

**Meeting of the Central Valley Flood Protection Board  
June 28, 2013**

**Staff Report – Encroachment Permit**

**SAFCA, Natomas Levee Improvement Program  
Sacramento River East Levee**

**Phase 1G and 2E Drainage Swale Grading Project, Sacramento County**

---

**1.0 – ITEM**

Consider approval of Draft Permit No. 18159-4-2 (Attachment B).

**2.0 – APPLICANT**

Sacramento Area Flood Control Agency (SAFCA)

**3.0 – LOCATION**

The project is located at the intersections of Elverta Road, Teal Bend Golf Club driveway, and Elkhorn Boulevard with the Garden Highway along the Sacramento River East Levee (see Attachment A).

**4.0 – DESCRIPTION**

SAFCA has named this project the Sacramento River East Levee Phase 1G and 2E Drainage Swale Grading Project. It is a component of the Natomas Levee Improvement Program. The work proposed for construction under this permit includes drainage improvements at the Elverta Road, Teal Bend Golf Club driveway, and Elkhorn Boulevard intersections with the Garden Highway, and re-grading of a drainage swale between the new adjacent levee and the Garden Highway roadway pavement (See Attachments A and D).

The proposed work will be performed within the footprint of work conducted under previously issued Central Valley Flood Protection Board (Board) permits for SAFCA's Sacramento River East Levee Phase 2 Improvement Project, Reaches 5A through 9B (Board Encroachment Permit Nos. 18159-4 and 18159-4-1).

The following work is proposed under this permit:

- At Elverta Road, install two drainage inlets on the land side of the levee, one on each side of Elverta Road. Connect inlets to a drainage outfall on the waterside of the levee by reinforced concrete pipe (RCP). Install rock slope erosion protection along the waterside levee slope around the outfall. Grade the area around the inlets to drain properly.
- At the Teal Bend Golf Club driveway, construct a 6-inch-deep aggregate base shoulder on the land side of the levee. Construction will involve excavation of 6 inches of soil and replacement with aggregate base. The aggregate base will be graded to drain towards the drainage swale.
- At Elkhorn Boulevard, construct a new inlet on the landside of the levee and south side of the roadway at Elkhorn Boulevard. Construct 86.15-feet of 24-inch RCP to tie into the existing manhole at Station 393+70. The area will be graded to drain to the inlet.
- Grade approximately 8,500 feet of drainage swale (Stations 309+00 to 395+50) between the new adjacent levee and Garden Highway embankment.

The following Construction Drawings are applicable to this permit (Attachment D):

- G-001, Title Sheet and Location Map
- G-008, Key Map
- C-201, Drainage Grading Plan (Station: 309+00 to 344+50)
- C-202, Drainage Grading Plan (Station: 344+50 to 381+50)
- C-203, Drainage Grading Plan (Station: 381+50 to 395+50)
- C-402, Elverta Road Drainage Plan, Profile and Section
- C-403, Drainage Site Plans
- C-405, Typical Drainage Details (1 of 2)
- C-406, Typical Drainage Details (2 of 2)

## **5.0 – PROJECT ANALYSIS**

### **5.1 – Authority of the Board**

- California Code of Regulations, Title 23, Division 1 (CCR 23), § 6, Need for a Permit
- CCR 23, § 106, Existing Encroachments within an Adopted Plan of Flood Control
- CCR 23, § 112, Streams Regulated and Nonpermissible Work Periods
- CCR 23, § 116, Borrow and Excavation Activities – Land and Channel
- CCR 23, § 120, Levees

Board staff finds that the overall design of the proposed project is in compliance with CCR 23 standards as described in Sections 5.2 and 5.3 below.

## **5.2 – Hydraulic Analysis**

The proposed work at Teal Bend Golf Club driveway, Elkhorn Boulevard, and grading of approximately 8,500 feet of drainage swale are on the landside levee which are directed into existing or proposed pre-cast concrete drop structures and reinforced concrete pipes to outfall structures along the water side of the levee where storm water is controlled by a Rock Slope Protection (RSP) dissipater. The proposed work at Elverta Road is on both the landside and waterside of the levee. Board permit No. 18159-4 approved construction of drainage structures designed to handle a 25-year storm event. However, the existing and newly proposed drainage extensions will handle a 100-year storm event without failing the levee.

Board staff reviewed the proposed drainage extensions of this project and find that they will have no adverse hydraulic impacts to the as-built drainage features or other facilities of the Sacramento River Flood Control Project.

## **5.3 – Geotechnical Analysis**

Structural and geotechnical impacts are negligible due to grading and placing a 6-inch thick aggregate base roadway shoulders adjacent to the Teal Bend Golf Club driveway and Elkhorn Boulevard. Installing rock slope erosion protection along the waterside levee slope around the outfall matches the existing levee slope.

The proposed volume of excavated material is 500 cubic yards which is a minor quantity for a project of this size and scope. Material stockpile areas will be kept to a minimum size and duration along the landside of the existing adjacent levee.

Board staff reviewed the design plans and agrees with the applicant's conclusion that the proposed project will result in no significant adverse geotechnical impacts to the Sacramento River floodway or levees. All project work will be done in a manner that will not pose a threat to the structural integrity of the Sacramento River Flood Control Project. Earthwork will be completed in compliance with the conditions of Draft Permit No. 18159-4-2 (Attachment B) and CCR 23 Standards.

## **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 comment letter has not been received for this application. Staff anticipates receipt of a letter indicating that the USACE District Engineer has no objection to the project, subject to conditions. Upon receipt of the letter, staff will review to ensure conformity with the draft permit language and incorporate it into the permit by reference as Exhibit A.
- Reclamation District 1000 endorsed this application on January 23, 2013, subject to conditions, which are incorporated into the permit as Exhibit B (see Attachment B, Exhibit B).

## **7.0 – CEQA ANALYSIS**

Board staff has prepared the following CEQA findings:

The Board, acting as a responsible agency under CEQA, has independently reviewed the Program Environmental Impact Report (EIR) (SCH No. 2008072060, August 2009) on the Natomas Levee Improvement Program Phase 3 Landside Improvements Project prepared by the lead agency, SAFCA. SAFCA determined that the project would have a significant effect on the environment and adopted Resolution 09-059 dated May 21, 2009 (which includes a Statement of Facts, Findings, and Mitigation Measures, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program). These documents including project design and SAFCA resolutions may be viewed or downloaded from the Board's website at <http://www.cvfpb.ca.gov/meetings/2013/06-28-2013.cfm> under a link for this agenda item. The documents are also available for review in hard copy at the Board and SAFCA offices.

The Board previously approved construction of Reaches 5A through 9B of the NLIP Landside Improvements Project on April 23, 2010 through Permit No. 18159-4 and Resolution 2010-10 and made appropriate CEQA findings. The Board finds that the proposed drainage swale grading project is within the scope of the previously adopted Program EIR and therefore constitutes a subsequent activity to the EIR. The Board further finds that no new environmental effects could occur and no new mitigation measures are required pursuant to CEQA Guidelines section 15162. Therefore, no new environmental document is required pursuant to CEQA Guidelines section 15168.

The documents and other materials which constitute the record of the Board's proceedings in this matter are in the custody of Jay Punia, Executive Officer, Central Valley Flood Protection Board, 3310 El Camino Ave., Rm. 151, Sacramento, California 95821.

### **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 have been applied to the review of this permit.

3. Effects of the decision on the facilities of the State Plan of Flood Control, and consistency of the proposed project with the Central Valley Flood Protection Plan as adopted by Board Resolution 2012-25 on June 29, 2012:

Since the proposed project does not impair the structural or hydraulic functions of the Sacramento River, the project has no adverse effect on facilities of the State Plan of Flood Control, and is consistent with the adopted 2012 Central Valley Flood Protection Plan.

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

There are no foreseeable projected future events that would impact this project.

## **9.0 – LAND RIGHT-OF-WAY CONCRENS**

The applicant is not required to acquire any new rights of way to construct the project. All work will be performed within the limits of construction of the previously permitted project (Permit Nos. 18159-4 and 18159-4-1).

## **10.0 – STAFF RECOMMENDATION**

Staff recommends that the Board adopt Resolution 2013-14 which:

