

RECLAMATION

Managing Water in the West

Categorical Exclusion Checklist

License to Panoche Drainage District to Connect the Firebaugh Sumps to the San Joaquin River Water Quality Improvement Project

CEC-14-023

Prepared by:


Rain L. Emerson
Supervisory Natural Resources Specialist
South-Central California Area Office

Date: 08/18/2014

Concurred by:

See Attachment A
Archaeologist
Mid-Pacific Regional Office


Date: See Attachment A

Concurred by:

See Attachment B
Native American Affairs Specialist
Mid-Pacific Regional Office


Date: See Attachment B

Concurred by:


Lisa Carlson
Biology Technician
South-Central California Area Office

Date: 08/18/2014

Approved by:


For Michael Jackson
Area Manager
South-Central California Area Office

Date: 8/18/14



Background

In 1953, the Bureau of Reclamation (Reclamation) completed installation of subsurface check drains and six closed drain sumps between mileposts 99 and 110 of the Delta-Mendota Canal (DMC), located near the city of Firebaugh. The purpose of the Firebaugh Sumps is to collect shallow groundwater to prevent damage to the canal bank and adjacent lands. Water collected in the subsurface drains is discharged into the DMC through six drainage inlet structures (Figure 1). The water from the sumps, though low in volume (cumulative volume from all six sumps averages 3.3 acre-feet per day), is rich in selenium and other trace elements, such as mercury. This high-selenium groundwater is diluted somewhat by the canal water and is used for downstream irrigation and wildlife refuges, posing a risk of adverse environmental effects to aquatic wildlife. The Regional Water Quality Control Board issued monitoring orders to Reclamation in 1988 for the Firebaugh sumps.

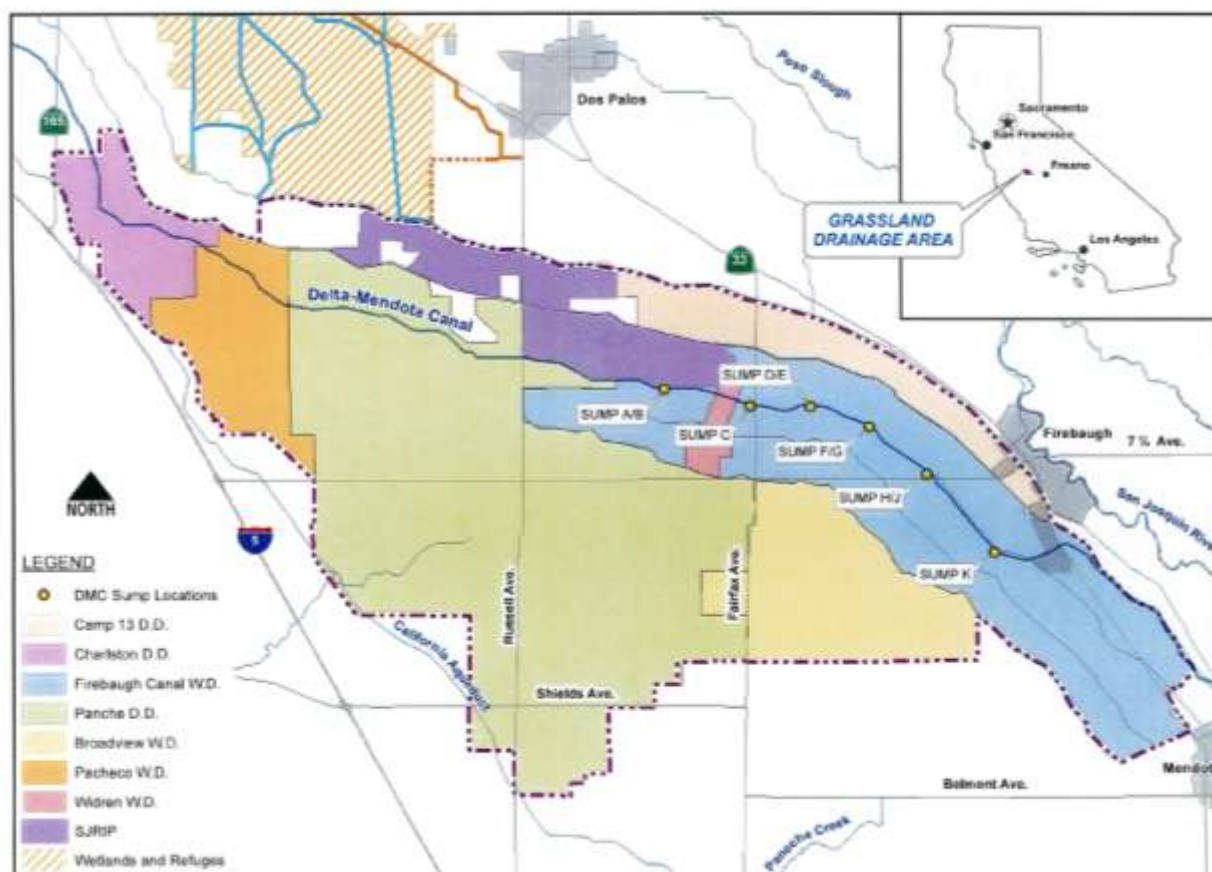


Figure 1 Location of Six Firebaugh Sumps

On June 8, 2006, Reclamation released a Final Environmental Impact Statement for the *San Luis Drainage Feature Re-evaluation* (SLDFR FEIS). The SLDFR FEIS evaluated seven action alternatives in addition to the no action alternative for implementing drainage service within the San Luis Unit. The In-Valley/Water Needs Land Retirement alternative analyzed in the FEIS was chosen for implementation and documented in Reclamation's Record of Decision (ROD) which was signed March 9, 2007. This alternative, and all other action alternatives analyzed in the FEIS, included intercepting high selenium groundwater from the Firebaugh Sumps and re-

routing the intercepted drainage water via a pipeline for reuse, treatment, and disposal within the Northerly Area of the San Luis Unit. This was also included as part of the Proposed Action evaluated in the U.S. Fish and Wildlife Service (Service) Biological Opinion (1-1-06-F-0027) issued for SLDFR.

Although not a component of the Grassland Bypass Project (GBP), the removal of the Firebaugh Sumps from the DMC was included as a term and condition of the 2009 GBP Biological Opinion (81420-2009-F-1036) issued by the Service and included in Reclamation's ROD for the 2010-2019 GBP.

In 2009, Reclamation issued Financial Assistance Agreement R09AP20025 to Panoche Drainage District which included \$500,000 to design and construct new pipelines for each sump and reroute the discharge into the San Joaquin Water Quality Improvement Project (SJRIIP) where the sump water would be managed through recirculation and reuse.

Purpose and Need for Action

Reclamation needs to remove the high-selenium water collected in the Firebaugh Sumps from the DMC. In addition, Reclamation needs to use grant funding from Financial Assistance Agreement R09AP20025 by December 31, 2014. The purpose of the Proposed Action is to allow Panoche Drainage District access to Reclamation rights-of-way (ROW) to connect new pipelines from the Firebaugh sumps to existing ditches that convey drainage water to the SJRIIP.

Proposed Action

Reclamation proposes to issue a perpetual land use authorization to Panoche Drainage District to access Reclamation ROW to install, operate, and maintain pipelines to re-route drainage discharge from the six Firebaugh Sumps away from the DMC to the SJRIIP. Drainage from the sumps would be released to ditches within the SJRIIP where it would be recirculated and reused in the same manner as existing drainage water within the SJRIIP. This would remove approximately 760 pounds of selenium and 8,300 tons of salts from the DMC as it would re-route approximately 1,200 AF per year of drainage water from the sumps previously discharged to the DMC.

Construction activities would consist of modification to the existing pump manifolds and installation of approximately 2.8 miles (combined) of 6-inch polyvinyl chloride (PVC) pipeline, 0.7 miles of which would be in Reclamation ROW. Pipeline would be installed in a trench (trench dimensions are approximately 42 inches deep by 12 inches wide) with 36-inch of cover, backfilled with native material compacted to 95% maximum dry density. Project designs are included in Attachment C.

Environmental Commitments

Panoche Drainage District would implement the following environmental commitments to avoid any environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified will be fully implemented.

Table 1 Environmental Commitments

Biological Resources Protection Measures
Construction activities and ground disturbing maintenance activities, for the project will be conducted between May 1st and October 1st, during the giant garter snake's active season. If ground-disturbing maintenance activities must be conducted during the non-active season, Reclamation shall be contacted and further environmental review will be required.
Any maintenance activities that would require work within drainage ditches shall be conducted during the giant garter snake active season (May 1st through October 1st) and when the drainage ditches have been naturally dry for at least 15 consecutive days. If one or both of these conditions cannot be met, Reclamation shall be contacted and further environmental review will be required.
24-hours prior to construction activities or ground-disturbing maintenance activities, the action area shall be surveyed for giant garter snakes. Survey of the project area shall be repeated if a lapse in construction activity of two weeks or greater has occurred. If a giant garter snake is found during the survey, construction on the proposed project shall not begin until Reclamation has been contacted and appropriate consultation has been completed.
Project-related vehicles shall observe a daytime speed limit of 20 miles per hour throughout the site in all project areas, except on county roads and State and Federal highways.
To prevent inadvertent entrapment of listed species or other wildlife during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.
No firearms shall be allowed on the project site.
No pets, such as dogs or cats, should be permitted on the project site to prevent harassment or mortality of wildlife.
A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured, or entrapped kit fox. The name and telephone number of the representative shall be provided to Reclamation and the Service.
Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact Reclamation and the California Department of Fish and Wildlife (CDFW) immediately in the case of dead, injured, or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530) 934-9309. The Service should be contacted as well.
Prior to construction or any ground-disturbing maintenance activities, a qualified biologist shall conduct pre-construction surveys for the San Joaquin kit fox, its sign and burrows in the Action area and a 200-foot area outside of the project footprint. The survey shall be conducted no less than 14 days and no more than 30 days prior to the initiation of any construction activities on the proposed action or any future ground disturbing maintenance activities. A letter report documenting survey methods and findings shall be submitted to Reclamation at least 5 days before construction. If kit foxes, kit fox sign, or kit fox burrows are found during the survey, construction or maintenance on the proposed project shall not begin until Reclamation has been contacted and appropriate consultation has been completed.
Work on the project, including maintenance, shall not be conducted at night.
San Joaquin kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for San Joaquin kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved and should be left alone until the Service has been consulted; no further action may be taken until Reclamation biologists have been notified and guidance has been provided by the Service.
In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or if a protected species is involved Reclamation and the Service should be contacted for guidance.
All food-related trash items such as wrappers, cans, bottles and food scraps should be disposed of in securely closed containers and removed at least once a week from the project site.

Biological Resources Protection Measures
The Service and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is Mr. Thomas Leeman, Chief, San Joaquin Valley Division, Endangered Species Program, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Suite W-2605, Sacramento, California 95825-1846, (916) 414-6600. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
If any listed species are observed in the Action area during construction or maintenance activities, work shall stop and Reclamation shall be contacted immediately. Work on the project shall be suspended until Reclamation determines the appropriate course of action.
New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service.
Before the start of any ground-disturbing activities associated with the proposed project, including maintenance, a qualified biologist shall conduct focused surveys for burrowing owls in areas of suitable habitat on and within 250 feet of the project footprint. A letter report documenting survey methods and findings shall be submitted to Reclamation at least 5 days before construction on the proposed project.
If occupied burrowing owl burrows are found, Reclamation shall be notified and work on the proposed project shall not begin until a qualified biologist has established a non-disturbance buffer of 160 feet during the non-breeding season (September 1 through January 31) or 250 feet during the breeding season (February 1 through August 31). The biologist shall remain on-site during construction to monitor the burrow, and may stop construction at any time to avoid impacts to the owls. The buffer shall remain in place until the biologist determines the nest is no longer active.
If a burrowing owl is observed at the construction site at any time during construction or maintenance, a temporary non-disturbance buffer of approximately 160 feet shall be observed to establish a safe area for the animal until it leaves the construction area at its own volition.

Exclusion Category

516 DM 14.5 paragraph D (10): *Issuance of permits, licenses, easements, and crossing agreements which provide right-of-way over Bureau lands where the action does not allow for or lead to a major public or private action.*

Evaluation of Criteria for Categorical Exclusion

- | | | | |
|---|---|---------------------------------------|---------------------------------|
| 1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 2. This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2)(E) and 43 CFR 46.215(c)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 4. This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 5. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 6. This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (43 CFR 46.215 (e)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |
| 8. This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01) (43 CFR 46.215 (g)). | No
<input checked="" type="checkbox"/> | Uncertain
<input type="checkbox"/> | Yes
<input type="checkbox"/> |

- | | No | Uncertain | Yes |
|--|-------------------------------------|--------------------------|--------------------------|
| 9. This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species (43 CFR 46.215 (h)). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. This action would violate a Federal, tribal, State, or local law or requirement imposed for protection of the environment (43 CFR 46.215 (i)). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007, 43 CFR 46.215 (k), and 512 DM 3)). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act, EO 13112, and 43 CFR 46.215 (l)). | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Attachment A

Reclamation's Cultural Resources Determination

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

MP-153 Tracking Number: 14-SCAO-166

Project Name: Delta-Mendota Canal (DMC) Interceptor Sump Reroute Project, Fresno County, California

NEPA Document: CEC-14-023

Project Manager/NEPA Contact: Rain Emerson

MP 153 Cultural Resources Reviewer: Mark Carper

Date: 8/18/2014

This proposed undertaking by Reclamation is to issue a perpetual land use authorization to Panoche Drainage District (PDD) to access Reclamation's right-of-way (ROW) to install, operate, and maintain pipelines to reroute drainage discharge from six existing Firebaugh sumps away from the DMC to the San Joaquin River Improvement Project (SJRIIP). Although not a component of the Grasslands Bypass Project (GBP), this action was included as a term and condition of the 2009 GBP biological opinion issued by the U.S. Fish and Wildlife Service and included in Reclamation's Record of Decision for the 2010-2019 GBP. Reclamation also intends to use grant funding to partially fund this project.

Reclamation's issuance of the land use authorization and use of Federal funding constitute an undertaking as defined in Section 301(7) of the NHPA (16 U.S.C. 470), as amended, and requires compliance with Section 106 of the NHPA.

The proposed project involves construction of new pipelines to connect to six existing sumps, located at five locations to reroute the drainage. Construction activities would consist of modification to the existing pump manifolds and installation of approximately 2.8 miles (combined) of 6-inch polyvinyl chloride (PVC) pipeline, 0.7 miles of which would be in Reclamation's ROW. Pipeline would be installed in a trench (trench dimensions are approximately 42-inches-deep by 12-inches-wide) with 36-inch of cover, backfilled with native material compacted to 95% maximum dry density.

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

In an effort to identify potential historic properties within the APE, Reclamation conducted a record search at the Southern San Joaquin Information Center and an intensive pedestrian survey of the APE. No cultural resources were identified within the project APE.

Pursuant to 36 CFR § 800.3(f)(2) Reclamation identified the Tule River Indian Tribe and the Tuolumne Band of Me-Wuk Indians as Indian tribes likely to have knowledge of historic properties or attach religious and cultural significance to historic properties within the APE. Reclamation sent letters to these tribes requesting their participation in the Section 106 process and assistance in identifying sites of religious and cultural significance of historic properties pursuant to 36 CFR § 800.4(a)(4). No such sites were identified.

Reclamation initiated consultation with the California State Preservation Office (SHPO) by letter dated July 15, 2014 requesting concurrence with a finding of no historic properties affected for the project. Pursuant to the regulations at 36 CFR §800.5(c), SHPO has 30 days from receipt to review an agency finding. The SHPO has yet to respond to Reclamation's finding of effect. If after 30 days the SHPO has not responded, the regulations state that "...the agency official shall then carry out the undertaking in accordance with paragraph (d)(1) of this section" [§800.5(c)(1)]. Because the SHPO has failed to comment on Reclamation's finding within the period of time provided to them pursuant to the Section 106 regulations, Reclamation may move on to the next step of the Section 106 process. Reclamation has concluded the NHPA Section 106 process for this undertaking.

