



**SAN ANTONIO WATER SYSTEM
C_13 - BROADWAY CORRIDOR PROJECT
PACKAGE A
SAWS JOB NO. 11-2518
SOLICITATION NO. B-13-CD-058-RA**

**ADDENDUM NO. 2
NOVEMBER 13, 2013**

TO BIDDER OF RECORD:

The following changes, additions, and/or deletions are hereby made a part of the Contract Documents for the construction of the C_13 - Broadway Corridor Project, Package A - N. Alamo St., 6th St. and Elm St. for the San Antonio Water System, San Antonio, Texas, dated October 2013, as fully and completely as if the same were full set forth therein.

PROCUREMENT REQUIREMENTS

1. BID PROPOSAL: REPLACE this section in its entirety with the attached section.

BIDDING AND CONTRACT REQUIREMENTS

1. TABLE OF CONTENTS - REPLACE this section in its entirety with the attached section.
2. SPECIAL CONDITIONS
 - a. INSERT the following section after 2a (April 1, 2014 and April 30, 2014):
"b. April 1, 2015 and April 30, 2015"
 - b. INSERT the following text at the end of 6H:
"Length of time shall be in accordance with acquired COSA ROW permits and Contract Documents."

- c. INSERT the following section after 6H:

“I. Contractor shall coordinate with Owner’s Archaeological Monitoring Program and Monitors. Personnel associated with Archaeological Monitoring Program may consist of employees of Owner, COSA, THC and/or authorized representatives of one of these entities. Personnel shall have access to Work per the General Conditions.”

TECHNICAL SPECIFICATIONS

1. SECTION 01 11 00 SUMMARY OF WORK

- a. Article 1.02, J: DELETE this section in its entirety and REPLACE with the following:

“J. Archaeological Finds and Monitoring:

1. Refer to General Conditions and Section 01 50 00 regarding Archaeological Finds.
2. Coordinate with Archaeological Monitoring Program to be implemented by Owner.”

- b. INSERT the following paragraph:

“1.08 ALLOWANCES

- A. Approval of the use of the allowances shall be from the Owner.
- B. The Contract Price includes cash allowances for certain materials, equipment and portions of the Work as follows:
 1. Utility Relocation by Grande Communications: This item provides an allowance for costs accessed from Grande Communications associated with the need for Grande Communications to relocate utilities in conflict with the Work along N. Alamo Street. Measurement for payment is on a lump sum basis. Contractor to pay for relocation and be reimbursed actual amount by the San Antonio Water System.
 2. Utility Relocation by AT&T: This item provides an allowance for costs accessed from AT&T associated with the need for AT&T to relocate utilities in conflict with the Work along N. Alamo Street. Measurement for payment is on a lump sum basis. Contractor to pay for relocation and be reimbursed actual amount by the San Antonio Water System.

3. Utility Relocation by CPS Energy: This item provides an allowance for costs accessed from CPS Energy associated with the need for CPS Energy to relocate utilities in conflict with the Work along N. Alamo Street. Measurement for payment is on a lump sum basis. Contractor to pay for relocation and be reimbursed actual amount by the San Antonio Water System.
- C. The Contractor shall use monies in Allowances only on issuance of written directive by the Owner. The Contractor's Bid shall include overhead, profit, insurance, and taxes for the allowances. Allowances shall include only the following costs:
 1. Products.
 2. Labor.
 3. Transportation.
 4. Equipment Rental.
 5. Other Direct Expenses.
 - D. Monies remaining in Allowances at close of the Project shall be credited to the Owner by change order.
 - E. The Contractor shall not exceed allowances without Owner's approval. If the approved cost is more or less than the specified allowance amount, the contract sum will be adjusted by change order equal to the amount of the difference."

2. SECTION 01 29 00 MEASUREMENT PROCEDURES

- c. Article 1.05, B:
 - i. INSERT "866" in "Spec No." column for Item No. 6
 - ii. INSERT "33 05 01.80, 31 60 00, 31 73 12, 31 80 00" in "Spec No." column for Item No. 20
 - iii. Item 29, INSERT the following text under "Description"
 - a) After "water main piping," INSERT "casing as shown on Drawings"
 - b) After "appurtenances;" INSERT "installed by open cut and installed inside casing"

iv. INSERT Row 44:

“

Item No.	Spec No.	Item	Description
44	01 11 00	Utility Relocation Allowance	This item provides an allowance for all costs assessed by Grande Communications, CPS Energy, and AT&T to relocate their utilities along N. Alamo Street that are in conflict with the Work. Measurement for payment is on a lump sum basis. Schedules for relocating utilities provided by Utility Owners shall be shown on Contractor’s Schedule.

“

v. Rows 44 and 45 become rows 45 and 46, respectively.

3. SECTION 01 31 19 PROJECT MEETINGS

a. Article 1.06.A, DELETE this Paragraph in its entirety and INSERT the following:

“A. In accordance with General Conditions.”

4. SECTION 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION

a. INSERT the following paragraph:

“1.07 Schedule of Values:

- A. Such items as Bond premiums, temporary facilities and controls, and equipment storage should be listed separately in the Schedule of Values, provided the costs can be substantiated.
- B. Overhead and profit shall not be listed as separate items.
- C. Subdivide costs of products to be installed under the lump sum items into separate line items under each section listing.
 - 1. Continue the breakdown for the various sections, providing details as required by the OWNER.
 - 2. Provide adequate detail to allow easy determination of the percentage of work completed for each item.
 - 3. Separate product costs and installation costs.