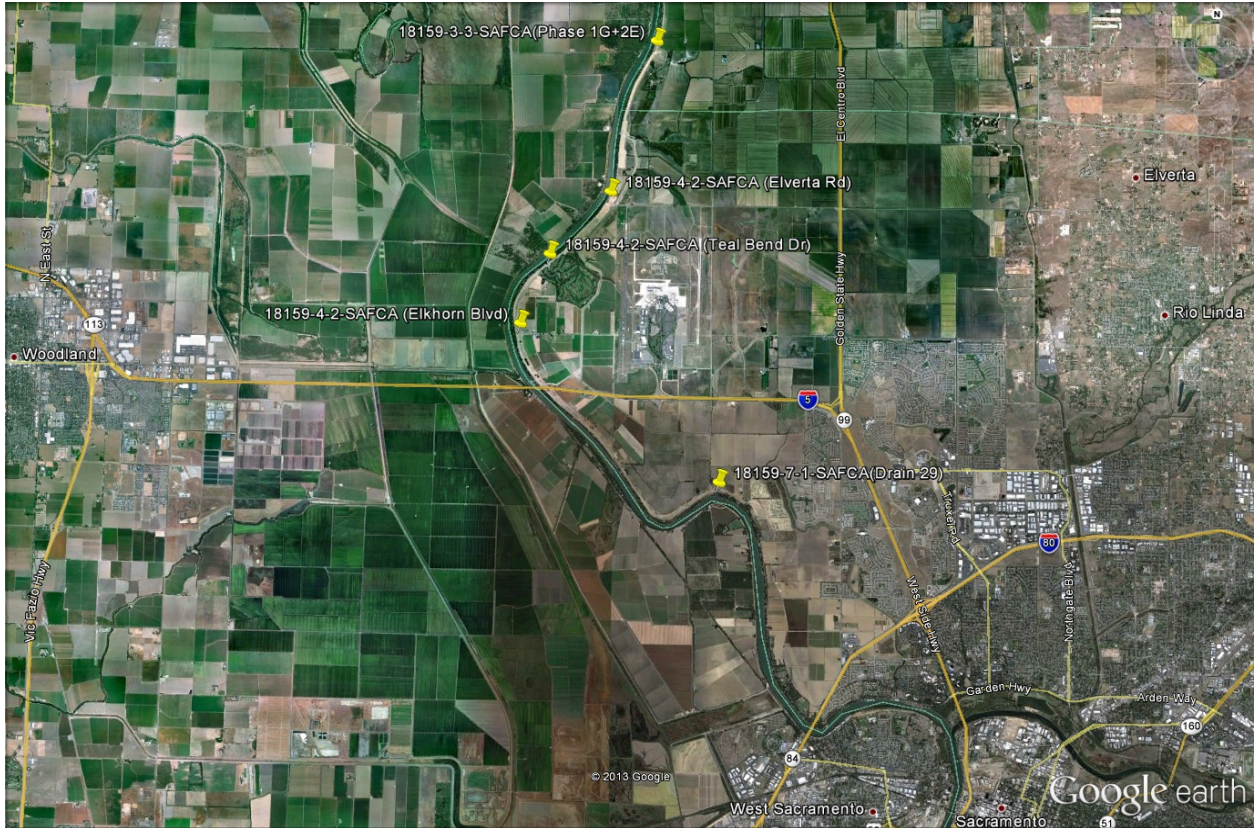
- adopts the CEQA findings,
- approves the permit in substantially the form provided, conditioned upon receipt of a U.S. Army Corps of Engineers comment letter indicating that the District Engineer has no objection to the project, subject to conditions, and
- directs the Executive Officer to take the necessary actions to execute the permit and all related documents, and file a Notice of Determination with the State Clearinghouse.

## **11.0 – LIST OF ATTACHMENTS**

- A. Vicinity and Location Maps
- B. Draft Permit No. 18159-4-2
  - Exhibit A: USACE Comment Letter (placeholder)
  - Exhibit B: RD 1000 Endorsement
- C. Board Resolution No. 2013-14
- D. Drainage Grading and Drainage Plan

Technical Review:	Sungho Lee, Engineer
Environmental Review:	Andrea Mauro, Environmental Scientist
Document Review:	David R. Williams, PE, Projects Section Chief
	Eric Butler, PE, Projects and Environmental Branch Chief
	Len Marino, PE, Chief Engineer

ATTACHMENT A – VICINITY AND LOCATION MAPS



**DRAFT**

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

**PERMIT NO. 18159-4-2 BD****This Permit is issued to:**

Sacramento Area Flood Control Agency (SAFCA)  
1007 - 7th St., 7th Floor  
Sacramento, California 95814-3407

The project is a component of SAFCA's Sacramento River East Levee, Phase 1G and 2E Drainage Swale Grading Project. The work is to make drainage improvements at the intersections of Garden Highway with Elverta Road, Teal Bend Golf Club driveway, and Elkhorn Boulevard, and to re-grade a drainage swale between the new adjacent levee and the Garden Highway roadway pavement. The work includes: (1) install two drainage inlets on the landside of the levee, one on each side of Elverta Road. Connect inlets to a drainage outfall on the waterside of the levee via reinforced concrete pipe (RCP). Install rock slope protection along the waterside levee slope around the outfall to provide erosion protection. Grade the area around the inlets to drain properly; (2) construct a 6-inch-deep aggregate base shoulder, on the land side of the levee at the Teal Bend Golf Club driveway. The shoulder will be minimum 10-foot wide and extend from the roadway shoulder to the drainage swale. Construction will involve excavation of 6 inches of soil and replacement with aggregate base. The area will be graded to drain to the swale; (3) construct one drainage inlet on the landside of the levee and south side of the roadway at Elkhorn Boulevard. Construct 86.15-feet of 24-inch RCP to tie into the existing manhole at Station 393+70. The nearby area will be graded to drain to the inlet; and (4) grade approximately 8,500 feet of drainage swale between the new adjacent levee and Garden Highway embankment.

The project is located along existing intersections and levees which are within the footprint of the work conducted under the previously issued CVFPB Permits for the Sacramento River East Levee Phase 2 Improvement Project, Reaches 5A Through 9B (Board Encroachment Permit No. 18159-4 (Section 12, 13, 36, T11N, R3E, MDB&M, Reclamation District 1000, Sacramento River, 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 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. 18159-4-2 BD**

**LIABILITIES / IMDEMNIFICATION**

**THIRTEEN:** 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.

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

#### EASEMENT, LICENSE OR TEMPORARY ENTRY PERMIT

SIXTEEN: If the construction project extends onto land owned in fee and/or easement by the Sacramento and San Joaquin Drainage District acting by and through the Central Valley Flood Protection Board (hereafter Board), the permittee should secure an easement, license, or temporary entry permit from the Board prior to commencement of work. Contact Angelica Aguilar at (916) 653-5782.

#### PERMITTING AND AGENCY CONDITIONS

SEVENTEEN: The permittee shall comply with all conditions set forth in the letter from the Department of Army (U.S. Army Corps of Engineers, Sacramento District) dated xxxx, which is attached to this permit as Exhibit A and is incorporated by reference.

EIGHTEEN: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

NINETEEN: The permittee shall comply with all conditions set forth in the letter from Reclamation District 1000 dated January 23, 2013, which is attached to this permit as Exhibit B and is incorporated by reference.

#### PRE-CONSTRUCTION

TWENTY: The permittee shall contact the Board by telephone at (916) 574-0609, and the Board's Construction Supervisor at (916) 574-2646 to schedule a preconstruction conference. Failure to do so at least 20 working days prior to start of work may result in delay of the project.

TWENTY-ONE: The permittee shall contact the U. S. Army Corps of Engineers regarding inspection of the project during construction as the proposed work is an alteration to an existing federal flood control project that will be incorporated into the Sacramento River Flood Control Project, a facility of

the State Plan of Flood Control.

TWENTY-TWO: The permittee shall provide construction supervision and inspection services acceptable to the Board.

#### CONSTRUCTION

TWENTY-THREE: All work approved by this permit shall be in accordance with the submitted nine drawings (Drawings G-001 & 008, C-201 through 203, and C-402, 403, 405 & 406). No other drawings will be considered under this permit. 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.

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

TWENTY-FIVE: No material stockpiles, temporary buildings, or equipment shall remain in the floodway during the flood season from November 1 to April 15.

TWENTY-SIX: Excavations below the design flood plane and within the levee section or within fifty (50) feet of the projected waterward and landward levee slopes shall have side slopes no steeper than 1 horizontal to 1 vertical. Flatter slopes may be required to ensure stability of the excavation.

TWENTY-SEVEN: The fill surface areas shall be graded to direct drainage away from the toe of the levee.

TWENTY-EIGHT: At all times during construction, at least one lane of the levee crown roadway shall be kept clear for vehicular access.

TWENTY-NINE: The permittee shall ensure that all pipe joints are watertight.

THIRTY: The permittee shall be responsible for all damages due to settlement, consolidation, or heave from any construction-induced activities.

#### VEGETATION / ENVIRONMENTAL MITIGATION

THIRTY-ONE: The mitigation measures approved by the CEQA lead agency and the permittee are found in its Mitigation Monitoring and Reporting Program adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures.

#### CONSTRUCTION COMPLETION

THIRTY-TWO: Upon completion of the project, the permittee shall submit a final completion letter and as-built drawings to the Central Valley Flood Protection Board, 3310 El Camino Avenue, Suite 151, Sacramento, California 95821 and Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite 256, Sacramento, California 95821.

#### OPERATIONS AND MAINTENANCE

THIRTY-THREE: 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.

THIRTY-FOUR: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by an authorized representative of the Central Valley Flood Protection Board, Department of Water Resources or any other agency responsible for maintenance.

THIRTY-FIVE: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

#### PROJECT ABANDONMENT, CHANGE IN PLAN OF FLOOD CONTROL

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

THIRTY-SEVEN: 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.

END OF CONDITIONS

This page intentionally left blank.

This page intentionally left blank.



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

SAMPLE

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

Dear Mr. Punia:

The Corps' comment letter for this encroachment permit application is anticipated soon.

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 "Meegan G. Nagy".

Meegan G. Nagy, P.E.  
Chief, Flood Protection and Navigation Section

This page intentionally left blank.



APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD  
ENCROACHMENT PERMIT

Application No. \_\_\_\_\_  
(For Office Use Only)

1. Description of proposed work:

The project is known as the "Sacramento River East Levee Phase 1G and 2E Drainage Swale Grading Project, Contract 4155", it is a component of the Natomas Levee Improvement Program. The work proposed for coverage under this permit includes the drainage improvements at the Elverta Road, Teal Bend Drive, and Elkhorn Boulevard intersections with the Garden Highway and re-grading of a drainage swale between the new adjacent levee and the Garden Highway roadway pavement. See Attachment A for additional information.

2. Location: Sacramento County, in Section See Attachment A,

Township: See Attachment A (N) (S), Range See Attachment A (W), M. D. B. & M.

