

2nd Addendum to the Environmental Impact Report on the
Natomas Levee Improvement Program
Landside Improvements Project—Phase 2 Project



State Clearinghouse # 2007062016

Prepared for:



August 2009

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Natomas Levee Improvement Program
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SECOND ADDENDUM TO THE PHASE 2 LANDSIDE EIR

INTRODUCTION

This addendum to the *Natomas Levee Improvement Program Landside Improvements Project Environmental Impact Report* (State Clearinghouse No. 2007062016) (2007 Landside EIR) (SAFCA 2007) addresses the proposed construction of three elements of the Natomas Levee Improvement Program (NLIP) Landside Improvements Project (Phase 2 Project). It discusses proposed minor changes in the Phase 2 Project as described and analyzed in the previously certified 2007 Landside EIR and the supplement to the 2007 Landside EIR (SAFCA 2008a) (SEIR). This document is an addendum to the 2007 Landside EIR as supplemented. The 2007 Landside EIR and the SEIR are hereby incorporated by reference, and are available at the Sacramento Area Flood Control Agency's (SAFCA's) offices at 1007 7th Street, 7th Floor, Sacramento, CA 95814, and online at SAFCA's Web site (http://www.safca.org/Programs_Natomas.html).

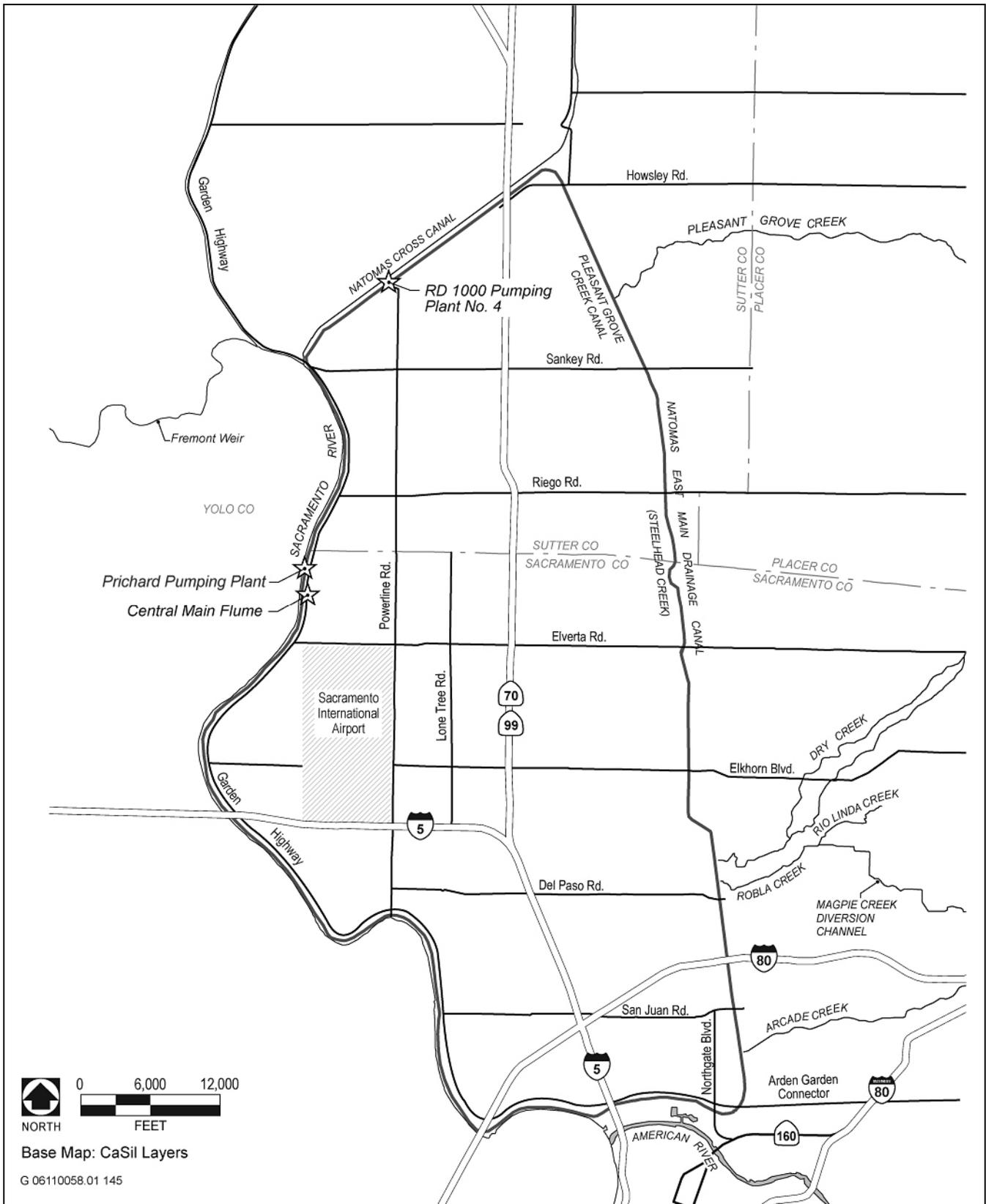
In the 2007 Landside EIR, SAFCA described three actions as part of the program. First, as part of the Phase 2 Project, SAFCA described the need to raise the outfall pipes for Reclamation District (RD) 1000 Pumping Plant No. 4, which cross the Natomas Cross Canal (NCC) south levee in Reach 2 and discharge into the NCC (SAFCA 2007:2-22). SAFCA also identified the need to remove encroachments on the landside of the Sacramento River east levee (SAFCA 2007:2-60). In addition, SAFCA identified the need to extend the pipes connecting the Prichard Pumping Plant and the realigned Elkhorn Canal, which would require vegetation removal (SAFCA 2007:2-38). The locations of these activities are depicted in **Plate 1**.

Minor changes in the implementation of these actions are proposed. First, as part of raising the RD 1000 Pumping Plant No. 4 outfall pipes as described in the 2007 Landside EIR, SAFCA proposes to replace the outfall structure at the location where the outfall pipes enter the NCC. This would require the construction of a cofferdam on the waterside of the NCC south levee to dewater the area surrounding the outfall. This cofferdam would be constructed in the NCC channel. Second, the 2007 Landside EIR project description did not specifically identify the Central Main Flume as a landside utility facility that must be removed. SAFCA must remove the westernmost segment of this feature between the toe of the existing Sacramento River east levee and the eastern edge of the realigned Elkhorn and Giant Garter Snake (GGS)/Drainage Canals to construct the adjacent levee and seepage berm and to remove what would otherwise be a remnant section of the flume between the seepage berm and the canals. Third, the extension of the pipes connecting the Prichard Pumping Plant and the Elkhorn Canal would require removal of slightly more vegetation than described in the 2007 Landside EIR and the SEIR. Because these actions constitute project changes, SAFCA has prepared this addendum to the 2007 Landside EIR as supplemented.

PROJECT DESCRIPTION

COFFERDAM CONSTRUCTION AT RECLAMATION DISTRICT 1000 PUMPING PLANT No. 4 AND RAISING OF THE PUMPING PLANT OUTFALL

RD 1000 Pumping Plant No. 4, located along the NCC south levee, pumps water from the RD 1000 North Drain into the NCC. To raise the outfall elevation at RD 1000 Pumping Plant No. 4 above the 200-year flood elevation and reconstruct the outfall pipes and outfall structure at the location where the pipes enter the NCC, as identified in the 2007 Landside EIR, the portion of the NCC immediately surrounding the outfall must be dewatered. Dewatering the area requires that SAFCA construct a cofferdam in a U shape surrounding the outfall and connecting with the waterside bank of the NCC south levee at RD 1000 Pumping Plant No. 4 (**Plate 1**). Based on the typical water levels in the NCC at the time this work would occur, SAFCA anticipates that the cofferdam would be constructed of rock riprap. The sequencing of construction of the outfall and cofferdam is shown in **Appendix A**.



Source: Adapted by EDAAW in 2009

**Reclamation District 1000 Pumping Plant No. 4,
Prichard Pumping Plant, and Central Main Flume Location Map**

Plate 1

INSTALLATION

The construction contractor would construct a rock cofferdam composed of angular washed rock and place the rock so that it binds with the underlying rock already in the channel and creates a stable configuration. The cofferdam would prevent water from entering the work site while allowing water to flow around the work zone (the cofferdam would not completely obstruct the channel). The shape would resemble a half-circle or U shape extending from the waterside slope of the NCC south levee into the channel. The rock would be placed by using an excavator with a bucket and dipping the filled bucket below the water surface and spilling the rock below the water surface so that rock freefall is minimized. After the rock has been placed, the contractor would place a thin layer (less than about 6 inches thick) of three-quarter- to 1½-inch washed crushed rock over the streamside surface of the cofferdam. This crushed rock would provide a relatively smooth surface over which the contractor would place a rubberized liner that would form the water barrier of the cofferdam, minimizing the potential for water leakage and the possible occurrence of a silt plume from construction within the contained area.