After reviewing CEC-14-023, dated May 2014, I concur with item #8 which states that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places.

This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

Attachment B

Reclamation's Indian Trust Assets Determination



Emerson, Rain <remerson@usbr.gov>

Re: CEC-14-023 Firebaugh Sumps

RIVERA, PATRICIA <privera@usbr.gov>

Wed, Jul 9, 2014 at 5:22 AM

To: Rain Emerson <remerson@usbr.gov>

Rain,

I reviewed the proposed action to issue a perpetual land use authorization to Panoche Drainage District to access Reclamation rights-of-way to install, operate, and maintain pipelines to re-route drainage discharge from the six Firebaugh Sumps away from the Delta-Mendota Canal (DMC) to the San Joaquin River Water Quality Improvement Project (SJRIIP). Drainage from the sumps would be released to ditches within the SJRIIP where it would be recirculated and reused in the same manner as existing drainage water within the SJRIIP. This would remove approximately 760 pounds of selenium and 8,300 tons of salts from the DMC as it would re-route approximately 1,200 acre-feet per year of drainage water from the sumps previously discharged to the DMC.

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The proposed action does not have a potential to impact Indian Trust Assets. The nearest Indian Trust Asset is a Public Domain Allotment, approximately 44 miles southwest of the project location.

Patricia Rivera
Native American Affairs Program Manager
US Bureau of Reclamation
Mid-Pacific Region
2800 Sacramento, California 95825
(916) 978-5194

Attachment C

Project Designs

PANOCHÉ DRAINAGE DISTRICT

FIREBAUGH CALIFORNIA

SAN JOAQUIN RIVER SALINITY
MANAGEMENT PROGRAM

DMC SUMP REPLUMBING PROJECT
LOCATION MAP

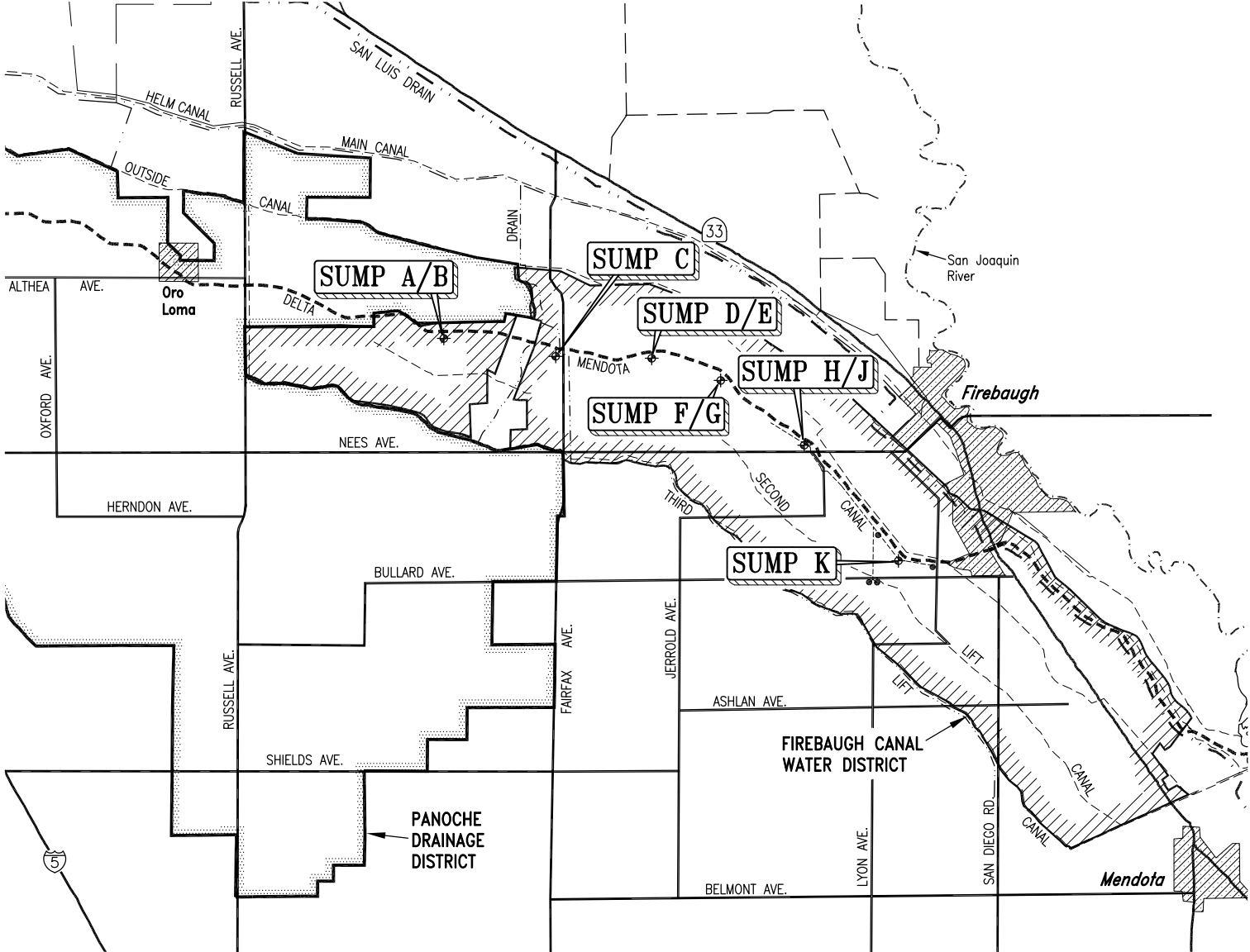
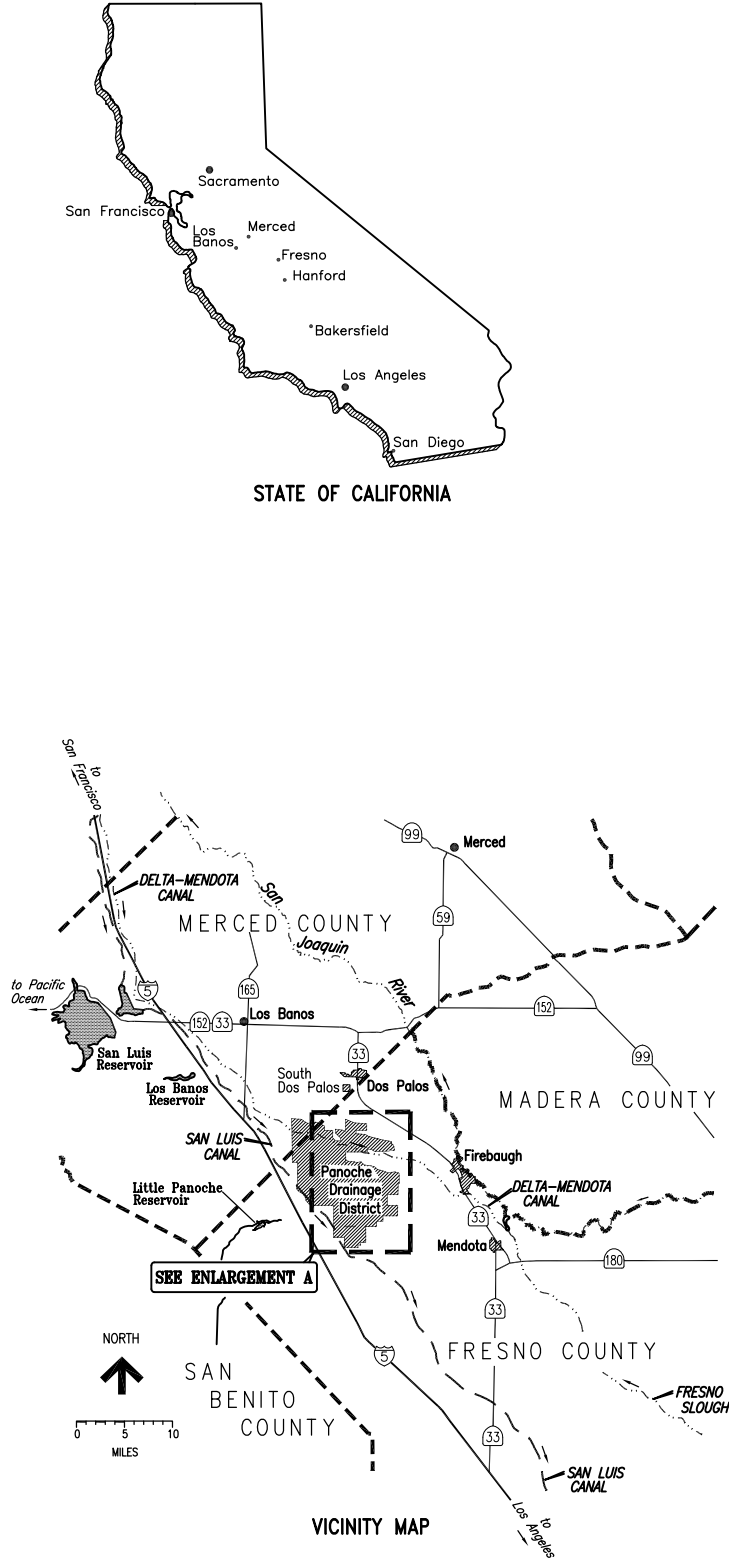
SUMMERS ENGINEERING INC.
Consulting Engineers
HANFORD CALIFORNIA

MARCH 2014



DRAWING LIST

FIGURE NUMBER	TITLE	DRAWING NUMBER
1	LOCATION MAP	L-1
2	SUMP A/B SITE PLAN	DMC-SP-1
3	SUMP C SITE PLAN	DMC-SP-2
4	SUMP D/E SITE PLAN	DMC-SP-3
5	SUMP F/G SITE PLAN	DMC-SP-4
6	SUMP K PIPELINE PLAN & PROFILE STA 0+00 TO 48+00	DMC-KP-1
7	SUMP K PIPELINE PLAN & PROFILE STA 48+00 TO 96+00	DMC-KP-2
8	SUMP K PIPELINE PLAN & PROFILE STA 96+00 TO 144+00	DMC-KP-3
9	SUMP K PIPELINE PLAN & PROFILE STA 144+00 TO 190+45	DMC-KP-4

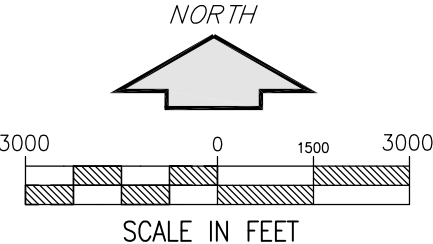


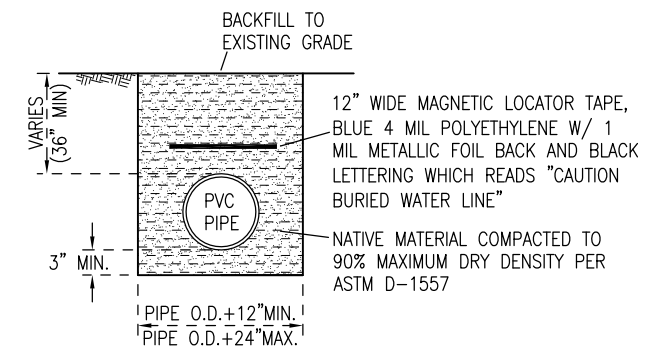
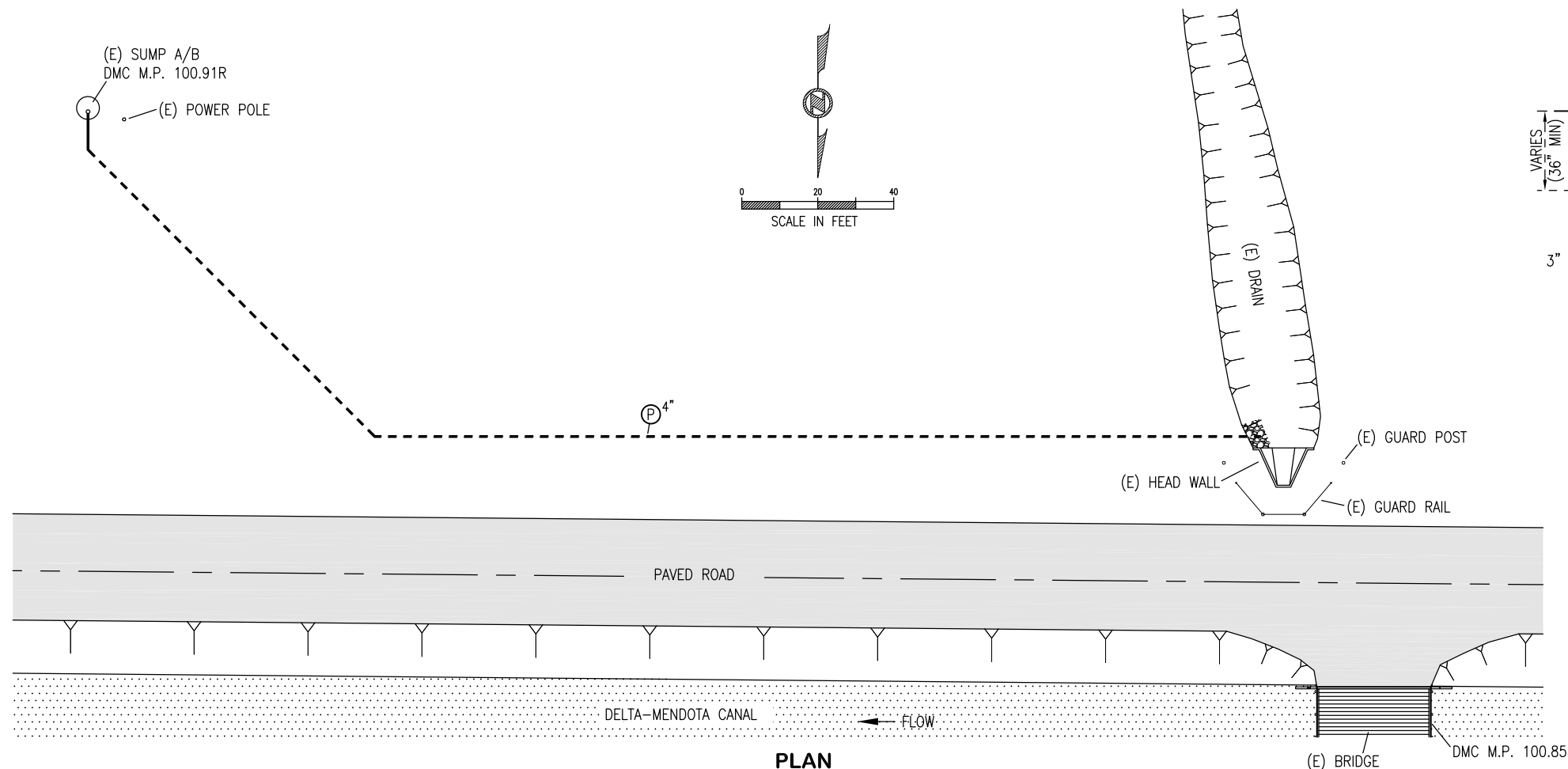
ENLARGEMENT A - LOCATION OF PROJECT

THE LOCATIONS SHOWN ON THE DRAWINGS FOR EXISTING AND/OR NEW PIPE, VALVES, CONNECTIONS AND APPURTENANCES, GAS MAINS, WATER MAINS, UNDERGROUND AND OVERHEAD TELEPHONE CABLES, UNDERGROUND AND OVERHEAD ELECTRICAL SERVICES, AND OTHER UTILITIES WERE DETERMINED FROM RECORDS AVAILABLE TO THE ENGINEER AND MAY HAVE BEEN ALTERED IN THE FIELD. THE CONTRACTOR SHALL CONTACT THE RESPONSIBLE UTILITY AND VERIFY LOCATIONS BEFORE EXCAVATING.