- a. Product costs include cost for product, delivery and unloading costs, royalties and patent fees, taxes, and other costs paid directly to the supplier or vendor.
- b. Installation costs include cost for the supervision, labor, and equipment for field fabrication, erection, installation, startup, initial operation, and Contractor's overhead and profit.
- 4. "Lump sum," "miscellaneous," and other such general entries in the schedule shall be avoided whenever possible.
- 5. Break down costs to list major products or operations for each line item which has an installed value of more than \$5,000.00.
- 6. Make sum of total costs for all items listed in the Schedule of Values equal the Contract Price. No additional payment will be allowed if the quantities shown on the Schedule of Values are less than those actually required to accomplish the Work, unless the quantities are altered by a change order.
- 7. Breakdown of items may not be altered without the written approval of the OWNER."

5. SECTION 01 43 33 MANUFACTURERS FIELD SERVICES

- a. Article 3.04.F.2, DELETE "Section 01 78 23, Operation and Maintenance Data" and INSERT "General Conditions" in its place.

6. SECTION 02 61 00 REMOVAL AND DISPOSAL OF CONTAMINATED SOIL

- a. Article 1.02.A, DELETE text "1. U.S. Code of Federal Regulations (CFR):
 - a. Title 29, Labor, Chapter XVII Occupational Safety and Health Administration (OSHA), Part 1910, Occupational Safety and Health Standards: Part 1910.120, Hazardous Waste Operations and Emergency Response.
 - b. Title 40, Protection of Environment, Chapter I Environmental Protection Agency (EPA), Part 261, Identification and Listing of Hazardous Waste:
 - 1) Part 261.21, Characteristic of Ignitability.
 - 2) Part 261.22, Characteristic of Corrosivity.
 - 3) Part 261.23, Characteristic of Reactivity."

and INSERT the following text in its place:

1. "Department of Labor Regulations:
 - a. 29 CFR Part 1910 - Occupational Safety and Health Standards.
 - b. 29 CFR Part 1518 - Safety and Health Regulations for Construction.
 2. United States Environmental Protection Agency (EPA) Publications:
 - a. 40 CFR 257 - Criteria for Development of Solid Waste Disposal Facilities.
 - b. 40 CFR 258 - Criterion for Municipal Solid Waste Landfills.
 - c. 40 CFR 260 - Hazardous Waste Management System: General.
 - d. 40 CFR 261 - Identification and Listing of Hazardous Waste.
 - e. 40 CFR 263 - Transporters of Hazardous Waste.
 - f. 40 CFR 264 - Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
 - g. 40 CFR 265 - Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
 - h. 49 CFR Parts 171-178 - Department of Transportation (DOT) regulations.
 - i. EPA/SW 846 - Test Methods for Evaluating Solid Waste Physical/Chemical Methods, latest revision.
 - j. EPA 600/4-79/20 - Methods for Chemical Analysis of Water and Wastes, latest revision.
 - k. EPA 600/4 -79-019 - Handbook for the Analytical Quality Control in Water and Wastewater Laboratories.
 - l. EPA 600/4-84-076 - Characterization of Hazardous Waste Sites - A Methods Manual: Volume 11, Available Sampling Methods, latest edition."
- b. INSERT the following text at the end of section 1.02.A.2.b:
- "1) Guidelines for the Classification and Coding of Industrial and Hazardous Wastes, TCEQ, RG-022, February 2005".
- c. Article 1.02.A.3, DELETE Paragraph in its entirety.
- d. Article 1.03.A, DELETE Paragraph in its entirety.
- e. Article 1.03, INSERT the following Paragraph:

“D. Industrial wastes result from (or are incidental to) operations of industry, manufacturing, mining, or agriculture – for example, wastes from power generation plants, manufacturing facilities, and laboratories serving an industry. *Nonindustrial wastes*, by contrast, come from sources such as schools, hospitals, churches, dry cleaners, most service stations, and laboratories serving the public.”

- f. Article 1.03.E, INSERT text “Class 1 or Class 2” before text “Nonhazardous Soil and Debris”.
- g. Article 1.03.E, INSERT text “Meets definitions prescribed in Guidelines for the Classification and Coding of Industrial and Hazardous Wastes, TCEQ, RG-022, February 2005” at the end of the Paragraph.
- h. Article 1.04.A.1.b, INSERT text “(analytical requirements, etc)” after text “and acceptance requirements”.
- i. Article 1.04.A.1.c.3), INSERT text “, permitting” after text “Documentation of licensing”.
- j. Article 1.04.A.1.c.4), DELETE text “licensing” and INSERT text “permitting” in its place.
- k. Article 1.04.A.1.c.4), INSERT text “(analytical requirements, debris sizing, etc)” after text “disposal requirements”.
- l. Article 1.04.A.1, INSERT the following Paragraph after section 1.04.A.1.c.4):
“d. Backfill chemical and physical analysis showing material approval.”
- m. Article 1.04.A.1, INSERT the following Paragraph after section 1.04.A.1, old Paragraph d, new Paragraph d:
“f. Work Plan describing means and methods for site activities.”
- n. Article 1.05.A.2, DELETE text “Contractor’s Consultant shall have minimum of 3 years’ experience in planning, sampling, and performing quality control in remediation of contaminated sites.” and INSERT text “Laboratory: The laboratory shall have minimum of 5 years of experience in providing testing services associated with water and soils contaminated with petrochemicals.”
- o. Article 1.05.A.4, DELETE text “licensed” and INSERT text “permitted by the State and/or EPA”.
- p. PART 3 - EXECUTION, INSERT the following Paragraphs:
“3.01 NOTIFICATION
A. In the event contaminated materials are encountered or suspected by the Contractor to be encountered, the Contractor shall stop work in the area and notify the Owner.
3.02 CONTAMINATED MATERIALS SCREENING

- A. Upon approval by the Owner, the Contractor shall visually screen all excavation and groundwater for contamination. Potentially contaminated materials shall be identified by odor, stain, discoloration from native earth materials and by utilizing field detection devices.
- B. Approved detection devices include: photo ionization detector, flame ionization detector, or organic vapor analyzer.”
- q. Old Article 3.02, new Article 3.04.C, INSERT text “toxicity,” after text “Test for”.
- r. Old Article 3.02, new Article 3.04.C, INSERT text “and additional analytical requirements as identified in 30 TAC 335 (TPH, additional metals, etc)” after text “40 CFR 261.23”
- s. Old Article 3.03, new Article 3.05.G, DELETE text “ACM” and INSERT text “asbestos” in its place.
- t. PART 3 – EXECUTION, INSERT the following Paragraphs:

“3.07 SAMPLING

A. Before disposal activities are initiated, the Contractor must acquire samples and perform the required testing in order to properly classify the waste.