3. Sacramento Area Flood Control Agency of 1007 7th Street, 7th Floor  
Name of Applicant Address

Sacramento  
City

CA  
State

95814  
Zip Code

(916) 874-7606  
Telephone Number

(916) 874-8289  
Fax Number

4. Endorsement: (of Reclamation District)

We, the Trustees of Reclamation District No. 1000  
Name and District Number

approve this plan, subject to the following conditions:

- Conditions listed on back of this form       Conditions Attached       No Conditions

  
Trustee

01/23/2013  
Date

\_\_\_\_\_  
Trustee

\_\_\_\_\_  
Date

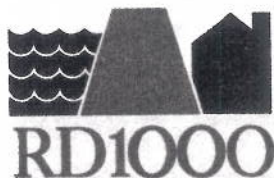
5. Names and addresses of adjacent property owners sharing a common boundary with the land upon which the contents of this application apply. If additional space is required, list names and addresses on back of the application form or an attached sheet.

See Attachment A

Name

Address

Zip Code



---

RECLAMATION  
DISTRICT 1000

**Permit Conditions**

**Permit Application No.** 18159-4-2

**Location:** Sacramento River (East Levee) Phase 1G and 2E Drainage Swale  
Grading Project SAFCA Natomas Levee Improvement Project  
(Approx RM 74.7 to RM 70.0)

**Applicant:** Sacramento Area Flood Control Agency (SAFCA)

**Description:** Site Drainage Improvements and River Outfall Structures

**CONDITIONS:**

1. Maintenance of all encroaching structures, facilities, vegetation or any other items or matters approved under this permit shall remain the responsibility of the Permittee until accepted by the District or transferred to Sacramento County.
2. Permittee shall obtain all necessary permits and regulatory approvals for the proposed work.
3. Permittee shall coordinate with the District in the preparation of the project plans and specifications and with any modifications thereto. District shall review and approve final plans and specifications prior to construction and shall also review and approve all proposed modifications to the approved project plans and specifications prior to their construction. Field fitting improvements shall be approved by the District in the field.
4. Work on the levee or within the Sacramento River shall be done outside of the flood season (November 1 to April 15) unless otherwise approved by the Central Valley Flood Protection Board and the District.
5. Permittee shall acquire necessary right of way for the improvements and convey said rights to the District for operation and maintenance of the flood control features the District is to operate and maintain to the satisfaction of the District.
6. Permittee shall restore the levee, access roads, gates, fences and other associated flood control facilities to the satisfaction of the District upon completion of the work or prior to flood season.

7. In event of an emergency, Permittee shall immediately restore the levee and access to the satisfaction of the District.

Resolution No. 2010-02

**WHEREAS**, Reclamation District No. 1000 (District) operates and maintains levees under the authority of the California Central Valley Flood Protection Board (CCVFPB) and the California Water Code; and

**WHEREAS**, the CCVFPB and Title 23 of the California Water Code require any encroachment on or adjacent to the levee or within the designated floodway have an encroachment permit be issued by the CCVFPB with appropriate conditions to insure they do not impede or impair the operations and maintenance of the flood control system; and

**WHEREAS**, such permit applications are reviewed and endorsed by the local maintaining agency responsible for the operations and maintenance of the levee system where the encroachment is proposed and allows for conditions to be included in the permits to address issues including, but not limited to, operations, maintenance, public safety and flood emergency response; and

**WHEREAS**, endorsement of the permit applications for levees surrounding the Natomas basin are the purview of the District and various actions through the years by past District Boards have granted authority to the General Manager to endorse permit applications; and

**WHEREAS**, the Board desires to enumerate a clear policy on how future permit applications are to be reviewed and endorsed by the District

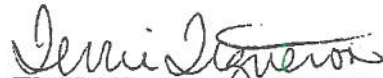
**NOW, THEREFORE BE IT RESOLVED:**

The Reclamation District No. 1000 Board of Trustees desires to delegate their authority to endorse encroachment permit applications to the District General Manager for routine encroachments and those which do not involve District policy issues. A determination as to which permits will be endorsed by the General Manager shall be left to his or her judgment, provided however, that all such endorsements shall be presented to the Board of Trustees at the next scheduled Board meeting.

Those permit applications which are not routine in nature, present policy issues or are likely to be controversial shall be brought to the Board for consideration and action at which time the Board may delegate signature authority to the General Manager if approved. This will include all permit applications where the General Manager is recommending denial to the California Central Valley Flood Protection Board.

CERTIFICATION

I, Terrie Figueroa, Secretary of Reclamation District No, 1000, hereby certify that the foregoing Resolution 2010-02 was duly adopted by the Board of Trustees of Reclamation District No, 1000 at a regular meeting held January 8, 2010 and made a part of the minutes thereof.



\_\_\_\_\_  
Terrie Figueroa  
District Secretary

This page intentionally left blank.

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

**RESOLUTION NO. 2013-14**

**FINDINGS AND DECISION AUTHORIZING ISSUANCE OF  
ENCROACHMENT PERMIT NO. 18159-4-2**

**SACRAMENTO AREA FLOOD CONTROL AGENCY  
SACRAMENTO RIVER EAST LEVEE, REACHES 5A THROUGH 9B  
DRAINAGE SWALE GRADING PROJECT, SACRAMENTO COUNTY**

**WHEREAS**, the Sacramento Area Flood Control Agency (SAFCA) proposed the Natomas Levee Improvement Program (NLIP), a comprehensive flood risk reduction program designed to provide a “200-year” level of protection to the Natomas Basin, and;

**WHEREAS**, the Central Valley Flood Protection Board (Board) approved Permit No. 18159-4 and made findings pursuant to the California Environmental Quality Act (CEQA) at the April 23, 2010 meeting for SAFCA’s Sacramento River East Levee (SREL), NLIP Phase 3 Landside Improvements Project to construct a combination of adjacent levee, seepage cutoff wall, seepage berm, reinforced concrete floodwall, drainage structures and outfalls through the existing Garden Highway Levee, and construction grading for related pumping plants along Reaches 5A through 9B by SAFCA designation of the existing left (east) bank levee of the Sacramento River; and

**WHEREAS**, the Board approved Permit No. 18159-4-1 and made additional findings pursuant to CEQA at the December 21, 2012 meeting for the SAFCA NLIP, Phase 3 Landside Improvements Project to install two access control gates within the recently constructed SREL project in Reaches 5A through 9B along the left (east) bank levee of the Sacramento River between a point just upstream of Elverta Road to a downstream point adjacent to the Teal Bend Golf Course. The specific sites are located at Ramp 5 (one gate) and Reservoir Road (one gate) in Sacramento County; and

**WHEREAS**, SAFCA submitted Application No. 18159-4-2 to the Board on February 5, 2013 to construct drainage improvements at Elverta Road, Teal Bend Drive, and Elkhorn Boulevard intersections with the Garden Highway and re-grade a drainage swale between the new adjacent levee and the Garden Highway roadway pavement within the recently constructed SREL project in Reaches 5A through 9B. The drainage swale grading project features are a minor appurtenant components of the NLIP project; and

**WHEREAS**, SAFCA as lead agency under the California Environmental Quality Act, Public Resources Code sections 21000 *et seq.* (“CEQA”) prepared a Program Environmental Impact Report (EIR) on the Natomas Levees Improvement Program (NLIP), Phase 3 Landside Improvements Project (SCH No. 2008072060, August 2009) and a Mitigation Monitoring and

Reporting Program (MMRP) (incorporated herein by reference and available at Board or SAFCA offices); and

**WHEREAS**, on May 21, 2009, SAFCA approved Resolution 09-059 for the Natomas Levee Improvement Program, Phase 3 Landside Improvements Project, the MMRP, and approved findings and a statement of overriding considerations pursuant to the CEQA Guidelines (incorporated herein by reference); and

**WHEREAS**, SAFCA analyzed the grading and drainage improvements within Reaches 5A through 9B in the EIR and MMRP; and

**WHEREAS**, on January 23, 2013, Reclamation District 1000 endorsed application 18159-4-2; and

**WHEREAS**, the U.S. Army Corps of Engineers (USACE) approval has not been received for Permit Application No. 18159-4-2. Board staff anticipates the USACE approval of the project, subject to conditions, and upon receipt of the approval letter, staff will review to ensure conformity with the permit language and incorporate it into Permit 18159-4-2; and

**WHEREAS**, Board staff completed a technical review Permit Application No. 18159-4-2; and

**WHEREAS**, the Board conducted a public hearing on June 28, 2013 on Permit Application No. 18159-4-2 and has reviewed the reports of its staff, the documents and correspondence in its files, and the environmental documents prepared by SAFCA.

NOW, THEREFORE, BE IT RESOLVED THAT,

**Findings of Fact**

1. The Board hereby adopts as findings the facts set forth in the Staff Report.
2. The Board has reviewed all Attachments, Exhibits, Figures, and References listed in the Staff Report.

**CEQA Findings**

3. The Board, as a responsible agency, has independently reviewed the analyses in the Program EIR on the NLIP Phase 3 Landside Improvements Project EIR (SCH No. 2008072060, August 2009), the MMRP on the NLIP Phase 3 Landside Improvements Project, and the SAFCA findings, and has reached its own conclusions regarding them.
4. The Board finds that the proposed drainage swale grading project is within the scope of the previously adopted Program EIR and therefore constitute a subsequent activity to the EIR. The Board further finds that no new environmental effects could occur and no new mitigation



measures are required pursuant to CEQA Guidelines section 15162. Therefore, no new environmental document is required pursuant to CEQA Guidelines section 15168.

5. **Custodian of Record** The custodian of the CEQA record for the Board is its Executive Officer, Jay Punia, at the Board offices at 3310 El Camino Avenue, Room 151, Sacramento, California 95821.