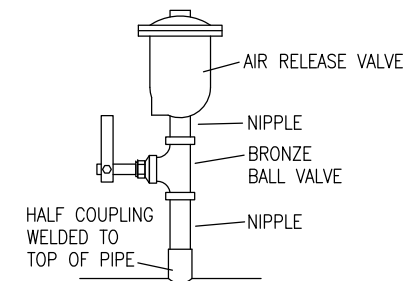
CAUTION : OVERHEAD POWER LINES
IN THIS AREA

CALL USA AT LEAST 48 HOURS PRIOR TO ANY
EXCAVATION 1-800-642-2444





DETAIL A
TYPICAL PIPE
BEDDING & BACKFILL



DETAIL B
1" AIR & VACUUM
RELEASE VALVE

- GENERAL NOTES

■ 1. ALL PVC PIPE SHALL BE 100 PSI PLASTIC IRRIGATION PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D1784 AND SCS430DD AND SHALL HAVE A MAXIMUM DIMENSION RATIO OF 41.

■ 2. RIP-RAP SHALL BE 4"-12" NOMINAL DIAMETER ROCK OR BROKEN CONCRETE FREE FROM REBAR AND OBJECTIONABLE DEBRIS.

■ 3. EXISTING STEEL PIPE MAY BE REUSED WITH ENGINEER'S APPROVAL. ALL NEW STEEL PIPE SHALL BE SCHEDULE 40 OR MANUFACTURED IN ACCORDANCE WITH AWWA C-200 WITH $\frac{1}{4}$ " WALL THICKNESS. NEW STEEL PIPE SHALL BE LINED AND COATED WITH HIGH SOLIDS EPOXY PAINT IN ACCORDANCE WITH AWWA C-210.

■ 4. CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, BRACING SLOPING OR OTHER METHODS REQUIRED FOR WORKER SAFETY AND PROTECTION.

■ 5. EXISTING FLOW METER MAY BE REUSED WITH ENGINEER'S APPROVAL. NEW FLOW METER SHALL BE WATER SPECIALTIES MODEL LP-21 OR APPROVED EQUAL. FLOW METER SHALL TOTALIZE IN ACRE FEET. LOCATE METER AT LEAST 10 PIPE DIAMETERS DOWNSTREAM OF PUMP CONNECTION AND 5 PIPE DIAMETERS UPSTREAM OF AIR VALVE.

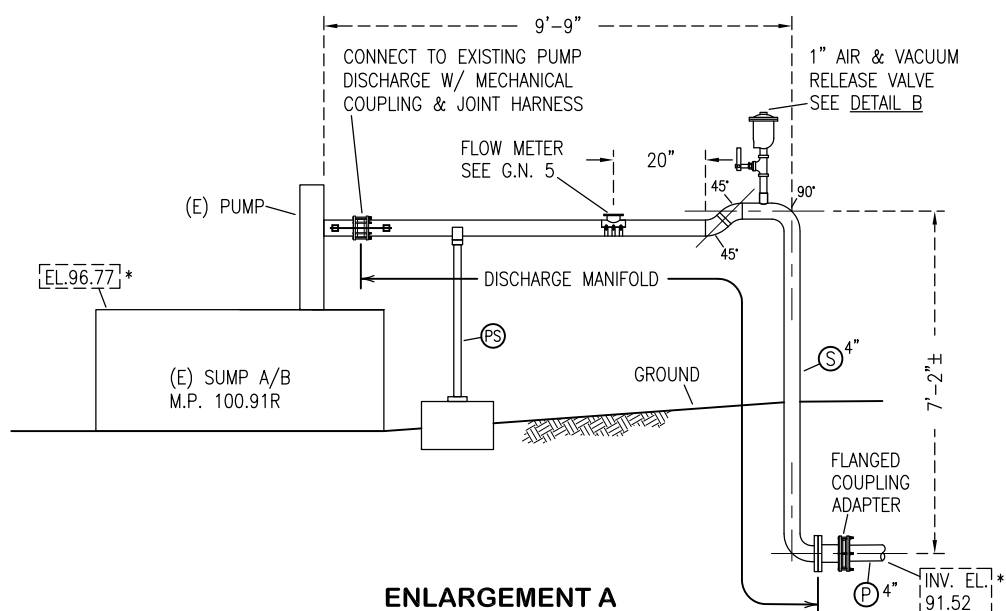
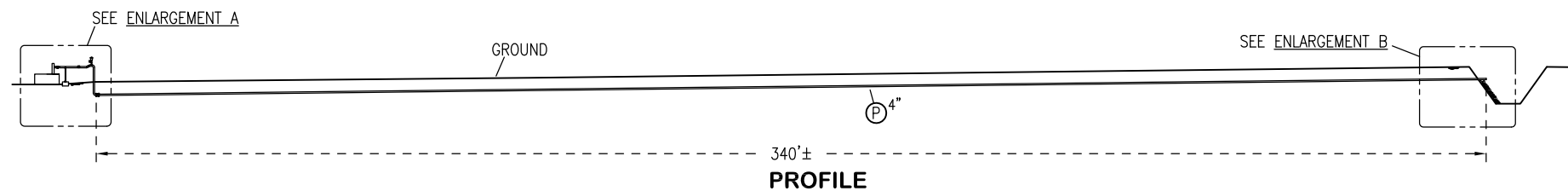
■ 6. AIR RELEASE VALVE SHALL BE WATERMAN CR101 OR APPROVED EQUAL.

EXPLANATION OF SYMBOLS

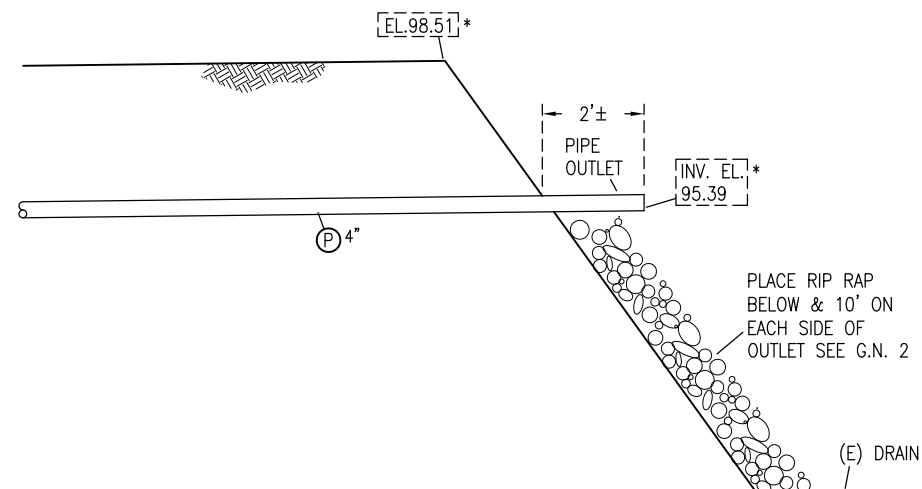
- (E) EXISTING
- (P) PVC PIPE, SIZE INDICATED
- GALVANIZED ADJUSTABLE PIPE SUPPORT W/ 2 EA.
- (FS) $\frac{1}{2}$ " ϕ x4" EPOXY ANCHORS IN 18"SQ.x12" THICK CONC.
FOOTING REINFORCED W/ #4@12" EACH WAY
- (S) STEEL PIPE, SIZE INDICATED
- * ASSUMED ELEVATION DATUM

ESTIMATED QUANTITIES

4" PVC PIPE	340 LINEAR FEET
SUMP A/B DISCHARGE MANIFOLD	LUMP SUM



ENLARGEMENT A



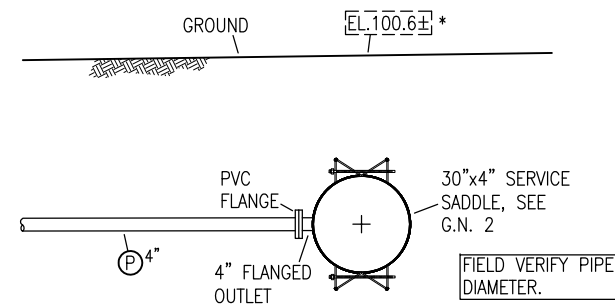
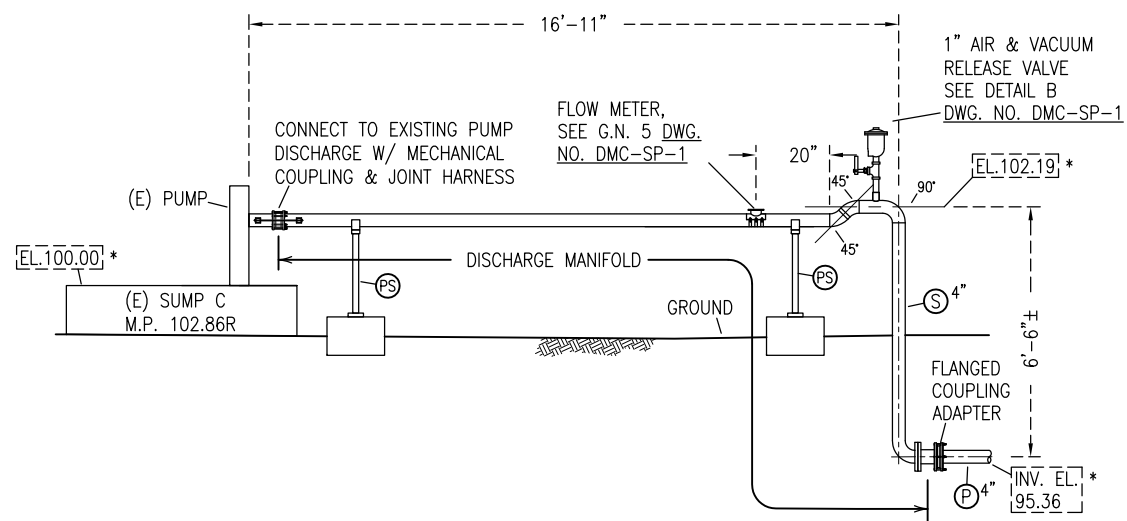
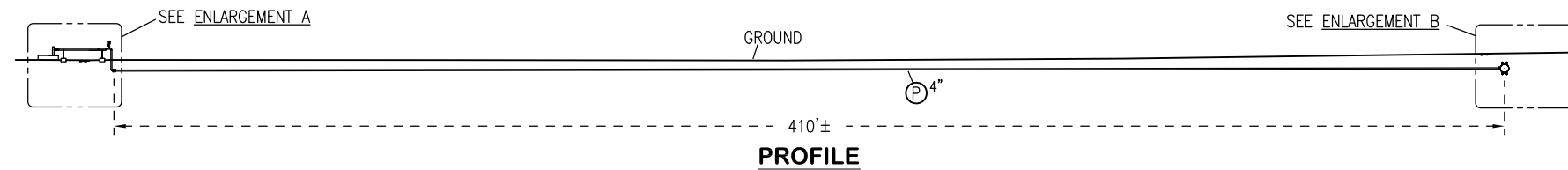
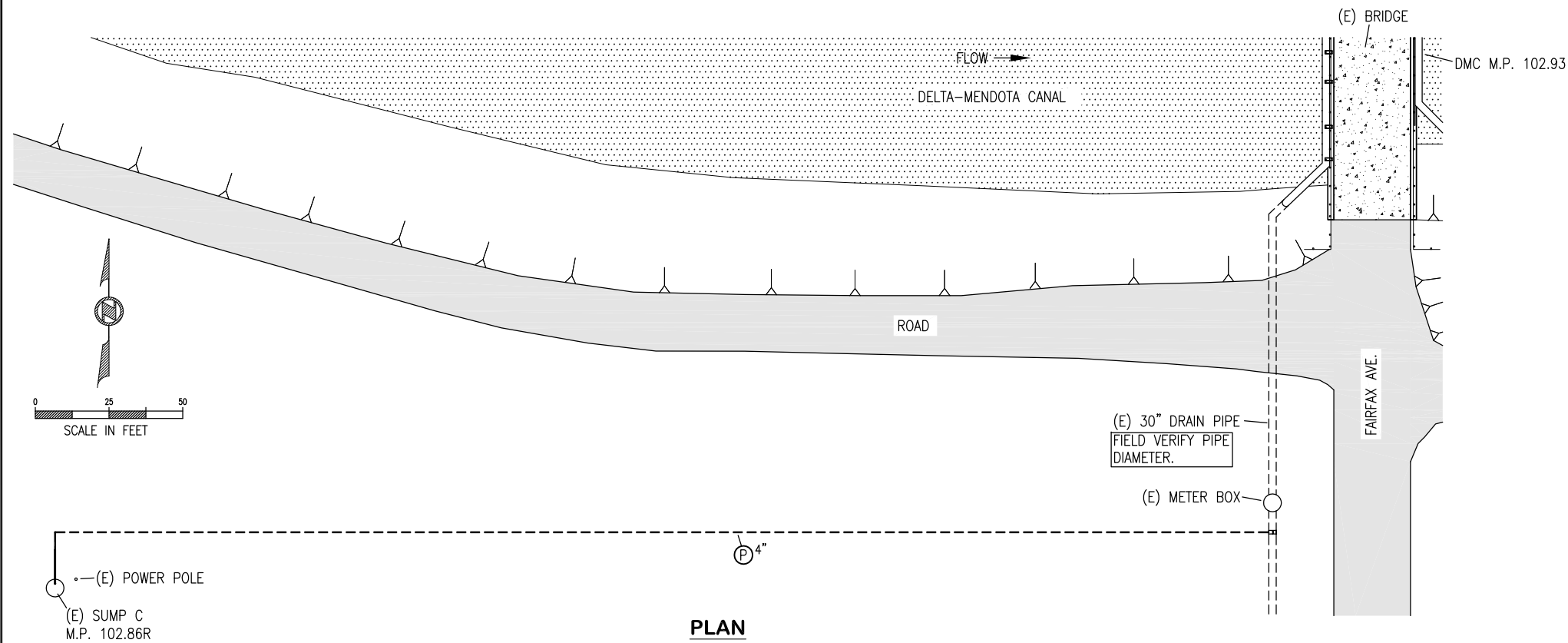
ENLARGEMENT B

CAUTION : OVERHEAD POWER LINES
IN THIS AREA

CALL USA AT LEAST 48 HOURS PRIOR TO ANY
EXCAVATION 1-800-642-2444



						SUMMERS ENGINEERING INC.					
						HANFORD Consulting Engineers CALIFORNIA					
						DATE MAY 2010		APPROVED <i>[Signature]</i>			
						DRAWN KY		DRAWING NO. DMC-SP-1			
						CHECKED JCL		SHEET 1 OF 3			
NO. DATE MADE CHKD. APPD.						DRAWING NAME: PDD10013.dwg					
REVISIONS											



GENERAL NOTES

- 1. SEE DWG. NO. DMC-SP-1 FOR APPLICABLE GENERAL NOTES.
- 2. SERVICE SADDLE SHALL BE ROMAC MODEL FTS42T OR APPROVED EQUAL, EPOXY LINED AND COATED WITH SS NUTS, BOLTS AND WASHERS. FIELD VERIFY (E) DRAIN PIPE O.D.
- 3. ALL NUTS, BOLTS, AND WASHERS SHALL BE 304 STAINLESS STEEL.
- 4. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL DETAIL.

