COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: December 11, 2013

TO: Planning Commission

FROM: Planning Staff

SUBJECT: SUPPLEMENTAL STAFF REPORT: Consideration of a Coastal Development Permit and Grading Permit, and certification of a Mitigated Negative Declaration, to permit the stabilization and restoration of an approximately 1,700 linear foot section of Corinda de los Trancos Creek in the unincorporated Half Moon Bay area of San Mateo County. This project is appealable to the California Coastal Commission.

County File Number: PLN 2013-00109 (Questa Engineering)

RECOMMENDATION

That the Planning Commission certify the Mitigated Negative Declaration and approve the Coastal Development Permit and Grading Permit, County File PLN 2013-00109, by making the required findings and adopting conditions of approval as listed in Attachment A.

BACKGROUND

This item was continued by the Planning Commission on September 25, 2013 to allow the applicant and staff an opportunity to prepare responses to several questions that were raised during the public hearing, specifically:

1. What measures can be taken to address peak flows in the Creek?

   In the applicant's response letter, and as discussed by the applicant during the November 16, 2013 site visit, the landfill operators have evaluated this issue in the past. According to Mr. Syd Temple (project engineer/applicant), in 1998, when the last creek restoration was being designed, this issue (high peak flows out of the retaining pond) was recognized and analyzed. The potential to create additional stormwater detention capacity by expanding the existing sedimentation basin was evaluated by the landfill's geotechnical consultants. They determined that such expansion would jeopardize the stability of the landfill's toe buttress and potentially cause a failure of this portion of the landfill. Because of the topographically constrained nature of the site, there are limited opportunities, away from the toe buttress, to construct additional ponds. Mr. Temple did state,

during the site visit, that the landfill operator constructs temporary holding ponds in the upper portions of the landfill, as operations allow.

Additionally, as is described in the applicant's submittal materials and discussed during the site visit, the rate of erosion within the creek has greatly accelerated in those areas where the gabion baskets have failed. These baskets were installed in the early 1990s and have, unfortunately, come to the end of their design life. During the site visit, staff saw ample visual evidence of the accelerated erosion due to these failures. While high peak flows have undoubtedly impacted the lower portion of the creek (where the proposed project is located), it is also true that the failure of these old grade control structures has been a significant cause of the problem as well.

Project Longevity

During the September 25, 2013 public hearing, a question was raised as to the longevity of this project and whether the proposed stream protection measures will simply fail. As discussed above, the majority of this project is to repair areas where the old wire gabion baskets and mats (installed in the early 1990s) have failed. To provide a long-term repair for these areas, the applicant is proposing to use 1/2 to 2 ton rock to build the grade control structures and armor and stabilize the creek banks. The applicant estimates that this size rock will have a design life of 100 years.

Agricultural Lands and PAD Permit

In a letter from Committee for Green Foothills, Ms. Lennie Roberts (Spokesperson) states that the use of USDA soil maps is inappropriate, that portions of the project will be on agricultural lands and that a PAD permit is required. Regarding the use of USDA soil maps to determine the presence of prime soils, Policy 5.1 (*Definition of Prime Agricultural Lands*) of the LCP states:

> Define prime agricultural lands as:
>
> a. All land which qualifies for rating as Class I or Class II in the U.S. Department of Agriculture Soil Conservation Service Land Use Capability Classification, as well as all Class III lands capable of growing artichokes or Brussels sprouts.

According to the USDA Soil Survey, a portion of the soils in the project area are "Soquel loam, sloping, eroded" which has a capability classification of Class III. Staff's analysis in this regard remains the same, the areas in which construction equipment will be staged are not used for agriculture, and they are in fact approved parking areas associated with the Lemos Farm's activities. No existing or proposed agricultural activities will be disrupted by the project. Because no

agricultural lands will be impacted or converted, either temporarily or permanently, staff has determined that a PAD permit is not required for this project. This approach is consistent with past Planning Department practice with regards to stream and land restoration projects.

2. Is the project a fish and wildlife management activity?

In the Committee for Green Foothills letter, Ms. Roberts disagrees with staff's conclusion that this project is a fish and wildlife management activity. While it is true that the project will protect the only road into the County's landfill, it will have a benefit for downstream habitat by reducing the amount of sediment entering into Pilarcitos Creek. Increased sedimentation has a number of negative impacts upon aquatic species within the Creek, including loss of habitat and increased turbidity. Not approving a project that would stabilize the creek and stop downstream sedimentation would conflict with past County approvals for similar types of projects as well as LCP and General Plan policies that call for the protection of sensitive habitats.

Mitigation Measure 2 and the Proposed Replanting Palette

In addition, Ms. Roberts states that the proposed Mitigation Measure 2 is insufficiently specific as to type, location, and density of plant species to be used in revegetation. The mitigation measure in question deals specifically with post re-planting monitoring. This proposed measure was taken from the mitigation measures for the approved Pilarcitos Quarry EIR. Regarding the applicant's proposed replanting palette, many of the species listed do occur within the County's Coastal Zone. The applicant has provided the following statement:

> "The planting palette was chosen to replicate a coastal shrub and riparian woodland species mix. All of the species found on that list can be found in the watershed or in nearby watersheds. We believe the planting list is appropriate for the site. The redwood trees were added as a direct request from Bob Lemos (property owner to the west) to provide screening from the landfill entrance. The seed mixes consist of erosion control mix and coastal scrub mix. Questa is open to substitutions on the plant list and will contact the local RCD to get information on locally available seed mixes and their suppliers."

Other questions that were raised at the public hearing include:

3. How long will the landfill be open?

The landfill is currently forecasted to accept refuse until approximately 2042, given current projections on population growth and the effectiveness of existing recycling programs.

4. Is there an alternative to the proposed project?

In the applicant's response letter, and as discussed during the November 16, 2013 site visit, the proposed bank stabilization plan is dictated by the existing site conditions within the creek channel, as well as critical infrastructure adjacent to the creek. As was discussed during the site visit, the relatively steep gradient of the lower portion of the creek, adjacent to Highway 92, leads to higher water velocity which in turn leads to increased rates of erosion. These existing conditions require a more substantial fix than in other flatter portions of the creek, where minimal or no repairs are required.

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Applicant's October 16, 2013 response letter
C. Committee for Green Foothills September 25, 2013 comment letter
D. Staff Report from the September 25, 2013 Planning Commission Public Hearing (with attachments, including the Initial Study and Environmental Document).

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Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2013-00109 Hearing Date: December 11, 2013

Prepared By: Michael Schaller, Senior Planner For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Mitigated Negative Declaration, Find:

1. That the Mitigated Negative Declaration is complete, correct, and adequate and prepared in accordance with the California Environmental Quality Act (CEQA) and applicable State and County Guidelines.

2. That, on the basis of the Initial Study, comments received hereto, and testimony presented and considered at the public hearing, that there is no substantial evidence that the project if subject to the mitigation measures contained in the Negative Declaration will have a significant effect on the environment.

3. That the Mitigated Negative Declaration reflects the independent judgment of San Mateo County.

4. That the mitigation measures in the Mitigated Negative Declaration and agreed to by the owner and placed as conditions on the project have been incorporated into the Mitigation Monitoring and Reporting Plan in conformance with the California Public Resources Code Section 21081.6.

Regarding the Coastal Development Permit, Find:

5. That the project, as described in the application and accompanying materials required by Section 6328.7 and as conditioned in accordance with Section 6328.14, conforms to the plans, policies, requirements and standards of the San Mateo County Local Coastal Program as discussed in the September 25, 2013 staff report under Section B.2, including protection of biological resources and regulation of development in floodplains.

6. That the project conforms to specific findings required by policies of the San Mateo County Local Coastal Program. Specifically, the proposed project has a fish and wildlife management component and is also a flood control project.

Both types of projects are allowed uses within a riparian corridor. The proposed project will protect both downstream fish habitat and the access road to the landfill by stabilizing the creek channel.

Regarding the Grading Permit, Find:

7. That the project will not have a significant adverse effect on the environment. Staff performed an Initial Study, pursuant to California Environmental Quality Act (CEQA) regulations, and determined that the project, if undertaken with appropriate mitigation measures, would not have a significant adverse impact on the environment. The Negative Declaration's mitigation measures have been incorporated into the recommended conditions of approval to ensure that the project will have no adverse impacts to the environment.

8. That the project conforms to the criteria of the San Mateo County Grading Ordinance and is consistent with the General Plan. The project has been reviewed against the applicable policies of the San Mateo County General Plan and found, as proposed and conditioned, to be consistent with its goals and objectives, specifically with regards to Biotic, Soil and Visual Resources, as well as Hazard Mitigation Policies. The project, as proposed and conditioned, conforms to standards in the Grading Ordinance, including those relative to an erosion and sediment control plan, dust control plan, and the timing of grading activity.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

General Conditions

1. The approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on December 11, 2013. The Community Development Director may approve minor revisions or modifications to the project if they are found to be consistent with the intent of and in substantial conformance with this approval.

2. These permits shall be valid for two (2) years from the date of approval in which time a building permit shall be issued. Any extension of the permits shall require submittal of an application for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.

3. The Department of Fish and Game has determined that this project is not exempt from Department of Fish and Game California Environmental Quality Act filing fees per Fish and Game Section 711.4. The applicant shall pay to the San Mateo County Clerk/Recorder's Office an amount of $2,156.25 (plus the $50 administrative fee) at the time of filing of the Notice of Determination by the

County Planning and Building Department staff within ten (10) business days of the approval.

4. Prior to the issuance of the grading permit, the applicant shall submit copies of the approved Section 404 permit from the Army Corps and the Streambed Alteration Agreement from the Department of Fish & Wildlife. The applicant shall also submit a copy of an approved General Permit for Storm Water Discharges from the Regional Water Quality Control Board, or waiver from said Permit, prior to the issuance of the grading permit.

Mitigation Measures

5. **Mitigation Measure 1:** The applicant shall implement the proposed re-vegetation plan as depicted in the project plans immediately upon completion of grading activities.

6. **Mitigation Measure 2:** To ensure that re-vegetation efforts are successful, the applicant shall implement a five year monitoring program for those areas affected by the project. Woody plant survivorship and canopy cover progress will be measured using either the line-intercept methodology or direct counting of healthy, live plantings in a representative segment of the restoration area. Natural recruitment of native woody trees and shrubs will be recorded and included in the estimates. Tree and shrub density will be calculated using the as-built acreage of planting areas. A comprehensive species list will be recorded for the monitoring area to document species richness and relative cover by native and non-native plant species. Photographs representative of the overall progress of riparian establishment will be taken in each year to provide visual documentation of vegetation establishment. By the fifth growing season following planting, the total number of planted and naturally recruited native trees and shrubs in the re-vegetation areas shall be equal to at least 60 percent of the number of trees and shrubs originally planted. All planted and recruited trees and shrubs counted must be alive and in good health. If by the fifth year the 60 percent target has not been met, then the applicant shall replant as necessary and monitor for an additional five years. The applicant shall submit annual monitoring reports to the County Planning Department outlining the progress of re-vegetation efforts.

7. **Mitigation Measure 3:** The County shall require construction contractors to implement the following BAAQMD's Basic Construction Mitigation Measures, listed below:

    a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

    b. All haul trucks transporting soil, sand, or other loose material into or off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.

f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Post a publicly visible sign with the telephone number and person to contact at the County regarding the project. The County shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

8. **Mitigation Measure 4:** The applicant shall submit the names and credentials of biologists proposed to perform preconstruction surveys and monitoring to the USFWS for written approval at least 15 days prior to commencement of any activities.

9. **Mitigation Measure 5:** Each construction area will be surrounded by snake exclusionary fencing one week prior to the start of construction.

10. **Mitigation Measure 6:** A USFWS-approved biologist will survey the work areas no less than 5 days prior to the onset of activities and after the snake exclusion fence has been installed. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. In making this determination the USFWS shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move California red-legged frogs from the work areas before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. If a California red-legged frog is found nearby, but outside a proposed work area, it will not be disturbed and USFWS will be notified. The biologist will also report any observations of other listed species addressed in this biological assessment.

11. **Mitigation Measure 7:** Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for all construction personnel. The training will include a description of the listed species with potential to occur, their habitat, and the general measures that are being implemented to conserve the species as they relate to the project and the boundaries within which the project may be accomplished (i.e., work areas).

12. **Mitigation Measure 8:** A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area. All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.

13. **Mitigation Measure 9:** During project activities, all trash will be properly contained, removed from the work areas and disposed of regularly. Following construction, all trash and construction debris from work areas will be removed.

14. **Mitigation Measure 10:** All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (66 feet) from any riparian habitat or water body. The applicant shall ensure contamination of habitat does not occur during such operations. Prior to the start of construction, the applicant shall prepare a plan to ensure a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

15. **Mitigation Measure 11:** A USFWS-approved biologist will ensure that the spread or introduction of invasive plant species will be avoided to the maximum extent possible. When practical, invasive exotic plants in the project area will be removed.

16. **Mitigation Measure 12:** Project areas that are disturbed will be re-vegetated with an appropriate assemblage of native riparian, wetland and upland vegetation.

17. **Mitigation Measure 13:** Stream contours will be returned to their original condition at the end of project activities, unless consultation with USFWS has determined that it is not beneficial to the species or feasible.

18. **Mitigation Measure 14:** The number of access routes, number and size of staging areas, and the total area of the project will be limited to the minimum necessary to achieve the project goals. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian areas where feasible. Where impacts occur in staging areas and access routes, restoration will be performed.

19. **Mitigation Measure 15:** Work activities will be completed between August 1 and November 1. Should the proponent or applicant demonstrate a need to conduct

activities outside this period, the USACE may authorize such activities after obtaining the Service's approval.

20. **Mitigation Measure 16:** To control erosion during and after project implementation, the applicant shall implement best management practices.

21. **Mitigation Measure 17:** A USFWS-approved biologist will permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the maximum extent possible.

22. **Mitigation Measure 18:** Vegetation clearing and other construction work will occur outside the nesting birds season (February 15 to August 1). If work must be initiated during the nesting season, a preconstruction survey for nesting birds will be performed by a qualified biologist. Any active nests will be avoided until all the young have fledged and are independent.

23. **Mitigation Measure 19:** A qualified biologist will monitor the removal and relocation of woodrat houses and placement of refuge structures (e.g., half wine barrels and slash piles) for any woodrat nests located within the access road footprint. If young woodrats are found in any house, all removed material will be replaced and removal of that house will not continue until the young have left the house. Prior to dismantling houses, data will be collected to document the following characteristics of the house: house-building materials, contents of house cavities (particularly stored food and plants), percent and type of ground cover immediately around each house, tree and shrub species surrounding the house, and the house substrate (e.g., ground, tree, etc.). New houses will be established on site for each house removed. New house designs will be constructed of a half wine barrel placed upside down in appropriate microhabitat with materials from the nest chamber of the dismantled house placed inside, and other house materials placed over and around the barrel, including a long tunnel-shaped entrance that leads only into the receptacle.

24. **Mitigation Measure 20:** If surface water is present during construction, the applicant shall implement the following:

    a. Cofferdams, flow bypass pipes, or diversion dams shall be used to ensure continued flow around the work area.

    b. Adequate sediment and turbidity control measures shall be implemented. One or more fences of filter fabric shall be constructed across stream channels downstream of the lowermost cofferdams to reduce turbidity and sedimentation downstream of the stream construction sites during removal of cofferdams and until water clarity is re-established once stream flow is re-introduced to the stream channel in the work area.

c. The presence of surface water, such as in-stream flow or pool habitat, could mean the potential for salmonids to occur in the work area. To relocate salmonids from the work area following installation of a cofferdam or diversion dam/bypass pipes, a fish rescue and relocation effort shall be conducted by qualified biologists utilizing NMFS prescribed methods for the safe handling of salmonids.

d. The applicant shall have a biologist monitor the construction site during placement and removal of cofferdams, channel diversions, and access ramps to ensure that any adverse effects to salmonids are minimized. The biologist shall be on site during all dewatering events to capture, handle, and safely relocate steelhead, if present.

e. Consistent with Mitigation Measures 22 and 23, contractors shall have a supply of erosion control materials, and fuel and hydraulic fluid spill containment supplies on-site to facilitate a quick response to unanticipated storm events, or fuel or hydraulic fluid spill emergencies.

f. Consistent with Mitigation Measure 22, construction equipment used within the creek channel shall be checked each day prior to work within the creek.

25. **Mitigation Measure 21:** Project materials shall be placed in locations and manners that would not impair surface water flow into or out of any water of the United States. If surface flow is present during construction, dewatering would ensure that near-normal downstream flows are maintained. Fill shall consist of suitable material and placement such that it would not be eroded by future high flows. Following completion of construction, temporary fill shall be removed to upland areas, dredged material shall be returned to its original location, and the affected areas shall be restored to preconstruction elevations. The area upstream and downstream of the project reach shall be monitored annually for a two year period post construction to qualitatively assess channel conditions.

26. **Mitigation Measure 22:** The applicant shall prepare a comprehensive stormwater pollution and erosion control plan for the project. Erosion control measures shall be in place prior to the start of construction activities and remain in place throughout all phases of project construction. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the County of San Mateo Department of Public Work's Contract Requirements for Erosion and Sediment Control and Contract Requirements for Water Pollution Control for Construction in Sensitive Areas, and at a minimum include, but not be limited to, the following measures (County of San Mateo 2013a; County of San Mateo, 2013b):

a. Temporary erosion control measures (such as silt fences, staked straw bales, and temporary re-vegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place.

b. Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.

c. A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of petroleum products.

d. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.

e. Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

f. Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.

g. Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused topsoil, if any, shall be broadly redistributed to the surrounding areas in such a manner that topography and vegetation cover would not be adversely impacted.

h. Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.

i. Disturbed areas will be re-vegetated after completion of construction activities.

j. Provide sanitary facilities for construction workers.

27. **Mitigation Measure 23:** The applicant shall use the following best management practices (BMPs) to minimize potential adverse effects of the project to groundwater and soils from chemicals used during construction activities:

a. Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction;

b. Avoid overtopping construction equipment fuel gas tanks;

c. Provide secondary containment for any hazardous materials temporarily stored on-site;

d. During routine maintenance of construction equipment, properly contain and remove grease and oils;

e. Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and

f. Properly dispose of discarded containers of fuels and other chemicals.

28. **Mitigation Measure 24:** The construction contractor(s) shall develop a construction management plan for review and approval by the County's Planning Department and Department of Public Works. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, any safety hazards and traffic congestion during construction:

a. A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, signs, and designated construction access routes.

b. Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular traffic, and circulation and safety. Impacts to Highway 92 shall be minimized to the greatest extent possible.

c. Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

d. Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

Grading Permit Conditions

29. The provision of the San Mateo County Grading Ordinance shall govern all grading on and adjacent to this site. Per San Mateo County Ordinance Section 8605.5, all equipment used in grading operations shall meet spark arrester and fire-fighting tool requirements, as specified in the California Public Resources Code.

30. No grading activities shall commence until the applicant has been issued a grading permit (issued as the "hard card" with all necessary information filled out and signatures obtained) by the Current Planning Section.

31. The engineer who prepared the approved grading plan shall be responsible for the inspection and certification of the grading as required by Section 8606.2 of the Grading Ordinance. The engineer's responsibilities shall include those relating to non-compliance detailed in Section 8606.5 of the Grading Ordinance.

32. For the final approval of the grading permit, the applicant shall ensure the performance of the following activities within thirty (30) days of the completion of grading:

    a. The engineer shall submit written certification to the Department of Public Works and the Geotechnical Section that all grading has been completed in conformance with the approved plans, conditions of approval, and the Grading Ordinance.

    b. All applicable work during construction shall be subject to observation and approval by the geotechnical consultant. Section II of the Geotechnical Consultant Approval form must be submitted to the County's Geotechnical Engineer and Current Planning Section.

33. The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Re-vegetation of denuded areas shall begin immediately upon completion of grading/construction operations.

34. The grading permit "hard card" and the building permit shall be issued at the same time. No grading shall occur until the "hard card" has been issued.

35. Unless approved, in writing, by the Community Development Director, no grading shall be allowed during the winter season (October 1 to April 30) to avoid potential soil erosion.

36. The applicant shall submit a letter to the Current Planning Section, a minimum of two (2) weeks prior to commencement of grading, stating the date when grading will begin.

Building Inspection Section

37. Sediment and erosion control measures must be installed prior to beginning any site work and maintained throughout the term of the permit. Failure to install or maintain these measures will result in stoppage of construction until the corrections have been made and fees paid for staff enforcement time.

Geotechnical Section

38. The applicant shall comply with all requirements of the Geotechnical Section prior to the issuance of a grading permit and/or building permit.

Department of Public Works

39. The applicant shall submit a permanent stormwater management plan in compliance with the County's Drainage Policy and NPDES requirements for review and approval by the Department of Public Works.

40. The applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Department of Public Works for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Department of Public Works for review and approval.

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County of San Mateo - Planning and Building Department

ATTACHMENT B

October 16, 2013

Planning Commission
Attn: Mike Schaller
San Mateo County Planning Department
455 County Center
Redwood City, CA 94063

Dear Planning Commissioners,

I apologize for missing the September 26, Planning Commission hearing. I have listened to the audio tapes of those proceedings and would welcome another opportunity to discuss the project with County personal and planning commissioners. Prior to that meeting I would like to address some of the issues that were brought up in the hearing. Namely these issues were:

- Project applicants and purpose
- Hydrology Conditions: Landfill closure
- Project alternative analysis
- Project longevity
- Planting palette
- The 2002 Project

Project Applicant and Purpose. The project is proposed by the two adjacent landowners, Republic Services and Bob Lemos. Questa Engineering is the consulting engineering firm designing the proposed project and has applied for the County permits on behalf of landowners. The purpose of the project is to stabilize the Corinda los Trancos channel for approximately 1,700 feet upstream of the highway 92 culvert. The 2011 December storm caused extensive damage to channel banks on both properties. Mr. Lemos has lost a fence and erosion continues to threaten facilities on his property. On the landfill side, erosion is threatening several large pine trees and is within 10 feet of the active landfill roadway. If the problem remains unaddressed, then Mr. Lemos will lose more property and potentially some of the improvements he has near the creek bank. On Republic property, the roadway is at risk and could fail during a large event. This would mandate emergency repairs, the landfill is trying to be proactive and address this issue in the most environmentally appropriate way possible.

Hydrology: Landfill Operations and Closure. The landfill is currently forecasted to be accepting refuse until approximately 2042. After closure the landfill will be reclaimed according to its current use permit. The hydrologic conditions of the site are expected to remain relatively consistent for a minimum of 10 years after closure. Then as revegetation efforts progress, the runoff conditions would be expected to moderate and remain below current design flows. The sediment basin will be maintained for 30 years following site closure. Allied waste is committed to managing the downstream riparian areas in the most appropriate and sustainable manner possible.

The hydrologic and geomorphic conditions of the watershed have been forever altered by the landfill. The potential to create additional stormwater detention by expanding the existing sedimentation basin has been evaluated and geotechnical concerns about the stability of the landfill toe buttress made that option infeasible. The landfill is bound by its operating permit to trap sediment leaving the landfill in the basin. However, this requirement in turn reduces sediment inputs into the downstream channel, which

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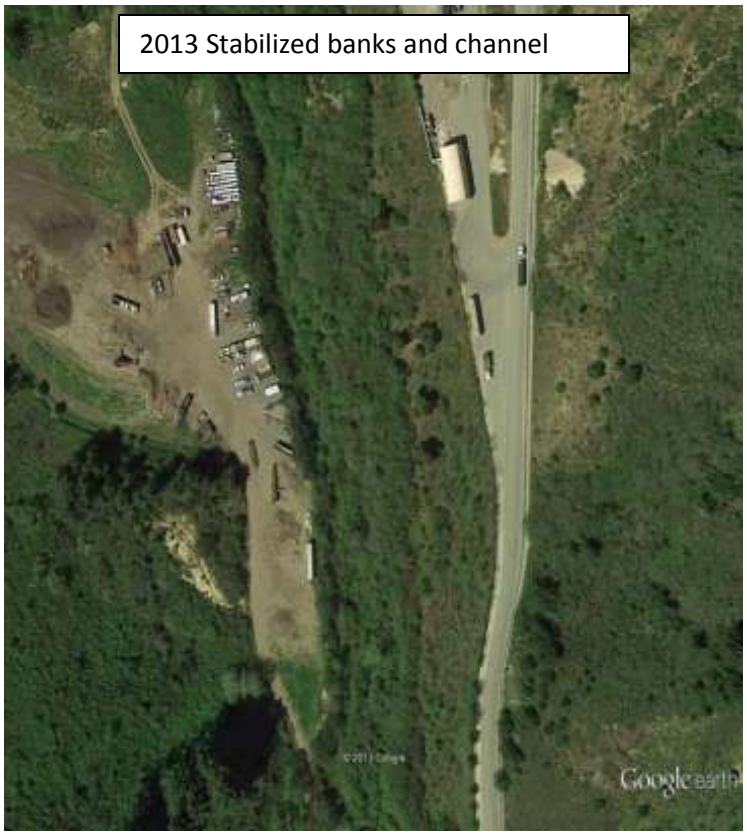
increases long-term erosion potential. The downstream channel is in the process of adjusting to the new runoff and sediment load dynamics in the watershed. These conditions are causing geomorphic changes in the channel that are explained in the design reports. These geomorphic processes will continue throughout the design life of the project. The rate at which these adjustments take place can be managed in an environmentally sensitive way. As the channel evolves the responses will need to be adaptive. Channel grades will need to be stabilized and natural processes that involve woody debris and revegetation will be encouraged. These techniques have been shown to work well in the watershed. The grade control planned for the project is intended to stabilize the vertical movement of the channel in the lower section. The upper section of the channel was stabilized as part of the 2002 project. The middle reach from the scale upstream to the 2002 project boundary is still relatively natural and has no grade control. It is expect that this area will require ongoing monitoring and maintenance during the life of the landfill.

Project Alternative Analysis. The site is very confined, flood control and bank stability are the most significant design issues. Rock slope protection and grade control were the most appropriate options. Where channel capacity is not critical, the design includes revegetation with native species and biotechnical bank reconstruction. The proposed redwood planting at the top of bank provides a desired screen between the Lemos Farm and the Landfill entrance. The remainder of the project is to rebuild the previous gabion grade controls with more durable rock and provide minor amounts of bank reconstruction.

Project Longevity. The previous stability project used gabions these have been shown to have a design life of around 25 years. The project proposes to use imported rock. This rock will be meet Caltrans durability standards and should last far longer than the gabion structures previously used. We would expect the design life of the grade control to exceed 100-years.

Planting Palette. The planting palette was chosen to replicate a coastal shrub and riparian woodland species mix. All of the species found on that list can be found in the watershed or in nearby watersheds. We believe the planting list is appropriate for the site. The redwood trees were added as a direct request from Bob Lemos to provide screening from the landfill entrance. The seed mixes consist of erosion control mix and coastal scrub mix. Questa is open to substitutions on the plant list and will contact the local RCD to get information on locally available seed mixes and their suppliers.

The 2002 Project. The project was started in late 1998 but was not constructed until 2002. The channel had become severely eroded creating vertical banks along Mr. Lemos's property. The banks and channel bottom were rebuilt and stabilized. A series of rock grade control structures were build to rebuild the channel. A low flow channel and a new floodplain terrace were constructed. Bio-degradable COIR logs were used to stabilize the channel and help establish riparian tree species. The following photos show the channel as it evolved after construction for three years.



A lush riparian canopy was reestablished and the channel was stabilized vertically and laterally through bank reconstruction.

Please if you have any questions regarding this issues and would like to speak with me prior to the next hearing please feel free to contact me at (510) 236—6114 ext. 220 or stemple@questaec.com.

Sincerely,

Sydney Temple P.E.
Questa Engineering Corporation

County of San Mateo - Planning and Building Department

ATTACHMENT C

September 25, 2013

To: San Mateo County Planning Commission

From: Lennie Roberts, Committee for Green Foothills

Brief Outline of concerns regarding PLN2013-001009 (CDP and Grading Permit to permit the stabilization and restoration of a 1,700 linear foot section of Corinda los Trancos Creek, near Half Moon Bay

Committee for Green Foothills requests that this item be continued, and a field trip be arranged for the Planning Commission to visit the site. A more complete history of previous attempts at stabilizing the banks and channel should be provided, and measures to address the source of the problem must be incorporated into the project.

The fundamental cause of the accelerated erosion downstream of the landfill is not being addressed. Page 9 of the Staff Report: "The landfill activities in the upper canyon have greatly increased storm runoff which is directed to the large sediment pond at the top of the creek. However, this pond has had a minimal effect on attenuating the flows during large storm events as it was designed to retain sediment not diminish the flows leaving the landfill. During major storm events, the large size of the primary spillway on the pond allows all of the peak flow to pass through the pond with very little detention."

The landfill occupies most of the upper watershed of Corinda Los Trancos canyon. One of the primary goals of landfills is to keep stormwater OUT of the landfill. Corinda's landfill diverts all sheet flow from the side slopes of the canyon around the landfill, and the cap over the landfill is also designed to prevent rainwater from entering the landfill material. While diversion of stormwater around the landfill is desirable for maintaining the integrity of the landfill, it has resulted in greater runoff particularly during peak storm events. Unless there are measures taken to attenuate the peak flows, downcutting of the stream bed and erosion of the banks will continue.

Previous attempts which have included installation of gabions on the banks and step pools in the stream channel have failed. The proposed gradient control structures (large and medium boulders and Engineered Stream Material (what is this exactly?), and riprap rock slope protection will also fail. It is only a matter of time.

Page 8, Item 2.a. Agricultural Component references USDA soil maps. This is inappropriate for a Coastal Development Permit. LCP soil maps should be referenced, as prime soils have a more expansive definition under the Coastal Act. Some of the work, particularly access and staging areas, will be on agricultural lands on the Lemos property. The Staff Report should analyze these impacts. CGF disagrees that a PAD permit is not required.

Page 8, Item 2.b. Sensitive Habitats Component: CGF disagrees with the conclusion under Policy 7.3 that "successful implementation of the project will result in the long-term stability and protection of biotic resources in this riparian corridor" for the reasons stated above.

Page 8, Item 2.b. Sensitive Habitats Component: CGF disagrees with the staffs conclusion that this project is a fish and wildlife management activity, as the presumed benefits of the project are to reduce or eliminate bank failure and protect the road leading to the landfill.

Page 9, Item 2.b. Sensitive Habitats Component: Reference is made to siltation of spawning grounds in Pilarcitos Creek downstream of Corinda los Trancos Creek. Where are the downstream spawning grounds?

Why is the Owner/Applicant on Attachment C listed as San Mateo County Department of Public Works and why does it have a different PLN number?

CGF is also concerned about Mitigation Measure 2 that is insufficiently specific as to type, location, density of plant species to be used in revegetation. Some of the proposed plants and trees are inappropriate for this location. CGF would like to have time for consultation with the California Native Plant Society regarding a more appropriate plant palette.

County of San Mateo - Planning and Building Department

ATTACHMENT D

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 25, 2013

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of a Coastal Development Permit and Grading Permit, and certification of a Mitigated Negative Declaration, to permit the stabilization and restoration of an approximate 1,700 linear foot section of Corinda de los Trancos Creek in the unincorporated Half Moon Bay area of San Mateo County. This project is appealable to the California Coastal Commission.

PROPOSAL

The applicant is proposing to stabilize and restore a 1,700-foot section of Corinda de los Trancos (CDLT) Creek from the scale house for Ox Mountain Landfill extending to the culvert under Highway 92. To stabilize the creek, the applicant is proposing to:

1. **Gradient Control:** Construct a series of grade control structures within the channel of the creek. These structures consist of large to medium size boulders that are keyed into the creek bed, with the upslope creek channel backfilled with Engineered Stream Material (ESM) to fill voids and prevent piping. The structures will be keyed deeply into the banks and channel so that the flow does not "flank" or go under the structures.

2. **Bank Slope Protection:** Install approximately 840 linear feet of bank protection throughout the project reach. Riprap rock slope protection with planted willow will be utilized throughout the project site. Riprap rock slope protection heights will vary from 4 ft. to 8 ft.

3. **Erosion Control:** Due to severe channel degradation, most bank slopes within the project reach are nearly vertical. Following installation of the willow planted rock channel and bank armoring, the applicant is proposing to grade all slopes back to a minimum of 1.5:1, or 2:1 where possible. The bank slope above the rock armoring and other disturbed areas will be seeded with native grasses and shrubs. Following seeding, biodegradable erosion control blankets will be installed on top of all exposed slopes that drain directly into the channel, and straw mulch will be used to cover other disturbed areas. Bank slope planting will be completed by cutting holes within the blanket and installing appropriate tree and shrub species.

RECOMMENDATION

That the Planning Commission certify the Mitigated Negative Declaration and approve the Coastal Development Permit and Grading Permit, County File PLN 2013-00109, by making the required findings and adopting conditions of approval as listed in Attachment A.

SUMMARY

Corinda de los Trancos (CDLT) Creek runs north and south draining the Ox Mountain Landfill before flowing under Highway 92 at a location 1.8 miles east of the intersection with Highway 1. The creek is bordered to the west by the Lemos Farm and to the east by the Ox Mountain Landfill access road. Due to the positioning of CDLT, current bank failures threaten both the landfill access road and the Lemos Farm property.

The geomorphology of CDLT has been affected by a number of activities. Historically, road building and agricultural activities likely encroached on the riparian corridor narrowing the channel. More recently, the expansion of the Ox Mountain Landfill beginning in the early 1990s has led to significant increases in storm flow runoff and reduced the sediment input to the channel. Bed load sediment input has been drastically reduced due to the construction of a large sediment control pond at the base of the landfill. This pond effectively traps bed load size material interrupting the delivery of larger size sediment which leads to a lack of channel armoring and subsequent down cutting pressure.

To remedy this situation, the applicant is proposing to construct a series of grade control structures within the channel, as well as re-shaping and armoring of the creek's banks. The proposed project will have some temporary, significant, impacts on the creek and surrounding habitat. However, mitigation measures have been proposed by Staff which will minimize these temporary impacts to a less than significant level. With these measures, Staff believes the project conforms to the County's General Plan and LCP. If the project is not initiated, Staff believes permanent, significant impacts on the creek, the surrounding habitat, and the Pilarcitos Creek watershed will continue to occur. Currently, the creek is physically degrading and this trend is not likely to change without intervention.

MJS:jlh – MJSX0631_WJU.DOCX

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 25, 2013

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Consideration of a Coastal Development Permit, pursuant to Section 6328.4 of the County Zoning Regulations, and a Grading Permit, pursuant to Section 8600 of the County Ordinance Code, and certification of a Mitigated Negative Declaration, pursuant to the California Environmental Quality Act, to permit the stabilization and restoration of an approximate 1,700 linear foot section of Corinda de los Trancos Creek in the unincorporated Half Moon Bay area of San Mateo County. This project is appealable to the California Coastal Commission.

County File Number: PLN 2013-00109 (Questa Engineering)

PROPOSAL

The applicant is proposing to stabilize and restore a 1,700-foot section of Corinda de los Trancos (CDLT) Creek from the scale house for Ox Mountain Landfill extending to the culvert under Highway 92. To stabilize the creek, the applicant is proposing to:

1. **Gradient Control:** Construct a series of grade control structures within the channel of the creek. These structures consist of large to medium size boulders that are keyed into the creek bed, with the upslope creek channel backfilled with Engineered Stream Material (ESM) to fill voids and prevent piping. The structures will be keyed deeply into the banks and channel so that the flow does not "flank" or go under the structures.

2. **Bank Slope Protection:** Install approximately 840 linear feet of bank protection throughout the project reach. Riprap rock slope protection with planted willow will be utilized throughout the project site. Riprap rock slope protection heights will vary from 4 ft. to 8 ft.

3. **Erosion Control:** Due to severe channel degradation, most bank slopes within the project reach are nearly vertical. Following installation of the willow planted rock channel and bank armoring, the applicant is proposing to grade all slopes back to a minimum of 1.5:1, or 2:1 where possible. The bank slope above the rock armoring and other disturbed areas will be seeded with native grasses and shrubs. Following seeding, biodegradable erosion control blankets will be installed on top of all exposed slopes that drain directly into the channel, and straw mulch will be used to cover other disturbed areas. Bank slope planting will

be completed by cutting holes within the blanket and installing appropriate tree and shrub species.

RECOMMENDATION

That the Planning Commission certify the Mitigated Negative Declaration and approve the Coastal Development Permit and Grading Permit, County File PLN 2013-00109, by making the required findings and adopting conditions of approval as listed in Attachment A.

BACKGROUND

Report Prepared By: Michael Schaller, Senior Planner, Telephone 650/363-1849

Applicant: Questa Engineering

Owners: Republic Services (Ox Mountain Landfill) and Bob Lemos

Location: 12320 Highway 92, Half Moon Bay (Ox Mountain Landfill)

APNs: 056-360-040 and 056-360-330

Size: 10 acres (approximately)

Existing Zoning: PAD/CD (Planned Agricultural District/Coastal District) and RM-CZ (Resource Management – Coastal Zone)

General Plan Designation: Open Space and Agriculture

Williamson Act: Neither parcel is under a Williamson Act Contract.

Existing Land Use: The project site is bordered by the Lemos Christmas Tree Farm to the west, and the access road for Ox Mountain Landfill is to the east. The landfill itself lies to the north of the project site, and Highway 92 defines the southern boundary of the project site.

Water Supply: Not applicable to this project.

Sewage Disposal: Not applicable to this project.

Flood Zone: The project site is in Flood Zone A (areas with 1% annual chance of flooding) as defined by FEMA (Community Panel Number 06081C0260E, dated October, 16, 2012).

Environmental Evaluation: An Initial Study and Mitigated Negative Declaration were prepared for this project and circulated from June 24, 2013 to July 24, 2013. See Section C of this report for further discussion.

Setting: Corinda de los Trancos (CDLT) Creek runs north and south draining the Ox Mountain Landfill before flowing under Highway 92 at a location 1.8 miles east of the intersection with Highway 1. The creek is bordered to the west by the Lemos Farm and to the east by the Ox Mountain Landfill access road. Due to the positioning of CDLT, current bank failures threaten both the landfill access road and the Lemos Farm property.

The geomorphology of CDLT has been affected by a number of activities. Historically, road building and agricultural activities likely encroached on the riparian corridor narrowing the channel. More recently, the expansion of the Ox Mountain Landfill beginning in the early 1990s has led to significant increases in storm flow runoff and reduced the sediment input to the channel. Bed load sediment input has been drastically reduced due to the construction of a large sediment control pond at the base of the landfill. This pond effectively traps bed load size material interrupting the delivery of larger size sediment which leads to a lack of channel armoring and subsequent down cutting pressure.

Previous channel work was completed in the early 1990s immediately after the expansion of the landfill. Gabion baskets were installed in a series of grade control structures at select locations along the segment of CDLT from the landfill scale house to the culvert beneath Highway 92. The gabion grade control structures provided vertical channel stability for twenty years. These structures have all failed over recent years leading to widespread channel degradation. The sand based sediment load of the creek slowly eroded the gabion wiring, the baskets broke open and the smaller rock content was lost to sediment transport. Some of the gabion bank protection is still evident and appears to be partially functional although the baskets are being undermined in most locations. In addition to the gabions, two concrete low water crossings were installed adjacent to the scale house. Currently, water is flowing under one of the structures and the second structure presents a 10’ drop with significant evidence of erosion around the outfall. Failure of these remaining grade control structures would lead to significant upstream erosion.

The channel throughout most of the project reach is vegetated with willow, alder, and shrubs that provide bank stability as long as the bed elevation is not altered significantly. However, when the gabion structures failed, rapid channel incision occurred throughout the project reach, generally ranging in depth from 1’ to 4’. The most recent channel incision is generally associated with stream reaches upstream from failed gabion grade control structures. In addition to the incision, there are numerous cases of active bank failures along CDLT where mature riparian vegetation is falling into the creek and causing debris jams, channel movement, and further exacerbation of the bank erosion and incision problems.

Vegetation and Wildlife

CDLT Creek supports fragmented mature riparian woodland consisting of alders and willows. The upper slopes of the canyon (outside of the landfill) are dominated by coastal scrub/chaparral and grassland. The chaparral plant community is dominated by coyote brush, California sage, and sticky monkey flower. Portions of the western slope

of the canyon consist of Douglas fir woodland. The agricultural fields operated by Mr. Lemos are currently used to grow pumpkins, cut flowers, and Christmas trees. The chaparral vegetation provides a food source for seed-eating species such as California quail, dark-eyed junco, western harvest mouse, and black-tailed deer. The Douglas-fir stands provide a food source for dark-eyed junco. In addition, these woodlands provide nesting habitat for a variety of birds including Swainson's thrush, brown creeper and raptors such as the red-tailed hawk and the great horned owl.

Riparian Woodland

Riparian woodland vegetation lines the bottom two-thirds of the deeply incised CDLT Creek channel. Dominant plant species within the riparian zone include willow and red alder which form a dense canopy along the majority of the channel. Understory vegetation consists of Californian blackberry, California black current, thimbleberry, bracken fern, western sword fern, and stinging nettle. The CDLT Creek corridor provides habitat for a variety of wildlife including opossum, striped skunk, California meadow vole, black tailed deer, raccoon, and brush rabbit.

Listed Species

The USFWS endangered and threatened species list for the Half Moon Bay quadrangle includes 25 federally listed animals. The California Natural Diversity Database (CNDDB) for the quadrangle includes records for five additional California Species of Special Concern including three animals and two plants. Twenty-five species from these two lists have no potential to occur within the project area due to lack of suitable habitat. These 25 species will not be affected by the proposed project.

The five species that may occur or may be affected by the proposed project include:

1. Present/High Potential: California red-legged frog

2. Moderate Potential: San Francisco garter snake, San Francisco dusky footed woodrat

3. Low Potential: Monarch butterfly, Central California Coastal steelhead (known to occur only downstream in Pilarcitos Creek)

The primary species of concern for this project is the California red-legged frog which was observed in CDLT Creek during channel stabilization work located approximately 1/2 mile upstream from the proposed project (CNDDB 2013).

DISCUSSION

A. DETAILED PROJECT DESCRIPTION

The applicant is proposing to stabilize and restore a 1,700 foot section of Corinda de los Trancos (CDLT) Creek from the scale house for Ox Mountain Landfill extending to the culvert under Highway 92. To stabilize the creek, the applicant is proposing to:

Gradient Control

The channel elevation through the project area drops approximately 60 feet over a distance of approximately 1,700 feet with an average slope of 3.5%. Under natural conditions, channels in this type of high gradient stream would be composed of bedrock, course cobble, or a series of vertical drops created with boulders and/or large wood. No bedrock or boulders are evident within the channel reach and existing cobble, and wood provides only occasional grade control. Installation of rock weirs are proposed to create individual channel segments with lower slopes in the context of the overall project reach. Fish do not inhabit the project reach so there is no restriction on vertical drop heights. Ten grade control structures are proposed:

1. Six buried grade control structures within the first 500 feet (between the box culvert under Highway 92 and Station 5+20).

2. Three 3' high chute grade control structures between Stations 6+00 and 9+60.

3. One large (10' high) chute grade control structure at Station 16+00 (adjacent to Scale House).

The grade control structures consist of large to medium size boulders that are keyed into the creek bed, with the upslope creek channel backfilled with Engineered Stream Material (ESM) to fill voids and prevent piping. These grade control structures (rock weirs/check dams) will be keyed deeply into the banks and channel so that flow does not "flank" or go under the structures. The grade control structures will increase the chances of developing a stable channel and associated floodplain morphology for the creek.

Bank Slope Protection

There are numerous occurrences of bank erosion throughout the project reach. These are often associated with areas of down cutting that will be treated with grade control installation. However, at many locations, additional treatments will be necessary to stabilize the bank. Approximately 840 linear feet of bank protection is proposed throughout the project reach, with the majority (approximately 500 linear feet) within the lower portion of the project reach between Highway 92 and Station 5+00. Riprap rock slope protection with planted willow will be utilized throughout the project site. In general, the rock will be placed with its base in a toe trench excavated 3' below the channel elevation. In many locations, the rock armoring will be installed with a slope of 1.5 (horizontal) to 1 (vertical) due to channel capacity and top of bank constraints. Where no constraints exist, 2:1 slopes will be used. Riprap rock slope protection heights will vary from 4 ft. to 8 ft. All together, the project will result in approximately 1,010 cubic yards of material (1/2-2 ton riprap, Engineered Stream Material, and Soil) to be placed within the project area.

Erosion Control

During project implementation, a dewatering and stockpile management plan will be implemented to ensure that no sedimentation or erosion into the creek occurs. Following installation of the willow planted rock channel and bank armoring, all slopes within the project reach will be graded back to a minimum of 1.5:1, or 2:1 where possible. The bank slope above the rock armoring and other disturbed areas will be seeded with native grasses and shrubs. Following seeding, biodegradable erosion control blankets will be installed on top of all exposed slopes that drain directly into the channel, and straw mulch will be used to cover other disturbed areas. Bank slope planting will be completed by cutting holes within the blanket and installing appropriate tree and shrub species. Existing storm drainage outfalls will be retrofitted with appropriate energy dissipation aprons.

B. KEY ISSUES

1. Conformance with the General Plan

Staff has reviewed the project for conformance with all applicable General Plan Policies. The policies applicable to this project include the following:

a. Chapter 1 - Vegetative, Water, Fish and Wildlife Resources

The proposed project will have some temporary, significant, impacts on the creek and surrounding habitat. However, mitigation measures have been proposed by Staff which will minimize these temporary impacts to a less than significant level. If the project is not initiated, Staff believes permanent, significant impacts on the creek, the surrounding habitat, and the Pilarcitos Creek watershed will continue to occur. Currently, the creek is physically degrading and this trend is not likely to change without intervention.

Policy 1.24 (*Protect Vegetative Resources*). This policy requires development to minimize the removal of vegetative resources. Removal of vegetative resources has been minimized to those areas where stabilization and restoration of the creek is most imperative. Of the nearly 1,700 linear feet of creek channel within the project reach, only 850 linear feet will be restored with willow planted rock slope protection. To compensate for this loss of resources and to stabilize the affected creek banks, the applicant will plant approximately 423 native trees and shrubs within both the channel and creek banks. Exposed slopes will be hydroseeded with a native seed mix and stabilized using biodegradable erosion control fabrics.