**Considerations pursuant to Water Code section 8610.5**

6. **Evidence Admitted into the Record.** The Board has considered all the evidence presented in this matter, including the original application for Permit Nos. 18159-4-2 and technical documentation provided by SAFCA on the NLIP Phase 3 Landside Improvements Project proposed improvements, past and present Staff Reports and attachments, the original Environmental Impact Report on the Natomas Levee Improvement Program, Phase 3 Landside Improvements Project (Draft and Final Versions), and SAFCA Resolution 09-059 including findings, Statement of Overriding Considerations, and the Mitigation Monitoring and Reporting Program.

The custodian of the file is Executive Officer Jay Punia at the Central Valley Flood Protection Board, 3310 El Camino Avenue, Room 151, Sacramento, California 95821.

7. **Best Available Science.** In making its findings, the Board has used the best available science relating to the issues presented by all parties and the design is in compliance with these standards.
8. **Effects on Facilities of the State Plan of Flood Control.** This project has no adverse effects on facilities of the State Plan of Flood Control, and is consistent with the adopted 2012 Central Valley Flood Protection Plan.
9. **Effects of Reasonably Projected Future Events.** There are no other foreseeable projected future events that would impact this project.

**Other Findings/Conclusions regarding Issuance of the Permit.**

10. Based on the foregoing and particularly on the evidence that the condition of the existing Natomas levees, prior to the beginning of construction of the NLIP Landside Improvements Project, posed an unacceptable risk to life and property, the Board finds and concludes that the issuance of Encroachment Permit No. 18159-4-2 for installation of drainage swale grading project is in the public interest.
11. This resolution shall constitute the written decision of the Board in the matter of Permit No. 18159-4-2.

**Approval of Encroachment Permit No. 18159-4-2**

12. Based on the foregoing the Central Valley Flood Protection Board hereby approves issuance of Encroachment Permit No. 18159-4-2 in substantially the form provided as Staff Report Attachment B, conditioned upon receipt of a U.S. Army Corps of Engineers comment letter indicating that the District Engineer has no objection to the project, subject to conditions.
  
13. The Board directs the Executive Officer to take the necessary actions to prepare and execute Encroachment Permit No. 18159-4-2 and all related documents, and to prepare and file a Notice of Determination pursuant to CEQA for the drainage swale grading project, minor appurtenant components of the Natomas Levee Improvement Program, Phase 3 Improvements Project.

PASSED AND ADOPTED by vote of the Board on \_\_\_\_\_, 2013

\_\_\_\_\_  
William H. Edgar  
President

\_\_\_\_\_  
Jane Dolan  
Secretary

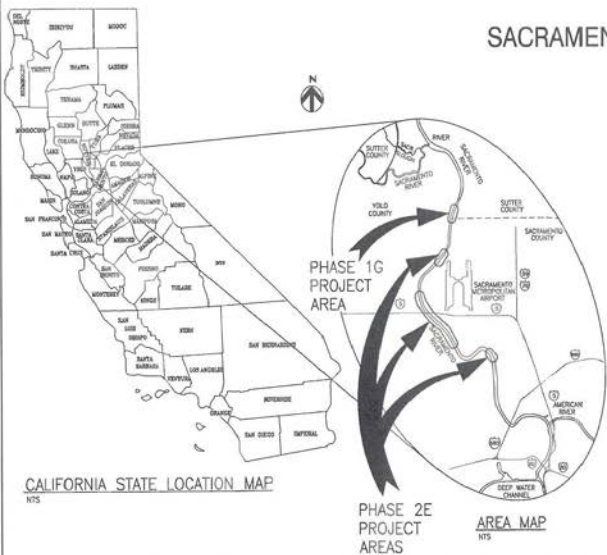
SACRAMENTO AREA FLOOD CONTROL AGENCY  
 PROJECT PLANS FOR CONSTRUCTION OF  
**NATOMAS LEVEE IMPROVEMENT PROGRAM**

SACRAMENTO RIVER EAST LEVEE  
 PHASE 1G AND 2E IMPROVEMENT PROJECT

VOLUME 2

SACRAMENTO RIVER EAST LEVEE PHASE 1G AND 2E DRAINAGE SWALE GRADING PROJECT

SACRAMENTO AND SUTTER COUNTIES, CALIFORNIA



CONFORMED SET

ACCEPTED BY: *Paul T. Deraux* DATE: 10/22/2012  
 Paul T. Deraux, PE  
 District Engineer  
 Reclamation District No. 1000

ISSUED FOR CONSTRUCTION  
 SUBMITTED FOR APPROVAL BY: *John A. Bazzani* DATE: 10/22/2012  
 John A. Bazzani, PE  
 Director of Engineering  
 Design Construction Maintenance  
 Sacramento Area Flood Control Agency  
 APPROVED BY: *Richard M. Johnson* DATE: 10/22/2012  
 Richard M. Johnson, PE  
 Executive Director  
 Sacramento Area Flood Control Agency

CONTRACT NO. 4155  
 APPROVED ON: October 18, 2012 BY: SAFCO BOARD OF DIRECTORS  
 RESOLUTION NO: 2012-132 *Debra Russell*  
 CLERK OF THE BOARD

C:\pwworking\hcr\ac\0225510250-001.dwg, CL-001, 10/22/2012 3:41:00 PM, Indigo

REV.	DATE	BY	CHK.	APPR.	DESCRIPTION
0	10/18/12	EJC	AJ	SJ	CONFORMED SET

DESIGNED BY: B. JOHNSON  
 DRAWN BY: E. COLCHADO/L. RODRIGUEZ  
 IN CHARGE: B. JOHNSON  
 PROJECT/DC MANAGERS: C. TORANEC/A. WACK  
 DATE: 10/05/12

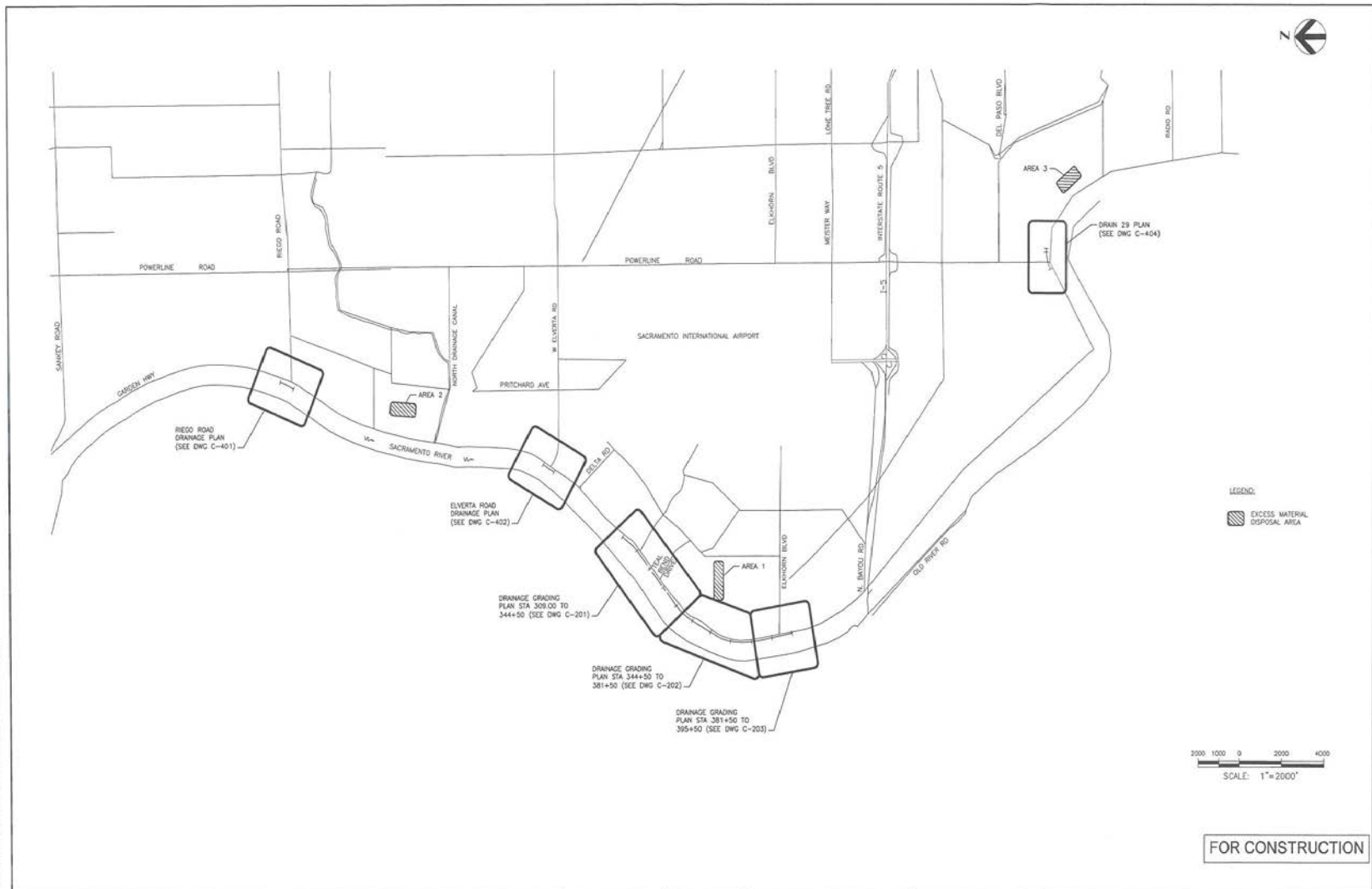
**HR**  
 HCR Engineering Inc.  
 2385 Iron Point Rd. Suite 300  
 Folsom, Ca 95630