EXPLANATION OF SYMBOLS

- (E) EXISTING
- (P) PVC PIPE, SIZE INDICATED
- (PS) GALVANIZED ADJUSTABLE PIPE SUPPORT W/ 2 EA. 1/2"x4" EPOXY ANCHORS IN 18"SQ.x12" THICK CONC. FOOTING REINFORCED W/ #4@12" EACH WAY
- (S) STEEL PIPE, SIZE INDICATED
- * ASSUMED ELEVATION DATUM

ESTIMATED QUANTITIES

4" PVC PIPE	410 LINEAR FEET
SUMP C DISCHARGE MANIFOLD	LUMP SUM



PANOCHÉ DRAINAGE DISTRICT

FIREBAUGH CALIFORNIA

SAN JOAQUIN RIVER SALINITY
MANAGEMENT PROGRAM
DMC SUMP REPLUMBING PROJECT
SUMP C SITE PLAN

SUMMERS ENGINEERING INC.
HANFORD Consulting Engineers CALIFORNIA

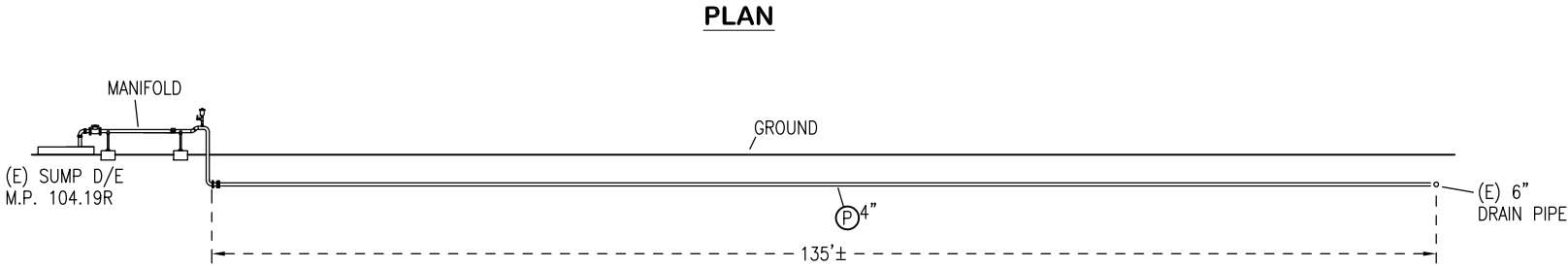
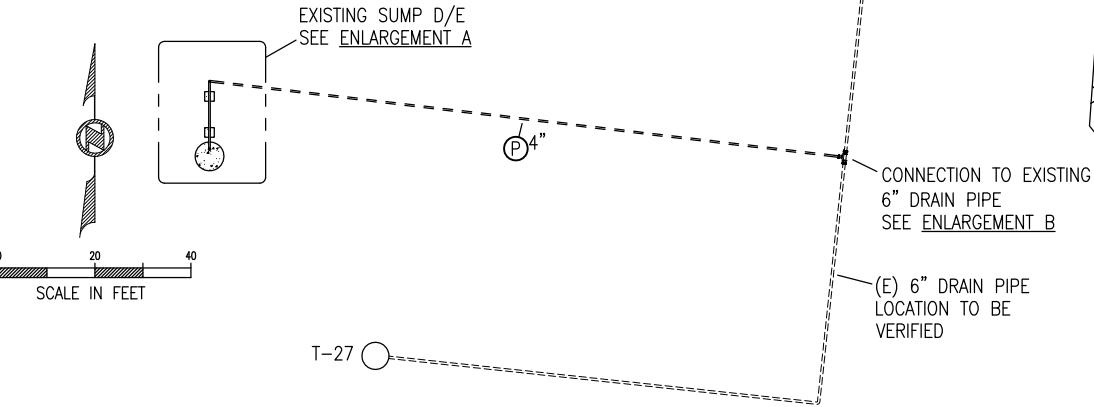
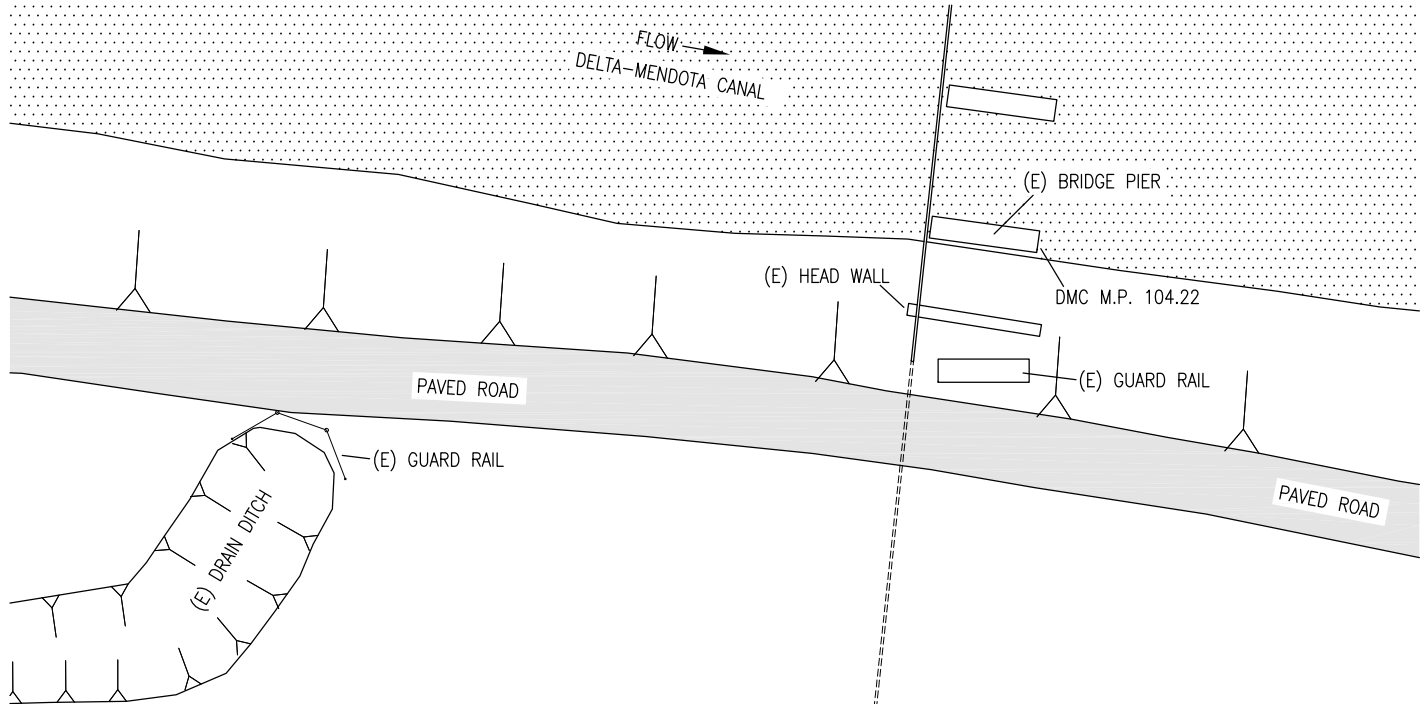
DATE MAY 2010 APPROVED *Joseph C. McGowan*
DRAWN KY DRAWING NO. DMC-SP-2
CHECKED JCL SHEET 2 OF 3

DRAWING NAME: PDD10014.dwg

CAUTION : OVERHEAD POWER LINES
IN THIS AREACALL USA AT LEAST 48 HOURS PRIOR TO ANY
EXCAVATION 1-800-642-2444

GENERAL NOTES

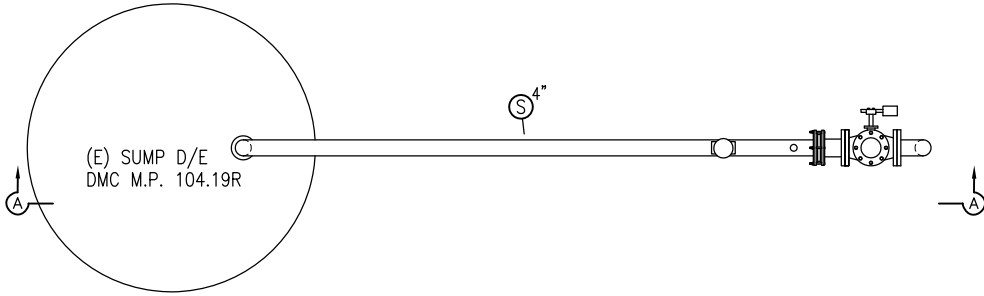
- 1. SEE DWG. NOS. DMC-SP-1&2 FOR APPLICABLE GENERAL NOTES.
- 2. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL DETAIL.



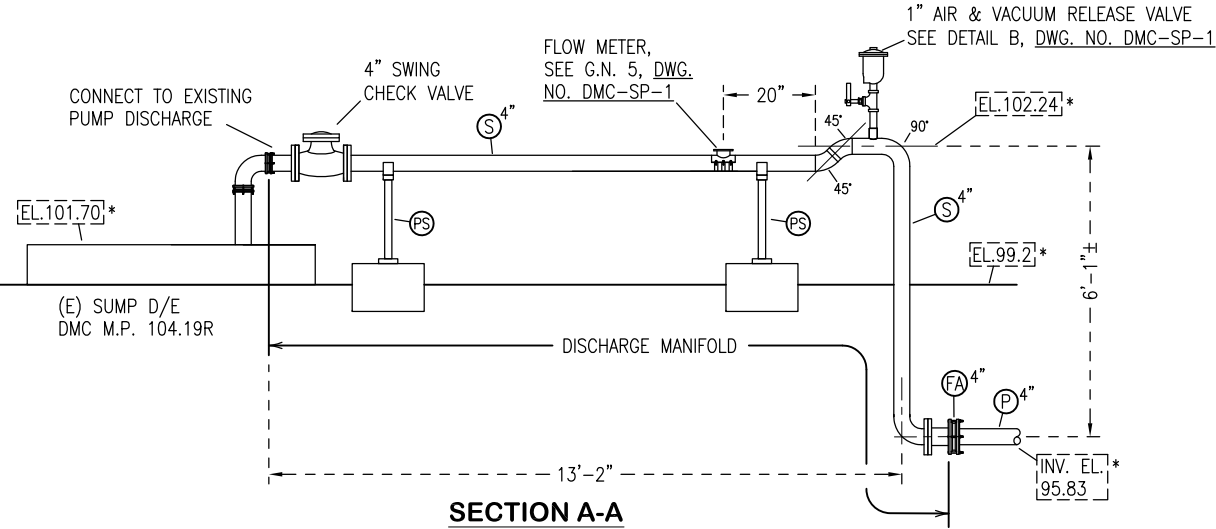
PROFILE

CAUTION : OVERHEAD POWER LINES
IN THIS AREA

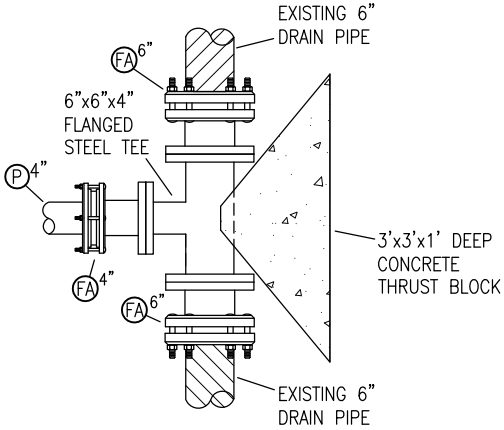
CALL USA AT LEAST 48 HOURS PRIOR TO ANY
EXCAVATION 1-800-642-2444



ENLARGEMENT A



SECTION A-A



ENLARGEMENT B

EXPLANATION OF SYMBOLS

- (E) EXISTING
- (FA) FLANGED COUPLING ADAPTER, SIZE INDICATED
- (PS) GALVANIZED ADJUSTABLE PIPE SUPPORT W/ 2 EA. 1/2"x4" EPOXY ANCHORS IN 18"SQ.x12" THICK CONC. FOOTING REINFORCED W/ #4@12" EACH WAY
- (P) PVC PIPE, SIZE INDICATED
- (S) STEEL PIPE, SIZE INDICATED
- * ASSUMED ELEVATION DATUM

ESTIMATED QUANTITIES

4" PVC PIPE	135 LINEAR FEET
SUMP D/E DISCHARGE MANIFOLD	LUMP SUM



PANOCHÉ DRAINAGE DISTRICT

FIREBAUGH CALIFORNIA

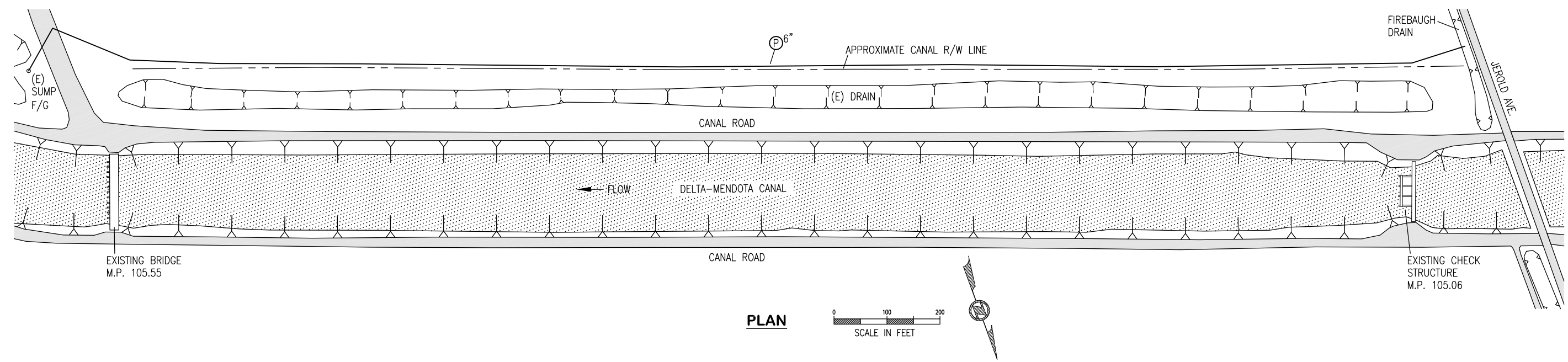
SAN JOAQUIN RIVER SALINITY
MANAGEMENT PROGRAM
DMC SUMP REPLUMBING PROJECT
SUMP D/E SITE PLAN

SUMMERS ENGINEERING INC.