Policy 1.25 (*Protect Water Resources*). This policy requires development to minimize the alteration of natural water bodies and maintain adequate stream flow and water quality for vegetative and

fish and wildlife habitats. The purpose of the project is to stabilize the creek to prevent bank failure with subsequent loss of trees and vegetation and dumping of sediment loads into Pilarcitos Creek. CDLT Creek is no longer a natural water body in the strictest sense of the term. The creek's upper watershed has been highly modified by the expansion of the landfill and construction of runoff control structures for that use. Additionally, stabilization projects have occurred within the creek in the last 20 years. Given this setting, the proposed work is an attempt to stabilize the creek and return it to something approaching its pre-landfill condition, using a mix of constructed elements (rip-rap check dams) and revegetation. To protect water quality during the construction phase of the project, the applicant is proposing to implement erosion control fencing around all work sites and, if water is present in the creek at the time of construction, then water will be diverted around work sites through the use of coffer dams and pipes.

b. Chapter 2 - Soil Resources

Soils within this watershed have been classified as being highly erosive, and exposed soils erode at a rate 100 times faster than when covered with vegetation. The project complies with Policy 2.17 (*Regulate Development to Minimize Soil Erosion and Sedimentation*) and Policy 2.18 (*Encourage/ment of Soil Protective Uses*). As proposed, grade control structures (check dams) will be constructed in-stream to reduce the erosive force of high runoff through this stretch of the creek. Bank protection devices will also be used to protect the reconstructed channel profile. Short-term (silt fencing, straw matting, etc.) and long-term (revegetation) erosion control measures have been incorporated into the project design. Water flow in the creek, if present, will be diverted around the project site during construction through the use of coffer dams and flexible plastic drain pipes. Work will be restricted to the dry season when water flow in the creek will be at its lowest.

c. Chapter 4 - Visual Quality Policies

The project complies with Policy 4.26 (*Water Bodies*), which calls for the protection of visual resources of water bodies, and Policy 4.28 (*Trees and Vegetation*), which calls for the protection of trees and vegetation. The proposed project will have a short-term visual impact upon the scenic resources of the project site, in that existing vegetation will be removed to allow for the stabilization and restoration work. However, given the ongoing erosion problems of this creek, this vegetation will eventually be lost. Replacement of the removed vegetation is included as part of the project design and included as conditions of approval in Attachment A.

d. Chapter 15 - Natural Hazards

The project complies with Policy 15.13 (*Abatement of Natural Hazards*). By stabilizing the creek channel, it is hoped that significant loss of adjacent agricultural land due to bank erosion will be prevented. Additionally, stabilization of the creek will help prevent buildup of sediment downstream which, in turn, causes flooding.

2. Conformance with the Local Coastal Program (LCP)

Staff has reviewed the project and found it to be in compliance with the policies of the Local Coastal Program. The relevant policies are discussed below:

a. Agriculture Component

Based upon the USDA soil maps, there are Class III soils adjacent to the creek which could potentially be considered "prime soils." However, there is no actively farmed land immediately adjacent to the creek. The property line between the two project parcels runs essentially down the middle of the creek. On the landfill side, there is no agricultural activity occurring. On the lands of Lemos, actively farmed lands are separated from the creek by parking areas, ranch buildings and a riparian buffer zone. The work proposed by this permit is limited to the areas within the creek banks, thus not affecting agricultural lands. Staff has determined that a PAD permit is therefore not required for this project.

b. Sensitive Habitats Component

Policy 7.3 (*Protection of Sensitive Habitats*) prohibits development that would have a significant adverse impact upon sensitive habitats which includes riparian corridors such as CDLT. The project will have a negative short-term impact upon the remaining biotic resources within those stretches of the creek where work is proposed. However, if the project is not carried out, the creek will continue to degrade and undercut its banks, causing further erosion and loss of vegetation. Successful implementation of the project will result in the long-term stability and protection of biotic resources in this riparian corridor.

Policy 7.9 (*Permitted Uses in a Riparian Corridor*) lists fish and wildlife management activities and flood control projects as allowed uses within a riparian corridor. The proposed project will protect both downstream fish habitat and the access road to the landfill by stabilizing the creek channel.

The landfill activities in the upper canyon have greatly increased storm runoff which is directed to the large sediment pond at the top of the creek. However, this pond has had a minimal effect on attenuating flows during large storm events as it was designed to retain sediment not diminish the flows leaving the landfill. During major storm events, the large size of the primary spillway on the pond allows all of the peak flow to pass through the pond with very little detention. The pond effectively traps bed load size material interrupting the delivery of larger size sediment (rocks) which leads to a lack of channel armoring and subsequent down cutting pressure. As discussed previously, the failure of the early 1990s erosion control structures has resulted in accelerated down cutting of the creek channel which has created over steepened banks at some locations. When these banks fail, there is a flush of sediment into the creek, which then gets pushed down into Pilarcitos Creek, which then silts over spawning grounds for Steelhead within that creek. The bank failures also threaten the stability of the access road into the landfill, which is the only point of entry into the landfill.

The proposed work will benefit downstream fish and wildlife habitat by reducing a source of sedimentation into Pilarcitos Creek as well as protecting the only access road into the County landfill.

Policy 7.10 (*Performance Standards in Riparian Corridors*) outlines certain standards that are required for projects in Riparian Corridors. The applicant proposes to remove only that vegetation necessary to carry out the project, and only critical areas will be worked on. Stringent erosion and sediment controls are proposed as part of the project, and only native plant species will be used for revegetation. These measures are included as conditions of approval.

Policy 7.33 (*Permitted Uses in Habitats of Rare and Endangered Species*). As discussed above, the California red-legged frog has been identified within the CDLT Creek corridor. Very few activities are allowed within areas designated as habitat for rare or endangered species. One of these is restoration of damaged habitat. The applicant, in compliance with U.S. Fish and Wildlife Service requirements, has proposed implementing a number of measures that are consistent with the Service's Programmatic Biological Opinion. These measures include placing exclusionary fencing around work areas, pre-construction surveys within each fenced area, worker training, and construction monitoring. These measures have been included in Attachment A as Conditions No. 8 – No. 24.

c. Visual Resources Component

Policy 8.6 (*Streams, Wetlands, and Estuaries*) requires development to be set back from the edge of streams and other natural waterways a sufficient distance to preserve the visual character of the waterway. All of the project site within the creek lie within the Highway 92 County scenic corridor. Approximately 200 feet of the creek upstream from the Highway 92 crossing is readily visible to motorists passing on the highway. Within this area, a majority of the over-steepened east bank will be laid back to reduce the chances of slope failure. The banks on both sides will be revegetated as discussed above. The project, by its nature, will have a significant, temporary impact upon the creek's visual resources. However, failure to implement the project will inevitably result in the same impact, as the creek devours its banks in an attempt to reestablish equilibrium. As the over-steepened banks fail, trees and other vegetation on them will fall into the creek, creating additional hazards and accelerating erosion forces within the creek channel. The visual impacts of the project will be temporary in nature. As trees and other vegetation, planted to stabilize the reformed banks, become established, the visual impact of the project will diminish.

d. Hazards Component

Policy 9.9 (*Regulation of Development in Floodplains*) requires projects that alter streams to incorporate the best mitigation measures feasible and limits this type of work to necessary water supply projects, flood control projects and developments to enhance fish and wildlife habitat. As discussed above, the project is necessary to prevent the loss of the only access road into the County landfill. The project will also benefit downstream fish habitat in Pilarcitos Creek by reducing the likelihood of catastrophic bank failures, which would result in large amounts of sediment entering into the watershed.

3. Compliance with Zoning Regulations

The project's compliance with the PAD zoning regulations was discussed above. The project also lies within lands zoned RM-CZ. Section 6903 of the County Zoning Regulations defines which types of development in the RM-CZ Zoning District require Development Review Permits. This section also outlines which types of actions are exempt from Development Review Permits and Procedures. Specifically, grading and excavating operations, which are subject to regulations of the County Ordinance Code, Chapter 8, *Regulation of Grading and Excavating Operations*, are exempt from a RM-CZ Permit. This project includes an application for a Grading Permit. Review for compliance with the County Grading Regulations is included below, under Section 4.

4. Conformance with the Grading Ordinance

The grading proposal has been reviewed by the Department of Public Works and the County Geotechnical Section. Both Departments have approved the plans as proposed. The applicant has applied to the Army Corp of Engineers, California Department of Fish and Wildlife, and the Regional Water Quality Control Board for the respective permits from each agency. Conditions have been added which require the applicant to submit copies of these permits to the County upon their approval. Planning Staff reviewed the proposal against the required findings for a grading permit. After conducting an environmental review as required by CEQA, Staff found that there will not be a significant long-term adverse effect on the environment. The project conforms to the criteria for review contained in the Grading Ordinance, including an erosion and sediment control plan. Finally, as outlined above, the project conforms to the General Plan and the Local Coastal Program. In order to approve this project, the Planning Commission must make the required findings contained in the Grading Regulations. The findings and supporting evidence are outlined below:

a. That the project will not have a significant adverse effect on the environment.

As discussed under the project description, the applicant estimates that the entire project will involve approximately 1,010 cubic yards of material being placed within the project area. After conducting an environmental review as required by CEQA, Staff found that, if all mitigation measures are implemented, there will not be a significant long-term adverse effect on the environment. Mitigation measures include:

(1) Post-construction revegetation monitoring (Condition No. 6)

(2) Implementation of dust control measures (Condition No. 7)

(3) Erection of snake exclusion fencing (Condition No. 9)

(4) Pre-construction survey for the California red-legged frog and the San Francisco garter snake (Condition No. 10)

(5) Pre-construction worker education on the California red-legged frog and the San Francisco garter snake (Condition No. 11)

(6) Biological monitoring during construction activities (Condition No. 12)

(7) Scheduling construction to occur between August 1 and November 1 (Condition No. 19)

b. That the project conforms to the criteria of the San Mateo County Grading Ordinance and is consistent with the General Plan.

The project conforms to the criteria for review contained in the Grading Ordinance, including an erosion and sediment control plan, dust control measures, and revegetation plans. As outlined above, the project conforms to the General Plan.

C. ENVIRONMENTAL REVIEW

An Initial Study and Mitigated Negative Declaration were prepared for this project and circulated from June 24, 2013 to July 24, 2013. No comments were received. All mitigation measures recommended in the Negative Declaration have been included as Conditions of Approval Nos. 5 through 28 in Attachment A.

D. REVIEWING AGENCIES

California Coastal Commission
Building Inspection Section
Department of Public Works
Geotechnical Section
Regional Water Quality Control Board
California Department of Fish and Wildlife

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Vicinity Maps
C. Project Plans
D. Applicant's Biological Report
E. Applicant's Design Report
F. Initial Study/Mitigated Negative Declaration

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Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2013-00109 Hearing Date: September 25, 2013

Prepared By: Michael Schaller
Senior Planner

For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Mitigated Negative Declaration, Find:

1. That the Mitigated Negative Declaration is complete, correct, and adequate and prepared in accordance with the California Environmental Quality Act (CEQA) and applicable State and County Guidelines.

2. That, on the basis of the Initial Study, comments received hereto, and testimony presented and considered at the public hearing, that there is no substantial evidence that the project if subject to the mitigation measures contained in the Negative Declaration will have a significant effect on the environment.

3. That the Mitigated Negative Declaration reflects the independent judgment of San Mateo County.

4. That the mitigation measures in the Mitigated Negative Declaration and agreed to by the owner and placed as conditions on the project have been incorporated into the Mitigation Monitoring and Reporting Plan in conformance with the California Public Resources Code Section 21081.6.

Regarding the Coastal Development Permit, Find:

5. That the project, as described in the application and accompanying materials required by Section 6328.7 and as conditioned in accordance with Section 6328.14, conforms to the plans, policies, requirements and standards of the San Mateo County Local Coastal Program as discussed in the staff report under Section B.2, including protection of biological resources and regulation of development in floodplains.

6. That the project conforms to specific findings required by policies of the San Mateo County Local Coastal Program. Specifically, the proposed project has a fish and wildlife management component and is also a flood control project. Both

types of projects are allowed uses within a riparian corridor. The proposed project will protect both downstream fish habitat and the access road to the landfill by stabilizing the creek channel.

Regarding the Grading Permit, Find:

7. That the project will not have a significant adverse effect on the environment. Staff performed an Initial Study, pursuant to California Environmental Quality Act (CEQA) regulations, and determined that the project, if undertaken with appropriate mitigation measures, would not have a significant adverse impact on the environment. The Negative Declaration's mitigation measures have been incorporated into the recommended conditions of approval to ensure that the project will have no adverse impacts to the environment.

8. That the project conforms to the criteria of the San Mateo County Grading Ordinance and is consistent with the General Plan. The project has been reviewed against the applicable policies of the San Mateo County General Plan and found, as proposed and conditioned, to be consistent with its goals and objectives, specifically with regards to Biotic, Soil and Visual Resources, as well as Hazard Mitigation Policies. The project, as proposed and conditioned, conforms to standards in the Grading Ordinance, including those relative to an erosion and sediment control plan, dust control plan, and the timing of grading activity.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

General Conditions

1. The approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on September 25, 2013. The Community Development Director may approve minor revisions or modifications to the project if they are found to be consistent with the intent of and in substantial conformance with this approval.

2. These permits shall be valid for two (2) years from the date of approval in which time a building permit shall be issued. Any extension of the permits shall require submittal of an application for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.

3. The Department of Fish and Game has determined that this project is not exempt from Department of Fish and Game California Environmental Quality Act filing fees per Fish and Game Section 711.4. The applicant shall pay to the San Mateo County Clerk/Recorder's Office an amount of $2,156.25 (plus the $50 administrative fee) at the time of filing of the Notice of Determination by the

County Planning and Building Department staff within ten (10) business days of the approval.

4. Prior to the issuance of the grading permit, the applicant shall submit copies of the approved Section 404 permit from the Army Corps and the Streambed Alteration Agreement from the Department of Fish and Wildlife. The applicant shall also submit a copy of an approved General Permit for Storm Water Discharges from the Regional Water Quality Control Board, or waiver from said Permit, prior to the issuance of the grading permit.

Mitigation Measures

5. **Mitigation Measure 1:** The applicant shall implement the proposed re-vegetation plan as depicted in the project plans immediately upon completion of grading activities.

6. **Mitigation Measure 2:** To ensure that re-vegetation efforts are successful, the applicant shall implement a five year monitoring program for those areas affected by the project. Woody plant survivorship and canopy cover progress will be measured using either the line-intercept methodology or direct counting of healthy, live plantings in a representative segment of the restoration area. Natural recruitment of native woody trees and shrubs will be recorded and included in the estimates. Tree and shrub density will be calculated using the as-built acreage of planting areas. A comprehensive species list will be recorded for the monitoring area to document species richness and relative cover by native and non-native plant species. Photographs representative of the overall progress of riparian establishment will be taken in each year to provide visual documentation of vegetation establishment. By the fifth growing season following planting, the total number of planted and naturally recruited native trees and shrubs in the re-vegetation areas shall be equal to at least 60 percent of the number of trees and shrubs originally planted. All planted and recruited trees and shrubs counted must be alive and in good health. If by the fifth year the 60 percent target has not been met, then the applicant shall replant as necessary and monitor for an additional five years. The applicant shall submit annual monitoring reports to the County Planning Department outlining the progress of re-vegetation efforts.

7. **Mitigation Measure 3:** The County shall require construction contractors to implement the following BAAQMD's Basic Construction Mitigation Measures, listed below:

    a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

    b. All haul trucks transporting soil, sand, or other loose material into or off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.

f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Post a publicly visible sign with the telephone number and person to contact at the County regarding the project. The County shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

8. **Mitigation Measure 4:** The applicant shall submit the names and credentials of biologists proposed to perform preconstruction surveys and monitoring to the USFWS for written approval at least 15 days prior to commencement of any activities.

9. **Mitigation Measure 5:** Each construction area will be surrounded by snake exclusionary fencing one week prior to the start of construction.

10. **Mitigation Measure 6:** A USFWS-approved biologist will survey the work areas no less than 5 days prior to the onset of activities and after the snake exclusion fence has been installed. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. In making this determination the USFWS shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move California red-legged frogs from the work areas before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. If a California red-legged frog is found nearby, but outside a proposed work area, it will not be disturbed and USFWS will be notified. The biologist will also report any observations of other listed species addressed in this biological assessment.

11. **Mitigation Measure 7:** Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for all construction personnel. The training will include a description of the listed species with potential to occur, their habitat, and the general measures that are being implemented to conserve the species as they relate to the project and the boundaries within which the project may be accomplished (i.e., work areas).

12. **Mitigation Measure 8:** A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area. All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.

13. **Mitigation Measure 9:** During project activities, all trash will be properly contained, removed from the work areas and disposed of regularly. Following construction, all trash and construction debris from work areas will be removed.

14. **Mitigation Measure 10:** All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (66 feet) from any riparian habitat or water body. The applicant shall ensure contamination of habitat does not occur during such operations. Prior to the start of construction, the applicant shall prepare a plan to ensure a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

15. **Mitigation Measure 11:** A USFWS-approved biologist will ensure that the spread or introduction of invasive plant species will be avoided to the maximum extent possible. When practical, invasive exotic plants in the project area will be removed.

16. **Mitigation Measure 12:** Project areas that are disturbed will be re-vegetated with an appropriate assemblage of native riparian, wetland and upland vegetation.

17. **Mitigation Measure 13:** Stream contours will be returned to their original condition at the end of project activities, unless consultation with USFWS has determined that it is not beneficial to the species or feasible.

18. **Mitigation Measure 14:** The number of access routes, number and size of staging areas, and the total area of the project will be limited to the minimum necessary to achieve the project goals. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian areas where feasible. Where impacts occur in staging areas and access routes, restoration will be performed.

19. **Mitigation Measure 15:** Work activities will be completed between August 1 and November 1. Should the proponent or applicant demonstrate a need to conduct activities outside this period, the USACE may authorize such activities after obtaining the Service's approval.

20. **Mitigation Measure 16:** To control erosion during and after project implementation, the applicant shall implement best management practices.

21. **Mitigation Measure 17:** A USFWS-approved biologist will permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the maximum extent possible.

22. **Mitigation Measure 18:** Vegetation clearing and other construction work will occur outside the nesting birds season (February 15 to August 1). If work must be initiated during the nesting season, a preconstruction survey for nesting birds will be performed by a qualified biologist. Any active nests will be avoided until all the young have fledged and are independent.

23. **Mitigation Measure 19:** A qualified biologist will monitor the removal and relocation of woodrat houses and placement of refuge structures (e.g., half wine barrels and slash piles) for any woodrat nests located within the access road footprint. If young woodrats are found in any house, all removed material will be replaced and removal of that house will not continue until the young have left the house. Prior to dismantling houses, data will be collected to document the following characteristics of the house: house-building materials, contents of house cavities (particularly stored food and plants), percent and type of ground cover immediately around each house, tree and shrub species surrounding the house, and the house substrate (e.g., ground, tree, etc.). New houses will be established on site for each house removed. New house designs will be constructed of a half wine barrel placed upside down in appropriate microhabitat with materials from the nest chamber of the dismantled house placed inside, and other house materials placed over and around the barrel, including a long tunnel-shaped entrance that leads only into the receptacle.

24. **Mitigation Measure 20:** If surface water is present during construction, the applicant shall implement the following:

    a. Cofferdams, flow bypass pipes, or diversion dams shall be used to ensure continued flow around the work area.

    b. Adequate sediment and turbidity control measures shall be implemented. One or more fences of filter fabric shall be constructed across stream channels downstream of the lowermost cofferdams to reduce turbidity and sedimentation downstream of the stream construction sites during removal of cofferdams and until water clarity is re-established once stream flow is re-introduced to the stream channel in the work area.

    c. The presence of surface water, such as in-stream flow or pool habitat, could mean the potential for salmonids to occur in the work area. To relocate salmonids from the work area following installation of a cofferdam or diversion dam/bypass pipes, a fish rescue and relocation effort shall be

conducted by qualified biologists utilizing NMFS prescribed methods for the safe handling of salmonids.

d. The applicant shall have a biologist monitor the construction site during placement and removal of cofferdams, channel diversions, and access ramps to ensure that any adverse effects to salmonids are minimized. The biologist shall be on site during all dewatering events to capture, handle, and safely relocate steelhead, if present.

e. Consistent with Mitigation Measures 22 and 23, contractors shall have a supply of erosion control materials, and fuel and hydraulic fluid spill containment supplies on-site to facilitate a quick response to unanticipated storm events, or fuel or hydraulic fluid spill emergencies.

f. Consistent with Mitigation Measure 22, construction equipment used within the creek channel shall be checked each day prior to work within the creek.

25. **Mitigation Measure 21:** Project materials shall be placed in locations and manners that would not impair surface water flow into or out of any water of the United States. If surface flow is present during construction, dewatering would ensure that near-normal downstream flows are maintained. Fill shall consist of suitable material and placement such that it would not be eroded by future high flows. Following completion of construction, temporary fill shall be removed to upland areas, dredged material shall be returned to its original location, and the affected areas shall be restored to preconstruction elevations. The area upstream and downstream of the project reach shall be monitored annually for a two year period post construction to qualitatively assess channel conditions.

26. **Mitigation Measure 22:** The applicant shall prepare a comprehensive stormwater pollution and erosion control plan for the project. Erosion control measures shall be in place prior to the start of construction activities and remain in place throughout all phases of project construction. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the County of San Mateo Department of Public Work's Contract Requirements for Erosion and Sediment Control and Contract Requirements for Water Pollution Control for Construction in Sensitive Areas, and at a minimum include, but not be limited to, the following measures (County of San Mateo 2013a; County of San Mateo, 2013b):

a. Temporary erosion control measures (such as silt fences, staked straw bales, and temporary re-vegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place.

b. Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.

c. A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of petroleum products.

d. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.

e. Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

f. Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.

g. Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused topsoil, if any, shall be broadly redistributed to the surrounding areas in such a manner that topography and vegetation cover would not be adversely impacted.

h. Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.

i. Disturbed areas will be re-vegetated after completion of construction activities.

j. Provide sanitary facilities for construction workers.

27. **Mitigation Measure 23:** The applicant shall use the following best management practices (BMPs) to minimize potential adverse effects of the project to groundwater and soils from chemicals used during construction activities:

a. Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction;

b. Avoid overtopping construction equipment fuel gas tanks;

c. Provide secondary containment for any hazardous materials temporarily stored on-site;

d. During routine maintenance of construction equipment, properly contain and remove grease and oils;

e. Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and

f. Properly dispose of discarded containers of fuels and other chemicals.

28. **Mitigation Measure 24:** The construction contractor(s) shall develop a construction management plan for review and approval by the County's Planning Department and Department of Public Works. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, any safety hazards and traffic congestion during construction:

a. A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, signs, and designated construction access routes.

b. Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular traffic, and circulation and safety. Impacts to Highway 92 shall be minimized to the greatest extent possible.

c. Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

d. Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

Grading Permit Conditions

29. The provision of the San Mateo County Grading Ordinance shall govern all grading on and adjacent to this site. Per San Mateo County Ordinance Section 8605.5, all equipment used in grading operations shall meet spark arrester and fire-fighting tool requirements, as specified in the California Public Resources Code.

30. No grading activities shall commence until the applicant has been issued a grading permit (issued as the "hard card" with all necessary information filled out and signatures obtained) by the Current Planning Section.

31. The engineer who prepared the approved grading plan shall be responsible for the inspection and certification of the grading as required by Section 8606.2 of the Grading Ordinance. The engineer's responsibilities shall include those relating to non-compliance detailed in Section 8606.5 of the Grading Ordinance.

32. For the final approval of the grading permit, the applicant shall ensure the performance of the following activities within thirty (30) days of the completion of grading:

    a. The engineer shall submit written certification to the Department of Public Works and the Geotechnical Section that all grading has been completed in conformance with the approved plans, conditions of approval, and the Grading Ordinance.

    b. All applicable work during construction shall be subject to observation and approval by the geotechnical consultant. Section II of the Geotechnical Consultant Approval form must be submitted to the County's Geotechnical Engineer and Current Planning Section.

33. The applicant shall implement erosion control measures prior to the beginning of grading or construction operations. Re-vegetation of denuded areas shall begin immediately upon completion of grading/construction operations.

34. The grading permit "hard card" and the building permit shall be issued at the same time. No grading shall occur until the "hard card" has been issued.

35. Unless approved, in writing, by the Community Development Director, no grading shall be allowed during the winter season (October 1 to April 30) to avoid potential soil erosion.

36. The applicant shall submit a letter to the Current Planning Section, a minimum of two (2) weeks prior to commencement of grading, stating the date when grading will begin.

Building Inspection Section

37. This project will require a building permit.

38. Sediment and erosion control measures must be installed prior to beginning any site work and maintained throughout the term of the permit. Failure to install or maintain these measures will result in stoppage of construction until the corrections have been made and fees paid for staff enforcement time.

Geotechnical Section

39. The applicant shall comply with all requirements of the Geotechnical Section prior to the issuance of a grading permit and/or building permit.

Department of Public Works

40. Prior to the issuance of the building permit, the applicant will be required to provide payment of “roadway mitigation fees” based on the square footage (assessable space) of the proposed building per Ordinance No. 3277.

41. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been net and an encroachment permit issued.

42. The applicant shall submit a permanent stormwater management plan in compliance with the County’s Drainage Policy and NPDES requirements for review and approval by the Department of Public Works.

43. The applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Department of Public Works for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Department of Public Works for review and approval.

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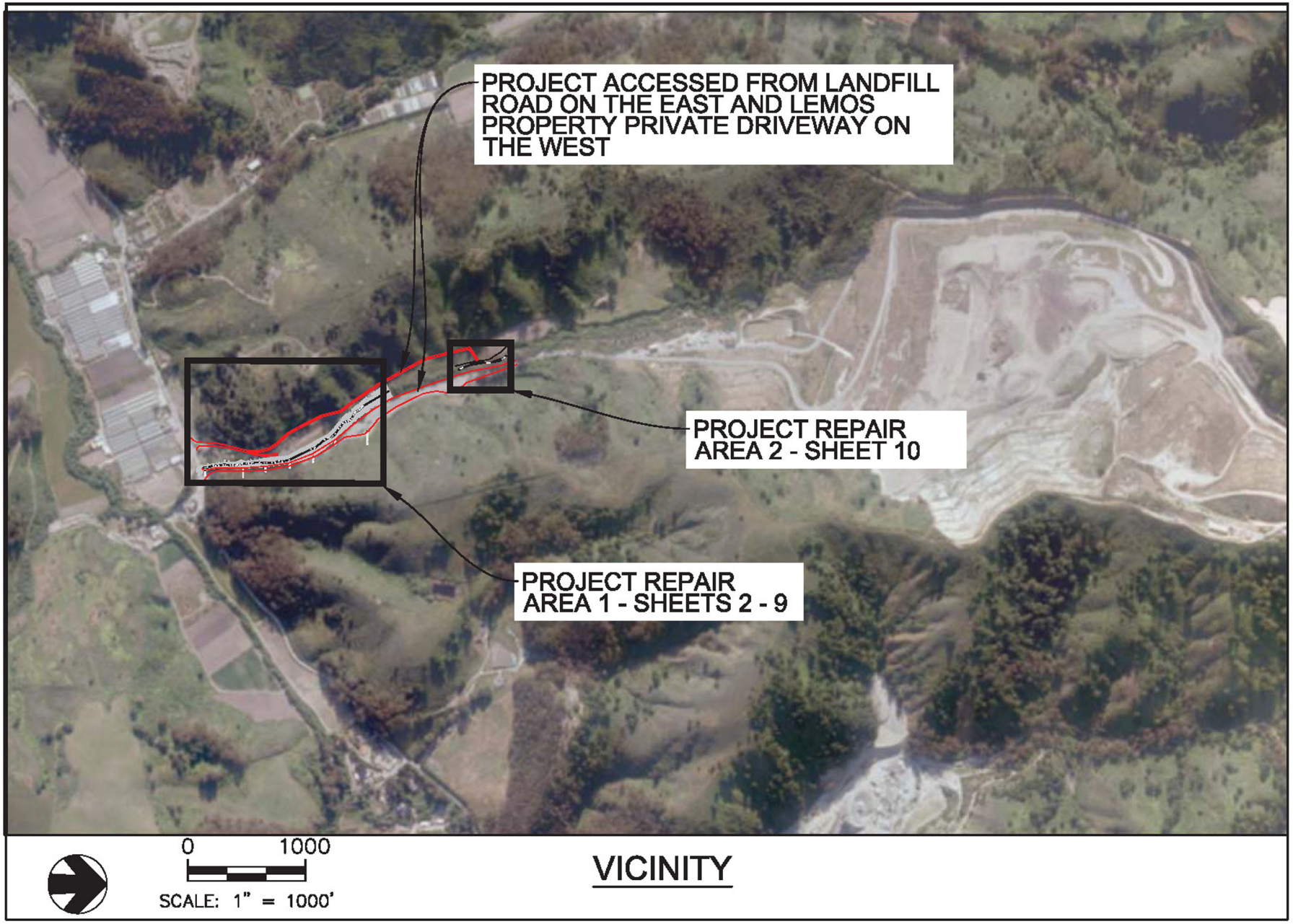


San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **B**

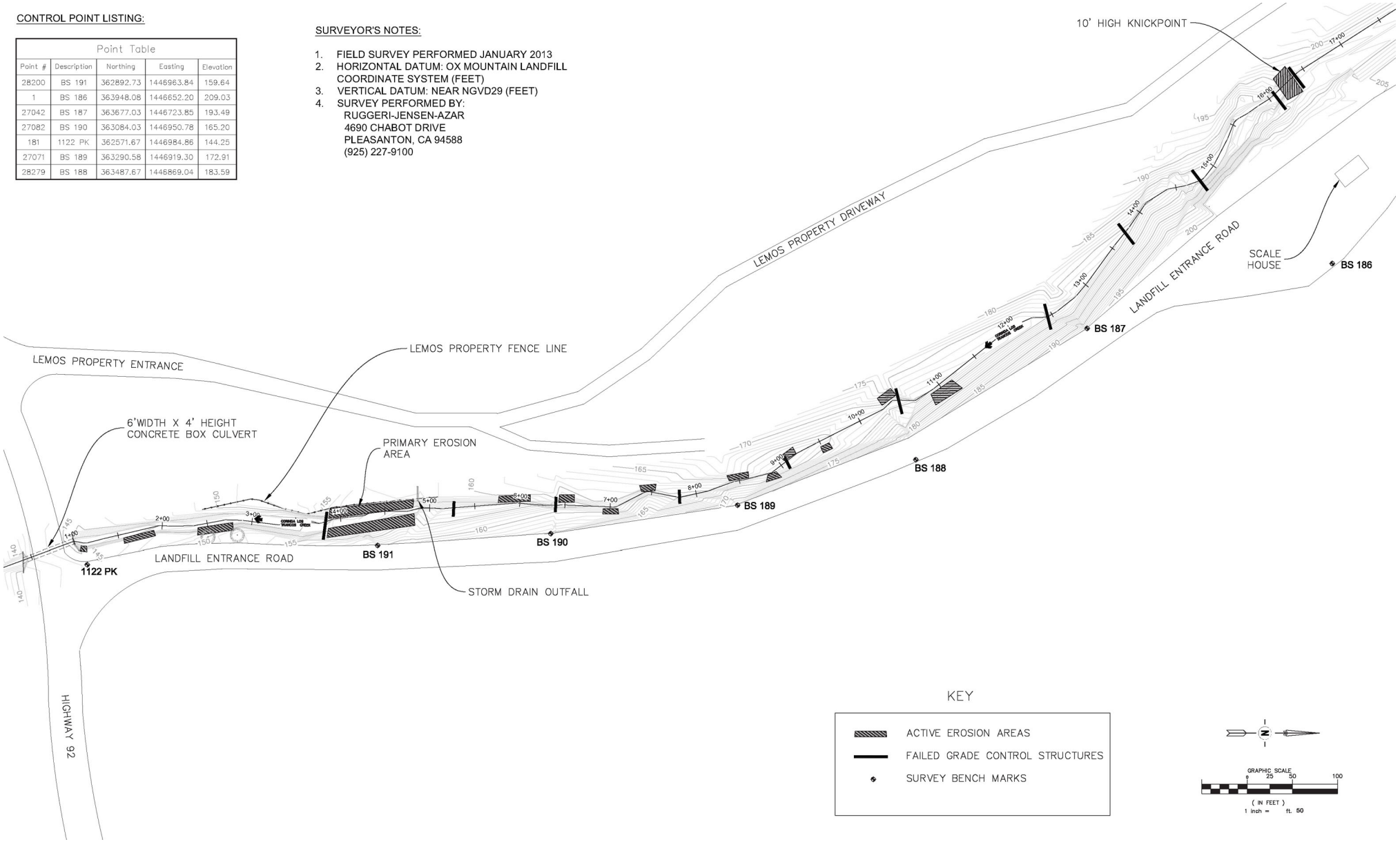
File Numbers:

CONTROL POINT LISTING:

Point Table				
Point #	Description	Northing	Easting	Elevation
28200	BS 191	362892.73	1446963.84	159.64
1	BS 186	363948.08	1446652.20	209.03
27042	BS 187	363677.03	1446723.85	193.49
27082	BS 190	363084.03	1446950.78	165.20
181	1122 PK	362571.67	1446984.86	144.25
27071	BS 189	363290.58	1446919.30	172.91
28279	BS 188	363487.67	1446869.04	183.59

SURVEYOR'S NOTES:

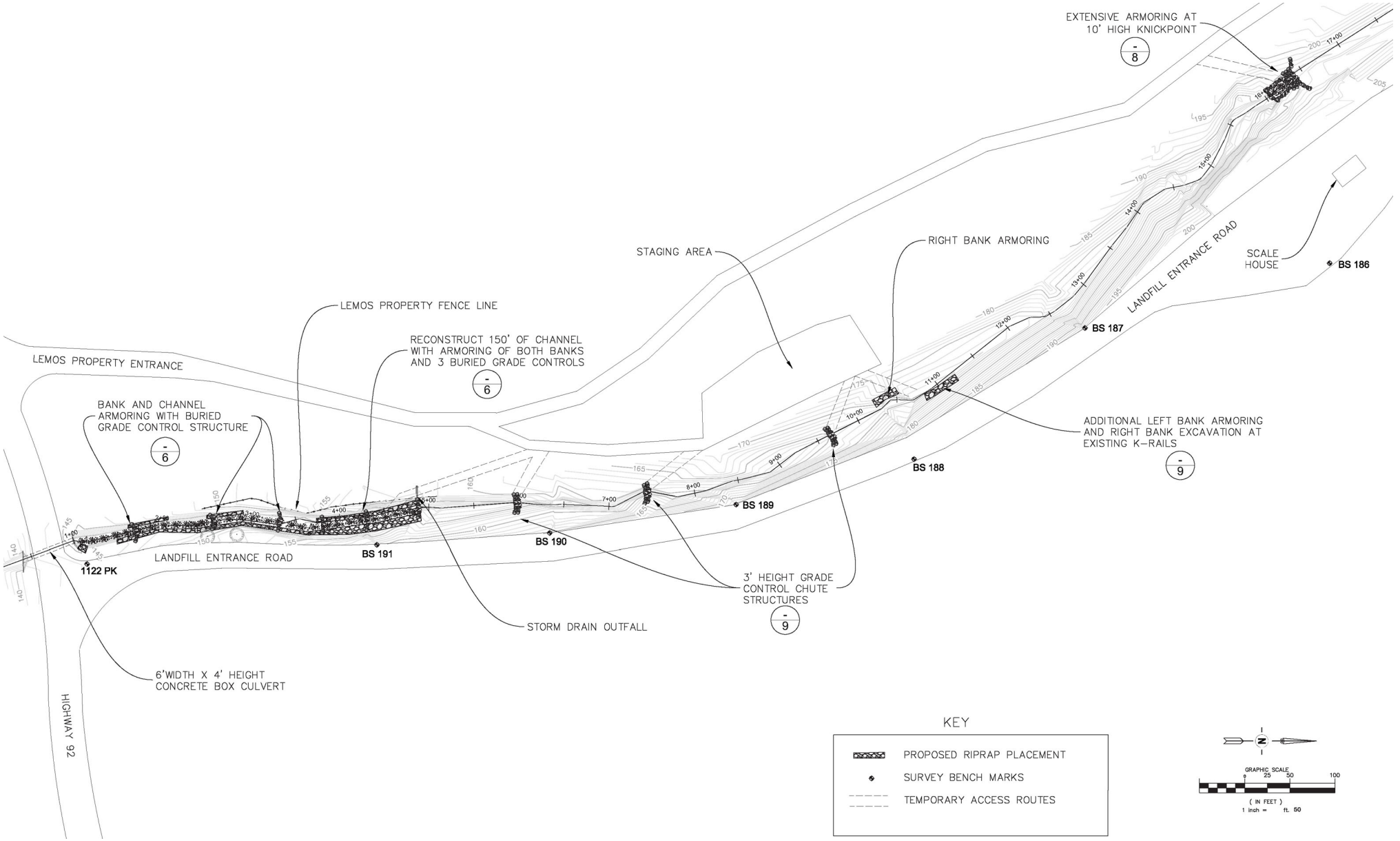
1. FIELD SURVEY PERFORMED JANUARY 2013
2. HORIZONTAL DATUM: OX MOUNTAIN LANDFILL COORDINATE SYSTEM (FEET)
3. VERTICAL DATUM: NEAR NGVD29 (FEET)
4. SURVEY PERFORMED BY:
   RUGGERI-JENSEN-AZAR
   4690 CHABOT DRIVE
   PLEASANTON, CA 94588
   (925) 227-9100



San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **C**

File Numbers:



San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **C**

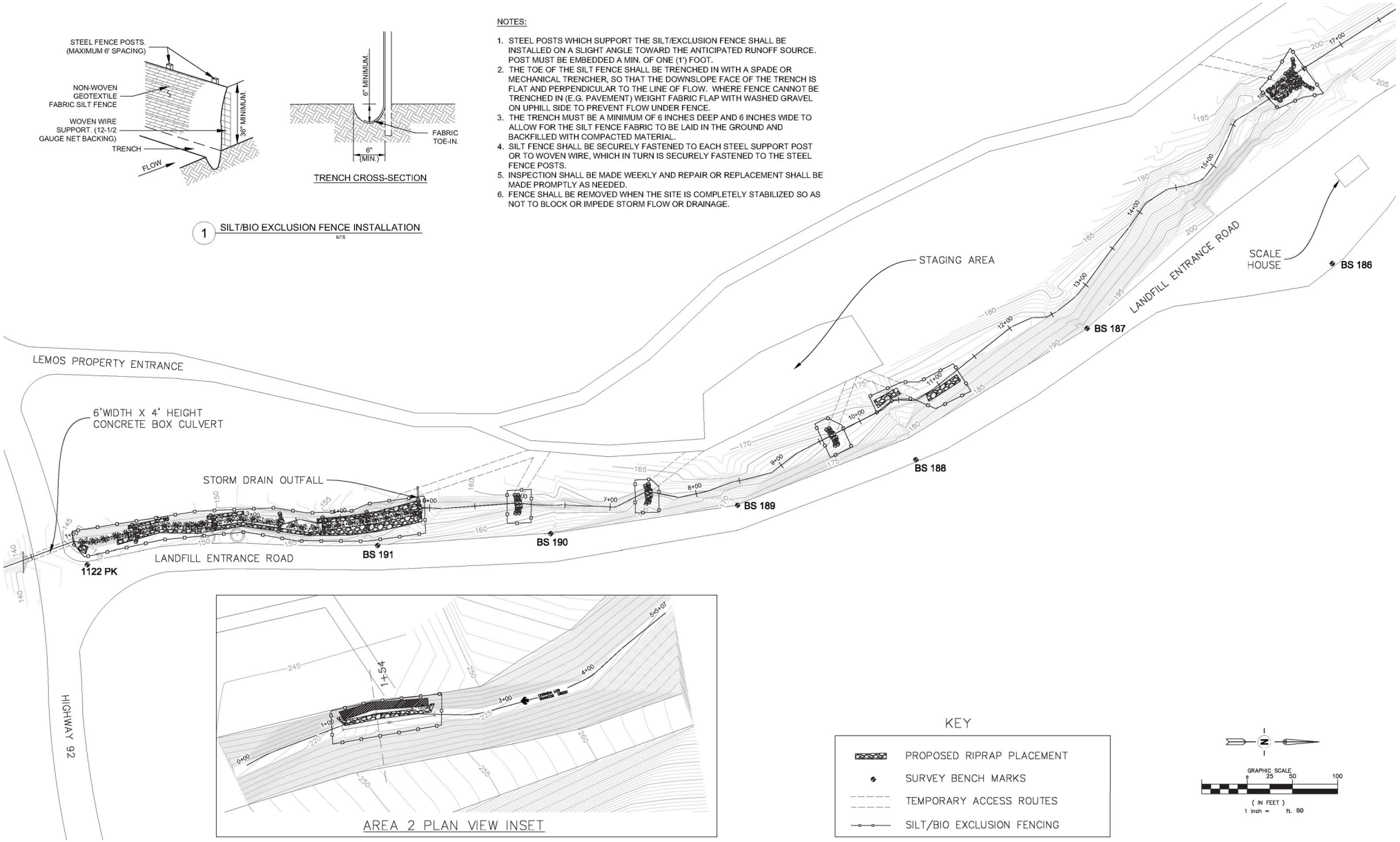
File Numbers:

TRENCH CROSS-SECTION

1 SILT/BIO EXCLUSION FENCE INSTALLATION
NTS

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT/EXCLUSION FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

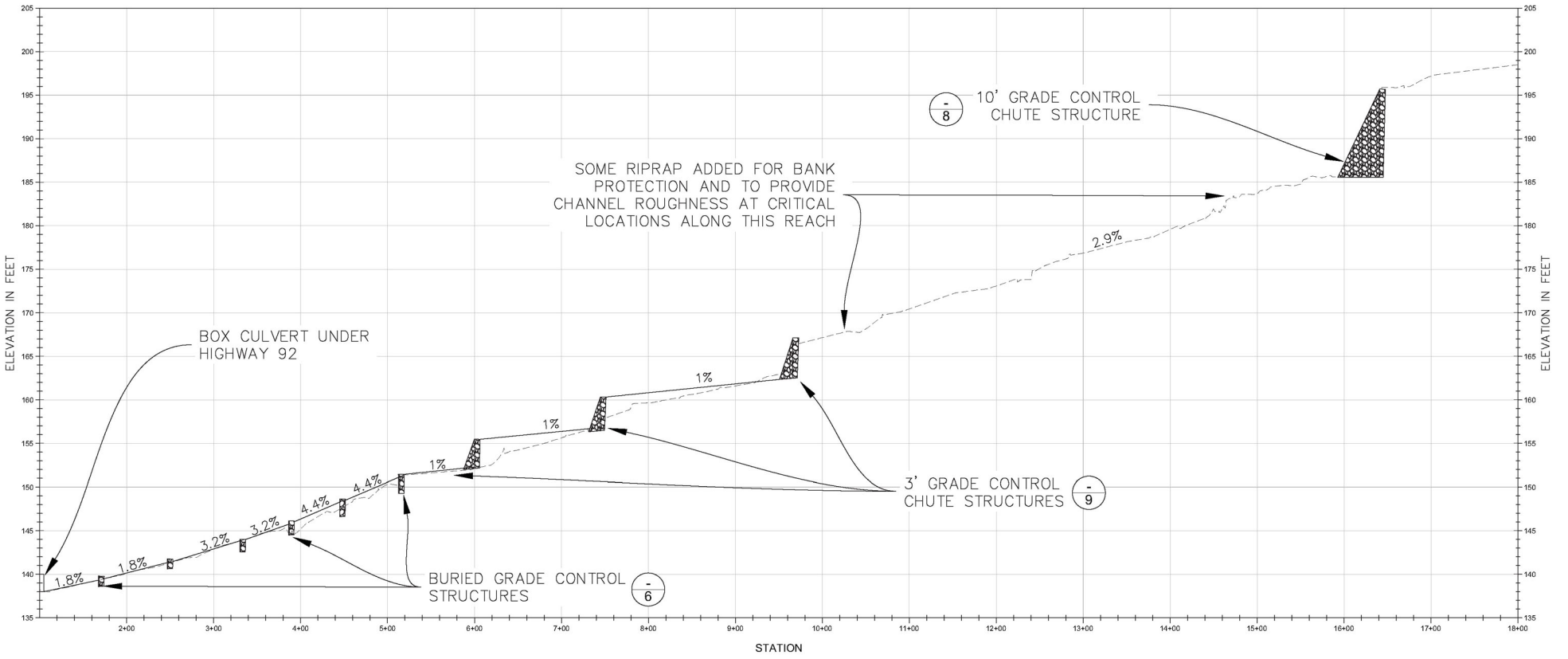


San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **C**

File Numbers:

CORINDA LOS TRANCOS LONGIDUDINAL PROFILE



KEY

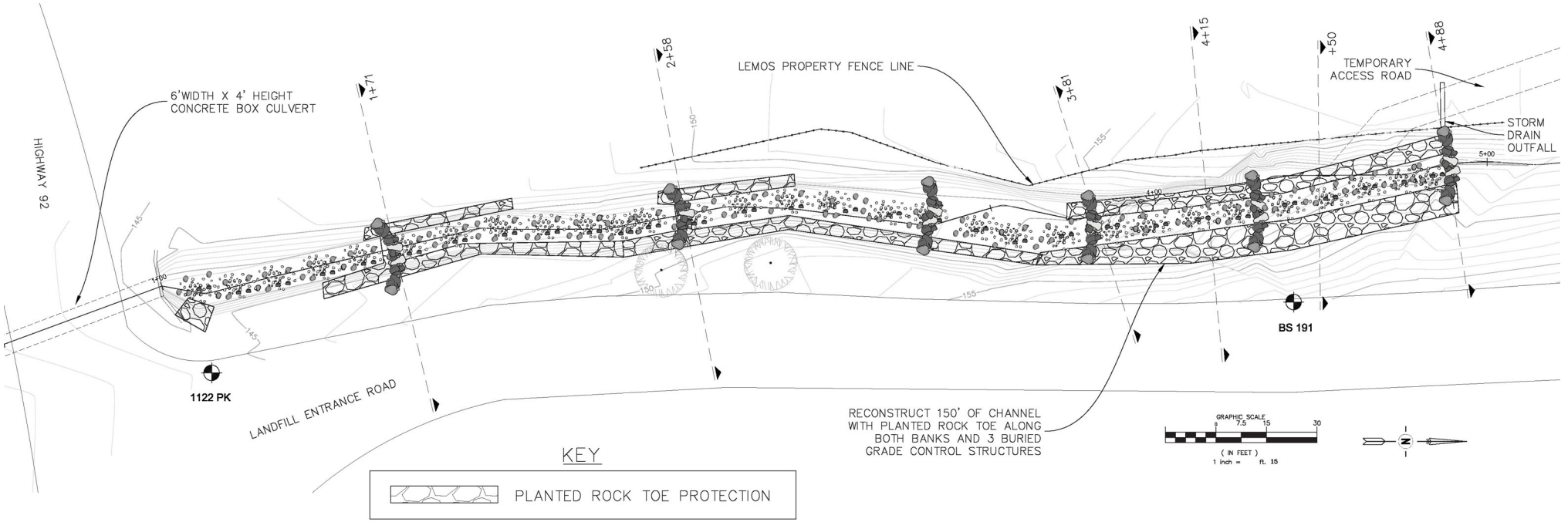
PROPOSED LONG-TERM GRADIENT

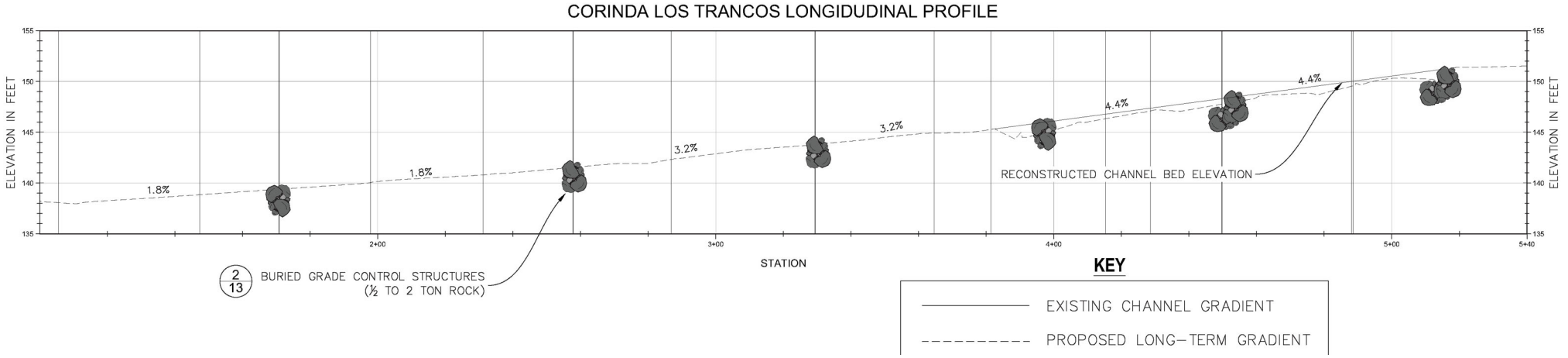
EXISTING CHANNEL GRADIENT

San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **C**

File Numbers:



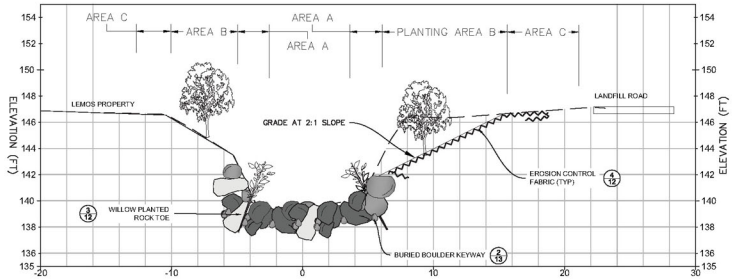


San Mateo County Planning Commission Meeting

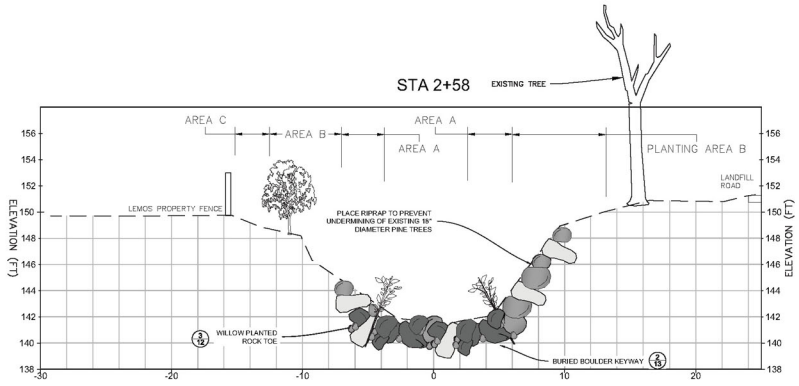
Owner/Applicant: Attachment: **C**

File Numbers:

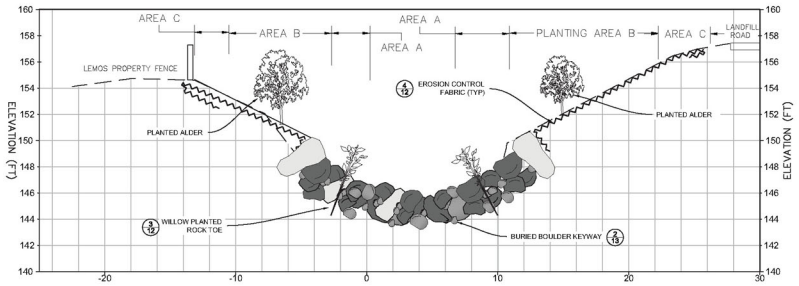
STA 1+71



STA 2+58



STA 3+81



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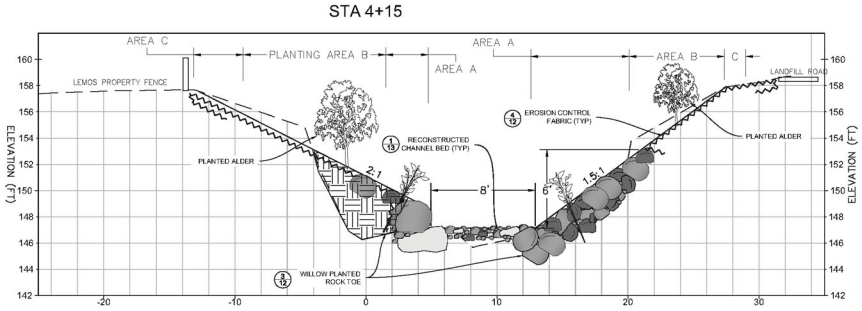

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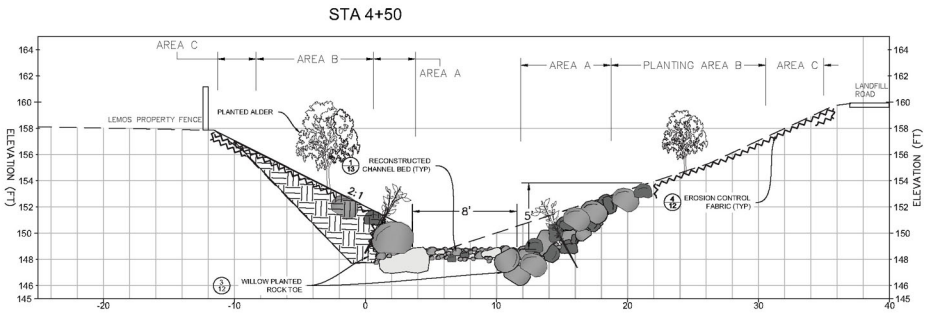

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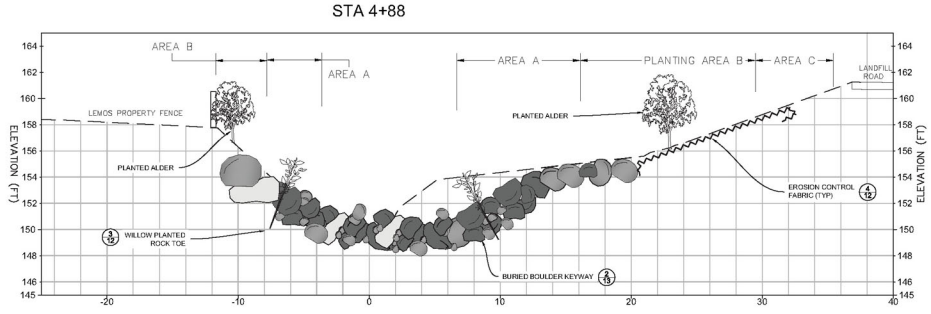

San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **C**

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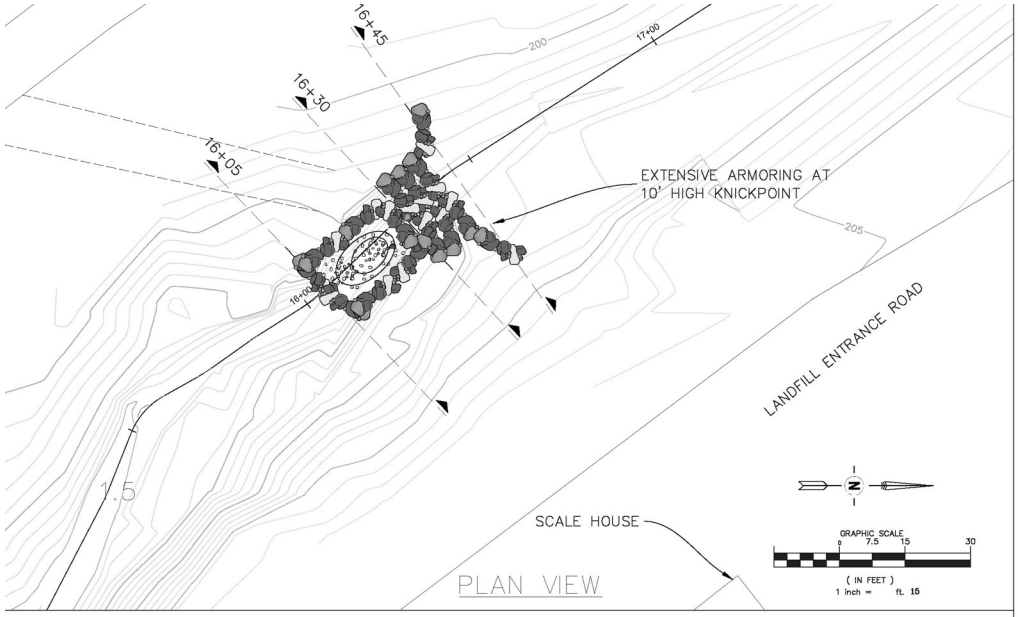

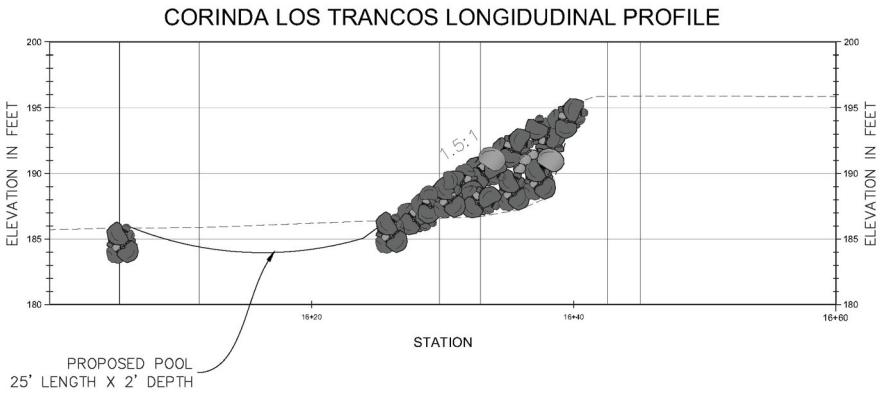

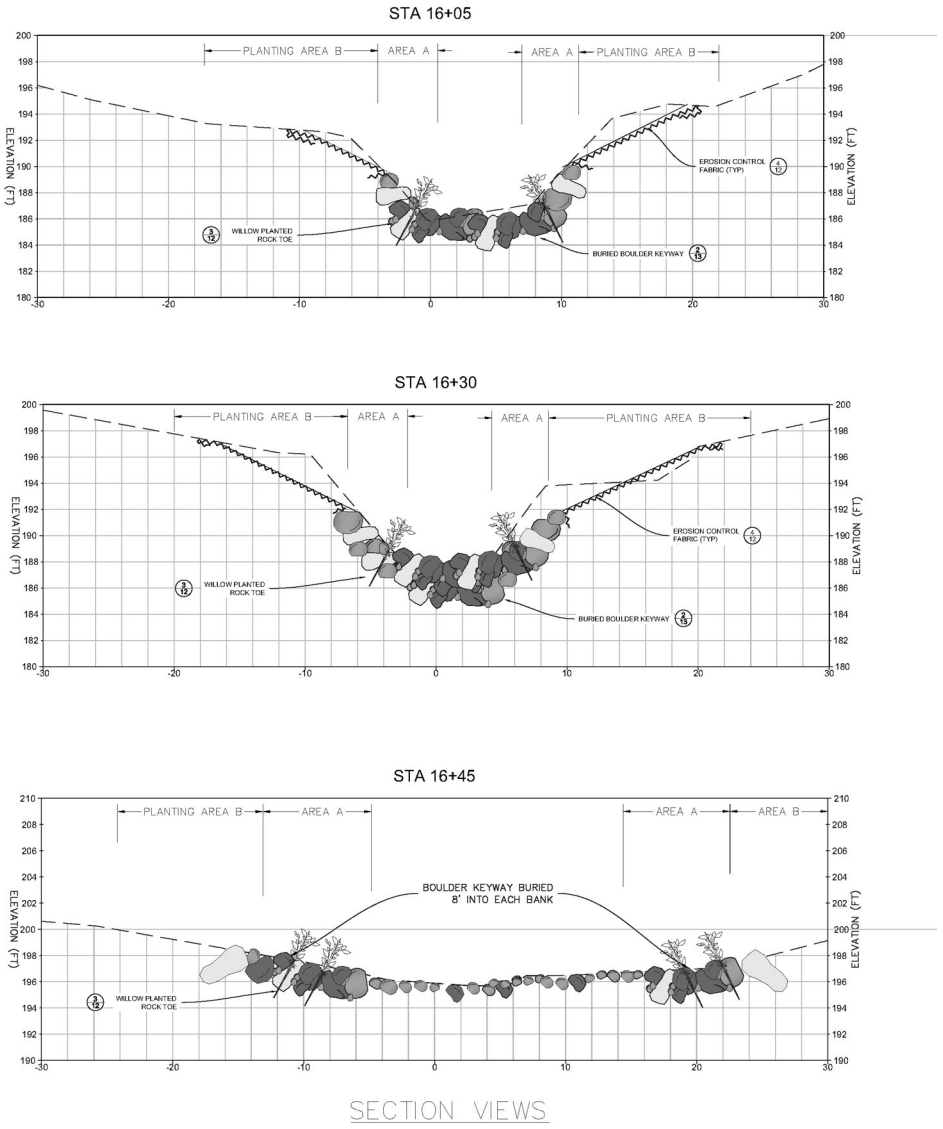

San Mateo County Planning Commission Meeting

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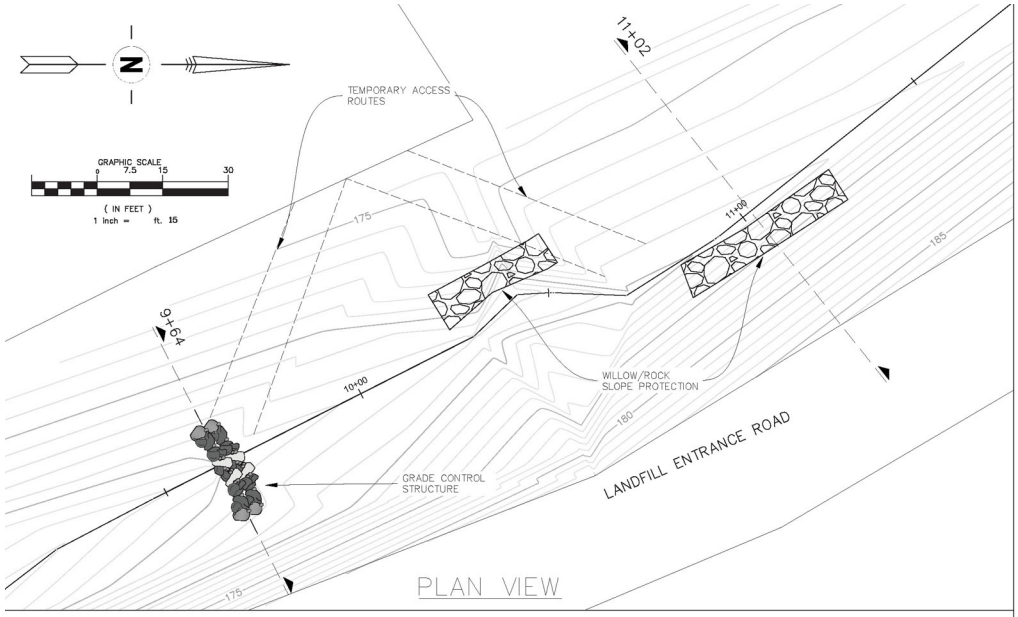
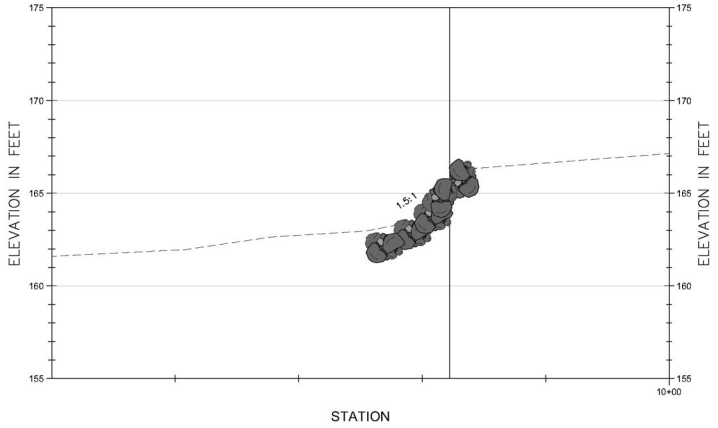


PLAN VIEW

CORINDA LOS TRANCOS LONGIDUDINAL PROFILE



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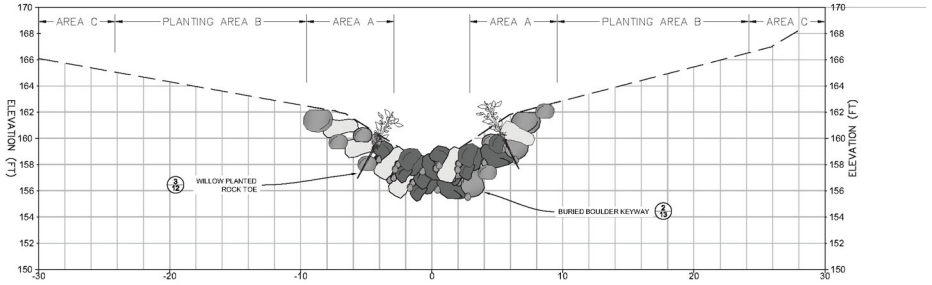
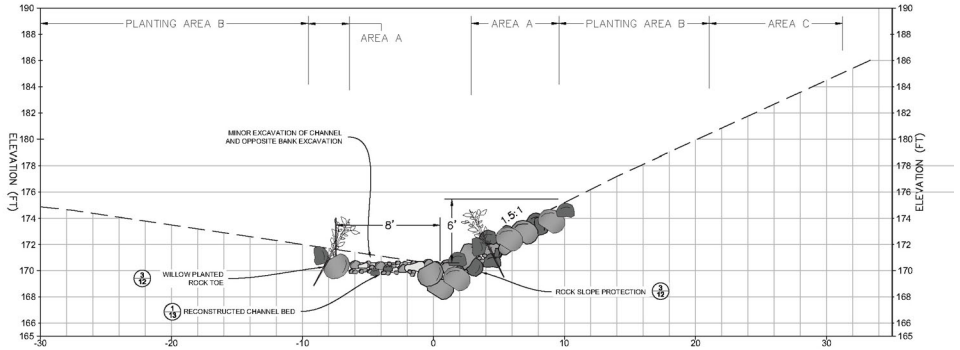


STA 11+02



SECTION VIEWS

San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment: **C**

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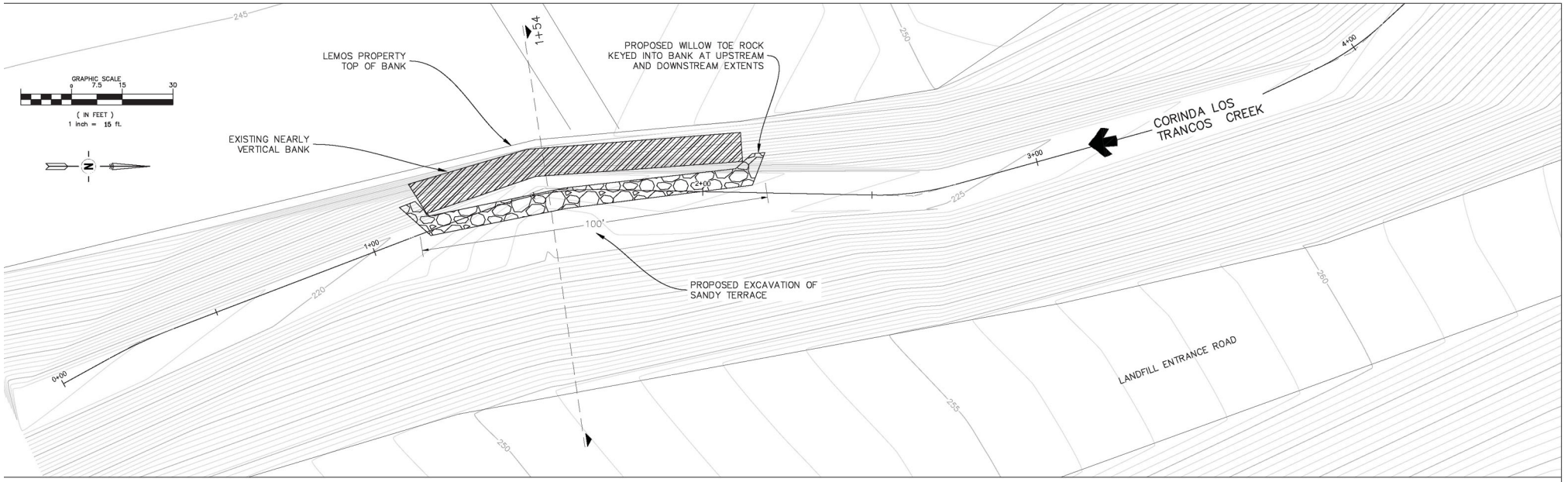

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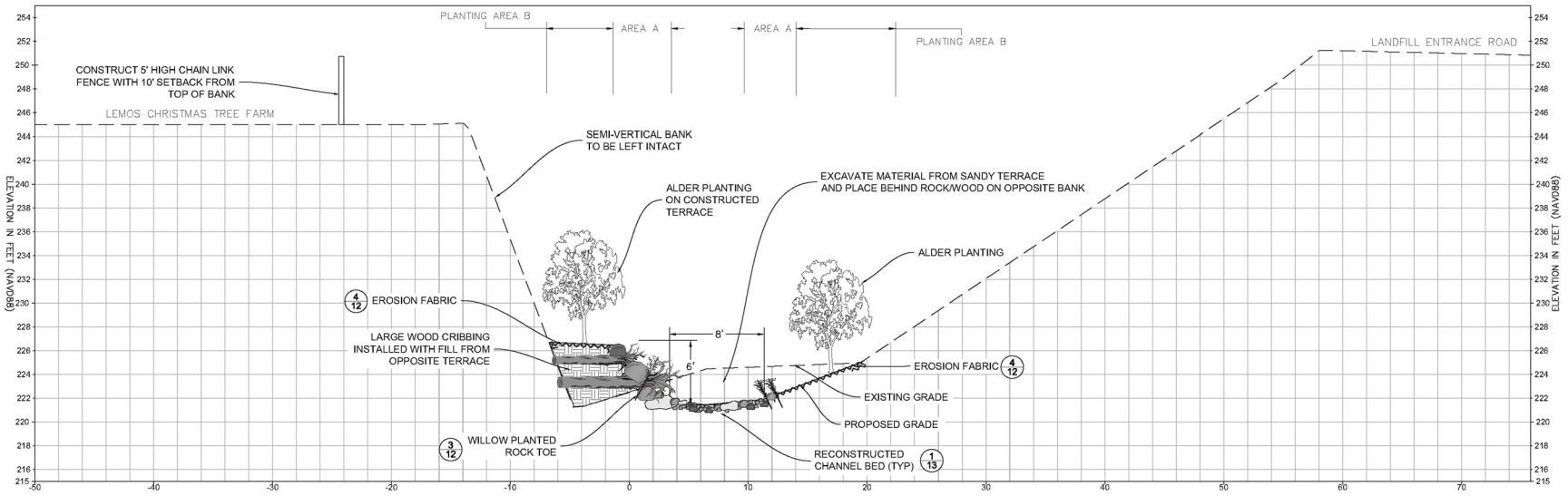


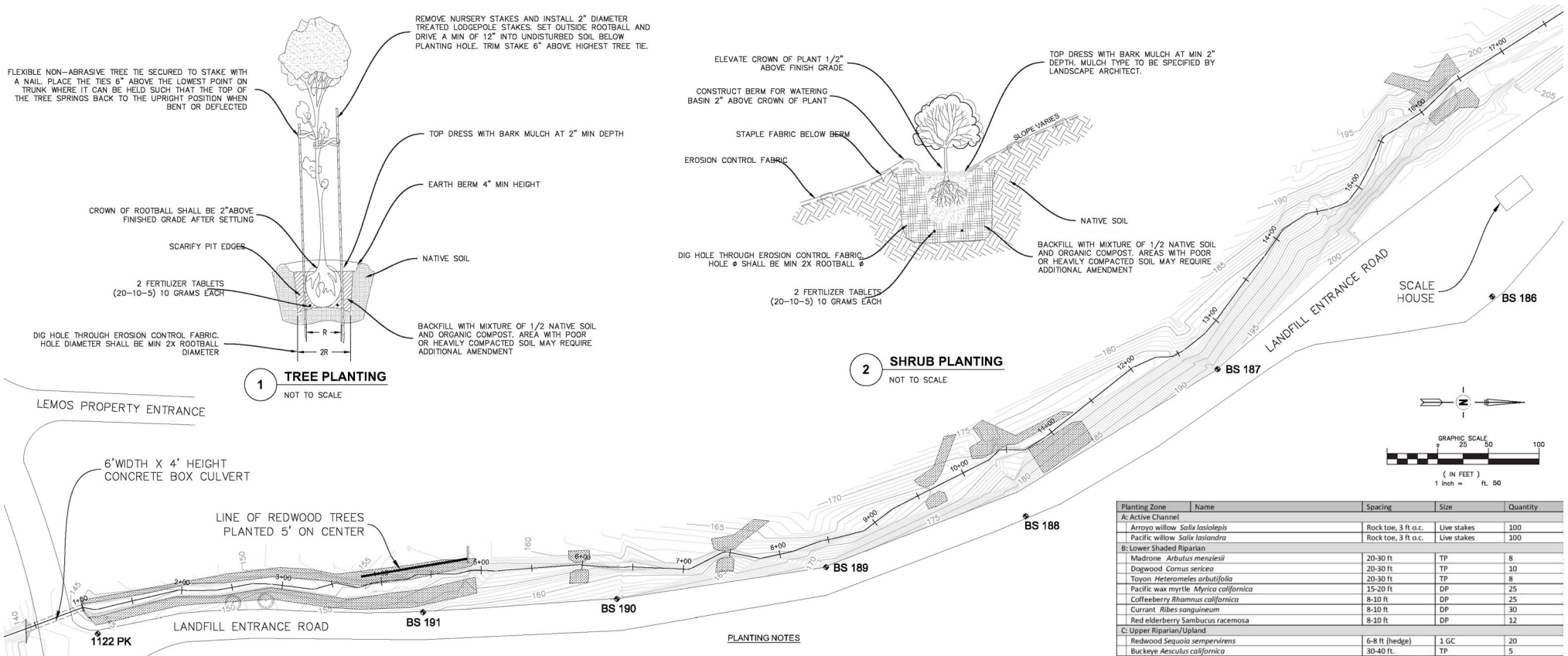
San Mateo County Planning Commission Meeting

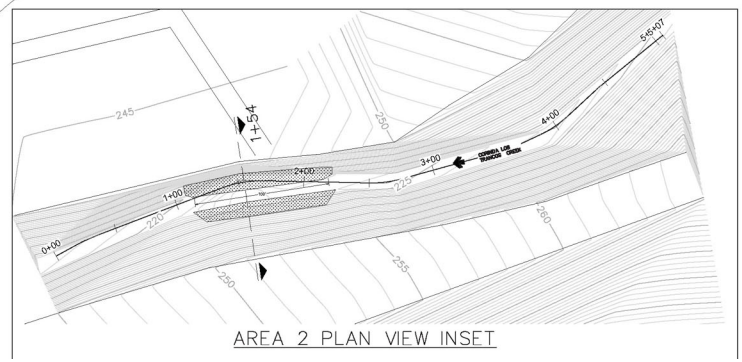
Owner/Applicant: Attachment: **C**

File Numbers:

1 **TREE PLANTING**
NOT TO SCALE

2 **SHRUB PLANTING**
NOT TO SCALE





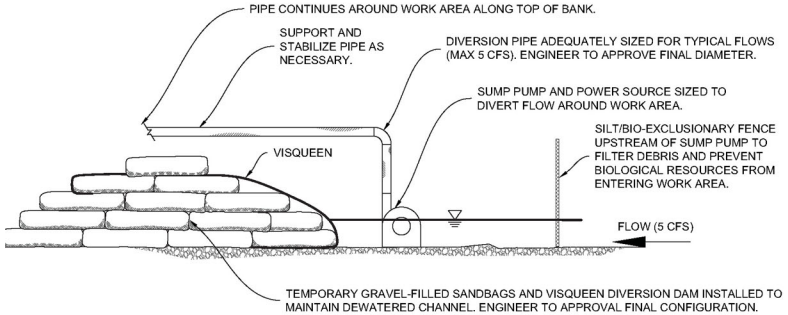
PLANTING NOTES

1. VERIFY SITE CONDITIONS PRIOR TO START OF WORK. NOTIFY ENGINEER OF SUBSTANTIAL VARIATIONS BETWEEN SITE CONDITIONS AND DRAWINGS.
2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
3. SEE SECTION VIEWS ON SHEETS 7-10 FOR DETAILED LAYOUT OF PLANTING AREAS A, B, AND C.
4. SEED MIX SHOWN ON PLANS TO BE DIRECT SEEDED PRIOR TO PLACEMENT OF EROSION FABRIC.
5. COASTAL SCRUB SEED MIX AVAILABLE FROM: S&S SEEDS INC. P.O. BOX 1275 CARPINTERIA, CA 93014, PHONE: (805) 684-0436.
6. EROSION CONTROL SEED MIX MIX AVAILABLE FROM: PACIFIC COAST SEED (PCSEED.COM) 533 HOWTHORN PLACE LIVERMORE, CA 94550, PHONE: (925) 373-4417

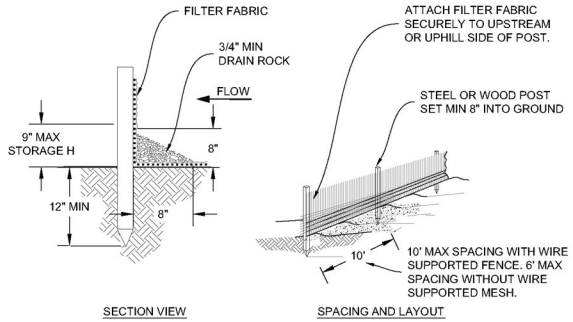
KEY

AREAS TO BE PLANTED AND SEEDED

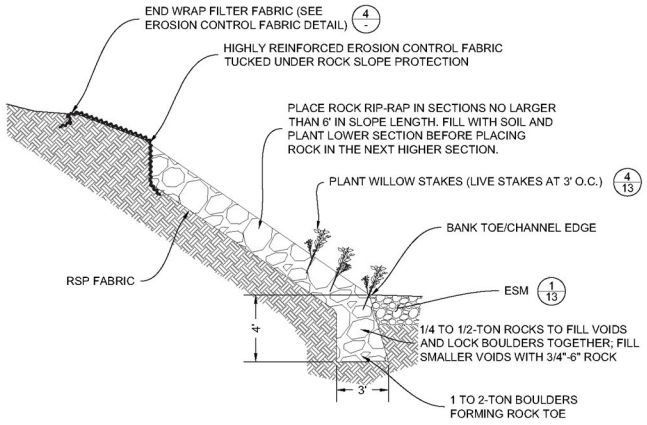
Planting Zone	Name	Spacing	Size	Quantity
A: Active Channel				
	Arroyo willow *Salix lasiolepis*	Rock toe, 3 ft o.c.	Live stakes	100
	Pacific willow *Salix lasiandra*	Rock toe, 3 ft o.c.	Live stakes	100
B: Lower Shaded Riparian				
	Madrone *Arbutus menziesii*	20-30 ft	TP	8
	Dogwood *Cornus sericea*	20-30 ft	TP	10
	Toyon *Heteromeles arbutifolia*	20-30 ft	TP	8
	Pacific wax myrtle *Myrica californica*	15-20 ft	DP	25
	Coffeeberry *Rhamnus californica*	8-10 ft	DP	25
	Currant *Ribes sanguineum*	8-10 ft	DP	30
	Red elderberry Sambucus racemosa	8-10 ft	DP	12
C: Upper Riparian/Upland				
	Redwood *Sequoia sempervirens*	6-8 ft (hedge)	1 GC	20
	Buckeye *Aesculus californica*	30-40 ft.	TP	5
	Red alder *Alnus rubra*	20-30 ft	TP	25
	Coast live oak *Quercus agrifolia*	30-40 ft.	TP	5
	Coast silktassel *Garrya elliptica*	10-15 ft.	DP	10
	Coyote brush *Baccharis pilularis*	8-10 ft.	DP	20
	Blue blossom *Ceanothus thrysiflorus*	8-10 ft.	DP	20
Direct seeding (all disturbed areas)				
	Coastal Sage Scrub Mix*:			30 lbs/ac
	Artemisia californica/California Sagebrush			
	Camissonia cheiranthifolia/Beach Evening Primrose			
	Collinsia heterophylla/Chinese Houses			
	Encelia californica/Bush Sunflower			
	Eriogonum fasciculatum/California Buckwheat			
	Eriophyllum confertiflorum/Golden Yarrow			
	Eschscholzia californica/California Poppy			
	Lasthenia californica/Dwarf Goldfields			
	Lotus scoparius/Deerweed			
	Lupinus succulentus/Arroyo Lupine			
	Mimulus aurantiacus puniceus/Mission Red Monkeyflower			
	Nassella pulchra/Purple Needlegrass			
	Salvia apiana/White Sage			
	Salvia mellifera/Black Sage			
	Sisyrinchium bellum/Blue-eyed Grass			
	Vulpia microstachys/Small Fescue			
	Native Erosion Control Mix**:			25 lbs/ac
	Bromus carinatus/California Brome			
	Hordeum brachyantherum/Meadow Barley			
	Vulpia microstachys/Three Weeks Fescue			
	Trifolium wildenovii/Tomcat Clover			



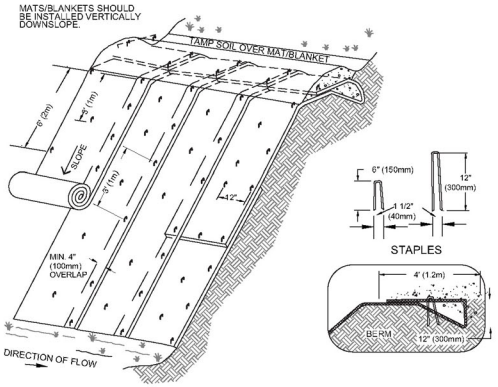
1 **VISQUEEN AND SANDBAG COFFER DAM**
NTS



2 **SILT/BIO-EXLUSIONARY FENCING IN CHANNEL**
NTS



3 **WILLOW PLANTED RSP**
NTS



NOTES:
1. EROSION CONTROL BLANKETS/MATS SHALL BE BIODEGRADABLE (SEE SPECS)
2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS.
3. MATS/ BLANKETS SHALL HAVE GOOD SOIL CONTACT.
4. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
5. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

4 **EROSION CONTROL FABRIC**
NTS

EROSION CONTROL NOTES

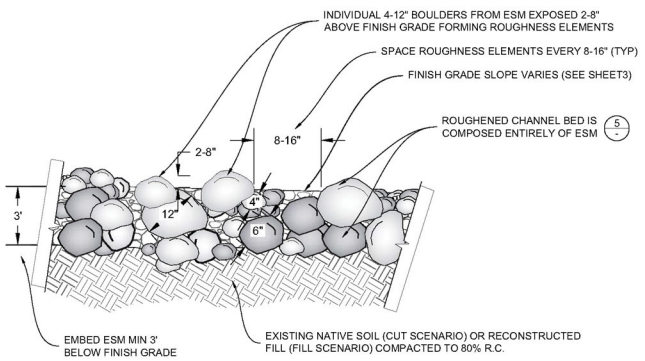
1. GRADING, EROSION CONTROL PRACTICES, AND SEDIMENT CONTROL PRACTICES SHALL MEET THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK AND SHALL BE ADEQUATE TO PREVENT TRANSPORTATION OF SEDIMENT FROM THE SITE TO ANY OFFSITE AREA TO THE SATISFACTION OF THE ENGINEER.
2. CLEARING, EXCEPT THAT NECESSARY TO ESTABLISH SEDIMENT CONTROL DEVICES, SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND HAVE BEEN STABILIZED.
3. SUFFICIENT EROSION AND SEDIMENT CONTROL SUPPLIES SHALL BE AVAILABLE ON SITE DURING THE RAINY SEASON (OCTOBER THROUGH APRIL) TO PROTECT AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS. CONTRACTORS SHALL BE PREPARED YEAR-ROUND TO DEPLOY EROSION AND SEDIMENT TREATMENT CONTROL PRACTICES.
4. SOIL DISTURBANCE WORK SHALL BE CONDUCTED DURING DRY WEATHER.
5. THE CONTRACTOR SHALL PROVIDE A SWPPP PRIOR TO THE COMMENCEMENT OF WORK.
6. THE CONTRACTOR SHALL PROVIDE ADEQUATE MATERIALS MANAGEMENT, INCLUDING COVERING, SECURING, AND SEGREGATING POTENTIALLY TOXIC MATERIALS (ASPHALT, HERBICIDES, PESTICIDES, FERTILIZER, GREASE, OILS, FUEL, PAINTS, STAINS, SOLVENTS, WOOD PRESERVATIVES, ETC.), AND PROVIDING SECONDARY CONTAINMENT FOR HAZARDOUS MATERIALS.
7. THE CONTRACTOR SHALL PROVIDE TRAINING AND EQUIPMENT TO CONTAIN SPILLS OF OIL AND OTHER HAZARDOUS MATERIALS.
8. PAVING OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT PROPERLY DISPOSES OF WASTES AND IN WHICH MEASURES TO CONTROL RUN ON AND PREVENT RUNOFF FROM AREAS BEING PAVED ARE IMPLEMENTED.
9. SANITARY FACILITIES OF SUFFICIENT NUMBER AND SIZE TO ACCOMMODATE CONSTRUCTION CREWS SHALL BE LOCATED AWAY FROM STORM DRAIN INLETS AND DRAINAGE FACILITIES, AND ANCHORED TO PREVENT BEING BLOWN OVER OR TIPPED BY VANDALS. THE FACILITIES SHALL BE MAINTAINED IN GOOD WORKING ORDER AND EMPTIED AT REGULAR INTERVALS BY A LICENSED SANITARY WASTE HAULER.
10. SOIL STABILIZATION SHALL BE COMPLETED WITHIN FIVE DAYS OF CLEARING OR INACTIVITY IN CONSTRUCTION.
11. PROJECTS SHALL BE DESIGNED TO AVOID DISTURBING LAND IN SENSITIVE AREAS AND TO PRESERVE EXISTING VEGETATION WHEREVER POSSIBLE.
12. MAJOR GRADING OPERATIONS SHALL BE SCHEDULED DURING DRY MONTHS WHEN PRACTICAL, AND SHALL ALLOW ADEQUATE TIME BEFORE RAINFALL BEGINS TO STABILIZE THE SOIL WITH EROSION CONTROL MATERIALS.
13. SEEDING AND MULCHING SHALL BE DONE AS SOON AS GRADING IS COMPLETE.
14. IF SEEDING OR ANOTHER VEGETATIVE EROSION CONTROL METHOD IS USED, THE VEGETATIVE COVER SHALL BECOME ESTABLISHED WITHIN A TIME-FRAME APPROVED BY THE ENGINEER, OR THE ENGINEER MAY REQUIRE THE SITE TO BE RE-SEEDED OR A NON-VEGETATIVE OPTION EMPLOYED.
15. SPECIAL TECHNIQUES THAT MEET THE DESIGN CRITERIA OUTLINED IN THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK ON STEEP SLOPES OR IN DRAINAGE WAYS SHALL BE USED TO ENSURE STABILIZATION.
16. SOIL STOCKPILES MUST BE STABILIZED AND/OR SECURELY COVERED AT THE END OF EACH WORKDAY.
17. IN AREAS WHERE PERMANENT RE-SEEDING AND PLANTING IS NOT ESTABLISHED AT THE CLOSE OF THE CONSTRUCTION SEASON, ADDITIONAL CONTROL MEASURES SHALL BE USED, SUCH AS A HEAVY MULCH LAYER OR ANOTHER METHOD THAT DOES NOT REQUIRE GERMINATION, TO ENSURE SOIL STABILIZATION AT THE SITE.
18. WHERE RUNOFF NEEDS TO BE DIVERTED FROM ONE AREA AND CONVEYED TO ANOTHER, EARTH DIKES, DRAINAGE SWALES, SLOPE DRAINS OR OTHER SUITABLE PRACTICE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK.
19. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
20. TECHNIQUES THAT DELIVER UPLAND RUNOFF PAST DISTURBED SLOPES SHALL BE EMPLOYED WHEN DETERMINED NECESSARY BY THE PROJECT ENGINEER.
21. LINEAR SEDIMENT BARRIERS SHALL BE PLACED BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, DOWN-SLOPE OF EXPOSED SOIL AREAS, AROUND SOIL STOCKPILES, AND AT OTHER APPROPRIATE LOCATIONS ALONG THE SITE PERIMETER.
22. STREET SWEEPING SHALL BE CONDUCTED ON AN AS NEEDED BASIS TO REMOVE SEDIMENT FROM STREETS AND ROADWAYS AND TO PREVENT THE SEDIMENT FROM ENTERING STORM DRAINS OR RECEIVING WATERS.
23. EVERY STORM DRAIN INLET WITH THE POTENTIAL TO RECEIVE SEDIMENT-LADEN RUNOFF SHALL BE PROTECTED IN ACCORDANCE WITH THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK. INLET PROTECTION SHALL BE INSPECTED AND MAINTAINED FREQUENTLY.
24. SEDIMENT BASINS OR SEDIMENT TRAPS SHALL BE INSTALLED ON PROJECTS WHERE SEDIMENT-LADEN WATER MAY ENTER THE DRAINAGE SYSTEM OR WATERCOURSES AND IN ASSOCIATION WITH DIKES, TEMPORARY CHANNELS, AND PIPES USED TO CONVEY RUNOFF FROM DISTURBED AREAS.
25. OTHER MEASURES, SUCH AS TRACK-OUT PREVENTION DEVICES, OR AS REQUIRED BY THE DISTRICT INSPECTOR IN ORDER TO ENSURE THAT SEDIMENT IS NOT TRACKED ONTO PUBLIC STREETS BY

San Mateo County Planning Commission Meeting

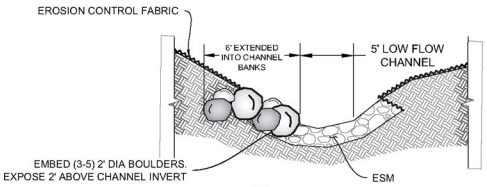
Owner/Applicant:

Attachment: **C**

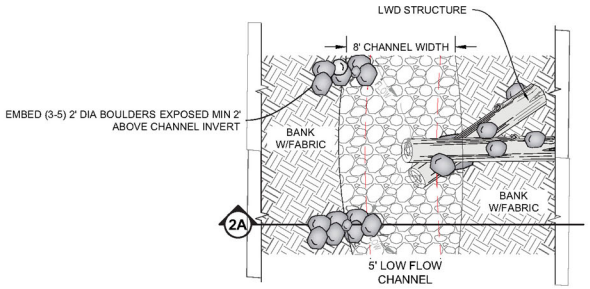
File Numbers:



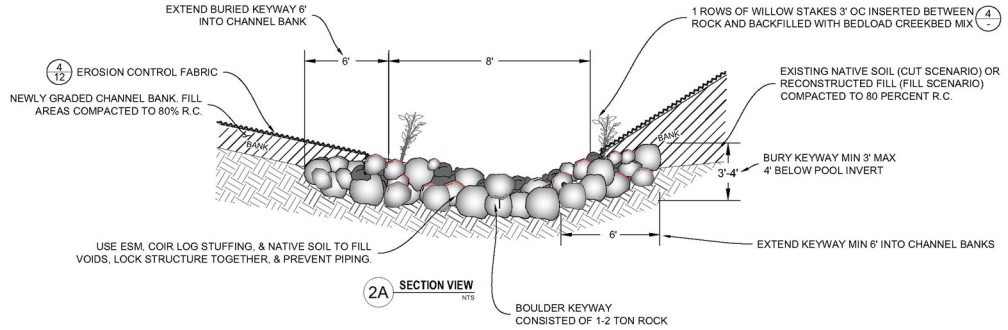
1 **RECONSTRUCTED CHANNEL BED (ESM)** NTS **SIDE VIEW** NTS



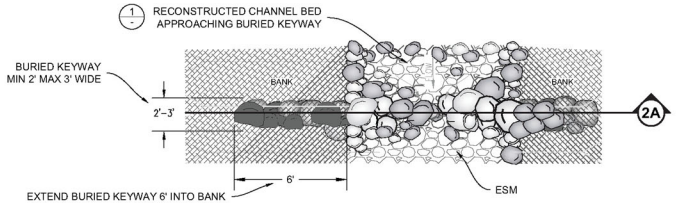
2A **SECTION VIEW** NTS



3 **BOULDER CLUSTERS** NTS



2A **SECTION VIEW** NTS



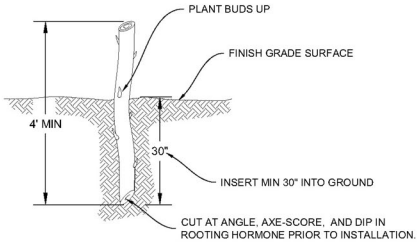
PLAN VIEW NTS

2 **BURIED BOULDER KEYWAY** NTS

BOULDERS FOR BANK ARMORING	ENGINEERED STREAMBED MATERIAL (ESM)*	
½ - 2 TON 18" - 48"	SIZE (INCHES)	%PASSING
	D84	15"-18"
	D50	10"
BOULDER GRADE CONTROL STRUCTURES	D30	6"
• INDIVIDUALLY PLACED 1-3 TON ROCK.	D16	1"
• BACKFILL WITH ESM	D0	SAND
	*ESM SHALL CONTAIN A MIN OF 10% AND MAX OF 15% NATIVE ON-SITE SOIL.	

TOTAL VOLUME OF ROCK
BOULDERS (1/2 - 3 TON): 680 CUBIC YARDS
ENGINEERED STREAMBED MATERIAL: 100 CUBIC YARDS

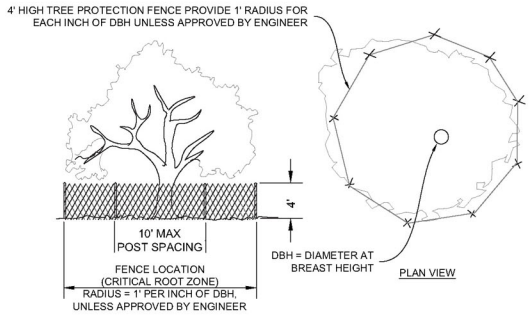
5 **ROCK SIZING AND VOLUME** NTS



NOTE:

1. WILLOW STAKE SPECIES SHALL BE A MIX OF SPECIES PRESENT AT AND ADJACENT TO THE WORK SITE.
2. CONTRACTOR RESPONSIBLE FOR PROVIDING SOURCE DOCUMENTATION TO ENGINEER.
3. EACH STAKE SHALL BE 1.5" - 3" THICK AT THE BOTTOM TO FACILITATE ROOT GROWTH AFTER TREATMENT WITH ROOTING HORMONE.
4. INSERT MIN 30" INTO GROUND
5. FOR WILLOW STAKES IN ROCK TOE AND WILLOW PLANTED RSP, INSTALL STAKES AND ROCK CONCURRENTLY AND THEN BACKFILL WITH NATIVE SOIL TO PROMOTE ROOTING.