**SAFCA**  
 VOL 2: SREL PHASE 1G AND 2E IMPROVEMENT PLANS  
 TITLE SHEET AND LOCATION MAP

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING.  
 ADJUST SCALES FOR REDUCED PLOTS.  
 DRAWING NO. | SHEET  
 G-001 | 1

ATTACHMENT D - DRAINAGE GRADING AND DRAINAGE PLAN

ATTACHMENT D - DRAINAGE GRADING AND DRAINAGE PLAN



FOR CONSTRUCTION

C:\pwworking\hcd\02350202\G-008.dwg, Layout1, 10/2/2012 4:00:41 PM, hcd\jgr

ID	DATE	BY	CHK	APPR	DESCRIPTION
					CONFORMED SET

REV.	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY:  
B. JOHNSON

DRAWN BY:  
L. RODRIGUEZ

IN CHARGE:  
B. JOHNSON

PROJECT/DC MANAGERS:  
C. KRIVANEC/J. MACK

DATE:  
10/05/12

**HDR** HDR Engineering Inc.  
2305 Iron Point Rd. Suite 300  
Folsom, CA 95630

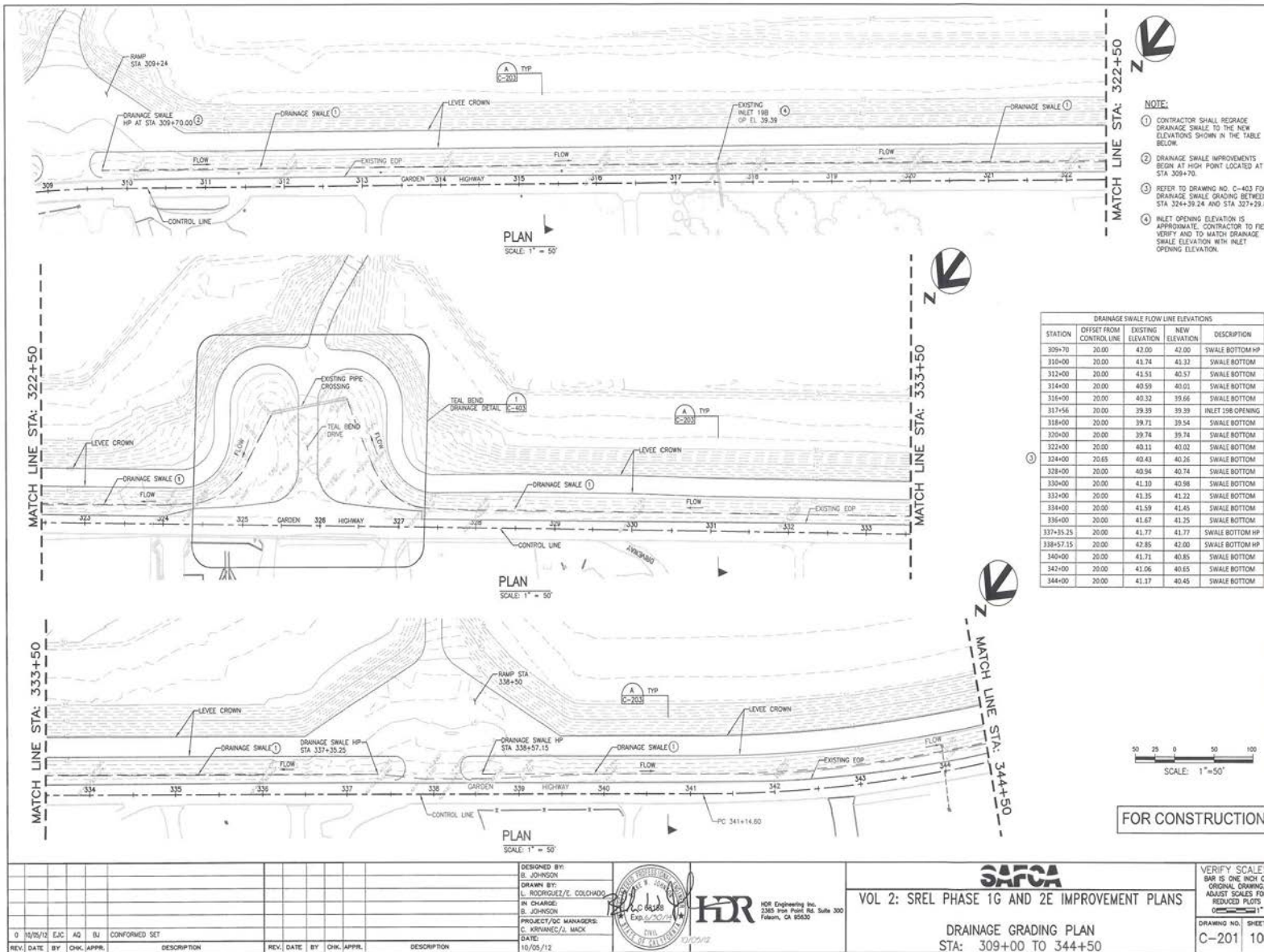
**SAFCA**

VOL 3: SREL PHASE 2D IMPROVEMENT PLANS

KEY MAP

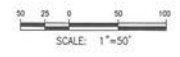
VERIFY SCALES  
BAR IS ONE INCH ON  
ORIGINAL DRAWING.  
ADJUST SCALES FOR  
REDUCED PLOTS

DRAWING NO. SHEET  
G-008 8



- NOTE:**
- CONTRACTOR SHALL REGRADE DRAINAGE SWALE TO THE NEW ELEVATIONS SHOWN IN THE TABLE BELOW.
  - DRAINAGE SWALE IMPROVEMENTS BEGIN AT HIGH POINT LOCATED AT STA 309+70.
  - REFER TO DRAWING NO. C-403 FOR DRAINAGE SWALE GRADING BETWEEN STA 324+39.24 AND STA 327+29.84.
  - INLET OPENING ELEVATION IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY AND TO MATCH DRAINAGE SWALE ELEVATION WITH INLET OPENING ELEVATION.

DRAINAGE SWALE FLOW LINE ELEVATIONS				
STATION	OFFSET FROM CONTROL LINE	EXISTING ELEVATION	NEW ELEVATION	DESCRIPTION
309+70	20.00	42.00	42.00	SWALE BOTTOM HP
310+00	20.00	41.74	41.32	SWALE BOTTOM
312+00	20.00	41.51	40.57	SWALE BOTTOM
314+00	20.00	40.59	40.01	SWALE BOTTOM
316+00	20.00	40.32	39.66	SWALE BOTTOM
317+54	20.00	39.39	39.39	INLET 198 OPENING
318+00	20.00	39.71	39.54	SWALE BOTTOM
320+00	20.00	39.74	39.74	SWALE BOTTOM
322+00	20.00	40.11	40.02	SWALE BOTTOM
324+00	20.65	40.43	40.26	SWALE BOTTOM
328+00	20.00	40.94	40.74	SWALE BOTTOM
330+00	20.00	41.10	40.98	SWALE BOTTOM
332+00	20.00	41.35	41.22	SWALE BOTTOM
334+00	20.00	41.59	41.45	SWALE BOTTOM
336+00	20.00	41.67	41.75	SWALE BOTTOM
337+35.25	20.00	41.77	41.77	SWALE BOTTOM HP
338+57.15	20.00	42.85	42.00	SWALE BOTTOM HP
340+00	20.00	41.71	40.85	SWALE BOTTOM
342+00	20.00	41.06	40.65	SWALE BOTTOM
344+00	20.00	41.17	40.45	SWALE BOTTOM



