

**Meeting of the Central Valley Flood Protection Board
February 25, 2011**

**Staff Report
Pacific Gas and Electric (PG&E) 4" Gas Line Relocation
City of Sacramento, CA**

1.0 – ITEM

Consider approval of Permit No. 18641 (Attachment B).

2.0 – APPLICANT

Pacific Gas and Electric (PG&E)

3.0 – LOCATION

The project is located at Arcade Creek and Norwood Avenue, in Sacramento California. (Arcade Creek, Sacramento County, see Attachment C).

4.0 – DESCRIPTION

The proposed project consists of replacing the existing 4" gas line in Norwood Avenue between Lindley drive and Fairbanks Avenue which is currently attached to west side of the existing bridge over Arcade Creek. The proposed 4" gas line would be placed under the proposed sidewalk along the west side of Norwood Avenue and be installed on the west side of the proposed bridge.

5.0 – BACKGROUND

In 1998, due to SAFCA's work raising and rebuilding levees as part of the North Local Project, FEMA certified northern Sacramento's flood protection as being able to withstand a 100-year flood.

The Norwood Avenue Bridge was built in 1956, and was recently widened to provide a full width sidewalk on the west side of Norwood Avenue.

On February 3, 2011, the Central Valley Flood Protection Board (CVFPB) Executive Officer signed a Board approved permit to remove and replace the Norwood Avenue Bridge under Board Permit # 18617.

5.1 – Project Analysis

The City of Sacramento plans to replace the existing Norwood Avenue Bridge crossing of Arcade Creek and construct minor approach roadway improvements between Lindley Drive and Fairbanks Avenue on Norwood Avenue. The purpose of the project is to provide a higher and wider bridge that addresses the flood design needs and required bike lanes. The proposed bridge will be raised to reduce flood-related closures, lessen stream flow obstructions, and improve emergency vehicle access during the high water events.

PG&E owns and maintains a 4" gas line facility within the limits of City's project that requires relocation of its facilities to accommodate the project. PG&E owns a buried 4-inch gas line along the west side of Norwood Avenue that will be impacted by the project's proposed improvements. Before construction of the new Norwood Avenue Bridge, PG&E proposes to temporarily cut-off the 4-inch gas line between Lindley Drive and Fairbanks until the new Norwood Avenue Bridge is constructed. During construction of the proposed bridge the existing gas line will be removed.

Upon completion of the new bridge, PG&E will install a new 4" gas line 1-foot from the back of curb and gutter under the proposed sidewalk along the west side of Norwood Avenue. The new gas line will be placed a minimum of 28 inches deep below finished grade. It will be placed within a 3 feet wide trench except within the levee section where the depth of the new gas line will be above the 200-year flood elevation, which corresponds to approximately 24 inches below finish grade for a distance of approximately 120 feet north of the proposed bridge. The 28-inch trench section south of the bridge accommodates the gas line above the 200-year flood elevation. The 4-inch gas line will be installed on the west side of the proposed bridge and pass through the proposed bridge wing walls into the sidewalk section. The wing walls function as a reinforced concrete wall to prevent seepage along pipelines.

Construction will occur with the bridge project between April 15 and November 1.

The PG&E will restore all levee slopes and roadways to pre-project condition and follow all standards and guidelines as applicable, in Title 23 of the California Water Code for construction activities on levees and within the floodway. The relevant Title 23 sections are:

- 112. Streams Regulated and No permissible Work Periods
- 115. Dredged Spoil, and Waste Material
- 116. Borrow and Excavated Activities – Land and Channel
- 120. Levees
- 121. Erosion Control
- 123. Pipelines, Conduits, and Utility Lines
- 124. Abandoned Pipelines and Conduits.

5.2 – Hydraulic Analysis

N/A

5.3– Geotechnical Summary

N/A

5.4 – Staff Comments

The City was successful in obtaining Federal Highway Bridge Replacement and Rehabilitation (HBRR) Program funds to replace the existing bridge. Under this program, the federal government will pay 88.53% of the cost of the project, while the City of Sacramento will pay 11.47% of the remaining cost.

Before construction of the new Norwood Avenue Bridge, PG&E proposes to temporarily cut-off the 4-inch gas line between Lindley Drive and Fairbanks until the new Norwood Avenue Bridge is constructed.

Construction for the bridge will be conducted in two stages in order to maintain traffic flow along Norwood Avenue. The first stage will include construction of a temporary pedestrian bridge east of the existing bridge, removal of a portion of the existing bridge and construction of the new bridge west of the existing structure. Once the temporary pedestrian bridge is in place, pedestrian access will be limited to the existing sidewalks on the east side of Norwood Avenue. Removal of a portion of the existing bridge will begin by removing the existing sidewalks and shifting the existing through lanes to the east. The proposed bridge would then be completed. The second stage includes removal of the existing bridge, construction of the remaining portion of the roadway approaches, and removal of the existing gas line.

Construction of the new bridge will require the use of temporary trestles (*a framework of vertical slanting uprights and cross pieces, supporting a bridge*) placed upstream and downstream to provide a stable platform from which to install the new bridge piles. The temporary trestles will be built wide enough to accommodate heavy construction equipment; a minimum working deck width of 36 feet is planned. The trestles will be built out from the approaches on driven steel pile supports. The span lengths for a trestle are typically 20 – 30 feet, and will require four or five piles per support. The piles will be about 18 inches in the greatest dimension and will be either HP pile shapes (*a bearing pile shape having parallel flange surfaces and equal web and flange thickness*) or steel pipe piles depending on the construction contractor who is awarded the project. The trestle piles will be installed with diesel pile-driving hammers. Upon completion of the new bridge, PG&E will install a new 4" gas line along the west side of Norwood Avenue. There will be 1424 feet of 3 gauge (0.24") minimum wall thickness steel pipe with an operating pressure of 50 psi.

Construction of the proposed bridge is anticipated to start this summer 2011 and be completed by the end of the year.

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 not yet been received for this application. Upon receipt of a favorable letter and review by Board staff it will be incorporated into the permit as Exhibit A.
- Sacramento City Council consent for the project dated March 23, 2010 (Exhibit B).
- American River Flood Control permit conditions and recommendation (Exhibit C).

6.1 – Owners of the property on which the project is located

- City of Sacramento
- Sacramento Housing and Redevelopment Agency (SHRA)
- Sacramento Area Flood Control agency (SAFCA)
- Sacramento-San Joaquin Drainage District (SSJDD)
- American River Flood Control District (ARFCD)

7.0 – PROPOSED CEQA FINDINGS:

Board staff has prepared the following CEQA Findings:

The Board, acting as a responsible agency under CEQA, has independently reviewed the Initial Study/Mitigated Negative Declaration (SCH No. 2010022016, January 2010), Mitigation Reporting Plan, and the Sacramento City Council Resolution 2010-173 for the Norwood Avenue Bridge Replacement Project prepared by the lead agency, the City of Sacramento. These documents, including the project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvfpb.ca.gov/meetings/2011/03-25-2011.cfm> under a link for this agenda item.

The City of Sacramento determined that the project would not have a significant effect on the environment and adopted the Mitigated Negative Declaration at the City of Sacramento Council Meeting on April 1, 2010. Subsequently, the City of Sacramento filed a Notice of Determination with the State Clearinghouse and Sacramento County Clerk on April 7, 2010. 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 Reporting Plan and address impacts to biological resources, cultural resources, hazards and hazardous materials, and transportation.

The description of the mitigation measures are further described in the adopted Mitigation Reporting Plan.

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 entire State Plan of Flood Control:

This project has no negative impacts on the State Plan of Flood Control. Both hydraulic and structural impacts from the project construction are negligible.

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

Climate change issues have not been taken into account in the hydraulic analysis for this project; however, it is assumed to be inland past the point tidal influence raises in WSE, and due to the excessive amount of freeboard in the channel at this location, the project would have an ample factor of safety built into it. Climate change WSE raises are only estimated from 6-inches to 1-foot of impact and would be well within the freeboard of this project in the event that tidal influences did reach further inland than expected. There are no other foreseeable projected future events that would impact this project.