B. Samples shall be taken by qualified personnel that have at least 2 years of experience collecting hazardous waste samples and are under the direct control of the testing laboratory. All sampling data shall be recorded in a bound log book. As a minimum, the following shall be noted:

1. Date and time of sampling.
2. Date and time of excavation.
3. Sample identification and location.
4. Stockpile or water volume.
5. Sample depth.
6. Visual description of material sampled.
7. Description of sampling methods and equipment used.
8. Description of sample handling techniques (containers, preservation, chain of custody).
9. Field instrumentation readings.
- 10 Weather conditions.
11. Printed name of sampling personnel.

C. Potentially contaminated materials shall be sampled in accordance with the following schedule:

1. Total Petroleum Hydrocarbon (TPH) testing: One sample shall be taken for every 50 cubic yards of excavated materials.
2. Toxicity Characteristic Leachate Procedure (TCLP) for benzene and lead: One sample shall be taken for every 200 yards of excavated material.
3. Groundwater seepage or surface water inflow that collects into known or suspected areas of contamination in quantities large enough to require its removal must be sampled at a frequency equal to one per 5,000 gallons unless otherwise indicated by the Owner or required by the disposal facility.
4. Reinsate water used in washing equipment used in known or suspected contaminated areas shall be collected, sampled, and analyzed for waste characterization and disposal. Sampling and testing frequency shall be equal to that specified for groundwater seepage or surface water inflow.

D. All sampling equipment shall be cleaned immediately prior to use with a laboratory grade non-phosphate detergent solution followed by rinses with distilled de-ionized water. Sampling tools shall consist of stainless steel trowels or other sampling devices consistent with the required analysis.

E. Excavated soils shall be sampled in the stockpiles to obtain a representative coverage of all the materials for the full depth of the stockpiles. Water samples shall be collected with a stainless steel or teflon bailer, dipper, pond sampler, or similar device.

F. Care shall be exercised to capture any observed floating oils so as to collect representative samples. Each sample container shall be clearly identified with a label that shows the field sample number, date/time of sampling, sample location, and names of sampling personnel. All information shown on the label must be written in indelible ink.

G. Containers shall be placed in zip-lock bags and stored in an iced cooler. The samples must remain in a refrigerated condition at all times, including transportation. Field and trip blanks shall be included in the Sampling and Analysis Plan procedures. Chain of custody documentation shall accompany each sample group or shipment."

u. Old Article 3.05, new Article 3.08.B, DELETE text "Section 31 23 23, Fill and Backfill" and INSERT text "SAWS Item No. 804, Excavation, Trenching and Backfill".

v. PART 3 - EXECUTION, INSERT the following Paragraphs:

"3.10 EQUIPMENT DECONTAMINATION

A. Decontaminate equipment that has come into contact with hazardous soil or debris, solid waste, or impacted water by methods approved by Consultant.

B. Wastewater and sediment generated by decontamination activities shall be contained and treated or disposed of in accordance with provisions stated in this section.

3.11 TESTING

A. Soil and water samples shall be analyzed for the parameters listed in Table 1:

Table 1 Parameters for Sample Analysis					
Parameter	Matrix	Extraction Method	Container	Preservation	Holdin g Time
TPH	Soil	418.1	250 ml glass	Ice to 4° C	28 days
TPH	Liquid	418.1	2x1-L amber glass	HCL to pH<2 and ice to 4° C	28 days
TCLP (benzene)	Soil	1311/8260B	2x125 ml glass Septa jars	Ice to 4° C	14 days
TCLP (lead)	Soil	1311/6010C	1x125 ml glass Septa jars	Ice to 4° C	6 mos.
Total lead	Liquid	3050/6010C	1x125 ml glass Septa jars	Ice to 4° C	6 mos.

B. All test methods shall conform to TCEQ and EPA requirements. The minimum detection limit shall not be greater than 0.1 ppm.

C. Data shall be submitted to the Owner as they are received, but at least within four weeks of sample collection. A series of periodic (weekly) data submittals may result. Unanticipated results shall be reported to the Owner immediately.

D. Data submittals shall include the results of all analysis, including duplicate sample submittals and any unusual observations. Minimum data reporting shall include laboratory sample IDs which match field sample IDs. Supplemental quality control and related information (method blanks, etc.) shall be made available upon request.

3.12 TEMPORARY STORAGE OF CONTAMINATED MATERIALS

A. Prior to stockpiling contaminated materials for staging and classification, the Contractor shall establish the location and security measures for an exclusion zone to prevent unauthorized entrance.

B. Soils suspected to be contaminated shall be stockpiled in areas of sufficient size to permit and facilitate sorting and staging, as well as sampling and waste classification activities.

C. Stockpiles shall be isolated from the environment using impervious geosynthetic membrane liners (10 mil minimum thickness) beneath and over the contaminated soil and rock. Berms shall also be constructed around the stockpiles to contain the materials and to prevent contamination of storm water runoff that may flow adjacent to the Site.

