

**Meeting of the Central Valley Flood Protection Board  
February 25, 2011  
Staff Report – Encroachment Permit  
City of Sacramento, Department of Utilities  
Low Flow Discharge Pipe Replacement, Sacramento County**

---

**1.0 – ITEM**

To consider approval of Permit No. 18619 (Attachment B)

**2.0 – APPLICANT**

City of Sacramento, Department of Utilities

**3.0 – LOCATION**

The project is located within the City of Sacramento, west of Norwood Avenue and north of El Camino Avenue (Arcade Creek, Sacramento County; Figure 1 & 2, Attachment A).

**4.0 – DESCRIPTION**

The applicant proposes to remove an existing 12-inch diameter steel low flow pump outlet pipe and install a new 12-inch diameter steel low flow pump outlet pipe through the left (south) bank levee of Arcade Creek (Figure 3 & 4, Attachment A).

**5.0 – PROJECT ANALYSIS**

**Background and Proposed Project Design**

The City of Sacramento Department of Utilities operates and maintains Sump No. 154, a large storm drainage pump station, located near the southeast corner of the Natomas East Main Drainage Canal and Arcade Creek (see Site Photographs, Attachment A). The existing 12-inch diameter steel low flow pump outlet pipe for this pump station has reached the end of its useful life and needs to be replaced. Originally the City proposed to replace this old steel outlet pipe with new HDPE plastic pipe. However after the CVFPB received the Army Corps comment letter dated December 16, 2010 and shared it with the City, a change in proposed pipe material has been made by the applicant.

The City now proposes to remove this existing steel outlet pipe and replace it with a new 12-inch diameter #10 gage or thicker walled, welded steel pipe with lean concrete,

or controlled low strength material (CLSM) encasement around the buried pipe over the levee, on approximately the same horizontal and vertical alignment as the existing pipe. A new air release valve, an in-line gate valve waterside of the levee crown as a positive closure device, a new outlet flap gate and 6-inch diameter gravity drain connection between the two existing outlet structures to facilitate drainage to prevent mosquito breeding, are also proposed as part of this pipe replacement project.

### **5.1 – Hydraulic Analysis**

No hydraulic investigation was needed for this project because the applicant does not propose to change any Arcade Creek channel geometry, and the levee crown/slopes are proposed to be restored to pre-project conditions.

### **5.2 – Geotechnical Analysis**

No geotechnical investigation was needed for this project because the applicant does not propose to alter any natural area watercourses nor install other flood control features within Arcade Creek as part of their proposed project.

## **6.0 – AGENCY COMMENTS AND ENDORSEMENTS**

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The U.S. Army Corps of Engineers 208.10 comment letter has been received for this application and it is incorporated into the permit as Exhibit A.
- The American River Flood Control District (ARFCD) has endorsed this application through a comment letter with conditions and is incorporated into the permit as Exhibit B.

## **7.0 – CEQA ANALYSIS**

Board staff has prepared the following CEQA findings:

The Board, as a responsible agency under CEQA, has reviewed Initial Study/Mitigated Negative Declaration (SCH Number: 2010052037, May 2010) and Mitigation Monitoring and Reporting Program for the Sump 154 Low-Flow Outlet Replacement Project prepared by the lead agency, the City of Sacramento. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvpfb.ca.gov/meetings/2011/02-25-2011.cfm> under a link for this agenda item. These documents are also available for review in hard copy at the Board and the City of Sacramento, Department Services Department, Planning Division Offices.

The City of Sacramento has determined that the project would not have a significant effect on the environment and approved the project on October 8, 2010 and filed a Notice of Determination on October 11, 2010 with the State Clearinghouse and County Clerk. Board staff finds that although the proposed project could have a potentially significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. The project proponent has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where no significant impacts will occur. These mitigation measures are included in the project proponent's Mitigation Monitoring and Reporting Program and address impacts to biological and cultural resources. The description of the mitigation measures are further described in the adopted Mitigation Monitoring and Reporting Program.

### **8.0 – SECTION 8610.5 CONSIDERATIONS**

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

*The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.*

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

*The accepted industry standards for the work proposed under this permit as regulated by Title 23 California Code of Regulations have been applied to the review of this permit.*

3. Effects of the decision on the entire State Plan of Flood Control:

*There are no effects on the State Plan of Flood Control as the proposed project does not impact the design channel capacity of Arcade Creek.*

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

*Future events, changes in hydrology and climate may increase flows in Arcade Creek which in turn would increase the flood risk for the project.*

## **9.0 – STAFF RECOMMENDATION**

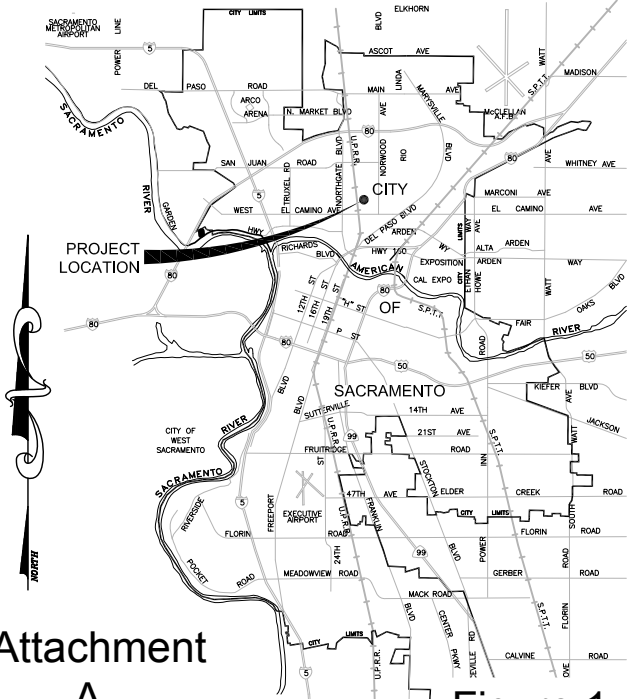
Staff recommends that the Board adopt the CEQA findings, approve the permit and direct staff to file a Notice of Determination with the State Clearinghouse.

## **10.0 – LIST OF ATTACHMENTS**

- A. Location Maps and Photos
- B. Draft Permit No. 18619

Design/Overall Review:	Jon Tice, P.E.
Environmental Review:	James Herota / Andrea Mauro
Document Review:	Gary Lemon, P.E. / Mitra Emami, P.E. / Len Marino, P.E.