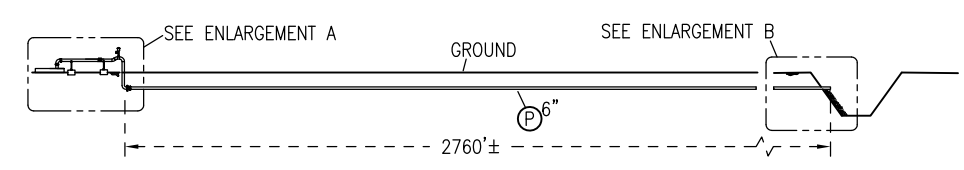
HANFORD Consulting Engineers CALIFORNIA

DATE	MAY 2010	APPROVED	Joseph C. McGowan
DRAWN	KY	DRAWING NO.	DMC-SP-3
CHECKED	JCL	SHEET	3 OF 3

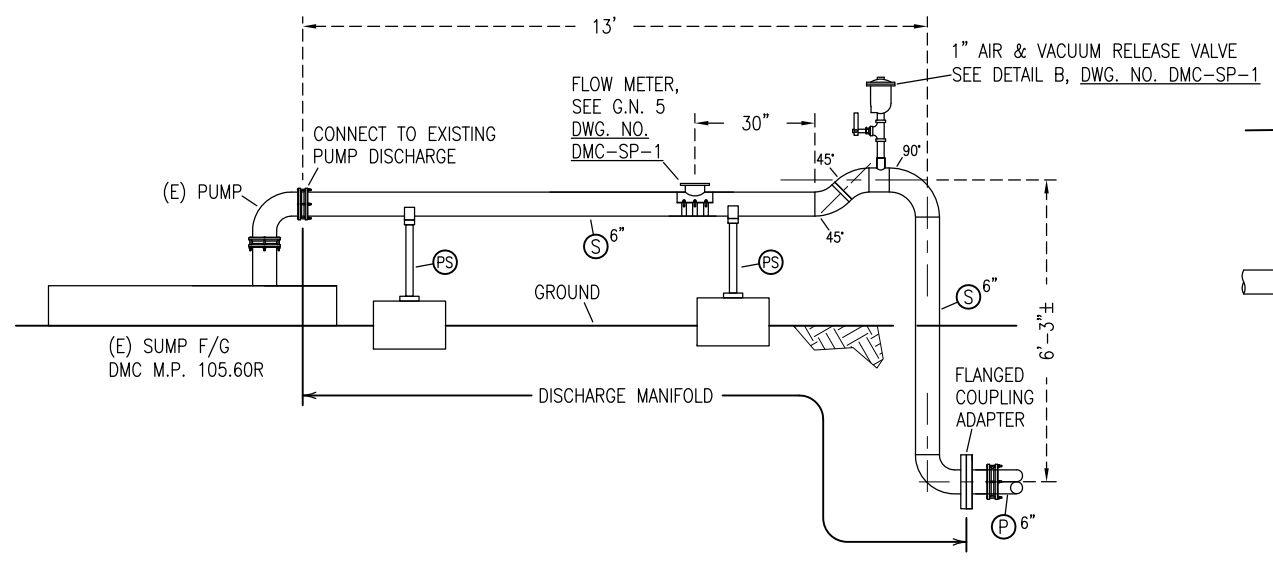
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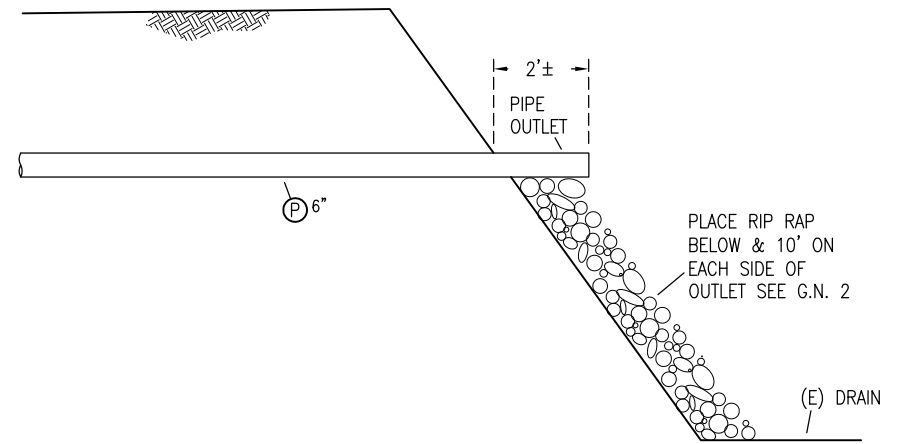
PLAN



PROFILE



ENLARGEMENT A



ENLARGEMENT B

GENERAL NOTES

- 1. SEE DWG. NOS. DMC-SP-1&2 FOR APPLICABLE GENERAL NOTES.
- 2. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL DETAIL.

EXPLANATION OF SYMBOLS

- (E) EXISTING
- P 6" PVC PIPE, SIZE INDICATED
- R/W RIGHT OF WAY
- S 6" STEEL PIPE, SIZE INDICATED

ESTIMATED QUANTITIES

6" PVC PIPE	2,760 LINEAR FEET
SUMP F/G DISCHARGE MANIFOLD	LUMP SUM



PANOCHÉ DRAINAGE DISTRICT
FIREBAUGH CALIFORNIA
SAN JOAQUIN RIVER SALINITY MANAGEMENT PROGRAM
DMC SUMP REPLUMBING PROJECT
SUMP F/G SITE PLAN

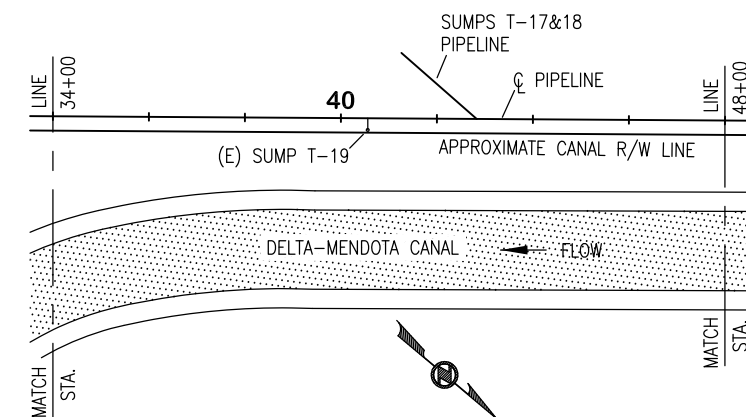
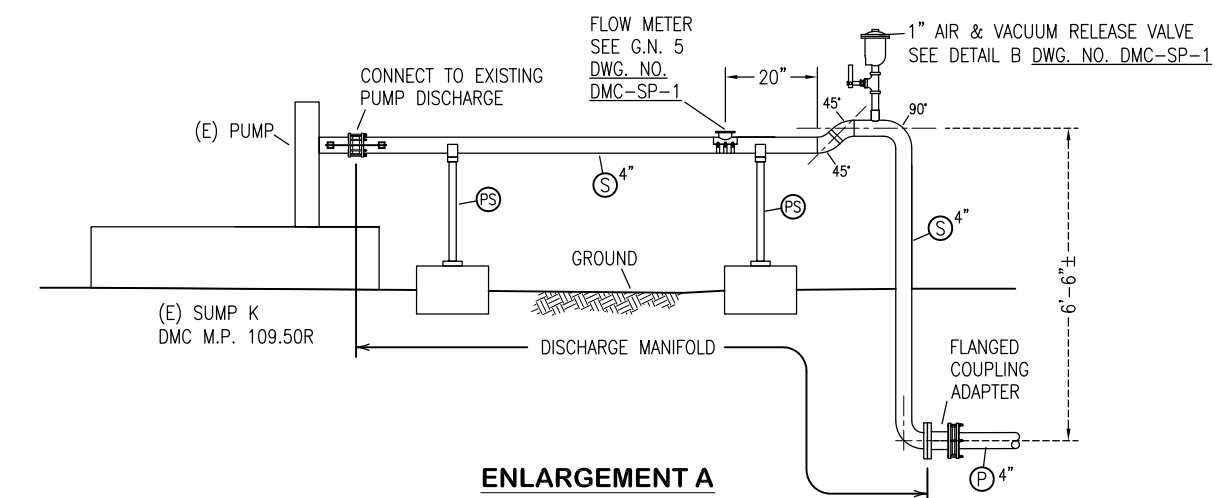
SUMMERS ENGINEERING INC. HANFORD Consulting Engineers CALIFORNIA				
DATE	FEBRUARY 2014	APPROVED	<i>Joseph C. McGowan</i>	
DRAWN	JMG	DRAWING NO.	DMC-SP-4	
CHECKED	JCL	SHEET	1	OF 1
DRAWING NAME: PDD14004.dwg				
REVISIONS				

CAUTION : OVERHEAD POWER LINES
IN THIS AREA

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EXCAVATION 1-800-642-2444



PLAN



6" PVC PIPE	3260	LINEAR	FEET
8" PVC PIPE	1023	LINEAR	FEET
15" PVC PIPE	14,762	LINEAR	FEET
SUMP K DISCHARGE MANIFOLD	LUMP	SUM	

■ 1. SEE DWG. NOS. DMC-SP-1&2 FOR APPLICABLE GENERAL NOTES.

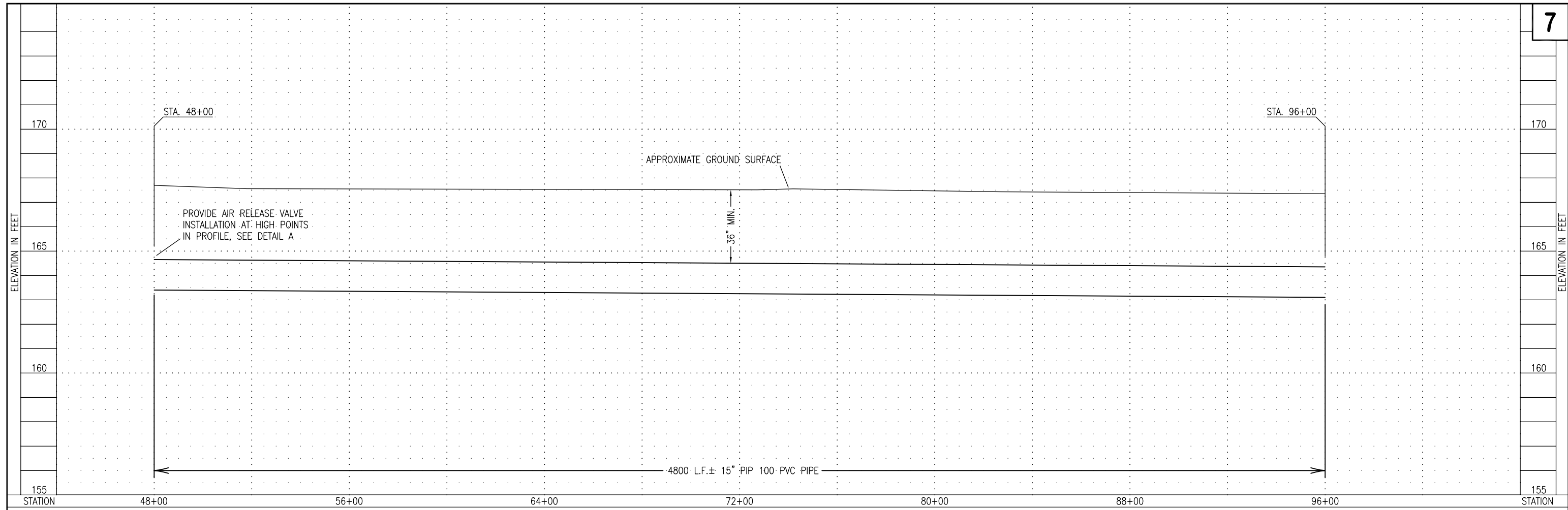
- 2. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL.

AP	ANGLE POINT
(E)	EXISTING
(P)	PVC PIPE, SIZE INDICATED
(PS)	GALVANIZED ADJUSTABLE PIPE SUPPORT W/ 2 EA. $\frac{1}{2}" \phi \times 4"$ EPOXY ANCHORS IN 18" SQ. x 12" THICK CONC. FOOTING REINFORCED W/ #4 @ 12" EACH WAY
R/W	RIGHT OF WAY
(S)	STEEL PIPE, SIZE INDICATED

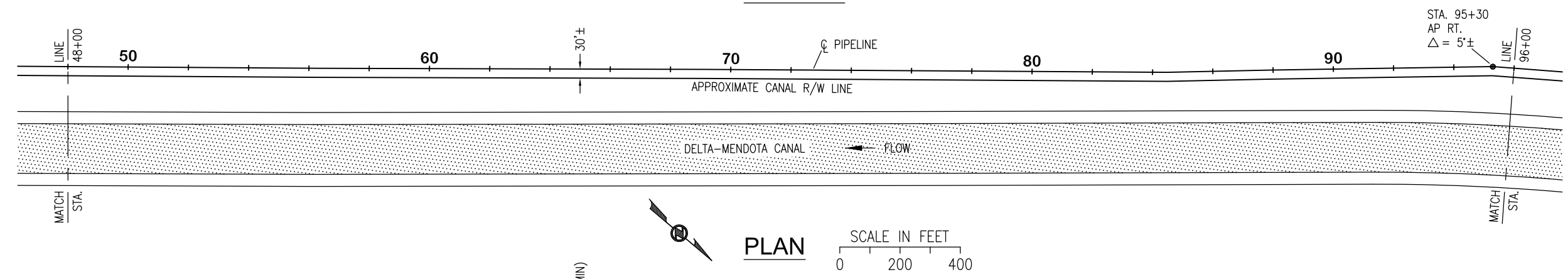


	SUMMERS ENGINEERING INC. HANFORD Consulting Engineers CALIFORNIA				
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DATE <u>FEBRUARY 2014</u> DRAWING <u>JMG/KY</u>	APPROVED <u><i>[Signature]</i></u> DRAWING NO. <u>DMC-KP-1</u>				
NO. _____ DATE _____ MADE _____ CHKD. _____ APPD. _____ <div style="text-align: center; border-top: 1px solid black; margin-top: 5px;"> REVISIONS </div>	CHECKED <u>JCL</u> SHEET <u>1</u> OF <u>4</u> DRAWING NAME: <u>PPD14002.dwg</u>				

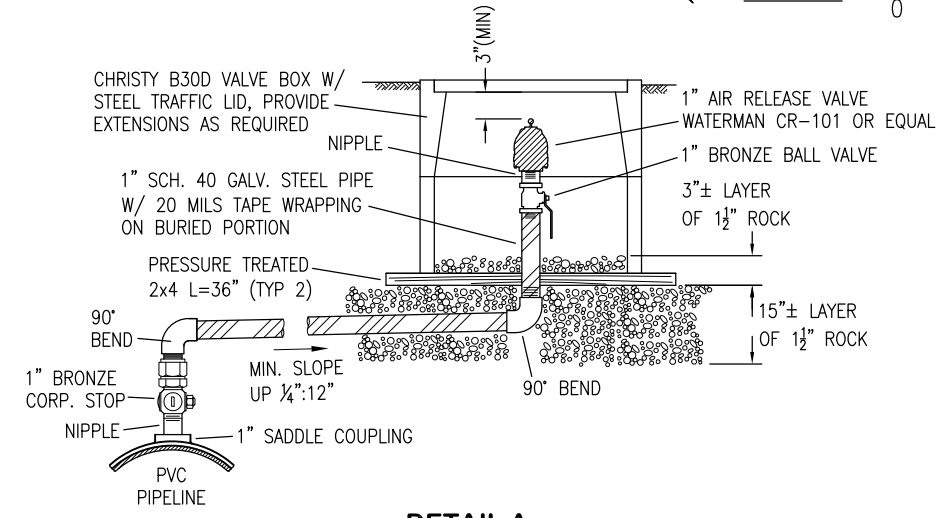
CAUTION : OVERHEAD POWER LINES
IN THIS AREA



PROFILE



PLAN



DETAIL A

GENERAL NOTES

- 1. SEE DWG. NOS. DMC-SP-1&2 FOR APPLICABLE GENERAL NOTES.
- 2. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL.