EQUIPMENT

The contractor would use an excavator to place the rock for the cofferdam. Work would occur when the levee is degraded for construction of improvements to the RD 1000 Pumping Plant No. 4 outfall pipe. The excavator would access the work site from the degraded levee, using the existing ramp from the top of the levee to the discharge pipes. The excavator arm, bucket, and tracks would be cleaned of mud and other debris before the excavator was moved to the work site. The excavator would initially sit on the existing berm at the waterside toe of the levee. After a sufficient volume of rock is placed and arranged in a stable condition, the excavator would be moved out onto the cofferdam to place the rock material that cannot be reached from the NCC south levee waterside bank.

DEWATERING AND CONSTRUCTION

After the cofferdam is constructed, the contractor would pump water out of the enclosed work area using a pump and intake and discharge hoses. The intake hose would be fitted with a screen with a one-quarter-inch mesh opening. The discharge water would be pumped either over the levee embankment or directly into the canal. If the contractor discharges the water back into the NCC, a silt bag cover would be fitted over the hose to minimize the discharge of sediment.

After the area inside the cofferdam is dewatered, the foundation area of the outfall structure would be excavated. During construction of the new outfall structure, additional pumping would likely be required to maintain the lowered water elevation within the cofferdam. This discharge water would be pumped over the levee for proper disposal on the landside of the NCC south levee or directly into the NCC as described above. The cofferdam would be in place for approximately 3 months.

FUELING OF EQUIPMENT

The contractor would fuel the equipment used on the work site (such as the excavator and water pump) on top of the levee crown, away from the stream zone, to ensure that fuels are not discharged into the NCC or below the high-water mark.

REMOVAL OF COFFERDAM

During cofferdam removal, the contractor would use some of the rock from the cofferdam to fill in the area around the Pumping Plant No. 4 discharge outfall structure. After the initial placement of rock is complete, water would be pumped into the cofferdam area to equalize the water pressure on the rubberized liner. The liner would then be removed. The contractor would then remove the remaining rock that is not used for the new plant outfall apron.

PRICHARD PUMPING PLANT VEGETATION REMOVAL AND EXCAVATION

To accommodate the longer distance between the realigned Elkhorn Canal and the Prichard Pumping Plant and the higher design elevation of the Sacramento River east levee, SAFCA proposes to replace the existing pipelines

with longer pipes. Starting at the existing Prichard Pumping Plant concrete vault, the existing 60-inch-diameter corrugated metal pipe would be removed and replaced with two 36-inch and one 30-inch welded steel pipes. Two construction stages are anticipated. Initially, an approximately 17-foot-wide trench at varying depths would be excavated in which to lay the pipes and the trench area around the pipes would be backfilled. An existing positive closure valve (slide gate) on the waterside of the levee would be removed. A flexible coupling would be constructed on the waterside to connect the welded steel pipes to temporary high-density polyethylene (HDPE) pipes that would be constructed through the area of the adjacent setback levee. Additional existing structures would be removed. The temporary HDPE pipes, which are flexible, would allow the adjacent levee fill to settle over a period of approximately 1 year without generating unacceptable stresses in the steel pipe sections. Another flexible coupling would be constructed on the landside to connect the temporary pipe to discharge pipes that would continue to the Prichard distribution box. During the second stage, permanent pipes would be constructed to replace the HDPE pipes. The permanent pipes would be raised to be above the “200-year” design water surface profile of the adjacent setback levee. Stage 2 construction would require the Prichard pumps to be upgraded to accommodate the higher water pressure needed to pump across the raised adjacent setback levee; the volume of water pumped would remain the same.

These activities are consistent with the description of the program analyzed in the 2007 Landside EIR as supplemented; however, additional vegetation removal beyond the acreages identified in the 2007 Landside EIR and SEIR would be required. Vegetation removal as part of the proposed work would be conducted on both the landside and the waterside of the Sacramento River east levee. Some vegetation removal on the landside has already occurred in preparation for the landside improvements and was part of the area approved in the California Department of Fish and Game streambed alteration agreement for the Phase 2 Project and the certified 2007 Landside EIR and SEIR. Additional vegetation removal on the waterside and landside would be necessary to accommodate the project changes noted in this addendum. Vegetation types and acreages are identified in **Table 1**.

Table 1 Vegetation and Habitat Impacts Analyzed in the Addendum Compared to Previously Disclosed Impacts		
Impacts Associated with New Activities		
Habitat Affected	Extent of Additional Area Affected (acres)	
Central Main Flume		
Woodlands	1.04	
Jurisdictional waters (ditches)	0.12	
Prichard Pumping Plant Vegetation Removal and Excavation		
Ruderal and annual grassland	0.09	
Woodland	1.67	
RD 1000 Pumping Plant No. 4		
Aquatic giant garter snake habitats	0.075 (surface area to be dewatered, temporary impact)	
Summary of Impacts for the Phase 2 Project		
Habitat Affected	Previously Identified Acreage	Total Including New Activities
Woodlands	17.0 ¹	19.71
Jurisdictional waters	16.3 ²	16.42
Ruderal and annual grasslands	152.0 ³	152.09
Aquatic giant garter snake habitats	26.8 ⁴	26.875
Notes: RD = Reclamation District ¹ SAFCA 2008b:3.3-10. ² Jewell, pers. comm., 2009:1. ³ SAFCA 2008b:3.3-9. ⁴ SAFCA 2008b:3.3-6. Source: Data compiled by EDAW in 2009		

REMOVAL OF THE CENTRAL SEGMENT OF THE CENTRAL MAIN FLUME

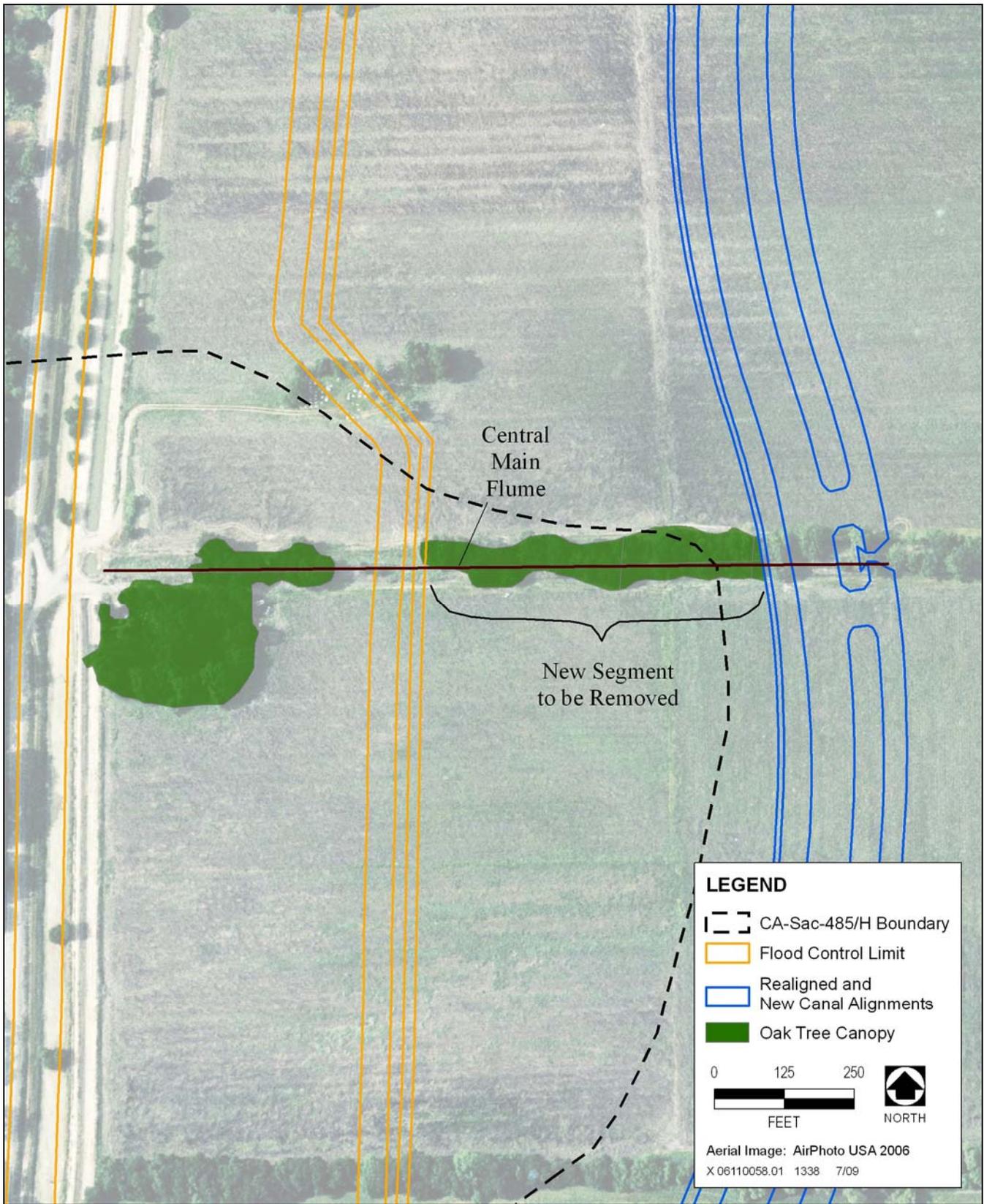
The Central Main Flume consists of an approximately 10-foot-wide concrete-lined highline channel that conveys water from the current alignment of the Elkhorn Canal to water users to the east. Because the Elkhorn Canal is in the footprint of proposed improvements to the Sacramento River east levee, the canal would be moved east, parallel to the proposed alignment of the GGS/Drainage Canal. The segment of the Central Main Flume west of the realigned Elkhorn and GGS/Drainage Canals would be dewatered and removed because it would be obsolete (**Plate 2**). A portion of this flume is located under the footprint of the proposed improvements to the Sacramento River east levee; impacts associated with removal of the segment inside the footprint of Sacramento River east levee improvements and the realigned Elkhorn and GGS/Drainage Canals are not further analyzed in this addendum because those impacts were disclosed in the 2007 Landside EIR as supplemented.