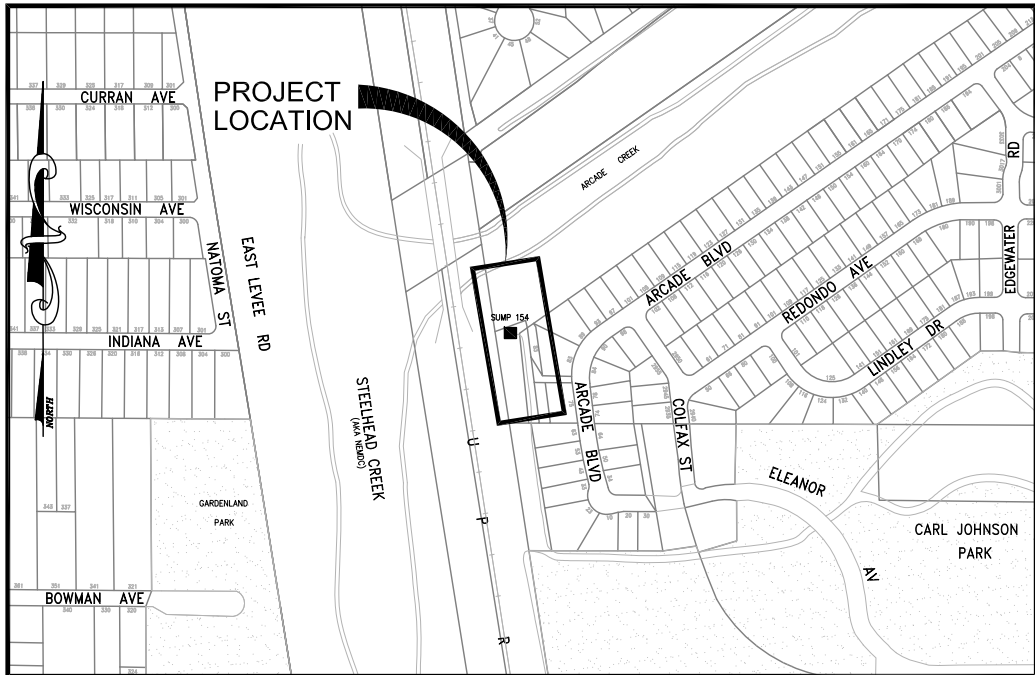




Attachment  
A

Figure 1

VICINITY MAP  
N.T.S.



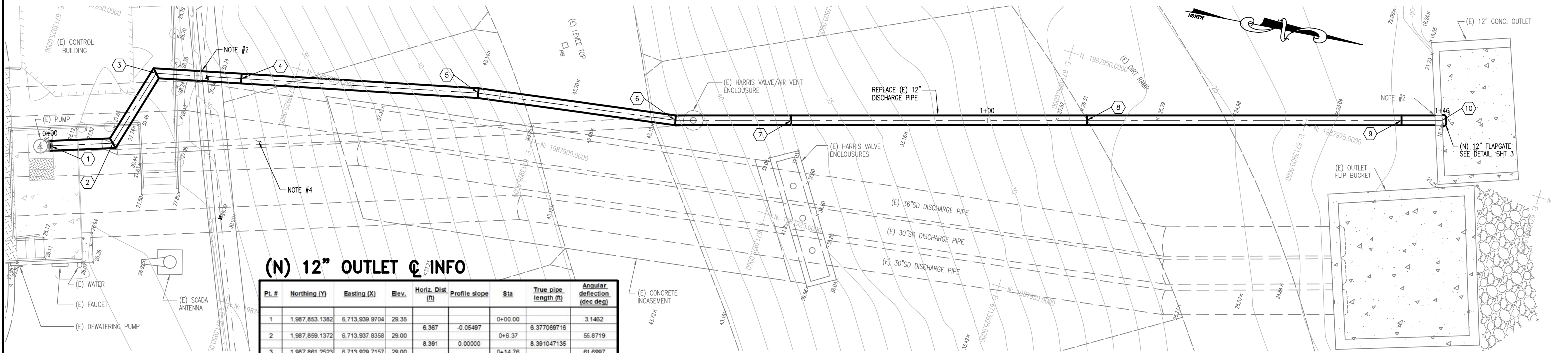
Attachment A

LOCATION MAP  
N.T.S.

Figure 2

R:\Civil3D Projects\W14003800\_Sump 154 Outfall Maintenance\dwg\W14003800\_C-2-C-3.dwg, 2/3/2011 1:38:44 PM

PN: X14003800 - SUMP 154 LOW-FLOW OUTLET REPLACEMENT PROJECT  
R:\Civil3D Projects\W14003800\_Sump 154 Outfall Maintenance\dwg



(N) 12" OUTLET Q INFO

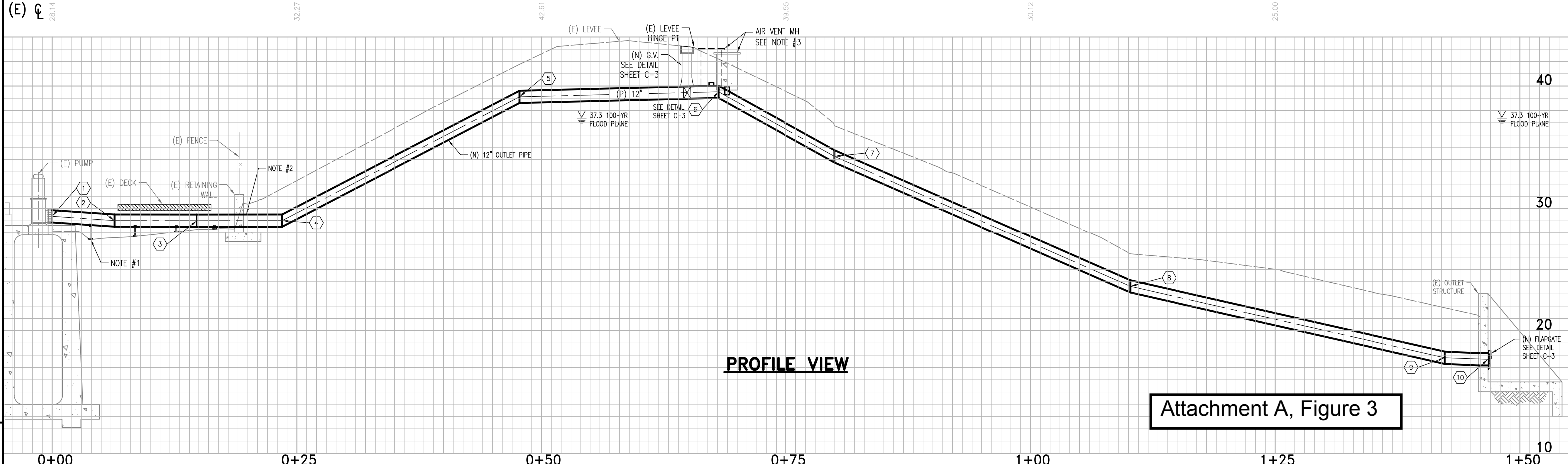
Pl. #	Northing (Y)	Easting (X)	Elev.	Horiz. Dist (ft)	Profile slope	Sta	True pipe length (ft)	Angular deflection (deg deg)
1	1,987,853.1382	6,713,939.9704	29.35	6.387	-0.05497	0+00.00	6.377069716	3.1462
2	1,987,859.1372	6,713,937.8358	29.00	8.391	0.00000	0+6.37	8.391047135	55.8719
3	1,987,861.2523	6,713,929.7157	29.00	8.750	0.00000	0+14.76	8.749962443	61.6997
4	1,987,869.7533	6,713,927.6433	29.00	24.250	0.41650	0+23.51	26.26920997	22.6115
5	1,987,893.3133	6,713,921.8998	39.10	20.350	0.02015	0+47.76	20.35420023	21.8655
6	1,987,913.3916	6,713,918.5851	39.51	11.864	-0.44337	0+68.11	12.97746741	26.1957
7	1,987,924.7241	6,713,915.0748	34.25	30.186	-0.35281	0+79.97	32.00993444	4.4778
8	1,987,953.5588	6,713,906.1433	23.60	32.200	-0.18106	1+10.16	32.72353731	9.1707
9	1,987,984.3172	6,713,896.6164	17.77	4.141	-0.02898	1+42.36	4.142254851	8.6025
10	1,987,988.2722	6,713,895.3909	17.65			1+46.50		1.6601