FOR CONSTRUCTION

REV.	DATE	BY	CHK. APPR.	DESCRIPTION	
0	10/05/12	EJC	AQ	BU	CONFORMED SET

DESIGNED BY:  
E. JOHNSON

DRAWN BY:  
L. RODRIGUEZ/E. COLCHADO

IN CHARGE:  
E. JOHNSON

PROJECT/DC MANAGERS:  
C. KRIVANEK/L. MACK

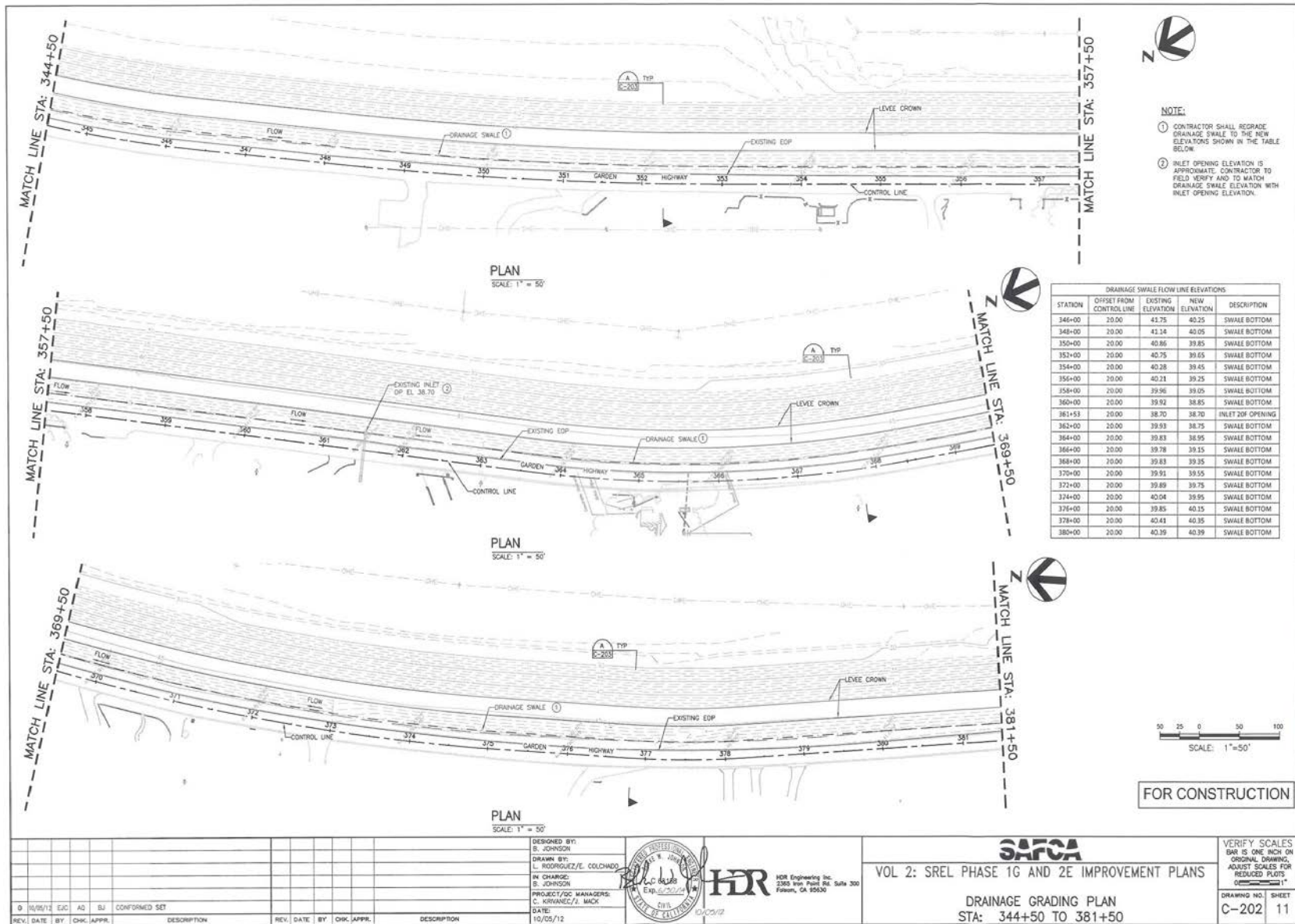
DATE:  
10/05/12

**SARCA**

VOL 2: SREL PHASE 1G AND 2E IMPROVEMENT PLANS

DRAINAGE GRADING PLAN  
STA: 309+00 TO 344+50

VERIFY SCALES  
BAR IS ONE INCH ON  
ORIGINAL DRAWING,  
ADJUST SCALES FOR  
REDUCED PLOTS  
DRAWING NO. SHEET  
C-201 10



- NOTE:**
- ① CONTRACTOR SHALL RESPADE DRAINAGE SWALE TO THE NEW ELEVATIONS SHOWN IN THE TABLE BELOW.
  - ② INLET OPENING ELEVATION IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY AND TO MATCH DRAINAGE SWALE ELEVATION WITH INLET OPENING ELEVATION.

DRAINAGE SWALE FLOW LINE ELEVATIONS				
STATION	OFFSET FROM CONTROL LINE	EXISTING ELEVATION	NEW ELEVATION	DESCRIPTION
346+00	20.00	41.75	40.25	SWALE BOTTOM
348+00	20.00	41.14	40.05	SWALE BOTTOM
350+00	20.00	40.86	39.85	SWALE BOTTOM
352+00	20.00	40.75	39.65	SWALE BOTTOM
354+00	20.00	40.28	39.45	SWALE BOTTOM
356+00	20.00	40.21	39.25	SWALE BOTTOM
358+00	20.00	39.96	39.05	SWALE BOTTOM
360+00	20.00	39.92	38.85	SWALE BOTTOM
361+53	20.00	38.70	38.70	INLET 20" OPENING
363+00	20.00	39.93	38.75	SWALE BOTTOM
364+00	20.00	39.83	38.95	SWALE BOTTOM
366+00	20.00	39.78	39.15	SWALE BOTTOM
368+00	20.00	39.83	39.35	SWALE BOTTOM
370+00	20.00	39.91	39.55	SWALE BOTTOM
372+00	20.00	39.89	39.75	SWALE BOTTOM
374+00	20.00	40.04	39.95	SWALE BOTTOM
376+00	20.00	39.85	40.15	SWALE BOTTOM
378+00	20.00	40.41	40.35	SWALE BOTTOM
380+00	20.00	40.39	40.39	SWALE BOTTOM



FOR CONSTRUCTION

DESIGNED BY: S. JOHNSON			HDR Engineering Inc. 2300 Hwy. 90A, Suite 300 Tallahassee, FL 32309
DRAWN BY: L. RODRIGUEZ/E. COLCHANDU			
IN CHARGE: S. JOHNSON			
PROJECT/DC MANAGERS: C. HERNANDEZ / L. MACK			
DATE: 10/05/12			

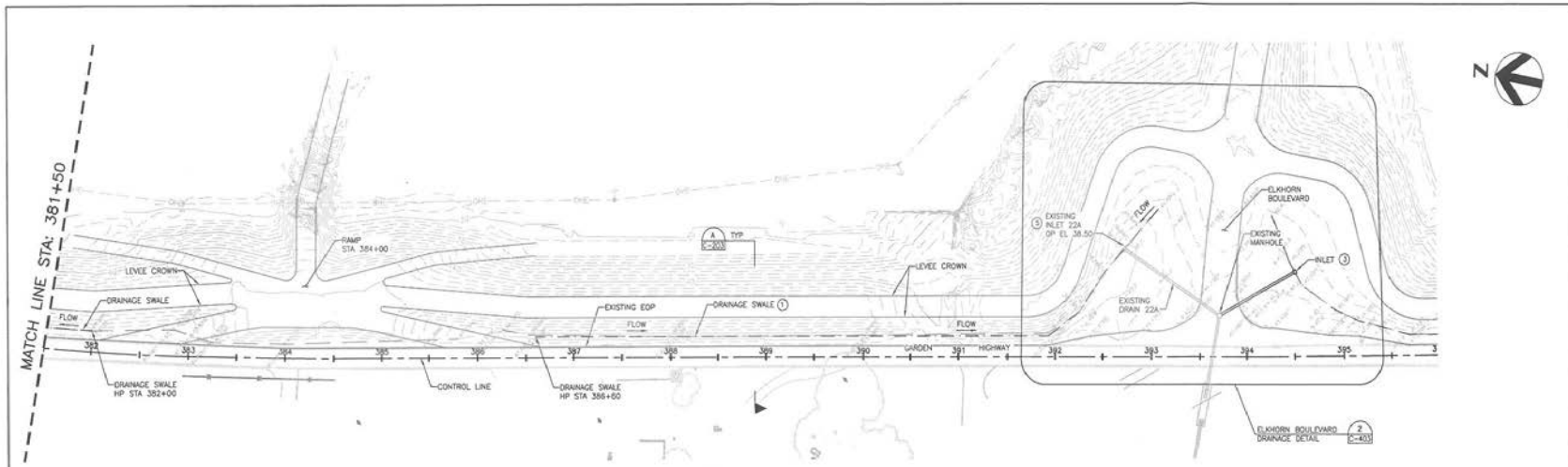
**SAFCA**

VOL 2: SREL PHASE 1G AND 2E IMPROVEMENT PLANS

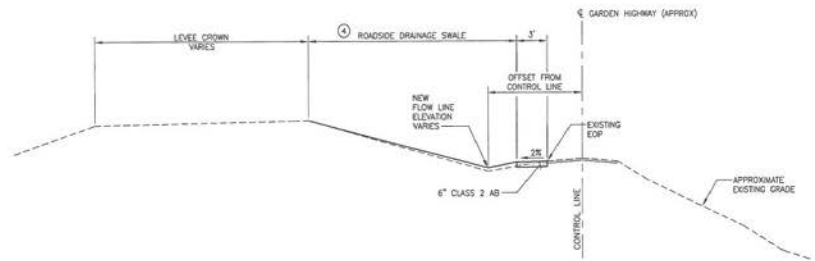
DRAINAGE GRADING PLAN  
STA: 344+50 TO 381+50

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLANS DRAWING NO. SHEET C-202 11
---

REV.	DATE	BY	CHK.	APPR.	DESCRIPTION	REV.	DATE	BY	CHK.	APPR.	DESCRIPTION
0	10/05/12	EAC	AJ	BJ	CONFORMED SET						



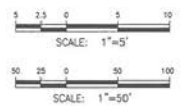
PLAN  
SCALE: 1" = 50'



DRAINAGE SWALE SECTION  
SCALE: 1" = 5'

DRAINAGE SWALE FLOWLINE ELEVATIONS				
STATION	OFFSET FROM CONTROL LINE	EXISTING ELEVATION	NEW ELEVATION	DESCRIPTION
382+00	20.00	40.58	40.58	SWALE BOTTOM HP
386+60	20.00	39.60	39.60	SWALE BOTTOM HP
388+00	20.00	38.99	39.20	SWALE BOTTOM
390+00	20.00	38.94	39.00	SWALE BOTTOM
391+93.08	20.00	39.14	38.70	SWALE BOTTOM

- NOTE:**
- CONTRACTOR SHALL REGRADE DRAINAGE SWALE TO THE NEW ELEVATIONS SHOWN IN TABLE.
  - DRAINAGE SWALE IMPROVEMENTS ARE NOT REQUIRED FROM STA 382+00 TO STA 386+60.
  - REFER TO DRAWING NO. C-403 FOR DRAINAGE SWALE GRADING STA 392+00 TO STA 394+00.
  - CONTRACTOR SHALL PROVIDE STRAW & TACKLER EROSION CONTROL AT ROADSIDE DRAINAGE SWALE IN ACCORDANCE WITH SPECIFICATION 1223.2.
  - INLET OPENING ELEVATION IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY AND TO MATCH DRAINAGE SWALE ELEVATION WITH INLET OPENING ELEVATION.