The Central Main Flume is a concrete-lined flume that was constructed on an earthen berm slightly above the existing grade. The 2007 Landside EIR described impacts associated with resources that are in the footprint of the Sacramento River east levee improvements, including resources such as woodlands adjacent to the flume. The impacts disclosed in the 2007 Landside EIR as supplemented include resources along the flume that are in the footprint of the Sacramento River east levee and resources in the footprint of the realigned Elkhorn and GGS/Drainage Canals, where the flume and other encroachments would be removed. SAFCA has identified approximately 625 additional feet of the flume (between the two previously identified segments) that would need to be removed (**Plate 2**). The concrete lining of the flume would be broken into rubble and removed by an excavator or other piece of heavy equipment working from one side of the flume. Existing trees along the sides of the flume would be felled to allow for equipment access to the flume, and the stumps would be cut to be level with the existing grade and painted with an herbicide to prevent resprouting. After the concrete is removed, the remaining flume cross section would be filled with imported earthen material, and the flume alignment would be capped with the same imported fill to provide a cover over any potential cultural resources that may be present in the earthen berm material. The contractor would use low-ground-pressure equipment and would construct the cap so that the equipment is working on a surface of imported fill rather than on the surface of cultural deposit CA-Sac-485/H (see **Plate 2** for site boundaries).

Several resources would be affected by work at the Central Main Flume. To remove the flume and construct a berm over the flume alignment, it would be necessary to remove oak trees on both sides of the flume. It would also be necessary to fill local drainage ditches, located along the flume, that have been determined to be waters of the United States subject to regulation by the U.S. Army Corps of Engineers (USACE) under the Clean Water Act (jurisdictional features). While it may be possible to remove trees from one side of the flume only, this addendum conservatively estimates that trees on both sides might be removed. These features would be removed and/or filled as a result of the proposed work at the central section of the Central Main Flume. The affected acreages are provided in **Table 1**.

STANDARD FOR PREPARATION OF AN ADDENDUM

Under the State CEQA Guidelines (California Code of Regulations [CCR] Section 15164), an addendum to a previously certified EIR is required when minor changes in the project are proposed, but none of the conditions described in the State CEQA Guidelines as requiring a subsequent EIR (CCR Section 15162) or a supplemental EIR (CCR Section 15163) have occurred.



Source: Adapted by EDAW in 2009

Central Main Flume Central Segment to be Removed

Plate 2

SUBSEQUENT OR SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORTS

Under the State CEQA Guidelines (CCR Section 15162), a subsequent EIR is required whenever any of the following conditions occur:

- ▶ substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- ▶ substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- ▶ new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - the project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

ENVIRONMENTAL ANALYSIS

This section of the addendum analyzes the potential effects on the physical environment from implementation of the proposed changes in the Phase 2 Project. This analysis has been prepared to determine whether any of the conditions described above that would require preparation of a subsequent or supplemental EIR would occur as a result of the project changes.

ISSUES NOT ANALYZED FURTHER IN THIS ADDENDUM

The proposed activities described in this addendum constitute minor changes in the approved Phase 2 Project. Implementation of these proposed changes would not cause a new significant impact or a substantial increase in the severity or intensity of the impacts identified in the 2007 Landside EIR and the SEIR (SAFCA 2007, 2008) for the following issue areas:

- ▶ agriculture and land use,
- ▶ hydrology and hydraulics,
- ▶ paleontological resources,
- ▶ transportation and circulation,
- ▶ air quality,
- ▶ recreation,
- ▶ utilities and service systems, and
- ▶ hazards and hazardous materials.

These issue areas were fully analyzed in the previously certified EIR, as supplemented. The area of disturbance associated with the proposed changes to the Phase 2 Project described in this addendum would be very small in relation to the scale of the project. Furthermore, for each significant impact related to construction in these project areas, mitigation measures adopted by SAFCA and incorporated into the Phase 2 Project would apply.

ISSUES CARRIED FORWARD FOR FURTHER ANALYSIS IN THIS ADDENDUM

GEOLOGY AND SOILS

Ground-disturbing activities associated with the proposed cofferdam construction, additional vegetation removal, and Central Main Flume removal could result in temporary, short-term construction-related erosion, as described in Impact 3.3-a of the 2007 Landside EIR, “Potential Temporary, Short-Term Construction-Related Erosion” (SAFCA 2007:3.3-5). This impact would be potentially significant. However, implementation of these proposed activities would not result in a substantial increase in the severity or intensity of the previously identified impact. These project changes would be subject to implementation of the previously adopted Mitigation Measure 3.5-a (SAFCA 2007:3.3-5), which requires compliance with National Pollutant Discharge Elimination System (NPDES) permit conditions, preparation and implementation of a storm water pollution prevention plan (SWPPP), and implementation of best management practices (BMPs). In addition, a monitoring program would be implemented during and after construction to ensure that the project complies with all applicable standards and that the BMPs are effective (SAFCA 2007:3.5-6, 3.5-7). With implementation of this mitigation measure, which is part of the Phase 2 Project, potential erosion impacts resulting from the proposed project changes would be reduced to a less-than-significant level.

WATER QUALITY

As described for Impact 3.5-a of the 2007 Landside EIR, “Temporary Effects on Water Quality from Stormwater Runoff, Erosion, and Spills Associated with Construction,” ground-disturbing activities associated with project construction could cause soil erosion and sedimentation of local drainages and waterways. Soils and associated contaminants that could enter receiving waters from stormwater runoff and erosion can increase turbidity, stimulate algae growth, increase sedimentation of aquatic habitat, and introduce compounds that are toxic to aquatic organisms (SAFCA 2007:3.5-5, 3.5-6). The proposed cofferdam construction at RD 1000 Pumping Plant No. 4 and reconstruction of the pumping plant outfall, additional vegetation removal at the Prichard Pumping Plant, and removal of the central segment of the Central Main Flume could contribute to these previously disclosed impacts by causing the discharge of sediments or contaminants to receiving waters. This impact would be potentially significant, but would not increase the severity or intensity of the previously identified impact.

Previously adopted Mitigation Measure 3.5-a, “Implement Standard BMPs, Prepare and Implement a SWPPP, and Comply with NPDES Permit Conditions,” from the 2007 Landside EIR would apply to the proposed changes (SAFCA 2007:3.5-6). As required under this mitigation measure, which is part of the Phase 2 Project, final design and construction plans shall require the implementation of standard erosion, siltation, and good housekeeping BMPs. SAFCA’s construction contractor shall prepare a SWPPP and comply with the conditions of the NPDES general stormwater permit for construction activity. The SWPPP, for work conducted under NPDES authorization, shall describe the construction activities to be conducted and the BMPs that would be implemented to prevent discharges of contaminated stormwater into waterways, and inspection and monitoring activities shall be conducted. Implementation of this mitigation measure would reduce temporary, construction-related soil erosion and sedimentation impacts to a less-than-significant level.