9.0 – STAFF RECOMMENDATION

Staff recommends that the Board adopt the CEQA findings, approve Permit No. 18641 conditioned upon receipt of a USACE 208.10 letter of determination confirming the Corps has no objection to the project, and an order to direct the Executive Officer to take necessary actions to prepare the permit and to file a Notice of Determination with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

- A. Resolution No. (None required under consent items)
- B. Draft Permit No. 18641
 - Exhibit A – U.S. Army Corps of Engineers 208.10 Comment Letter
 - Exhibit B – Sacramento City Council Approval
 - 1. Report to City Council
 - 2. City Resolution
 - Exhibit C – American River Flood Control District Permit Conditions
- C. Location Maps
- D. Norwood Avenue Bridge Replacement cover sheet
- E. Construction Drawings U-1, U-2, UD-1, UD-2, S-1, S-5, & S-6
- F. Photos; Sheets 1 thru 3

Report Completed by:	David R. Williams, P.E.
Design Review:	David R. Williams, P.E.
Document Review:	Dan S. Fua, P.E. – Supervising Engineer Len Marino, P.E. – Chief Engineer

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

PERMIT NO. 18641 BD

This Permit is issued to:

PG&E
2730 Gateway Oaks Drive
Sacramento, California 95833

To replace the existing 4-inch-diameter gas line in Norwood Avenue between Lindley Drive and Fairbanks Avenue, which is currently attached to the west side of the existing bridge over Arcade Creek. The proposed 4-inch-diameter gas line shall be placed under the proposed sidewalk along the west side of Norwood Avenue and be installed on the west side of the proposed bridge. The project is located in North Sacramento along Norwood Avenue (Section 17&20, 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

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. 18641 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: Prior to commencement of work, the permittee shall create a photo record, including associated descriptions, of the project conditions. The photo record shall be certified (signed and stamped) by a licensed land surveyor or professional engineer registered in the State of California and submitted to the Central Valley Flood Protection Board within 30 days of beginning the project.

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 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

SEVENTEEN: 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.

EIGHTEEN: The permittee agrees to incur all costs for compliance with local, State, and Federal permitting and resolve conflicts between any of the terms and conditions that agencies might impose under the laws and regulations it administers and enforces.

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

TWENTY: 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-ONE: Except with respect to the activities expressly allowed under this permit, the work area shall be restored to the condition that existed prior to start of work.

TWENTY-TWO: Temporary staging, formwork, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-THREE: Pipe installed in the levee section and within 10 feet of the levee toes shall be new steel and at least 3 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-FOUR: 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.

TWENTY-FIVE: All pipe joints within the levee section shall be butt welded or threaded.

TWENTY-SIX: Abandoned pipes within the levee section shall be removed from the levee section or completely filled with concrete in accordance with Central Valley Flood Protection Board standards. A detailed plan for filling the abandoned pipe with concrete shall be submitted to and approved by the Central Valley Flood Protection Board prior to commencing work.

TWENTY-SEVEN: Backfill material for excavations within the levee section and within 10 feet of the levee toes shall be placed in 4- to 6-inch layers, moisture conditioned above optimum moisture content, and compacted to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

TWENTY-EIGHT: The pipeline shall have provisions for rapid closure. Permittee shall submit drawings and/or plans for proposed valve locations to the Central Valley Flood Protection Board prior to start of construction.

TWENTY-NINE: 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.

THIRTY: 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.

THIRTY-ONE: 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.

THIRTY-TWO: The permittee shall submit as-built drawings to the Department of Water Resources' Flood Project Inspection Section, located at 3310 El Camino Ave, Room 256, Sacramento, California, 95821, upon completion of the project.

THIRTY-THREE: All debris generated by this project shall be disposed of outside the flood control project works.

THIRTY-FOUR: 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.

THIRTY-FIVE: 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.

THIRTY-SIX: This permit is not valid until the Central Valley Flood Protection Board has received written notification from the U.S. Army Corps of Engineers (Corps) that the Corps has no opposition to this project. The permittee shall comply with all conditions set forth in the letter from the Corps once it is received, which shall be attached to this permit as Attachment B and incorporated by reference.

THIRTY-SEVEN: The permittee shall comply with all conditions set forth in the Sacramento City Council Approval dated March 23, 2010, which is attached to this permit as Exhibit B and is incorporated by reference.

THIRTY-EIGHT: The permittee shall comply with all conditions set forth in the project endorsement from the American River Flood Control District dated October 15, 2010, which is attached to this permit as Exhibit C and is incorporated by reference.

THIRTY-NINE: This permit shall run with the land and all conditions are binding on permittee's successors and assigns.

U.S. ARMY CORPS OF ENGINEERS 208.10

COMMENT LETTER.

Not received yet

REPORT TO COUNCIL City of Sacramento

915 I Street, Sacramento, CA 95814-2604
www.CityofSacramento.org



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CONSENT
March 23, 2010

Honorable Mayor and
Members of the City Council

Title: Norwood Avenue Bridge Replacement Project (T15068400)

Location/Council District: Norwood Avenue Bridge at Arcade Creek between Fairbanks Avenue and Lindley Avenue. Location map – Exhibit A of Resolution. (District 2)

Recommendation: Adopt a **Resolution:** 1) approving the conceptual design plans, and 2) approving the Mitigated Negative Declaration and the Mitigation Reporting Plan for the project.

Contact: Ricky Chuck, Senior Engineer, (916) 808-5050; Tim Mar, Supervising Engineer, (916) 808-7531

Presenters: None

Department: Transportation

Division: Engineering Services

Organization No: 15001131

Description/Analysis

Issue: The project will replace the structurally deficient Norwood Avenue Bridge over Arcade Creek with a new bridge that meets current standards. The project will construct a new and higher concrete bridge with two travel lanes, bike lanes, sidewalks, and street lighting.

Approval of the conceptual design plans and adoption of the Mitigated Negative Declaration and Mitigation Reporting Plan are necessary to move forward with completing the final design and comply with the California Environmental Quality Act.

Policy Considerations: This action requested herein is consistent with the Sacramento City Code, Title 3 and with the City of Sacramento Strategic Plan goals of improving and expanding public safety and enhancing livability.

Environmental Considerations:

California Environmental Quality Act (CEQA): The Community Development Department, Environmental Planning Services has prepared an Initial Study and Mitigated Negative Declaration for the proposed project. City Council approved the 2030 General Plan and certified the Master Environmental Impact Report (Master EIR) on March 3, 2009. The project was included in the Master EIR, and the Initial Study prepared for the project examines the project for the purpose of identifying any additional significant environmental effects, or project-specific effects, that could occur with the project and that were not examined in the Master EIR.

The project-specific effects that the City has identified that were not covered in the Master EIR include transportation and circulation, biological resources, hazards, and cultural resources. In compliance with Section 15070(B) 1 of the California Environmental Quality Act (CEQA) Guidelines, the City has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where clearly no significant impacts will occur.

The Mitigated Negative Declaration was distributed through the State Clearinghouse (SCH# 2010022016) and was available for public review during the period of February 4, 2010 through March 8, 2010. As of the writing of this report, one comment letter regarding the project has been received. The comment letter, from the Sacramento Area Bicycle Advocates (SABA), is attached to this staff report. SABA comments on the importance of planning for the Arcade Creek bike path and consideration of general plan policies. The project will accommodate future bike path improvements when planning and financing arrangements are in place, and the letter therefore identifies no new impacts. Staff has contacted SABA to discuss the comment.

The project is funded by Federal Highway Bridge Replacement and Rehabilitation (HBRR) Program funds. As a result, the proposed project is also subject to the National Environmental Policy Act (NEPA). NEPA studies are currently under review with the State Department of Transportation and the Federal Highway Administration. These agencies will take their respective actions.

Sustainability Considerations: This project is consistent with the City's Sustainability Master Plan. It conforms to the Air Quality Focus Area by improving and optimizing transportation infrastructure.


Other: None

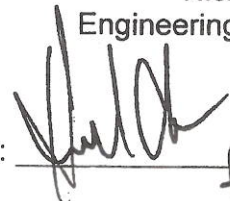
Commission/Committee Action: None

Rationale for Recommendation: Approval of the conceptual design plans and adoption of the Mitigated Negative Declaration and Mitigation Reporting Plan are necessary to move forward with completing the final design and comply with the California Environmental Quality Act.

Financial Considerations: The current project budget is \$1,292,359. The budget is comprised of \$230,000 in Major Street Construction Tax (Fund 2007) and \$1,062,359 in Federal Capital Grant (Fund 3703) funds. As of February 18, 2010, the project has an unobligated balance of \$244,097, which is sufficient to complete the design. There are no General Funds planned or allocated to this project.

Emerging Small Business Development (ESBD): No goods or services are being procured at this time.