4 **WILLOW STAKES** NTS



6 **TREE PROTECTION FENCING** NTS

San Mateo County Planning Commission Meeting

Owner/Applicant: Attachment:

File Numbers:

BIOLOGICAL ASSESSMENT
FOR CORINDA LOS TRANCOS CHANNEL STABILIZATION PROJECT, SAN MATEO COUNTY, CALIFORNIA

Prepared for:

Ox Mountain Landfill
12310 San Mateo Road
Half Moon Bay, California 94019-7112

Prepared by:

Questa Engineering
1220 Brickyard Cove Road
Point Richmond, Ca 94807

February 2013

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Executive Summary

The Ox Mountain Landfill is proposing treatments to stabilize channel segments along Corrinda Los Trancos (CLT) Creek. This Biological Assessment provides essential information about the project's potential impacts to federally-listed species for the purpose of Section 7 consultation between the U.S. Fish and Wildlife Service (USFWS) and the U.S. Army Corps of Engineers and for project review under the California Environmental Quality Act.

The USFWS list for the project area includes 25 federally listed species, including 25 animals and zero plants. The project will have no effect on 22 of these species due to lack of suitable habitat or because the project area is outside of their known range. We also assessed the potential for the project to affect five additional species which are California Species of Special Concern.

California red-legged frogs (CRLF) are present within the project area which lies within designated critical habitat Unit SNM-1 (USFWS 2010). There is also potential for San Francisco dusky-footed woodrat and San Francisco garter snake to occur within the project area or immediate vicinity. Central California Coastal Steelhead and monarch butterflies have potential to occur within the general project vicinity but would not likely be affected by project related activities as long as Best Practices are followed.

The project will result in approximately 0.22 acres of temporary impact to California red-legged frog habitat by construction of temporary access roads through riparian willow forest and installing the channel stabilization features. Potential impact to CRLF habitat will be minimized by conducting the project in accordance with provisions provided in the Programmatic Biological Opinion under the Clean Water Act for projects that may affect California red-legged frogs (USFWS 1999). This approach will also reduce the potential for impacts to other listed species with potential to occur in the project area.

Introduction

This Biological Assessment was prepared for the Corinda Los Trancos Channel Stabilization Project. The intent of this assessment is to provide essential information about the project's potential impacts to listed species for the purpose of Section 7 consultation between the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers (USACE). The project has potential to impact or take California red-legged frog, San Francisco garter snake, and San Francisco dusky-footed woodrat. Other species including monarch butterfly and Central California Coastal Steelhead may occur in the broader project vicinity but are not expected to be impacted by project activities.

CLT is not used by rainbow trout, Central California Coastal steelhead, or Coho salmon. The Highway 92 culvert prevents access to the creek and the sandy substrate is unsuitable for successful steelhead/coho spawning. The project area is located within designated critical habitat SNM-1 for California red-legged frog (USFWS 2010). Questa Engineering proposes to minimize the potential for any negative effects to these species by incorporating the measures described in the Programmatic Biological Opinion for California red-legged frog (USFWS 1999; Appendix A).

Project Location

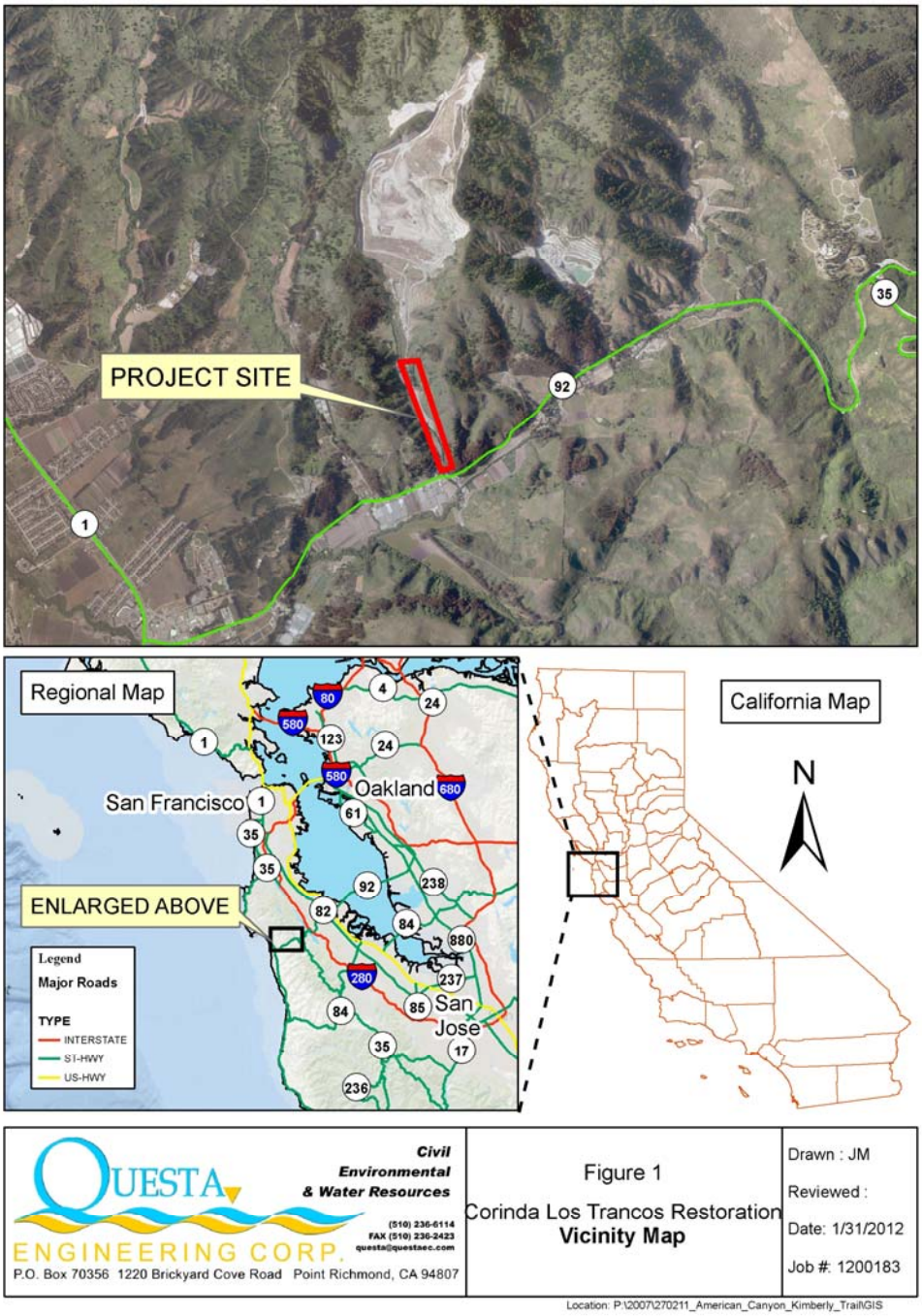
CLT Creek is located in the western portion of San Mateo County, east of Half Moon Bay (**Figure 1**). The creek runs north and south draining the Ox Mountain Landfill before flowing under Highway 92 and draining into Pilarcitos Creek approximately 900 feet downstream. The proposed channel stabilization reach extends approximately 1,800 feet upstream from Highway 92 and is bordered to the west by the Lemos Farm and to the east by the Ox Mountain Landfill access road.

Project Description and Purpose

Segments of CLT have experienced significant bank erosion and channel downcutting in recent years. The upstream landfill has changed the hydrologic and geomorphic drivers of channel stability. Landfill activities have reduced infiltration rates and thereby increased peak discharges in CLT while also reducing bedload inputs due to the construction of a large sediment control pond. The combination of these effects has lead to channel degradation and failure of numerous creek banks throughout the project reach. Mature riparian vegetation is toppling and sliding into the creek, causing debris dams and further exacerbating the channel and bank erosion.

To treat the extensive erosion, willow planted rock armoring, riparian revegetation, and erosion control best management practices will be employed to stabilize the channel and banks. Primary project components will include: (1) environmental protection and dewatering activities; (2) installation of ten willow planted riprap grade control structures; (3) construction of 840 linear feet of willow planted rock slope protection; (4) Riparian revegetation of willow, alder, and other native species; and (5) installation of erosion fabric and mulch.

Figure 1. Corinda Los Trancos Channel Stabilization Project Location.



Affected Environment

The project area is located along Corinda Los Trancos Creek in coastal San Mateo County, approximately one mile east of Half Moon Bay, California, along Highway 92 (**Figure 1**). The project area is bordered to the east by the Ox Mountain Landfill Access Road, to the south by Highway 92, to the west by the Lemos Farm, and to the north by the landfill. The project is located within the Pilarcitos Creek watershed, a basin which hosts a variety of plant communities. Representative plant communities within the watershed include coastal scrub/chaparral, non-native grassland, riparian woodlands, and mixed evergreen woodland. The Pilarcitos Creek watershed supports aquatic faunal species typical of the coastal drainages of the Santa Cruz Mountains, including Pacific Tree frog, red-legged frog, sculpin, three-spine stickleback, and various aquatic insects (*San Mateo County, 1991*).

Vegetation and Wildlife

Corinda Los Trancos Creek supports fragmented mature riparian woodland consisting of alders and willows. The upper slopes of the canyon are dominated by coastal scrub/chaparral and grassland. The chaparral plant community is dominated by coyote brush (*Baccharis pilularis consanguinea*), California sage (*Artemisia californica*), and sticky monkey flower (*Mimulus aurantiacus*). Portions of the western slope of the canyon consist of Douglas fir (*Pseudotsuga menziesii*) woodland. The agricultural fields operated by Mr. Lemos are currently used to grow pumpkins, cut flowers, and Christmas trees. The chaparral vegetation provides a food source for seed-eating species such as California quail (*Callipepla californica*), dark-eyed junco (*Junco hyemalis*), western harvest mouse (*Reithrodontomys megalotis*), and browse for black-tailed deer (*Odocoileus hemionus*). The Douglas-fir stands provide a food source for dark-eyed junco. In addition, these woodlands provide nesting habitat for a variety of birds including Swainson's thrush (*Catharus ustulatus*), brown creeper (*Certhia americana*) and raptors such as red-tailed hawk (*Buteo jamaicensis*) and great horned owl (*Budo virginianus*).

Riparian Woodland

Riparian woodland vegetation lines the bottom two-third's of the deeply incised CLT Creek channel. Dominant plant species within the riparian zone include willow (*Salix sp.*), and red alder (*Alnus oregana*) which form a dense canopy along the majority of the channel. Understory vegetation consists of Californian blackberry (*Rubus ursinus*), California black current (*Ribes malvaceum*), thimbleberry (*Rubus parviflorus velutins*), bracken fern (*Pteridium aquilinum*), western sword fern (*Polystichum munitum*), and stinging nettle (*Urtica holosericea*).

The Corinda Los Trancos Creek corridor provides habitat for a variety of wildlife including Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), California meadow vole (*Mieotus californicus*), black tailed deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), and brush rabbit (*Sylvilagus bachmani*).

Listed Species

The USFWS endangered and threatened species list for the Half Moon Bay quadrangle includes 25 federally listed animals (**Appendix B**). The California Natural Diversity Database (CNDDB) for the quadrangle includes records for five additional California Species of Special Concern including three animals and two plants. **Table 1** summarizes the status, habitat, and potential occurrence of these 30 species.

Twenty-five species (black abalone, white abalone, tidewater goby, delta smelt, coho salmon, loggerhead turtle, green turtle, leatherback turtle, olive ridley sea turtle, marbled murrelet, western snowy plover, short-tailed albatross, California brown pelican, California least tern, Guadalupe fur seal, sei whale, blue whale, finback whale, southern sea otter, right whale, Steller sea-lion, sperm whale, saltmarsh common yellowthroat, Choris' popcorn flower, and Kellogg's horkelia) have no potential to occur within the project area due to lack of suitable habitat. These 25 species will not be affected by the proposed project.

The five species that may occur or may be affected by the proposed project include:

- Present/High Potential: California Red-legged frog
- Moderate Potential: San Francisco garter snake, San Francisco dusky footed woodrat
- Low Potential: Monarch butterfly, Central California Coastal Steelhead (known to occur only downstream in Pilarcitos Creek)

The primary species of concern for this project is the California Red legged frog which was observed in Corrinda Los Trancos Creek during channel stabilization work located approximately ½ mile upstream from the proposed project (CNDDB 2013).

Table 1. Listed species with potential to occur in the Corinda Los Trancos Channel Stabilization Project Area.

Species	Federal/State/CNPS Status[1]	Habitat	Potential to Occur
Invertebrates			
Black Abalone *Haliotes cracherodii*	FE/-/-	Low intertidal zones along the Pacific Coast.	**No potential.** Lack of suitable habitat within project area.
White Abalone *Haliotes sorenseni*	FE/-/-	Deep waters along the Pacific Coast.	**No potential.** Lack of suitable habitat within project area.
Monarch Butterfly *Danaus plexippus*	-/CSC/-	Groves of Eucalyptus, Cyprus and willow trees	**Low potential.** Suitable habitat exists within the project area although they have typically been found in forest groves more near to the coast.

Species	Federal/State/CNPS Status[1]	Habitat	Potential to Occur
Fish			
Tidewater goby *Eucyclogobius newberryi*	FE/CSC/-	Shallow coastal lagoons, brackish marshes and lower stream reaches with still water; ranges from San Diego to Humboldt County	**No Potential.** There is some potential for this species to occur in the lower reaches of Pilarcitos Creek, but no possibility that they could enter CLT and pass under Highway 92.
Delta smelt *Hypomesus transpacificus*	FT/-/-	Shallow coastal lagoons, brackish marshes and lower stream reaches with still water.	**No Potential.** There is some potential for this species to occur in the lower reaches of Pilarcitos Creek, but no possibility that they could enter CLT and pass under Highway 92
Central Valley Steelhead and Central California Coastal Steelhead *Oncorhynchus mykiss*	FT/-/-	Clear, cold, freshwater streams with suitable spawning gravel	**Low Potential.** Known to occur within Pilarcitos Creek. No known sightings in CLT. Lack of spawning gravels and passage under Highway 92.
Central California coast coho salmon *Oncorhynchus kisutch*	FE/-/-	Anadromous; migrates through and spawns in coastal rivers and streams from Santa Cruz to Mendocino County	**No Potential.** Not known to currently inhabit Pilarcitos Creek. No possibility that they could enter CLT and pass under Highway 92.
Amphibians			
California red-legged frog *Rana draytonii*	FT/CSC/-	Ponds, pools, and slow-moving streams	**Present.** Species is present within Corinda Los Trancos Creek, project area within Critical Habitat Unit SNM-1.
Reptiles			
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE/CE/-	Permanent or seasonal freshwater ponds, wetlands, or marshes with dense riparian vegetation containing amphibian prey.	**Moderate potential.** Project area contains suitable habitat.
Loggerhead turtle *Caretta caretta*	FT/-/-	Oceanic.	**No potential.**
Green turtle *Chelonia mydas*	FT/-/-	Oceanic.	**No potential.**

Species	Federal/State/CNPS Status[1]	Habitat	Potential to Occur
Leatherback turtle *Dermochelys coriacea*	FE/-/-	Oceanic	**No potential.**
Olive ridley sea turtle *Lepidochelys olivacea*	FT/-/-	Oceanic	**No potential.**
Birds			
California least tern *Sterna antillarum browni*	FE/CE/-	Nests on barren to sparsely vegetated areas near water	**No potential.** Project area is outside of the known species breeding area. Nearest nesting area is located in San Francisco Bay.
Western Snowy Plover *Charadrius alexandrinus*	FT/CSC/-	Nests on beaches, gravel bars and barren ground	**No Potential.** Project area is outside of the known species breeding and area.
Brown Pelican *Pelicanus occidentalis*	FE/CE/-	Colony nester on rocky islands.	**No potential.** Project area is outside of the known species breeding and area.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	-/CSC/-	Coastal Alluvial Fan/Terrace Deposits	**No potential.** Lack of suitable habitat within project area. Nearest CNDDB record is located 2 mi to west.
Short-tailed albatross *Diomedea albatrus*	FE/-/-	Nests on large open coastal areas near to grass.	**No potential.** Lack of suitable habitat within project area.
Marbled Murrelet *Brachyramphus marmoratus marmoratus*	FT/CE/-	Nests in coastal redwood and Douglas-fir forests, up to 50 miles inland of Pacific Ocean	**No potential.** Lack of suitable nesting habitat within project area.
Mammals			
Guadalupe fur seal *Arctocephalus townsendi*	FT/-/-	Oceanic.	**No potential.**
Sei whale *Balaenoptera borealis*	FE/-/-	Oceanic	**No potential.**
Blue whale *Balaenoptera musculus*	FE/-/-	Oceanic	**No potential.**
Finback whale *Balaenoptera physalus*	FE/-/-	Oceanic.	**No potential.**
Right whale *Eubalaena glacialis*	FT/-/-	Oceanic	**No potential.**
Steller sea-lion *Eumetopias jubatus*	FE/-/-	Oceanic	**No potential.**
Southern Sea Otter *Enhydra lutris nereis*	FT/-/-	Coastal waters, particularly dense kelp forests	**No potential.** Lack of suitable habitat within project area.
Sperm whale *Physeter catodon*	FE/-/-	Oceanic	**No potential.**

Species	Federal/State/CNPS Status[1]	Habitat	Potential to Occur
San Francisco Dusky-footed woodrat *Neotoma fuscipes annectans*	-/CSC/-	Brushy and forested habitats, particularly areas with dense stands of poison oak	**Moderate Potential.** Suitable habitat, known occurrence 2 miles to the NE (CNNDB 2013).
Plants			
Kellogg's horkelia *Horkelia cuneata var. sericea*	-/CSC/-	Grasslands on the margins of ridge tops	**No potential.** No suitable habitat, known occurrence 1 mile to NW.
Choris' popcornflower *Plagiobothrys chorisianus var. chorisianus*	-/CSC/-	Coastal ocean bluffs	**No potential.** No suitable habitat, known occurrence 3 miles to SW.

[1]Status codes are defined as follows:

Federal status: USFWS Listing
FE = Listed as endangered under Endangered Species Act.
FT = Listed as threatened under Endangered Species Act.

California State Status: CDFG Listing
CE = Listed as endangered under California Endangered Species Act.
CT = Listed as threatened under California Endangered Species Act.\
CSC = California Species of Special Concern

California Native Plant Society (CNPS) status:
1B.1 = Plant species that are seriously endangered in California.
1B.2 = Plant species fairly endangered in California.

California red-legged frog (*Rana draytonii*)

The federally threatened California red-legged frog occur primarily in ponds or pools of streams that retain water long enough for breeding and development of young (about 15 weeks). The adults often prefer dense, emergent or shoreline riparian vegetation closely associated with deep, still or slow-moving water (Jennings and Hayes 1994), but may also be found in unvegetated streamside areas that provide shade and shelter. Other key habitat features include good water quality and absence of introduced predators such as bullfrogs and predatory fishes. California red-legged frogs can aestivate in small mammal burrows and moist leaf litter within 200 feet of aquatic habitat, and they can disperse through upland habitats for distances of 2.8 km (1.7 miles) or more at any time of year (USFWS 2002; USFWS 2005).

The project area lies within designated California red-legged frog critical habitat unit SNM-1 (USFWS 2010). Potential project-related impacts to the red-legged frog include direct and indirect impacts. Direct impacts include crushing or injuring frogs present in work areas with equipment or vehicles. Indirect impacts include temporary or permanent alteration of habitats such that they cannot be used by red-legged frogs, introduction of

non-native invasive plants, trash left on site that could attract predators, and sedimentation of aquatic habitats from vehicles crossing aquatic areas.

San Francisco garter snake (*Thamnophis sirtalis tetrataenia*)

The San Francisco garter snake is listed as a Federal and State endangered species (32 Federal Register 4001). It is currently distributed throughout San Mateo County and northern Santa Cruz County (USFWS 2006). The SFGS is one of twelve subspecies of *Thamnophis sirtalis*, the most widely distributed snake in North America (Behler 1988; Janzen et. al. 2002). Within the range of the SFGS, the California red-sided garter snake (*Thamnophis sirtalis infernalis*) co-occurs and hybridizes with the SFGS at some localities (Barry 1994). The SFGS can generally be distinguished by the presence of a lateral red longitudinal stripe bordered by black on both sides, whereas the California red-sided garter snake has reddish bars which break up the black lateral coloration (Stebbins 2003).

SFGS are typically found near aquatic habitats including ponds, creeks, canals, and freshwater marshes that support breeding populations of their primary prey, California red-legged frogs (*Rana draytonii*; CRLF) and Pacific treefrogs (*Pseudacris regilla*) (USFWS 2006). At some localities, SFGS are known to consume bullfrogs (*Rana catesbeiana*) which have facilitated the colonization of habitats by SFGS (Barry 2005). SFGS are primarily active above ground from early March to July during mating and feeding activities and may continue into the fall months. During the winter, SFGS are known to retreat to upland hibernacula which include rodent burrows and dense mats of grass, but may be found basking outside these winter hibernacula during warm days (Larsen 1994). These important upland hibernacula are often found on south-facing slopes that support grassland and coastal scrub (USFWS 2006).

Within suitable aquatic habitat, SFGS are capable of conducting movements of 1.33 miles over 111 days and 1.05 miles over 74 days (Wharton 1989). Larsen (1994) documented snakes moving a maximum distance of 0.4 miles (671 m) at the West of Bayshore site near the San Francisco International Airport. SFGS at Año Nuevo State Reserve and Pearson Ranch remained within 100-200 m of pond foraging habitats and upland sites (McGinnis 2002, in USFWS 2006).

There is potential for SFGS to occur within the project area, as there is suitable habitat present which is bolstered by the presence of a breeding population of California red-legged frogs, the primary prey species of SFGS. Avoidance and mitigation measures (USFWS 1999; Appendix A) employed in order to minimize impacts to CRLF should also minimize potential impacts to SFGS.

Central Valley Steelhead and Central California Coastal Steelhead
(*Oncorhynchus mykiss*)

Steelhead is the anadromous form of rainbow trout, a salmonid native to western North America and the Pacific Coast of Asia. The term anadromous refers to the life history of fish species born in freshwater streams that migrate to the ocean for their adult phase.

After birth, steelhead spend their first 1-3 years of life in their natal streams before emigrating to the ocean. Steelhead spend between one to four growing seasons in the ocean before returning to their native fresh water streams to spawn. Unlike Pacific salmon, steelhead do not always die after spawning and are able to spawn more than once. In California, most steelhead spawn from December through April in small streams and tributaries where cool, well oxygenated water is available year round.

Central California Coastal Steelhead and Central Valley Steelhead are distinct population segments (DPS) listed as threatened under the Endangered Species Act (ESA) in 1997. The Central California Coastal DPS includes all naturally spawned anadromous *O. mykiss* populations in California streams from the Russian River to Aptos Creek, and the drainages of San Francisco, San Pablo, and Suisun Bays eastward to Chipps Island at the confluence of the Sacramento and San Joaquin Rivers (NOAA 2006). The Central Valley DPS includes all naturally spawned anadromous steelhead populations in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco and San Pablo Bays and their tributaries, as well as two artificial propagation programs.

Steelhead have been documented in several coastal streams in the project vicinity including Pilarcitos Creek (NOAA 2005). Pilarcitos Creek is also located in designated critical habitat for steelhead (Federal Register 2005). However, no Steelhead have been documented in Corinda Los Trancos Creek upstream from Highway 92. The highway 92 culvert prevents access to the creek and the sandy substrate of the creek does not provide suitable spawning and rearing habitat. Indirect impacts to the downstream Steelhead population can be minimized by following Best Management Practices during construction such as dewatering and erosion control. In the long term, the project is intended to benefit steelhead reducing fine sediment input to their downstream habitat.

San Francisco Dusky-footed woodrat (*Neotoma fuscipes annectans*)

San Francisco dusky-footed woodrat are a California Species of Special Concern. They are medium-sized rodent, about the size of an adult rat, with a body around seven inches long, nose to rump, and a furred tail. They are herbivores and eat grasses, leaves, fresh fruits, small bulbs, bark, and flowers. They live in a variety of brushy and forested habitats. Woodrats build mounded stick houses that may range in size from 3 to 8 feet across at the base and as much as 6 feet tall, and they tend to live in colonies of 3 to 15 or more houses. Individual houses may persist for 20 to 30 years. In addition to woodrats their houses are often occupied by other animals including, reptiles, amphibians, small mammals, and invertebrates. Woodrat houses provide protection from temperature and moisture extremes and allow animals that might not otherwise tolerate local conditions to live there, increasing the biotic diversity.

San Francisco dusky-footed woodrats may be present within the project area. However, visual surveys for wood rat houses within the channel and flood plain have not discovered any potential houses. Temporary access roads will avoid woodrat nests where possible. These impacts will be minimized by using a qualified biological monitor to

oversee any removal and relocation of the woodrat houses and placement of refugee structures (e.g. half wine barrels and slash piles).

Monarch Butterfly *(Danaus plexippus)*

Monarch butterflies have complex life stages and migrate south and west each autumn to escape the cold weather. The monarch migration usually starts in about October of each year, but can start earlier if the weather turns cold sooner than that. Migrating butterflies have been identified within the Half Moon Bay quadrangle. By reducing unnecessary damage to the existing vegetation within the vicinity of the project, and following the additional avoidance and mitigation measures, impacts to monarch butterflies will be minimized.

Avoidance and Mitigation

Questa Engineering will implement measures to minimize and avoid the potential for take of the California red-legged frog, San Francisco garter snake, and other listed species with potential to occur in the project area. These measures include all of the minimization measures described in the Programmatic Formal Endangered Species Act Consultation on Issuance of Permits under Section 404 of the Clean Water Act or Authorizations under the Nationwide Permit Program for Projects that May Affect the California Red-legged Frog (hereafter referred to as the CRLF PBO (California Red-legged Frog Programmatic Biological Opinion; USFWS 1999; included in **Appendix A**). We have listed those measures below, modified them in some cases to be project-specific and referenced the measure from the PBO. These measures will also serve to avoid and/or minimize impacts steelhead. We will also minimize impacts to San Francisco dusky-footed woodrat and monarch butterfly through a combination of avoidance and mitigation measures detailed below.

Avoidance and Minimization Measures:

1. Questa and Ox Mountain Landfill will submit the names and credentials of biologists proposed to perform preconstruction surveys and monitoring to the USFWS for written approval at least 15 days prior to commencement of any activities. (CRLF PBO Measure #1)

2. Each construction area will be surrounded by herpetological exclusionary fencing 1 week prior to the start of construction.

3. A USFWS-approved biologist will survey the work areas no less than 5 days prior to the onset of activities and after the herpetological fence has been installed. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. In making this determination the USFWS shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move California red-legged frogs from the work areas before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. If a California red-legged frog is found nearby, but outside a proposed work area, it will not be disturbed and USFWS will be notified. The biologist will also report any observations of other listed species addressed in this biological assessment. (CRLF PBO Measure # 2)

4. Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for all construction personnel. The training will include a description of the listed species with potential to occur,

their habitat, and the general measures that are being implemented to conserve the species as they relate to the project and the boundaries within which the project may accomplished (i.e. work areas). (CRLF PBO Measure # 3)

5. A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area. All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.

6. During project activities, all trash will be properly contained, removed from the work areas and disposed of regularly. Following construction, all trash and construction debris from work areas will be removed. (CRLF PBO Measure #5)

7. All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (66 feet) from any riparian habitat or water body. Questa and Ox Mountain Landfill will ensure contamination of habitat does not occur during such operations. Prior to the start of construction, Questa and Ox Mountain Landfill will prepare a plan to ensure a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. (CRLF PBO Measure # 6)

8. A USFWS-approved biologist will ensure that the spread or introduction of invasive plant species will be avoided to the maximum extent possible. When practical, invasive exotic plants in the project area will be removed. (CRLF PBO Measure #7)

9. Project areas that are disturbed will be revegetated with an appropriate assemblage of native riparian, wetland and upland vegetation. (CRLF PBO Measure #8)

10. Stream contours will be returned to their original condition at the end of project activities, unless consultation with USFWS has determined that it is not beneficial to the species or feasible. (CRLF PBO Measure #9)

11. The number of access routes, number and size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian and wetland areas where feasible. Where impacts occur in staging areas and access routes, restoration will be performed. (CRLF PBO Measure # 10)

12. Work activities will be completed between August 1 and November 1, 2009. Should the proponent or applicant demonstrate a need to conduct activities

outside this period, the USACE may authorize such activities after obtaining the Service's approval. (CRLF PBO Measure #11)

13. To control erosion during and after project implementation, Questa and Ox Mountain Landfill will implement best management practices. (CRLF PBO Measure # 12)

14. A USFWS-approved biologist will permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the maximum extent possible. (CRLF PBO Measure #14)

15. Vegetation clearing and other construction work will occur outside the nesting birds season (Feb 15 to August 1). If work is initiated during the nesting season, a preconstruction survey for nesting birds will be performed by a qualified biologist. Any active nests will be avoided until all the young have fledged and are independent.

16. A qualified biologist will monitor the removal and relocation of woodrat houses and placement of refuge structures (e.g. half wine barrels and slash piles) for any woodrat nests located within the access road footprint. If young woodrats are found in any house, all removed material will be replaced and removal of that house will not continue until the young have left the house. Prior to dismantling houses, data will be collected to document the following characteristics of the house: house-building materials, contents of house cavities (particularly stored food and plants), percent and type of ground cover immediately around each house, tree and shrub species surrounding the house, and the house substrate (e.g., ground, tree, etc.). New houses will be established on site for each house removed. New house designs will be constructed of a half wine barrel placed upside down in appropriate microhabitat with materials from the nest chamber of the dismantled house placed inside, and other house materials placed over and around the barrel, including a long tunnel-shaped entrance that leads only into the receptacle.

Conclusion and Determination

No long term, permanent impact to California red-legged frog or other listed species habitat is anticipated from this project. However the project will temporarily impact a total of 0.22 acres of estivation habitat for CRLF within critical habitat unit SNM-1, from construction of temporary access roads and construction activities within the riparian forest. Temporary access roads and work areas will be protected with a perimeter of approved ESA fencing to avoid negative impacts outside of the work areas and to prevent migration of frogs into the immediate project vicinity. Channel stabilization activities will be conducted during the late summer dry season, when CLT will have low flows. In

order to avoid and minimize negative impacts to CRLF and other potentially occurring special-status species, Questa Engineering and Ox Mountain Landfill will implement conservation measures described in the CRLF PGO (**Appendix A**) and summarized above. Although all avoidance and minimization techniques will be utilized, we cannot rule out the possibility that some individual CRLF or San Francisco garter snakes could be killed or injured accidentally during the project. However, with careful consideration and implementation of these proposed conservation measures, the amount of potential take to the species and their habitat will be low.

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Appendix A: California Red-legged Frog Programmatic Biological Opinion (USFWS 1999)

United States Department of the Interior

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Subject: Programmatic Formal Endangered Species Act Consultation on Issuance of Permits under Section 404 of the Clean Water Act or Authorizations under the Nationwide Permit Program for Projects that May Affect the California Red-legged Frog

Dear Messrs. Champ, Fong, and Schubel

This document transmits the biological opinion of the U.S. Fish and Wildlife Service (Service) on issuance of permits under section 10 (§10) of the Rivers and Harbors Act of 1899 and section 404 (§404) of the Federal Water Pollution Control Act, as amended (Clean Water Act), for projects that may affect the California red-legged frog (*Rana aurora draytonii*). This consultation document has been prepared pursuant to 50 CFR 402 of our interagency regulations governing section 7 of the Endangered Species Act of 1973, as amended (Act).

This programmatic consultation evaluates the effects on California red-legged frogs of certain activities authorized by the Army Corps of Engineers (Corps) under Clean Water Act and Rivers and Harbors Act permits in all of Napa, Solano, Contra Costa, Alameda, San Francisco,

San Mateo (in part), Santa Clara, San Benito, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara and Ventura counties; all watersheds in Marin and Sonoma counties that drain toward San Francisco Bay; and in coastal draining watersheds in Marin and Sonoma counties, including and south of the Walker Creek watershed. Drainages in the Central Valley and south of the Transverse Ranges are excluded because the extreme rarity of the California red-legged frog in these areas warrants individual consultation in any circumstance where the Corps determines a project may affect the species.

San Francisco garter snakes (*Thamnophis sirtalis tetrataenia*) and California red-legged frogs may co-occur in western San Mateo County. Due to the rarity of the San Francisco garter snake, actions that would occur in western San Mateo County are excluded from this biological opinion

CONSULTATION HISTORY

Since listing of the California red-legged frog, the Service and the Corps have consulted, both formally and informally, on a variety of projects. In some cases, temporary disturbance of habitat and incidental take of individuals in the form of mortality or harassment occurred, but resulted in no long-term adverse impacts to California red-legged frogs in the affected areas. Staff from Fish and Wildlife Service offices determined that many of the same protective measures, including the Corps' proposed special conditions and the Service's terms and conditions, were very similar from project to project. Consequently, both of the Fish and Wildlife Offices within the range of the species collaborated in the preparation of this biological opinion.

ADMINISTRATION OF THE BIOLOGICAL OPINION

This programmatic consultation will be implemented in the following manner. The Corps will begin the consulting process by making a determination of whether the action under consideration may affect the California red-legged frog, as required by the implementing regulations for section 7 of the Act. If the Corps determines the project is not likely to adversely affect the California red-legged frog, it will seek the Service's concurrence in writing pursuant to 50 CFR 402.14(b)(1). If the Corps determines the proposed action is likely to adversely affect the California red-legged frog, the Corps will next consider whether the potential effects of the proposed action may be covered by this biological opinion.

If the Service or the Corps determines that the potential effects of the proposed action, including the indirect, interrelated and interdependent effects, are too great for the action to be covered by this biological opinion, the standard provisions for section 7 consultation apply throughout the remainder of the review process. If the Corps finds that the proposed action meets the criteria for consideration under this biological opinion. the Corps shall contact the Service, in writing, for Service concurrence, generally within 30 days, with the Corps' determination. At this time, the Corps shall provide to the Service the following information (prior to authorization):

1) a 7 ½ minute topographic map or a copy of the appropriate topographic map with the name of the map. Such maps shall indicate where the project site is located, restoration sites, and potential frog relocation sites; 2) a written description of the activity, including but not limited to, construction methods, time of year the work would occur, vegetation restoration and monitoring plans, and frog monitoring plan; and 3) one plan view and a minimum of one typical cross section indicating water bodies, vegetation types, work areas, roads, restoration sites, and refueling and staging areas.

Projects that do not meet the suitability criteria may be appended to this opinion, upon Service approval, if use of additional minimization measures sufficiently reduce the effects of the action to be consistent with the intent of this opinion. Projects that do not meet the suitability criteria, such as individual permit applications under section 404 of the Clean Water Act or section 10 of the Rivers and Harbors Act, may have effects on the frog similar in nature to those described under the Nationwide Permits below. The Service shall be available for consultation during all phases of project evaluation to assist the Corps with its effects determination.

Yearly, the Service shall evaluate the effects of actions that have occurred under this programmatic consultation to ensure that its continued implementation does not result in long-term adverse effects to the ecosystems upon which the California red-legged frog depends. This opinion may be modified to address problems with the programmatic process or excessive adverse effects on listed species.

BIOLOGICAL OPINION

Description of the Proposed Action

Suitability Criteria

Actions that fall under this consultation are projects that may adversely affect California red-legged frogs either by take of individuals, or through temporary disturbance or permanent loss of upland, riparian, or wetland red-legged frog habitat, or both, but which nonetheless do not contribute to a decline in California red-legged frogs in the affected area (see "Environmental Baseline" below). Actions that the Corps has permitted, and have undergone formal consultation with the Service, that meet these criteria include, but are not limited to: earthquake retrofitting, repair and widening of bridges, repair of bank protection, replacement of low-flow stream crossings with bridges, and small-scale stabilization of stream slopes.

Projects that meet the suitability criteria and may involve some or all of the preceding activities often occur under Nationwide Permits (NWP). To guide the Corps during project evaluation, the Service has reviewed the Nationwide Permits the Corps has issued under 33 CFR 330.3 (most recently described at 61 **FR** 65874) and has determined that projects typically authorized under the NWPs listed below (and amended herein) are likely to meet the suitability criteria described

above, provided that: 1) the additional minimization measures provided herein are implemented; 2) projects are single and complete projects and not part of larger actions, such as housing subdivision or golf course projects; 3) projects would not, in the Service's opinion, take place in areas where populations of California red-legged frogs are so isolated that even the small effects described below may have significant impacts. When the NWP program is reauthorized the Corps shall evaluate the new program and its consistency with this biological opinion. If it is determined that there are differences in the effects, amount or extent of incidental take, new permits that were not considered, or other information not considered then this biological opinion will be reinitiated and amended as necessary.

Nationwide Permit Activities

(#3) Maintenance.
(#5) Scientific Measuring Devices.
(#6) Survey Activities.
(#7) Outfall Structures.
(#12) Utility Line Discharges.
(#13) Bank Stabilization, provided that activity is less than fifty (50) feet in length.
(#14) Road Crossings.
(#15) U.S. Coast Guard Approved Bridges.
(#17) Hydropower Projects.
(#18) Minor Discharges.
(#19) Minor Dredging.
(#23) Approved Categorical Exclusions
(#25) Structural Discharges.
(#27) Wetland and Riparian Restoration and Creation Activities.
(#31) Maintenance of Existing Flood Control Facilities.
(#32) Completed Enforcement Actions.
(#33) Temporary Construction, Access and Dewatering.
(#37) Emergency Watershed Protection and Rehabilitation.
(#38) Cleanup of Hazardous and Toxic Waste.

Minimization of Adverse Effects

To the maximum extent practicable, projects authorized under this biological opinion shall be designed and implemented in such a way as to minimize adverse effects to California red-legged frogs or their habitat. To achieve that purpose, the following measures shall be taken as a minimum:

At least 15 days prior to the onset of activities, the applicant or project proponent shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures. No project activities shall begin until proponents have

received written approval from the Service that the biologist(s) is qualified to conduct the work.

2 A Service-approved biologist shall survey the work site two weeks before the onset of activities. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist shall contact the Service to determine if moving any of these life-stages is appropriate. In making this determination the Service shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move California red-legged frogs from the work site before work activities begin. Only Service-approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

3 Before any construction activities begin on a project, a Service-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 importance of the California red-legged frog and its habitat, the general measures that are being implemented to conserve the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

4 A Service-approved biologist shall be present at the work site until such time as all removal of California red-legged frogs, instruction of workers, and habitat disturbance have been completed. After this time, the contractor or permittee shall designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist shall ensure that this individual receives training outlined above in measure 3 and in the identification of California red-legged frogs. The monitor and the Service-approved biologist shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the Corps and Service during review of the proposed action. If work is stopped, the Corps and Service shall be notified immediately by the Service-approved biologist or on-site biological monitor.

5 During project activities, all trash that may attract predators 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.

6 All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 20 meters from any riparian habitat or water body. The Corps and permittee shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Corps shall ensure that the permittee has prepared a plan to allow a 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.

7 A Service-approved biologist shall ensure that the spread or introduction of invasive exotic plant species shall be avoided to the maximum extent possible. When practicable, invasive exotic plants in the project areas shall be removed.

8. Project sites shall be revegetated with an appropriate assemblage of native riparian wetland and upland vegetation suitable for the area. A species list and restoration and monitoring plan shall be included with the project proposal for review and approval by the Service and the Corps. Such a plan must include, but not be limited to, location of the restoration, species to be used, restoration techniques, time of year the work will be done, identifiable success criteria for completion, and remedial actions if the success criteria are not achieved.

9. Stream contours shall be returned to their original condition at the end of project activities, unless consultation with the Service has determined that it is not beneficial to the species or feasible.

10. The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas. Where impacts occur in these staging areas and access routes, restoration shall occur as identified in measures 8 and 9 above.

Work activities shall be completed between April 1 and November 1. Should the proponent or applicant demonstrate a need to conduct activities outside this period, the Corps may authorize such activities after obtaining the Service's approval.

12. To control erosion during and after project implementation, the applicant shall implement best management practices, as identified by the appropriate Regional Water Quality Control Board.

13. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than five millimeters (mm) to prevent California red legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

14. A Service-approved biologist shall permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the

maximum extent possible. The permittee shall have the responsibility to ensure that their activities are in compliance with the California Fish and Game Code.

Species Account

Description. The California red-legged frog is a relatively large aquatic frog ranging from 4 to 13 centimeters (11/2 to 5 inches) from the tip of the snout to the vent (Stebbins 1985). From above, the frog can appear brown, gray, olive, red or orange, often with a pattern of dark flecks or spots. The back of the frog is bordered on either side by an often prominent ridge (dorsolateral fold) running from the eye to the hip. The hind legs are well-developed with large, webbed feet. A cream, white, or orange stripe usually extends along the upper lip from beneath the eye to the rear of the jaw. The undersides of adult frogs are white, usually with patches of bright red or orange on the abdomen and hindlegs. The groin area sometimes exhibits bold black mottling with a white or yellow background.

Life History. California red-legged frogs breed from November through March; earlier breeding has been recorded in southern localities (Storer 1925). Males have paired vocal sacs and call in air (Hayes and Krempels 1986). Males appear at breeding sites from two to four weeks before females (Storer 1925). They typically call in small, mobile groups of three to seven individuals to attract females (Jennings and Hayes 1985). Females individually move toward a male or male calling group. Female California red-legged frogs deposit egg masses on emergent vegetation so that the masses float on the surface of the water (Hayes and Miyamoto 1984). Egg masses contain about 2,000 to 5,000 moderate-sized (2.0 to 2.8 mm in diameter; 0.08 to 0.11 inches), dark reddish brown eggs (Storer 1925, Jennings and Hayes 1985). Eggs hatch in 6 to 14 days (Storer 1925). Larvae undergo metamorphosis 3.5 to 7 months after hatching (Storer 1925, Wright and Wright 1949, Jennings and Hayes 1990). Egg predation is infrequent; most mortality probably occurs during the tadpole stage (Licht 1974) although eggs are susceptible to being washed away from high stream flows. Schmeider and Nauman (1994) report that the California red-legged frog eggs have a defense against predation which is possibly related to the nature of the egg mass jelly. Schmieder and Nauman (1994) report that California red-legged frog larvae are highly vulnerable to fish predation; larvae appear to be most vulnerable to fish predation immediately after hatching when the nonfeeding larvae are relatively immobile. Sexual maturity can be attained at two years of age by males and three years of age by females (Jennings and Hayes 1985); adults may live 8 to 10 years (Jennings *et al.* 1992) although the average life span is considered to be much lower.

The diet of California red-legged frogs is highly variable. Tadpoles probably eat algae (Jennings *et al.* 1992). Hayes and Tennant (1985) found invertebrates to be the most common food item for adults. Vertebrates such as Pacific tree frogs and California mice (*Peromyscus californicus*), represented over half of the prey mass eaten by larger frogs (Hayes and Tennant 1985). Feeding activity probably occurs along the shoreline and on the surface of the water. Hayes and Tennant (1985) found juvenile frogs to be active diurnally and nocturnally, whereas adult frogs were largely nocturnal.

Habitat. California red-legged frogs have been found at elevations that range from sea level to about 1,500 meters (5,000 feet). The frog uses a variety of habitat types, which include various aquatic systems, riparian, and upland habitats. The following habitat descriptions are meant to describe the range of habitat types utilized by California red-legged frogs. However, there is much variation in how frogs use the environment and in many cases frogs may complete their entire life cycle in a particular area without using other components (*i.e.*, a pond is suitable for each life stage and use of upland habitat or a riparian corridor is not necessary). California red-legged frogs are adapted to survive in a variable Mediterranean climate and survive temporal and spatial changes in habitat quality; the frog's variable life history enables it to change habitat use according to the year to year conditions and in response to adverse conditions. Populations appear to persist where a mosaic of habitat elements exists, embedded within a matrix of dispersal habitat. Here, local extinctions may be counterbalanced by recolonizations of new or unoccupied areas of suitable habitat. This interpretation corresponds with the notion that California red-legged frogs persist in what ecologists refer to as metapopulation; a collection of sub-populations that exchange dispersers.

Breeding Habitat. Breeding sites of the California red-legged frog are in aquatic habitats; larvae, juveniles and adult frogs have been collected from streams, creeks, ponds, marshes, sag ponds, deep pools and backwaters within streams and creeks, dune ponds, lagoons and estuaries. California red-legged frogs frequently breed in artificial impoundments such as stock ponds given the proper management of hydro-period, pond structure, vegetative cover, and control of exotic predators. The importance of riparian vegetation for this species is not well understood. While frogs successfully breed in streams and riparian systems, high spring flows and cold temperatures in streams often make these sites risky egg and tadpole environments. When this vegetation type is present, frogs spend considerable time resting and feeding in it; it is believed the moisture and camouflage provided by the riparian plant community provide good foraging habitat and may facilitate dispersal in addition to providing pools and backwater aquatic areas for breeding. Radio telemetry studies showed that individual California red-legged frogs move within the riparian zone from vegetated areas to pools (G. Rathbun, pers. comm.).

Breeding adults are often associated with dense, shrubby riparian or emergent vegetation and areas with deep (>0.7 meter) still or slow-moving water (Hayes and Jennings 1988); the largest summer densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*) (Jennings 1988). However, frogs often successfully breed in artificial ponds with little or no emergent vegetation and have been observed in stream reaches that are not cloaked in riparian vegetation. An important factor influencing the suitability of aquatic breeding sites is the genera lack of introduced aquatic predators.

California red-legged frogs are sensitive to high salinity. When eggs are exposed to salinity levels greater than 4.5 parts per thousand. 100 percent mortality occurs and larvae die when exposed to salinities greater than 7.0 parts per thousand (Jennings and Hayes 1990). Nussbaum *et al.* (1983) state that early red-legged frog (*Rana a. aurora*) embryos are tolerant of

temperatures only between 9 and 21 degrees Centigrade (48 and 70 degrees Fahrenheit), and both the lower and upper lethals are the most extreme known for any North American ranid frog. Data specific to the California red-legged frog are not available.

Dispersal and Use of Uplands

At any time of the year, juvenile and adult California red-legged frogs may move from breeding sites. They can be encountered living within streams at distances exceeding three kilometers (1.8 miles) from the breeding site and have been found up to 30 meters (100 feet) from water in adjacent dense riparian vegetation for up to 77 days (Rathbun *et al.* 1993). During periods of wet weather, starting with the first rains of fall, some individuals may make overland excursions through upland habitats. Most of these overland movements occur at night. Evidence from marked frogs on the San Simeon coast of California suggests that frog movements via upland habitats of about one mile are possible over the course of a wet season and frogs have been observed to make long-distance movements that are straight-line, point to point migrations rather than using corridors for moving in between habitats (N. Scott, *pers. com.* 1998). Dispersing frogs in northern Santa Cruz County traveled distances from one-quarter mile to more than two miles without apparent regard to topography, vegetation type, or riparian corridors (J. Bulger, *in litt.* 1998). The manner in which California red-legged frogs use upland habitats is not well understood; how much time California red-legged frogs spend in upland habitats, patterns of use, and whether there is differential use of uplands by juveniles, subadults and adults are being studied. Dispersal distances are largely unknown and are considered to be dependent on habitat availability and environmental variability.