PLAN VIEW

NOT FOR CONSTRUCTION

NOTES:

1. FIELD LOCATE FOUR GALVANIZED STEEL PIPE SUPPORTS SIMILAR TO EXISTING. SUBMIT DETAILS FOR APPROVAL.
2. CORE DRILL MIN. 14" DIAMETER HOLE THRU EXISTING WALL. SEAL AROUND PIPE WITH FULL DEPTH NON-SHRINK GROUT.
3. RE-POSITION (E) VENT MANHOLE AND COVER OVER NEW HARRIS SIPHON BREAKER. ADJUST MANHOLE LENGTH AS REQUIRED SO TOP IS FLUSH WITH ADJACENT LEVEE HINGE POINT, AND BOTTOM LEAVES BREAKER ACCESSIBLE. SEE DETAIL ON SHEET 3.
4. REMOVE (E) 12" WSP OUTLET. LENGTH AND PROFILE ASSUMED SIM TO NEW OUTLET.



PROFILE VIEW

Attachment A, Figure 3

PN: X14003800

NO. DESCRIPTION DATE BY

REVISIONS

BENCH MARK

DESCRIPTION: 277-GSB

ELEV. 20.145'

HILT NAIL CURB OVER GUTTER DRAIN NEAR FIRE HYDRANT SW CORNER LINDLEY DRIVE AND EDGEWATER ROAD.

FIELD BOOK

1460B

SCALE:

H: 1"=5'

V: 1"=4'

ON ORIGINAL SCALE DRAWING ADJUST SCALED DIMENSIONS IF THIS DOES NOT SCALE AT 1"

CITY OF SACRAMENTO

DEPARTMENT OF UTILITIES

DRAWN BY: R. JORDAN

DATE: 2/2011

DESIGNED BY: S.S. WILLIAMS

R.C.E. NO. C31326 DATE: 2/2011

CHECKED BY: R. BATHA

R.C.E. NO. C36129 DATE: 2/2011

PROFESSIONAL ENGINEER

STATE OF CALIFORNIA

12/31/10

IMPROVEMENT PLANS FOR:

SUMP 154 LOW-FLOW OUTLET REPLACEMENT PROJECT

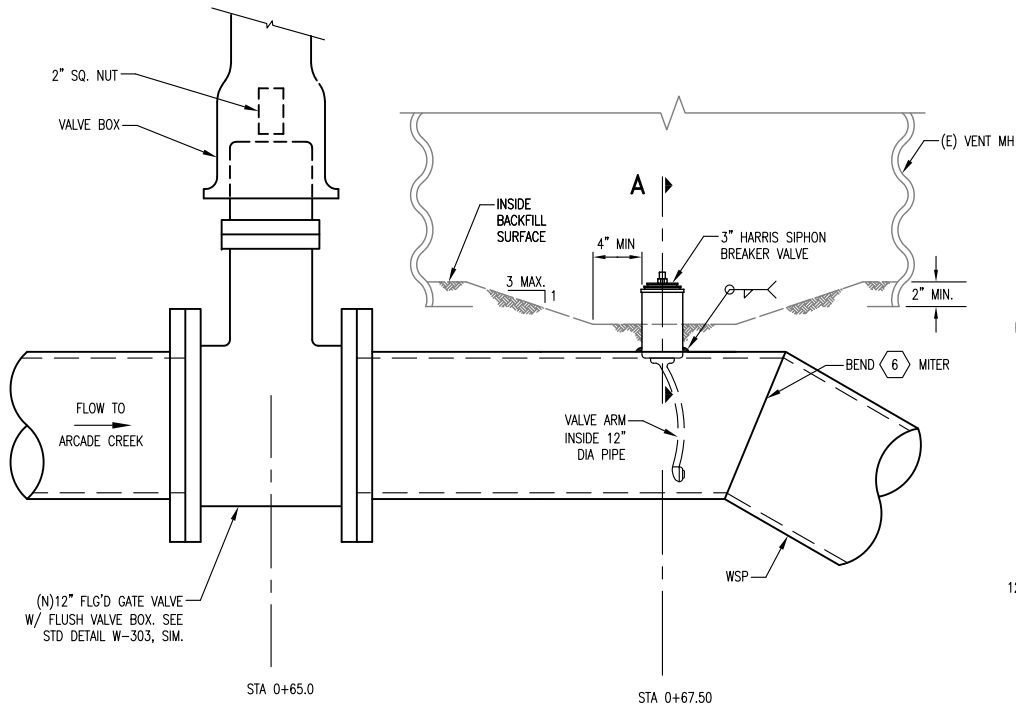
PLAN AND PROFILE

GIS GRID NO. V17

PN: X14003800

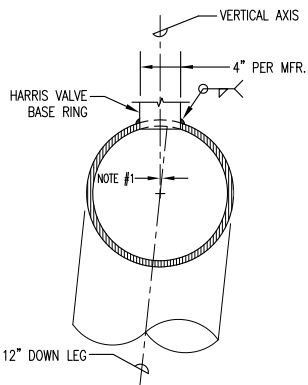
DWG. NO. C-2

SHEET 2 OF 3



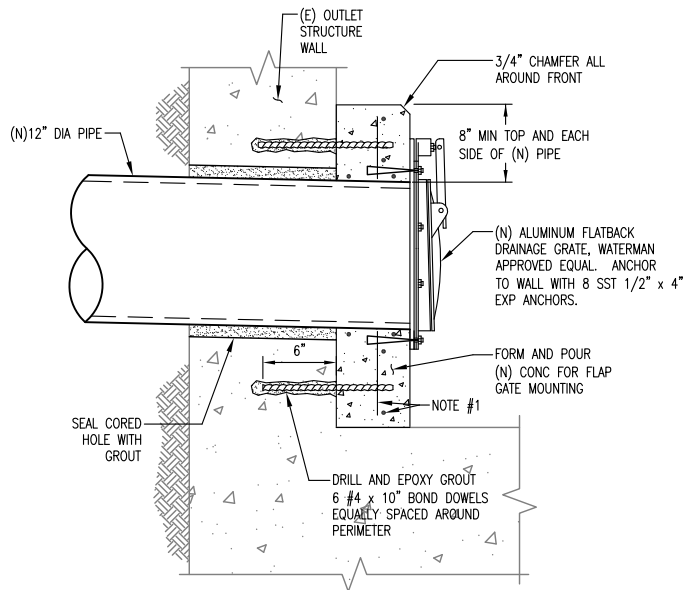
- NOTES:
1. ROTATE AXIS OF HOLE FOR HARRIS VALVE 7' 30" RELATIVE TO BEND #6 CENTER SO HARRIS VALVE IS VERTICAL.