Respectfully Submitted by: 
Nicholas Theocharides
Engineering Services Manager

Approved by: 
Jerry Way
Director of Transportation

Recommendation Approved:

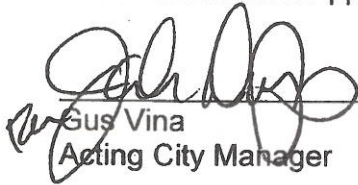

Gus Vina
Acting City Manager

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Exhibit C – Mitigated Negative Declaration	
Exhibit D – Mitigation Monitoring Plan	

RESOLUTION NO.

Adopted by the Sacramento City Council

**APPROVING CONCEPTUAL DESIGN PLAN AND ADOPTING MITIGATED
NEGATIVE DECLARATION AND MITIGATION REPORTING PLAN FOR THE
NORWOOD AVENUE BRIDGE REPLACEMENT PROJECT (T15068400)**

BACKGROUND

- A. The project will replace the structurally deficient Norwood Avenue Bridge over Arcade Creek with a new bridge that meets current standards. The project will construct a new and higher concrete bridge with two travel lanes, bike lanes, sidewalks, and street lighting and a new approach roadway between the intersections of Fairbanks Avenue and Lindley Way. Retaining walls will be constructed on both approaches in order to support the increase in profile grade. The bridge was constructed in 1945 and is rated structurally deficient. Arcade Creek has a history of elevated water levels that inundate the bridge. During high canal flows, Norwood Avenue had to be closed by using stop log floodwalls. This project will eliminate the need for road closure during high canal flows.
- B. The City of Sacramento has prepared an Initial Study and Mitigated Negative Declaration for this project.
- C. The Initial Study and Mitigated Negative Declaration have been circulated for public review and comment from February 4, 2010 through March 8, 2010 pursuant to the California Environmental Quality Act (CEQA).
- D. On the basis of the whole record before it, including the Initial Study and all comments received, the City has determined that there is no substantial evidence that the project, with mitigation measures as identified in the Initial Study, will have a significant effect on the environment.
- E. The Mitigated Negative Declaration reflects the City's independent judgment and analysis.
- F. In accordance with Section 21081.6 of the California Public Resources Code, the City of Sacramento requires that a Mitigation Reporting Plan be developed for implementing mitigation measures as identified in the Initial Study for the project.
- G. The Environmental Manager has prepared a Mitigation Reporting Plan for ensuring compliance and implementation of the mitigation measures as prescribed in the Initial Study for the project.

- H. The record of proceedings upon which this decision is based is on file on the Office of the City Clerk.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The conceptual design plan for the project is approved.
- Section 2. The Mitigated Negative Declaration and Mitigation Reporting Plan for the Norwood Avenue Bridge Replacement Project (T15068400) are adopted.
- Section 3. Exhibits A through D are incorporated into and made part of this resolution.

Table of Contents:

- Exhibit A: Map of Norwood Avenue Camino Bridge Replacement
Exhibit B: Conceptual Design Plan
Exhibit C: Mitigation Negative Declaration
Exhibit D: Mitigation Reporting Plan



APPROVED OCT 15 2010

Permit Conditions

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

Location: Arcade Creek Levees at Norwood Avenue

Applicant: SMUD

Description: Relocate SMUD power poles to a distance at least 15-feet from the levee toe. Vertical clearance of overhead lines shall be at least 25-feet above the levee crown.

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.
8. Roadway drainage shall not be directed to flow water on the levee section without adequate protection from erosion.

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

165 Commerce Circle, Suite D,
Sacramento, California 95815

7 APPROVED OCT 15 2010

9. The District reserves the right to review all final plans and specifications and request modifications to the project during construction as field conditions warrant.
10. 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.
11. 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.
12. Levee sections, overflow areas, and channel shall be restored to at least the same condition that existed prior to construction.

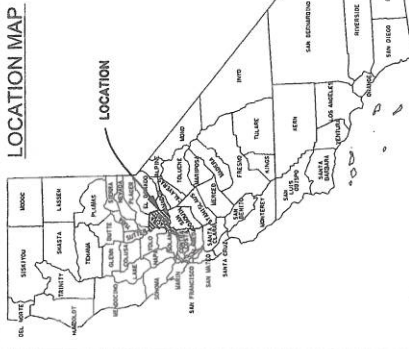
APPROVED OCT 15 2010



Vicinity Map
Scale: 1" = 200'

CITY OF SACRAMENTO

IMPROVEMENT PLANS FOR NORWOOD AVENUE BRIDGE REPLACEMENT



APPROVED BY: RICKY CHUCK, R.C.E. 61443
 SENIOR ENGINEER

DATE: _____

APPROVED BY: DAN SHERRY, R.C.E. 53638
 SUPERVISOR ENGINEER,
 DEPARTMENT OF UTILITIES, WATER

DATE: _____

APPROVED BY: RICHARD S. BATHA, R.C.E. 36129
 SUPERVISOR ENGINEER,
 DEPARTMENT OF UTILITIES, SEWER

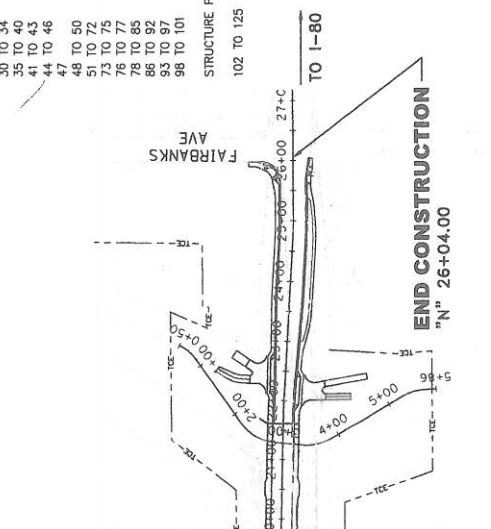
DATE: _____

LEGEND

EXISTING	PROPOSED
DROP INLET	DROP INLET
MAINTENANCE HOLE	MAINTENANCE HOLE
SANITARY SEWER	SANITARY SEWER
STORM DRAIN	STORM DRAIN
GATE VALVE	GATE VALVE
WATER MAIN	WATER MAIN
WATER METER	WATER METER
CURB, GUTTER & SIDEWALK	CURB, GUTTER & SIDEWALK
CENTER LINE	CENTER LINE
RIGHT-OF-WAY	RIGHT-OF-WAY
TREE	TREE
BUSH	BUSH
STREET LIGHT	STREET LIGHT
POWER POLE	POWER POLE
PULL BOX	PULL BOX
CHAIN LINK FENCE	CHAIN LINK FENCE
WOOD FENCE	WOOD FENCE
MAIL BOX	MAIL BOX
CUTLINE	CUTLINE
DRIVE TRANSITION	DRIVE TRANSITION
DITCH CULVERT	DITCH CULVERT
CURB RAMP	CURB RAMP

STANDARD ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AP	ANGLE POINT
B	BUILDING
B/C	BACK OF CURB
B/W	BACK OF WALK
CAB	CABINET
C&G	CURB AND GUTTER
CL or C	CURB, GUTTER AND SIDEWALK CENTER LINE
CO	CLEANOUT
CONC.	CONCRETE
CONST.	CONSTRUCT
CTV	CABLE TV
CR or C.R.	CURVE RETURN
CS	COMBINATION SEWER MH
CSMH	COMBINATION SEWER MANHOLE
D.B.	DRAIN BOX
D.I.	DRAIN INLET
DRY	DRIVEWAY
DWG	DRAWING
E	ELECTRICAL
E. of ELEV.	EDGE OF ELEVATION
EP, EOP, E/P	EDGE OF PAVEMENT (EXISTING)
EX	EXISTING
FI or F	FIRE HYDRANT
FM	FLOW LINE
FOC	FORCE MAIN
FOW	FACE OF CURB
G	GAS



INDEX OF SHEETS

1	TITLE SHEET
2	ABBREVIATIONS AND GENERAL NOTES
3 TO 6	TYPICAL CROSS SECTIONS
7 TO 8	PROJECT CONTROL
9 TO 11	LAYOUT
12 TO 13	PROFILE
14 TO 25	CONSTRUCTION DETAILS
26 TO 27	REMOVAL PLAN
28 TO 29	EROSION CONTROL PLAN & QUANTITIES
30 TO 34	CONTIGUOUS GRADING SLOPE PROTECTION
35 TO 38	CONCRETE CURB, GUTTER, & QUANTITIES
39 TO 43	WATER PLAN, DETAILS & QUANTITIES
44 TO 46	UTILITY PLAN, DETAILS & QUANTITIES
47	CONSTRUCTION AREA SIGNS
48 TO 50	STAGE CONSTRUCTION
51 TO 72	TRAFFIC HANDLING PLAN & QUANTITIES
73 TO 75	SIGNING AND STRIPING PLAN & QUANTITIES
76 TO 77	SUMMARY OF QUANTITIES
78 TO 85	RETAINING WALL LAYOUT & DETAIL
86 TO 92	BARRIER AND PEDESTRIAN RAILING LAYOUT & DETAILS
93 TO 97	PLANTING & IRRIGATION PLANS, NOTES, & DETAILS
98 TO 101	ELECTRICAL PLANS
102 TO 125	STRUCTURE PLANS
	NORWOOD AVENUE BRIDGE, BR No.