D. Before disposal activities are initiated, the existence of contamination shall be confirmed in accordance with this section. Soil and rock that have been identified as being contaminated shall be separated from soil and rock identified as being clean. If the Contractor fails to properly protect the stockpiles, and any materials become contaminated or otherwise unsuitable for use as backfill, such materials shall be removed, properly disposed of, and replaced with clean, satisfactory materials from approved sources at the Contractor's expense.

3.13 DISPOSAL OF CONTAMINATED WATER

A. If water within excavations is known or suspected to be contaminated, upon approval of the Owner, it shall be removed, sampled, tested, classified, and then properly disposed of. Water removed from excavations shall be placed in containers provided by the Contractor and disposed of at an approved disposal facility.

3.14 FREE PRODUCT REMOVAL

A. In the event that free product is encountered during excavation:

1. Remove product in a manner that minimizes spread of contamination into previously uncontaminated zones by using containment recovery and storage system to contain and remove product.
2. Provide onsite storage suitable for recovered material.
3. Material shall remain onsite until Contractor completes a characterization analysis.
4. Material shall not be transported to a disposal facility until analysis is complete.

3.15 TRANSPORTATION AND DISPOSAL OF CONTAMINATED MATERIALS

A. The Contractor will complete and provide profiles, Land Disposal Restriction (LDR) forms, waste manifests and any other documentation required by the transporter and disposal facility.

B. The Contractor shall utilize appropriate vehicles and operating practices to prevent spillage of contaminated or hazardous materials from occurring enroute to the disposal facility.

C. All operations for loading and hauling shall be in accordance with appropriate U.S. Department of Transportation regulations and TCEQ regulations and will provide all marking, labeling, placarding as required by regulation.

D. The Owner will sign the required profile, LDR, and manifest as the generator of the waste. The Contractor shall immediately notify the Owner of any problems completing shipment and disposal. Copies of all documents relating to the shipment and transportation of contaminated materials shall be provided to the Owner on a daily basis.

E. The Contractor shall dispose of contaminated materials only at facilities approved by the Owner and that are in compliance with 30 TAC 334 or 335 requirements, and with RCRA.

3.16 REPORT REQUIREMENTS

A. In the event that contaminated materials are encountered during installation of the Work, the Contractor shall prepare a written report documenting the handling of the waste. This report, as a minimum, shall contain the following information:

1. Field notes documenting the date of removal and volume of soil or water. Notes must include documentation indicating concurrence of the Owner regarding the quantities that were measured.
2. All acquired laboratory data.
3. Labeled photographs that document monitoring, sampling, excavation, and disposal.
4. Copies of all manifests and chain of custody documents.”

w. Article 3.08, DELETE in its entirety.

7. SECTION 03 30 00 CAST-IN-PLACE CONCRETE

- a. Article 2.01.A.1, DELETE text “Type II or Type I/II” and INSERT text “Type V” in its place.
- b. Article 3.13.A.1.b, INSERT text “Contractor shall pay the cost of all concrete testing.” at the end of the Paragraph.

8. SECTION 03 40 00 PRECAST AND PRESTRESSED CONCRETE

- a. Article 1.04.A, DELETE text “and Division 1”.
- b. Article 2.02.A, INSERT the following Paragraph:
“6. All pre-cast structures shall be watertight.”

9. SECTION 05 12 00 STRUCTURAL STEEL

- a. Article 1.04.A.1, DELETE text “Division 1, General Provisions” and INSERT text “General Conditions” in its place.
- b. Article 2.01.F.3, DELETE text “be galvanized” and INSERT text “Type 316 stainless steel” in its place.
- c. Article 2.06.A, DELETE text “may” and “Owner” and INSERT text “shall” and “Contractor” in its place respectively.

10. SECTION 05 50 00 MISCELLANEOUS METAL FABRICATIONS

- a. Article 1.04.A.1, DELETE text “Division 1, General Provisions” and INSERT text “General Conditions” in its place.
- b. Article 2.07.A.1, INSERT text “Hatches shall be traffic rated.” after text “shown on the Drawings”.
- c. Article 2.07.B.1, DELETE text “gauge galvanized steel” and INSERT “Type 316 stainless steel” in its place.
- d. Article 2.13.A, DELETE text “may be done by the Owner” and INSERT text “shall be done by Contractor.”

11. SECTION 05 53 00 METAL GRATINGS AND COVER PLATES

- a. Article 1.04.A.1, DELETE text “Division 1, General Provisions” and INSERT text “General Conditions” in its place.
- b. Article 2.02.A, INSERT text “Pedestrian Access” before text “Grating”.
- c. Article 2.02.B.1.b.2), DELETE text “over a” and INSERT text “with an impact factor of 1.33 over a 20 inch by 10 inch” in its place.
- d. Article 2.03.B.2.a, DELETE text “galvanized ASTM A572, Grade 50 steel plate” and INSERT text “Type 316 stainless steel” in its place.
- e. Article 2.03.B.2.b, DELETE text “galvanized ASTM A572, Grade 50 steel plate” and INSERT text “Type 316 stainless steel” in its place.
- f. Article 2.03.B.2.c, DELETE text “galvanized steel” and INSERT text “Type 316 stainless steel” in its place.

12. SECTION 26 42 01 PIPE BONDING AND TEST STATIONS

- a. Article 1.02.F, DELETE text “Either” and “or cement mortar coated steel pipe”.
- b. Article 2.01.B.5, DELETE text “Cement Mortar Coated” and INSERT text “Concrete Cylinder” in its place.
- c. Table in Article 2.03.F, DELETE text “and Cement Mortar Coated Steel Pipe”.
- d. Article 2.03.I, DELETE text “Cement Mortar Coated” and INSERT “Concrete Cylinder” in its place.