EXPLANATION OF SYMBOLS

- AP ANGLE POINT
- (E) EXISTING
- R/W RIGHT OF WAY



PANOCHÉ DRAINAGE DISTRICT

FIREBAUGH CALIFORNIA

**SAN JOAQUIN RIVER SALINITY
MANAGEMENT PROGRAM**

DMC SUMP REPLUMBING PROJECT

SUMP K PIPELINE PLAN & PROFILE

STA 48+00 TO STA 96+00

SUMMERS ENGINEERING INC.
HANFORD Consulting Engineers CALIFORNIA

DATE FEBRUARY 2014 APPROVED *Joseph C. McGowan*

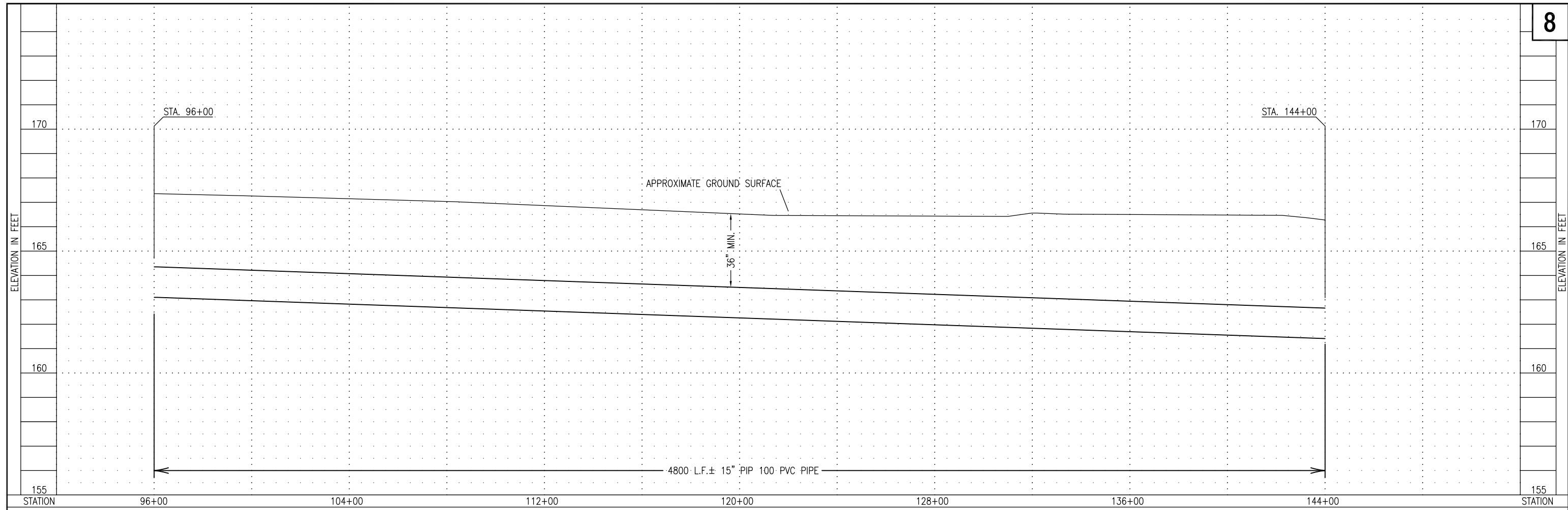
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CHECKED JCL SHEET 2 OF 4

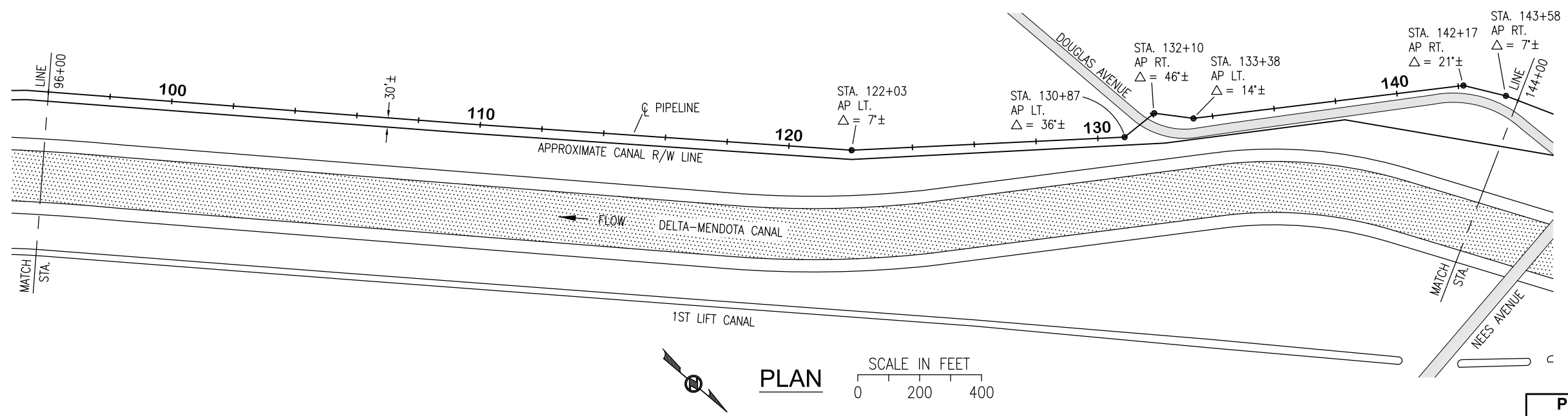
DRAWING NAME: PDD14002.dwg

CALL USA AT LEAST 48 HOURS PRIOR TO ANY
EXCAVATION 1-800-642-2444

CAUTION : OVERHEAD POWER LINES
IN THIS AREA



PROFILE



PLAN

SCALE IN FEET
0 200 400

GENERAL NOTES

- 1. SEE DWG. NOS. DMC-SP-1&2 FOR APPLICABLE GENERAL NOTES.
- 2. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL.

EXPLANATION OF SYMBOLS

- AP ANGLE POINT
- (E) EXISTING
- R/W RIGHT OF WAY



PANOCHÉ DRAINAGE DISTRICT
FIREBAUGH CALIFORNIA
SAN JOAQUIN RIVER SALINITY MANAGEMENT PROGRAM
DMC SUMP REPLUMBING PROJECT
SUMP K PIPELINE PLAN & PROFILE
STA 96+00 TO STA 144+00

SUMMERS ENGINEERING INC.
HANFORD CONSULTING ENGINEERS CALIFORNIA

DATE FEBRUARY 2014 APPROVED *Joseph C. McGowan*
DRAWN JMG/KY DRAWING NO. DMC-KP-3
CHECKED JCL SHEET 3 OF 4

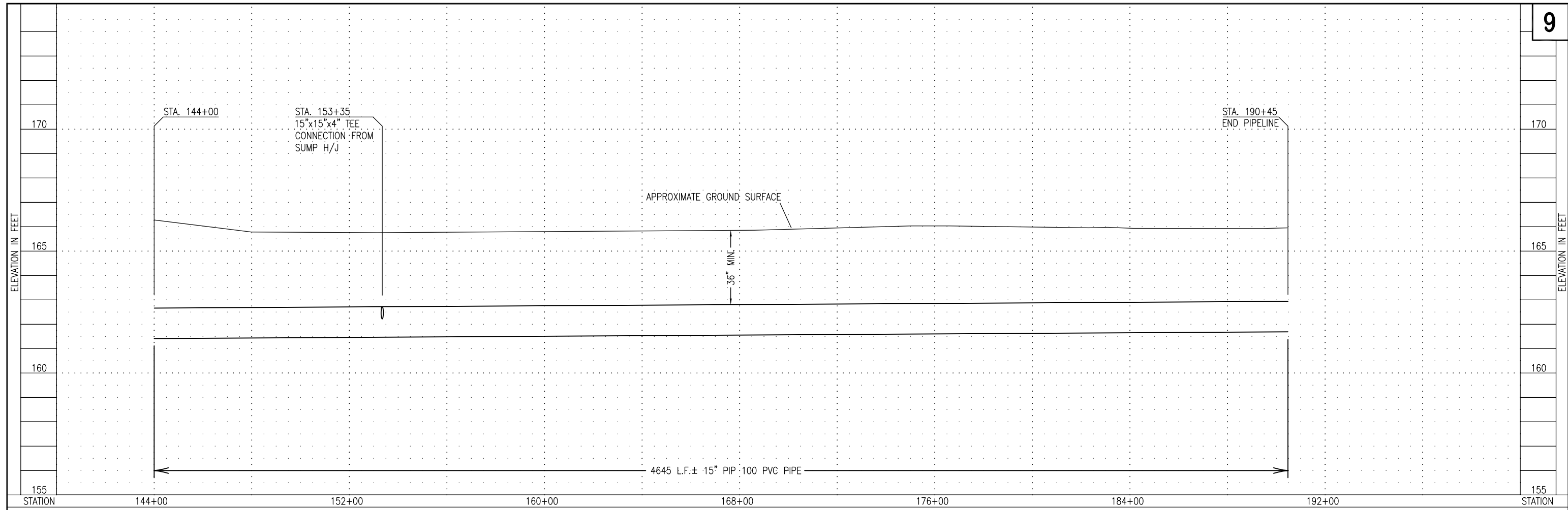
NO.	DATE	MADE	CHKD.	APPD.

REVISIONS

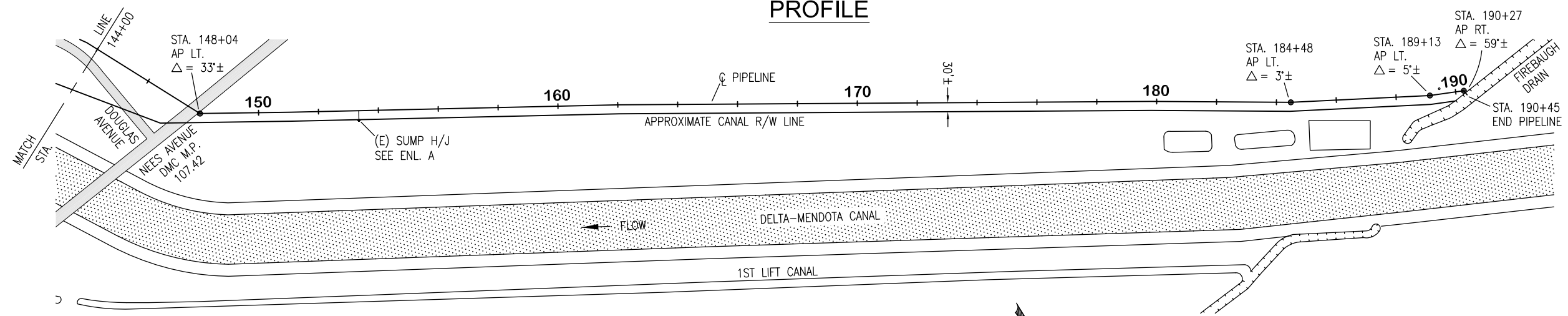
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CAUTION : OVERHEAD POWER LINES
IN THIS AREA

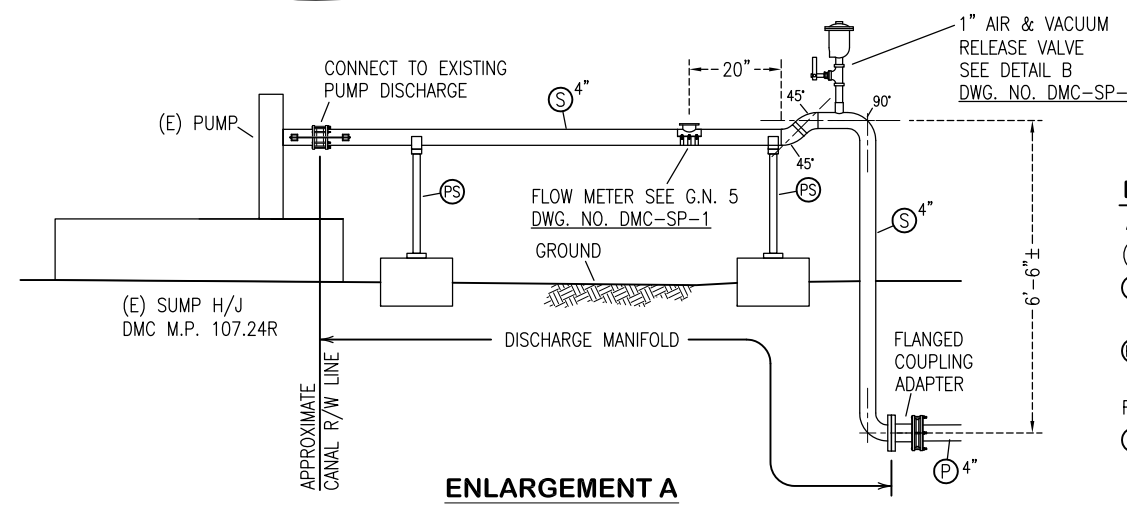
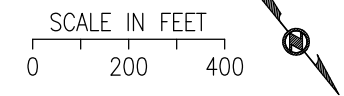
CALL USA AT LEAST 48 HOURS PRIOR TO ANY
EXCAVATION 1-800-642-2444



PROFILE



PLAN



ENLARGEMENT A

EXPLANATION OF SYMBOLS

- AP ANGLE POINT
- (E) EXISTING
- P PVC PIPE, SIZE INDICATED
- GALVANIZED ADJUSTABLE PIPE SUPPORT W/ 2 EA.
- PS 3/8"x4" EPOXY ANCHORS IN 18"SQ.x12" THICK CONC. FOOTING REINFORCED W/ #4@12" EACH WAY
- R/W RIGHT OF WAY
- S STEEL PIPE, SIZE INDICATED

GENERAL NOTES

- 1. SEE DWG. NOS. DMC-SP-1&2 FOR APPLICABLE GENERAL NOTES.
- 2. SEE DETAIL A, DWG. NO. DMC-SP-1 FOR PIPE BEDDING & BACKFILL.

CALL USA AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION 1-800-642-2444

CAUTION : OVERHEAD POWER LINES IN THIS AREA

ESTIMATED QUANTITIES

SUMP H/J DISCHARGE MANIFOLD LUMP SUM



					SUMMERS ENGINEERING INC.				
					HANFORD Consulting Engineers CALIFORNIA				
					DATE FEBRUARY 2014		APPROVED <i>Joseph C. McGowan</i>		
					DRAWN JMG/KY		DRAWING NO. DMC-KP-4		
					CHECKED JCL		SHEET 4 OF 4		
REVISIONS					DRAWING NAME: PDD14002.dwg				

PANOCHÉ DRAINAGE DISTRICT
FIREBAUGH CALIFORNIA
SAN JOAQUIN RIVER SALINITY MANAGEMENT PROGRAM
DMC SUMP REPLUMBING PROJECT
SUMP K PIPELINE PLAN & PROFILE
STA 144+00 TO STA 190+45

SUMMERS ENGINEERING INC.
HANFORD CONSULTING ENGINEERS CALIFORNIA

Attachment D

U.S. Fish and Wildlife Service Concurrence Memo



United States Department of the Interior




In Reply Refer to:
FF08ESMF00-
2014-I-0435

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

JUN 07 2014

Memorandum

To: David Hyatt, Supervisory Biologist, U.S. Bureau of Reclamation, South Central California Area Office, Fresno, California

From: Thomas Leeman, Chief, San Joaquin Valley Division, Endangered Species Program, Sacramento Fish and Wildlife Office, Sacramento California 

Subject: Issuance of Land Use Authorization to Panoche Drainage District in Order to Install, Operate, and Maintain Pipelines to Re-route Drainage Discharge from the Six Firebaugh Sumps to the Grassland Bypass Project's San Joaquin River Water Quality Improvement Project

This is in response to the memorandum (Memo) from the U.S. Bureau of Reclamation (Reclamation) requesting the U.S. Fish and Wildlife Service's (Service) concurrence that issuance of a perpetual land use authorization to the Panoche Drainage District (District) for right-of-way access to the Delta Mendota Canal (DMC) to install, operate, and maintain pipelines to re-route drainage discharge from the Firebaugh sumps (DMC sumps) to the Grassland Bypass Project's (GBP) San Joaquin River Water Quality Improvement Project (SJRIP) may affect but is not likely to adversely affect (NLAA) the federally-listed as threatened giant garter snake (*Thamnophis gigas*). This response is provided pursuant to section 7(a)(2) of the Endangered Species Act of 1973 (Act) (16 U.S.C. 1531 *et seq.*), and in accordance with the regulations governing interagency consultations (50 CFR §402). We received your June 10, 2014 Memo requesting concurrence with NLAA for the proposed action in Service's Sacramento Fish and Wildlife Office on June 17, 2014.