REVISIONS

NO.	DESCRIPTION	DATE	BY

BENCH MARK ELEV. 38.822
 CITY BENCHMARK BM277H 4C
 VERT. DATUM: NAD83
 HORZ. DATUM: NAD83 (1997.30)

CITY OF SACRAMENTO
 DEPARTMENT OF TRANSPORTATION

DESIGNED BY: K. BENSEY
 DRAWN BY: K. BENSEY
 CHECKED BY: K. BENSEY

DATE: 01/17/2010
 DATE: 01/14/2010
 DATE: 03/05/2010

R.C.E. 71485
 R.C.E. 53587
 R.C.E. 52118

TYLIN INTERNATIONAL
 2000 W. 10TH ST., SUITE 100
 SACRAMENTO, CA 95811

**IMPROVEMENT PLANS FOR
 NORWOOD AVENUE BRIDGE REPLACEMENT**

TITLE SHEET

T15068400

NOTES:

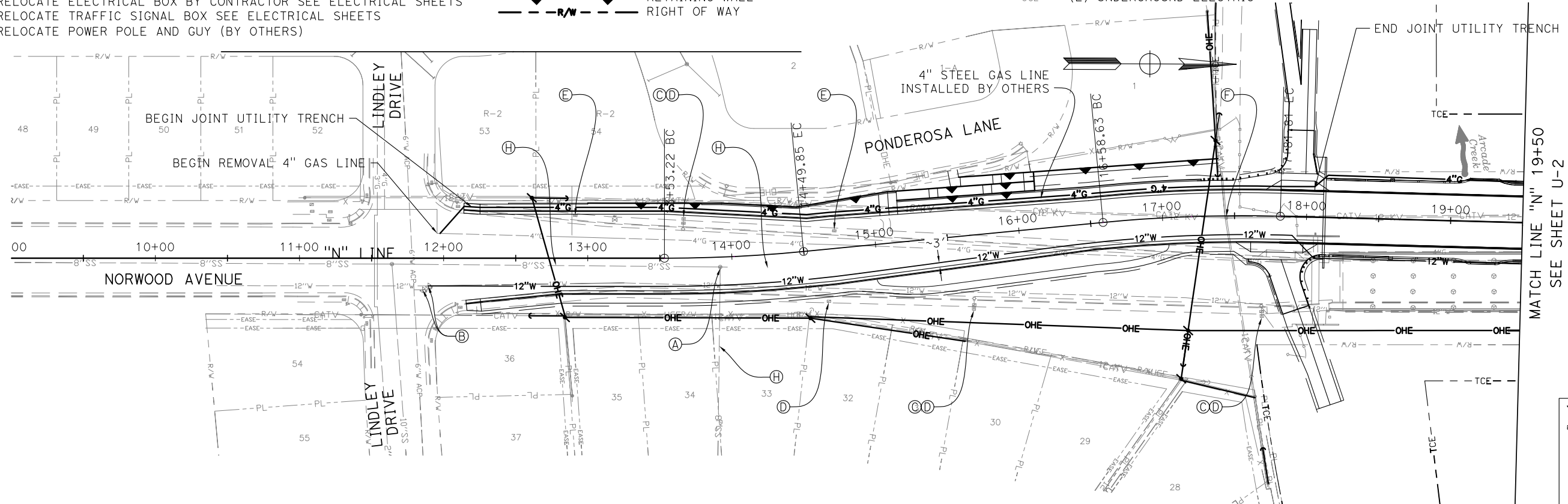
- ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN.
- FOR COMPLETE RIGHT OF WAY, SEE RIGHT OF WAY RECORD MAPS AT THE CITY OF SACRAMENTO

LEGEND

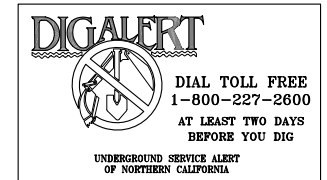
- (A) REMOVE MH
- (B) ADJUST VALVE COVER TO GRADE
- (C) RELOCATE STREET LIGHT BY CONTRACTOR SEE ELECTRICAL SHEETS
- (D) RELOCATE ELECTRICAL BOX BY CONTRACTOR SEE ELECTRICAL SHEETS
- (E) RELOCATE TRAFFIC SIGNAL BOX SEE ELECTRICAL SHEETS
- (F) RELOCATE POWER POLE AND GUY (BY OTHERS)

LEGEND CONT.

- (C) RELOCATE WATER VALVE AND AIR RELEASE VALVE
- (H) ABANDON SEWER
- (Z) DRAINAGE SYSTEM, SEE DRAINAGE PLANS
- F — FILL
- C — CUT
- - - TCE - - - TEMPORARY CONSTRUCTION EASEMENT
- M — METAL BEAM GUARD RAIL
- R/W — RETAINING WALL
- R/W — RIGHT OF WAY
- X — X (E) WIRE FENCE
- — □ (E) WOOD FENCE
- SS — (E) FLOWLINE
- SD — (E) SANITARY SEWER
- W — (E) STORM DRAIN
- W-AGP — (E) WATER
- G — (E) WATER ACP
- UGE — (E) GAS
- UGE — (E) UNDERGROUND ELECTRIC
- 12-KV — (E) OVERHEAD ELECTRIC
- UGT — (E) UNDERGROUND TELEPHONE
- T — (E) OVERHEAD TELEPHONE
- CATV — (E) OVERHEAD CABLE
- (E) GUY WIRE
- (E) POWER POLE
- (E) STREET LIGHT
- (E) ELECTRICAL BOX
- (E) SSMH
- (E) SDM
- (E) DRAINAGE INLET
- (E) WATER VALVE



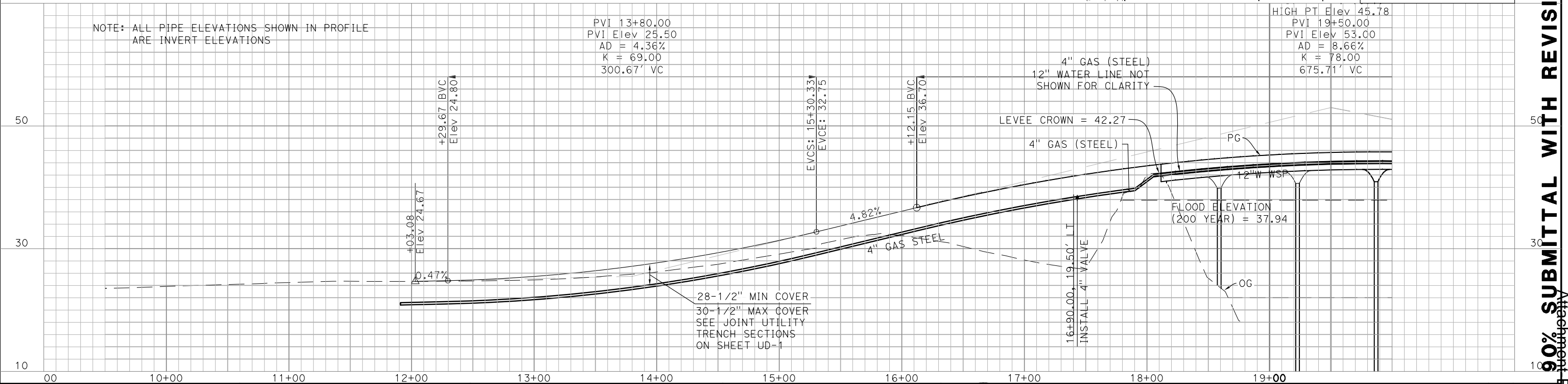
MATCH LINE "N" 19+50
SEE SHEET U-2



NOTE: ALL PIPE ELEVATIONS SHOWN IN PROFILE ARE INVERT ELEVATIONS

PVI 13+80.00
PVI Elev 25.50
AD = 4.36%
K = 69.00
300.67' VC

HIGH PT Elev 45.78
PVI 19+50.00
PVI Elev 53.00
AD = 8.66%
K = 78.00
675.71' VC



REVISIONS				BENCH MARK	FIELD BOOK
NO.	DESCRIPTION	DATE	BY		
				ELEV. 38.627	####
				DESCRIPTION CITY BENCHMARK BM277H 4C VERT. DATUM NGVD29	SCALE
				HORIZ. DATUM NAD83 (1997.30)	HORIZ. 1"=40'
					VERT. 1"=8'