FOR CONSTRUCTION

REV.	DATE	BY	CHK.	APPR.	DESCRIPTION
0	10/05/12	EJC	AQ	BJ	CONFORMED SET

DESIGNED BY:  
B. JOHNSON

DRAWN BY:  
L. RODRIGUEZ/E. COLOMBO

IN CHARGE:  
B. JOHNSON

PROJECT/DC MANAGERS:  
C. KRIVANEK/J. MACK

DATE:  
10/05/12

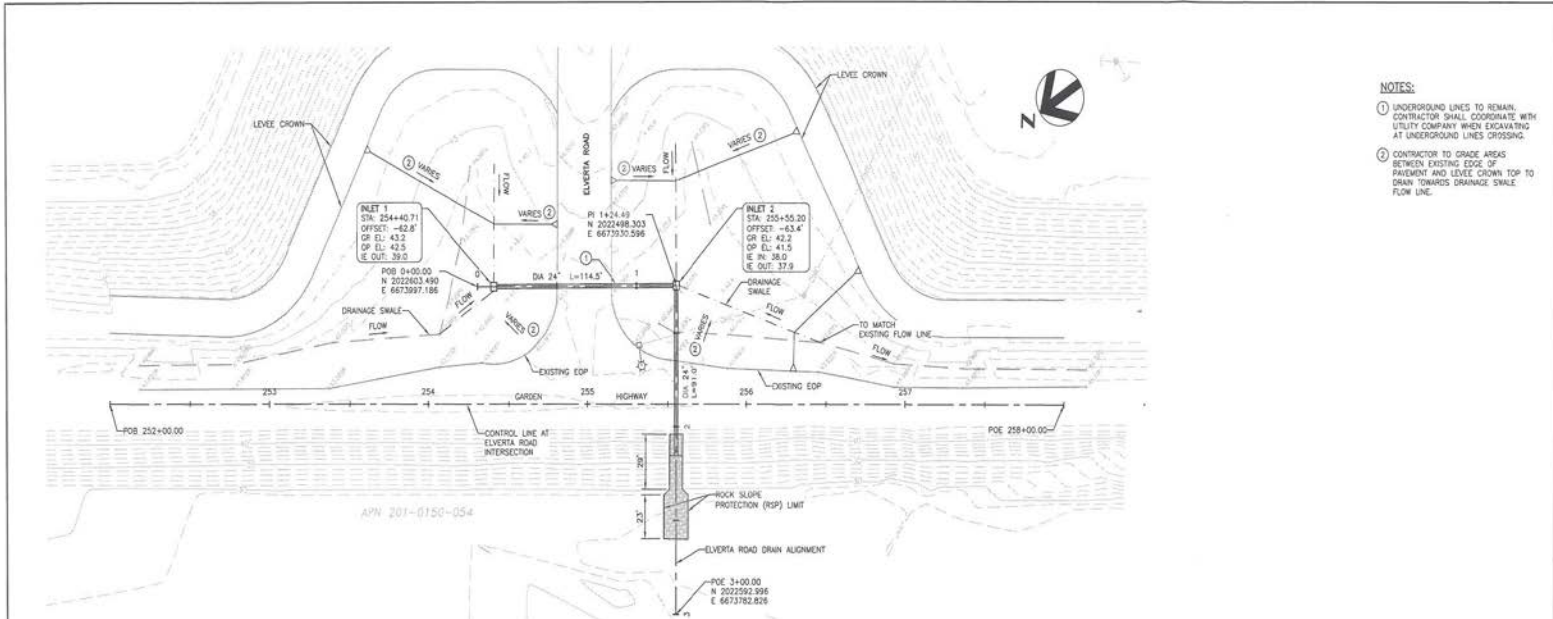
**SAFCA**

VOL 2: SREL PHASE 1G AND 2E IMPROVEMENT PLANS

DRAINAGE GRADING PLAN  
STA: 381+50 TO 395+50

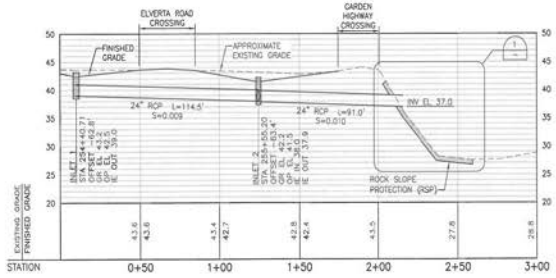
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS

DRAWING NO. SHEET  
C-203 12

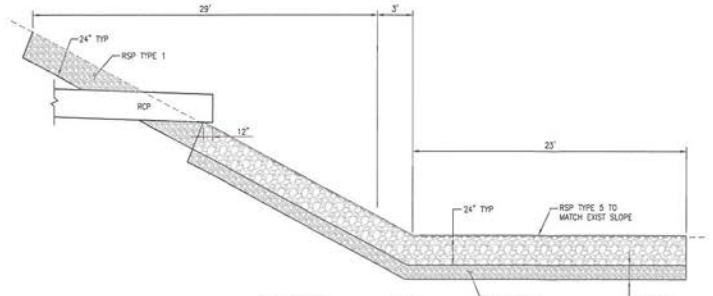


- NOTES:**
- UNDERGROUND LINES TO REMAIN. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY WHEN EXCAVATING AT UNDERGROUND LINES CROSSING.
  - CONTRACTOR TO GRADE AREAS BETWEEN EXISTING EDGE OF PAVEMENT AND LEVEL CROWN TOP TO DRAIN TOWARDS DRAINAGE SWALE FLOW LINE.

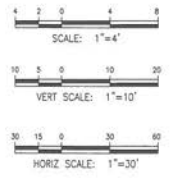
ELVERTA ROAD DRAINAGE - PLAN  
SCALE: 1" = 30'



ELVERTA ROAD DRAINAGE - PROFILE  
SCALE: 1" = 30'  
1" = 10'



SECTION  
SCALE: 1" = 4'



FOR CONSTRUCTION

REV.	DATE	BY	CHK.	APPR.	DESCRIPTION	REV.	DATE	BY	CHK.	APPR.	DESCRIPTION
0	10/01/12	EJC	AQ	BJ	CONFORMED SET						

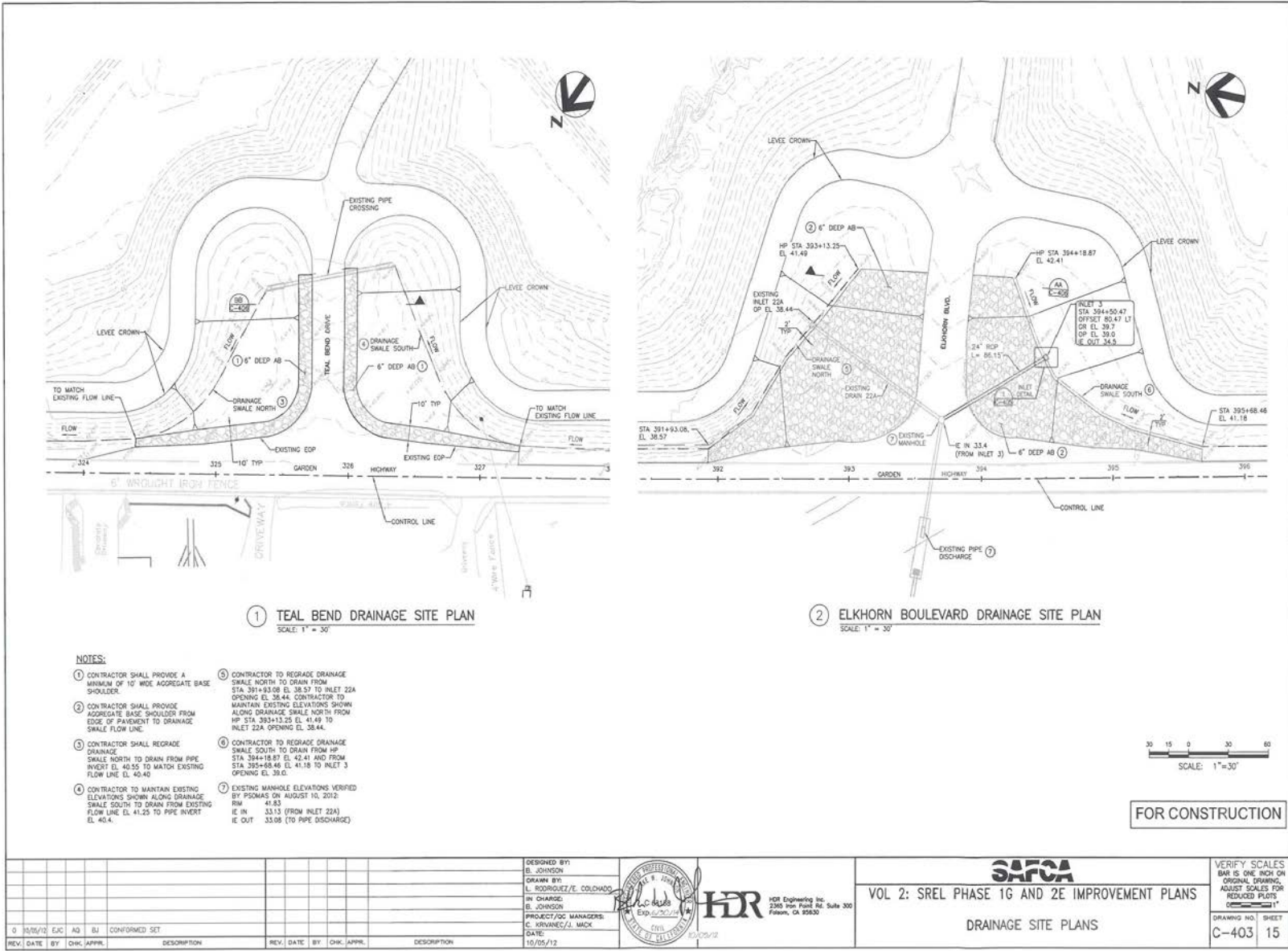
DESIGNED BY: EL JOHNSON  
 DRAWN BY: L. RODRIGUEZ/E. COLCHAGO  
 IN CHARGE: EL JOHNSON  
 PROJECT/DC MANAGERS: C. KRIVANEK/L. MACK  
 DATE: 10/05/12

