) shall take place within the ESA. Responsible parties are defined in the ESA Action Plan, and the ESA has been recorded in Caltrans' Environmental Commitments Record.

time. In the 1990s, Chevron Corporation, the current owner, began decommissioning the facility. Evaluations conducted in 2004 and 2017 concluded that this component of CA-SLO-879/H is not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources due to a lack of integrity (State Historic Preservation Officer concurrence August 10, 2017).

Through consultation with the tribes, and at the request of tribes, Caltrans will also implement protocols for evaluation and protection of any archaeological resources discovered during certain construction phases. Specifically, an archaeological monitor and tribe-designated Native American monitors will be present at the project site during all earth-moving activities. If cultural materials are discovered, all earth-moving activities within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the county coroner shall be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to Public Resources Code Section 5097.98, will then notify the Most Likely Descendent. At that time, the person who discovered the remains will contact the Caltrans District 5 Heritage Resources Coordinator so that that individual may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 will be followed as applicable.

Consistent with the Commission's tribal consultation policy adopted in 2018, Commission staff reviewed the tribal consultations Caltrans had undertaken. On March 10-11, 2020, Commission staff also wrote to the tribal representatives identified by the NAHC to inform them of the project's CDP application and the Commission's upcoming hearing on the project, and to advise them of the opportunity to provide comments for the CDP hearing.

In conclusion, based on the findings of the Caltrans Archaeological Survey Report, the tribal consultation performed by Caltrans and Commission staff, as well as the cultural resource avoidance measures and monitoring, evaluation, and protection protocols that will be implemented by Caltrans as part of the project, the Commission finds that the development is consistent with Coastal Act Section 30244.

F. Public Access and Recreation

Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and public recreation policies of [Coastal Act] Chapter 3." Coastal Act Sections 30210 through 30213, 30221 and 30223 specifically protect public access and recreation. In particular:

30210. 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.

30211. 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.

30212(a) 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...

30213. Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...

30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Taken together, these overlapping policies protect public access and recreation opportunities for the public, particularly free and low cost access. They also protect Highway 1 for its public recreational attributes.

Analysis

This stretch of Highway 1 serves as the primary transportation corridor between the communities of Morro Bay and Cayucos. The highway provides access to the beaches of Morro Bay including Morro Bay Dog Beach, which is one of the only off-leash dog beaches in the Central Coast. Highway 1 also intersects with Toro Creek Road (approximately 1000 feet north of the bridge) and Hill Plant Road (approximately 450 south of the bridge), which run inland up into the coastal mountains. Public beach parking is located on the seaward side of southbound Highway 1 at each of these intersections, and these parking areas are accessible from the northbound highway via left turn lanes.

Highway 1 in this area contains two vehicular traffic lanes in each direction, and the subject bridge carries the two northbound lanes over Toro Creek. This stretch of Highway 1 is also popular for cyclists. The right, or outside, shoulder width on Highway 1 is variable but maintains a width of 10 feet in many locations, including immediately north and south of the bridge. In contrast, the roadway shoulders on the existing northbound bridge are only one foot wide on each side. These narrow shoulders are unusable by bicycle and pedestrian traffic, or for vehicles needing to pull completely off of the roadway. The funneling of cyclists and pedestrians from the 10-foot-wide highway shoulder on either end of the bridge into the bridge's narrow shoulder space creates a

high risk of collision with vehicular traffic. Moreover, the existing bridge railing does not meet current height standards, compounding the risk associated with vehicular collisions with other vehicles as well as with cyclists and pedestrians. In general, the bridge forms a hazardous “bottleneck” in the traffic flow on this segment of Highway 1. The existing bridge as a whole also presents a public safety hazard because it is well past its design life and is seismically deficient.

The proposed replacement bridge will alleviate these public safety risks by having a widened bridge deck that will accommodate a 5-foot-wide inside shoulder, two 12-foot-wide traffic lanes, and a 10-foot-wide outside shoulder. The wider shoulders will conform to the highway’s shoulders immediately north and south of the bridge and will provide a safer traveling space for cyclists and pedestrians, with the outside shoulder serving as a Class III bike route. The replacement bridge railings will meet current safety standards while providing a more “see-through” appearance (see **Exhibit 5**). The bridge will also meet modern seismic standards. The replacement and relocation of guardrails in the roadway median and along the northbound outside shoulder will provide increased safety for those traveling by car, foot, or bicycle. **Special Condition 1** requires Caltrans to submit the final project plans for Executive Director review and approval.