CITY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION

TYLIN INTERNATIONAL
3301 C STREET, BLDG 100-M
SACRAMENTO, CA 95816

DESIGNED BY: K. RHODES
CHECKED BY: K. BEWSEY

DATE 03/01/2010 R.C.E. 53587 DATE 03/01/2010 R.C.E. 71485 DATE 8/20/2010

PROFESSIONAL ENGINEER
First Lost
NO. C NUMBER
Exp. Date
CIVIL
STATE OF CALIFORNIA

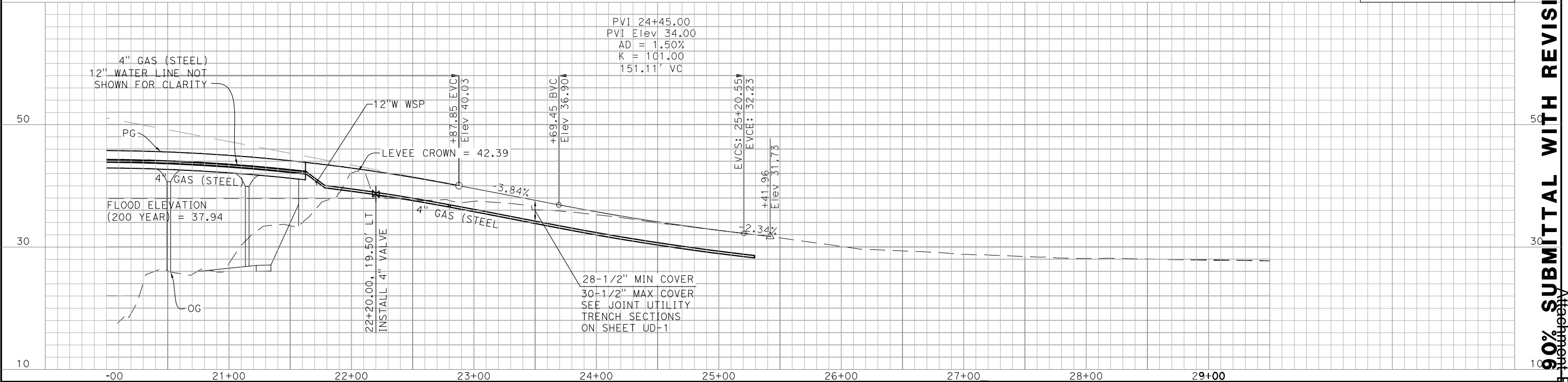
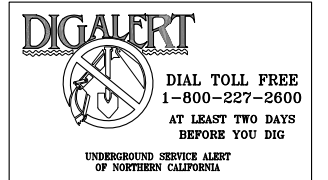
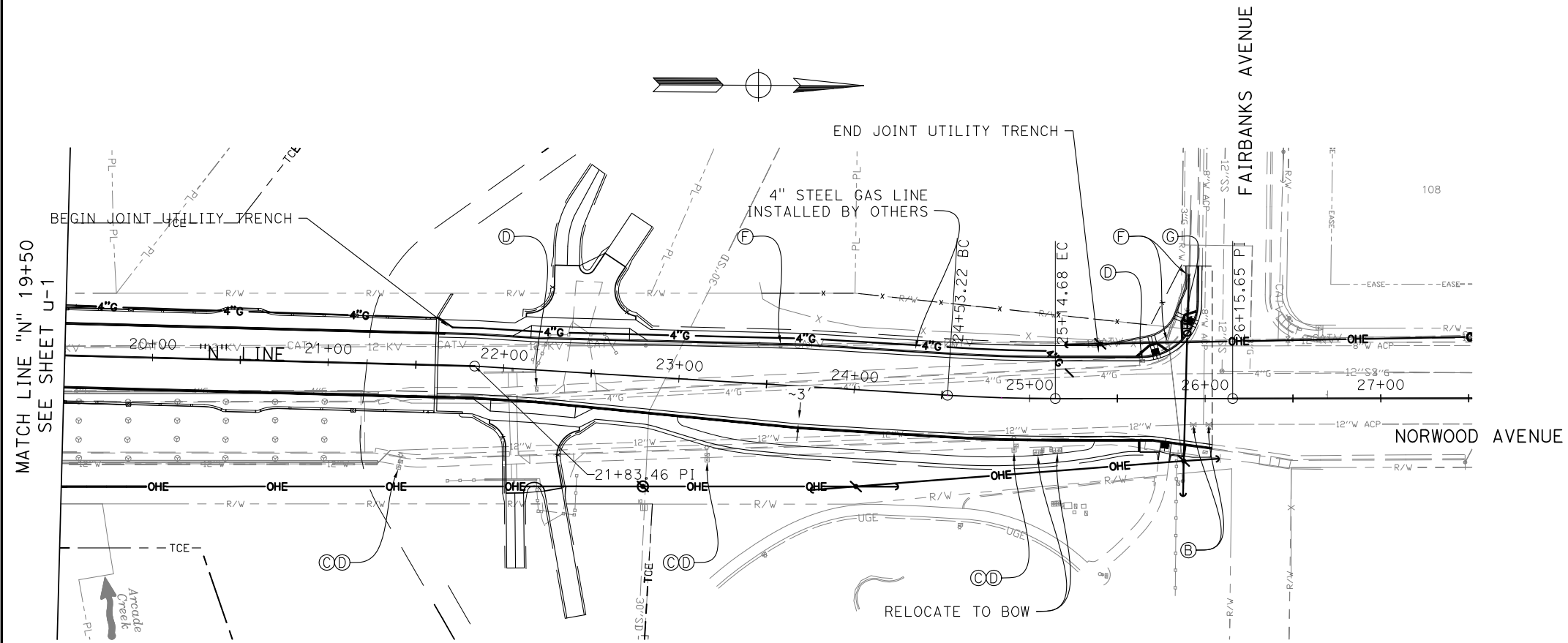
IMPROVEMENT PLANS FOR
NORWOOD AVENUE BRIDGE REPLACEMENT
UTILITY PLAN
"N" LINE 9+50 TO 19+50

T15068400 SHEET U-1
44 OF 125

90% SUBMITTAL WITH REVISIONS 9/9/2010, NOT FOR CONSTRUCTION

NOTES:

1. SEE SHEET U-1 FOR NOTES AND LEGEND.



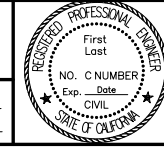
REVISIONS			
NO.	DESCRIPTION	DATE	BY

BENCH MARK	ELEV. 38.627
DESCRIPTION	CITY BENCHMARK BM277H 4C
VERT. DATUM	NGVD29
HORIZ. DATUM	NAD83 (1997.30)

FIELD BOOK	####
SCALE	
HORIZ. 1"=40'	
VERT. N/A	

CITY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION

TYLIN INTERNATIONAL
 3301 C STREET, BLDG 100-M
 SACRAMENTO, CA 95816



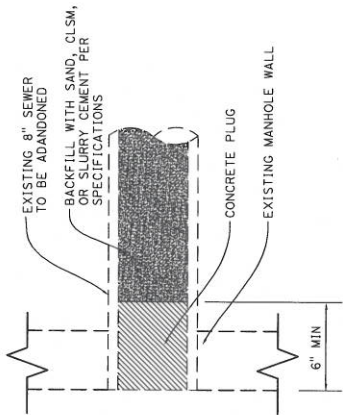
IMPROVEMENT PLANS FOR
NORWOOD AVENUE BRIDGE REPLACEMENT
 UTILITY PLAN
 "N" LINE 19+50 TO 26+16

T15068400
 SHEET U-2
 45 OF 125

90% SUBMITTAL WITH REVISIONS 9/9/2010, NOT FOR CONSTRUCTION

NOTES:

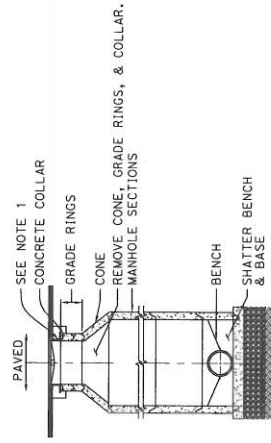
1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN.