FISHERIES AND AQUATIC RESOURCES

The NCC is not considered primary aquatic habitat for special-status fish species because a weir at the confluence of the NCC with the Sacramento River prevents fish from traveling into the NCC. Additionally, during the summer when the Pumping Plant No. 4 cofferdam would be constructed, aquatic habitat conditions (e.g., physical habitat, summer water quality) are generally degraded and can be unsuitable for these taxa. The release of sediments, fill, or contaminants into the NCC from in-water work associated with cofferdam construction at RD 1000 Pumping Plant No. 4 or the adjacent uplands could affect downstream water quality and thus result in

potentially significant impacts on fish habitat and fisheries. However, with implementation of previously adopted Mitigation Measure 3.5-a, as described above, these impacts would be reduced to less-than-significant levels.

The removal of additional vegetation at Prichard Pumping Plant would include a small stand of trees on the waterside slope of the Sacramento River east levee, which provides shaded riverine aquatic (SRA) habitat function to the Sacramento River. Removal of this stand could result in the loss of SRA habitat function. This impact would be significant. However, with implementation of previously adopted Mitigation Measure 3.6-b of the 2007 Landside EIR, “Restore, Replace, or Rehabilitate Loss of Degraded SRA Habitat Function and Comply with Section 1602 Permit Conditions,” which is part of the Phase 2 Project, this impact would be reduced to a less-than-significant level (SAFCA 2007:3.6-14) because vegetation providing SRA habitat function would be replaced at a suitable ratio. The work at the Central Main Flume is not anticipated to result in impacts on fisheries.

Implementation of the proposed project changes would not increase the severity or intensity of the previously identified impacts.

TERRESTRIAL BIOLOGY

The proposed construction activities at the Central Main Flume, Prichard Pumping Plant, and RD 1000 Pumping Plant No. 4 would permanently affect 2.71 acres of woodlands, 0.09 acre of grasslands, and 0.12 acre of jurisdictional ditches (see **Table 1**). The cofferdam construction at RD 1000 Pumping Plant No. 4 would also temporarily affect 0.075 acre of aquatic habitat. The woodland habitats that would be affected are potential nesting habitat for Swainson’s hawk, as well as for various songbirds. The grassland habitat is considered potential Swainson’s hawk foraging habitat. The aquatic habitat that would be affected is potential habitat for giant garter snake and northwestern pond turtle.

These new habitat effects and potential disturbances to special-status species would result in a minor contribution to the previously identified significant impacts of the Phase 2 Project, but would not increase the intensity or severity of the previously identified impacts. The 2007 Landside EIR disclosed that with implementation of mitigation, these habitat impacts would be reduced to a less-than-significant level. The following previously adopted mitigation measures, which are part of the Phase 2 Project, would apply to impacts resulting from the proposed project changes:

- ▶ 3.7-a, “Minimize Effects on Sensitive Habitats, Develop a Habitat Management Plan to Ensure Compensation for Unavoidable Adverse Effects, and Comply with Section 404, Section 401, and Section 1602 Permit Processes” (SAFCA 2007:3.7-16);
- ▶ 3.7-f, “Minimize Potential Impacts on Swainson’s Hawk, Monitor Active Nests during Construction, Develop a Management Plan in Consultation with DFG, and Obtain Incidental Take Authorization” (SAFCA 2007:3.7-26);
- ▶ 3.7-d, “Minimize the Potential for Direct Loss of Giant Garter Snake Individuals, Develop a Management Plan in Consultation with USFWS and DFG, and Obtain Incidental Take Authorization” (SAFCA 2007:3.7-22); and
- ▶ 3.7-e, “Conduct Focused Surveys for Northwestern Pond Turtle and Relocate Turtles” (SAFCA 2007:3.7-24).

These mitigation measures require SAFCA to minimize impacts on these taxa during construction and replace habitat for affected species at a suitable ratio. The wetland functions of the jurisdictional ditches would be replaced at a suitable ratio, as required under Mitigation Measure 3.7-a. Implementation of these mitigation measures would reduce habitat effects and disturbances resulting from the proposed project changes to a less-than-significant level.

CULTURAL RESOURCES

The construction of the proposed cofferdam and reconstruction of the RD 1000 Pumping Plant No. 4 outfall would occur on the waterside bank of the NCC south levee and in the NCC channel. The bank of the levee and the NCC channel are themselves constructed features and elements of RD 1000. For this reason, the levee and channel are not sensitive for archaeological deposits. The 2007 Landside EIR described the potential for impacts on elements of RD 1000 that have been recorded and determined eligible for listing in the National Register of Historic Places (NRHP) as a historic landscape district (SAFCA 2007:3.8-28). The 2007 Landside EIR disclosed that this impact would be reduced to a less-than-significant level (SAFCA 2007:3.8-29) by the implementation of previously adopted Mitigation Measure 3.8-a, “Document Alterations Made to Any RD 1000 Contributing Resources and Distribute the Information to the Appropriate Repositories” (SAFCA 2007:3.8-28). This mitigation measure requires that SAFCA document any alterations to changes to resources or elements of resources that contribute to the eligibility of the district and file this documentation with the relevant agencies and repositories. This mitigation measure is hereby incorporated by reference.

The proposed cofferdam would be a temporary structure that would not change the character-defining elements of RD 1000. Minor changes to the outfall of RD 1000 Pumping Plant No. 4 would be implemented, but these changes are consistent with the overall character and setting associated with the resource. The proposed work at RD 1000 Pumping Plant No. 4 would therefore result in less-than-significant impacts on RD 1000. The potential exists for in-water work to disturb strata in the channel that could bear cultural deposits, but no feasible way exists to conduct a survey of this area in advance of construction. The possibility for in-water work to affect cultural resources is remote, because the most culturally sensitive portions of the Natomas Basin are associated with natural waterways, such as the Sacramento River, rather than artificial waterways, such as the NCC. The impact of proposed construction at the RD 1000 Pumping Plant No. 4 outfall on undiscovered prehistoric archaeological resources and undiscovered human remains would be less than significant.

Cultural surveys have been conducted within the footprint of proposed improvements to the Sacramento River east levee at the Prichard Pumping Plant. This inventory effort has identified the buried prehistoric archaeological deposit CA-Sac-1116 (NLIP-7) within the footprint of proposed improvements to the Sacramento River east levee, adjacent to the Prichard Pumping Plant at a depth of 10–12 feet below the surface. A program of backhoe testing was conducted to evaluate CA-Sac-1116 for listing in the NRHP and California Register of Historical Resources (CRHR). These trenches encountered an extremely low density of cultural material (nine artifacts recovered for approximately several cubic meters of screened material). This assemblage lacked any potential to contribute to archaeological research. It should also be noted that the site contains no documented skeletal remains or other evidence of funerary deposits that might be of cultural or religious significance to Native American individuals or organizations that are culturally affiliated with the project area. In an inventory report submitted to the State Historic Preservation Officer (SHPO) and USACE, SAFCA recommended that this resource was ineligible for listing in the NRHP and CRHR (USACE and SAFCA 2009). USACE and SHPO concurred in this finding.

A small portion of the easternmost footprint of the proposed work at Prichard Pumping Plant has not been completely inventoried for cultural resources, but this portion of the project footprint is subject to previously adopted Mitigation Measure 3.8-d, “Perform Research and/or Surveys, Brief Workers Before Construction, Monitor Construction, Halt Potentially Damaging Activities, Investigate and Avoid Resources to the Extent Feasible, and Conduct Resource Documentation and Data Recovery as Needed” (SAFCA 2007:3.8-31), which is part of the Phase 2 Project. This mitigation measure requires SAFCA to complete an inventory, evaluation, and treatment of cultural resources in the project footprint before construction. It is unlikely that additional resources would be found in this portion of the project footprint because the existing inventory and evaluation revealed no archaeological deposits or outlying isolated artifacts in near-surface strata surrounding the Prichard Pumping Plant. CA-Sac-1116 is not eligible for listing in the NRHP or CRHR, and the area surrounding the Prichard Pumping Plant appears to have a low sensitivity for cultural resources impacts from work at the plant on identified and undiscovered archaeological resources, including undiscovered human remains. For these reasons, impacts on these resources would be less than significant.

The Prichard Pumping Plant itself is also a feature of RD 1000; however, the subterranean work and vegetation removal proposed would not change the character-defining elements of this resource and therefore are anticipated to result in less-than-significant impacts on this resource. Therefore, no mitigation would be required.