The District will use the authorization to install, operate, and maintain pipelines rerouting drainage from the six Firebaugh sumps away from the Delta Mendota Canal and into the SJRIP's drainage reuse area. This consultation is based on information provided in your June 10, 2014 Memo, a Biological Evaluation for this action, the environmental documents for the San Luis Drainage Feature Re-evaluation (SLDFR) including the 2006 Final Environmental Impact Statement (Reclamation 2006) and the Service's Biological Opinion (Service File No. 06-F-0027), and the March 2007 Record of Decision (ROD; Reclamation 2007), which included rerouting the drainage from the DMC sumps to the SJRIP, and e-mails between Reclamation and the Service. A complete administrative record of this consultation and the SLDFR consultation is on file in the Service's Sacramento Fish and Wildlife Office.

Reclamation's Proposed Action will involve modifications of existing pump manifolds at each DMC sump. Air vacuum release valves and flow meters will also be installed above-ground at each sump location. Approximately 22,690 linear feet of trenching in total will be required to install the pipelines. The trenches will be approximately 42 inches deep and approximately 12 inches wide. The PVC pipeline will be installed in the trenches with 36 inches of cover, then backfilled with native material and compacted to 95 percent maximum dry density. Three of the DMC sumps (Sumps A/B, F/G, and H/J) would require the placement of rip-rap in drainage ditches below and ten feet on either side of, the new outlet pipes where water would be discharged.

Appendix A includes maps of the project area and maps of the work involved at each individual DMC sump. Figure 1 provides an overview of the project area. Figures 2-6 in Appendix A show the specific work to be completed at each sump, including approximate trenching lengths, trench placement, etc. Construction for the entire project is expected to take two to three months to complete, but work at each site would only last about one or two days.

Once construction is complete, drainage from the sumps will be released into ditches within the SJRIP where it will be re-circulated and reused in the same manner as existing drainage water is managed within the SJRIP. This project will re-route approximately 1,200 acre-feet (AF) of poor quality subsurface agricultural drainage water that previously discharged into the DMC, and would prevent approximately 800 pounds of selenium and 8,300 tons of salts from entering the DMC annually. The DMC is the major source of water supply to the public and private wetlands in the Grasslands Ecological Area and the Mendota Wildlife Area. This action will likely result in an improvement in the quality of water delivered to these wetland areas, which would likely benefit the giant garter snake.

The proposed action will result in an additional 1,200 AF per year of poor quality subsurface agricultural drainage water entering the SJRIP reuse area. The amount of drainage water managed in the SJRIP has increased over the years reaching a volume of 23,169 AF in 2011 (Reclamation 2012). At its completion, the SJRIP project is designed to handle all of the drainage from the Grasslands Drainage Area; a total volume of up to 29,500 AF per year (Reclamation 2009). The addition of 1,200 AF per year of drainage water to the SJRIP reuse area is a minor increase, and is within the designed capacity of the project. Once the drainage water enters the SJRIP drainage reuse area it will be used to irrigate salt tolerant crops. Drainage from these salt tolerant crops will be collected in tile drains and reused within the SJRIP (Reclamation 2012). The drainage water associated with the proposed action will remain in the SJRIP reuse area and will not be discharged to the San Luis Drain. Land use in the SJRIP drainage reuse area will remain unchanged and commitments from the 2009 GBP biological opinion (Service File No., 09-F-1036), intended to minimize wildlife exposure to drainage water, will continue to be implemented.

The three drainage ditches where rip-rap will be placed have steep barren dirt walls and some weedy vegetation growing on the bottom of the channels. These ditches are already used to convey poor quality subsurface agricultural drainage water to the SJRIP, and the addition of the drainage water from the DMC sumps would not result in significant changes over baseline conditions. Pre-construction surveys will be conducted for giant garter snakes in areas of potentially suitable habitat. If no giant garter snakes are found during the surveys, construction will commence with the implementation of avoidance measures (as described in Appendix B).

Reclamation has determined that the proposed action will have “no effect” on the federally-listed species identified in Appendix C and is not requesting concurrence with those determinations. Based on additional communication on this project, the Service understands that Reclamation has made a no effect determination for San Joaquin kit fox but will be conducting pre-construction surveys and implementing standard avoidance and minimization measures for this species (as denoted in the SLDFR ROD in the Mitigation, Monitoring and Reporting Plan, and described in Appendix B). A portion of the action area is within the Western Madera County Core Recovery Area for the kit fox, and foxes are known to use canals to move within agricultural areas. Because this species uses subterranean dens and is reasonably likely to occur within the action area (as recognized by Reclamation's inclusion of pre-construction surveys and avoidance measures), and the action includes earthwork on the DMC, we respectfully suggest that the action is instead at the “may affect” level, which would trigger the requirements for consultation. It is reasonable to project that a finding of may affect, not likely to adversely affect, would be supported for the fox, and the Service is available to discuss this further with you. However, should Reclamation wish to stay with the “no effect” determination for this species that is your prerogative to do so.

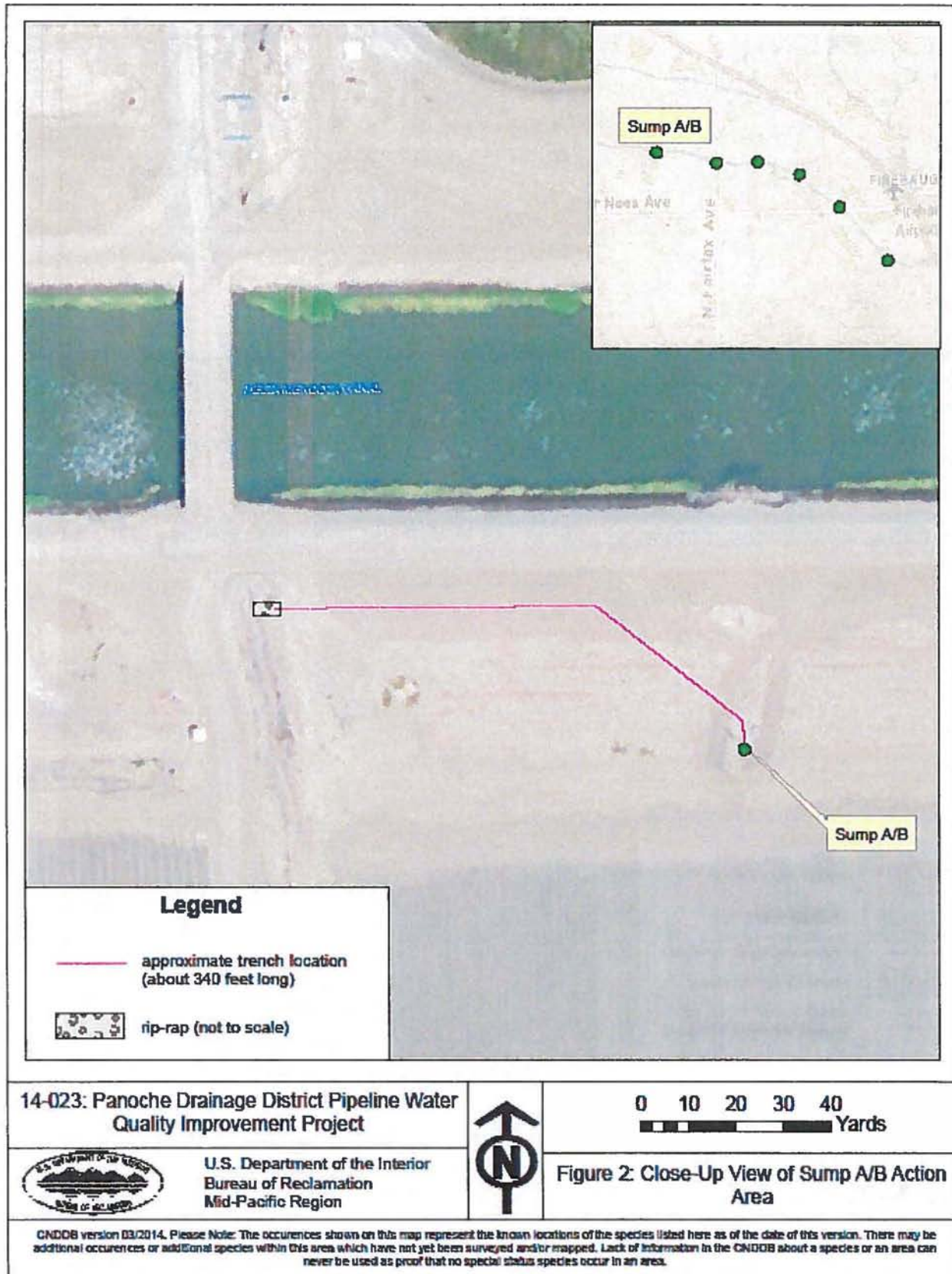
Based on the review of your Memo and other supporting information and environmental commitments in the BE for this action and the SLDFR ROD, we concur that implementation of this action, proposed by Reclamation, is NLAA the giant garter snake. Our concurrence with your NLAA determination concludes consultation for this action. Therefore, unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered, no further action pursuant to the Act is necessary. We appreciate your efforts to conserve federally-listed species and your efforts to avoid adverse effects to listed species that may result from this project. If you have questions about this memorandum, please contact Thomas Leeman or Joy Winckel at (916) 414-6600.

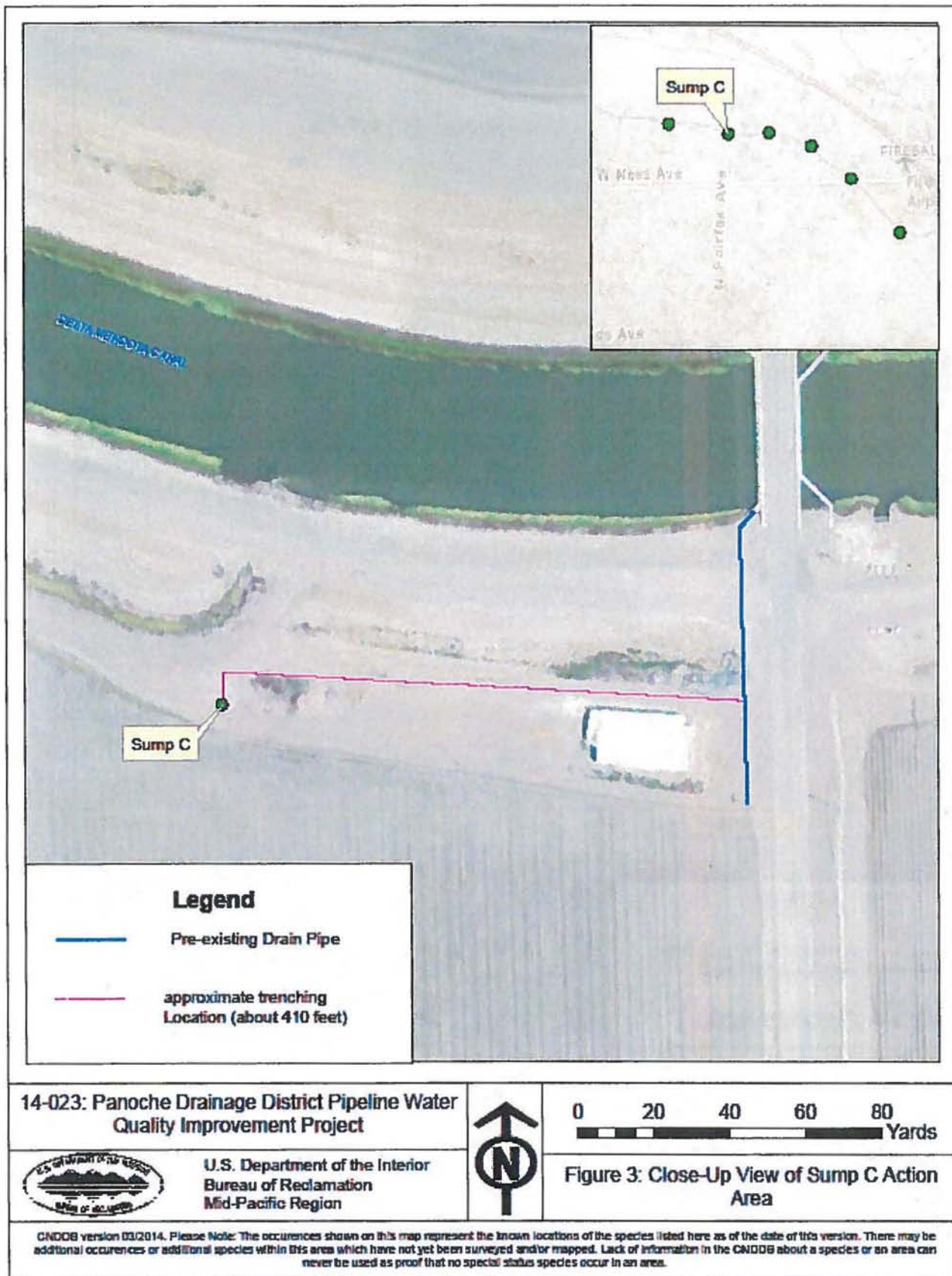
Literature Cited

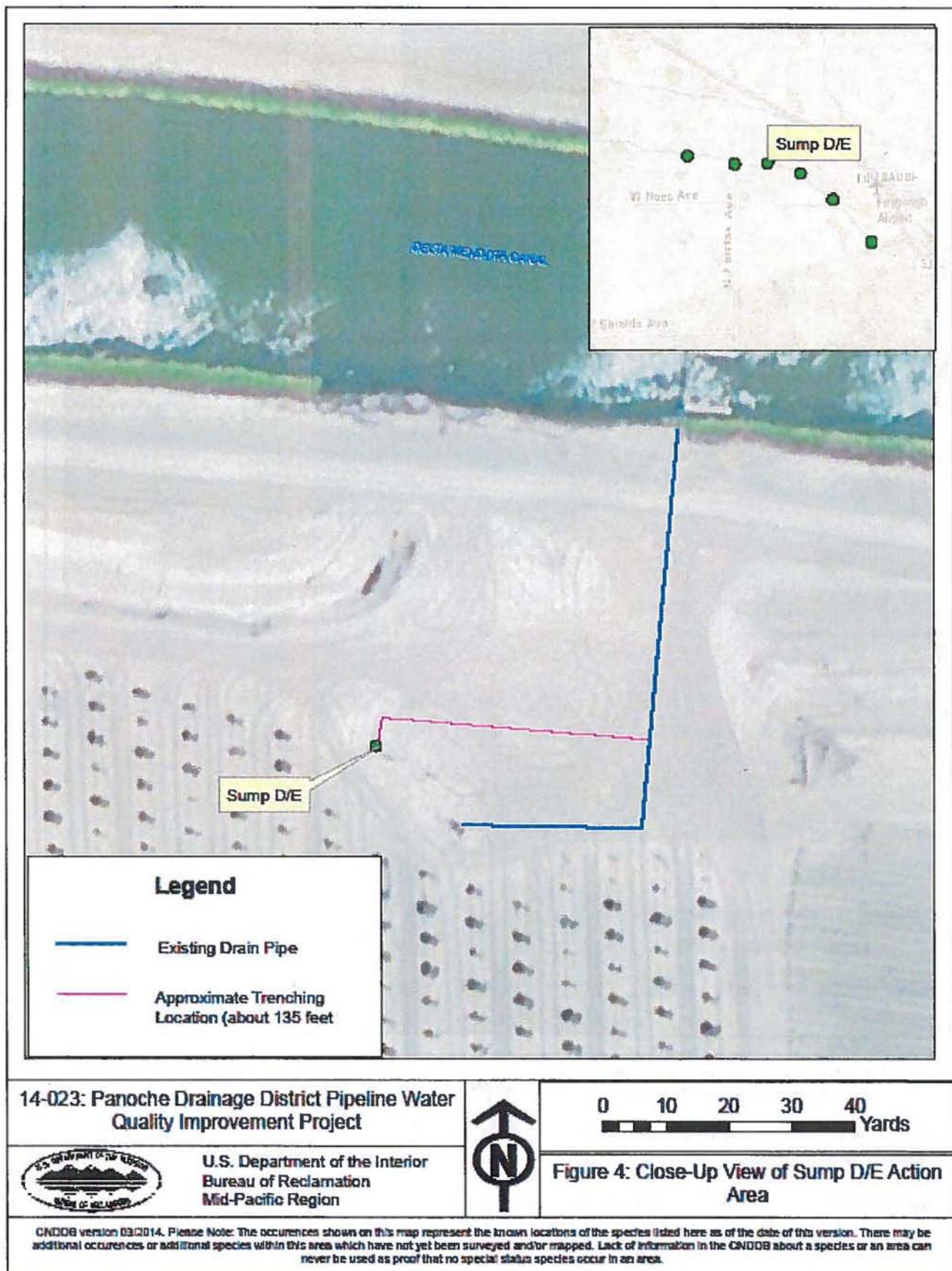
- U.S. Bureau of Reclamation (Reclamation). 2006. Final Environmental Impact Statement, San Luis Drainage Feature Re-evaluation. U.S. Bureau of Reclamation, Mid-Pacific Regional Office, Sacramento, CA, 24 Sections and Appendices. Available at the following URL: http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2226
- U.S. Bureau of Reclamation (Reclamation). 2007. San Luis Drainage Feature Re-evaluation. U.S. Bureau of Reclamation, Mid-Pacific Regional Office, Sacramento, CA, 37 pp. Available at the following URL: http://www.usbr.gov/mp/sccao/sld/docs/sld_feature_rceval_rsd.pdf
- U.S. Bureau of Reclamation (Reclamation). 2009. Grassland Bypass Project, 2010-2019 Environmental Impact Statement and Environmental Impact Report. Prepared for the U.S. Bureau of Reclamation, Sacramento and Fresno, CA and the San Luis Delta Mendota Water Authority, Los Banos, CA by Entrix, Concord, CA, 20 Sections and Appendices. Available at the following URL: http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4412
- U.S. Bureau of Reclamation. (Reclamation) 2012. Final Environmental Assessment: San Luis Drainage Feature Re-evaluation Demonstration Treatment Facility at Panoche Drainage District. Fresno, California, 44 pp. and Appendices. Available at the following URL: http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=9890