ABANDON SEWER PIPE AT MANHOLE DETAIL

4' RT "N" 11+64

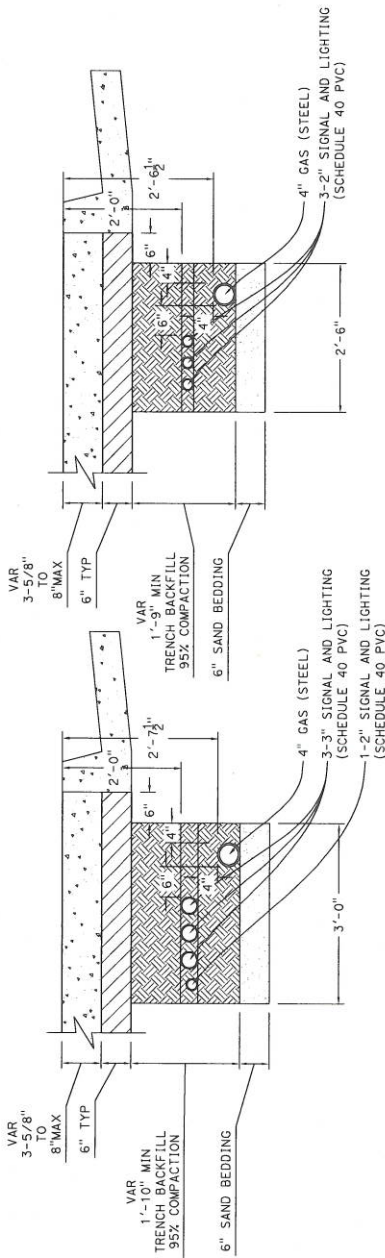
27' RT "N" 13+92 (BOTH SIDES)



ABANDON SEWER MANHOLE DETAIL

27' RT "N" 13+92

- NOTES:**
1. SALVAGE EXISTING MANHOLE FRAME AND COVER TO CITY PER SPECIFICATIONS.

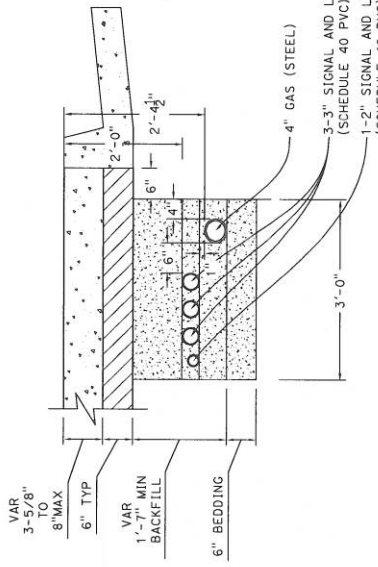


JOINT UTILITY TRENCH SECTION OUTSIDE LEVEE PRISM

SCALE N.T.S.

STA 12+20.00 TO 17+75.00 AND 22+25.00 TO 25+63.00

- NOTES:**
1. FOR ADDITIONAL INFORMATION NOT SHOWN, SEE ELECTRICAL, ROADWAY, & BARRIER AND RAILING PLANS.
 2. MAINTAIN 6" MINIMUM CLEARANCE FROM GAS LINE



JOINT UTILITY TRENCH SECTIONS WITHIN LEVEE PRISM

SCALE N.T.S.

STA 17+75.00 TO 18+11.50 AND 21+62.50 TO 22+25

- NOTES:**
1. FOR ADDITIONAL INFORMATION NOT SHOWN, SEE ELECTRICAL, ROADWAY, & BARRIER AND RAILING PLANS.
 2. BACKFILL AND BEDDING SHALL CONSIST OF 1'-6" MIN TRENCH BACKFILL (CLSM) OR CLEAN MIX CONCRETE (CLM) OR LEAN MIX CONCRETE. THE CLM OR CLSM MIX CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH BETWEEN 15,000 AND 50,000 PSI.
 3. MAINTAIN 6" MINIMUM CLEARANCE FROM GAS LINE

THIS PLAN ACCURATE FOR UTILITY WORK ONLY

CITY OF SACRAMENTO
DEPARTMENT OF TRANSPORTATION

FIELD BOOK
ELEV. 36.527
CITY BENCHMARK BM277H 4C
VERT. DATUM NAVD83
HORZ. DATUM NAD83 (1997.30)
SCALE
HORZ. 1"=40'
VERT. 1/4"=10'

NO.	REVISIONS	DATE	BY

DESIGNED BY: K. BEWSEY
DRAWN BY: P. CHEUNG
CHECKED BY: K. BRIDGES
R.C.E. 74485 DATE 02/25/2011 R.C.E. 53587 DATE 02/25/2011



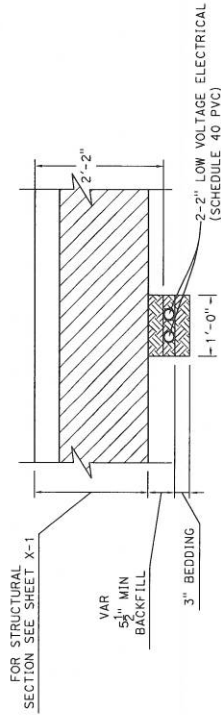
IMPROVEMENT PLANS FOR
NORWOOD AVENUE BRIDGE REPLACEMENT
UTILITY DETAILS

SHEET NO. 48
OF 138
115068400

- NOTES:**
 1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN.
 2. (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

UTILITY QUANTITIES

SHEET No.	STATION LIMITS	LOCATION	(N)										DESCRIPTION	
			ABANDON MH	REMOVE GAS LINE	ABANDON SEWER	ADJUST VALVE COVER TO GRADE	JOINT UTILITY TRENCH	UTILITY POT-HOLING	ELECTRICAL CROSSOVER					
			EA	LF	LF	EA	EA	CY	EA	EA	EA	EA	EA	EA
U-1	"N" 13+91.66	RT	1											
U-1	"N" 12+19.97 TO 18+05.81	LT						154						
U-1	"N" 11+85.43	RT							1					
U-1	"N" 11+89.27	RT												
U-1	"N" 11+64.15 TO 13+91.66	RT												
U-1	"N" 11+95.46 TO 26+20.46	LT												
U-1	"N" 16+25	LT TO RT												
U-2	"N" 21+77.41 TO 25+41.91	LT												
U-2	"N" 26+02.06	RT												
U-2	"N" 25+93.26	RT												
N/A	----	--												
	TOTAL		1	1425	330	4	254	9	62					



ELECTRICAL CROSSOVER DETAIL

SCALE N.T.S.
 "N" STA 16+25.00

- NOTES:**
 1. FOR ADDITIONAL INFORMATION NOT SHOWN, SEE WATER, RETAINING WALL, ELECTRICAL, & LANDSCAPE PLANS.
 2. EXTEND CROSSOVER 6" BEYOND BACK OF CURB AND RETAINING WALL LOL.