GATE AND HARRIS VALVES DETAIL  
SCALE: 1-1/2" = 1'-0"



SECTION A

NOT FOR CONSTRUCTION



- NOTES:
1. REINFORCE GRATE MOUNTING CONC WITH 8 #4 BARS: TWO HORIZONTAL BARS ABOVE AND TWO HORIZONTAL BARS BELOW NEW PIPE AND TWO VERTICAL BARS EACH SIDE OF NEW PIPE.

OUTLET FLAPGATE DETAIL  
SCALE: 1-1/2" = 1'-0"

Attachment A, Figure 4

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			

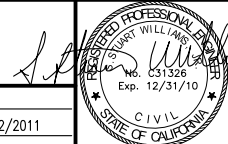
BENCH MARK	ELEV.	20.145'
DESCRIPTION:	277-G5B	
HILT NAIL CURB OVER GUTTER DRAIN NEAR FIRE HYDRANT SW CORNER LINDLEY DRIVE AND EDGEWATER ROAD.		

FIELD BOOK	1460B
SCALE:	
H: AS NOTED	
V: AS NOTED	

ON ORIGINAL SCALE  
DRAWING ADJUST  
SCALED DIMENSIONS  
IF THIS DOES NOT  
SCALE AT 1"



CITY OF SACRAMENTO DEPARTMENT OF UTILITIES		
DRAWN BY: R. JORDAN	DESIGNED BY: S.S. WILLIAMS	CHECKED BY: R. BATHA
DATE: 2/2011	R.C.E. NO. C31326 DATE: 2/2011	R.C.E. NO. C36129 DATE: 2/2011