13. SECTION 26 42 02 GALVANIC ANODE CATHODIC PROTECTION SYSTEM

- a. Article 1.02.A, DELETE Paragraph in its entirety and INSERT text “Concrete Cylinder Pipe: Bar-wrapped concrete cylinder pipe” in its place.
- b. Article 2.03.F, DELETE text “Cement Mortar Coated” and INSERT text “Concrete Cylinder” in its place.
- c. Article 3.01.A, DELETE text “cement mortar coated steel pipe,”.
- d. Article 3.03.E, DELETE text “cement mortar coated” and INSERT text “concrete cylinder” in its place (2 occurrences).

14. SECTION 31 05 30 SITE CONDITIONS SURVEY

- a. Article 1.01.A.1, DELETE text “entire Project” and INSERT text “tunnel work area” in its place.
- b. Article 1.01.A.2, INSERT text “utilities,” after text “industrial buildings, pavements,” and DELETE text “Above or belowground utilities, or roadways unless specifically identified shall not be considered as “structures”.
- c. Article 1.04.A, DELETE text “project work” and INSERT text “tunnel work area” in its place.

15. SECTION 31 22 00 STRUCTURAL EXCAVATION, FILL AND BACKFILL

- a. Article 1.05.D, DELETE text “Sheeting and bracing shall be as specified in Section 02 22 10”.
- b. Article 1.07.B, INSERT text “Satisfactory and unsatisfactory test shall be paid by Contractor.” at the beginning of the Paragraph.
- c. Article 3.03.A.1, DELETE text “95” and INSERT text “98”.
- d. Article 3.03.C.1, DELETE text “of 95 percent and maximum”.
- e. Article 3.03.C.1, DELETE text “0 to 3 percent” and INSERT text “+3 to -3 percent for granular, or -1 to +3 percent for cohesive” in its place.
- f. Article 3.04.B, DELETE text “optimum to +4” and INSERT text “-3 to +3”.
- g. Article 3.04.B, DELETE text “95” and INSERT text “98”.
- h. Article 3.04.C, DELETE text “-2 to +2” and INSERT “-3 to +3”.
- i. Article 3.04.C, DELETE text “Backfill placed within 5 feet of the High Service pump station, meter vault and Clear Well No. 2 walls shall be hand compacted.”
- j. Article 3.04.C.1, DELETE text “95” and INSERT text “98”.

- k. Article 3.05.A, INSERT text “for pipe under structures” after text “The embedment”.
- l. Article 3.05.A, DELETE text “95” and INSERT text “98”.

16. SECTION 31 41 00 SHORING

- a. Article 1.01.A, INSERT text “trenches, structural excavations” after text “to construct new siphon structures, tunneled crossings,”.
- b. Article 1.04.A.1, INSERT text “and all other excavations” after text “Provide temporary shoring plan for the trenchless construction”.
- c. Article 1.06.F, INSERT text “slides and collapses” at the end of the Paragraph.

17. SECTION 31 74 28 BACKFILL GROUTING

- a. Article 2.01A, DELETE text “Type I or II” and INSERT text “Type V”.
- b. Article 3.04.A, DELETE text “submitted”.
- c. Article 3.04.A.1, INSERT text “at no additional cost to the Owner” after text “A greater or lesser number of tests may be made”.

18. SECTION 33 05 01 04B BAR-WRAPPED CONCRETE CYLINDER PIPE AND FITTINGS

- a. Article 1.03.A.7, DELETE text “Trench and Backfill” and INSERT text “Excavation, Trenching and Backfill” in its place.
- b. Article 1.03.A.7, DELETE text “30-inches” and INSERT text “36-inches” in its place.
- c. Article 1.05.A.1.d, DELETE text “25,000” and “5” and INSERT text “10,000” and “3” in its place respectively.
- d. Article 1.05.A.2.d, DELETE text “5” and INSERT text “3” in its place.
- e. Article 1.05.A.2.e, DELETE text “5” and INSERT text “3” in its place.
- f. Article 2.01.E.2, DELETE text “welded joints” and INSERT text “single fillet butt-strap or single-fillet lap welded slip joints” in its place.
- g. Article 2.01.E.2, DELETE text “Single fillet butt strap or” and “or where welded joints are used for restrained joints”.

- h. Article 3.02.X, DELETE text “30 Inches” and INSERT text “36 Inches” in its place.
- i. INSERT Article 3.09:
 - “ 3.09 MEASUREMENT AND PAYMENT
 - A. This item shall be measured for payment as specified in Section 01 29 00.”

19. SECTION 33 05 01.08 FIBERGLASS REINFORCED PIPE AND FITTINGS

- a. Article 2.02.A.1.a, DELETE parenthesis and INSERT text “and” before text “tunnel carrier pipe”.
- b. Article 2.02.B.1, DELETE “,” after text “ASTM D3262”.
- c. Article 2.02.B.2, DELETE extra “,” between text “joints,” and “flush”.
- d. Article 2.02.D, INSERT the following Paragraph:
 - “5. Manhole installation shall comply with SAWS Item No. 853.”
- e. Article 3.06.D.5, INSERT text “Post-Construction television inspection shall be considered incidental to the pipe construction cost.” after text “Sewer Main Television Inspection.”
- f. INSERT Article 3.07:
 - “ 3.07 MEASUREMENT AND PAYMENT
 - A. This item shall be measured for payment as specified in Section 01 29 00.”

20. SECTION 40 27 00 PROCESS PIPING GENERAL

- a. Article 1.04.B, INSERT text “Cost to be paid for by Contractor.” at the end of the Paragraph.
- b. Article 2.02.D.5, DELETE Paragraph in its entirety.
- c. Article 2.04.C.1.a, DELETE text “In accordance with applicable piping material specified in Pipe Data Sheet.”
- d. Article 3.05.B.2, DELETE text “Trench Backfill” and INSERT text “Excavation, Trenching and Backfill” in its place.