A cultural resources inventory that includes shovel testing has been conducted in the entire footprint of the Central Main Flume (USACE and SAFCA 2009) west of the P-Drain. This inventory confirmed that the Central Main Flume crosses the cultural deposit CA-Sac-485/H, which contains a rich archaeological assemblage, including a funerary component with human skeletal remains. This resource was recommended eligible for listing in the NRHP and CRHR (USACE and SAFCA 2009). SHPO concurred with this finding. The shovel testing effort determined, however, that the flume is located in a berm, raised above grade, that contains disturbed and disarticulated cultural constituents from CA-Sac-485/H. Excavation of the flume would not intrude into undisturbed strata in CA-Sac-485/H, and therefore would not result in a significant impact on this resource. Construction would be monitored in accordance with previously adopted Mitigation Measure 3.8-d, “Perform Research and/or Surveys, Brief Workers Before Construction, Monitor Construction, Halt Potentially Damaging Activities, Investigate and Avoid Resources to the Extent Feasible, and Conduct Resource Documentation and Data Recovery as Needed” (SAFCA 2007:3.8-31), which is part of the Phase 2 Project. Any isolated and disarticulated human remains discovered during construction would be treated as required under previously adopted Mitigation Measure 3.8-e, “Halt Work Within 50 Feet of the Find, Notify the County Coroner and Most Likely Descendant, and Implement Appropriate Treatment of Remains” (SAFCA 2007:3.8-32). As required under this mitigation measure and State law, discovered Native American human remains would be transferred to the Most Likely Descendant and reinterred with appropriate dignity. For these reasons, work at the Central Main Flume would result in less-than-significant impacts on identified and previously undiscovered archaeological resources, as well as undiscovered human remains.

This addendum does not anticipate that significant impacts on cultural resources would result from the proposed changes to the overall program, which was disclosed in the 2007 Landside EIR, as supplemented. However, as with any ground-disturbing work, there is always the possibility that unknown cultural resources and human remains could be discovered or damaged and that potentially significant and unavoidable impacts on those resources would occur. This potential is consistent with the significance conclusions in the 2007 Landside EIR (SAFCA 2007) and the SEIR (SAFCA 2008a) for cultural resources, even with implementation of previously adopted mitigation measures referenced above.

NOISE

Although the 2007 Landside EIR, as supplemented, identified the potential of the Phase 2 Project to generate significant construction noise in the Phase 2 Project footprint, the removal of the central section of the Central Main Flume and the construction of a cofferdam at RD 1000 Pumping Plant No. 4 were not analyzed as part of the project’s noise impacts. This section analyzes the noise impacts of the proposed activities, and concludes that no sensitive receptors are near enough to the three proposed construction areas mentioned above to result in significant noise impacts on those sensitive receptors. Noise that may be associated with the removal of additional vegetation at the Prichard Pumping Plant, such as the use of chainsaws or other equipment, is consistent with the impacts that have been disclosed for the Phase 2 Project.

Cofferdam Construction at Reclamation District 1000 Pumping Plant No. 4 and Reconstruction of the Outfall

RD 1000 Pumping Plant No. 4 is located adjacent to and south of the NCC. The nearest noise-sensitive receptors (i.e., residences) are located approximately 4,300 feet to the south and approximately 4,600 feet to the northeast of the proposed construction activities. Compliance with Sutter County stationary-noise-level performance standards (50 decibels energy-equivalent noise level [dB L_{eq}] and 70 dB maximum noise level [L_{max}] for daytime and evening hours) is recommended for these residences. Based on the project description contained in this addendum, it is assumed that an excavator for rock placement and pumps for dewatering would be used during construction of the cofferdam. Noise levels were projected using the Federal Transit Administration methodology

for construction noise prediction and the Federal Highway Administration Road Construction Noise Model reference noise levels and usage factors for heavy construction equipment. Assuming soft conditions (ground types such as agricultural land uses or earthen surfaces that absorb and attenuate noise) and continuous construction activity, the proposed cofferdam construction and reconstruction of the outfall would result in a projected noise level of 31.9 dB L_{eq} at the residence to the south and 31.1 dB L_{eq} at the residence to the northeast. Based on these predicted noise levels, the proposed activity at RD 1000 Pumping Plant No. 4 would comply with Sutter County noise standards and would result in a less-than-significant impact on these receptors. Therefore, no mitigation is required.

Prichard Pumping Plant Vegetation Removal and Excavation

The Prichard Pumping Plant is located adjacent to and east of the Sacramento River east levee. The nearest noise-sensitive receptor (i.e., residence) is located approximately 225 feet southwest of proposed construction activities. Compliance with Sacramento County stationary-noise-level performance standards (50 dB L_{eq} and 70 dB L_{max} for daytime and evening hours) is required for this residence; however, daytime construction-related activities are exempt from applicable noise standards.

The work at the Prichard Pumping Plant consists of activities previously analyzed as part of the Phase 2 Project. The proposed change in the Phase 2 Project would require additional vegetation removal, which would be consistent with the noise impacts identified in the 2007 Landside EIR, as supplemented. Based on the project description in the 2007 Landside EIR, pipe replacement, trenching, and clearing and grubbing activities would take place at this location and were previously analyzed. As described in the 2007 Landside EIR in Table 3.12-4 on page 3.12-10, predicted noise levels associated with pipeline construction would be 65.3 dB L_{eq} at 100 feet, and predicted noise levels associated with clearing and grubbing would be 63.6 dB L_{eq} at 100 feet.

Assuming soft conditions and continuous construction activity, the predicted pipeline-replacement construction would result in a noise level of 58.3 dB L_{eq} at the nearest residence, and the predicted clearing and grubbing activities would result in a noise level of 56.6 dB L_{eq} at the same receptor. It is assumed that the existing levee would provide up to 5 dB of shielding, which would further reduce these noise levels because of the proximity of the pumping plant and the existing levee. Because the construction would not take place before 6 a.m. or after 8 p.m. on Monday through Friday or before 7 a.m. or after 8 p.m. on Saturday and Sunday, these activities would be exempt from Sacramento County noise standards, as described in the 2007 Landside EIR (SAFCA 2007:3.12-3). No mitigation of construction noise is required for work occurring during the exempt daytime hours.

Removal of the Central Segment of the Central Main Flume

The central segment of the Central Main Flume is located adjacent to and east of the Sacramento River east levee. The nearest noise-sensitive receptor (i.e., residence) is located approximately 2,800 feet south of proposed construction activities. Compliance with Sacramento County stationary-noise-level performance standards (50 dB L_{eq} and 70 dB L_{max} for daytime and evening hours) is required for this residence; however, daytime construction-related activities are exempt from applicable noise standards, as described above.

Based on the project description presented in this addendum, removal of the central segment of the Central Main Flume would require use of a mix of excavators and concrete breakers. Based on the Federal Transit Administration methodology for construction noise prediction, the Federal Highway Administration Road Construction Noise Model, reference noise levels, and use factors for heavy construction equipment, the proposed activity would result in a noise level of 37.6 dB L_{eq} at the nearest receptor (assuming continuous activity and soft conditions). Based on these predicted noise levels, the proposed activity at the central segment of the Central Main Flume would comply with Sacramento County noise standards and would result in a less-than-significant impact on these receptors. Because the construction activities would not take place before 6 a.m. or after 8 p.m. on Monday through Friday or before 7 a.m. or after 8 p.m. on Saturday and Sunday, the proposed changes would be

exempt from Sacramento County noise regulations. This impact would be less than significant. No mitigation of construction noise is required for work occurring during the exempt daytime hours.

Noise Impact Summary

The proposed cofferdam construction at RD 1000 Pumping Plant No. 4, the vegetation removal at Prichard Pumping Plant, and the removal of the central segment of the Central Main Flume would not result in a new significant noise impact that was not previously identified, nor would it substantially increase the severity or intensity of the previously identified significant and unavoidable noise impacts identified as part of the Phase 2 Project (SAFCA 2007, 2008a).

VISUAL RESOURCES

The Natomas Basin is generally characterized by flat agricultural land scattered with trees, riparian habitat, rural houses, and roadways (SAFCA 2007:3.14-2). The proposed demolition of an additional section of the Central Main Flume and construction at the Prichard Pumping Plant would require removal of woodlands. The project elements addressed in this addendum include removal of a total of an additional 2.71 acres of woodlands as a result of proposed additional activities at Prichard Pumping Plant and the Central Main Flume. As discussed in Impact 3.14-a, "Changes in Scenic Vistas, Scenic Resources, and Existing Visual Character of the Project Area," of the 2007 Landside EIR, isolated trees and groves in the Natomas Basin are striking, distinctive visual elements along the levee system, and implementation of the proposed project changes discussed in this addendum would contribute to this impact (SAFCA 2007:3.14-4 through 3.14-6). However, considering that the entire NLIP includes removal of approximately 82 acres of woodlands (SAFCA 2008b:3.3-10), the additional removal of approximately 2.71 acres would not constitute a substantial increase in the severity or intensity of this previously identified impact. Although there is no feasible mitigation in the near term, until replacement vegetation grows to maturity, the NLIP includes creation or preservation of 140 acres of woodlands, which would result in a net increase of woodlands in the long term because woodland acreage created by the project would exceed the acreage lost as a result of project impacts (SAFCA 2008b:3.3-10). Therefore, this impact would remain significant and unavoidable in the near term and less than significant in the long term.