*[Signature]*

IMPROVEMENT PLANS FOR:  
SUMP 154 LOW-FLOW OUTLET  
REPLACEMENT PROJECT  
DETAILS

GIS GRID NO.	V17
PN: X14003800	DWG. NO. C-3
	SHEET 3 OF 3



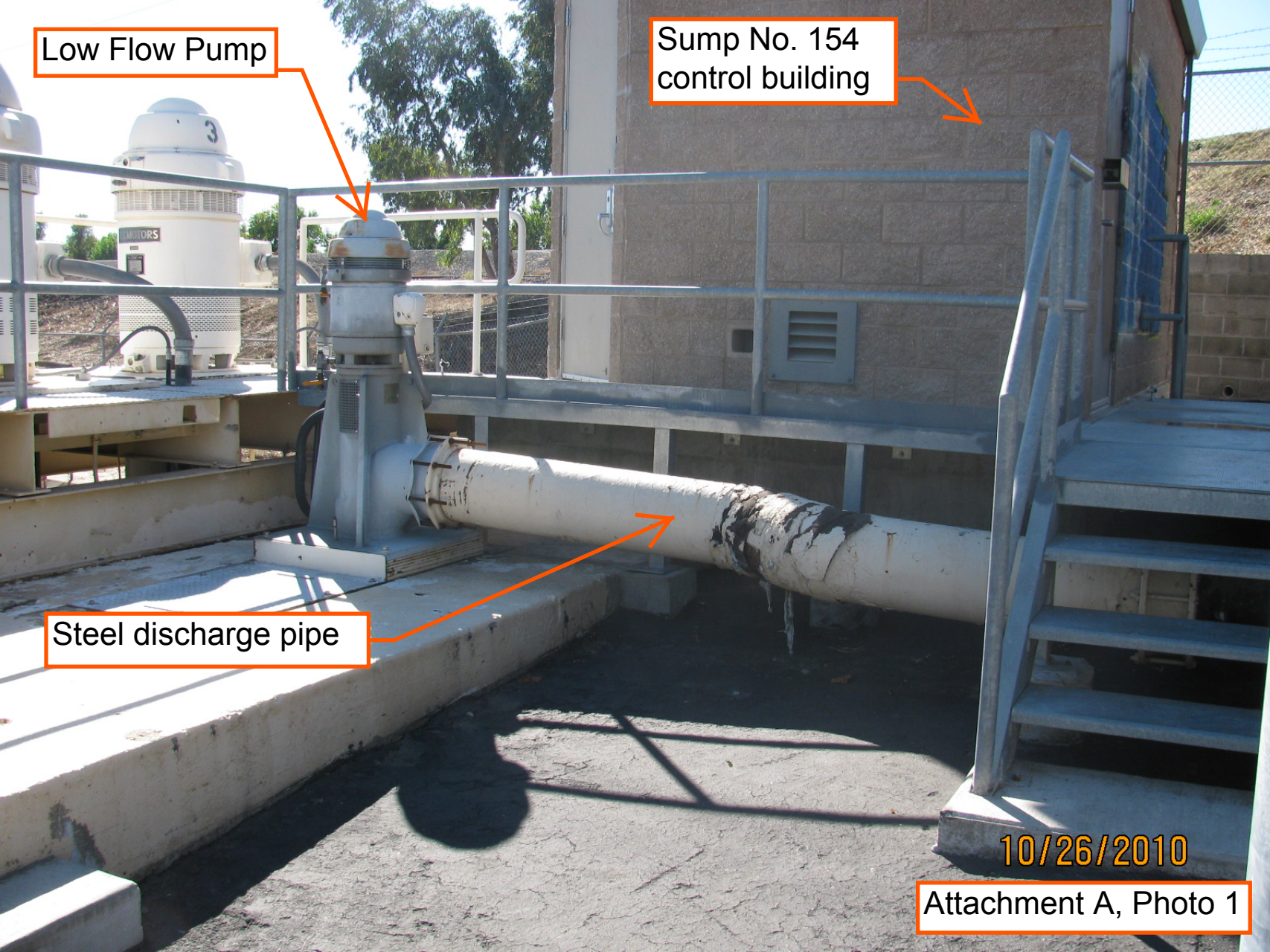
Low Flow Pump

Sump No. 154  
control building

Steel discharge pipe

10/26/2010

Attachment A, Photo 1







Existing Sump No. 154 retaining wall

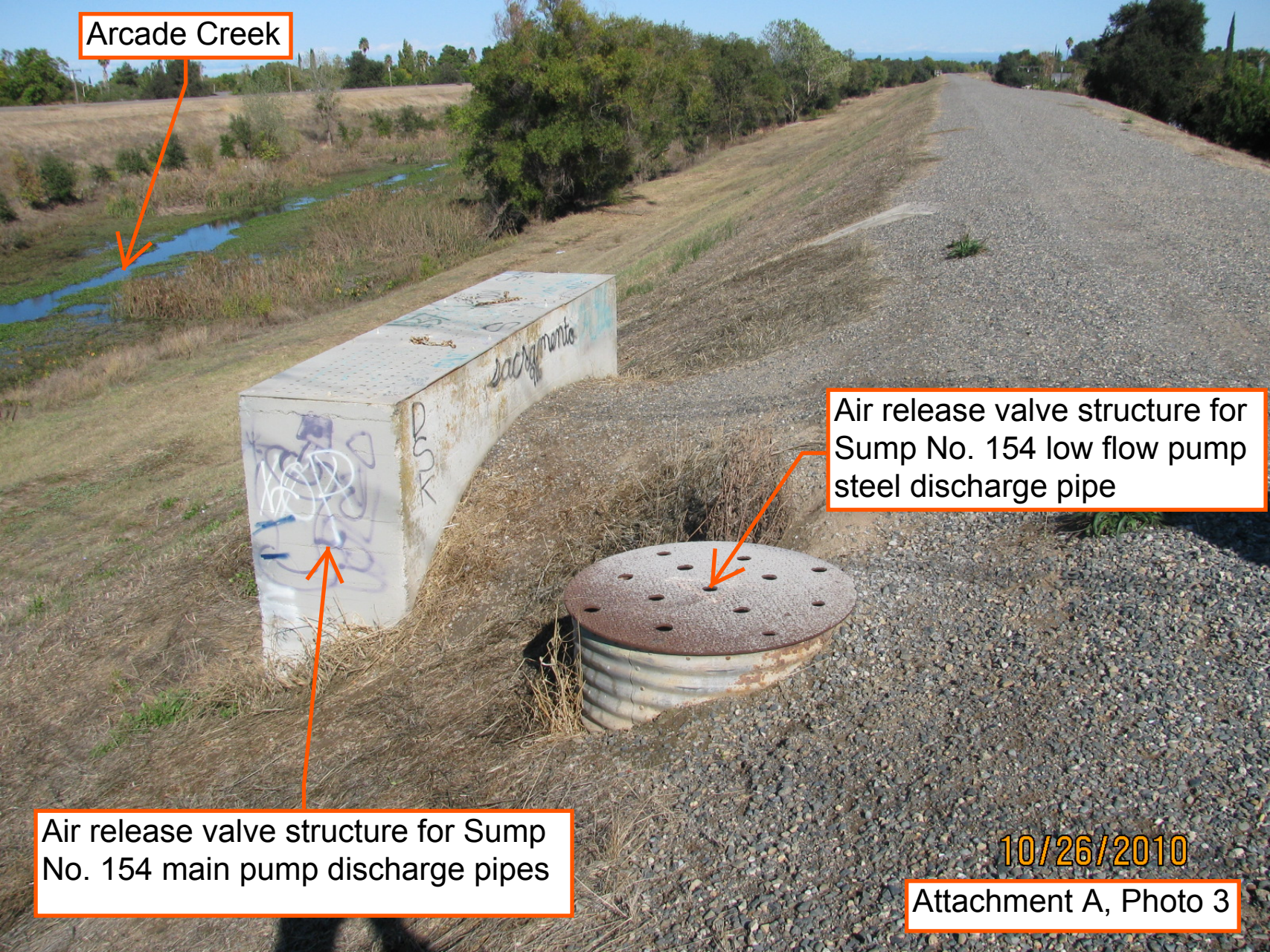
Low flow pump steel discharge pipe

10/26/2010

Attachment A, Photo 2



Arcade Creek



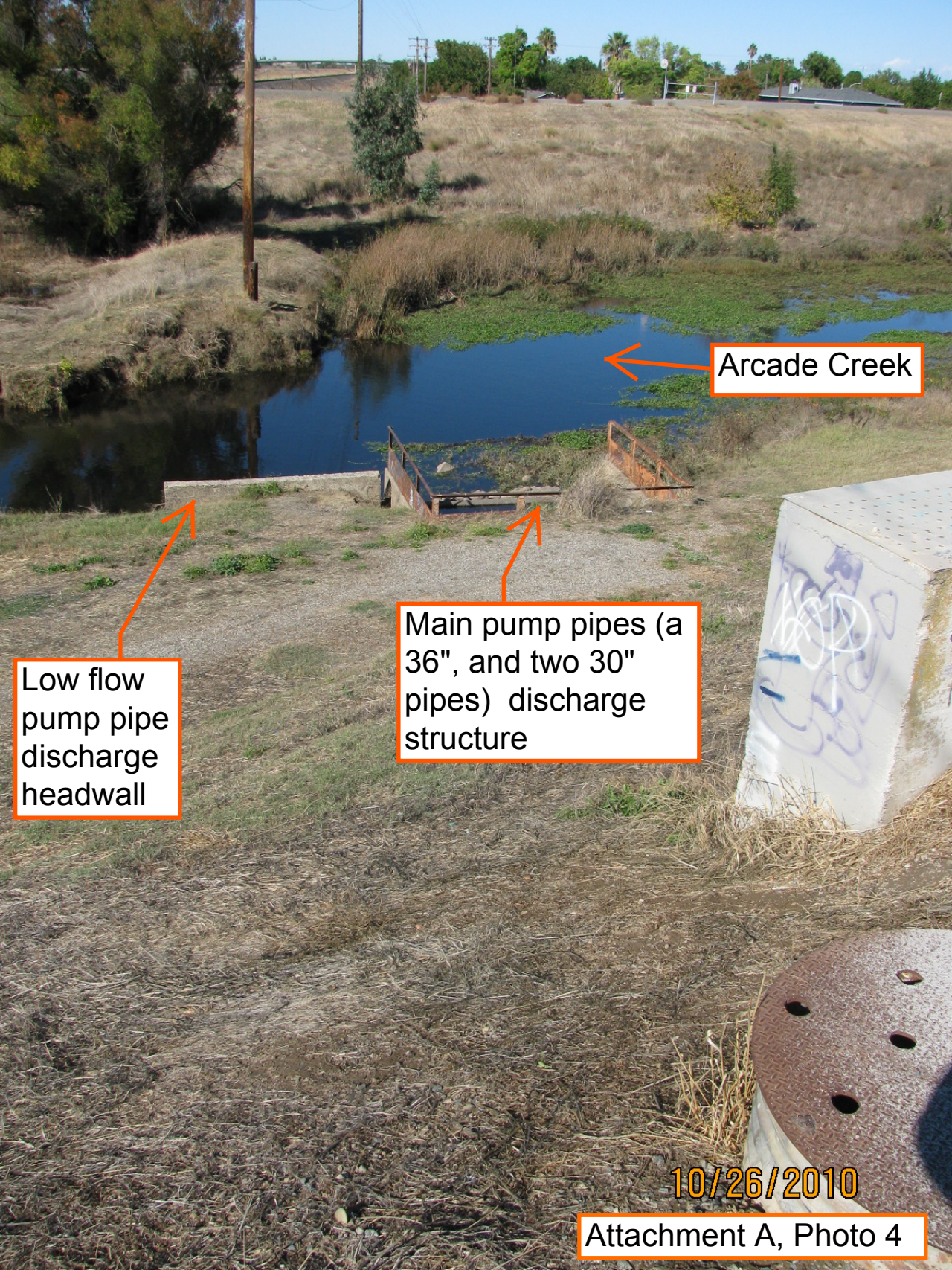
Air release valve structure for  
Sump No. 154 low flow pump  
steel discharge pipe