Summer Habitat. California red-legged frogs often disperse from their breeding habitat to forage and seek summer habitat. This could include boulders or rocks and organic debris such as downed trees or logs; industrial debris; and agricultural features, such as drains, watering troughs, spring boxes, abandoned sheds, or hay-ricks. California red-legged frogs use small mammal burrows and moist leaf litter (Jennings and Hayes 1994); incised stream channels with portions narrower and deeper than 46 centimeters (18 inches) may also provide habitat (61 FR 25813). This type of dispersal and habitat use, however, is not observed in all red-legged frogs and is most likely dependent on the year to year variations in climate and habitat suitability and varying requisites per life stage. For the California red-legged frog, this habitat is potentially all aquatic and riparian areas within the range of the species and includes any landscape features that provide cover and moisture (61 FR 25813); the distances that frogs will disperse to reach summer habitat is not fully understood and is currently a topic of study.

Distribution. The historical range of the California red-legged frog extended coastally from the vicinity of Point Reyes National Seashore, Marin County, California and inland from the vicinity of Redding, California southward to northwestern Baja California, Mexico (Jennings and Hayes 1985, Storer 1925, Hayes and Krempels 1986). The California red-legged frog has sustained a 70 percent reduction in its geographic range as a result of several factors acting singly or in combination (Jennings *et al.* 1992). Habitat loss and alteration, over-exploitation, and

introduction of exotic predators were significant factors in the species' decline in the early- to mid-1900s. Reservoir construction, expansion of introduced predators, grazing and prolonged drought fragmented and eliminated many of the Sierra Nevada foothill populations. Only a few drainages are currently known to support California red-legged frogs in the Sierra Nevada foothills, compared to more than 60 historical records. Several researchers in central California have noted the decline and eventual disappearance of California red-legged frog once bullfrogs (*Rana catesbiana*) become established at the same site (L. Hunt, *in litt.*, 1993; S. Barry, *in litt.*, 1992; S. Sweet, *in litt.*, 1993). Bullfrogs prey on California red-legged frogs (Twedt 1993; S. Sweet, *in litt.* 1993) and interfere with their reproduction (Jennings and Hayes 1990, Twedt 1993, M.. Jennings, *in litt.*, 1993, R. Stebbins, *in litt.*, 1993). Because of these combined threats, the California red-legged frog was listed as threatened on May 23, 1996 (61 **FR** 25813).

Environmental Baseline

The mechanisms for decline of the California red-legged frog are poorly understood. Although presence of California red-legged frogs is correlated with stillwater pools deeper than about 0.5 meter, riparian shrubbery, and emergent vegetation (Jennings and Hayes 1985), there are numerous locations in the historical range of the frog where these elements are well represented yet California red-legged frogs appear to be absent. The cause of local extirpations therefore does not appear to be restricted to absolute loss of aquatic habitat (Shaffer and Fisher 1996). The most likely causes of local extirpation are thought to be changes in faunal composition of aquatic ecosystems, *i.e.*, the introduction of non-native predators and competitors; and landscape-scale disturbances that disrupt California red-legged frog population processes, such as dispersal and colonization. Subtle environmental changes, such as the introduction of contaminants or changes in water temperature, may also play a role in local extirpations. These changes may also promote the spread of predators, competitors, parasites and diseases.

The processes described above are known to be heightened by urbanization. For instance, an increase in certain native and nonnative predators and competitors accompanies an increase in the local human population; disruption of dispersal likely results from an increase in barriers and sinks; and changes in hydroperiod, water temperature, and chemical composition of water bodies are readily traced to irrigation, gray water disposal, and urban runoff.

Effects of the Proposed Action

Activities that would be covered under this biological opinion are those that would not cause ecosystem-scale changes and, therefore, would likely not contribute to the decline of the California red-legged frog. Direct impacts to adults, sub-adults, tadpoles, and eggs of the California red-legged frog in the footprint of projects covered by this biological opinion would include injury or mortality from being crushed by earth moving equipment, construction debris, and worker foot traffic. These impacts would be reduced by minimizing and clearly demarcating the boundaries of the project areas and equipment access routes and locating staging areas outside of riparian areas or other water bodies. Avoiding work activities during the breeding

season would reduce adverse impacts, particularly to eggs and tadpoles. In addition, relocating individual California red-legged frogs may further minimize injury or mortality.

The capture and handling of California red-legged frogs to move them from a work area involves harassment of individuals. Mortality may occur as a result of improper handling, containment, or transport of individuals or from releasing them into unsuitable habitat. Improper handling, containment, or transport of individuals would be reduced or prevented by use of a Service-approved biologist. Removal of exotic species from a project site may result in lower mortality to resident California red-legged frogs, therefore minimizing the overall effects of the action.

Work activities, including noise and vibration, may harass California red-legged frogs by causing them to leave the work area. This disturbance may increase the potential for predation and desiccation. Minimizing the area disturbed by project activities and constraining activities to seasonal limits would reduce the potential for dispersal resulting from the action.

Tadpoles may be entrained by pump intakes, if such devices are used to dry out work areas. Screening pump intakes with wire with no greater than five millimeter (mm) mesh diameter should reduce the potential that tadpoles greater than eight weeks old would be caught in the inflow.

Some potential also exists for disturbance of habitat to cause the spread or establishment of non-native invasive species, such as giant reed (*Arundo donax*) or salt cedar (*Tamarix* spp.). Measures to prevent the spread or introduction of these species, such as avoiding areas with established native vegetation, restoring disturbed areas with native species, and post-project monitoring and control of exotic species, could reduce or eliminate this effect.

California red-legged frogs may sustain harassment and mortality from predators. If water that is impounded during or after work activities creates favorable habitat for non-native predators, such as bullfrogs, crayfish, and centrarchid fishes, California red-legged frogs may suffer abnormally high rates of predation. Additionally, any time California red-legged frogs are concentrated in a small area at unusually high densities, native predators such as herons, egrets, opossums, and raccoons may feed on them opportunistically. This impact can be minimized by avoiding creation of ponded water as a result of project actions unless approved by the Service and/or predator control.

Trash left during or after project activities could attract predators to work sites, which could, in turn, harass or prey on the listed species. For example, raccoons are attracted to trash and also prey opportunistically on the California red-legged frog. This potential impact can be reduced or avoided by careful control of waste products at all work sites.

Accidental spills of hazardous materials or careless fueling or oiling of vehicles or equipment could degrade water quality or upland habitat to a degree where the California red-legged frog is adversely affected or killed. The potential for this impact to occur can be reduced by thoroughly

informing workers of the importance of preventing hazardous materials from entering the environment, locating staging and fueling areas a minimum of 20 meters from riparian areas or other water bodies, and by having an effective spill response plan in place.

Work in live streams or in floodplains could cause unusually high levels of siltation downstream. This siltation could smother eggs of the California red-legged frog and alter the quality of the habitat to the extent that use by individuals of the species is precluded. Implementing best management practices and reducing the area to be disturbed to the minimum necessary should assist in reducing the amount of sediment that is washed downstream as a result of project activities.

Under the provisions of this consultation, some features of the site may be permanently or temporarily altered. For example, a bridge retrofitted for earthquake safety may have slightly larger footings after work is complete, or a small culvert might create a pool. Minor alterations such as these likely do not constitute a consequential loss of habitat.

The potential exists for uninformed workers to intentionally or unintentionally harass, injure, harm, or kill California red-legged frogs. The potential for this impact could be greatly reduced by informing workers of the presence and protected status of this species and the measures that are being implemented to protect it during project activities.

The ongoing effects of this consultation on the California red-legged frog would be monitored through annual reports provided by the Corps to the Service. These reports would enable the agencies to determine how much habitat has been temporarily and permanently affected by the covered actions and how many California red-legged frogs have been killed or injured.

Based on analysis of data for habitats impacted by the Nationwide Permit Program, the Service has determined that upland, wetland and riparian habitats suitable for the California red-legged frog will be lost. The Service found that for Fiscal years 1993, 1994, and 1995, 59.37, 60.34, and 56.94 acres of wetlands respectively, including riparian habitat, were lost for reporting and non-reporting nationwide permits combined within the Corps' Sacramento and San Francisco Districts. The range for reporting nationwide permits was from 11.34 acres to 44.89 acres for fiscal years 1993 to 1997. Acres impacted for non-reporting nationwides was from 43.75 acres to 45.6 acres for fiscal years 1992 to 1995. These habitat impacts represent total acres impacted by the Nationwide Permit Program, and are not necessarily all California red-legged frog habitat. The Service does not have similar data for habitats impacted by the Nationwide Permit Program in the Los Angeles District.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future

Federal actions unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Non-Federal activities expected to occur within the project area considered under this biological opinion include water treatment, potential release of toxic substances, water diversions, residential and commercial development activity, agricultural practices, intentional or unintentional release of native and non-native predators into water bodies, and grazing on private and municipal lands. The Service anticipates that the effects of these non-Federal activities would be addressed through section 10(a)(1)(B) permits. Habitat conservation plans that are required to obtain such permits would include measures that would minimize and mitigate the effects to the California red-legged frog resulting from the non-Federal activities. In addition, the persistence of the California red-legged frog in the affected area would not be diminished by the activities covered under this programmatic consultation. Therefore, the cumulative effects of the projects included in this biological opinion, considered together with other non-Federal actions, would not appreciably reduce the likelihood of survival and recovery of the California red-legged frog.

Conclusion

After reviewing the current status of the California red-legged frog, the environmental baseline for the area covered by this consultation, the effects of the proposed projects, and the cumulative effects, it is the Service's biological opinion that the proposed projects, as described in this consultation document, are not likely to jeopardize the continued existence of this species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The reasonable and prudent measures described below are nondiscretionary, and must be undertaken by the Corps so that they become binding conditions of any grant or permit issued to

the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the Corps (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

The Service anticipates the following forms of incidental take:

> Based on historical data about habitat impacts from the Nationwide Permit Program, the Service anticipates that up to 60 acres of wetland and riparian habitat and up to 60 acres of upland habitat, suitable for the California red-legged frog, may be permanently or temporarily taken annually as a result of implementing the actions described in the project description. In addition, the Service anticipates that all adults, juveniles, tadpoles, and eggs of California red-legged frogs associated with the loss of 60 acres of wetland and riparian habitat and 60 acres of upland habitat may be taken through mortality, harm, or harassment resulting from project-related activities. The quantification of take by harassment, harm, and mortality is difficult to ascertain because of the species' small size and aquatic habitat. These factors make it difficult to detect where California red-legged frogs, particularly tadpoles, are and if any have been affected by an action. For actions covered by this consultation, some harassment and mortality could be directly observed from those captured during translocation efforts. However, mortality from other sources would be difficult to observe.

The observed take may be lower than the actual take. However, with the implementation of the reasonable and prudent measures, the effects of the unobserved take would not change our analysis of effects of the actions covered by the biological opinion.

Effect of the Take

It is the opinion of the Service that the effects of the actions included under the auspices of this formal consultation are not likely to jeopardize the continued existence of the California red-legged frog.

Reasonable and Prudent Measures

The following reasonable and prudent measure is necessary and appropriate to minimize the impact of take on the California red-legged frog:

> Adverse effects to California red-legged frogs and their habitat shall be minimized to the extent possible.

Terms and Conditions

To be exempt from the prohibitions of section 9 of the Act, the Corps must ensure that the permittees comply with the following term and condition, which implements the reasonable and prudent measure described above.

> To implement the reasonable and prudent measure, the measures described in the "Minimization of Adverse Effects" section shall be fully implemented. These measures are hereby incorporated into this term and condition as requirements of proposed projects.

Disposition of Injured or Dead Specimens

Upon locating dead or injured California red-legged frogs, initial notification must be made in writing to the appropriate office of the Service's Division of Law Enforcement. Notification by both telephone and writing also must be made to the appropriate Fish and Wildlife Office:

U.S. Fish and Wildlife Service
Division of Law Enforcement
3310 El Camino Avenue, Suite 140
Sacramento, California 95821-6340

U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
3310 El Camino Avenue, Suite 130
Sacramento, California 95821-6340
(916) 979-2725

U.S. Fish and Wildlife Service
Division of Law Enforcement
1633 Bayshore Highway, Suite 248
Burlingame, California 94010

U.S. Fish and Wildlife Service
Division of Law Enforcement
370 Amapola Avenue, Suite 114
Torrance, California 90501

U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003
(805) 644-1766

Notification shall occur within three working days of finding the dead or injured animal. The report shall include the date, time, location of any carcass, a photograph, cause of death, if known, and any other pertinent information.

Care shall be taken in handling injured animals to prevent additional injury. Injured animals may be released to the wild after receipt of concurrence from the Service. Care shall be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Standard preservation methods shall be used. The remains of intact California red-legged frogs shall be placed with the California Academy of Sciences Herpetology Department [Contact: Jens Vindum, Collections Manager, California Academy of Sciences Herpetology Department, Golden Gate Park, San Francisco, California, 94118, (415) 750-7037].

REPORTING REQUIREMENTS

The Corps shall require each permittee who makes use of the provisions of this programmatic consultation to prepare a compliance certification to be filed with the Corps and the Service to certify, after completion of construction, that the action was completed in accordance with the permit conditions. The information contained in the compliance certification shall include:

1) the type(s) of action(s) that occurred

2) the number of acres affected and habitat type (e.g., upland, riparian.);

3) the linear feet of work;

4) how the site(s) was restored and a description of the area after the completion of the action;

5) which measures were employed to protect California red-legged frogs;

6) how the site(s) was restored or, if no restoration occurred the justification for not conducting this work; and,

7) a description of the area after the completion of the action

The Corps shall provide to the Service annually a listing of permits authorized under this biological opinion. Such a list shall provide the name of the permittee, Corps authorization number, and the location. This is information the Corps routinely tracks and can be provided either as a paper version or electronically. The Service and the Corps shall meet annually to review this information as well as information provided by permittees. The Corps may desire to develop a reporting format in coordination with the Service soon after issuance of this biological opinion, which can be provided to permittees.

Each compliance certification provided by the permittees shall contain maps as appropriate indicating the location of all actions. Each report shall have a table and photos keyed to the map as appropriate. The compliance certification shall also document the number of California red-legged frogs that were known to be taken, and the form of take (e.g., harassment by moving, mortality) during each project's activities. The Service recognizes that accurately quantifying the number of individuals that may have been taken may not be possible; in these cases, the reporting of all observations and relative numbers would provide useful information. The report shall also recommend modifications to future measures to enhance the protection of the California red-legged frog.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The recommendations provided here do not necessarily represent complete fulfillment of the agency's 7(a)(1) responsibilities for this species.

Coordinate with the Service to develop a conservation strategy for the California red-legged frog, including documenting past and present California red-legged frog localities, threats, and conservation opportunities.

2. Monitor the status of the California red-legged frog in areas of Corps jurisdiction to identify effects of urbanization on the resident California red-legged frog population.

3 The Corps should assist the Service in implementation of recovery actions identified by the Service during and after preparation of the recovery plan for the California red-legged frog.

4 The Corps, through its Federal projects, should develop and implement strategies for the conservation and recovery of the California red-legged frog.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the project described in this biological opinion. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law), and if (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the agency action is subsequently modified in a manner that causes an effect on listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, the Corps shall not issue authorizations under this biological opinion. If you have any questions regarding this opinion, please contact the appropriate field office staff member as indicated in Enclosure A.

Sincerely

Diane K. Noda
Field Supervisor
Ventura Fish and Wildlife Office

Wayne S. White
Field Supervisor
Sacramento Fish and Wildlife Office

Enclosure

cc FWS:PARD(ES), Portland, OR
FWS:HC and ES, Washington, D.C.
FWS:CFO, Carlsbad, CA (Attn.: K. Berg)
FWS:LE, Sacramento, CA (Attn.: Senior Resident Agent S. Pearson)
FWS:LE, Burlingame, CA (Attn.: Special Agent K. McCloud)
FWS:LE, Chico, CA (Attn.: Special Agent J. Mendoza)
FWS:LE, Clovis, CA (Attn.: Special Agent F. Kuncir)
FWS:LE, Torrance, CA (Attn.: Senior Resident Agent L. Farrington)
DOI:SOL, San Francisco, CA (Attn.: Solicitor R. Kohn Glazer)
EPA:Wetlands, San Francisco, CA
CDFG, Regions 1, 2, and 3
ESRP, Fresno, CA

Appendix B: USFWS Species List (2013)

LISTED SPECIES FOR HALF MOON BAY QUAD (429B):

Invertebrates

- Haliotes cracherodii
  - black abalone (E) (NMFS)

- Haliotes sorenseni
  - white abalone (E) (NMFS)

Fish

- Eucyclogobius newberryi
  - tidewater goby (E)

- Hypomesus transpacificus
  - delta smelt (T)

- Oncorhynchus kisutch
  - coho salmon - central CA coast (E) (NMFS)
  - Critical habitat, coho salmon - central CA coast (X) (NMFS)

- Oncorhynchus mykiss
  - Central California Coastal steelhead (T) (NMFS)
  - Central Valley steelhead (T) (NMFS)
  - Critical habitat, Central California coastal steelhead (X) (NMFS)

Amphibians

- Rana draytonii
  - California red-legged frog (T)
  - Critical habitat, California red-legged frog (X)

Reptiles

- Caretta caretta
  - loggerhead turtle (T) (NMFS)

- Chelonia mydas (incl. agassizi)
  - green turtle (T) (NMFS)

- Dermochelys coriacea
  - leatherback turtle (E) (NMFS)

- Lepidochelys olivacea
    - olive (=Pacific) ridley sea turtle (T) (NMFS)

- Thamnophis sirtalis tetrataenia
    - San Francisco garter snake (E)

Birds

- Brachyramphus marmoratus
    - marbled murrelet (T)

- Charadrius alexandrinus nivosus
    - Critical habitat, western snowy plover (X)
    - western snowy plover (T)

- Diomedea albatrus
    - short-tailed albatross (E)

- Pelecanus occidentalis californicus
    - California brown pelican (E)

- Sternula antillarum (=Sterna, =albifrons) browni
    - California least tern (E)

Mammals

- Arctocephalus townsendi
    - Guadalupe fur seal (T) (NMFS)

- Balaenoptera borealis
    - sei whale (E) (NMFS)

- Balaenoptera musculus
    - blue whale (E) (NMFS)

- Balaenoptera physalus
    - finback (=fin) whale (E) (NMFS)

- Enhydra lutris nereis
    - southern sea otter (T)

- Eubalaena (=Balaena) glacialis
    - right whale (E) (NMFS)

- Eumetopias jubatus
    - Steller (=northern) sea-lion (T) (NMFS)

- Physeter catodon (=macrocephalus)
    - sperm whale (E) (NMFS)

Key:

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- *Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

LISTED SPECIES FOR SAN MATEO COUNTY:

Invertebrates:

- Branchinecta lynchi
  - vernal pool fairy shrimp (T)

- Euphydryas editha bayensis
  - bay checkerspot butterfly (T)
  - Critical habitat, bay checkerspot butterfly (X)

- Haliotes cracherodii
  - black abalone (E) (NMFS)

- Haliotes sorenseni
  - white abalone (E) (NMFS)

- Icaricia icarioides missionensis
  - mission blue butterfly (E)

- Lepidurus packardi
  - vernal pool tadpole shrimp (E)

- Speyeria callippe callippe
  - callippe silverspot butterfly (E)

- Speyeria zerene myrtleae
  - Myrtle's silverspot butterfly (E)

Fish

- Acipenser medirostris
  - green sturgeon (T) (NMFS)

- Eucyclogobius newberryi
  - critical habitat, tidewater goby (X)
  - tidewater goby (E)

- Hypomesus transpacificus
  - delta smelt (T)

- Oncorhynchus kisutch
  - coho salmon - central CA coast (E) (NMFS)
  - Critical habitat, coho salmon - central CA coast (X) (NMFS)

- Oncorhynchus mykiss
    - Central California Coastal steelhead (T) (NMFS)
    - Central Valley steelhead (T) (NMFS)
    - Critical habitat, Central California coastal steelhead (X) (NMFS)

- Oncorhynchus tshawytscha
    - Central Valley spring-run chinook salmon (T) (NMFS)
    - winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Ambystoma californiense
    - California tiger salamander, central population (T)

- Rana draytonii
    - California red-legged frog (T)
    - Critical habitat, California red-legged frog (X)

Reptiles

- Caretta caretta
    - loggerhead turtle (T) (NMFS)

- Chelonia mydas (incl. agassizi)
    - green turtle (T) (NMFS)

- Dermochelys coriacea
    - leatherback turtle (E) (NMFS)

- Lepidochelys olivacea
    - olive (=Pacific) ridley sea turtle (T) (NMFS)

- Masticophis lateralis euryxanthus
    - Alameda whipsnake [=striped racer] (T)
    - Critical habitat, Alameda whipsnake (X)

- Thamnophis sirtalis tetrataenia
    - San Francisco garter snake (E)

Birds

- Brachyramphus marmoratus
    - Critical habitat, marbled murrelet (X)
    - marbled murrelet (T)

- Charadrius alexandrinus nivosus

    - Critical habitat, western snowy plover (X)
    - western snowy plover (T)

- Diomedea albatrus
    - short-tailed albatross (E)

- Pelecanus occidentalis californicus
    - California brown pelican (E)

- Rallus longirostris obsoletus
    - California clapper rail (E)

- Sternula antillarum (=Sterna, =albifrons) browni
    - California least tern (E)

Mammals

- Arctocephalus townsendi
    - Guadalupe fur seal (T) (NMFS)

- Balaenoptera borealis
    - sei whale (E) (NMFS)

- Balaenoptera musculus
    - blue whale (E) (NMFS)

- Balaenoptera physalus
    - finback (=fin) whale (E) (NMFS)

- Enhydra lutris nereis
    - southern sea otter (T)

- Eubalaena (=Balaena) glacialis
    - right whale (E) (NMFS)

- Eumetopias jubatus
    - Steller (=northern) sea-lion (T) (NMFS)

- Physeter catodon (=macrocephalus)
    - sperm whale (E) (NMFS)

- Reithrodontomys raviventris
    - salt marsh harvest mouse (E)

Plants

- Acanthomintha duttonii
    - San Mateo thornmint (E)

- Arctostaphylos hookeri ssp. ravenii
    - Presidio (=Raven's) manzanita (E)

- Chorizanthe robusta var. robusta
    - robust spineflower (E)

- Cirsium fontinale var. fontinale
    - fountain thistle (E)

- Cupressus abramsiana
    - Santa Cruz cypress (E)

- Eriophyllum latilobum
    - San Mateo woolly sunflower (E)

- Hesperolinon congestum
    - Marin dwarf-flax (=western flax) (T)

- Lasthenia conjugens
    - Contra Costa goldfields (E)

- Layia carnosa
    - beach layia (E)

- Lessingia germanorum
    - San Francisco lessingia (E)

- Pentachaeta bellidiflora
    - white-rayed pentachaeta (E)

- Potentilla hickmanii
    - Hickman's potentilla (=cinquefoil) (E)

- Suaeda californica
    - California sea blite (E)

- Trifolium amoenum
    - showy Indian clover (E)

Proposed Species

Plants

- Arctostaphylos Franciscana
    - Critical Habitat, Franciscan Manzanita (X)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
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- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or

injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).
Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.
- During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.
- Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals

on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 23, 2013.

Design Report for Channel Repairs, Corinda Los Trancos Creek, San Mateo County, California

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Prepared for:

Kevin Iler
Ox Mountain Landfill
12310 San Mateo Road
Half Moon Bay, California 94019-7112

Prepared by:

Questa Engineering Corporation
1220 Brickyard Cove Road
Suite 206
Pt. Richmond, California 94807
(510) 236-6114

February 2013

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FIGURES

TABLES

APPENDICES

INTRODUCTION

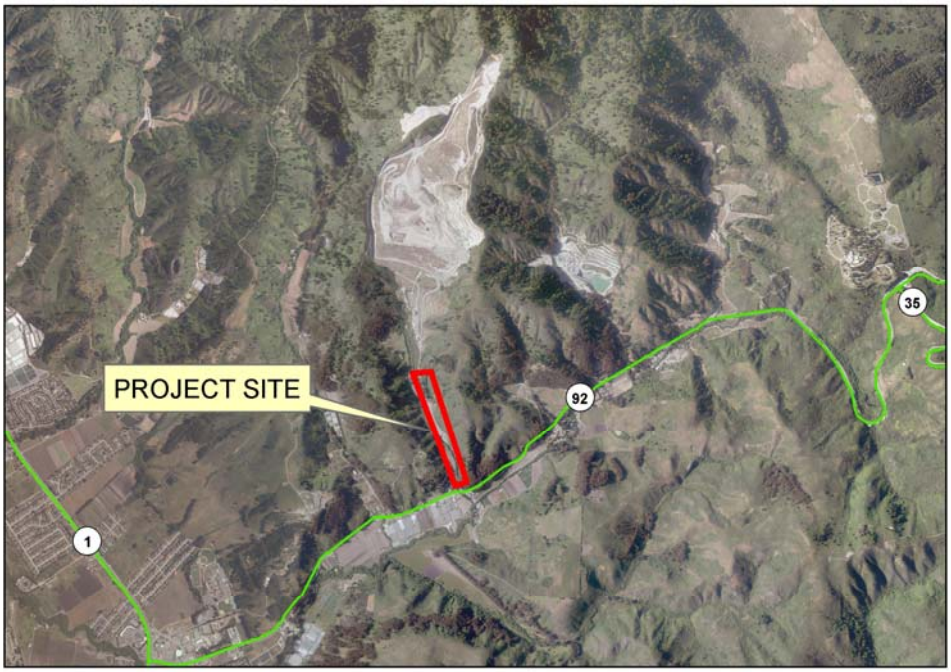
During the early winter of 2012/2013 large magnitude storms caused extensive damage to portions of the Corinda Los Trancos Creek channel and banks. Questa Engineering Corporation was retained to provide a repair strategy and implement it as quickly as possible before additional damage and/or flooding would occur. This report presents the results of Questa's investigation and analysis of the geomorphic, hydraulic, and biologic conditions to provide the basis for a channel repair design plan. Existing stream conditions were evaluated and channel stabilization treatments are proposed. The geomorphic analysis examined the existing fluvial geomorphology, channel geometry parameters, and overall drivers of channel stability. Hydraulic modeling provided estimated flow depths, velocities, and shear within the existing channel. A biological database search for any special status wildlife and plant species within the area was conducted.

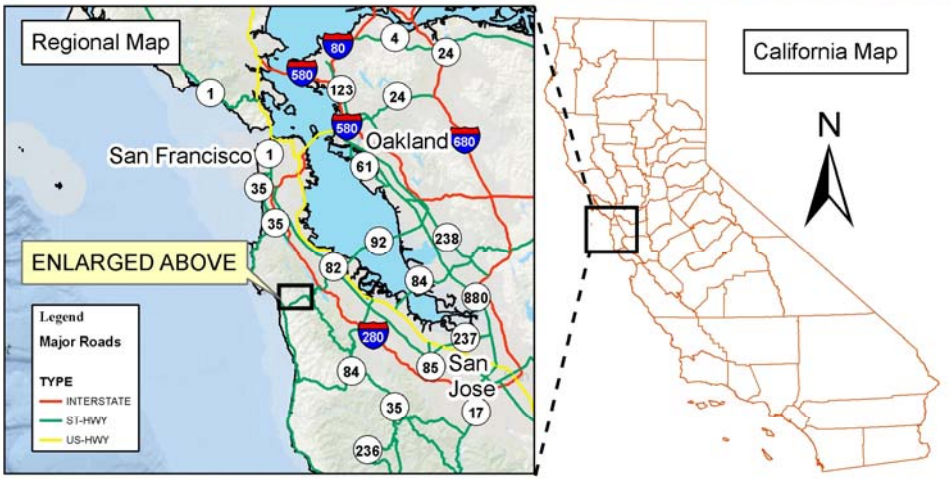
The purpose of these studies was to determine factors that are leading to the widespread channel instability and to develop a successful repair strategy. The report describes the constraints and realities of the project such as existing infrastructure and utility issues. Incorporating all the baseline information, the report discusses the objectives of the channel stabilization project and discusses the components of the proposed design plan.

SITE DESCRIPTION

Corinda Los Trancos (CLT) Creek is in the western portion of San Mateo County, located east of Half Moon Bay (**Figure 1**). The creek runs north and south draining the Ox Mountain Landfill before flowing under Highway 92 at a location 1.8 miles east of the intersection with Highway 1. The proposed repair reach extends approximately 1800 feet from Highway 92 upstream (north) and lies completely within unincorporated San Mateo County. The creek is bordered to the west by the Lemos Farm and to the east by the Ox Mountain Landfill road.

Segments of CLT have experienced significant recent bank erosion and channel downcutting. The site is located downstream from the Ox Mountain Landfill which has changed the hydrologic and geomorphic drivers of channel stability. Landfill activities have reduced infiltration rates and thereby increased peak discharges in CLT while also reducing bedload inputs due to the construction of a large sediment control pond. The combination of these effects has lead to channel degradation and failure of numerous creek banks throughout the project reach. Mature riparian vegetation is toppling and sliding into the creek, causing debris dams and further exacerbating the channel bank erosion. Due to the positioning of CLT, current bank failures threaten both the landfill access road and the Lemos Farm property. The project is divided into two reaches. The first reach is between the Landfill scale house and Highway 92. This reach is approximately 1,800 feet long. The second site is a tall vertical bank approximately 500 feet upstream of the scale house. Twenty five foot vertical banks have been created by a meander bend in the creek. The length of the second site is approximately 150 feet.





QUESTA ENGINEERING CORP.
Civil Environmental & Water Resources
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questa@questaec.com
P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807

Figure 1
Corinda Los Trancos Restoration
Vicinity Map

Drawn : JM
Reviewed :
Date: 1/31/2012
Job #: 1200183

Location: P:\2007\270211_American_Canyon_Kimberly_Trail\GIS

GEOMORPHIC ANALYSIS

Background and History

The geomorphology of CLT has been affected by a host of anthropogenic activities. Historically, road building and agricultural activities likely encroached on the riparian corridor narrowing the channel. More recently, the expansion of the Ox Mountain Landfill beginning in the early 1990s has lead to significant increases in storm flow runoff (discussed below) and reduced the sediment input to the channel. Bedload sediment input has been drastically reduced due to the construction of a large sediment control pond at the base of the landfill with dimensions of 150 feet wide, 400 feet long, and 15 feet deep. This pond effectively traps bedload size material interrupting the delivery of larger size sediment which leads to a lack of channel armoring and subsequent downcutting pressure.

Previous channel repair efforts have been implemented along the reach of CLT between the landfill and Highway 92. In 2002, Questa designed and oversaw channel stabilization work along 1,800 feet of CLT just downstream from the landfill. Work involved a series of willow planted rock drop structures within the creek and slope stabilization using biotechnical methods, including willow mattresses and alder planted coir logs. This work has functioned as designed over the past decade leading to channel stability and riparian re-growth through this reach.

Prior to this project, previous channel work was completed in the early 1990s immediately after the expansion of the landfill. Gabion baskets were installed in a series of grade control structures at select locations along the segment of CLT from the landfill scale house to the culvert beneath Highway 92. The gabion grade control structures provided vertical channel stability for twenty years. These structures have all failed over recent years leading to widespread channel degradation. The sand based sediment load of the creek slowly eroded the gabion wiring, the baskets broke open and the smaller rock content was lost to sediment transport. Some of the gabion bank protection is still evident and appears to be partially functional although the baskets are being undermined in most locations. In addition to the gabions, two concrete low water crossings were installed adjacent to the scale house. Currently, water is flowing under one of the structures and the second structure presents a 10’ drop with significant evidence of erosion around the outfall. Failure of this remaining grade control structure would lead to significant upstream erosion.

Existing Channel Conditions

The channel throughout most of the project reach is vegetated with willow, alder, and shrubs that provide bank stability as long as the bed elevation is not altered significantly. However, when the gabion structures failed, rapid channel incision throughout the proposed project reach occurred, generally ranging in depth from 1’ to 4’. The most recent channel incision is generally associated with stream reaches upstream from failed gabion grade control structures. In addition to the incision, there are numerous cases of active bank failures along CLT where mature riparian vegetation is falling into the creek

and causing debris jams, channel avulsion, and further exacerbation of the bank erosion and incision problems.

Existing erosion is generally focused in four zones: (1) 1000' reach from Highway 92 upstream; (2) 10' grade control adjacent to scale house; and (3) vertical right bank adjacent to Lemos tree farm. Existing conditions along CLT are described on **Sheet 2** of the 60% Design Plans in **Appendix B**.

Existing Channel Gradient

The channel slope is highly varied through the proposed repair reach. The average slope is 3.5% but reaches vary in slope between 2% and 5%.

Channel Bed Grain Size

The bed sediments in CLT are dominated by smaller sized silts, sand, and gravel with some cobble remnants from the failed gabion baskets. Given the relatively steep channel slope and high storm discharge volumes, the existing bed material is not adequate to provide stable bed armoring and the channel will likely continue to incise until additional grade control is provided.

HYDROLOGIC AND HYDRAULIC ANALYSIS

Design Hydrology

In preparation for the 2002 implementation project, Questa Engineering was contracted to examine watershed runoff dynamics. A detailed HEC-1 hydrologic model was compiled, and the watershed and the sediment pond were modeled under numerous rainfall scenarios. Analysis indicated that the landfill activities greatly increased storm runoff and that the sediment pond had minimal effects on attenuating flows during large storm events. This would be expected as the structure was designed to retain sediment not diminish the flows leaving the landfill. To analyze the hydrology, a series of storms were synthesized, varying from six to 24 hours duration, using NOAA statistical rainfall data.

Typically, peak flows of a particular storm event occur in the middle of the storm, in response to one or two intense rainfall bursts. The large size of the primary spillway on the sediment pond (84-inch diameter CMP) allows all of the peak flow to pass through the basin with very little detention. **Table 1** provides a comparison of estimated historic and current peak flow rates from CLT based on this analysis.

Table 1. **Results of Hydrologic Modeling**

Historic Flow (cfs)					***Current Flow (cfs)***			
Location	2-year	25-year	50-year	100-year	2-year	25-year	50-year	100-year
Sed Basin	96	255	324	373	188	610	730	808
Highway 92	176	465	588	678	294	795	945	1048

In summary, the current flows in CLT are nearly double the historic flows. The sediment basin effectively traps sediment but does not effectively mitigate peak flows for large storm events.

Hydraulic Analysis

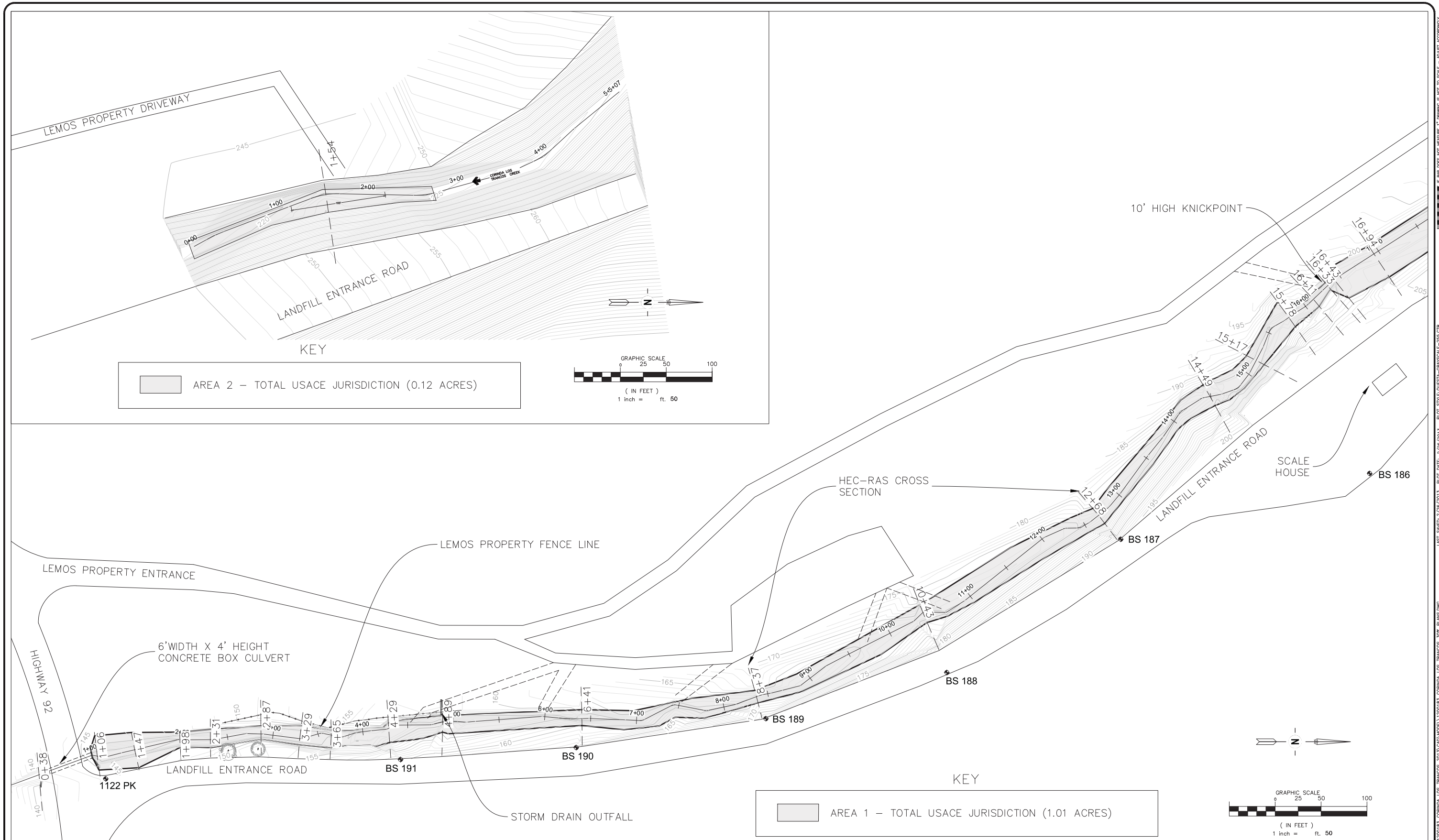
Using the existing flow data at Highway 92 listed in **Table 1**, hydraulic modeling was performed with the U.S. Army Corps of Engineers' (USACE) HEC-RAS program. The CLT channel geometry was imported into HEC-RAS based on ground survey provided to Questa by Ruggeri-Jensen-Azar (RJA) performed in January 2013. Detailed topographic survey covered the work areas and seven additional channel cross sections were surveyed throughout the study reach.

The site topography and channel profile are shown on **Sheets 2** & **5** in **Appendix B**. The HEC-RAS sections location and resulting USACE's jurisdiction map is shown in **Figure 2**. A Manning's "n" value of 0.07 was chosen for the entire project reach including the channel and floodplain. This represents the normal value for weedy deep pools and for floodplains with dense brush (HEC-RAS Hydraulic Reference Manual, 2010). A mixed flow regime was chosen for the analysis and critical depth upstream and downstream boundary conditions were used.

This model was used to determine existing conditions including flow depths and widths during flood events. In addition, shear forces within the channel were examined to guide proposed design treatments. The hydraulic model outputs for selected flows are attached to this report as **Appendix C.** The results for key variables are summarized below.

Channel Capacity - Overall, the CLT channel has capacity to carry the 100-year storm discharges with the exception of the 200' segment upstream from the Highway 92 crossing. This crossing is a 4' high by 6' width concrete box culvert with a capacity of approximately 300 cfs. Therefore, flooding occurs at Highway 92 during flow greater than the 2-year event, and the backwater effect of the undersized pipe also causes upstream flooding.

Channel Velocities and Shear Forces - Existing channel velocities and shear forces within the study reach are very high due to the steep gradient. **Table 2** summarizes the



IF BAR DOES NOT MEASURE 1" DRAWING IS NOT TO SCALE – ADJUST ACCORDINGLY

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CORINDA LOS TRANCOS CREEK

OX MOUNTAIN LANDFILL

QUESTA ENGINEERING CORP.
Civil Environmental & Water Resources
(510) 236-6114
FAX (510) 236-2423
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Sht:	Rev:	Date:	By:	Description:	App'd:

Design: JM/ST
Drawn: JM
Checked: ST
Appr'd:

CORINDA LOS TRANCOS STABILIZATION
FIGURE 2 - CORPS JURISDICTION

SAN MATEO COUNTY, CA

Size: D | Project: 1200183
Scale: AS NOTED
Date: 2/26/2013
Sheet: 2 OF 2

average channel velocity and shear based on the outputs from twenty-two HEC-RAS cross sections. High velocity and shear provide important design guidance because these values are linked directly to erosion potential of the channel. The model outputs are commensurate with the extensive scour and bank erosion that is evident in the field. Therefore, based on model outputs and field surveys, channel stabilization treatments must be able to withstand the forces that will be exerted by stream flows during storm events. Based on the calculated shear values, large riprap rock must be utilized for the majority of the project and the design must incorporate buried keyways to provide stability during large flows.

Table 2. Results of Hydraulic Modeling

Storm Event	*Total Discharge (cfs)*	*Average Channel Velocity (ft/s)*	*Average Channel Shear (lb/sq ft)*
2-year	294	6.6	6.7
25-year	795	7.8	7.0
50-year	945	8.3	7.4
100-year	1084	8.6	7.6

BIOLOGICAL RECONNAISSANCE

The full results of the biological database review are included in **Appendix A, Biological Assessment**. In summary,

- There is a single special status wildlife species with recorded occurrences within the project watershed, the California red-legged frog. Frogs are likely to occur in the project site because habitat conditions exist and they have been sighted in ponded areas approximately 2,500 feet upstream.
- In addition, there is potential for the San Francisco garter snake and San Francisco Dusky-footed woodrat to occur within the project area.
- No special-status plant species are considered likely to occur in the project vicinity.

PROJECT CONSTRAINTS AND DESIGN ISSUES

Utilities and Private Property

The project sites are located between a farm and main access road so there is little room to lay back stream banks or change the channel alignment. In addition, there are telephone poles and electrical lines at top of bank near the downstream extent of the site that have to be protected and made secure during construction.

Riparian Vegetation

There is extensive vegetation growing throughout the project reach. The proposed design must work around and incorporate existing vegetation into the project design wherever possible. This will help prevent unnecessary loss of riparian canopy and also facilitate bank stability provided by the roots of existing vegetation.

Channel Capacity

The proposed project should not increase flooding during storm events. Therefore, along the downstream portion of the project, the proposed grade control structures and bank stabilization treatments will have to be buried within the channel and banks in order to minimize reductions in channel capacity. Further upstream, grade control and bank stabilization structures will be built within the existing channel where hydraulic analyses shows that the 100-year flows will not exceed the channel capacity.

Channel Velocities and Erosion Potential

Due to the high channel velocity and shear forces, riprap rock grade control structures will be necessary to stabilize the channel. These structures should be keyed into the existing channel bed and banks as shown on the design plans. Relying solely on biotechnical repair techniques is not a good option for this project.

Adjacent Parcel Ownership

To implement the project, buy-in is required from the Lemos Farm to provide construction access and staging. Preliminary project plans have been discussed with the property owner and they are supportive. Please see attached support letter.

PROJECT DESCRIPTION

The goal of this project is to provide stable channel morphology with native riparian vegetation. The project is divided into two reaches. The first reach is the lower section that extends from the scale house to the Highway 92 culvert. This reach is where the majority of the erosion issues are occurring. The second reach is small area located 500 upstream of the scale house. This site is 20 foot vertical bank. The project proposes to stabilize the erosion occurring at each of these sites. This will improve aquatic habitat along the channel reach while reducing downstream sedimentation and loss of adjacent property. The project utilizes three primary repair components:

- Gradient Control – Provide long-term channel slope stability by installing riprap rock grade control structures sized to withstand the current hydrologic and geomorphic drivers.
- Bank Slope Protection – Treat existing bank failures with willow planted riprap rock slope protection.
- Erosion Control – Measures will be taken to prevent erosion and sedimentation during and post construction including dewatering, seeding, mulching, and riparian planting.

The details of these repairs are shown in the accompany project design plans attached as **Appendix B** of this report. Questa Engineering Corporation is requesting that the US Army Corps' district engineer waives the limits of 500 linear feet of bank stabilization, allowing this project to fall under NWP 13. This project covers 840 linear feet of bank as shown on the project plans. Considering that the existing stream channel is eroding rapidly, the project will significantly improve water quality and aquatic habitat in the vicinity and result in minimal adverse effects.

Gradient Control

The channel elevations through the project drop approximately 60 feet in 1,700 feet with an average slope of 3.5%. Under natural conditions, channels in this type of high gradient stream would be composed of bedrock, course cobble, or a series of vertical drops created with boulders and/or large wood. No bedrock or boulders are evident within the channel reach and existing cobble and wood provides only occasional grade control. Therefore, installation of rock weirs are proposed to create individual channel segments with lower slopes in the context of the overall project reach. Fish do not inhabit the project reach so there is no limit on vertical drop heights.

The proposed grade control configuration is detailed on **Sheets 3** & **5** in **Appendix B.**
It is essential that these structures be keyed deeply into the banks and channel so that flow does not "flank" or go under the structures. Engineered Stream Material (ESM) will also be placed behind the grade control structures to fill voids and prevent piping. Ten grade control structures are proposed:

- Installation of six buried grade control structures
- Installation of three 3' high chute grade control structures

- Installation of one large (10’ high) chute grade control structure

The grade control structures will increase the chances of developing a stable channel and associated floodplain morphology for the creek.

Bank Slope Protection

There are numerous occurrences of bank erosion throughout the project reach. These are often associated with areas of incision that will be treated with grade control installation. However, at many locations, additional treatments will be necessary to stabilize the bank. Approximately 840 linear feet of bank protection is proposed throughout the project reach as described in the project design plans in **Appendix B**. Riprap rock slope protection with planted willow will be utilized throughout the project site. In general, the rock will be placed with its base in a toe trench excavated 3’ below the channel invert. In many locations, the rock armoring will be installed with a slope of 1.5 (horizontal) to 1 (vertical) due to channel capacity and top of bank constraints. Where no constraints exist, 2:1 slopes will be used. Riprap rock slope protection heights will vary from 4’ to 8’ as shown in the design plans.

Questa analyzed the potential for “softer” bio-technical bank stabilization approach integrating vegetation, and biodegradable products such willow structures, fiber blankets, and coir blocks. However, **Table 3** demonstrates the limitations of biotechnical approaches considering CLT flow conditions with 6.7 lb/sq ft of shear force in the 2-year storm event.

Table 3. Shear Tolerance of Bank Slope Protection*

Treatment Approach	Directly after Installation		After three to four growing seasons	
	(N/m^2)	(lb/ft^2)	(N/m^2)	(lb/ft^2)
Turf /Grass	10	0.2	100	2.1
Reed Plantings	5	0.1	30	0.6
Reed Rolls, biologs	30	0.6	60	1.3
Live fascine	60	1.3	80	1.7
Willow brush layer	20	0.4	140	2.9
Willow mat	50	1.0	300	6.3
Hard wood plantings	20	0.4	120	2.5
Branch packing, brush mattress	100	2.1	300	6.3
Small rock revetment with live stakes	200	4.2	300	6.3

***H.M. Schiechtl and R.Stern. 1997. Water Bioengineering Techniques for Watercourse Bank and Shoreline Protection. Blackwell Science Ltd.**

Erosion Control

Grade control and bank protection will help to prevent the main drivers of erosion. However, additional measures will be needed to prevent erosion during and post-construction. First, during project implementation a dewatering and stockpile management plan will be necessary to insure that no sedimentation or erosion occurs.