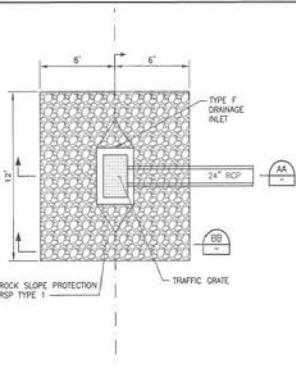
HR  
 HR Engineering Inc.  
 2305 Van Ness Blvd. Suite 300  
 Fremont, CA 94530

**SAFCA**  
 VOL 2: SREL PHASE 1G AND 2E IMPROVEMENT PLANS  
 ELVERTA ROAD DRAINAGE  
 PLAN, PROFILE AND SECTION

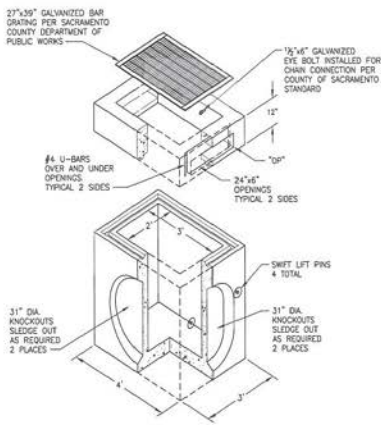
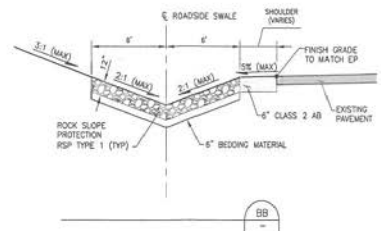
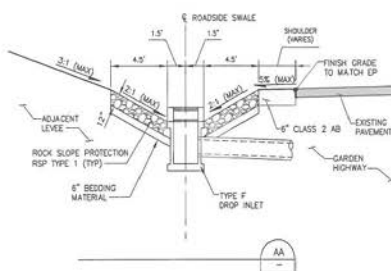
VERIFY SCALES  
 BAR IS ONE INCH ON  
 ORIGINAL DRAWING.  
 ADJUST SCALES FOR  
 REDUCED PLOTS  
 OTHERWISE 1"  
 DRAWING NO. / SHEET  
 C-402 / 14



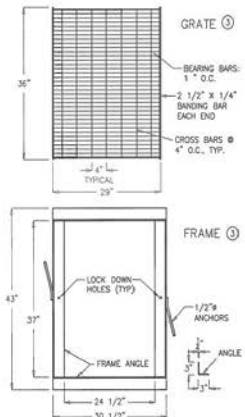




TYPICAL INLET DETAIL  
SCALE: 1"=4'  
1  
C-405

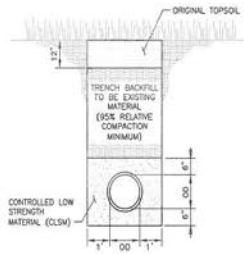


TYPE F DROP INLET (TYP)  
NTS

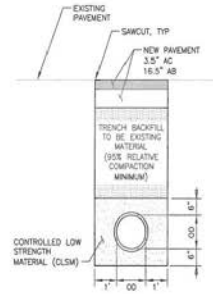


FRAME AND GRATE DETAIL  
NTS

- NOTES:
- TRENCH IN ROADWAYS SHALL BE COMPACTED AND BACKFILLED IMMEDIATELY FOLLOWING INSTALLATION OF PIPE, AND OPEN TO TRAFFIC AS SOON AS POSSIBLE.
  - TRENCH PIPE INSTALLATION COMPACTED AND BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
  - FRAME AND GRATE SHALL COMPLY WITH THE COUNTY OF SACRAMENTO STANDARD.



NON-PAVEMENT PIPE TRENCH DETAIL  
NTS



PIPE TRENCH DETAIL  
NTS

FOR CONSTRUCTION

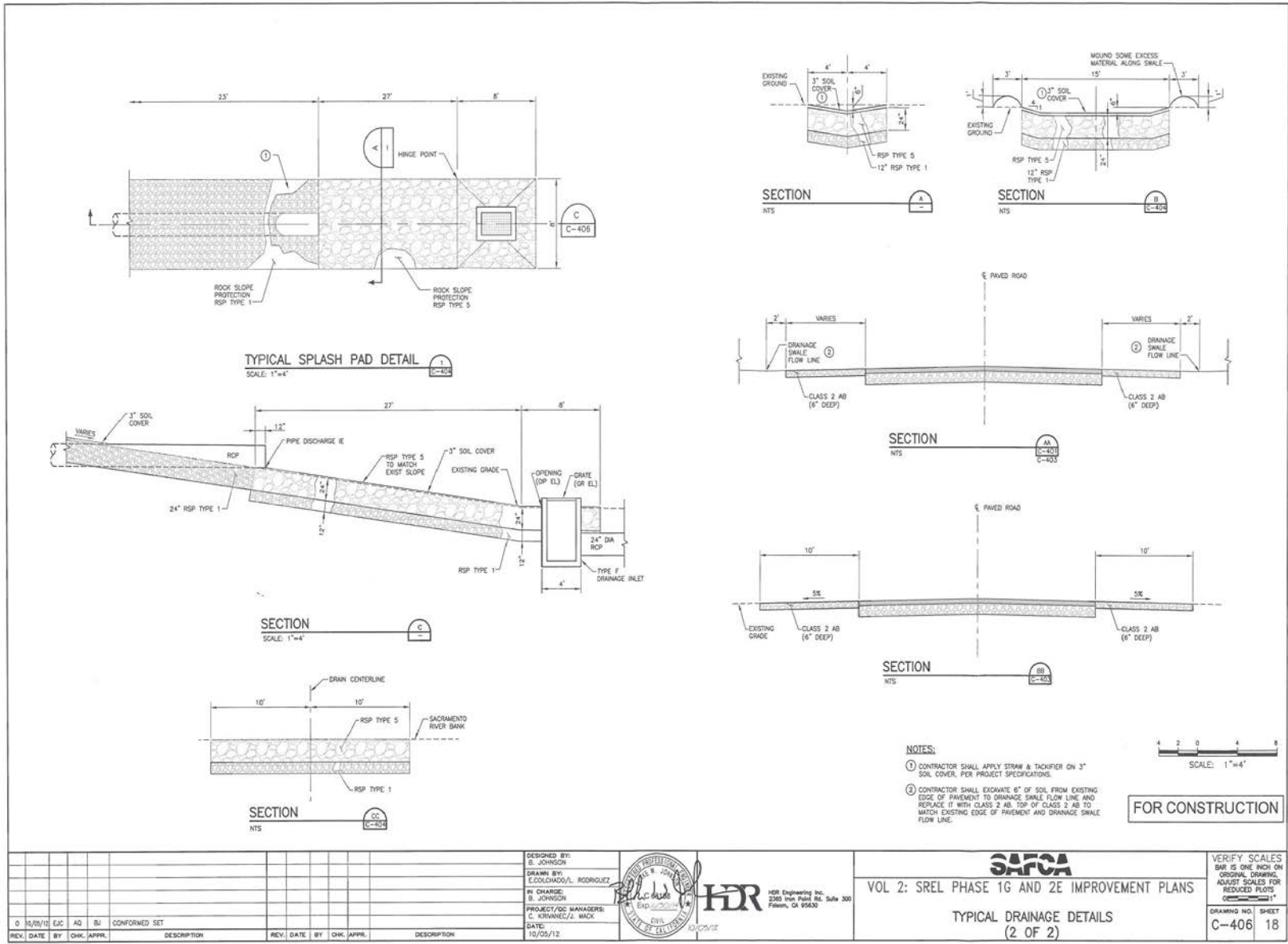
C:\pwworking\autocad\02355926C-405.dwg, C-405, 10/12/2012 8:44:59 AM, Ineditg

REV.	DATE	BY	CHK.	APPR.	DESCRIPTION	REV.	DATE	BY	CHK.	APPR.	DESCRIPTION
0	10/05/12	EJC	AQ	BJ	CONFORMED SET						

DESIGNED BY: B. JOHNSON  
 DRAWN BY: E. COLOMADO, L. RODRIGUEZ  
 IN CHARGE: B. JOHNSON  
 PROJECT/DC MANAGERS: C. KIRWANEC, J. MACK  
 DATE: 10/05/12

**SAFCA**  
 VOL 2: SREL PHASE 1G AND 2E IMPROVEMENT PLANS  
 TYPICAL DRAINAGE DETAILS  
 (1 OF 2)

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS OTHERWISE 1"
DRAWING NO. SHEET C-405 17



C:\pwworking\sarcap\d0235502\C-406.dwg, C:\404\_10112\2012 8-6-632 AM, Inedigu