Air release valve structure for Sump  
No. 154 main pump discharge pipes

10/26/2010

Attachment A, Photo 3





Arcade Creek

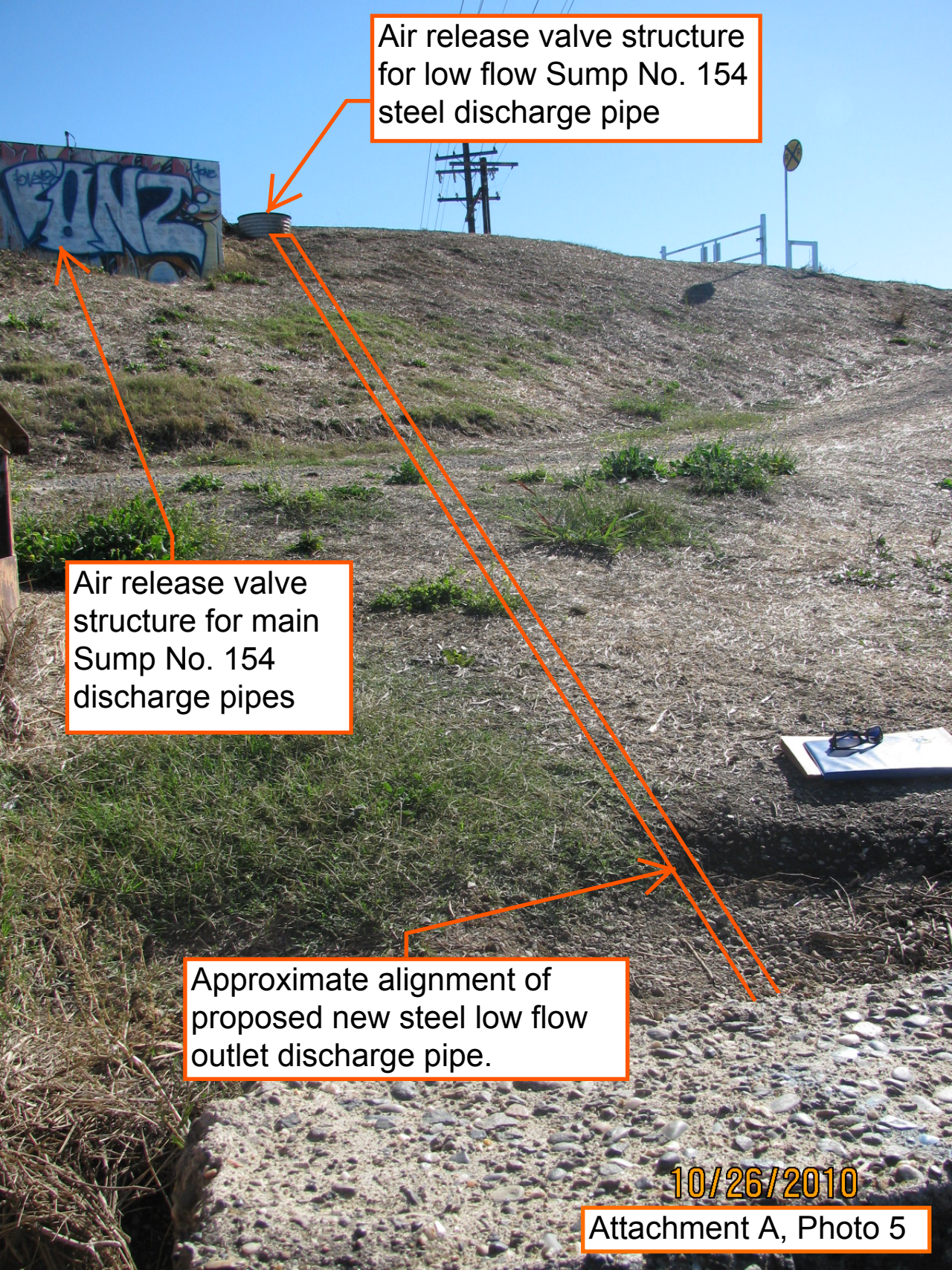
Low flow  
pump pipe  
discharge  
headwall

Main pump pipes (a  
36", and two 30"  
pipes) discharge  
structure

10/26/2010

Attachment A, Photo 4





Air release valve structure  
for low flow Sump No. 154  
steel discharge pipe

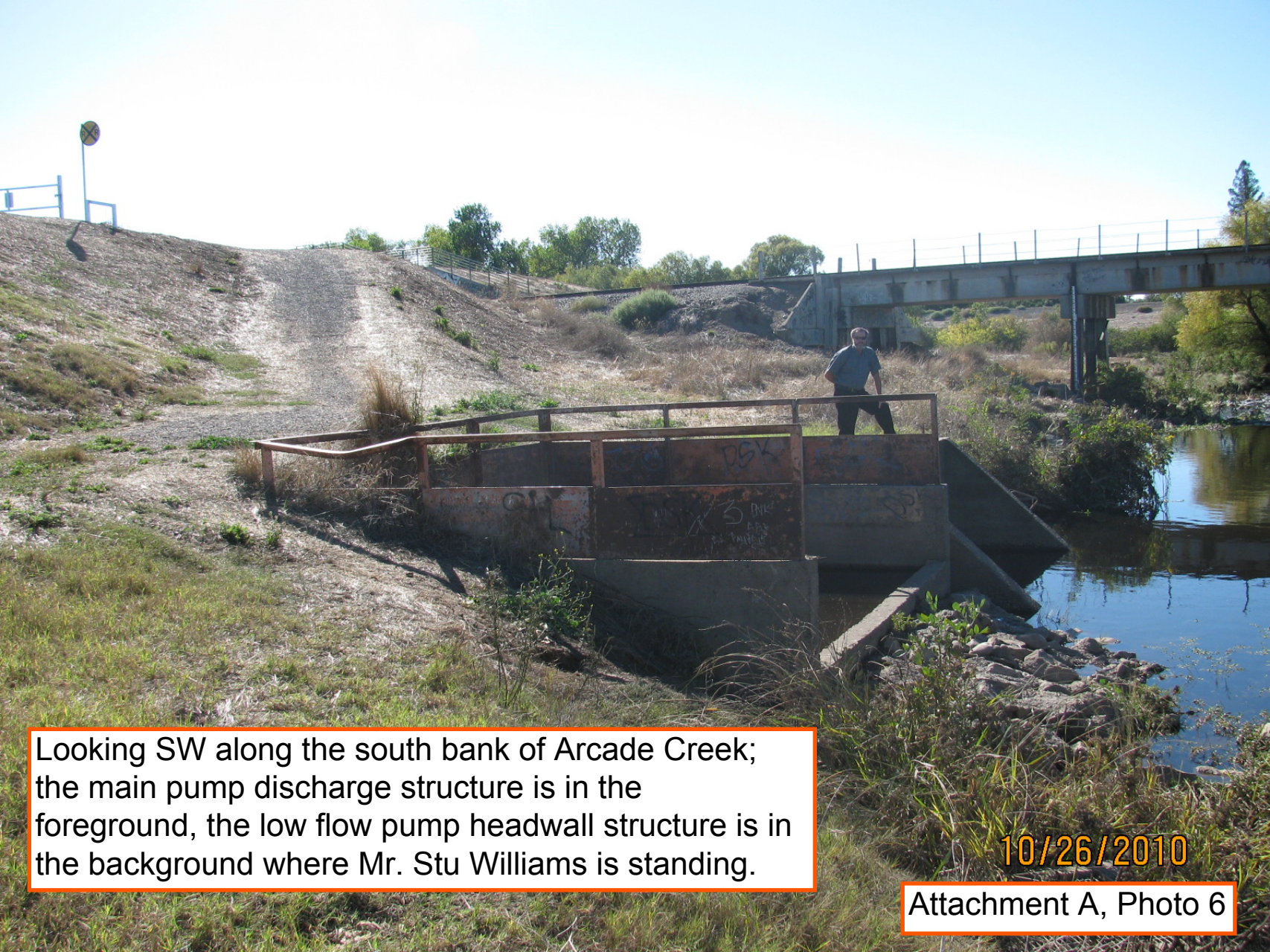
Air release valve  
structure for main  
Sump No. 154  
discharge pipes