THIS PLAN ACCURATE FOR UTILITY WORK ONLY

CITY OF SACRAMENTO
 DEPARTMENT OF TRANSPORTATION
 ENGINEER OF RECORD
 DRAWN BY: P. CHEUNG
 DESIGNED BY: K. BENSEY
 R.C.E. 71485 DATE 02/25/2011

BENCH MARK ELEV. 38.927
 CITY BENCHMARK BM277H 4C
 VERT. DATUM NOV029
 HORIZ. DATUM NAD83 (1987.30)

NO.	REVISIONS	DATE	BY



CHECKED BY: K. RHODES
 R.C.E. 53587 DATE 02/25/2011

SHEET NO. 4
 OF 13
 115068400

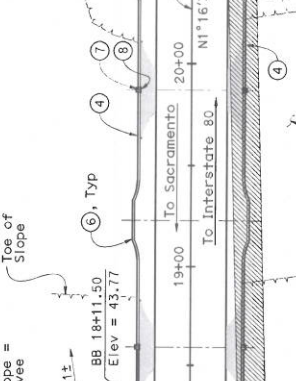
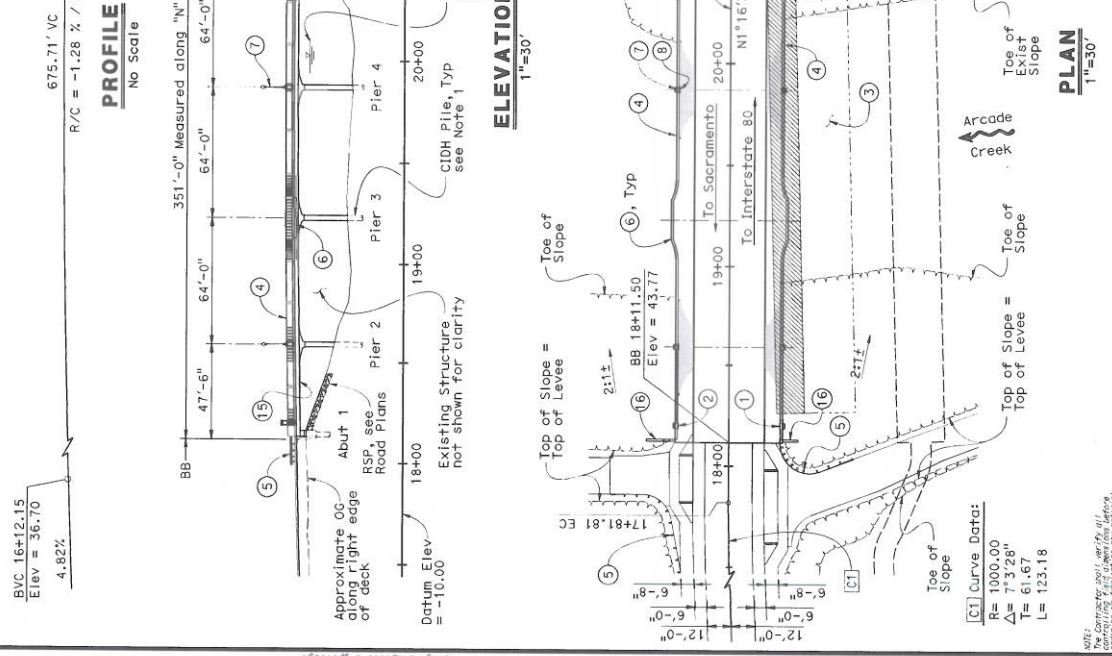
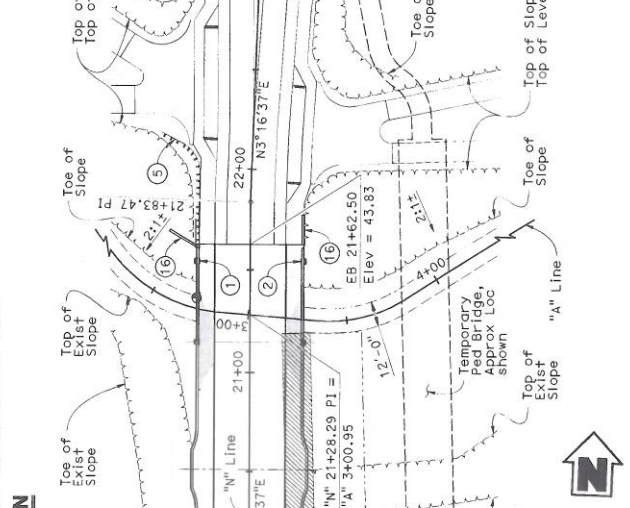
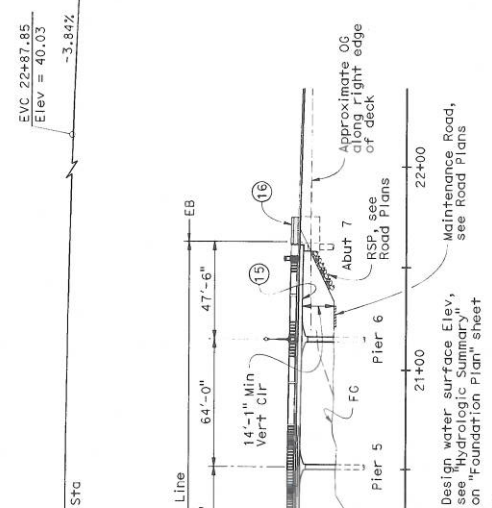
IMPROVEMENT PLANS FOR
NORWOOD AVENUE BRIDGE REPLACEMENT
 UTILITY DETAILS

DATE: 3/18/2010
 TIME PLOTTED: 11:59:44 AM
 FILE: 0:\PROJECTS\710511\940\94092.dwg

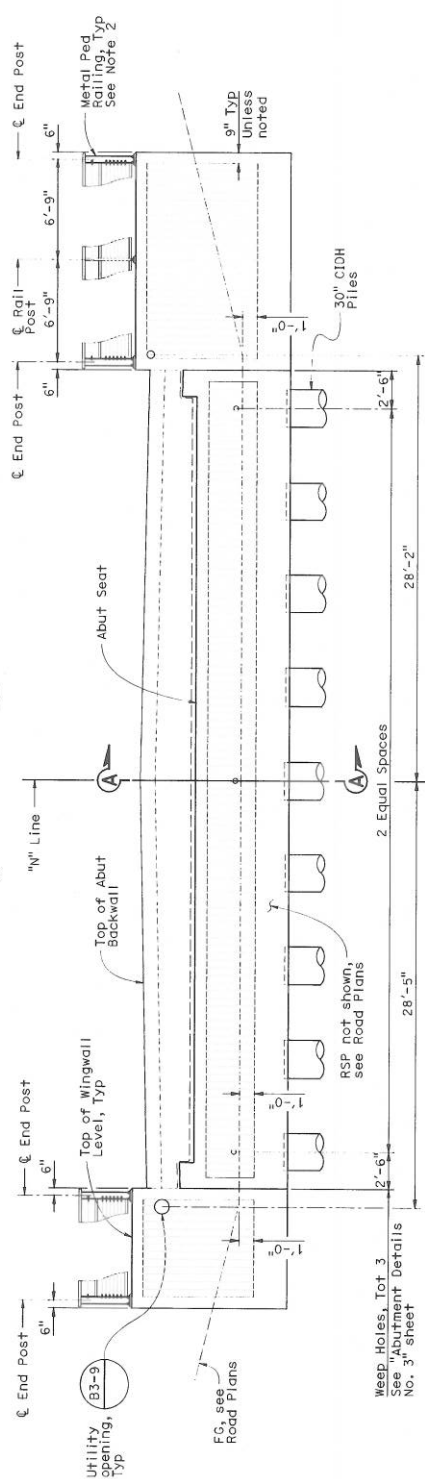
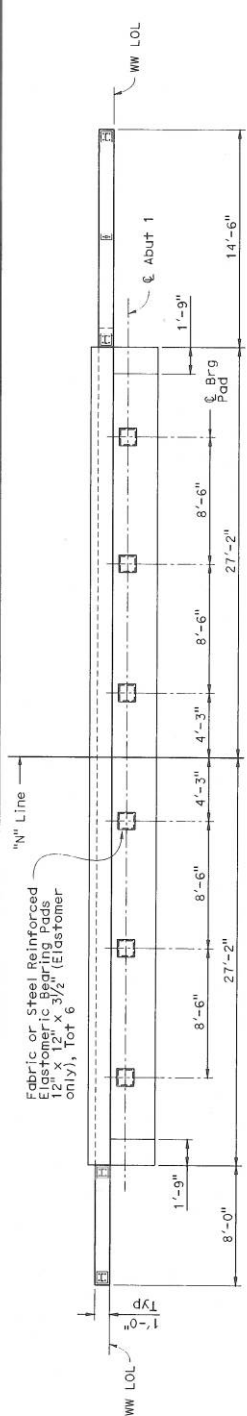
- Legend:**
- ① - Bridge Plaque
 - ② - Arcade Creek Plaque
 - ③ - Exist RC slab bridge with PCC piles, to be removed
 - ④ - Concrete Barrier (Texas Type C411) (Mod)
 - ⑤ - Metal beam guard railing, see Road Plans
 - ⑥ - Concrete overlook, Total 4 locations
 - ⑦ - City of Sacramento Light Standard, total 6 locations
 - ⑧ - Wildlife Plaque, total 6 locations
 - ⑨ - Water: 12" welded steel pipe, epoxy coated, mortar lined
 - ⑩ - Gas: 4" steel pipe
 - ⑪ - Communication: 3" ϕ Conduit, total 3
 - ⑫ - Electrical: 2" ϕ Conduit, total 1
 - ⑬ - Future Use: 5" ϕ Conduit, total 4
 - ⑭ - Exist utility to be removed and reinstalled on new structure
 - ⑮ - Soffit Light, total 4
 - ⑯ - Metal Pedestrian Railing, total 4 locations
 - ⑰ - Temporary Railing (Type K)
 - - Indicates existing bridge
 - ██ - Indicates new structure
 - ▨ - Indicates Remove portion of Exist Bridge & foundation during Stage 1 Construction
 - ▩ - Indicates Architectural Surface Details in Architectural sheet
 - ⦿ - Indicates Point of Minimum Vertical Clearance