Following installation of the willow planted rock channel and bank armoring, it will be critical to grade all slopes back to a minimum of 1.5:1, or 2:1 where possible. Bank slope geometries are described on **Sheet 7 to 9** in **Appendix B**. The bank slope above the rock armoring and other disturbed areas will be seeded with native grasses and shrubs as described in the Planting Pallet on **Sheet 11**. Following seeding, biodegradable erosion control blanket will be installed on top of all exposed slopes that drain directly into the channel and straw mulch will be used to cover other disturbed areas. Bank slope planting will be completed by cutting holes within the blanket and installing appropriate tree and shrub species per **Sheet 11**. Existing storm drainage outfalls will be retrofitted with appropriate energy dissipation aprons.

PROPOSED PROJECT SCHEDULE AND IMPACTS

Due to the current unstable conditions of the channel and banks and the high potential for further erosion and loss of property, work is expected to begin in August 2013 and will proceed for approximately three months.

Overall, the project will result in placement of material within the USACE's jurisdiction. **Tables 4** and **5** summarize the volume and type of riprap to be utilized for this project as well as the surface area to be impacted during construction.

Table 4. Material Utilized for Channel Repair

Project Feature	Type of Material	Volume Discharged (cubic yards)
Grade Control Structure (within USACE jurisdiction)	1/2 to 2 ton riprap	220
	ESM*	40
Bank Armoring (within USACE jurisdiction)	1/2 to 2 ton riprap	340
	ESM*	40
Channel Armoring	ESM*	60
Rebuild Bank Slopes at 2:1	Soil	200
Additional Armoring (outside of USACE jurisdiction)	1/2 to 2 ton riprap	110
Total		1010

***Engineered Stream Material (See design plans Sheet 11)**

Table 5. Project Impacts within USACE Jurisdiction (Sites 1 and 2)

Project Feature	Surface Area Filled/Impacted (sq ft)	Surface Area Filled/Impacted (acres)	Linear Length of Feature (ft)
Grade Control Structure	2,050	0.05	140
Bank Armoring	4,450	0.10	700
Temporary Access	3,083	0.07	-

PROPOSED AVOIDANCE AND MINIMIZATION MEASURES

The project will stabilize a highly erosive channel and thereby enhance biological resources and water quality within the USACE and RWQCB jurisdiction. Thus, offsite compensatory mitigation measures should not be a requirement for this project. All avoidance and minimization measures will be made part of the project's construction

documents and contractor work requirements. The project will comply with all applicable laws and regulations in order to avoid and/or minimize impacts to waters and aquatic habitat. In addition, the specific measures described below will be implemented to further minimize impacts.

1. Biological

Red legged frogs are likely to occur on the site. The project applicant will conduct the following mitigations:

- Each construction area will be surrounded by herpetological exclusionary fencing one week prior to the start of construction.

- Preconstruction surveys for the Red legged frogs will be completed no less than five days prior to the start of construction and after exclusionary fencings has been erected. Any frogs found within the construction area will be relocated.

- A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area.

- All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.

- Construction work will commence after nesting bird season ends on August 1.

2. Contractor Education

Contractor employees shall be educated and trained to be aware of the riparian environment and wildlife and plants with which they are working, and to take suitable precautions for the protection of water quality. Contractor education will help ensure that all employees: (i) know the nature of the sensitive resources that are present and must be protected; (ii) understand all permit conditions, actions and activities that are prohibited; and (iii) utilize Best Management Practices.

3. Dewatering, Erosion Control, and Stormwater Management

A Dewatering Plan, Stormwater Management Plan, and Erosion Control Plan will be prepared to ensure protection of water quality and to meet all project-specific NPDES requirements. The Plans would include measures to protect water quality and sensitive resource during all phases of work, including mobilization, clearing and grading, riprap rock placement, restoration planting, and post construction maintenance and monitoring. The Plans shall be prepared by a Qualified Stormwater Designer (QSD), who would also be responsible for water quality monitoring and storm event sampling and inspections, and implemented by a Qualified Stormwater Practitioner (QSP). General best management practices to be included in the project during construction include: coffer dams, sump pump, silt fences, construction entrances, straw wattles, erosion control seeding and revegetation. Additional components that will reduce erosion potential and are incorporated into the project design and construction documents include:

- Surface disturbance of soil and vegetation shall be minimized; existing access and maintenance roads shall be used wherever feasible.
- Any stockpiled soil shall be placed, sloped, and covered in the event of rain so that it would not be subject to accelerated erosion.
- Graded areas should be covered as soon as possible with seeding, mulching, erosion control materials, or other effective methods.
- Delineate clearing limits, easements, setbacks, sensitive areas, vegetation, and drainage courses by marking them in the field.
- If rainfall occurs during construction, use sediment controls and filtration to remove sediment from water collected on-site.

4. Pollution Prevention

The Contractor shall prepare and implement a Spill Control and Countermeasures Plan that includes protocols to prevent spills and exposure of aquatic wildlife and sensitive resources to contaminants. The plan shall include use of a containment boom to prevent spread of any toxic materials or other debris that may be released into CLT waters during construction.

5. Planting Plan

A Planting Plan that compensates for the disturbance to all sensitive habitats and riparian areas, and that specifies plant materials and plant establishment techniques for enhancement areas, and stabilizes disturbed areas with a native plant cover. **Sheet 11** of the enclosed plan set shows the planting plan for the project. We are proposing to replant native riparian species such as redwood, red alder, arroyo willow, and California Buckeye. A total of 423 trees and shrubs will be planted throughout the project reaches.

6. Use of Newer Construction Equipment

The construction contractors shall be required to use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 or higher exhaust emission limits for equipment over 50 horsepower. Tier 3 engines between 50 and 750 horsepower have been available since the 2008 model year. A list of construction equipment by type and model year shall be maintained by the construction contractor onsite. The construction contractor shall ensure that all construction equipment is properly serviced and maintained in designated staging areas so that operational emissions are reduced to the manufacturer's standards. The construction contractor shall limit nonessential idling of construction equipment to no more than five consecutive minutes.

7. Control of Fugitive Dust

The Proposed Project shall comply with BAAQMD Basic Control Measures for reducing construction emissions of fugitive dust:

- All exposed surfaces (e.g., staging areas, soil piles, graded areas, and unpaved access roads) shall be watered as necessary to prevent dust.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints.

8. Monitoring Reports

Monitoring reports shall be prepared as required by regulatory agencies. The report(s) shall document:

- Results of monitoring activities.
- Any remedial or management measures needed or conducted.

Recommendations for future actions, such as re-planting and re-seeding, and invasive plant control measures.

Appendix C
HYDRAULIC MODEL OUTPUT

HEC-RAS Plan: Plan 01 River: CLT Reach: CLT

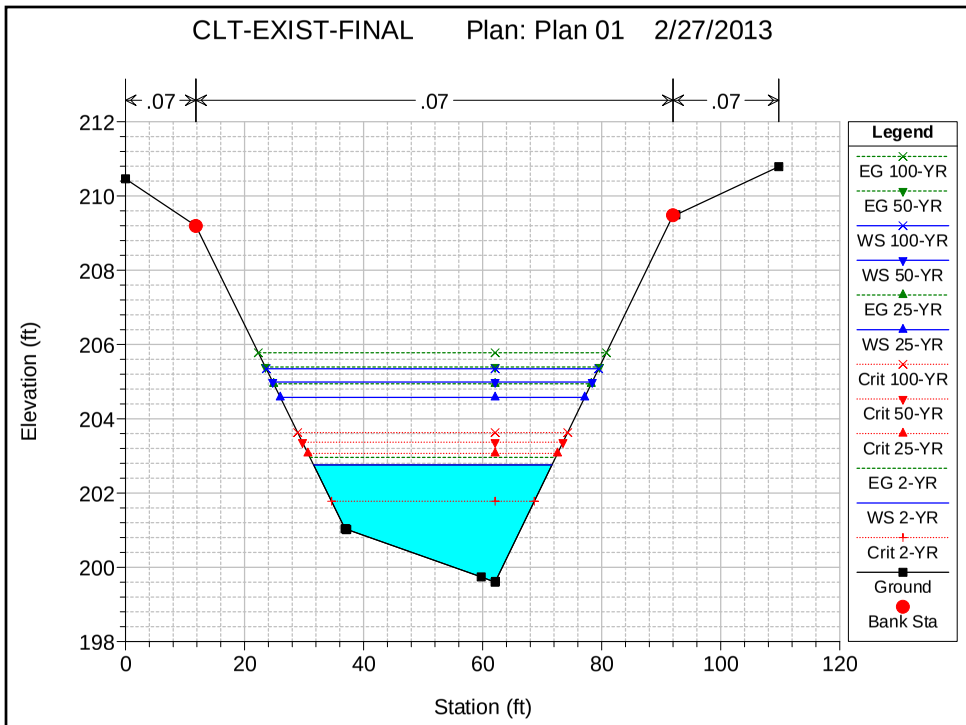
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(lb/sq ft)	(ft/s)	(sq ft)	(ft)	
CLT	1900.47	2-YR	294.00	199.60	202.76	201.78	202.96	0.011747	1.45	3.63	81.00	40.05	0.45
CLT	1900.47	25-YR	795.00	199.60	204.58	203.07	204.94	0.011437	2.23	4.85	164.01	51.16	0.48
CLT	1900.47	50-YR	945.00	199.60	204.99	203.37	205.39	0.011410	2.40	5.09	185.68	53.68	0.48
CLT	1900.47	100-YR	1084.00	199.60	205.35	203.63	205.78	0.011372	2.53	5.29	205.11	55.84	0.49
CLT	1694.2	2-YR	294.00	196.02	199.79		200.05	0.017181	1.91	4.09	71.84	38.70	0.53
CLT	1694.2	25-YR	795.00	196.02	201.19		201.77	0.021391	3.67	6.09	130.53	45.26	0.63
CLT	1694.2	50-YR	945.00	196.02	201.51		202.17	0.022250	4.10	6.52	145.04	46.74	0.65
CLT	1694.2	100-YR	1084.00	196.02	201.75		202.50	0.023257	4.54	6.92	156.63	48.01	0.67
CLT	1642.57	2-YR	294.00	195.68	197.81	197.81	198.44	0.069581	5.27	6.37	46.15	37.60	1.01
CLT	1642.57	25-YR	795.00	195.68	199.02	199.02	200.02	0.057801	7.12	8.03	99.03	49.50	1.00
CLT	1642.57	50-YR	945.00	195.68	199.29	199.29	200.38	0.057139	7.60	8.40	112.53	52.11	1.01
CLT	1642.57	100-YR	1084.00	195.68	199.54	199.54	200.69	0.055330	7.83	8.62	125.79	54.69	1.00
CLT	1632.88	2-YR	294.00	186.57	189.27	191.08	196.28	0.646694	56.07	21.25	13.84	7.80	2.81
CLT	1632.88	25-YR	795.00	186.57	191.80	194.36	198.38	0.301310	44.19	20.59	38.61	11.82	2.01
CLT	1632.88	50-YR	945.00	186.57	192.44	194.83	198.83	0.258924	41.58	20.28	46.60	12.90	1.88
CLT	1632.88	100-YR	1084.00	186.57	193.01	195.17	199.22	0.228405	39.45	19.99	54.22	13.85	1.78
CLT	1611.43	2-YR	294.00	185.84	190.65	189.35	191.14	0.019037	3.16	5.63	52.26	15.26	0.54
CLT	1611.43	25-YR	795.00	185.84	191.13	191.67	193.88	0.095780	17.22	13.30	59.78	15.75	1.20
CLT	1611.43	50-YR	945.00	185.84	191.63	192.22	194.65	0.095763	18.49	13.94	67.77	16.25	1.20
CLT	1611.43	100-YR	1084.00	185.84	192.08	192.68	195.31	0.094803	19.39	14.42	75.19	16.70	1.20
CLT	1578.08	2-YR	294.00	185.53	190.12	189.33	190.44	0.019773	2.30	4.52	65.05	32.59	0.56
CLT	1578.08	25-YR	795.00	185.53	192.00	190.82	192.53	0.015347	3.17	5.84	138.31	43.43	0.55
CLT	1578.08	50-YR	945.00	185.53	192.44	191.14	193.02	0.014467	3.36	6.13	157.84	45.23	0.54
CLT	1578.08	100-YR	1084.00	185.53	192.82	191.41	193.44	0.013853	3.53	6.38	175.35	46.79	0.54
CLT	1516.97	2-YR	294.00	184.36	187.37	187.37	188.37	0.064521	7.29	8.01	36.71	18.77	1.01
CLT	1516.97	25-YR	795.00	184.36	189.29	189.29	190.84	0.052620	9.68	10.01	80.16	26.42	0.99
CLT	1516.97	50-YR	945.00	184.36	189.72	189.72	191.40	0.051007	10.21	10.42	91.88	28.12	0.99
CLT	1516.97	100-YR	1084.00	184.36	190.08	190.08	191.87	0.050152	10.70	10.79	102.20	29.53	0.99
CLT	1449.15	2-YR	294.00	181.55	185.32	184.37	185.69	0.018234	2.54	4.90	60.03	25.28	0.56
CLT	1449.15	25-YR	795.00	181.55	187.25	186.17	187.95	0.020420	4.20	6.71	119.25	36.15	0.63
CLT	1449.15	50-YR	945.00	181.55	187.66	186.57	188.44	0.020720	4.59	7.11	134.50	38.82	0.65
CLT	1449.15	100-YR	1084.00	181.55	187.94	186.90	188.82	0.021287	5.07	7.56	145.68	40.01	0.66
CLT	1268.28	2-YR	294.00	175.69	179.16	179.16	180.19	0.058402	7.32	8.17	36.60	18.94	0.97
CLT	1268.28	25-YR	795.00	175.69	181.13	181.13	182.59	0.045106	9.34	10.03	85.94	31.02	0.93
CLT	1268.28	50-YR	945.00	175.69	181.52	181.52	183.11	0.043500	9.98	10.54	98.42	33.13	0.93
CLT	1268.28	100-YR	1084.00	175.69	181.89	181.89	183.55	0.040882	10.24	10.84	111.10	35.15	0.91

HEC-RAS Plan: Plan 01 River: CLT Reach: CLT (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(lb/sq ft)	(ft/s)	(sq ft)	(ft)	
CLT	1042.83	2-YR	294.00	167.59	171.96	170.92	172.39	0.017080	2.82	5.31	56.15	20.83	0.55
CLT	1042.83	25-YR	795.00	167.59	174.28	173.07	174.92	0.016308	3.81	6.53	129.14	41.85	0.58
CLT	1042.83	50-YR	945.00	167.59	174.75	173.47	175.43	0.015268	3.99	6.81	149.24	43.26	0.57
CLT	1042.83	100-YR	1084.00	167.59	175.04	173.83	175.81	0.015869	4.42	7.25	162.04	44.13	0.59
CLT	837.26	2-YR	294.00	160.22	165.47		166.47	0.056898	7.09	8.03	36.62	14.27	0.88
CLT	837.26	25-YR	795.00	160.22	167.79	167.64	169.37	0.050505	9.81	10.16	80.29	24.06	0.91
CLT	837.26	50-YR	945.00	160.22	168.16	168.14	169.97	0.053935	11.11	10.93	89.40	25.84	0.95
CLT	837.26	100-YR	1084.00	160.22	168.64	168.64	170.47	0.047498	10.94	11.05	103.89	34.24	0.91
CLT	640.53	2-YR	294.00	153.52	159.99		160.49	0.018155	3.18	5.69	53.87	19.29	0.47
CLT	640.53	25-YR	795.00	153.52	162.05	161.55	162.84	0.022065	5.59	8.02	128.04	52.39	0.55
CLT	640.53	50-YR	945.00	153.52	162.43	161.95	163.24	0.021894	5.86	8.29	148.87	56.04	0.55
CLT	640.53	100-YR	1084.00	153.52	162.74	162.35	163.57	0.021576	6.03	8.47	166.52	56.96	0.55
CLT	488.56	2-YR	294.00	149.57	154.46	154.46	155.53	0.072175	7.94	8.32	35.34	16.66	1.01
CLT	488.56	25-YR	795.00	149.57	156.50	156.50	157.86	0.052100	8.82	9.42	87.00	33.92	0.94
CLT	488.56	50-YR	945.00	149.57	156.87	156.87	158.34	0.050493	9.38	9.87	99.81	35.45	0.94
CLT	488.56	100-YR	1084.00	149.57	157.17	157.17	158.75	0.049018	9.88	10.27	110.82	36.66	0.94
CLT	428.58	2-YR	294.00	147.07	149.87	149.48	150.49	0.036907	4.46	6.34	46.40	22.20	0.77
CLT	428.58	25-YR	795.00	147.07	152.54	151.21	153.36	0.016723	4.56	7.34	112.62	27.26	0.59
CLT	428.58	50-YR	945.00	147.07	153.07	151.63	153.99	0.016388	4.97	7.79	127.24	28.23	0.60
CLT	428.58	100-YR	1084.00	147.07	153.53	152.02	154.53	0.016091	5.30	8.16	140.41	29.08	0.60
CLT	364.65	2-YR	294.00	144.91	148.35		148.83	0.018517	3.11	5.59	54.13	19.17	0.56
CLT	364.65	25-YR	795.00	144.91	151.82		152.44	0.011185	3.42	6.48	130.08	24.64	0.47
CLT	364.65	50-YR	945.00	144.91	152.30		153.03	0.012263	4.00	7.08	142.05	25.42	0.49
CLT	364.65	100-YR	1084.00	144.91	152.73		153.57	0.012803	4.46	7.56	153.30	26.38	0.51
CLT	329.36	2-YR	294.00	143.73	148.00		148.33	0.009505	2.06	4.75	66.48	21.24	0.44
CLT	329.36	25-YR	795.00	143.73	151.64		152.12	0.005810	2.52	5.89	156.88	28.87	0.38
CLT	329.36	50-YR	945.00	143.73	152.09		152.68	0.006626	3.05	6.55	170.37	31.96	0.41
CLT	329.36	100-YR	1084.00	143.73	152.50		153.19	0.007283	3.53	7.11	184.73	40.11	0.44
CLT	286.85	2-YR	294.00	142.10	147.28		147.77	0.018118	3.12	5.62	52.27	13.67	0.51
CLT	286.85	25-YR	795.00	142.10	151.06		151.74	0.013128	3.80	6.76	125.26	27.16	0.46
CLT	286.85	50-YR	945.00	142.10	151.28		152.21	0.017318	5.17	7.93	134.36	46.45	0.53
CLT	286.85	100-YR	1084.00	142.10	151.86		152.73	0.015317	4.96	7.87	161.95	48.36	0.51
CLT	231.15	2-YR	294.00	140.80	146.85		147.13	0.006624	1.70	4.44	72.29	19.34	0.35
CLT	231.15	25-YR	795.00	140.80	150.99		151.28	0.003595	1.69	4.89	210.56	41.35	0.29
CLT	231.15	50-YR	945.00	140.80	151.24		151.60	0.004468	2.16	5.55	220.66	41.35	0.32
CLT	231.15	100-YR	1084.00	140.80	151.78		152.17	0.004503	2.30	5.78	242.98	41.35	0.32

HEC-RAS Plan: Plan 01 River: CLT Reach: CLT (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Shear Chan	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(lb/sq ft)	(ft/s)	(sq ft)	(ft)	
CLT	197.86	2-YR	294.00	140.01	146.62		146.91	0.006803	1.67	4.37	70.57	15.56	0.33
CLT	197.86	25-YR	795.00	140.01	150.79		151.14	0.004606	1.99	5.22	186.25	31.00	0.30
CLT	197.86	50-YR	945.00	140.01	150.95		151.42	0.006034	2.65	6.05	191.39	31.00	0.34
CLT	197.86	100-YR	1084.00	140.01	151.46		151.98	0.006377	2.94	6.43	206.96	31.00	0.35
CLT	147.42	2-YR	294.00	138.83	146.52		146.67	0.002637	0.89	3.35	112.74	41.32	0.22
CLT	147.42	25-YR	795.00	138.83	150.80		150.94	0.001631	0.88	3.61	289.87	41.32	0.19
CLT	147.42	50-YR	945.00	138.83	150.98		151.17	0.002150	1.18	4.19	296.99	41.32	0.22
CLT	147.42	100-YR	1084.00	138.83	151.49		151.70	0.002325	1.33	4.49	318.06	41.32	0.23
CLT	105.57	2-YR	294.00	138.00	146.47	141.41	146.57	0.001582	0.55	2.66	134.36	37.00	0.17
CLT	105.57	25-YR	795.00	138.00	150.74	144.05	150.88	0.001432	0.79	3.42	292.43	37.00	0.18
CLT	105.57	50-YR	945.00	138.00	150.89	144.65	151.08	0.001918	1.07	3.99	298.00	37.00	0.20
CLT	105.57	100-YR	1084.00	138.00	151.39	145.95	151.61	0.002129	1.23	4.32	316.40	37.00	0.22
CLT	50		Culvert										
CLT	38.26	2-YR	294.00	135.57	137.88	138.73	140.57	0.218607	20.89	13.18	22.30	13.14	1.78
CLT	38.26	25-YR	795.00	135.57	141.52	141.52	142.55	0.029640	6.39	8.35	109.95	63.29	0.74
CLT	38.26	50-YR	945.00	135.57	141.85	141.85	142.90	0.028631	6.68	8.65	130.83	63.29	0.74
CLT	38.26	100-YR	1084.00	135.57	142.09	142.09	143.20	0.029099	7.16	9.04	145.67	63.29	0.75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Elevation (ft)
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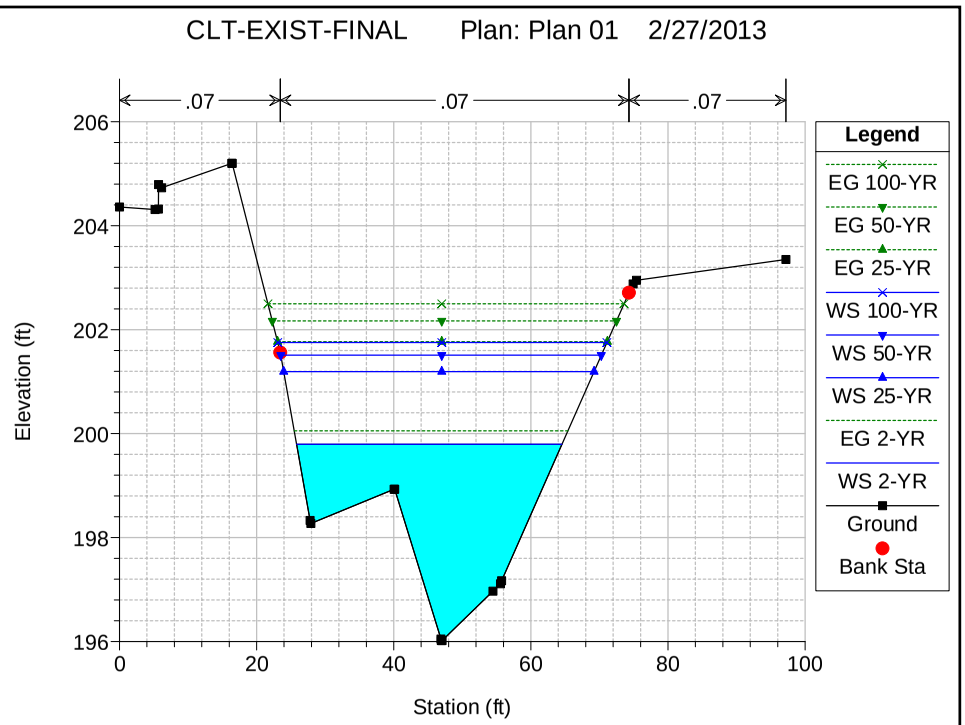
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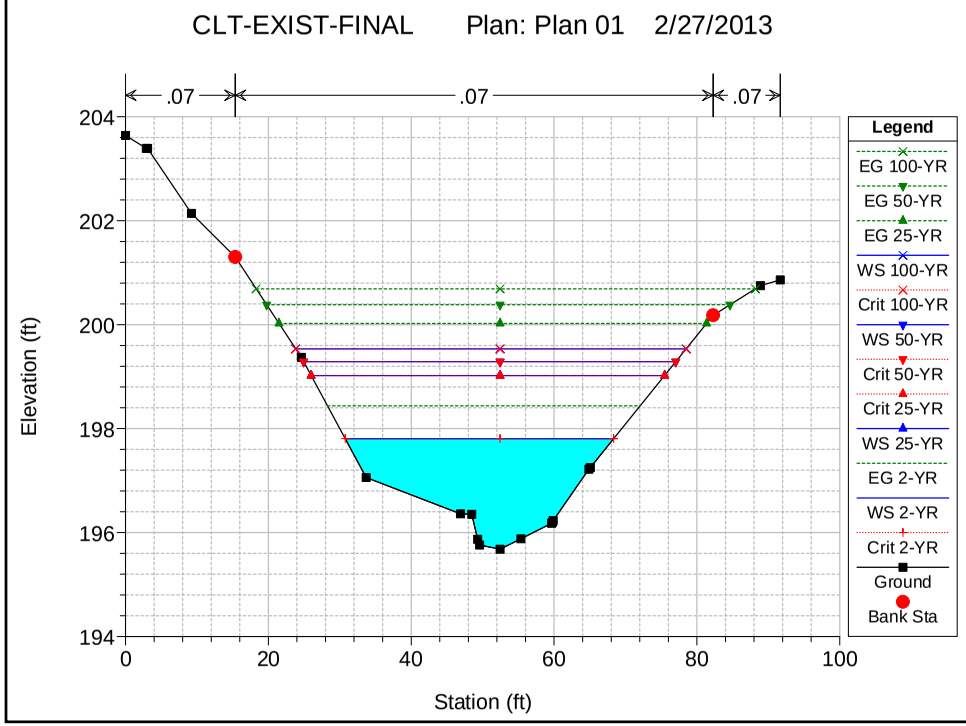
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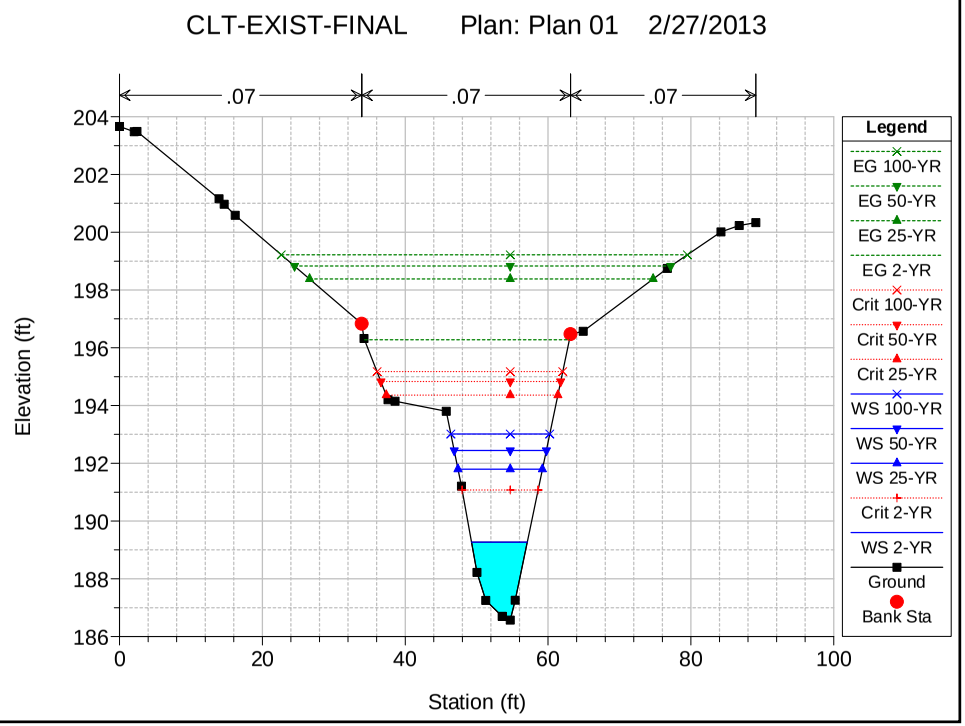
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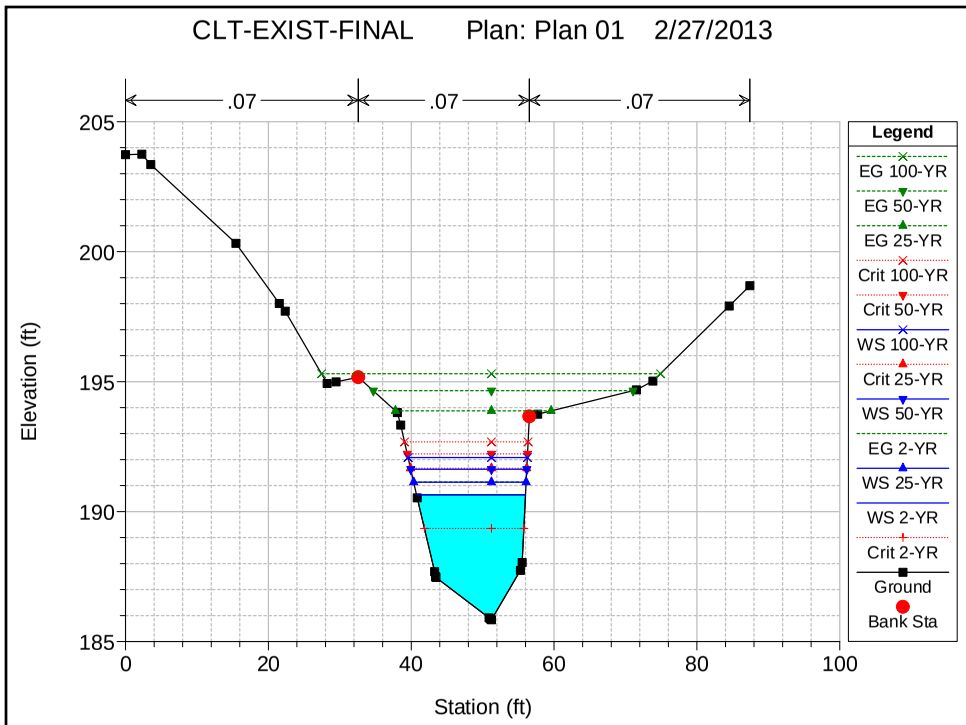
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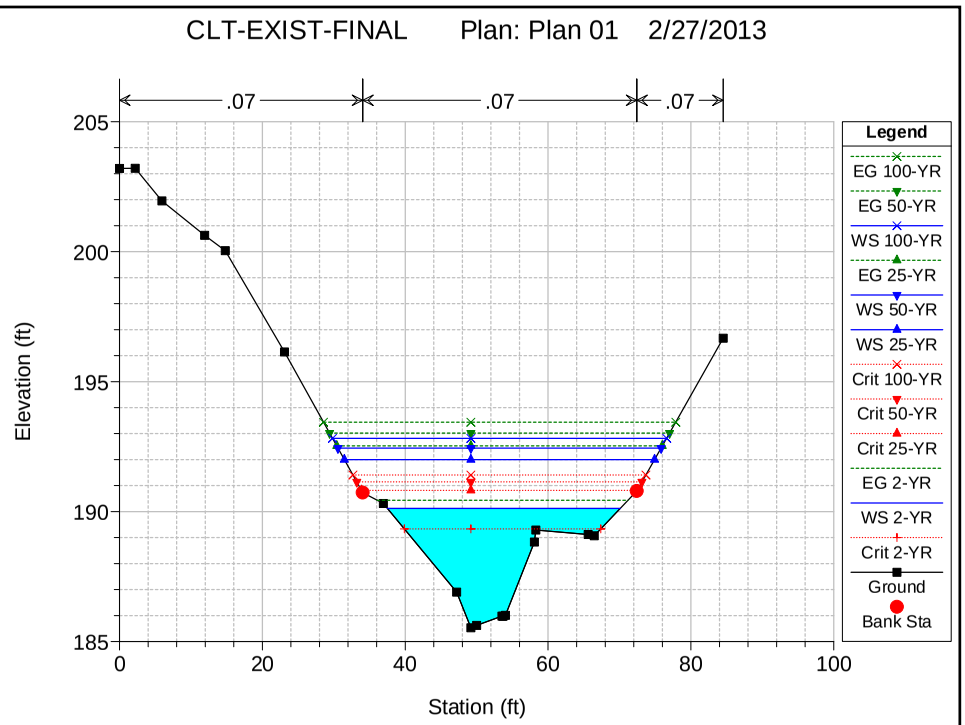
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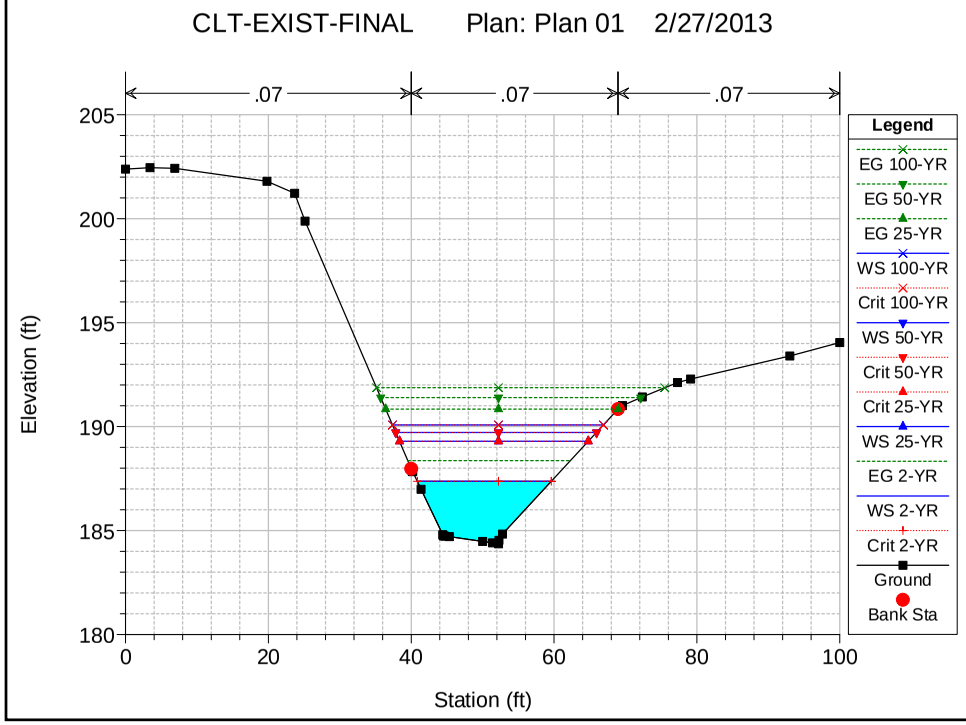
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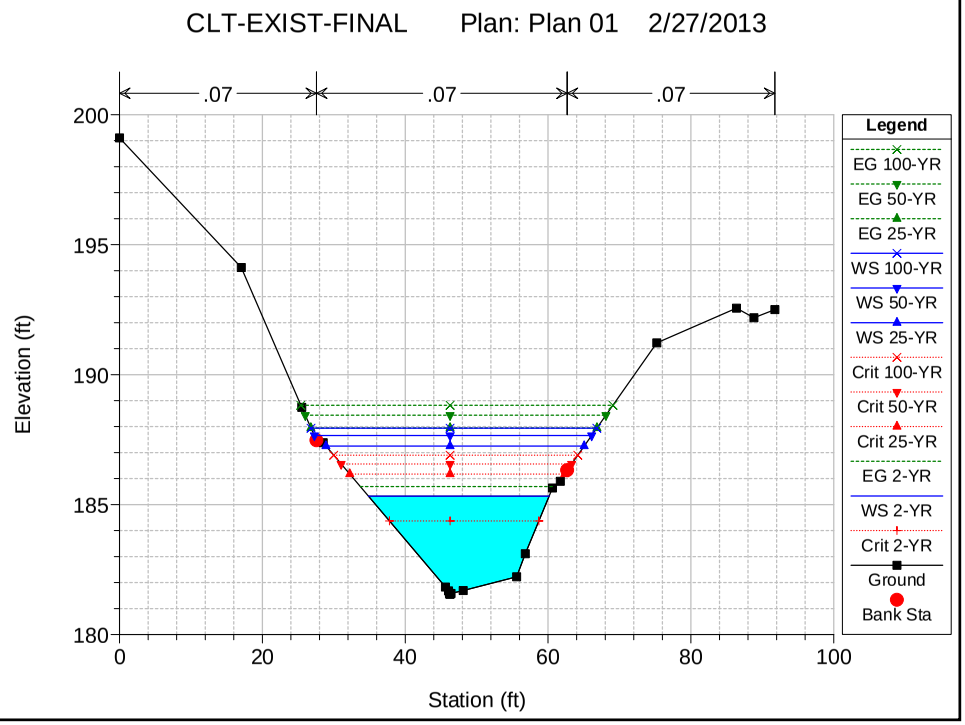
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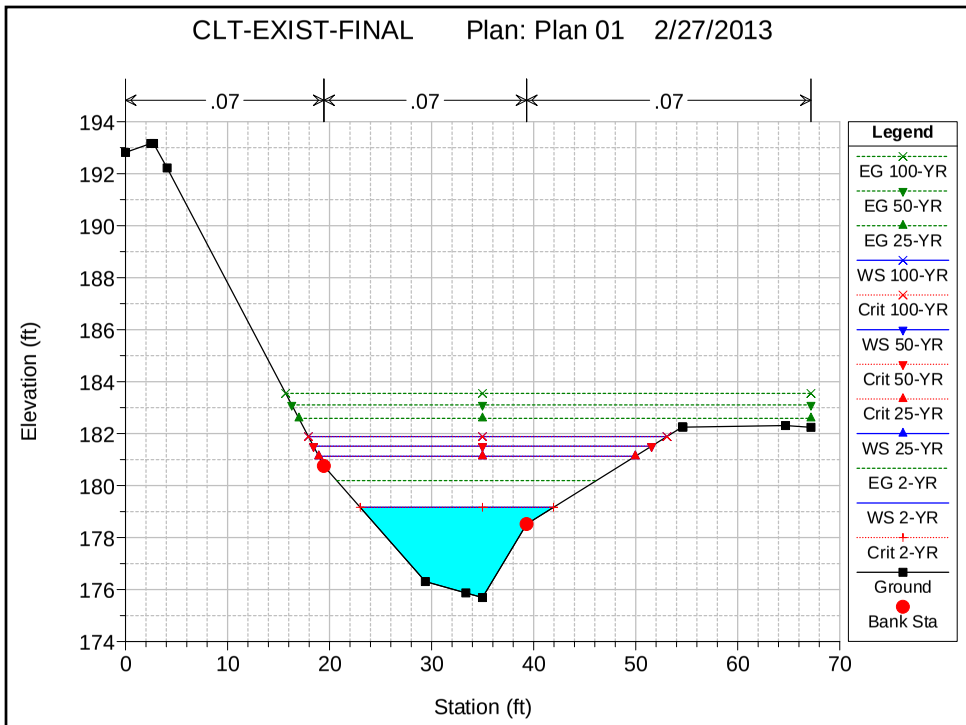
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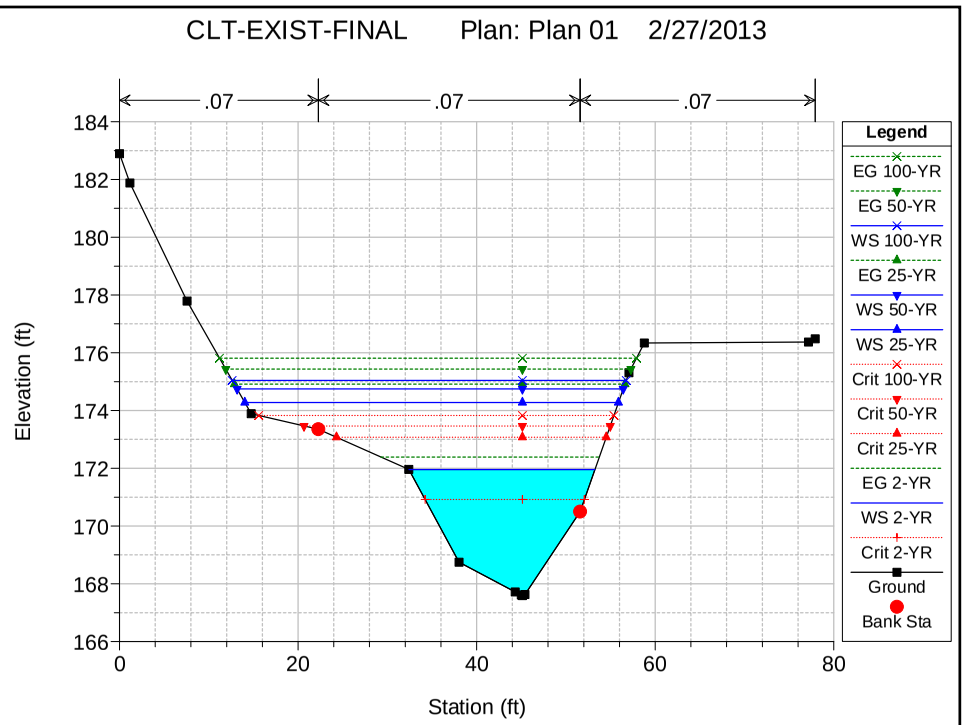
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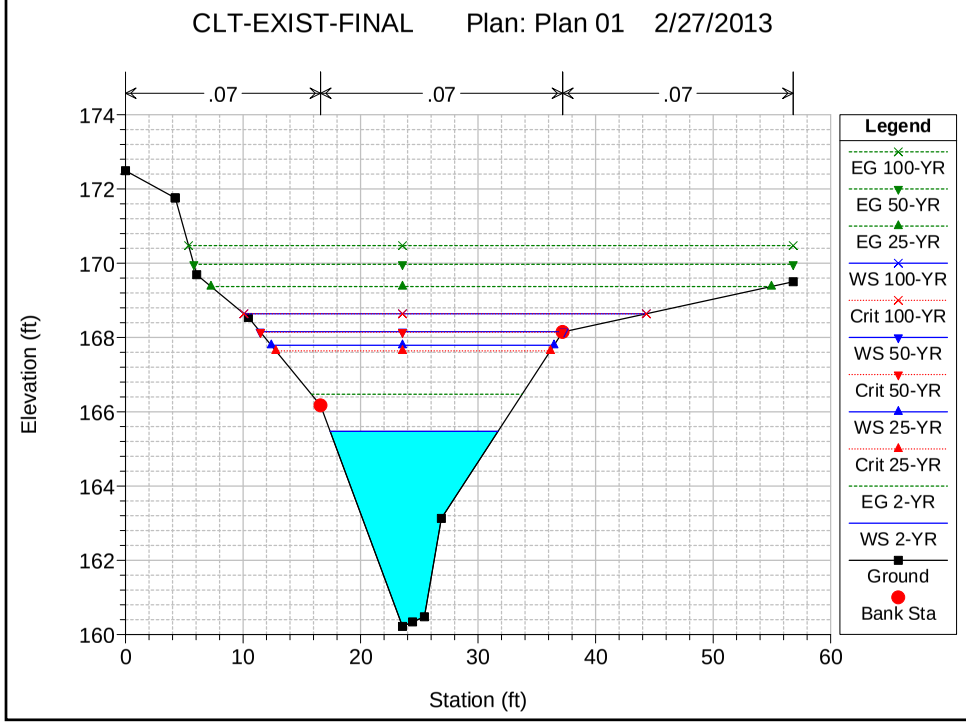
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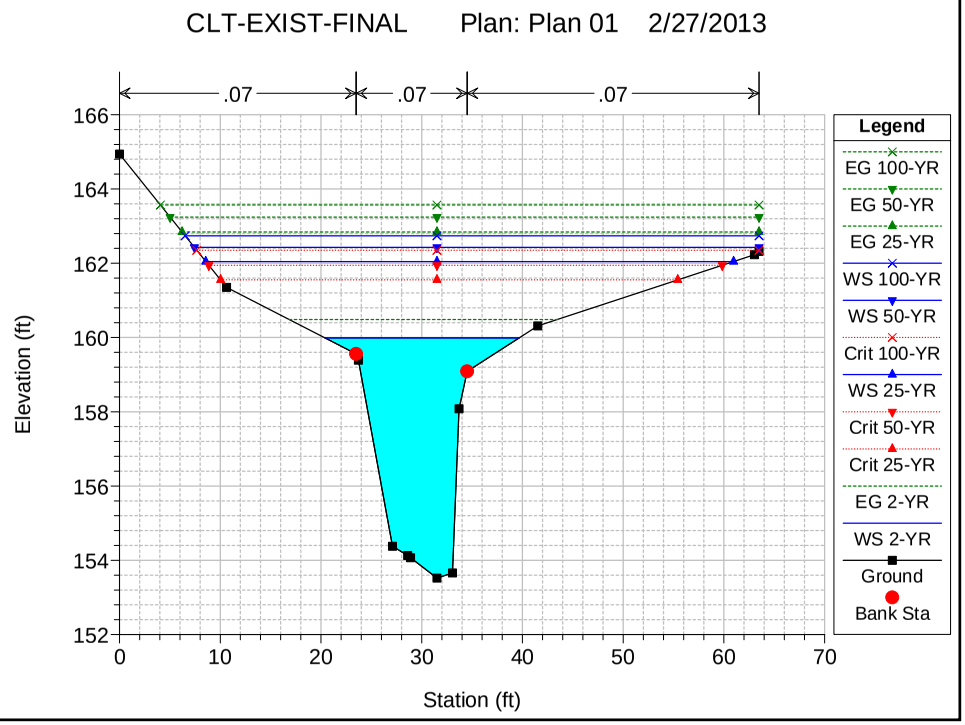
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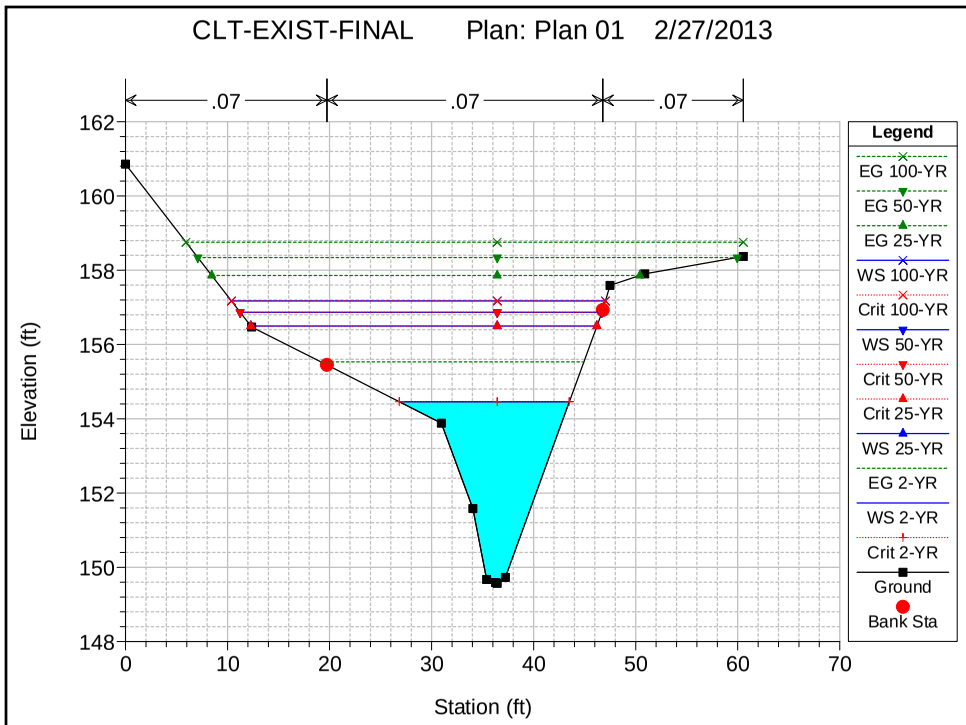
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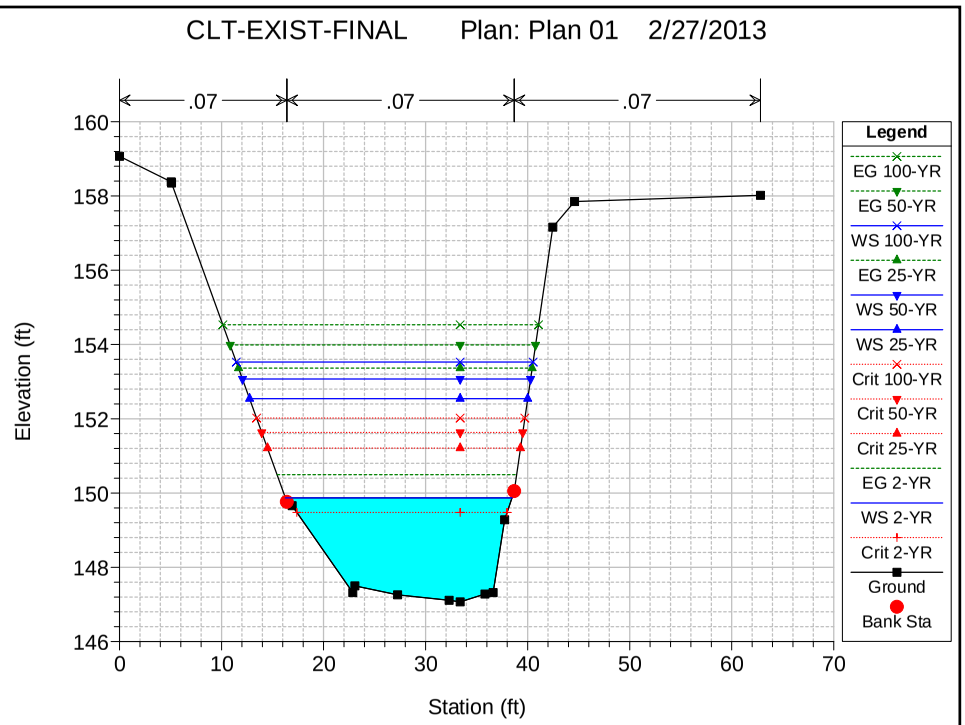
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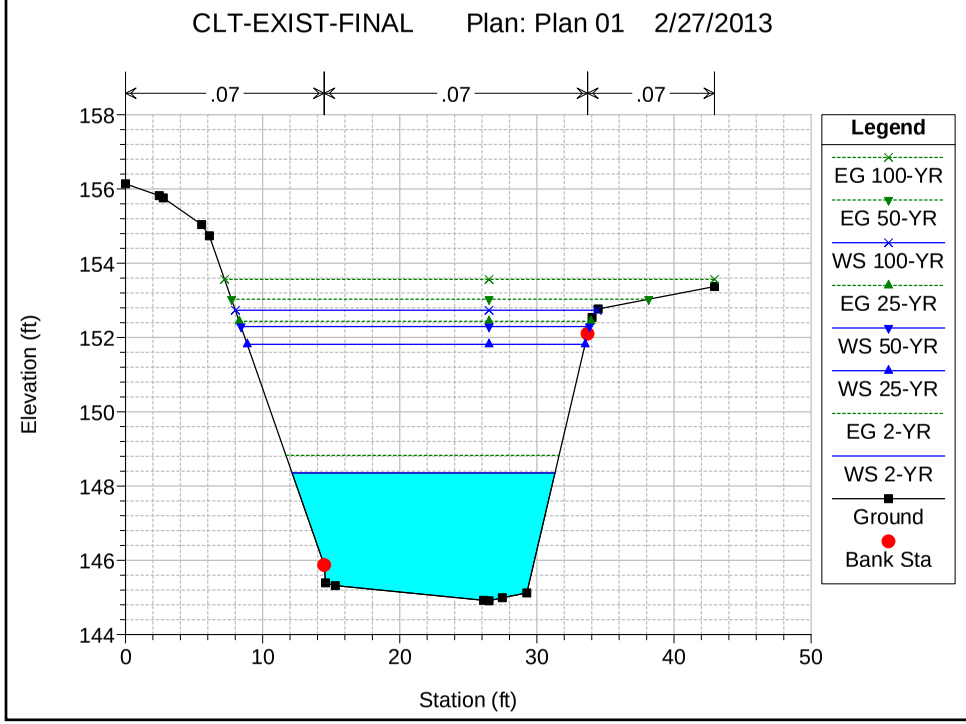
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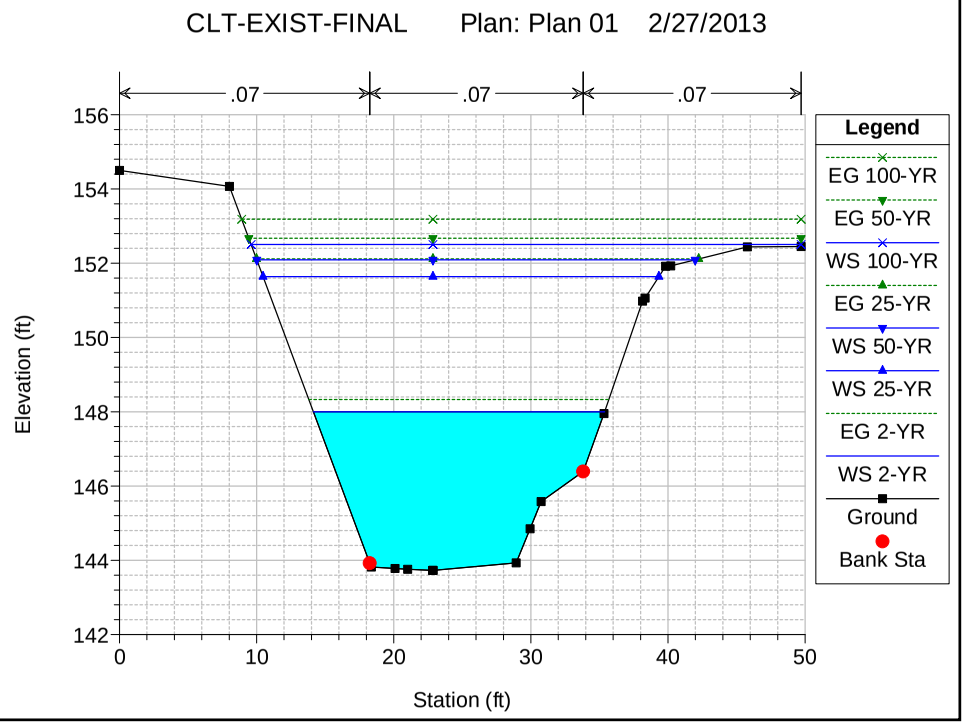
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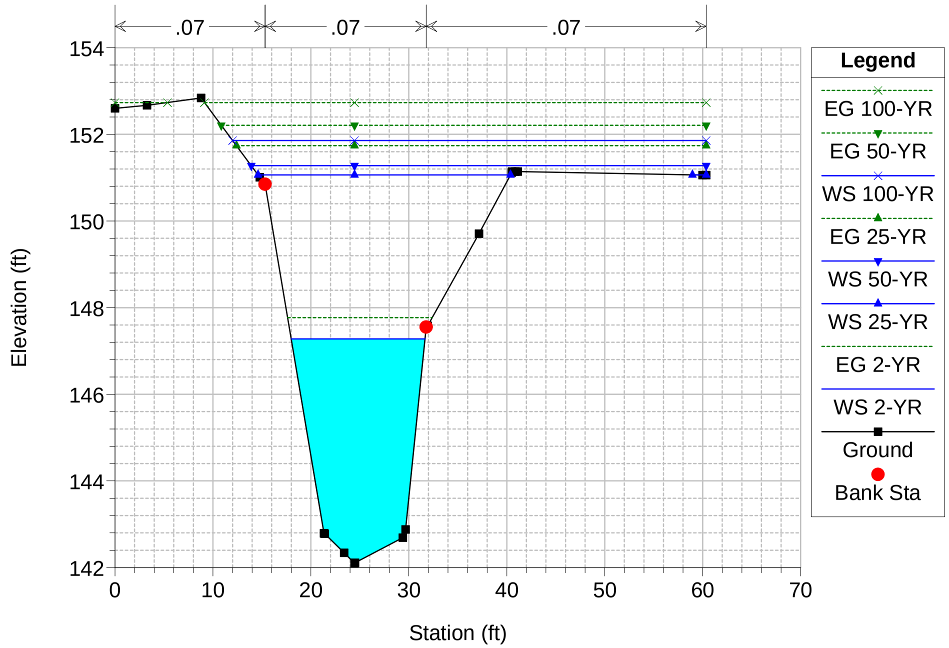