IMPACT CONCLUSION

The proposed changes in the Phase 2 Project that are analyzed in this addendum would not require major revisions to the 2007 Landside EIR, as supplemented, because no new substantial impacts would result, and the impacts presented in this addendum would not increase the severity or intensity of significant environmental effects. Furthermore, no changes have been proposed with respect to the circumstances under which the project changes would be undertaken that would require major revisions to the 2007 Landside EIR, as supplemented, because of new or substantially increased significant environmental effects; furthermore, there has been no discovery of new information of substantial importance that would trigger or require major revisions to the 2007 Landside EIR, as supplemented, because of new or substantially increased significant environmental effects. Therefore, no subsequent or supplemental EIR is required before approval of the activities proposed in this addendum.

REFERENCES CITED

- Jewell, Michael S. Chief, Regulatory Division. U.S. Army Corps of Engineers, Sacramento District, Sacramento, CA. June 23, 2009—letter to Stein M. Buer of SAFCA amending Clean Water Act Section 404 Permit No. SPK-2007-00211 to reflect the impacts on waters of the United States for Phase 2 of the Natomas Levee Improvement Program, Landside Improvements Project.
- Sacramento Area Flood Control Agency. 2007 (September). *Draft Environmental Impact Report on the Natomas Levee Improvement Program Landside Improvements Project*. State Clearinghouse No. 2007062016. Sacramento, CA. Prepared by EDAW, Sacramento, CA.
- . 2008a (December). *Supplement to the Environmental Impact Report on the Natomas Levee Improvement Program Landside Improvements Project—Phase 2 Project*. State Clearinghouse No. 2007062016. Sacramento, CA. Prepared by EDAW, Sacramento, CA.
- . 2008b (November). *Draft Supplement to the Environmental Impact Report on the Natomas Levee Improvement Program, Landside Improvements Project*. Sacramento, CA.
- SAFCA. *See* Sacramento Area Flood Control Agency.
- USACE and SAFCA. *See* U.S. Army Corps of Engineers and Sacramento Area Flood Control Agency.
- U.S. Army Corps of Engineers and Sacramento Area Flood Control Agency. 2009 (April). *Cultural Resources Inventory Report: Phase 2c, Natomas Levee Improvements Program, Landside Improvements Project*. Sacramento, CA. Prepared by EDAW, Sacramento, CA.

APPENDIX A

Construction Plans for Reclamation District 1000 Pumping Plant No. 4

SAFCA NLIP-NCC PHASE 2/SREL PHASE 1 LEVEE IMPROVEMENT PROJECT RD 1000 PUMP PLANT NO. 4 EXISTING OUTFALL LAYOUT

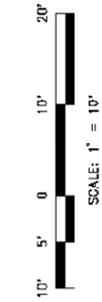
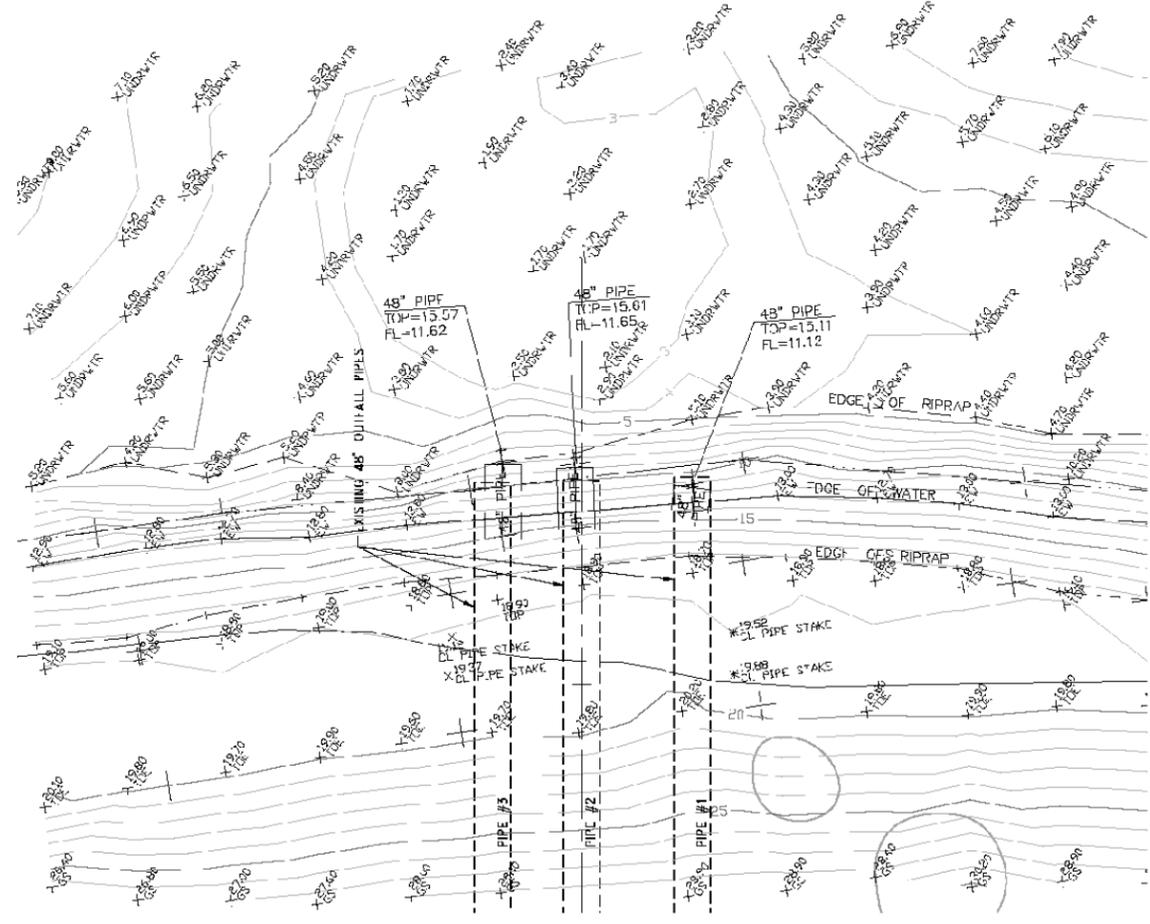
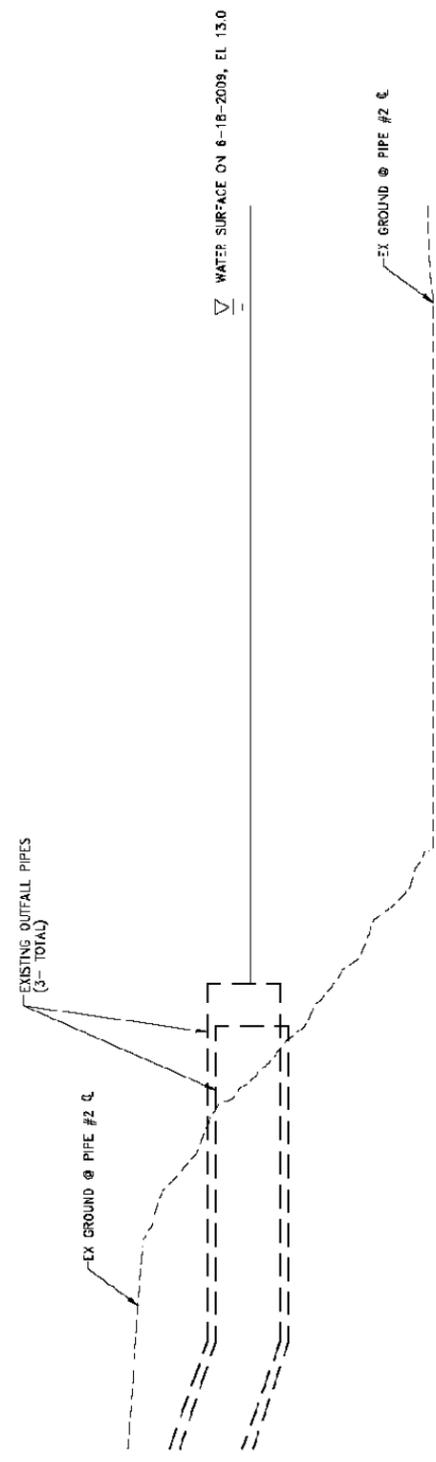