Approximate alignment of  
proposed new steel low flow  
outlet discharge pipe.

10/26/2010

Attachment A, Photo 5





Looking SW along the south bank of Arcade Creek;  
the main pump discharge structure is in the  
foreground, the low flow pump headwall structure is in  
the background where Mr. Stu Williams is standing.

10/26/2010

Attachment A, Photo 6

**DRAFT**

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
**THE CENTRAL VALLEY FLOOD PROTECTION BOARD**

**PERMIT NO. 18619 BD**

**This Permit is issued to:**

City of Sacramento, Department of Utilities  
1395 35th Avenue  
Sacramento, California 95822

To remove existing 12-inch-diameter buried steel outlet pipe and replace it with a new 12-inch diameter, #10 gage or thicker walled, welded steel pipe with lean concrete or CLSM encasement around the buried pipe over the levee, on approximately the same horizontal and vertical alignment as the existing pipe, through the left (south) bank levee of Arcade Creek. To project is located in North Sacramento west of Norwood Avenue and north of El Camino Avenue (Section 19, T9N, R5E, MDB&M, American River Flood Control District, Arcade Creek, Sacramento County).

**NOTE:** Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

**(SEAL)**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Executive Officer

**GENERAL CONDITIONS:**

**ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

**TWO:** Only work described in the subject application is authorized hereby.

**THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

**FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

**FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to

Page 1 of 4



change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

**SIX:** This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

**SEVEN:** It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

**EIGHT:** This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

**NINE:** The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

**TEN:** The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

**ELEVEN:** The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

**TWELVE:** Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

### **SPECIAL CONDITIONS FOR PERMIT NO. 18619 BD**

**THIRTEEN:** All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

**FOURTEEN:** The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion

**FIFTEEN:** The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

**SIXTEEN:** The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.



SEVENTEEN: The permittee shall arrange for an inspector from the Department of Water Resources to be at the site prior to any excavation and during all backfill operations. For availability and scheduling of an inspector, contact the Department of Water Resources at telephone number (916) 574-0609 at least 10 working days prior to the start of work.

EIGHTEEN: The permittee shall notify the American River Flood Control District, 165 Commerce Circle, Suite D, Sacramento, California, 95815, telephone (916) 929-4006, at least one week prior to commencement of work.

NINETEEN: The Central Valley Flood Protection Board, Department of Water Resources, and American River Flood Control District shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

TWENTY: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

TWENTY-ONE: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-TWO: No construction work of any kind shall be done during the flood season from November 1st to April 15th without prior approval of the Central Valley Flood Protection Board.

TWENTY-THREE: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1st to April 15th.

TWENTY-FOUR: No excavation shall be made or remain in the levee section during the flood season from November 1st to April 15th without prior approval of the Central Valley Flood Protection Board.

TWENTY-FIVE: The abandoned pipe shall be removed from the levee section.

TWENTY-SIX: The pipe shall be placed in the center of an open trench 2 feet wider than the diameter of the pipe or 2 times the diameter, whichever is greater.

TWENTY-SEVEN: The pipe shall be placed in an open cut with side slopes of 1 horizontal to 1 vertical or flatter.

TWENTY-EIGHT: Pipe installed in the levee section and within 10 feet of the levee toes shall be new steel and at least 7 gauge. Steel pipe shall be corrosion-proofed externally with a coating of coal-tar enamel; asphalt-saturated felt wrap; cement mortar; or PVC or polyethylene tape wrapped to a thickness of 30 mils. Steel pipe shall be corrosion-proofed internally with a continuous lining of cement mortar or asphalt.

TWENTY-NINE: The invert of the pipe through the levee section shall be above the design flood plane elevation of 37.3 feet, NGVD 29 Datum.

THIRTY: The pipe shall be installed through the levee section at a right angle to the centerline of the levee.

THIRTY-ONE: The pipe shall be buried at least 24 inches below the levee crown.

THIRTY-TWO: The pipe shall be buried at least 12 inches below the levee slopes and 24 inches below the levee crown.

THIRTY-THREE: All fill material shall be imported impervious material with 20 percent or more passing the No. 200 sieve, a plasticity index of 8 or more, and a liquid limit of less than 50 and free of lumps or stones exceeding 3 inches in greatest dimension, vegetative matter, or other unsatisfactory material. Fill material shall be compacted in 4- to 6-inch layers to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

THIRTY-FOUR: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the levee section.

THIRTY-FIVE: The pipeline shall be tested and confirmed free of leaks by X-ray, pressure tests, or other approved methods during construction or anytime after construction upon request by the Central Valley Flood Protection Board.

THIRTY-SIX: In the event existing rock revetment on the waterside levee slope is disturbed or displaced during construction, it shall be restored to its preconstruction condition.

THIRTY-SEVEN: The levee project area shall be restored to at least the condition that existed prior to commencement of work.

THIRTY-EIGHT: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources, American River Flood Control District or any other agency responsible for maintenance.

THIRTY-NINE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

FORTY: The permittee shall comply with all conditions set forth in the letter from Department of the Army dated December 16, 2010, which is attached to this permit as Exhibit A and is incorporated by reference.

FORTY-ONE: The permittee shall comply with all conditions set forth in the letter from the American River Flood Control District dated May 14, 2010, which is attached to this permit as Exhibit B and is incorporated by reference.





REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. Army Engineer District, Sacramento  
Corps of Engineers  
1325 J Street  
Sacramento, California 95814-2922

Flood Protection and Navigation Section (18619)

DEC 16 2010

Mr. Jay Punia, Executive Officer  
Central Valley Flood Protection Board  
3310 El Camino Avenue, Room 151  
Sacramento, California 95821

Dear Mr. Punia:

We have reviewed a permit application by the City of Sacramento, Department of Utilities (application number 18619). This project includes removing an existing 12 inch diameter steel outlet pipe and installing a 12 inch diameter solid wall HDPE pipe with fusion welded joints through the left bank levee of Arcade Creek. The project is located in North Sacramento, west of Norwood Avenue and north of El Camino Avenue at 38.6196°N 121.4671°W NAD83, in Sacramento County, California.