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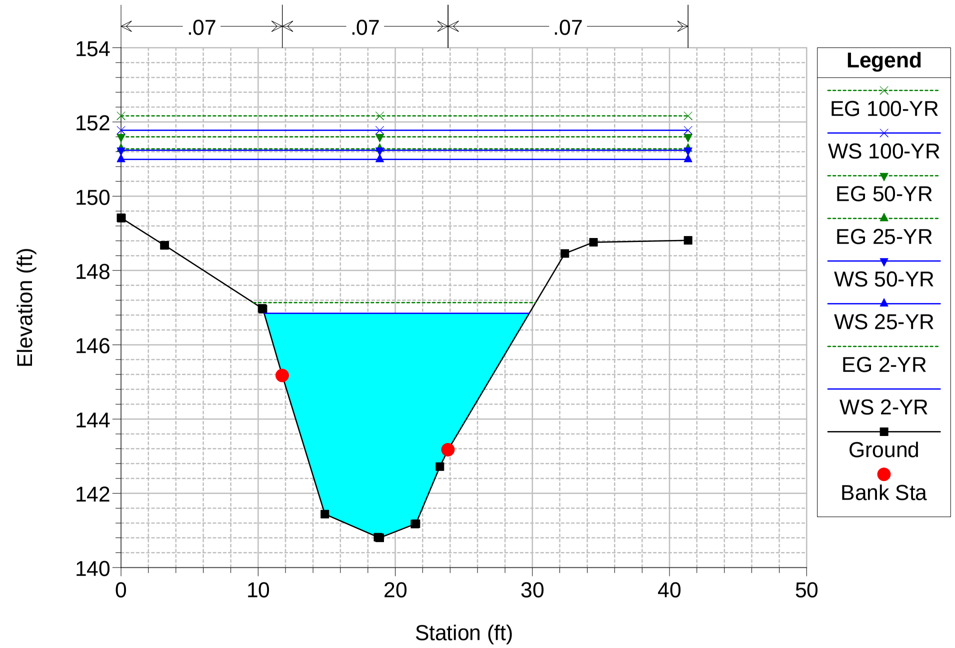

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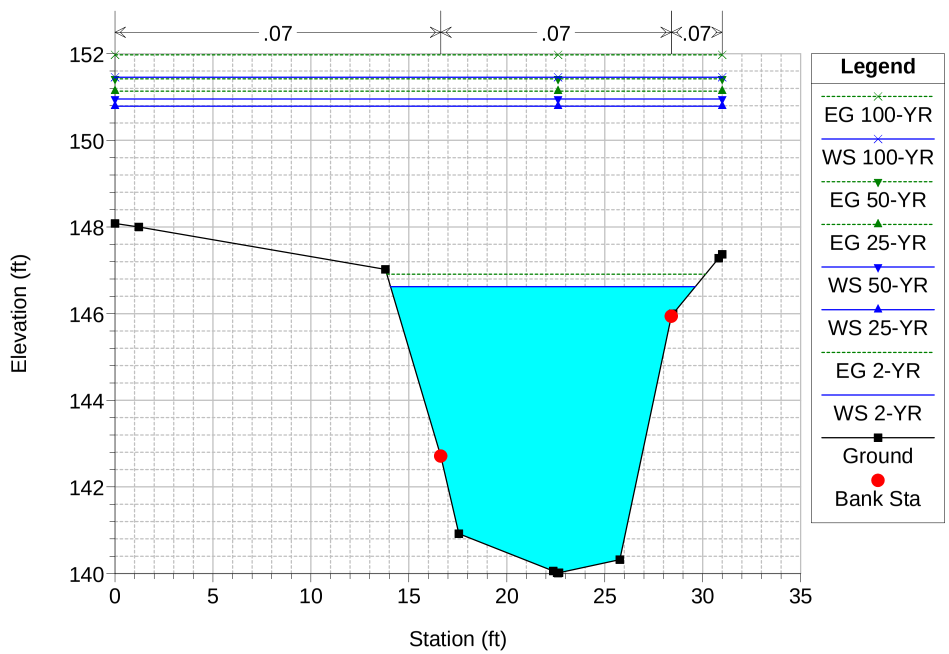

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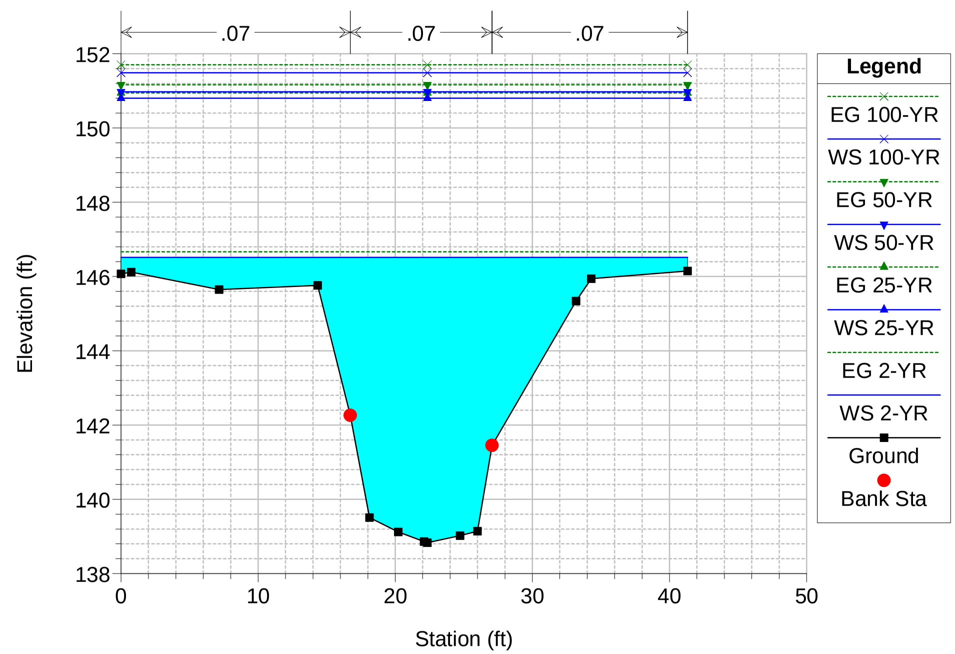

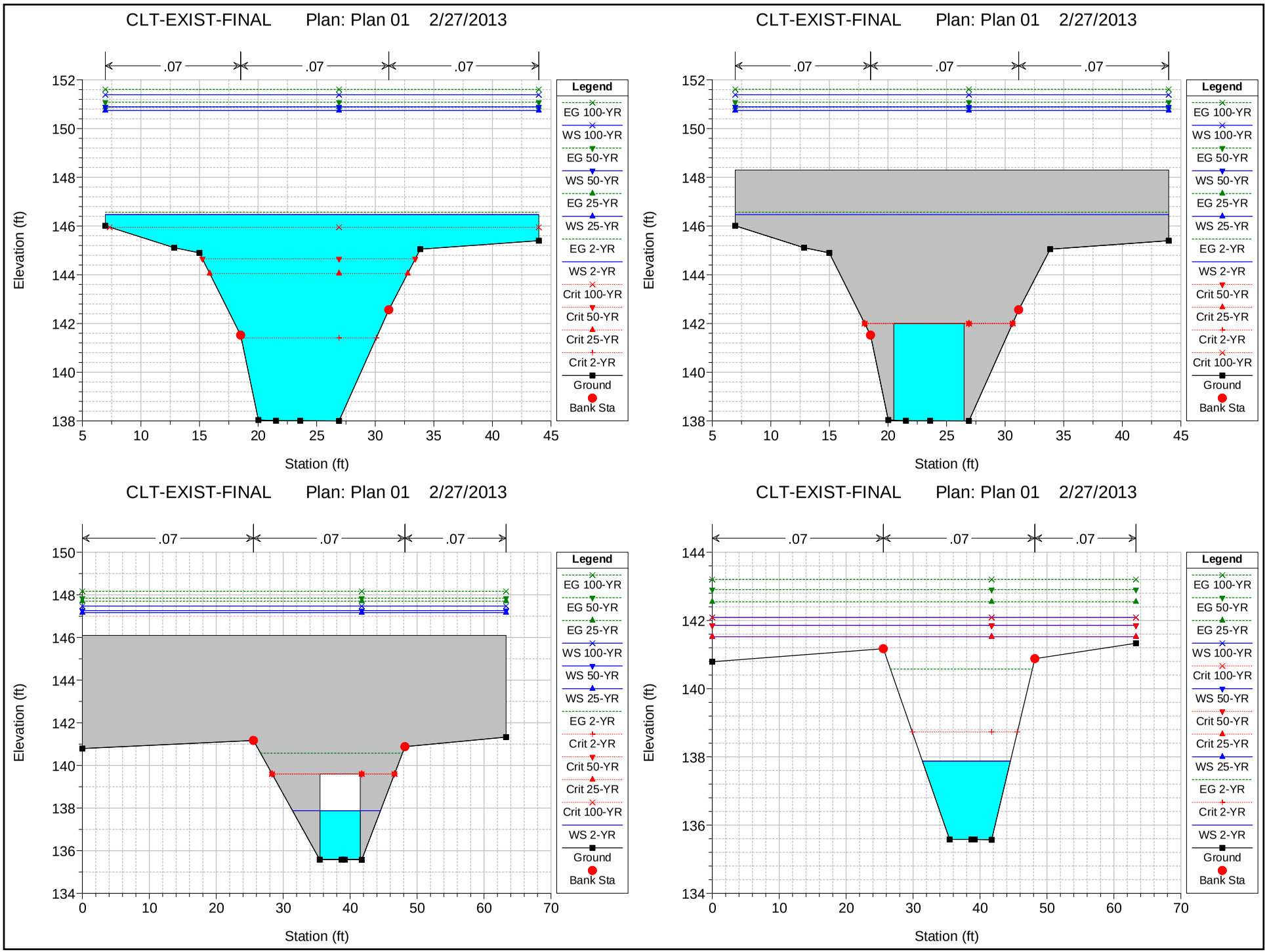
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COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT
NEGATIVE DECLARATION

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public resources Code 21,000 et seq.), that the following project: *Corinda de Los Trancos Creek Channel Repair and Stabilization*, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2013-00109

OWNER/APPLICANT: Republic Services (Ox Mountain Landfill) & Bob Lemos/Questa Engineering

ASSESSOR'S PARCEL NO.: 056-360-040 & -330

PROJECT LOCATION: 12320 Highway 92, Half Moon Bay (Ox Mountain Landfill)

PROJECT DESCRIPTION: The project is divided into two reaches. The first reach is the lower section that extends from the scale house to the Highway 92 culvert (Area 1). This reach is where the majority of the erosion issues are occurring. The second reach is a small area located 500 feet upstream of the scale house (Area 2). This site has a 20 foot vertical bank. The project proposes to stabilize the erosion occurring at each of these sites. The project utilizes three primary repair components:

Gradient Control
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Riparian woodland vegetation lines the bottom two-thirds of the deeply incised CLT Creek channel. Dominant plant species within the riparian zone include willow and red alder which form a dense canopy along the majority of the channel. Understory vegetation consists of Californian blackberry, California black current, thimbleberry, bracken fern, western sword fern, and stinging nettle. The CLT Creek corridor provides habitat for a variety of wildlife including Virginia opossum, striped skunk, California meadow vole, black tailed deer, raccoon, and brush rabbit.

Listed Species
The USFWS endangered and threatened species list for the Half Moon Bay quadrangle includes 25 federally listed animals. The California Natural Diversity Database (CNDDB) for the quadrangle includes records for five additional California Species of Special Concern including three animals and two plants. Twenty-five species from these two lists have no potential to occur within the project area due to lack of suitable habitat. These 25 species will not be affected by the proposed project.

The five species that may occur or may be affected by the proposed project include:

- Present/High Potential: California Red-legged frog
- Moderate Potential: San Francisco garter snake, San Francisco dusky footed woodrat
- Low Potential: Monarch butterfly, Central California Coastal Steelhead (known to occur only downstream in Pilarcitos Creek)

The primary species of concern for this project is the California Red legged frog which was observed in CLT Creek during channel stabilization work located approximately ½ mile upstream from the proposed project (CNDDB 2013).

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Current Planning Section has prepared the initial study for the above project and, based upon substantial evidence in the record, finds that:

1. The project will not adversely affect water or air quality or increase noise levels substantially.
2. The project will not have adverse impacts on the flora or fauna of the area.
3. The project will not degrade the aesthetic quality of the area.
4. The project will not have adverse impacts on traffic or land use.
5. In addition, the project will not:

    a) Create impacts which have the potential to degrade the quality of the environment.

    b) Create impacts which achieve short-term environmental goals to the disadvantage of long-term environmental goals.

    c) Create impacts for a project which are individually limited, but cumulatively considerable.

    d) Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The County of San Mateo has, therefore, determined that the environmental impact of the project, as mitigated, is not significant.

MITIGATION MEASURES included in the project to avoid potentially significant effects:

Mitigation Measure 1: The applicant shall implement the proposed re-vegetation plan as depicted in the project plans immediately upon completion of grading activities.

Mitigation Measure 2: To ensure that re-vegetation efforts are successful, the applicant shall implement a five year monitoring program for those areas affected by the project. Woody plant survivorship and canopy cover progress will be measured using either the line-intercept methodology or direct counting of healthy, live plantings in a representative segment of the restoration area. Natural recruitment of native woody trees and shrubs will be recorded and included in the estimates. Tree and shrub density will be calculated using the as-built acreage of planting areas. A comprehensive species list will be recorded for the monitoring area to document species richness and relative cover by native and non-native plant species. Photographs representative of the overall progress of riparian establishment will be taken in each year to provide visual documentation of vegetation establishment. By the fifth growing season following planting, the total number of planted and naturally recruited native trees and shrubs in the re-vegetation areas shall be equal to at least 60 percent of the number of trees and shrubs originally planted. All planted and recruited trees and shrubs counted must be alive and in good health. If by the fifth year the 60 percent target has not been met, then the applicant shall replant as necessary and monitor for an additional five years. The applicant shall submit annual monitoring reports to the County Planning Department outlining the progress of re-vegetation efforts.

Mitigation Measure 3: The County shall require construction contractors to implement the following BAAQMD's Basic Construction Mitigation Measures, listed below:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material into or off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- Post a publicly visible sign with the telephone number and person to contact at the County regarding the project. The County shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 4: The applicant shall submit the names and credentials of biologists proposed to perform preconstruction surveys and monitoring to the USFWS for written approval at least 15 days prior to commencement of any activities.

Mitigation Measure 5: Each construction area will be surrounded by snake exclusionary fencing one week prior to the start of construction.

Mitigation Measure 6: A USFWS-approved biologist will survey the work areas no less than 5 days prior to the onset of activities and after the snake exclusion fence has been installed. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. In making this determination the USFWS shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move California red-legged frogs from the work areas before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. If a California red-legged frog is found nearby, but outside a proposed work area, it will not be disturbed and USFWS will be notified. The biologist will also report any observations of other listed species addressed in this biological assessment.

Mitigation Measure 7: Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for all construction personnel. The training will include a description of the listed species with potential to occur, their habitat, and the general measures that are being implemented to conserve the species as they relate to the project and the boundaries within which the project may be accomplished (i.e. work areas).

Mitigation Measure 8: A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area. All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.

Mitigation Measure 9: During project activities, all trash will be properly contained, removed from the work areas and disposed of regularly. Following construction, all trash and construction debris from work areas will be removed.

Mitigation Measure 10: All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (66 feet) from any riparian habitat or water body. The applicant shall ensure contamination of habitat does not occur during such operations. Prior to

the start of construction, the applicant shall prepare a plan to ensure a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Mitigation Measure 11: A USFWS-approved biologist will ensure that the spread or introduction of invasive plant species will be avoided to the maximum extent possible. When practical, invasive exotic plants in the project area will be removed.

Mitigation Measure 12: Project areas that are disturbed will be re-vegetated with an appropriate assemblage of native riparian, wetland and upland vegetation.

Mitigation Measure 13: Stream contours will be returned to their original condition at the end of project activities, unless consultation with USFWS has determined that it is not beneficial to the species or feasible.

Mitigation Measure 14: The number of access routes, number and size of staging areas, and the total area of the project will be limited to the minimum necessary to achieve the project goals. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian areas where feasible. Where impacts occur in staging areas and access routes, restoration will be performed.

Mitigation Measure 15: Work activities will be completed between August 1 and November 1. Should the proponent or applicant demonstrate a need to conduct activities outside this period, the USACE may authorize such activities after obtaining the Service's approval.

Mitigation Measure 16: To control erosion during and after project implementation, the applicant shall implement best management practices.

Mitigation Measure 17: A USFWS-approved biologist will permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the maximum extent possible.

Mitigation Measure 18: Vegetation clearing and other construction work will occur outside the nesting birds season (Feb 15 to August 1). If work must be initiated during the nesting season, a preconstruction survey for nesting birds will be performed by a qualified biologist. Any active nests will be avoided until all the young have fledged and are independent.

Mitigation Measure 19: A qualified biologist will monitor the removal and relocation of woodrat houses and placement of refuge structures (e.g. half wine barrels and slash piles) for any woodrat nests located within the access road footprint. If young woodrats are found in any house, all removed material will be replaced and removal of that house will not continue until the young have left the house. Prior to dismantling houses, data will be collected to document the following characteristics of the house: house-building materials, contents of house cavities (particularly stored food and plants), percent and type of ground cover immediately around each house, tree and shrub species surrounding the house, and the house substrate (e.g., ground, tree, etc.). New houses will be established on site for each house removed. New house designs will be

constructed of a half wine barrel placed upside down in appropriate microhabitat with materials from the nest chamber of the dismantled house placed inside, and other house materials placed over and around the barrel, including a long tunnel-shaped entrance that leads only into the receptacle.

Mitigation Measure 20: If surface water is present during construction, the applicant shall implement the following:

- Cofferdams, flow bypass pipes, or diversion dams shall be used to ensure continued flow around the work area.

- Adequate sediment and turbidity control measures shall be implemented. One or more fences of filter fabric shall be constructed across stream channels downstream of the lowermost cofferdams to reduce turbidity and sedimentation downstream of the stream construction sites during removal of cofferdams and until water clarity is re-established once stream flow is re-introduced to the stream channel in the work area.

- The presence of surface water, such as in-stream flow or pool habitat, could mean the potential for salmonids to occur in the work area. To relocate salmonids from the work area following installation of a cofferdam or diversion dam/bypass pipes, a fish rescue and relocation effort shall be conducted by qualified biologists utilizing NMFS prescribed methods for the safe handling of salmonids.

- The applicant shall have a biologist monitor the construction site during placement and removal of cofferdams, channel diversions, and access ramps to ensure that any adverse effects to salmonids are minimized. The biologist shall be on site during all dewatering events to capture, handle, and safely relocate steelhead, if present.

- Consistent with Mitigation Measures 22 and 23, contractors shall have a supply of erosion control materials, and fuel and hydraulic fluid spill containment supplies onsite to facilitate a quick response to unanticipated storm events, or fuel or hydraulic fluid spill emergencies.

- Consistent with Mitigation Measure 22, construction equipment used within the creek channel shall be checked each day prior to work within the creek

Mitigation Measure 21: Project materials shall be placed in locations and manners that would not impair surface water flow into or out of any water of the United States. If surface flow is present during construction, dewatering would ensure that near-normal downstream flows are maintained. Fill shall consist of suitable material and placement such that it would not be eroded by future high flows. Following completion of construction, temporary fill shall be removed to upland areas, dredged material shall be returned to its original location, and the affected areas shall be restored to preconstruction elevations. The area upstream and downstream of the project reach shall be monitored annually for a two year period post construction to qualitatively assess channel conditions.

Mitigation Measure 22: The applicant shall prepare a comprehensive stormwater pollution and

erosion control plan for the project. Erosion control measures shall be in place prior to the start of construction activities and remain in place throughout all phases of project construction. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the County of San Mateo Department of Public Work's Contract Requirements for Erosion and Sediment Control and Contract Requirements for Water Pollution Control for Construction in Sensitive Areas, and at a minimum include, but not be limited to, the following measures (County of San Mateo 2013a; County of San Mateo, 2013b):

- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place.

- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.

- A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of petroleum products.

- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.

- Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.

- Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused topsoil, if any, shall be broadly redistributed to the surrounding areas in such a manner that topography and vegetation cover would not be adversely impacted.

- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.

- Disturbed areas will be re-vegetated after completion of construction activities.

- Provide sanitary facilities for construction workers.

Mitigation Measure 23: The applicant shall use the following best management practices (BMPs) to minimize potential adverse effects of the project to groundwater and soils from chemicals used during construction activities:

- Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction;

- Avoid overtopping construction equipment fuel gas tanks;

- Provide secondary containment for any hazardous materials temporarily stored onsite;

- During routine maintenance of construction equipment, properly contain and remove grease and oils;

- Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and

- Properly dispose of discarded containers of fuels and other chemicals

Mitigation Measure 24: The construction contractor(s) shall develop a construction management plan for review and approval by the County's Planning and Public Works Departments. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, any safety hazards and traffic congestion during construction:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, signs, and designated construction access routes.

- Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular traffic, and circulation and safety. Impacts to Highway 92 shall be minimized to the greatest extent possible.

- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

- Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

RESPONSIBLE AGENCY CONSULTATION: Referrals sent to:

Regional Water Quality Control Board
California Dept. of Fish and Wildlife
U.S. Army Corps of Engineers

INITIAL STUDY: The San Mateo County Current Planning Section has prepared the Environmental Evaluation of this project and has found that probable environmental impacts, as mitigated, are not significant. A copy of the initial study is attached.

REVIEW PERIOD: June ____, 2013 – July _____, 2013

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning Division, 455 County Center, Second Floor, Redwood City, no later than 5:00 p.m., July _____, 2013.

CONTACT PERSON

Mike Schaller, Project Planner
650/363-1849
mschaller@smcgov.org

County of San Mateo
Planning and Building Department

INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST
(To Be Completed by Planning Department)

1. **Project Title:** Corinda de Los Trancos Creek channel repair and stabilization

2. **County File Number:** PLN 2013-00109

3. **Lead Agency Name and Address:** San Mateo County Planning Department
455 County Center, 2nd Floor
Redwood City, CA 94063

4. **Contact Person and Phone Number:** Michael Schaller, Senior Planner
650/363-1849

5. **Project Location:** Corinda de Los Trancos Creek, adjacent to Ox Mountain Landfill

6. **Assessor's Parcel Number and Size of Parcel:** 056-360-040, 056-360-330

7. **Project Sponsor's Name and Address:** Kevin Iler (Ox Mountain Landfill)
12310 San Mateo Road
Half Moon Bay, CA 94019

8. **General Plan Designation:** Open Space and Agriculture

9. **Zoning:** Resource Management-Coastal Zone (RM-CZ) and Planned Agricultural Development (PAD)

10. **Description of the Project:** The project is divided into two reaches. The first reach is the lower section that extends from the scale house to the Highway 92 culvert (Area 1). This reach is where the majority of the erosion issues are occurring. The second reach is a small area located 500 feet upstream of the scale house (Area 2). This site has a 20 foot vertical bank. The project proposes to stabilize the erosion occurring at each of these sites. The project utilizes three primary repair components:

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The five species that may occur or may be affected by the proposed project include:

- Present/High Potential: California Red-legged frog

- Moderate Potential: San Francisco garter snake, San Francisco dusky footed woodrat

- Low Potential: Monarch butterfly, Central California Coastal Steelhead (known to occur only downstream in Pilarcitos Creek)

The primary species of concern for this project is the California Red legged frog which was observed in CLT Creek during channel stabilization work located approximately ½ mile upstream from the proposed project (CNDDB 2013).

12. **Surrounding Land Uses and Setting:** The project site is bordered by the Leemos Farm to the west and the access road for Ox Mountain Landfill to the east. The landfill itself lies to the north of the project site and Highway 92 defines the southern boundary of the project site.

13. **Other Public Agencies Whose Approval is Required:**

    - U.S. Army Corps of Engineers - Section 404 permit

    - U.S. Fish and Wildlife Service and the National Marine Fisheries Service - Endangered Species Act consultation

    - Regional Water Quality Control Board - Section 401 Water Quality Certification and/or Waste Discharge Requirements application

    - California Department of Fish and Wildlife - Streambed Alteration Agreement.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

X	Aesthetics		Climate Change		Population/Housing
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Public Services
X	Air Quality	X	Hydrology/Water Quality		Recreation
X	Biological Resources		Land Use/Planning	X	Transportation/Traffic
	Cultural Resources		Mineral Resources		Utilities/Service Systems
	Geology/Soils		Noise		Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should

be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1.	**AESTHETICS**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a.	Have a significant adverse effect on a scenic vista, views from existing residential areas,		X		

public lands, water bodies, or roads?				

Discussion: The project site is not viewable from public lands or water bodies. There are no residential areas adjacent to the project area. There are no designated scenic vistas in the project vicinity. The site is within the boundaries of the Highway 92 County Scenic Corridor. A portion of the project, approximately the first 150 feet, will be temporarily visible from Highway 92 while construction is underway.

As discussed in the project setting section, large portions of the creek bank within Area 1 are extremely steep and unstable. An element of the project is to lay these banks back to a more stable angle of repose. The toes of the creek banks will also be armored with large to medium size boulders. The rip-rap will then be joint planted with willow stakes and the upper portions of the banks reseeded with a short-term erosion control seed mix and a long-term re-vegetation seed mix, as described in the project description section above and depicted on the plans included as Attachement ? of this report.

Potential significant impacts of the project will be the removal of existing riparian vegetation in the area adjacent to Highway 92 as well as construction equipment on the landfill entrance road. These are short term impacts that cannot be avoided if the project is to be implemented properly. Mitigation for the loss of vegetation is the implementation of the proposed re-vegetation plan.

Mitigation Measure 1: The applicant shall implement the proposed re-vegetation plan as depicted in the project plans immediately upon completion of grading activities.

Mitigation Measure 2: To ensure that re-vegetation efforts are successful, the applicant shall implement a five year monitoring program for those areas affected by the project. Woody plant survivorship and canopy cover progress will be measured using either the line-intercept methodology or direct counting of healthy, live plantings in a representative segment of the restoration area. Natural recruitment of native woody trees and shrubs will be recorded and included in the estimates. Tree and shrub density will be calculated using the as-built acreage of planting areas. A comprehensive species list will be recorded for the monitoring area to document species richness and relative cover by native and non-native plant species. Photographs representative of the overall progress of riparian establishment will be taken in each year to provide visual documentation of vegetation establishment. By the fifth growing season following planting, the total number of planted and naturally recruited native trees and shrubs in the re-vegetation areas shall be equal to at least 60 percent of the number of trees and shrubs originally planted. All planted and recruited trees and shrubs counted must be alive and in good health. If by the fifth year the 60 percent target has not been met, then the applicant shall replant as necessary and monitor for an additional five years. The applicant shall submit annual monitoring reports to the County Planning Department outlining the progress of re-vegetation efforts.

Source: County of San Mateo, 1986, *General Plan Policies;* County of San Mateo *Local Coastal Program*; Site reconnaissance.

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

Discussion: As discussed above, the project site is not within a state scenic highway.

Source: County of San Mateo, 1986, *General Plan Policies*

c. Significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in		X		

topography or ground surface relief features, and/or development on a ridgeline?				
Discussion: See discussion under Question 1(a). Source:				
d. Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?				X
Discussion: No new street lights are proposed as part of this project Source: Project plan				
e. Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?		X		
Discussion: See discussion under Question 1(a). Source:				
f. If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?				X
Discussion: The project site is not within a Design Review District Source: San Mateo County Zoning Maps and Ordinance				
g. Visually intrude into an area having natural scenic qualities?		X		
Discussion: See discussion under Question 1(a). Source:				

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

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

Discussion: The project site is within the Coastal Zone. While there is prime farmland on the adjacent Leemos property (that is actively farmed) this project will not significantly impact it or convert this farmland to a non-agricultural use.

Source: Project plans; California Resources Agency Farmland Mapping and Monitoring Program

b. Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X

Discussion: The project parcel is not under a Williamson Act contract, but the adjacent Leemos property is under such contract. The project parcel is zoned Resource Management – Coastal Zone, which allows agriculture as a principally permitted use. However, the parcel is not used for that purpose. The project will not conflict with the on-going agricultural uses on the adjacent Leemos property. No agricultural land will be taken out of production or converted to a non-agricultural use.

Source: Project plans; San Mateo County Zoning Ordinance; San Mateo County Williamson Act database

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

Discussion: See discussion under Questions 2(a) and (b).

Source:				
d. For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?				X
Discussion: See discussion under Questions 2(a) and (b). Source:				
e. Result in damage to soil capability or loss of agricultural land?				X
Discussion: See discussion under Questions 2(a) and (b). Source:				
f. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? *Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.*				X
Discussion: The project site does not meet the definitions of forestland or timberland. Source: Project Plans, Site Visit, County GIS				

3.	**AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a.	Conflict with or obstruct implementation of the applicable air quality plan?				X
The Bay Area Air Quality Management District (BAAQMD) adopted new thresholds of significance (BAAQMD thresholds) on June 2, 2010, to assist lead agencies in determining when potential air quality impacts would be considered significant under CEQA. BAAQMD also released new CEQA Guidelines in					

May 2011, which advise lead agencies on how to evaluate potential air quality impacts with the adopted new thresholds of significance. On March 5, 2012 the Alameda County Superior Court issued a judgment finding that BAAQMD had failed to comply with CEQA when it adopted its 2010 thresholds of significance. While the court did not determine whether or not the thresholds were valid, it did find that the adoption of the thresholds was a project under CEQA, and therefore that BAAQMD should have conducted environmental review. As a result, the court set aside the thresholds and ordered BAAQMD to cease dissemination of them until it had complied with CEQA. BAAQMD has appealed the court's decision and the appeal is currently pending. In compliance with the court's order, BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts, and lead agencies are not required to use these thresholds in their environmental documents. However, nothing in the court's decision prohibits an agency's use of the thresholds to assess the significance of a project's air quality impacts. Therefore, based on substantial evidence, the analysis herein uses the BAAQMD thresholds and methodologies in its CEQA Air Quality Guidelines (BAAQMD, 2011) to determine the significance of project-related impacts with respect to air pollutant emissions.

Discussion: The project site is within the San Francisco Bay Area Air Basin (Bay Area), which is currently designated as a nonattainment area for state and national ozone standards, state particulate matter (PM10 and PM2.5) standards, and the federal PM2.5 (24-hour) standard. The BAAQMD's 2010 Clean Air Plan (BAAQMD, 2010) is the applicable Clean Air Plan (CAP) that has been prepared to address ozone nonattainment issues.

The BAAQMD CEQA Air Quality Guidelines (BAAQMD, 2011) identify a three-step methodology for determining a project's consistency with the current CAP. If the responses to these three questions can be concluded in the affirmative and those conclusions are supported by substantial evidence, then BAAQMD considers the project to be consistent with air quality plans prepared for the Bay Area.

The first question to be assessed in this methodology is "does the project support the goals of the Air Quality Plan (currently the 2010 CAP)?" The BAAQMD-recommended measure for determining project support for these goals is consistent with BAAQMD thresholds of significance. If a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation measures, the project would be consistent with the goals of the 2010 CAP. As indicated in the following discussion with regard to questions 2.3b) and 2.3c), both construction and operation of the project would result in less than significant air quality impacts with mitigation. Therefore, the project would be considered to support the primary goals of the 2010 CAP and, therefore, consistent with the 2010 CAP.

The second question to be assessed in this consistency methodology is "does the project include applicable control measures from the CAP?" Air pollutant emissions are a function of human activity. The 1988 California Clean Air Act, Section 40919(d) requires regions to implement "transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled." Consistent with this requirement, one of the goals of the 2010 CAP is to reduce the number of trips and vehicle miles Bay Area residents travel in single-occupant vehicles through the implementation of five categories of Transportation Control Measures (TCMs). A review of the TCM's in the 2010 CAP indicates that these measures lend themselves to application to large scale land use development projects and cannot feasibly be implemented by this stream restoration project. Consequently, TCMs of the 2010 CAP would not be applicable to the proposed Project. Therefore the proposed Project meets this consistency criterion.

The third question to be assessed in this consistency methodology is "does the project disrupt or hinder implementation of any control measures from the CAP?" Examples of how a project may cause the disruption or delay of control measures include a project that precludes an extension of a transit line or bike path, or proposes excessive parking beyond parking requirements. There are no existing or planned transit improvements in the project vicinity, nor would the project interfere with existing transit (bus) routes in the area. The project will not generate parking demand beyond the construction phase, nor generate additional vehicle trips beyond the construction phase.

The responses to all three of the questions with regard to CAP consistency are affirmative and the project would not conflict with or obstruct implementation of the 2010 CAP, and thus would have a no impact.

Source: Bay Area Air Quality Management District (BAAQMD), 2010. Bay Area 2010 Clean Air Plan. Project Plans

b.	Violate any air quality standard or contribute significantly to an existing or projected air quality violation?		X		

Discussion: Project construction would involve use of equipment and materials that would emit ozone precursor emissions (i.e., reactive organic gases or ROG, and nitrogen oxides, or NOx). Construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity, and construction worker automobile trips. Emission levels for these activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NOx from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project development. Emissions were estimated using the Roadway Construction Emissions Model (RoadMod), version 7.1.2 (Sacramento Metropolitan Air Quality Management District, 2012), which BAAQMD recommends for linear construction projects, for each of the project components. Although the peak-day for each project component would not likely overlap, this worse-case scenario is shown below in Table 1.

TABLE 1

PEAK DAY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (Pounds/Day)[a]

Year	ROG	NOx	CO	Exhaust PM10[b]	Exhaust PM2.5[b]
2013 (Unmitigated Emissions)	2.1	22.5	10.2	1.1	1.0
BAAQMD Construction Threshold	54	54	None	82	54
Significant Impact?	No	No	No	No	No

NOTES:
CO = carbon monoxide
PM10 = particulate matter less than 10 microns in diameter
PM2.5 = particulate matter 2.5 microns in diameter

[a] Emissions were modeled using RoadMod with default assumptions in most cases. It was assumed that construction would occur for 30 working days (approximately 1.5 months) in the year 2013. It was estimated that the project will require approximately 30 haul trips to import rip-rap for the grade control structures. There is no anticipated export of soil material.

[b] BAAQMD's proposed construction-related significance thresholds for PM10 and PM2.5 apply to exhaust emissions only and not to fugitive dust.

Although the project would not generate emissions that would exceed the BAAQMD thresholds during the construction phase, due to the non-attainment status of the air basin with respect to ozone, PM10, and PM2.5, the BAAQMD recommends that projects implement a set of Basic Construction Mitigation Measures as best management practices regardless of the significance determination. Implementing Mitigation Measure 3 (below) would help reduce impacts of these three emissions to a less than significant level.

With regards to long-term operations, the project will not generate new vehicle trips or result in maintenance activities other than the occasional site visit to check on the status of the re-vegetation plantings. Operational impacts of the project would be less than significant without mitigation.

Mitigation Measure 3: The County shall require construction contractors to implement the following BAAQMD's Basic Construction Mitigation Measures, listed below:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material into or off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the County regarding the project. The County shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Source: Roadway Construction Emissions Model (RoadMod), ver. 7.1.2, Project Plans, BAAQMD *CEQA Air Quality Guidelines*

c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	

Discussion: According to the BAAQMD, no single project, by itself, is sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In addition, according to the BAAQMD *CEQA Air Quality Guidelines*, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD, 2011). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in less than significant air quality impacts. As discussed above, the project would not exceed the BAAQMD thresholds, thus resulting in less than significant construction emissions. The project would not result in long-term adverse air quality impacts either. Thus, the project would not result in cumulatively considerable air pollutant emissions and would be result in less than significant cumulative impacts on the air quality environment.

Source: Project Plans, BAAQMD *CEQA Air Quality Guidelines*				
d. Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD?			X	

Discussion: Land uses in the project site vicinity include the County Landfill and several commercial land uses. Construction of the project would result in short-term diesel exhaust emissions (DPM), which are toxic air contaminants (TACs), from on-site heavy-duty equipment and haul trucks. Exposure of sensitive receptors is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure that people have with the substance. A longer exposure period will result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of the proposed construction activities (approximately 1.5 months) would only constitute a small percentage of the total 70-year exposure period. Furthermore, based on the linear progression of the project construction activities, the use of diesel powered construction equipment would be temporary and episodic, affecting only a few nearby receptors for a limited period of time. It is not anticipated that the project will generate post-construction emissions of any TACs as activities that would generate TACs are not proposed or anticipated.

In conclusion, the proposed project would not expose sensitive receptors to substantial pollutant concentrations during construction or operations. Therefore, impacts related to exposure of sensitive receptors to substantial pollutant concentrations are considered less than significant.

Source: Project Plans, BAAQMD *CEQA Air Quality Guidelines*

e. Create objectionable odors affecting a significant number of people?			X	

Discussion: As a general matter, the types of land use development that pose potential odor problems include wastewater treatment plants, refineries, landfills, composting facilities and transfer stations. No such uses would occupy the project site. Although some odor may occur during construction due to the use of diesel-fueled engines, construction activities would be temporary and would only affect a few nearby receptors for a limited period of time. Upon completion of the proposed project, objectionable odors would not occur. Therefore, the project would not create objectionable odors that would affect a substantial number of people and this impact would be considered less than significant.

Source: Project Plans, BAAQMD *CEQA Air Quality Guidelines*

f. Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area?			X	

Discussion: As discussed in response to question 3(b) above, the project would not exceed the BAAQMD thresholds and would not result in long-term adverse air quality impacts. Also, as discussed for questions 3(d) and 3(e) above, the project would not expose sensitive receptors to substantial pollutant concentrations or objectionable odors. Thus, the project would not generate pollutants that will violate existing standards of air

quality on-site or in the surrounding area. This impact would be considered less than significant.