Collectively, these changes represent permanent public access improvements by increasing the safety of all highway travelers. Moreover, providing adequate shoulder space on the bridge would fill a critical gap for cyclists looking to travel this stretch of northbound Highway 1. This project will enhance coastal access by encouraging bicycle travel between the neighboring communities of Morro Bay and Cayucos, as well as this area’s coastline and its numerous coastal recreation opportunities.

The project will temporarily impact travel along the coast by delaying traffic. However, Caltrans has taken multiple measures to minimize these traffic impacts. Temporary establishment of a median crossover will route both directions of highway traffic onto the southbound bridge during construction for approximately 170 days (see pages 11-13 of **Exhibit 4**). This will allow the project to be completed in one construction season instead of two, reducing the construction period from 435 days to 270 days. Bicycle access will be maintained using the southbound bridge. Construction staging, storage, and activities will not restrict public access to the beach parking areas along the seaward side of the southbound highway both north and south of the bridge, or to any coastal access points or recreation areas in the vicinity. **Special Condition 4(a)** requires Caltrans to minimize the areas within which construction activities and staging are to take place, and to site and design construction areas to avoid impacts public access to the water and shoreline to the extent feasible. Moreover, Caltrans will implement a public awareness campaign prior to beginning construction and as needed during the duration of the construction. Motorists will be informed of traffic pattern changes by changeable message signs. The public will also be notified of planned

project lanes closures on Caltrans' dedicated website for lane closures.¹⁸

Independent of this project, an interagency planning effort led by San Luis Obispo County has been underway for many years to construct a public path between Morro Bay and Cayucos. This project, known as the "Morro Bay to Cayucos Connector," would construct a walking trail as well as a Class I bicycle path west of and adjacent to southbound Highway 1 from the northern portion of Morro Bay at the Yerba Buena Street/Highway 1 intersection to the south end of Studio Drive in Cayucos. A significant portion of the proposed trail would be located on the seaward side of Caltrans' southbound right-of-way. The San Luis Obispo County Board of Supervisors certified the Final Environmental Impact Report (FEIR) for the project on October 19, 2010.¹⁹ More recently, the County has been working collaboratively with the State Coastal Conservancy, Caltrans, and other entities to perform necessary studies and planning. Construction on the project is anticipated to begin in the next few years, and will require a CDP from the Commission.²⁰ The Connector project, together with the completed proposed project, will result in appropriate enhancement of the California Coastal Trail (CCT) in this area, so additional mitigation is not required in this case as a result.

In conclusion, the Commission finds that the proposed project will provide necessary public safety improvements for a highway route that is critical for providing access to and along the coast, and will provide for enhanced cycling and pedestrian access along the northbound highway. Although the project will have temporary traffic impacts, Caltrans has committed to minimization measures including a significantly reduced construction period and multiple public awareness efforts. Given that vehicular and cycling access along the highway will be maintained, and there will be no restrictions to public parking or access points during construction, the proposed project will not have significant adverse effects on public access to and along the coast, and should enhance such access when complete. Therefore, the Commission concludes that the project is consistent with the above-cited public access policies of the Coastal Act.

¹⁸ <https://lcswebreports.dot.ca.gov/>

¹⁹ Final Environmental Impact Report (SCH No. 2009081001), July 21, 2010, https://slocountyparks.com/wp-content/uploads/2016/02/mb_to_cay_connector_final_eir_july_2010.pdf.

²⁰ It should be noted that although the Commission supports the fact that providing a standard outside shoulder and railings on northbound Toro Creek Bridge will enhance bicycle connectivity between Morro Bay and Cayucos, this project does not obviate the need or merit of constructing a separated trail through this corridor for pedestrians and cyclists. In the meantime, this bridge project will provide a valuable linkage for increasing multimodal transportation along this stretch of coastline, and will serve as a viable intermediary measure for cyclists until a separated path is constructed, in addition to increasing the overall safety of the northbound highway.

G. Visual Resources

Section 30251 of the Coastal Act states:

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.