21. **Special Provisions to Item No. 850 Sanitary Sewer Structures:** INSERT the following text at the end of the Special Provision:

“3. Section 850.5 Measurement:

a. Delete paragraph and replace with the following:

Sanitary Sewer Structures will be measured as a lump sum per the requirements of the Contract Documents, complete in place.

4. Section 850.5 Payment:

a. Delete paragraph and replace with the following:

The work, as prescribed by this item, will be paid for at the unit price bid for each “Sanitary Sewer Structures,” such as grit chambers, diversion structures, and siphon structures. The price shall be full compensation for furnishing and placing all materials, manipulations, bases, connecting pipes as described in the Contract Documents,, testing, concrete, flowable fill, manhole rings and encasement, mortar, diversion of flows within structure installation, labor, tools, equipment and incidentals necessary to complete the work. Note: no separate payment for structural coating.”

22. **Special Provisions to Item No. 853 Sanitary Sewer Glass-Fiber Reinforced Polyester (FRP) Manholes:** INSERT the following text at the end of the Special Provision:

“b. Tee-base manholes and Tee-base drop manholes shall be paid at the contract unit price bid for each such manhole. The price shall be full compensation for all riser sections, throat rings, cones, watertight rings and covers, manhole reinforced concrete ring encasement, manhole concrete base encasement, concrete mortar, drop pipes and fittings, initial backfill material, labor, tools, equipment testing, tees, wyes, and incidentals necessary to complete the work. ”

DRAWINGS

1. DWG A-S-11, INSERT the following note:

“9. Entire interior of chamber (excluding SS Liner) to be coated per SAWS Item No. 850”

2. DWG A-D-04: INSERT the following text to Detail DD-852-01, Sheet 1 of 2, Item No. 852, Sanitary Sewer Manholes:

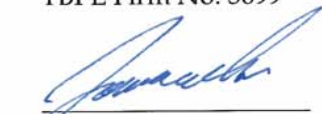
"5) Between manhole base section and top of cast-in-place concrete slab, where occurs, provide joint sealant at contact interface. Joint sealant shall be SF302-Synko-Flex Waterstop, RN103-Ram-Nek Joint Sealant, or equal."

3. DWG A-S-03: REPLACE this drawing in its entirety with the attached sheet.
4. DWG A-S-04: REPLACE this drawing in its entirety with the attached sheet.
5. DWG A-S-05: REPLACE this drawing in its entirety with the attached sheet.
6. DWG A-S-06: REPLACE this drawing in its entirety with the attached sheet.
7. DWG A-D-13: REPLACE this drawing in its entirety with the attached sheet.
8. INSERT DWG A-D-19, TEST HOLE DATA SHEET and DWG A-D-20, TEST HOLE DATA SHEET to end of DRAWINGS

ALL BIDDERS SHALL ACKNOWLEDGE RECEIPT OF ADDENDUM NO. 1 IN THE BID FORM AND BY HIS/HER SIGNATURE AFFIXED HERETO AND TO FILE SAME AS AN ATTACHMENT TO HIS/HER BID. BID FORMS SUBMITTED WITHOUT THIS ACKNOWLEDGEMENT WILL BE CONSIDERED INFORMAL.

CH2M HILL

TBPE Firm No. 3699


Jonathan Vorheis, P.E.



ACKNOWLEDGEMENT BY BIDDER

THE UNDERSIGNED ACKNOWLEDGES RECEIPT OF THIS ADDENDUM NO. 2 AND THE BID SUBMITTED HERewith IS IN ACCORDANCE WITH THE INFORMATION AND STIPULATION SET FORTH.

Date

Signature of Bidder

Appended hereto and part of Addendum No. 2 are:

1. Contractor Questions and Clarifications
2. BID PROPOSAL
3. TABLE OF CONTENTS
4. DWG A-S-03, STRUCTURAL - DOWNSTREAM SIPHON DIVERSION STRUCTURE
5. DWG A-S-04, STRUCTURAL - DOWNSTREAM SIPHON DIVERSION STRUCTURE, REINFORCING
6. DWG A-S-05, STRUCTURAL - UPSTREAM SIPHON DIVERSION STRUCTURE
7. DWG A-S-06, STRUCTURAL - UPSTREAM SIPHON DIVERSION STRUCTURE, REINFORCING
8. DWG A-D-13, CIVIL DETAILS SHEET 3 OF 4
9. DWG A-D-19, TEST HOLE DATA SHEET
10. DWG A-D-20, TEST HOLE DATA SHEET

QUESTIONS RECEIVED AND RESPONSES

1. When it comes to experience with grouting, which specific grouting operation has experience requirements?

Response: Refer to Contract Documents and individual specification sections for specific experience requirements.

2. For bypass pumping, do you require redundant equipment? The SAWS specification does require redundant equipment.

Response: Refer to *Special Provisions to SAWS Specifications for Water and Sanitary Sewer Construction*, Special Provisions to Item No. 864 Bypass Pumping, Paragraph 5, Item H, on Page 13 of 26.

3. The Geotechnical Data Report does not appear to contain information/boring logs for three bores along the proposed tunnel alignment: B-101, B-102 and B-103. Can this information be made available to prospective bidders?

Response: The requested information is located in file "*Supplemental – Summary of Geotechnical Results*" on SAWS Contract Solicitations website.

4. The proposed 500' LF tunnel alignment is designed to be excavated and supported by a 120" diameter TBM. Would a 114" diameter tunnel be an acceptable alternative, should it allow for adequate capacity to install and support the carrier pipe?

Response: Tunneling via TBM is not specified per Addendum No. 1. Alternative tunneling methods will be evaluated with selected Contractor. Modifications to the design tunnel diameter are permitted, provided the minimum clearance of 6 inches between the carrier pipes and the liner is provided, as shown on A-M-04.