FIGURE 1



PLAN
SCALE: 1"=10'

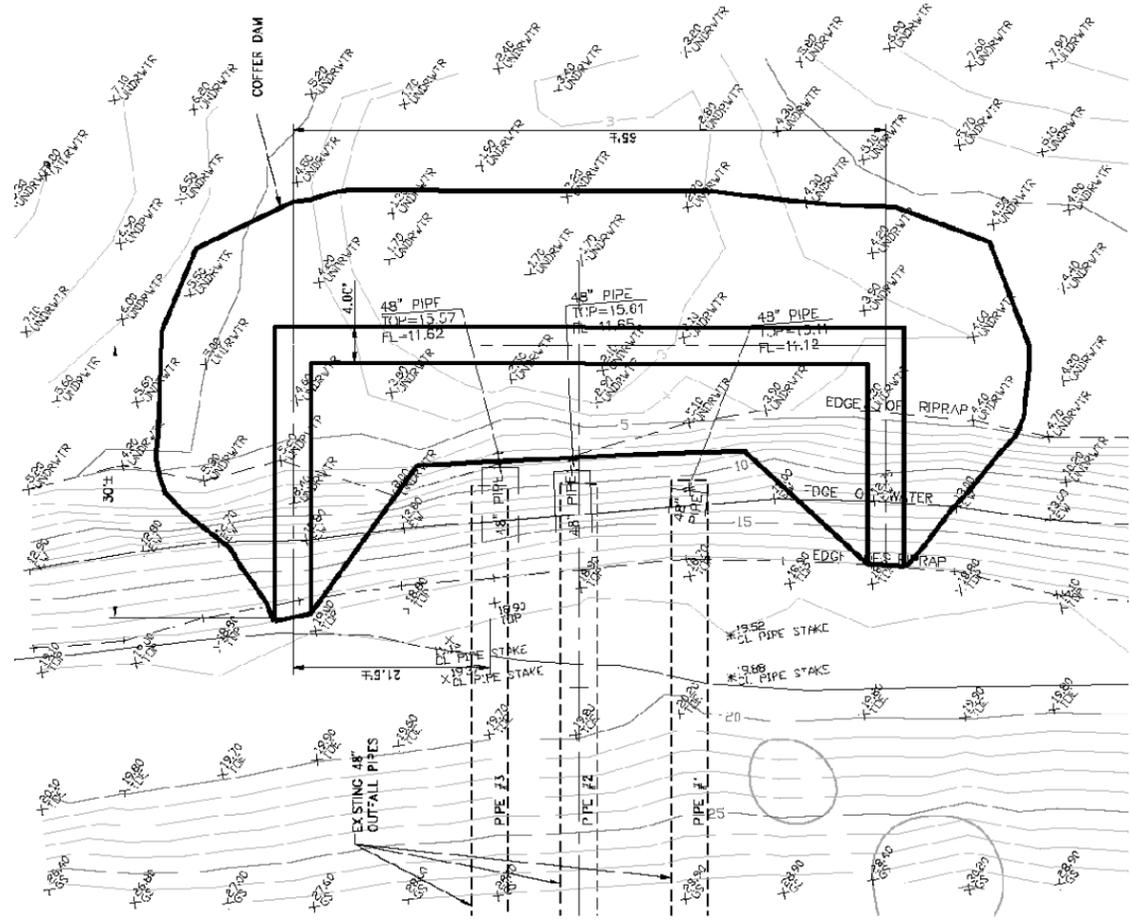


ELEVATION
SCALE: 1"=5'

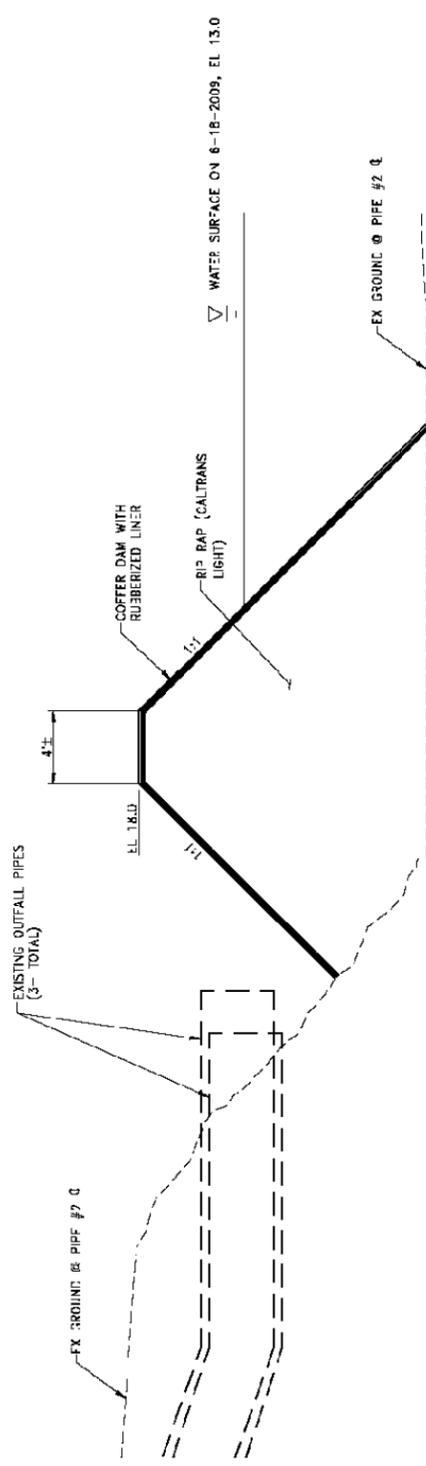
SAFCA NLIP-NCC PHASE 2/SREL PHASE 1 LEVEE IMPROVEMENT PROJECT RD 1000 PUMP PLANT NO. 4

COFFER DAM LAYOUT

FIGURE 2



PLAN
SCALE: 1"=10'

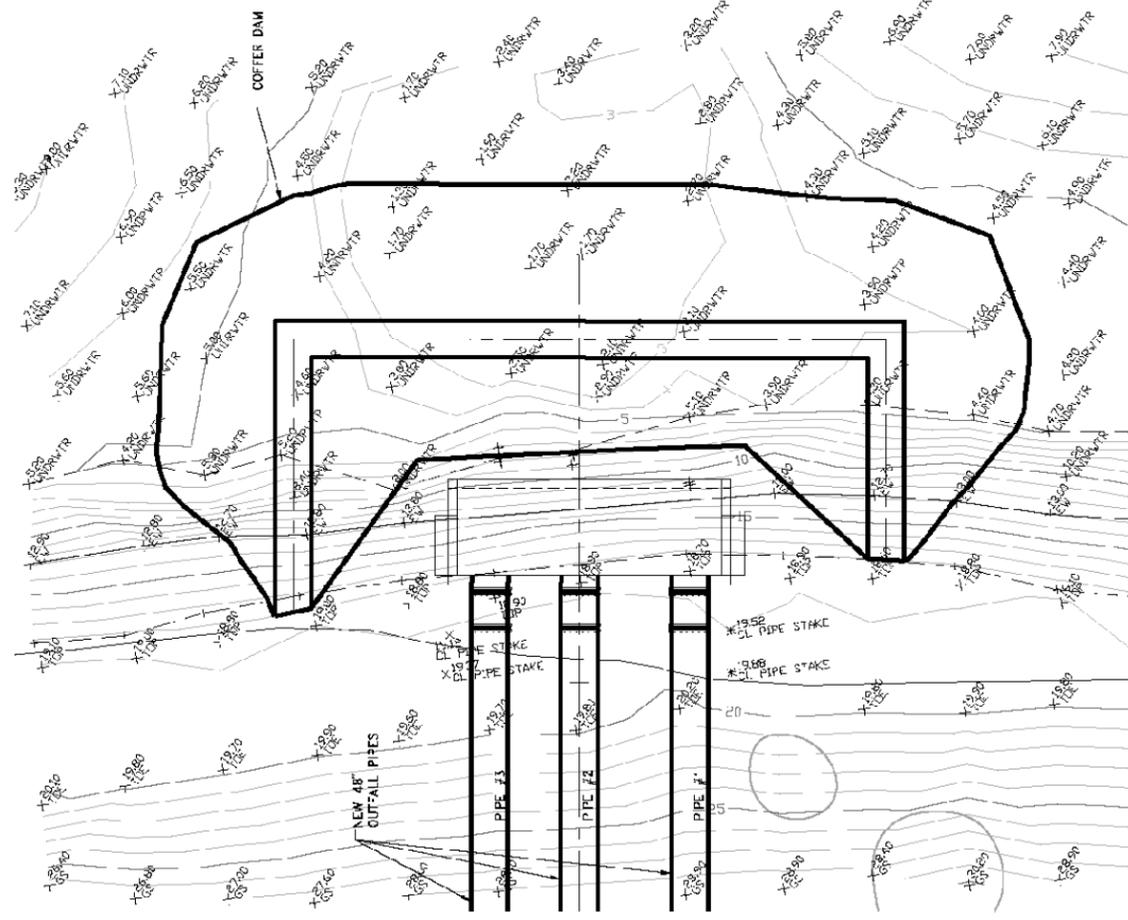


ELEVATION
SCALE: 1"=5'