The District Engineer has no objection to approval of this application by your Board from a flood control standpoint, subject to the following conditions:

- a. That the proposed work shall not be performed during the flood season of November 1 to April 15, unless otherwise approved in writing by your Board.
- b. That the cut made in the levee section for the proposed work shall be made with stable side slopes.
- c. That the existing pipe shall be completely removed from the project right-of-way.
- d. That the proposed pipe within the levee section shall be new steel, at least #10 gage, with butt welded joints and properly soilproofed.
- e. That the invert of the pipe through the levee section shall be above the design profile 37.3 feet COE datum in the Sacramento River Flood Control Project, Levee and Channel Profiles, file number 50-10-3334, sheet 3 of 4, dated March 15, 1957. The Sacramento District of the Corps of Engineers is currently working to determine the exact relationship between design profiles (which are referenced to a "Corps of Engineers datum" or to a "U.S. engineering datum"), to NAVD88.
- f. That the proposed pipe shall be designed and constructed to prevent 1) flotation, 2) scour or embankment erosion, 3) damage from debris, particularly during flood flows, 4) leakage, 5) seepage along the proposed pipes, 6) corrosion, and 7) damage from vehicular loads.
- g. That the backfill over the proposed pipe shall consist of either controlled low-strength material (CLSM) or lean mix concrete. The CLSM or lean mix concrete shall have a 28 day compressive strength of between 15 and 50 psi.

-2-

h. That the proposed pipe in the levee section shall be buried at least 2 feet below the levee crown. If it is necessary to raise the levee crown to provide a minimum of two feet of cover over the top of the proposed pipe, the fill shall be uniformly transitioned on a 1 on 10 slope or flatter on each side of the proposed pipe and feathered into the existing grade.

i. That the proposed pipe shall be equipped with an accessible positive closure device at the waterside edge of the levee crown.

j. That the positive closure valve shall be tested periodically to ensure it is functioning properly.

k. That the condition of the pipe shall be verified using video or sonar equipment at least once every five years or annual pressure readings showing no significant loss in pressure. The results of the inspection shall be submitted through the Central Valley Flood Protection Board to the Department of Water Resources, Flood Project Integrity and Inspection Branch and this office.

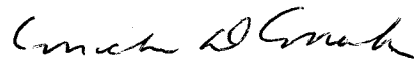
l. That in the event erosion occurs at the site, the erosion shall be repaired and adequate bank protection shall be placed to prevent future erosion.

m. That the project levee section shall be returned to the existing lines and grade.

A Section 10 and/or Section 404 permit application (SPK-2010-00597) is in process for this work.

A copy of this letter is being furnished to Mr. Don Rasmussen, Chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite LL30, Sacramento, CA 95821.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Mahoney".

Michael D. Mahoney, P.E.  
Chief, Construction-Operations Division



State of California

DEPARTMENT OF WATER RESOURCES  
CENTRAL VALLEY FLOOD PROTECTION BOARD

California Natural Resources Agency

APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD  
ENCROACHMENT PERMIT

Application No.

**-18619**

(For Office Use Only)

## 1. Description of proposed work:

Replace existing buried nominal 140-foot long 12-inch diameter welded steel low-flow outlet pipe at Sump 154 with a new buried 12-inch diameter solid wall HDPE DR21 pipe with fusion welded joints. The replacement pipe will be buried in the south bank of the Arcade Creek levee, along the same general vertical and horizontal alignment as the existing pipe. Replace 12-inch outlet flapgate. Also, core a 6-inch diameter gravity drain connection between the two concrete outlet structures to facilitate water changes in the flip-bucket (stagnant water is conducive to mosquito breeding).

2. Location: Sacramento County, in Section Rancho Del Paso (Arcade Cr.),Township: 9N (N) (S), Range 5E (W), M. D. B. & M.3. City of Sacramento, Dept. of Utilities of 1395 35<sup>th</sup> Ave.  
Name of Applicant AddressSacramento  
CityCA  
State95822  
Zip Code916.808-1400  
Telephone Number916.808-1497  
Fax Number

## 4. Endorsement: (of Reclamation District)

We, the Trustees of American River Flood Control District  
Name and District Number

approve this plan, subject to the following conditions:

☐ Conditions listed on back of this form☒ Conditions Attached☐ No Conditions[Signature] 5/14/10  
Trustee Date[Signature] 5/14/2010  
Trustee Date

## 5. Names and addresses of adjacent property owners sharing a common boundary with the land upon which the contents of this application apply. If additional space is required, list names and addresses on back of the application form or an attached sheet.

City of Sacramento  
Name915 I St., 5<sup>th</sup> Floor, Sacramento CA  
Address95814  
Zip CodeAmerican River Flood Control District165 Commerce Circle Dr., Sacramento CA95815Union Pacific Railroad1400 Douglas St., #1640, Omaha NE68179Chand Rohiteshwar83 Arcade Blvd., Sacramento, CA95815



Board of Trustees  
Karolyn W. Simon  
Brian F. Holloway  
Bettina C. Redway  
Virginia G. Moose  
Derek W. Minnema

General Manager/Engineer  
Timothy R. Kerr, P.E.

## Attachment B, Exhibit B

### Permit Conditions

Permit Application No.: (to be designated by the Central Valley Flood Protection Board)

Location: Arcade Creek South Levee near the junction with Steelhead Creek

Applicant: City of Sacramento

Description: Replace existing buried nominal 140-foot long 12-inch diameter welded steel low-flow outlet pipe at Sump 154 with a new buried 12-inch diameter solid wall HDPE DR21 pipe with fusion welded joints.

#### CONDITIONS:

1. Maintenance of all encroaching facilities under this permit shall remain the responsibility of permittee.
2. Permittee shall obtain all necessary permits and regulatory approvals for the proposed work.
3. Permittee may be required, at permittee's sole cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted work if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if encroaching facilities are damaged by any cause.
4. Work shall be done outside of the flood season of November 1 to April 15 unless otherwise approved by the District and Central Valley Flood Protection Board.
5. Permittee shall notify the District one week in advance of the start of construction.
6. Permittee shall allow access of ARFCD levee maintenance personnel and equipment during the construction period.
7. That temporary staging, material stockpiles, and equipment shall not be placed or allowed to remain in the floodway during the flood season from November 1 to April 15.

voice 916-929-4006 fax 916-929-4160

165 Commerce Circle, Suite D,  
Sacramento, California 95815

8. Permittee may not use the levee crown for staging construction or storing materials without specific approval by the District. If approved by the District, the levee crown shall be fully restored to its pre-project condition to the satisfaction of the District. In addition, if adverse weather conditions are forecast or other emergency condition arises, the Permittee shall immediately remove any equipment or materials stored on the levee and restore the levee surface for all-weather access to the satisfaction of the District.
9. In the event that erosion occurs at the project site, the applicant shall repair the eroded areas and place adequate Best Management Practice features on the levee sections to prevent further erosion.
10. Levee sections, overflow areas, and channel shall be restored to at least the same condition that existed prior to construction.