Source: Project Plans, BAAQMD *CEQA Air Quality Guidelines*

4. BIOLOGICAL RESOURCES. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
a. Have a significant adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

Discussion:

California Red-legged Frog

The project area lies within designated California red-legged frog (CRLF) critical habitat unit SNM-1 (USFWS 2010). Potential project-related impacts to the red-legged frog include direct (crushing or injuring frogs present in work areas with equipment or vehicles) and indirect impacts (temporary or permanent alteration of habitats such that they cannot be used by red-legged frogs, introduction of non-native invasive plants, trash left on site that could attract predators, and sedimentation of aquatic habitats from vehicles crossing aquatic areas). To avoid potential significant impacts to the CRLF and SFGS, the following measures are proposed:

San Francisco Garter Snake

There is potential for San Francisco Garter Snake (SFGS) to occur within the project area, as there is suitable habitat present which is bolstered by the presence of a breeding population of CRLF, the primary prey species of SFGS. Avoidance and mitigation measures (USFWS 1999; Appendix A) employed in order to minimize impacts to CRLF should also minimize potential impacts to SFGS. To avoid potential significant impacts to the CRLF and SFGS, the following measures are proposed:

Mitigation Measure 4: The applicant shall submit the names and credentials of biologists proposed to perform preconstruction surveys and monitoring to the USFWS for written approval at least 15 days prior to commencement of any activities.

Mitigation Measure 5: Each construction area will be surrounded by snake exclusionary fencing one week prior to the start of construction.

Mitigation Measure 6: A USFWS-approved biologist will survey the work areas no less than 5 days prior to the onset of activities and after the snake exclusion fence has been installed. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. In making this determination the USFWS shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall

be allowed sufficient time to move California red-legged frogs from the work areas before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. If a California red-legged frog is found nearby, but outside a proposed work area, it will not be disturbed and USFWS will be notified. The biologist will also report any observations of other listed species addressed in this biological assessment.

Mitigation Measure 7: Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for all construction personnel. The training will include a description of the listed species with potential to occur, their habitat, and the general measures that are being implemented to conserve the species as they relate to the project and the boundaries within which the project may be accomplished (i.e. work areas).

Mitigation Measure 8: A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area. All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.

Mitigation Measure 9: During project activities, all trash will be properly contained, removed from the work areas and disposed of regularly. Following construction, all trash and construction debris from work areas will be removed.

Mitigation Measure 10: All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (66 feet) from any riparian habitat or water body. The applicant shall ensure contamination of habitat does not occur during such operations. Prior to the start of construction, the applicant shall prepare a plan to ensure a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Mitigation Measure 11: A USFWS-approved biologist will ensure that the spread or introduction of invasive plant species will be avoided to the maximum extent possible. When practical, invasive exotic plants in the project area will be removed.

Mitigation Measure 12: Project areas that are disturbed will be re-vegetated with an appropriate assemblage of native riparian, wetland and upland vegetation.

Mitigation Measure 13: Stream contours will be returned to their original condition at the end of project activities, unless consultation with USFWS has determined that it is not beneficial to the species or feasible.

Mitigation Measure 14: The number of access routes, number and size of staging areas, and the total area of the project will be limited to the minimum necessary to achieve the project goals. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian areas where feasible. Where impacts occur in staging areas and access routes, restoration will be performed.

Mitigation Measure 15: Work activities will be completed between August 1 and November 1. Should the proponent or applicant demonstrate a need to conduct activities outside this period, the USACE may authorize such activities after obtaining the Service's approval.

Mitigation Measure 16: To control erosion during and after project implementation, the applicant shall implement best management practices.

Mitigation Measure 17: A USFWS-approved biologist will permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the maximum

extent possible.

Mitigation Measure 18: Vegetation clearing and other construction work will occur outside the nesting birds season (Feb 15 to August 1). If work must be initiated during the nesting season, a preconstruction survey for nesting birds will be performed by a qualified biologist. Any active nests will be avoided until all the young have fledged and are independent.

Central Valley Steelhead and Central California Coastal Steelhead

Steelhead have been documented in several coastal streams in the project vicinity including Pilarcitos Creek (NOAA 2005). Pilarcitos Creek is also located in designated critical habitat for steelhead (Federal Register 2005). However, no Steelhead have been documented in Corinda Los Trancos Creek upstream from Highway 92. The Hwy. 92 culvert prevents access to the creek and the sandy substrate of the creek does not provide suitable spawning and rearing habitat. Indirect impacts to the downstream Steelhead population can be minimized by following Best Management Practices during construction such as dewatering and erosion control. In the long term, the project is intended to benefit the steelhead by reducing fine sediment input into their downstream habitat.

San Francisco Dusky-footed woodrat

San Francisco dusky-footed woodrat are a California Species of Special Concern. San Francisco dusky-footed woodrats may be present within the project area as there is suitable habitat within the area. However, visual surveys for wood rat houses within the channel and flood plain did not identify any potential houses. Temporary access roads will avoid woodrat nests where possible. To reduce potential impacts to the woodrat, the applicant's biologist is recommending the following measure:

Mitigation Measure 19: A qualified biologist will monitor the removal and relocation of woodrat houses and placement of refuge structures (e.g. half wine barrels and slash piles) for any woodrat nests located within the access road footprint. If young woodrats are found in any house, all removed material will be replaced and removal of that house will not continue until the young have left the house. Prior to dismantling houses, data will be collected to document the following characteristics of the house: house-building materials, contents of house cavities (particularly stored food and plants), percent and type of ground cover immediately around each house, tree and shrub species surrounding the house, and the house substrate (e.g., ground, tree, etc.). New houses will be established on site for each house removed. New house designs will be constructed of a half wine barrel placed upside down in appropriate microhabitat with materials from the nest chamber of the dismantled house placed inside, and other house materials placed over and around the barrel, including a long tunnel-shaped entrance that leads only into the receptacle.

Source: Applicant's biological report, Cal. Dept. of Fish & Wildlife database

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

Discussion: The project will have a significant temporary impact upon the riparian habitat of Corinda de Los Trancos creek through the removal of existing riparian vegetation. However, the proposed work is necessary to stabilize the creek and avoid the loss of creek bank vegetation due to erosion and bank failure. A key component of the project is re-vegetation of the creek banks with riparian plant and tree species in order to stabilize them and avoid erosion into the creek.

Source: Project plans, site visit				
c. Have a significant adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
Discussion: No wetlands were identified by the project biologist. Source: Project plans, site visit				
d. Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
Discussion: As discussed previously, the creek is not accessible to fish passage due to the Hwy. 92 culvert barrier. No other species are known to use the creek on a regular basis for migratory purposes. As discussed above, CRLF and SFGS could use the creek area on a permanent basis. Potential impacts and mitigations for these species were discussed above. Source: Applicant's biological report, Cal. Dept. of Fish & Wildlife database				
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?		X		
Discussion: See Question 4.b above. Source:				
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?				X
Discussion: The project site is not within the boundaries of any said conservation plan. Source: Calif. Dept. of Fish & Wildlife (CDFW); U.S. Fish & Wildlife Service (USFW)				
g. Be located inside or within 200 feet of a marine or wildlife reserve?				X
Discussion: The project site is not inside or within 200 feet of a marine or wildlife reserve.				

Source: Calif. Dept. of Fish & Wildlife (CDFW); U.S. Fish & Wildlife Service (USFW)				
h. Result in loss of oak woodlands or other non-timber woodlands?				X
Discussion: The project site does not contain oak woodlands or other non-timber woodlands. Source: Site visit; project plans				

5. CULTURAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Cause a significant adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?				X
Discussion: There are no identified historical, archaeological, or paleontological resources within the project boundaries. Corinda de los Trancos Creek has been the subject of several flooding events over the last 20 years as well as two different creek stabilization efforts that substantially altered the creek. Any resources that might have been present prior to the opening of the landfill have been destroyed or washed away. Source: County General Plan, County Cultural Resources database				
b. Cause a significant adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?				X
Discussion: See Question 5.a Source:				
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
Discussion: See Question 5.a Source:				
d. Disturb any human remains, including those interred outside of formal cemeteries?				X
Discussion: See Question 5.a				

Source:

6. GEOLOGY AND SOILS. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
a. Expose people or structures to potential significant adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:			X	
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other significant evidence of a known fault? *Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.*				X
Discussion: The project site is not within or adjacent to a mapped earthquake fault zone Source: Alquist-Priolo Earthquake Fault Zoning Map (Half Moon Bay Quad) – Calif. Dept. of Conservation				
ii. Strong seismic ground shaking?			X	
Discussion: The nearest known fault zone to the project site is the Seal Cove fault zone which is approximately three miles west of the project site. The San Andreas fault zone lies approximately 3.5 miles east of the project site. A major earthquake along either fault line could produce strong ground shaking. However, the project will not create any habitable structures or potentially unstable slopes adjacent to habitable structures or infrastructure. Source: Alquist-Priolo Earthquake Fault Zoning Map (HMB Quad) – Calif. Dept. of Conservation; Project plans				
iii. Seismic-related ground failure, including liquefaction and differential settling?				X
Discussion: The project site is not within a mapped liquefaction hazard zone or on soils known to be susceptible to liquefaction or differential settling. Again, the project will not create any habitable structures or potentially unstable slopes adjacent to habitable structures or infrastructure. Source: Calif. Geological Survey Seismic Hazards Zones maps; Project Plans				
iv. Landslides?				X
Discussion: See question 6(a)(ii).				

Source:				
v. Coastal cliff/bluff instability or erosion? *Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).*				X
Discussion: The project site is not near any coastal cliffs/bluffs. Source: Project Plans, Google Earth				
b. Result in significant soil erosion or the loss of topsoil?			X	
Discussion: The project is intended to address long-term channel erosion within Corinda de los Trancos Creek. This will be achieved through the construction of grade control structures and the reduction of the overall slope of the creek. In addition, over steepened creek banks will be laid back to reduce their potential to fail during peak winter flows. Construction of the project within the creek channel will require a significant amount of grading within the confines of a live creek. To address erosion issues during construction, the applicant is proposing to utilize coffer dams to divert stream water around work areas and to implement construction phase erosion control measures within all work areas, including the use of silt fencing, etc. As discussed previously, the project includes an extensive post-construction re-vegetation component that will reduce the potential for long-term erosion off of the newly created stream banks. Implementation of the project as proposed will not result in a significant erosion problem. Source: Project Plans				
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?				X
Discussion: See question 6(a)(iii). Source:				
d. Be located on expansive soil, as noted in the 2010 California Building Code, creating significant risks to life or property?				X
Discussion: Based upon the U.S. Dept. of Agriculture soil maps for San Mateo County, the soils on the project site are not identified as expansive soils. No habitable structures or over steepened slopes will be created by this project. Source: U.S. Dept. of Agriculture soil maps for San Mateo County				
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are				X

not available for the disposal of wastewater?				

Discussion: No septic system or other wastewater disposal system is proposed.

Source: Project Plans

7. CLIMATE CHANGE. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?			X	

Discussion: Greenhouse gas (GHG) impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008). BAAQMD has provided guidance on detailed methods for modeling GHG emissions from proposed projects (BAAQMD, 2011). On January 9, 2012, Alameda Superior Court rescinded the thresholds that BAAQMD had adopted. However, because the court did not rule on the substance of the thresholds, agencies and local governments can continue to use these thresholds.

GHG emissions were estimated using the Roadway Construction Emissions Model (RoadMod), version 7.1.2 (Sacramento Metropolitan Air Quality Management District, 2012), which BAAQMD recommends for linear construction projects, for each of the project components. Notably, there are no long-term sources of GHGs associated with project development. Once the project is completed, there will be no more GHG generation associated with the project. GHGs associated with construction would be generated by construction equipment, haul trucks, and worker vehicles. Maximum annual GHGs of 29 metric tons of CO2 would be emitted during the year 2013 for all construction activities related to this project. Thus, the proposed project would not exceed the BAAQMD's most stringent GHG threshold of 1,100 metric tons per year and would be considered less than significant.

Source: Source: Roadway Construction Emissions Model (RoadMod), ver. 7.1.2, Project Plans, BAAQMD *CEQA Air Quality Guidelines*

b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Discussion: San Mateo County is in the process of compiling an inventory of countywide GHG emissions. The inventory is in draft form at the time of this analysis (San Mateo County, 2012a). The County has also developed a Government Operations Climate Action Plan (San Mateo County, 2012b). The Climate Action Plan includes energy use reduction measures, transportation measures, and solid waste reduction measures to reduce the County Government GHGs. Since the project consists of stream and creek bank improvements and would not result in long-term sources of GHGs, these reduction strategies do not apply. Thus, the project would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

Source: San Mateo County, 2012a. County of San Mateo Greenhouse Gas Emission Inventory. Draft, March 2012, San Mateo County, 2012b. County of San Mateo Government Operations Climate Action Plan. September 2012.				
c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
Discussion: The project site does not contain forestland, nor will the project involve the removal of a significant number of trees. In fact, the re-vegetation plan for this project proposes to plant over 100 new trees to help both stabilize the reformed creek banks and to provide habitat within the damaged riparian corridor. Source: Project Plans				
d. Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X
Discussion: The project site is approximately 2.3 miles east of the Pacific Ocean and does not contain coastal cliffs/bluffs. There is no evidence to suggest that rising sea levels will directly impact the project site. Source: San Mateo County GIS				
e. Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
Discussion: See Question 7(e), above. Source:				
f. Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: See Question 8(i), below. Source:				
g. Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?			X	
Discussion: The project will construct grade control structures within the stream channel in order to reduce				

the velocity of the storm waters within the creek channel during peak storm events. The slope of the creek will also be built back up to help reduce the velocity. The hydrological regime of this creek is highly regulated by the large storm water retention pond at the head of the stream within the Ox Mountain Landfill, and by the general disturbance of the canyon by the landfill. The intention of the project is to reduce the velocity of the creek and reduce the amount of bank failure due to channel incision. There are no habitable structures proposed in or immediately adjacent to the creek.

Source: Project Plans

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X
Discussion: No hazardous materials, pesticides or herbicides, are proposed for use in this project. Source: Project Plans				
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
Discussion: The only hazardous material that is proposed for use in this project is diesel fuel to power construction equipment. Equipment will be refueled at the existing refueling station within the landfill. This area meets standard fuel containment measures including a secondary containment wall around the fuel tank. There is no new risk associated with this project. Source: Project Plans, Site visit				
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
Discussion: There are no existing or proposed schools within one mile of the project site. Source: Project Plans, Site visit.				

d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
Discussion: The project site is located adjacent to the Ox Mountain Landfill which is a hazardous materials site. However, the project will not involve the disturbance of any landfill areas. The water within CDLT creek is monitored as part of the Landfill's stormwater permit. There is no evidence to suggest that the proposed project will release hazardous substances from the landfill areas into the environment. Source: Project Plans, Site visit					
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?				X
Discussion: There are no airports within 2 miles of the project site. The project site is not within the boundaries of an airport land use plan. Source: County GIS database					
f.	For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?				X
Discussion: There are no private airstrips within a 2 mile radius of the project site. Source: County GIS database					
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
Discussion: There is no evidence to suggest that the project will interfere with any emergency response plan. No work will occur that will impede or close a public road. Source: Project Plans, Site visit, County GIS database					
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
Discussion: No habitable structures are proposed with this project. The CDLT creek corridor itself is not an area that would be susceptible to wildland fire in general. Source: Project Plans, Site visit, County GIS database					

i. Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The project will not create housing or other habitable structures. Source: Project Plans				
j. Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?			X	
Discussion: CDLT Creek is designated as a Flood Zone A (Areas with a 1% annual chance of flooding. Base Flood elevations not determined). Hydrological analysis performed for this project by the applicant's engineer indicates that overall, the creek's channel has capacity to carry the 100-year storm discharge with the exception of the 200' segment upstream from the Highway 92 crossing. This crossing is a 4' high by 6' wide concrete box culvert with a capacity of approximately 300 cfs. Therefore, flooding occurs at Highway 92 during flow greater than the 2-year event, and the backwater effect of the undersized pipe also causes upstream flooding. The proposed grade control structures will not significantly impede 100-year flood flows. As proposed, the project will only reduce the volume of the creek channel approximately 1 foot within the upper reach of Work Area 1. Given the overall capacity of the creek, this is a less than significant impact. Source: Project Plans				
k. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
Discussion: No habitable structures or structures with monetary value will be constructed within or immediately adjacent to CDLT creek. Source: Project Plans				
l. Inundation by seiche, tsunami, or mudflow?				X
Discussion: The project site is not near the ocean or any lakes, which precludes inundation by tsunami or seiche. There are no unstable slopes immediately adjacent to the creek from which a mudflow would originate. Source: Project Plans, Site visit, County GIS database				

9. HYDROLOGY AND WATER QUALITY. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***

a. Violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?		X		

Discussion: Construction activities associated with the project would require land disturbing activities such as grading, earthmoving, backfilling, and compaction. Additionally, project construction would involve use of chemicals and solvents such as fuel and lubricating grease for motorized heavy equipment. Such construction activities could dislodge soil and cause erosion or inadvertent spills of construction related chemicals into waterways resulting in adverse water quality impacts. Construction and ground disturbance activities associated with the project would occur within and directly adjacent to Corinda de Los Trancos Creek and water quality impacts could be significant in the immediate vicinity of construction activities as well as further downstream. Exposed soil from stockpiles and excavated areas could be transported by wind or stormwater and, if not properly managed, could increase the sediment load (turbidity) in stormwater runoff and the Creek. In addition, construction activities would require use of hazardous materials such as fuels and oils, which, if not managed appropriately, could become mobilized by run-off and contribute to non-point source pollution and degradation of water quality. Temporary storage of construction materials and equipment in work areas and staging areas also creates the potential for a release of hazardous materials, trash, or sediment into the Creek.

In most years, Corinda de Los Trancos Creek runs year round, albeit at a much reduced rate during the summer months. There is the potential that there will be some water flow in the Creek at the time of project construction. If that is the case, then the applicant will be required to dewater the section of the Creek where work is proposed. This is typically achieved thru the construction of a cofferdam and clean water bypass. Water resulting from dewatering operations would be required to comply with the local stormwater requirements prior to discharge (e.g., San Mateo County NPDES Permit CA0029921 as stated under Section 4.100.070 of the San Mateo County Municipal Code). However, dewatering activities have the potential to result in degradation of water quality if water is discharged in a manner that would result in erosion or contamination of Corinda de Los Trancos Creek. Implementation of Mitigation Measure 20 (below), which requires installation of a cofferdam, flow bypass pipes, or a diversion dam to divert water around the work area and includes sediment and turbidity control measures, will reduce potential water quality impacts associated with dewatering to a less than significant level.

Mitigation Measure 20: If surface water is present during construction, the applicant shall implement the following:

- Cofferdams, flow bypass pipes, or diversion dams shall be used to ensure continued flow around the work area.
- Adequate sediment and turbidity control measures shall be implemented. One or more fences of filter fabric shall be constructed across stream channels downstream of the lowermost cofferdams to reduce turbidity and sedimentation downstream of the stream construction sites during removal of cofferdams and until water clarity is re-established once stream flow is re-introduced to the stream channel in the work area.
- The presence of surface water, such as in-stream flow or pool habitat, could mean the potential for salmonids to occur in the work area. To relocate salmonids from the work area following installation of a cofferdam or diversion dam/bypass pipes, a fish rescue and relocation effort shall be conducted by qualified biologists utilizing NMFS prescribed methods for the safe handling of salmonids.

- The applicant shall have a biologist monitor the construction site during placement and removal of cofferdams, channel diversions, and access ramps to ensure that any adverse effects to salmonids are minimized. The biologist shall be on site during all dewatering events to capture, handle, and safely relocate steelhead, if present.

- Consistent with Mitigation Measures 22 and 23, contractors shall have a supply of erosion control materials, and fuel and hydraulic fluid spill containment supplies onsite to facilitate a quick response to unanticipated storm events, or fuel or hydraulic fluid spill emergencies.

- Consistent with Mitigation Measure 22, construction equipment used within the creek channel shall be checked each day prior to work within the creek

Implementation of silt fences and fiber rolls, as proposed in the applicant's plans, will control the discharge of sediment and pollutants from the construction site. Because proposed land disturbing activities would occur over an area of less than one acre, the Project is not be subject to a General Construction Permit under the National Pollutant Discharge Elimination System (NPDES) permit program under section 402(p) of the federal Clean Water Act. Therefore, the project would not be required to implement a Storm Water Pollution Prevention Plan and could result in the discharge of sediment or pollutants from the construction site, which could potentially result in a violation of water quality standards. Mitigation Measures 20 (above) and **21 (below)** specify best management practices to protect cold water habitat. Additionally, implementation of **Mitigation Measure 22** as well as **Mitigation Measure 23** (below) would reduce this impact to a less than significant level.

Mitigation Measure 21: Project materials shall be placed in locations and manners that would not impair surface water flow into or out of any water of the United States. If surface flow is present during construction, dewatering would ensure that near-normal downstream flows are maintained. Fill shall consist of suitable material and placement such that it would not be eroded by future high flows. Following completion of construction, temporary fill shall be removed to upland areas, dredged material shall be returned to its original location, and the affected areas shall be restored to preconstruction elevations. The area upstream and downstream of the project reach shall be monitored annually for a two year period post construction to qualitatively assess channel conditions.

Mitigation Measure 22: The applicant shall prepare a comprehensive stormwater pollution and erosion control plan for the project. Erosion control measures shall be in place prior to the start of construction activities and remain in place throughout all phases of project construction. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the County of San Mateo Department of Public Work's Contract Requirements for Erosion and Sediment Control and Contract Requirements for Water Pollution Control for Construction in Sensitive Areas, and at a minimum include, but not be limited to, the following measures (County of San Mateo 2013a; County of San Mateo, 2013b):

- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place.

- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.

- A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of

petroleum products.

- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.

- Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.

- Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused topsoil, if any, shall be broadly redistributed to the surrounding areas in such a manner that topography and vegetation cover would not be adversely impacted.

- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.

- Disturbed areas will be re-vegetated after completion of construction activities.

- Provide sanitary facilities for construction workers.

Mitigation Measure 23: The applicant shall use the following best management practices (BMPs) to minimize potential adverse effects of the project to groundwater and soils from chemicals used during construction activities:

- Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction;

- Avoid overtopping construction equipment fuel gas tanks;

- Provide secondary containment for any hazardous materials temporarily stored onsite;

- During routine maintenance of construction equipment, properly contain and remove grease and oils;

- Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and

- Properly dispose of discarded containers of fuels and other chemicals

The operation and maintenance activities associated with the project would result in minimal effects on water quality. After construction is completed, disturbed areas will be restored with biotechnical stabilization methods and plantings of native vegetation to minimize the potential for future erosion. Operation and maintenance activities would be similar to those under existing conditions, primarily monitoring of replanted vegetation. Such activities would not involve soil disturbance and are not expected to result in discharge of pollutants or violation of water quality standards or waste discharge requirements.

Source: Project Plans, County of San Mateo Department of Public Works Contract Requirements: Erosion and Sediment Control and Water Pollution Control for Construction in Sensitive Areas

b. Significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	

Discussion: The proposed project does not require substantial withdrawal of groundwater nor are any withdrawals proposed. It is possible that grading activities during project construction could intercept the local groundwater table and the proposed project may require short-term dewatering to accommodate installation of the bank stabilization measures. Such dewatering activities would be minimal and temporary in nature and as such, there would be no impacts to groundwater supplies or aquifers. Any effects related to lowering the groundwater table would be temporary since dewatering would be required for only a limited period during construction activities and highly localized within the vicinity of excavation activities. Therefore, if construction related groundwater dewatering is required, it would not affect local wells in the project area. As a result, impacts related to the depletion of groundwater resources would be less than significant.

The proposed project would not result in a substantial increase in impervious surface area and would not interfere significantly with groundwater recharge. Added impervious surfaces would be minimal and would consist of the rip-rap drop structure and the creek bank armoring. The bank armoring will be replanted with willows or other live plant materials. As a result, impacts related to local groundwater recharge would be less than significant.

Source: Project Plans

c. Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?			X	

Discussion: The proposed project will not result in the alteration of the course of Corinda de Los Trancos Creek. Laying back portions of the creek banks will not substantially alter the existing drainage pattern of the project area. In fact, laying back the creek banks to a more stable slope will reduce the potential for erosion and sedimentation into the creek due to bank failure caused by near vertical slopes. Stormwater runoff will

continue to flow directly into the creek off of adjacent top of bank areas and there will be no substantial change above the current baseline in runoff flow rates nor will the project increase erosion or siltation offsite after construction is completed. In the long-term, the proposed project is expected to reduce erosion and siltation in Corinda de Los Trancos Creek. The proposed bank stabilization methods would include a combination of structural materials, which provide short-term protection from erosion and live cuttings. As the live cuttings become established, the roots provide long-term stabilization to the soils, while the vegetation reduces flow velocities and sheer stresses on the bank surface. In the long term, these measures will provide a benefit to the Creek by reducing erosion and siltation, and providing increased habitat value. Source: Project Plans				
d. Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				X
Discussion: There will be no substantial change in runoff flow rates. The project will restore failing banks but will not alter the drainage pattern of the area nor will it substantially alter flows within the channel. Therefore, there will be no increase in the rate or volume of surface runoff that could result in on- or off-site flooding. Source: Project Plans				
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?		X		
Discussion: As discussed previously, the project will create minimal new amounts of impervious surfaces in the form of rip-rap to be used to armor the creek banks. However, it is not anticipated that this increase will cause significant amounts of new runoff. Construction activities associated with the project have the potential to result in polluted runoff, a potentially significant impact. However, construction is expected to occur in the summer when runoff-generating rain events are not likely. Refer to question 9(a) above for description of BMPs that will be implemented to prevent discharge of polluted runoff from the construction site. With implementation of these mitigation measures, the impact will be less than significant. Source: Project Plans				
f. Significantly degrade surface or groundwater water quality?		X		
Discussion: See Question 9(a) above. Source:				
g. Result in increased impervious surfaces and associated increased runoff?			X	
Discussion: As discussed for question 9(b) and 9(e), the proposed project will not result in a substantial increase in impervious surface area and it is not anticipated that there will be a substantial change above the				

current baseline in runoff flow rates. The impact is less than significant.

Source: Project Plans

10. LAND USE AND PLANNING. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Physically divide an established community?				X
Discussion: There is no community adjacent to the project site. Source: Project Plans, Site visit, County GIS database				
b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
Discussion: The project is intended to address an on-going erosion issue that is negatively impacting both CDLT Creek and the larger Pilarcitos Creek watershed. The County General Plan contains policies that encourage land owners to address erosion problems on their property to avoid impacting public resources and infrastructure. This project is in keeping with those policies. Policies to protect biological and other resources have been included in the relevant sections of this Initial Study. Source: Project Plans, County General Plan, LCP, Zoning Regulation				
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
Discussion: The project site is not within the boundaries of an approved habitat conservation plan or natural community conservation plan. Source: Source: Project Plans, County GIS database				
d. Result in the congregating of more than 50 people on a regular basis?				X
Discussion: There is no evidence to suggest that the project will result in the congregating of more than 50 people on a regular basis. Source: Project Plans				
e. Result in the introduction of activities not currently found within the community?				X

Discussion: There is no evidence to suggest that the project will result in the introduction of new activities to the project site, after completion of the project. Source: Project Plans					
f.	Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?				X
Discussion: There is no evidence to suggest that the project will encourage further off-site development or encourage increased on-site development. Source: Project Plans					
g.	Create a significant new demand for housing?				X
Discussion: There is no evidence to suggest that the project will create additional demand for housing. Source: Project Plans					

11.	**MINERAL RESOURCES**. Would the project:	***Potentially Significant Impacts***	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a.	Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X
Discussion: There are no identified mineral resources on the project site. Source: SMC. General Plan					
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
Discussion: The project site is not designated as a mineral resource recovery site. Source: SMC. General Plan					

12.	**NOISE**. Would the project result in:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
Discussion: The project could potentially generate noise levels above those set in the County Noise Ordinance during certain phases of the stream repair project. In particular when heavy equipment is being used to move the large boulders into place within the stream channel. The nearest sensitive receptor is the residence on the Leemos Ranch farm, which is approximately 150 feet away from the Area 1 construction site. Additional noise sources in the area include traffic on Highway 92 and operational noise originating at the landfill. The San Mateo County Code, Section 4.88.360 (Noise Ordinance), provides the following exemption for construction related noise: "noise sources associated with demolition, construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 6:00 p.m. and 7:00 a.m. weekdays, 5:00 p.m. and 9:00 a.m. on Saturdays or at any time on Sundays, Thanksgiving and Christmas (are exempt from the restrictions of the Noise Ordinance)". None of the proposed project activities would occur during the above periods. As a result, the project would have a less-than-significant impact with respect to County noise standards. Source: Project Plans, County GIS database, County Noise Ordinance				
b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?				X
Discussion: It is not anticipated that this project will utilize heavy equipment that creates large amounts of vibration, such as vibratory rollers which are typically used in road construction. Source: Project Plans				
c. A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
Discussion: The project is a stream restoration. No habitable structures are proposed, nor permanent mechanical equipment placed on site which could generate noise, post construction. Source: Project Plans				
d. A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
Discussion: See Question 12(a), above. Source:				
e. For a project located within an airport land use plan or, where such a plan has not been				X

adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?				
Discussion: The project site is not within an airport land use plan or within 2 miles of a public or private airport/airstrip. Source: County GIS				
f. For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels?				X
Discussion: See Question 12(f), above. Source:				

13. POPULATION AND HOUSING. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Induce significant population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
Discussion: The project involves the restoration of a degraded stream. No infrastructure will be improved or extended to accommodate this project. No commercial, industrial or residential uses are proposed. Source: Project plans				
b. Displace existing housing **(including low- or moderate-income housing)**, in an area that is substantially deficient in housing, necessitating the construction of replacement housing elsewhere?				X
Discussion: There is no housing within or adjacent to the project site. Source: Project plans, County GIS database, Site Visit				

14. PUBLIC SERVICES. Would the project result in significant adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
a.	Fire protection?			X	
b.	Police protection?			X	
c.	Schools?				X
d.	Parks?				X
e.	Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?				X

Discussion: Because construction activities would be short-term and would involve a workforce of 4 to 16 construction workers on any given day, project construction would not significantly increase demand for fire and police protection services throughout the project vicinity, and would not change any uses on the site. The project is not expected to significantly affect the Coastside Fire Protection District's or San Mateo County Sheriff's Office's ability to maintain service ratios, response times, and other performance objectives. No new or physically altered facilities would be required. For these reasons, the project's impact with respect to the provision of fire and police protection facilities would be less than significant. There is no aspect of the project that would result in an increase in demand on local school services. The proposed project would not result in an increase of permanent employees; therefore it would not result in a permanent increase in the use of existing park and recreation facilities and new or physically altered facilities would not be required. The proposed project would not involve new permanent employees and, therefore, it is not expected to increase the use of other public facilities such as libraries or hospitals.

Source: Project Plans

15. RECREATION. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
a.	Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?				X

Discussion: There would be no impact as the project does not include any recreational facilities, is not in the vicinity of existing recreational facilities, and would not cause an increase in population or population densities or any other change that would result in an increase in the use of nearby parks. Source: Project Plans				
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
Discussion: See Question 15(a), above. Source:				

16. TRANSPORTATION/TRAFFIC. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
Discussion: Project construction would incrementally increase traffic volumes on Highway 92 for a short period of time during project construction. The additional traffic would be due to construction worker trips and the delivery of construction equipment and materials to and from the project site. The expected increase in traffic would take place between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays, for approximately 45 days. The estimated increase in trips along Highway 92 would be fewer than twelve round trips per day, based upon seven construction workers and four material delivery trips. Based on this estimate, the project would not result in a substantial increase in traffic during construction and would not cause an exceedance of any level of service standard or cause inadequate emergency access. As such, the project would be consistent with the C/CAG's Congestion Management Program (2011). For these reasons, the proposed project would have a less than-significant impact with respect to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, or congestion management program. Source: City/County Association of Governments (C/CAG) of San Mateo County, 2011, Congestion Management Program; Project Plans				
b. Conflict with an applicable congestion			X	

management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?				
Discussion: See Question 16(a) above. Source:				
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks?				X
Discussion: The project site is not located close to any airport, and the project would not intrude into an airport's air space, nor would construction or operational activities affect air traffic patterns; therefore, no impact would occur.				
d. Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		

Discussion: The project will not alter any existing roadways or permanently utilize equipment that would be incompatible with existing vehicular traffic. The project could however, temporarily constrict the access road into the Ox Mountain landfill if vehicles, including construction equipment, need to be parked on the road in order to access work areas within the creek channel. This restricted access could create a temporary safety hazard with the larger semi-trucks delivering trash to the landfill. To mitigate this potential impact, the following measure is proposed:

Mitigation Measure 24: The construction contractor(s) shall develop a construction management plan for review and approval by the County's Planning and Public Works Departments. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, any safety hazards and traffic congestion during construction:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, signs, and designated construction access routes.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular traffic, and circulation and safety. Impacts to Highway 92 shall be minimized to the greatest extent possible.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

Source: County GIS, Project Plans

e.	Result in inadequate emergency access?		X		
Discussion: See Question 16(d), above. Source:					
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X
Discussion: The project involves the repair of a degraded stream channel. It is not expected to generate, or otherwise affect existing, public transit, bicycle, or pedestrian, facilities or plans or users of such facilities. Therefore, the project would have no impact with respect to these issues. Source: Project Plans					
g.	Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?				X
Discussion: The project involves the repair of a degraded stream channel. As such there is no evidence to suggest that the project will have a permanent impact upon pedestrian traffic or patterns. There will be a minor, temporary increase in pedestrian traffic (5-10 pedestrians where there are currently none) during construction as project workers navigate through the project site performing their duties. Source: Project plans					
h.	Result in inadequate parking capacity?				X
Discussion: There is adequate parking for the construction workers within the Ox Mountain Landfill processing area. The construction management plan required above under Mitigation Measure 24 will address parking of construction equipment. There is no evidence to suggest that the project will result in parking problems on the project site post construction. Source: Project Plans					

17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
Discussion: The proposed project will not produce any wastewater nor will it require the construction of new water or wastewater treatment facilities or expansion of such facilities. Therefore, the project will not conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board and will not				

affect capacity of the County's wastewater treatment system; no impact will occur. Source: Project Plans				
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
Discussion: See Question 17(a), above. Source:				
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
Discussion: The project involves the repair of a degraded stream channel. The project does not propose to construct new storm drainage facilities or expand existing facilities. Therefore, no impact would occur from project implementation. Source: Project Plans				
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
Discussion: The project will not result in habitable structures which require water for either consumption or fire suppression. There is no evidence to suggest that the project will require water beyond that necessary for dust control and initial irrigation of the re-vegetated slopes. This demand can be met by the landfill's existing supply. Source: Project Plans				
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
Discussion: The project will not result in habitable structures which require wastewater treatment. There is no evidence to suggest that the project will produce wastewater. Source: Project Plans				
f. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?				X

Discussion: The project will not generate significant solid waste. There will be some solid waste generated during the re-vegetation phase as packaging from plant material is disposed. It is not anticipated that this will be a significant amount. Source: Project Plans				
g. Comply with Federal, State, and local statutes and regulations related to solid waste?				X
Discussion: See Question 17(f), above. Source:				
h. Be sited, oriented, and/or designed to minimize energy consumption, including transportation energy; incorporate water conservation and solid waste reduction measures; and incorporate solar or other alternative energy sources?				X
Discussion: The above cited measures are applicable to built structures such as homes or industrial buildings. Such measures are not applicable to this project, which is a stream restoration project. Source: Project Plans				
i. Generate any demands that will cause a public facility or utility to reach or exceed its capacity?				X
Discussion: There is no evidence to suggest that this project will cause a public facility or utility to reach or exceed its capacity. Source: Project Plans				

18. MANDATORY FINDINGS OF SIGNIFICANCE.				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
a. Does the project have the potential to degrade the quality of the environment, significantly reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		

Discussion: Potentially significant impacts were identified for biological resources and mitigation measures were proposed which will reduce these impacts to a less than significant level and are not expected to degrade environmental quality, or substantially reduce the habitat or affect populations of any wildlife, fish, or plant species. It has been determined that construction of the proposed project would not have any impact on any examples of the major periods of California history or prehistory.				
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
Discussion: The project would not have impacts to agriculture or forestry resources, mineral resources, or population and housing that would combine with other projects. The proposed activities could have potential impacts with respect to aesthetics, biological resources, hydrology and water quality, and transportation and traffic. However, such impacts would be limited to the project site and, where necessary, mitigated such that they would not substantially combine with other off-site impacts. The project's potential impacts with respect to air quality and greenhouse gas emissions, however, could extend beyond the site to combine with impacts from other projects. As described in Sections 3 and 7, Air Quality and Climate Change, respectively, the BAAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable in developing its CEQA significance thresholds. The BAAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. As discussed in the above sections, the proposed project's emissions would be limited to the construction period and would be below the BAAQMD cumulatively considerable threshold. For the reasons presented above, the proposed project is not be expected to result in adverse impacts to human beings, either directly or indirectly. All impacts identified in this document are less than significant, or reduced to less than significant levels with implementation of mitigation measures, and the project's incremental contribution to potential cumulative impacts will not be cumulatively considerable. Therefore, the project's impact is considered less than significant.				
c. Does the project have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly?			X	
Discussion: See Question 18(b) above.				

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
U.S. Army Corps of Engineers (CE)	X		Section 404 permit
State Water Resources Control Board	X		Construction General Permit

AGENCY	YES	NO	TYPE OF APPROVAL
Regional Water Quality Control Board	X		401 Water Quality Certification and/or Waste Discharge Requirements
State Department of Public Health			
San Francisco Bay Conservation and Development Commission (BCDC)			
U.S. Environmental Protection Agency (EPA)			
County Airport Land Use Commission (ALUC)			
CalTrans			
Bay Area Air Quality Management District			
U.S. Fish and Wildlife Service	X		Biological Opinion
Coastal Commission			
Calif. Dept. of Fish & Wildlife	X		Streambed Alteration Agreement
City			
Sewer/Water District:			
Other:			

MITIGATION MEASURES

	Yes	No
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.	X	

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: The applicant shall implement the proposed re-vegetation plan as depicted in the project plans immediately upon completion of grading activities.

Mitigation Measure 2: To ensure that re-vegetation efforts are successful, the applicant shall implement a five year monitoring program for those areas affected by the project. Woody plant survivorship and canopy cover progress will be measured using either the line-intercept methodology or direct counting of healthy, live plantings in a representative segment of the restoration area. Natural recruitment of native woody trees and shrubs will be recorded and included in the estimates. Tree and shrub density will be calculated using the as-built acreage of planting areas. A comprehensive species list will be recorded for the monitoring area to document species richness and relative cover by native and non-native plant species. Photographs representative of the overall progress of riparian establishment will be taken in each year to provide visual documentation of vegetation establishment. By the fifth growing season following planting, the total number

of planted and naturally recruited native trees and shrubs in the re-vegetation areas shall be equal to at least 60 percent of the number of trees and shrubs originally planted. All planted and recruited trees and shrubs counted must be alive and in good health. If by the fifth year the 60 percent target has not been met, then the applicant shall replant as necessary and monitor for an additional five years. The applicant shall submit annual monitoring reports to the County Planning Department outlining the progress of re-vegetation efforts.

Mitigation Measure 3: The County shall require construction contractors to implement the following BAAQMD's Basic Construction Mitigation Measures, listed below:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material into or off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the County regarding the project. The County shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

- **Mitigation Measure 4:** The applicant shall submit the names and credentials of biologists proposed to perform preconstruction surveys and monitoring to the USFWS for written approval at least 15 days prior to commencement of any activities.
-
- **Mitigation Measure 5:** Each construction area will be surrounded by snake exclusionary fencing one week prior to the start of construction.
-
- **Mitigation Measure 6:** A USFWS-approved biologist will survey the work areas no less than 5 days prior to the onset of activities and after the snake exclusion fence has been installed. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. In making this determination the USFWS shall consider if an appropriate relocation site exists. If the Service approves moving animals, the approved biologist shall be allowed sufficient time to move California red-legged frogs from the work areas before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and monitoring of California red-legged frogs. If a California red-legged frog is found nearby, but outside a proposed work area, it will not be disturbed and USFWS will be notified. The biologist will also report any observations of other listed species addressed in this biological assessment.
-

- **Mitigation Measure 7:** Before any construction activities begin on the project, a USFWS-approved biologist will conduct a training session for all construction personnel. The training will include a description of the listed species with potential to occur, their habitat, and the general measures that are being implemented to conserve the species as they relate to the project and the boundaries within which the project may be accomplished (i.e. work areas).
- **Mitigation Measure 8:** A qualified construction monitor shall be present on-site, as required by regulatory permit conditions, during the initial clearing and grubbing of each work area. All vegetation clearing shall be done by hand and supervised by a qualified biologic monitor.
- **Mitigation Measure 9:** During project activities, all trash will be properly contained, removed from the work areas and disposed of regularly. Following construction, all trash and construction debris from work areas will be removed.
- **Mitigation Measure 10:** All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 20 meters (66 feet) from any riparian habitat or water body. The applicant shall ensure contamination of habitat does not occur during such operations. Prior to the start of construction, the applicant shall prepare a plan to ensure a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- **Mitigation Measure 11:** A USFWS-approved biologist will ensure that the spread or introduction of invasive plant species will be avoided to the maximum extent possible. When practical, invasive exotic plants in the project area will be removed.
- **Mitigation Measure 12:** Project areas that are disturbed will be re-vegetated with an appropriate assemblage of native riparian, wetland and upland vegetation.
- **Mitigation Measure 13:** Stream contours will be returned to their original condition at the end of project activities, unless consultation with USFWS has determined that it is not beneficial to the species or feasible.
- **Mitigation Measure 14:** The number of access routes, number and size of staging areas, and the total area of the project will be limited to the minimum necessary to achieve the project goals. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian areas where feasible. Where impacts occur in staging areas and access routes, restoration will be performed.
- **Mitigation Measure 15:** Work activities will be completed between August 1 and November 1. Should the proponent or applicant demonstrate a need to conduct activities outside this period, the USACE may authorize such activities after obtaining the Service's approval.
- **Mitigation Measure 16:** To control erosion during and after project implementation, the applicant shall implement best management practices.
- **Mitigation Measure 17:** A USFWS-approved biologist will permanently remove, from within the project area, any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the maximum extent possible.
- **Mitigation Measure 18:** Vegetation clearing and other construction work will occur outside the nesting birds season (Feb 15 to August 1). If work must be initiated during the nesting season, a preconstruction survey for nesting birds will be performed by a qualified biologist. Any active nests will be avoided until all the young have fledged and are independent.

Mitigation Measure 19: A qualified biologist will monitor the removal and relocation of woodrat houses and placement of refuge structures (e.g. half wine barrels and slash piles) for any woodrat nests located within the access road footprint. If young woodrats are found in any house, all removed material will be replaced and removal of that house will not continue until the young have left the house. Prior to dismantling houses, data will be collected to document the following characteristics of the house: house-building materials, contents of house cavities (particularly stored food and plants), percent and type of ground cover immediately around each house, tree and shrub species surrounding the house, and the house substrate (e.g., ground, tree, etc.). New houses will be established on site for each house removed. New house designs will be constructed of a half wine barrel placed upside down in appropriate microhabitat with materials from the nest chamber of the dismantled house placed inside, and other house materials placed over and around the barrel, including a long tunnel-shaped entrance that leads only into the receptacle.

Mitigation Measure 20: If surface water is present during construction, the applicant shall implement the following:

- Cofferdams, flow bypass pipes, or diversion dams shall be used to ensure continued flow around the work area.
- Adequate sediment and turbidity control measures shall be implemented. One or more fences of filter fabric shall be constructed across stream channels downstream of the lowermost cofferdams to reduce turbidity and sedimentation downstream of the stream construction sites during removal of cofferdams and until water clarity is re-established once stream flow is re-introduced to the stream channel in the work area.
- The presence of surface water, such as in-stream flow or pool habitat, could mean the potential for salmonids to occur in the work area. To relocate salmonids from the work area following installation of a cofferdam or diversion dam/bypass pipes, a fish rescue and relocation effort shall be conducted by qualified biologists utilizing NMFS prescribed methods for the safe handling of salmonids.
- The applicant shall have a biologist monitor the construction site during placement and removal of cofferdams, channel diversions, and access ramps to ensure that any adverse effects to salmonids are minimized. The biologist shall be on site during all dewatering events to capture, handle, and safely relocate steelhead, if present.
- Consistent with Mitigation Measures 22 and 23, contractors shall have a supply of erosion control materials, and fuel and hydraulic fluid spill containment supplies onsite to facilitate a quick response to unanticipated storm events, or fuel or hydraulic fluid spill emergencies.
- Consistent with Mitigation Measure 22, construction equipment used within the creek channel shall be checked each day prior to work within the creek

Mitigation Measure 21: Project materials shall be placed in locations and manners that would not impair surface water flow into or out of any water of the United States. If surface flow is present during construction, dewatering would ensure that near-normal downstream flows are maintained. Fill shall consist of suitable material and placement such that it would not be eroded by future high flows. Following completion of construction, temporary fill shall be removed to upland areas, dredged material shall be returned to its original location, and the affected areas shall be restored to preconstruction elevations. The area upstream and downstream of the project reach shall be monitored annually for a two year period post construction to qualitatively assess channel conditions.

Mitigation Measure 22: The applicant shall prepare a comprehensive stormwater pollution and erosion control plan for the project. Erosion control measures shall be in place prior to the start of construction

activities and remain in place throughout all phases of project construction. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the County of San Mateo Department of Public Work's Contract Requirements for Erosion and Sediment Control and Contract Requirements for Water Pollution Control for Construction in Sensitive Areas, and at a minimum include, but not be limited to, the following measures (County of San Mateo 2013a; County of San Mateo, 2013b):

- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place.

- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.

- A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of petroleum products.

- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.

- Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.

- Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused topsoil, if any, shall be broadly redistributed to the surrounding areas in such a manner that topography and vegetation cover would not be adversely impacted.

- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.

- Disturbed areas will be re-vegetated after completion of construction activities.

- Provide sanitary facilities for construction workers.

Mitigation Measure 23: The applicant shall use the following best management practices (BMPs) to minimize potential adverse effects of the project to groundwater and soils from chemicals used during construction activities:

- Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction;
- Avoid overtopping construction equipment fuel gas tanks;
- Provide secondary containment for any hazardous materials temporarily stored onsite;
- During routine maintenance of construction equipment, properly contain and remove grease and oils;
- Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and
- Properly dispose of discarded containers of fuels and other chemicals

Mitigation Measure 24: The construction contractor(s) shall develop a construction management plan for review and approval by the County's Planning and Public Works Departments. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, any safety hazards and traffic congestion during construction:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, signs, and designated construction access routes.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular traffic, and circulation and safety. Impacts to Highway 92 shall be minimized to the greatest extent possible.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

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

X I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because of the mitigation measures in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

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

(Signature)

Date

(Title)

Attachment A: Project Plans

Attachment B: Applicant's Biological Report

Attachment C: Applicant's Design Report