Highway 1 through the Central Coast represents one of the State's most acclaimed scenic resources. In the northern portion of San Luis Obispo County, including the proposed project site, Highway 1 is a designated State and National Scenic Byway. In 2003, it was designated as an "All-American Road," the highest designation offered by the Federal Highway Administration under the National Scenic Byways Program. Highway 1 provides the means by which millions of visitors per year enjoy this great scenic attraction. Thus, the project area is a highly scenic area within the meaning of Coastal Act Section 30251. The policies of the San Luis Obispo County LCP and the Morro Bay LCP generally reinforce the protection of visual resources along Highway 1 and underscore the concern and sensitivity regarding aesthetic issues along this route.²¹

The one-mile stretch of Highway 1 between Morro Bay and Cayucos is located on a gently-sloped marine terrace situated between the Pacific Ocean and a series of low foothills rising up to the Santa Lucia Mountain Range. The diverse geomorphic features that characterize the region contribute to the high scenic quality of the coast. The most notable natural visual resources are Morro Rock near Morro Bay to the south, the valleys and hills east of the project, and unobscured views of the Pacific Ocean. The vegetation of the surrounding open space is predominately denuded grassland and scattered coyote brush, with natural stands of oak, sycamore, and pine trees at the lower elevations primarily on the north and east-facing slopes. Eucalyptus trees can also be seen in the regional landscape associated with ranches and old homesteads.

Highway 1, a State Scenic Highway and National Scenic Byway, generally parallels the coastline through the area. This stretch of Highway 1 is a four-lane divided highway, with twelve-foot lanes and variable shoulder widths. Landscaping along the highway is minimal to moderate, and mostly consists of scattered trees, shrubs and naturalized

²¹ See, e.g., San Luis Obispo County Visual and Scenic Resource Policies 1, 4, and 5, available online at <https://www.slocounty.ca.gov/getattachment/8dc664c3-b6ec-4e1d-af8b-c2f442049a0c/Coastal-Plan-Policy.aspx>; Morro Bay Local Coastal Program Visual Resource Policies 12.01, 12.02C, 12.03, etc., available online at <https://www.morro-bay.ca.us/DocumentCenter/View/519/LCP-Chapter-XIII-Visual-Resources?bidId=>.

grasses. The views from the project site are of relatively high quality, and are defined largely by views of the ocean and the beach, the topography of the inland hills, and the natural vegetative pattern of the Toro Creek riparian corridor. A moderate amount of development also can be seen along this stretch of Highway 1, including a Chevron Oil Company building can be seen just inland from the project site.

Both the northbound and southbound Toro Creek Bridge decks are supported by three rows of piles driven in the streambed, which are visible momentarily when crossing over the opposing bridge. The existing bridge railing on the northbound Toro Creek Bridge is a concrete balustrade style and largely obscures views from the roadway surface to the top of the railing. The existing railings have been patched in multiple places due to collisions.

The proposed bridge has been designed intentionally to appear visually similar to the existing bridge. The bridge would maintain two lanes of highway traffic, and would be constructed at the same grade as the existing bridge to remain visually consistent with the surrounding roadway and the southbound bridge. To meet modern safety standards, the replacement bridge would differ visually in several respects. The bridge's deck would be noticeably wider to accommodate the expanded 5-foot-wide inside shoulder and 10-foot-wide outside shoulder. The new bridge shoulders will conform to the width of the roadway shoulders immediately north and south of the bridge. The new bridge will have steel, open-style Type ST-75 railings (see **Exhibit 5**). Although approximately 6 inches taller (totaling 42 inches) than the existing bridge railings in order to meet modern safety standards, these railings will appear more visually open and provide better see-through views of the ocean, riparian corridor, and hillsides.

Roadside guardrails along the outside shoulder and in the highway median will be upgraded and reconfigured to improve safety. All existing guardrails will be removed and replaced with standard Midwest Guardrail System (MGS) style guardrail, which is approximately three inches taller will otherwise maintain a similar visual profile to the existing guardrail. These new MGS guardrails will be added in the southbound median south of the bridge, and in the northbound median north of the bridge. In the northbound outside shoulder at the southern bridge approach, the replacement guardrail will extend approximately 100 feet farther south. In the median south of the bridge, the replacement northbound guardrail and new southbound guardrail will gradually merge into a single median barrier extending approximately 265 feet south of the bridge. In the median north of the bridge, the new northbound guardrail and replacement southbound guardrail will similarly merge into a barrier extending approximately 225 feet north of the bridge (see pages 3, 4, and 8 of **Exhibit 4**).

The overall effect of these changes would be a somewhat larger, more engineered-looking bridge. This character change would be minor, however, and would be subordinate to the surrounding high quality viewshed. Similar shoulder widths and bridge sizes are seen elsewhere throughout Morro Bay and Cayucos and would not be inconsistent with the Highway 1 viewing experience throughout the regional area. No new sources of light or glare are proposed as part of the project. Although viewer

sensitivity along Highway 1 is considered high, it is expected that the project would not seem out of place with its setting.