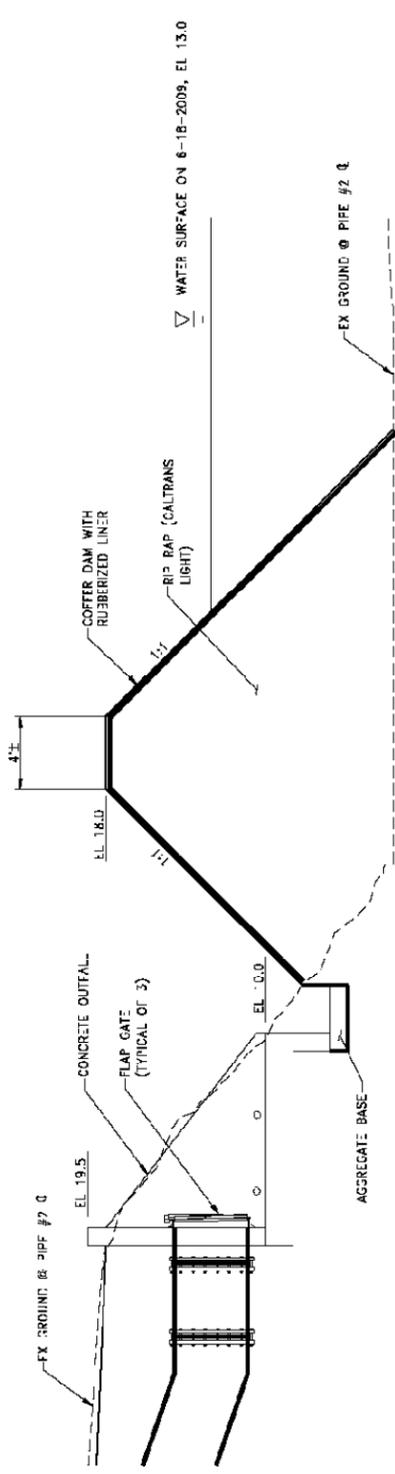
SAFCA NLIP-NCC PHASE 2/SREL PHASE 1 LEVEE IMPROVEMENT PROJECT RD 1000 PUMP PLANT NO. 4 HEADWALL EXCAVATION LAYOUT



FIGURE 3

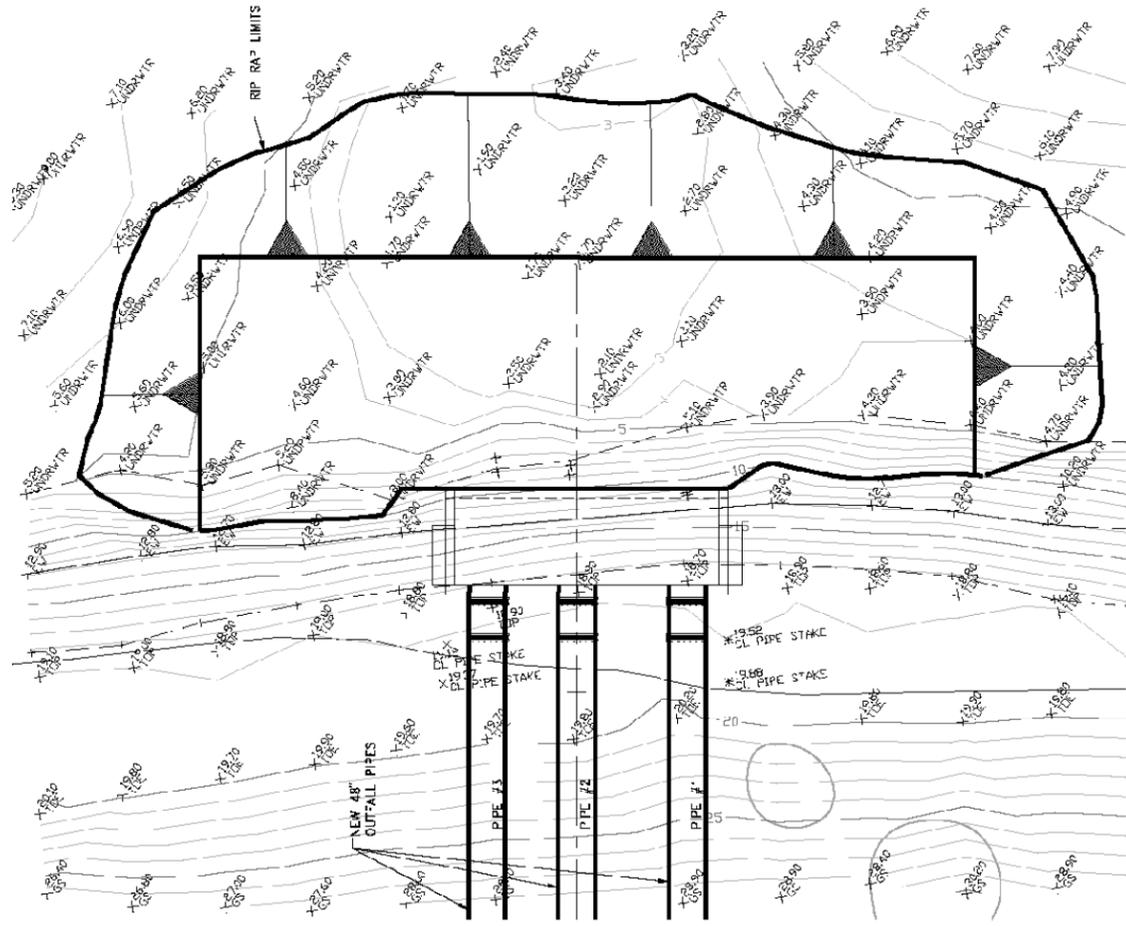


PLAN
SCALE: 1" = 10'

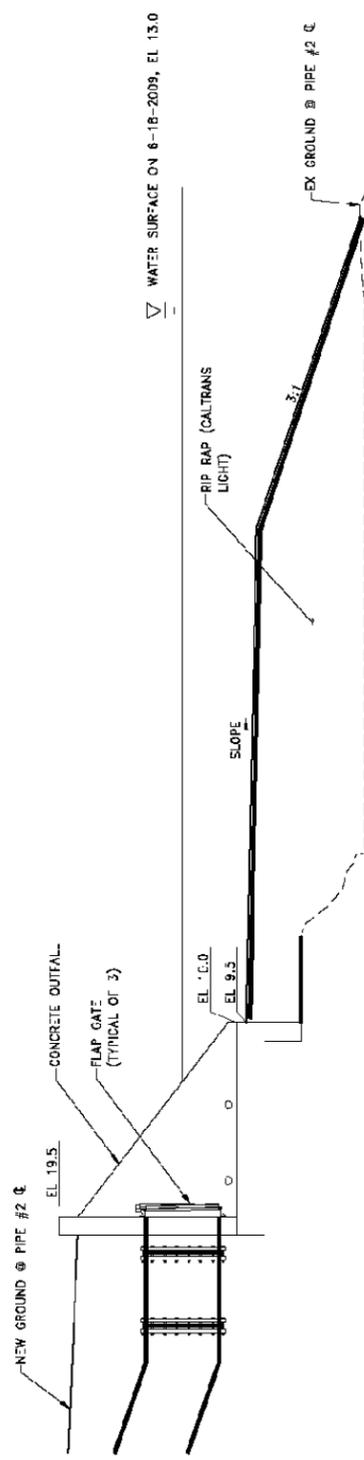


ELEVATION
SCALE: 1" = 5'

SAFCA NLIP-NCC PHASE 2/SREL PHASE 1 LEVEE IMPROVEMENT PROJECT RD 1000 PUMP PLANT NO. 4 FINAL OUTFALL LAYOUT



PLAN
SCALE: 1"=10'



ELEVATION
SCALE: 1"=5'