5. Shown on the plans N Alamo is to closed completely to traffic, except for the cross streets. Is this correct?

Response: The only section of Alamo to be closed off entirely during construction (except for access to businesses, residences, and emergency vehicles and for cross streets) is the segment South of Josephine St. and north of Jones St. during the installation of the Tunnel, siphon boxes, diversion structures, and the installation of the recycled water line. In addition, the intersection of Josephine and Alamo will be closed off during the installation of the new 60-in FRP and associated manholes.

6. Can more than 1 phase of the traffic control be in place at a time as long as they are carried out as designed?

Response: This is dependent on the permit obtained from COSA ROW Management by the Contractor.

BID PROPOSAL

PROPOSAL OF _____, a
 corporation, a partnership consisting of _____,
 an individual doing business as _____,

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitations to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform all work required for the execution of Package A of the C_13, San Antonio Water System Job Number 11-2518 in accordance with the Plans and Specifications for the following prices to wit:

BID SCHEDULE - UNIT PRICE

Schedule of prices for CONSTRUCTION OF C_13 – BROADWAY CORRIDOR PROJECT PACKAGE A in accordance with the Contract Documents. Bidder must complete entire schedule.

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
1	CoSA 801	Tree Protection to include placement and removal after project is complete and in place _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
2	CoSA 530	Traffic Control, Barricades, Signs and Traffic Handling _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
3	SAWS 550	Trench Excavation Safety Protection (All Depths) _____ Dollars and _____ Cents	1,676	LF	\$ _____	\$ _____

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
4	SAWS 864	Flow Management and Bypass Pumping _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
5	SAWS 868	Removal of Siphon Barrel Stop-logs and Pre-Construction Cleaning of Siphon Barrels _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
6	SAWS 868, 866	60-inch Sanitary Sewer Cleaning and Televising Before Rehabilitation _____ Dollars and _____ Cents	6,431	LF	\$ _____	\$ _____
7	SAWS 901	60-inch CIPP Sewer Main Rehabilitation _____ Dollars and _____ Cents	6,431	LF	\$ _____	\$ _____
8	SAWS 855, 910	Manhole Rehabilitation and Adjustment _____ Dollars and _____ Cents	14	EA	\$ _____	\$ _____
9	SAWS 853	Replacement of Manhole 30356 with a Tee Base Drop Manhole Complete and In-Place _____ Dollars and _____ Cents	1	EA	\$ _____	\$ _____
10	SAWS 853	New Standard Tee Base Manholes _____ Dollars and _____ Cents	2	EA	\$ _____	\$ _____
11	33 05 01.08	60-inch FRP Sewer Pipe _____ Dollars and _____ Cents	127	LF	\$ _____	\$ _____

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
12	33 05 01.08	66-inch FRP Sewer Pipe _____ Dollars and _____ Cents	41	LF	\$ _____	\$ _____
13	SAWS 862	Abandonment of 60-inch RCP on Josephine Street _____ Dollars and _____ Cents	60	LF	\$ _____	\$ _____
14	SAWS 862	Abandonment of Manhole on Josephine Street _____ Dollars and _____ Cents	1	EA	\$ _____	\$ _____
15	SAWS 853	New FRP Manhole for Air Transfer Piping _____ Dollars and _____ Cents	1	EA	\$ _____	\$ _____
16	33 05 01.08	24-inch FRP Air Transfer Piping _____ Dollars and _____ Cents	590	LF	\$ _____	\$ _____
17	SAWS 850	Grit Chamber _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
18	SAWS 850	Upstream and Downstream Diversion Structure Installation. Complete and In-Place _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
19	SAWS 850, 33 05 01.08	Inverted Siphon Inlet and Outlet Structures and Transition Piping Installation. Complete and In-Place _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
20	31 71 31, 33 05 01.80, 31 60 00, 31 73 12, 31 80 00	Triple Barrel Siphon Installation. Complete and In-Place via trenchless technology _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
21	SAWS 848	18-inch SDR 26 PVC Installation _____ Dollars and _____ Cents	80	LF	\$ _____	\$ _____
22	SAWS 852	Standard Manholes for 18-inch sewer _____ Dollars and _____ Cents	2	EA	\$ _____	\$ _____
23	SAWS 862	Removal and Disposal of Sewage from Abandoned 60-inch RCP, Siphon Structures and Siphon Barrels on N. Alamo _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
24	SAWS 862	Removal and Disposal of Solid Material from Abandoned 60-inch RCP on N. Alamo _____ Dollars and _____ Cents	60	CY	\$ _____	\$ _____
25	SAWS 862, 868	Removal and Disposal of Solid Material from Abandoned Siphon Structures and Barrels _____ Dollars and _____ Cents	30	CY	\$ _____	\$ _____
26	SAWS 862, 868	Cleaning and Televising of Abandoned Siphon Structures and Barrels _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
27	SAWS 862	Grouting of Abandoned 60-inch RCP on N. Alamo _____ Dollars and _____ Cents	425	CY	\$ _____	\$ _____
28	SAWS 862	Grouting of Abandoned Siphon Structures and Barrels _____ Dollars and _____ Cents	425	CY	\$ _____	\$ _____
29	33 05 01.04	36-inch Recycled Water Line Relocation _____ Dollars and _____ Cents	778	LF	\$ _____	\$ _____
30	SAWS 862	Abandonment of 36-inch Recycled Water Line _____ Dollars and _____ Cents	528	LF	\$ _____	\$ _____
31	33 05 01.04	Recycled Water Installation of 4-inch Outlet _____ Dollars and _____ Cents	1	EA	\$ _____	\$ _____
32	33 05 01.04	Recycled Water Blow-off Installation _____ Dollars and _____ Cents	2	EA	\$ _____	\$ _____
33	SAWS 830	36-inch Recycled Water Butterfly Valve _____ Dollars and _____ Cents	1	EA	\$ _____	\$ _____
34	CoSA 202.1	Prime Coat Application. Complete and In-Place _____ Dollars and _____ Cents	1,184	GAL	\$ _____	\$ _____