Following construction, construction access areas, staging areas, and other temporary uses be re-graded and re-contoured to match the surrounding natural topography. Vegetation trimmed or removed during project construction will be restored with appropriate native plants following construction. Furthermore, willow poles will be planted among all new rock slope protection (RSP), providing visual screening of the RSP. This vegetative restoration and screening, coupled with the decrease in bridge piles, will give the riparian corridor a more natural appearance when viewed from the southbound highway and the surrounding area.

In conclusion, the proposed project's overall visual impact would be minor and visually unobtrusive, and will be mitigated by the visual enhancements provided by the improved bridge railings and vegetative screening and restoration. As a result, the Commission finds that the project is consistent with Section 30251 of the Coastal Act.

H. Other Agency Approvals

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

The Army Corps has regulatory authority over the proposed project under Section 404 of the Clean Water Act, which regulates the discharge of dredge or fill material in waters of the United States. Army Corps granted Caltrans the requisite Section 404 permit on February 25, 2020.

U.S. Fish and Wildlife Service (USFWS)

Under the Endangered Species Act, a Section 7 Consultation is required for incidental take of any federally listed fish and wildlife species. USFWS issued a Programmatic Biological Opinion for the California red-legged frog on August 23, 2017. USFWS issued a biological Opinion for tidewater goby on August 23, 2017.

National Marine Fisheries Service (NMFS)

Under the Endangered Species Act, a Section 7 Consultation is required for incidental take of any federally listed anadromous fish species. NMFS issued a Biological Opinion for steelhead trout on October 25, 2017. Caltrans reinitiated consultation with NMFS three times due to changes to the plans for stream dewatering and pile installation. NMFS submitted re-initiation responses on July 25, 2018, November 4, 2019, and January 27, 2020.

California Department of Fish and Wildlife (CDFW)

Section 1602 of the State of California Fish and Game Code requires any person, state or local agency, or public utility proposing a project that may affect a river, stream, or lake to notify the CDFW before beginning the project. If activities will result in the diversion or obstruction of the natural flow of a stream; substantially alter its bed, channel, or bank; impact riparian vegetation; or, adversely affect existing fish and wildlife resources, a Streambed Alteration Agreement is required from CDFW. CDFW

submitted a draft Streambed Alteration Agreement on March 9, 2020. **Special Condition 3** requires Caltrans to submit the final CDFW Streambed Alteration Agreement to the Executive Director prior to commencement of construction.

Regional Water Quality Control Board – Central Coast Region (RWQCB)

Section 401 of the Clean Water Act requires Caltrans to obtain a water quality certification from the RWQCB for projects involving dredging and/or filling activities. Caltrans submitted an application to the RWQCB on December 20, 2019. **Special Condition 3** requires Caltrans to submit proof of RWQCB certification to the Executive Director prior to commencement of construction.

I. California Environmental Quality Act (CEQA)

Section 13096 of Title 14 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Public Resources Code, Section 21080.5(d)(2)(A) prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

Caltrans, acting as the lead agency under CEQA, adopted a Mitigated Negative Declaration for the project in June 2018. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of the Natural Resources Agency as being the functional equivalent of environmental review under CEQA (Section 15251(c)). The Commission has reviewed the relevant coastal resource issues with the proposed project, and has identified appropriate and necessary modifications to address adverse impacts to such coastal resources. All above findings are incorporated herein in their entirety by reference.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

APPENDIX A – Substantive File Documents²²

- CDP File 3-19-1199
- Caltrans, *Toro Creek Bridge Replacement Water Quality Best Management Practices*, September 24, 2019.
- Caltrans, *Coastal Development Permit Mitigation and Monitoring Plan*, April 10, 2020.

APPENDIX B – Staff Contact with Agencies and Groups

- California Department of Transportation
- California State Coastal Conservancy
- City of Morro Bay
- Department of Planning, County of San Luis Obispo
- Northern Chumash Tribal Council
- Salinan Nation Cultural Preservation Association
- Salinan Tribe of Monterey
- Salinan Tribe of Monterey and San Luis Obispo Counties
- San Luis Obispo County Chumash Council
- Yak Tityu Tityu Northern Chumash

²² These documents are available for review in the Commission's Central Coast District office in Santa Cruz.