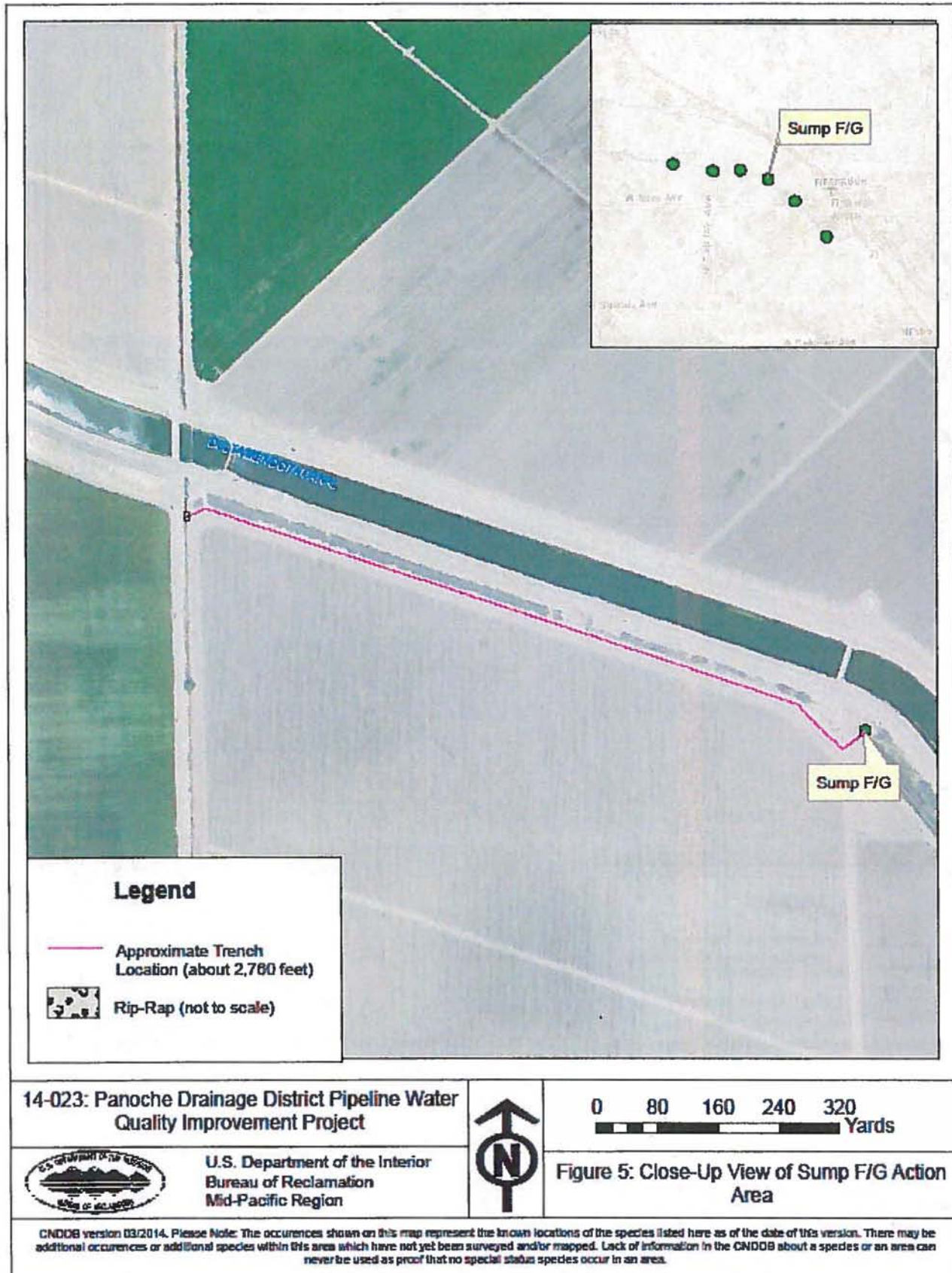
Appendix A. Maps of the Project Area and work to be done at Individual DMC Sumps

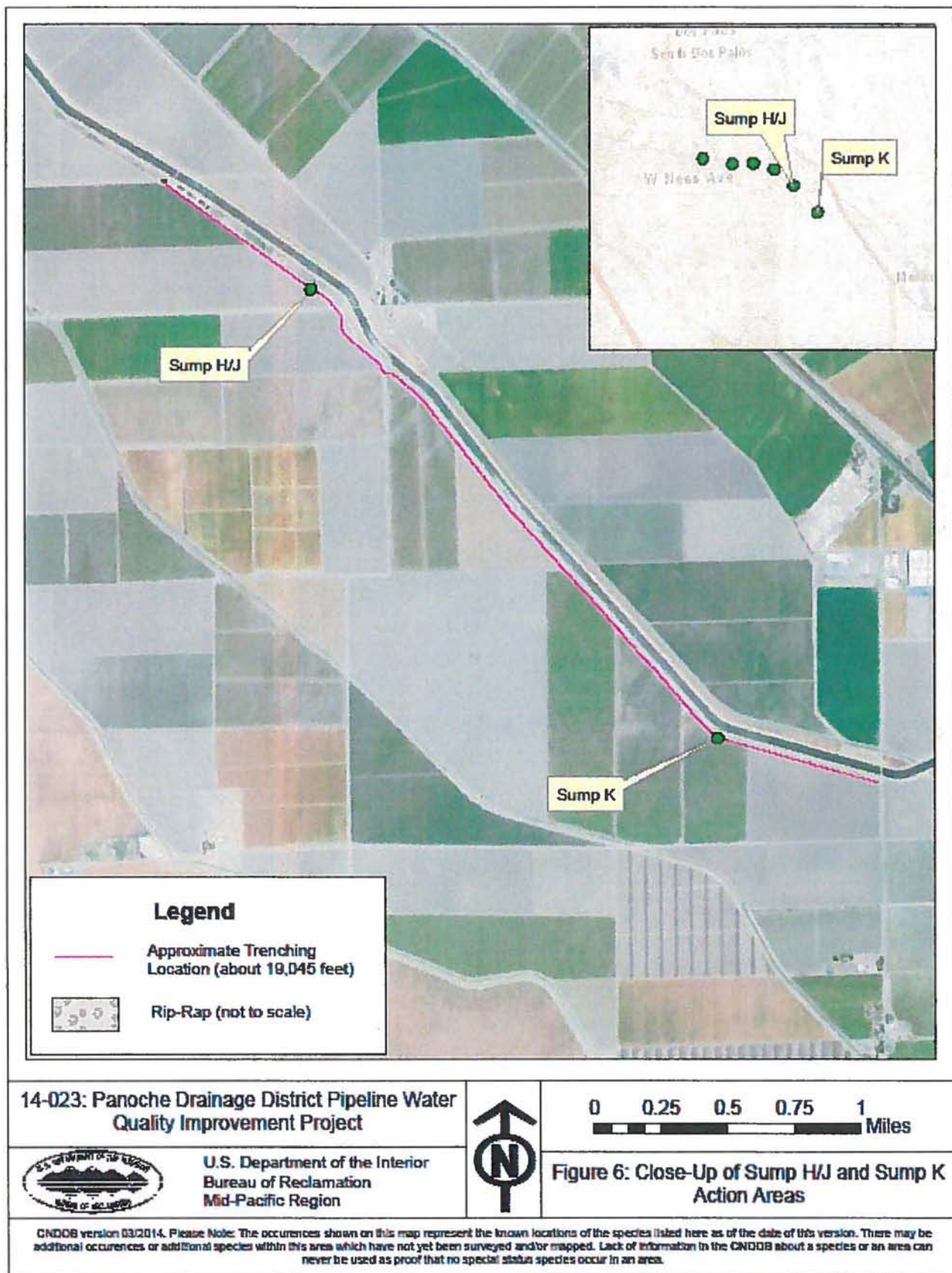












Appendix B. San Joaquin kit fox and giant garter snake avoidance measures

The following avoidance measures will be implemented to avoid potential environmental consequences associated with the proposed project. The NLAA determination for the proposed project assumes that Reclamation will ensure that the measures specified would be fully implemented.

San Joaquin kit fox

As identified in the SLDFR ROD, Measures identified in *U.S. Fish and Wildlife Service Standardized Recommendations For Protection Of The Endangered San Joaquin Kit Fox Prior To Or During Ground Disturbance* (Service 2011) for “Construction and On-Going Operational Requirements”, shall be implemented during project construction. Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities.

Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals.

To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

Additionally, the following measures, as described in Service (2011) shall be implemented:

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when SJKF are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of SJKF or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Wildlife (CDFW) shall be contacted as noted under measure 13 referenced below.
3. SJKF are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for SJKF before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved and should be left alone until the Service has been consulted; no further action may be taken until Reclamation biologists have been notified and guidance has been provided by Service.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from the construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of SJKF, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of SJKF and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent (see POC description above) who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The POC will be identified during the employee education program and their name and telephone number shall be provided to Reclamation and the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the SJKF and its habitat needs; a report of the occurrence of SJKF in the project area; an explanation of the status of the species and its protection under the Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be recontoured if necessary, and revegetated to promote restoration of the area to preproject conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, CDFW, and revegetation experts.
11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or if a protected species is involved Reclamation and the Service should be contacted for guidance.

12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their POC. This representative shall contact Reclamation and the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530) 934-9309. The Service should be contacted as well.
13. The Sacramento Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information.

The Service contact is Mr. Thomas Leeman, Chief, San Joaquin Valley Division, Endangered Species Program, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Suite W-2605, Sacramento, California 95825-1846, (916) 414-6600. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Giant Garter Snake

1. Construction activities and ground disturbing maintenance activities, for the proposed project will be conducted between May 1st and October 1st, during the giant garter snake's active season. If ground-disturbing maintenance activities must be conducted during the non-active season, Reclamation shall be contacted and further environmental review will be required.
2. Any maintenance activities that would require work within drainage ditches shall be conducted during the giant garter snake active season (May 1st through October 1st) and when the drainage ditches have been naturally dry for at least 15 consecutive days. If one or both of these conditions cannot be met, Reclamation shall be contacted and further environmental review will be required.
3. 24-hours prior to construction activities or ground-disturbing maintenance activities, the action area shall be surveyed for giant garter snakes. Survey of the project area shall be repeated if a lapse in construction activity of two weeks or greater has occurred. If a giant garter snake is found during the survey, construction on the proposed project shall not begin until Reclamation has been contacted and appropriate consultation has been completed.
4. Project-related vehicles shall observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways.

5. To prevent inadvertent entrapment of listed species or other wildlife during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals.
6. No firearms shall be allowed on the project site.
7. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment or mortality of wildlife.

Appendix C. Federally threatened and endangered species potentially within the Action Area that Reclamation has determined would not be affected by the proposed action.

Species	Status	Effects	Occurrence in the Study Area
INVERTEBRATES			
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	NE	Absent. There are no vernal pools within the action area. Vernal pool habitat and this species would not be affected by the proposed action.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	NE	Absent. There are no elderberry shrubs in the proposed construction area. There would be No effect to this species or its habitat.
AMPHIBIANS			
California tiger salamander, central population <i>Ambystoma californiense</i>	T	NE	Absent. There are no vernal pools or other suitable breeding sites within two miles of the action area. There would be no effect to this species.
REPTILES			
Blunt-nosed leopard lizard <i>Gambelia sila</i>	E	NE	Absent. The action area is surrounded by irrigated agricultural lands in all directions, insecticides are used commonly and the construction areas are regularly disced. This species is not present in the action area due to a lack of suitable habitat. There would be no effect to this species.
MAMMALS			
Giant kangaroo rat <i>Dipodomys ingens</i>	E	NE	Absent. The proposed action area is located in an area of intensive agriculture and is maintained by disking and rodenticide use to reduce vegetation and burrows in the ROW. Giant kangaroo rats would not occur in the proposed action area due to a lack of suitable habitat. There would be no effect to this species.
Fresno kangaroo rat <i>Dipodomys nitratoides exilis</i>	E	NE	Absent. The proposed action area is located in an area of intensive agriculture and is maintained by disking and rodenticide use which reduce vegetation and burrows in the ROW. Fresno kangaroo rates would not occur in the proposed action area due to a lack of suitable habitat. There would be no effect to this species.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	NE	Possible. The proposed action area is surrounded by intensively cultivated agricultural lands which are unsuitable for long-term occupation by kit foxes and which

			may constitute effective barriers to kit fox movement. Rodenticide use, insecticide use, and discing in the action area reduce prey populations and available burrows. San Joaquin kit foxes have not been seen in the vicinity of the action area in over 20 years, and are unlikely to be present due to the highly disturbed nature of the action area. There is still some potential for dispersing San Joaquin kit foxes to move through the area, but dispersing kit foxes would not be affected by the proposed action. Pre-construction surveys will be conducted prior to any construction or maintenance on the proposed action and standard avoidance measures will be fully implemented.
PLANTS			
Palmate-bracted bird's-beak <i>Cordylanthus palmatus</i>	E	NE	Absent. The proposed action area is surrounded by agricultural lands and is maintained frequently to prevent the growth of vegetation in the ROW. There is no suitable habitat for this species in the action area, so there would be no effect to this species.
<p>1 Status= Listing of Federally special status species E: Listed as Endangered T: Listed as Threatened</p> <p>2 Effects = Effect determination NE: No Effect from the Proposed Action to federally-listed species</p> <p>3 Definition Of Occurrence Indicators Absent: Species not recorded in study area and/or habitat requirements not met Possible: Species not observed in the last 10 years in area</p>			