Notes:

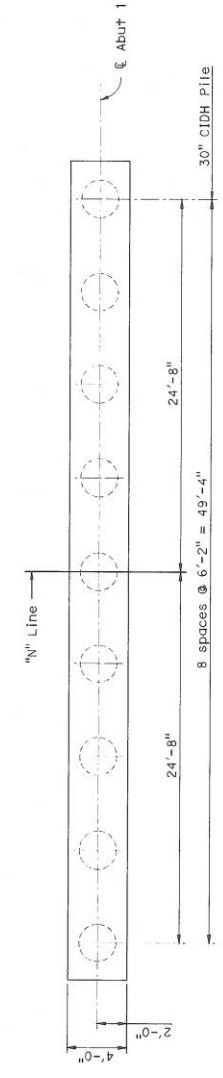
1. For Pile Data Table, see "Foundation Plan" sheet.
2. For Index to Plans and General Notes, see "Index To Plans" sheet.
3. For "A" Line data, see Road Plans.



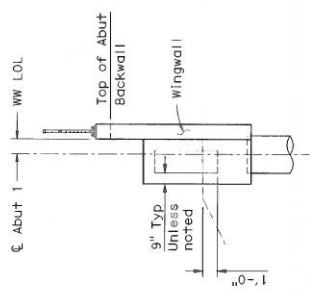
BRIDGE NO.	24C-0080	REVISIONS	
		DATE	BY
CITY OF SACRAMENTO DEPARTMENT OF PUBLIC WORKS 3301 ARCADE AVENUE, SUITE 100 SACRAMENTO, CA 95811			
DRAWN BY: K. Pope		CHECKED BY: S. Alligullu	
DATE: 3/18/2010		DATE: 3/18/2010	
R.C.E. 59822		R.C.E. 70027	
NORWOOD AVENUE BRIDGE REPLACEMENT GENERAL PLAN			



ELEVATION
 1/4"=1'-0"



FOOTING PLAN
 1/4"=1'-0"



Note: West end shown. East end similar but opposite hand.

END VIEW

Indicates Architectural Surface (Type II), see Architectural details sheet

Notes:

1. For Section A-A, see "Abutment Details No. 1" sheet.
2. Omit Architectural bent rails. For additional reinforcement for mounting Railing, see Barrier & Railing sheets.

NO.	REVISIONS	DATE	BY

BRIDGE NO.	24C-0080
DESIGNED BY	L. Bodge
CHECKED BY	S. Alligier
DATE	3/18/2010
R.C.E.	59922
DATE	3/18/2010

CITY OF SACRAMENTO
 DEPARTMENT OF PUBLIC WORKS
 3201 J STREET, SUITE 1000
 SACRAMENTO, CALIFORNIA 95811

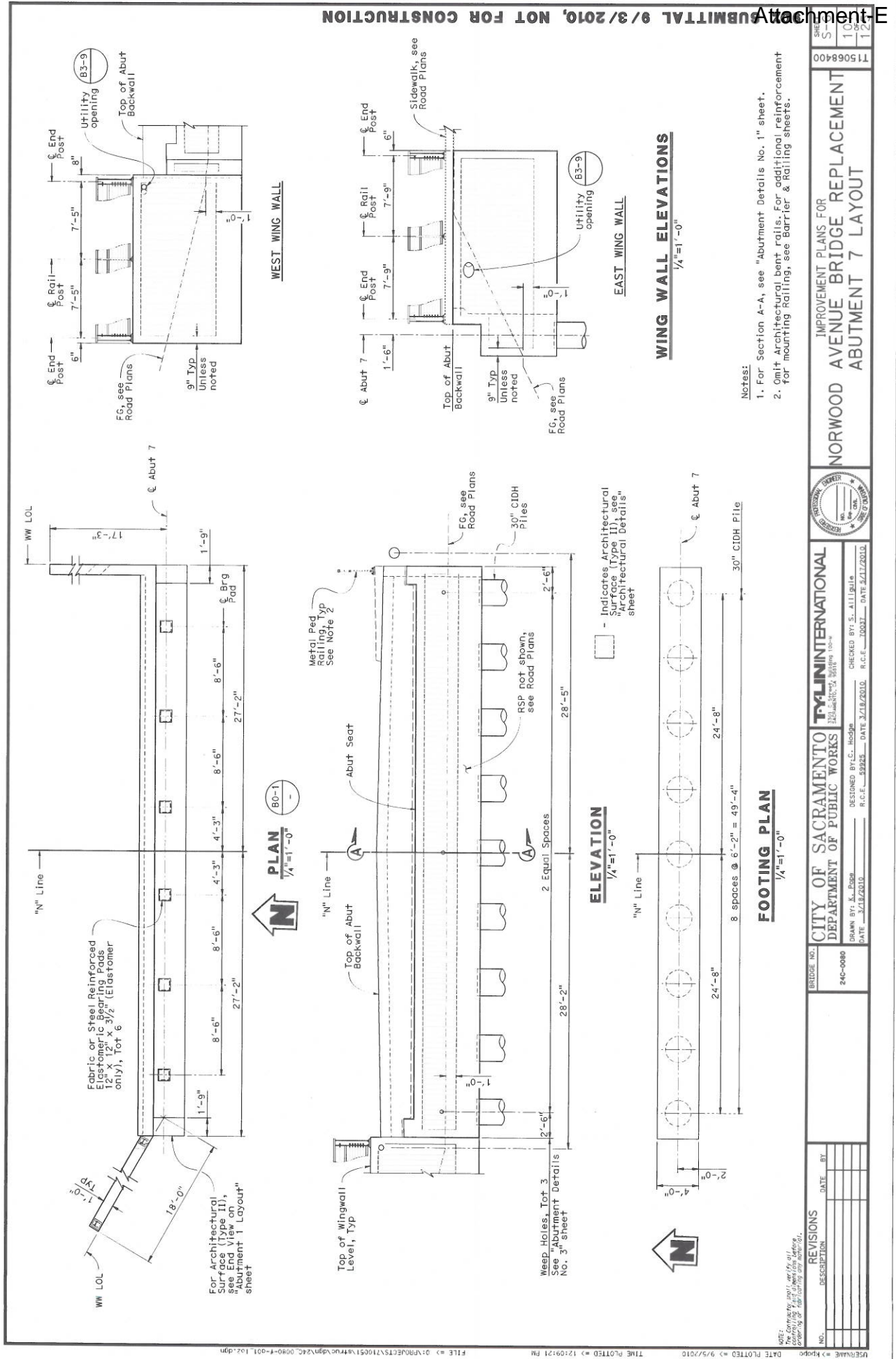
TYLINS INTERNATIONAL
 3201 J STREET, SUITE 1000
 SACRAMENTO, CALIFORNIA 95811



NORWOOD AVENUE BRIDGE REPLACEMENT
ABUTMENT 1 LAYOUT

IMPROVEMENT PLANS FOR

DATE: 9/3/2010
 SHEET: 10 OF 12
 T15068400



SHEET NO.	TOTAL SHEETS
10	12
11	12
12	12

IMPROVEMENT PLANS FOR
NORWOOD AVENUE BRIDGE REPLACEMENT
ABUTMENT 7 LAYOUT



TYLIMINTERNATIONAL
ENGINEERING ARCHITECTURE SURVEYING
13215 HICKORY VALLEY ROAD, SUITE 100
DUBLIN, CA 94568
PHONE: 916.835.8600
FAX: 916.835.8601
WWW.TYLIM.COM

NO.	DESCRIPTION	DATE	BY



Photo 1: Looking upstream from south levee



Photo 2: Looking south from bridge sidewalk

Site Photos



Photo 3: Looking downstream from north levee



Photo 4: Looking downstream from south levee

Site Photos



Photo 5: Looking downstream from bridge sidewalk



Photo 6: Looking upstream from bridge sidewalk

Site Photos