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
35	CoSA 203.1	Tack Coat Application. Complete and In-Place _____ Dollars and _____ Cents	592	GAL	\$ _____	\$ _____
36	CoSA 208.1	Salvaging, Hauling and Stockpiling Reclaimable Asphaltic Pavement _____ Dollars and _____ Cents	4,735	SY	\$ _____	\$ _____
37	CoSA 205.4	Cutting and Replacing with Flexible Base and Hot Mix Asphaltic Concrete Pavement (Trench Repair) – Type “C” Modified or Type “D” – 3 inches min. compacted depth. Complete and In-Place _____ Dollars and _____ Cents	5,918	SY	\$ _____	\$ _____
38	CoSA 230.2	Full Depth Pavement Replacement. Complete and In-Place _____ Dollars and _____ Cents	1,270	SY	\$ _____	\$ _____
39	CoSA 500.1	Cutting and Replacing Concrete Curbing (<1,000 LF). Complete and In-Place _____ Dollars and _____ Cents	910	LF	\$ _____	\$ _____
40	CoSA 503.1	Concrete Driveways Reconstruction. Complete and In-Place _____ Dollars and _____ Cents	45	SY	\$ _____	\$ _____
41	CoSA 502.1	Concrete Sidewalks Reconstruction. Complete and In-Place. _____ Dollars and _____ Cents	460	SY	\$ _____	\$ _____

Item No.	Spec No.	Item Description (Unit Price to be Written in Words)	Estimated Quantity	Unit	Unit Price (Figures)	Total Price (Figures)
42	CoSA 540	SWPPP Plan and Execution _____ Dollars and _____ Cents	1	LS	\$ _____	\$ _____
43	CoSA 540.10	Inlet Gravel Filter Bags _____ Dollars and _____ Cents	50	FT	\$ _____	\$ _____
44	01 50 00	Utility Relocation Allowance <u>One Hundred Fifty Thousand</u> Dollars and _____ No _____ Cents	1	LS	\$150,000.00	\$150,000.00
A.	SUBTOTAL BASE BID AMOUNT _____ Dollars and _____ Cents				\$ _____	
45	SAWS 100.	Mobilization and Demobilization _____ Percent (Maximum of 10% of the <u>Line Item "A"</u> Sub-total Base Bid amount)	1	LS	\$ _____	\$ _____
46	SAWS 101.	Preparing Right-of-Way _____ Percent (Maximum of 5% of the <u>Line Item "A"</u> Sub-total Base Bid amount)	1	LS	\$ _____	\$ _____
	MOBILIZATION AND PREPARING ROW SUB-TOTAL _____ Dollars and _____ Cents				\$ _____	

Mobilization lump sum bid shall be limited to a maximum 10% of the Line Item "A" Sub-total Base Bid amount. Preparing Right-of-Way lump sum bid shall be limited to a maximum of 5% of the Line Item "A" Sub-total Base Bid amount. The Line Item "A" Sub-total base bid is defined as all bid items **EXCLUDING** Item 100, Mobilization and Item 101, Preparing Right-of-Way. **In the event of a discrepancy between the written percentage and dollar amount shown for Mobilization and Preparation of ROW bid items the written percentage will govern. If the percentage written exceeds the allowable maximum stated for mobilization and or preparation of ROW, SAWS reserves the right to cap the amount at the percentages shown and adjust the extensions of the bid items accordingly.**

TOTAL BID AMOUNT (Line Item "A", Mobilization & Preparing Right of Way)

\$ _____

_____ **DOLLARS AND**

_____ **CENTS**

BIDDER'S SIGNATURE & TITLE

FIRM'S NAME (TYPE OR PRINT)

FIRM'S ADDRESS

FIRM'S PHONE NO. /FAX NO.

FIRM'S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following:

Addendum Nos. _____

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID.

The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within 450 calendar days after the start date, as set forth in the Authorization to Proceed. **The bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.** Complete the additional requirements of the Proposal which are included on the following pages.

BIDDER EXPERIENCE

BIDDER'S EXPERIENCE

In order to make a responsive Bid, the Bidder, or the Bidder's subcontractor, must provide evidence of a minimum of three (3) successful projects, completed in the last three (3) years, five (5) years or ten (10) years (as noted), for **each** of the criteria listed below:

- Installation of at least 500 linear feet of 48-inch minimum diameter CIPP
- Installation of wastewater flow management/bypass pumping systems
- Minimum experience for tunneling

As provided in the space below, indicate the project name, owner contact name and telephone number, date completed, and attributes of the project. All questions must be answered comprehensively. Attach additional sheets as necessary.

A minimum of three (3) similar projects involving at least 500 feet of Cured-In-Place Pipe of a minimum diameter of 48 inches on each project.

Project Name/ Owner (Contact and Phone No.)/ Completion Date/ Pipe Diameter and Linear Feet

1) _____

2) _____

3) _____

A minimum of three (3) similar projects involving a flow management/bypass pumping system within the last 3 years with similar flows for each project.

Project Name/ Owner (Contact and Phone No.)/ Completion Date/ Bypass Flow Rate/ Length of Bypass Pipeline

1) _____

2) _____

3) _____

A minimum of three (3) similar projects involving at least a 500-foot tunnel on each project within the last 10 years in similar rock and soil utilizing similar techniques.

Project Name/ Owner (Contact and Phone No.)/ Completion Date/ Tunnel Excavation Support Diameter and Linear Feet

1) _____

2) _____

3) _____

END OF FORM

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BIDDING AND CONTRACT REQUIREMENTS	<u>PAGE</u>
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Proposal Certification	PC-1
Good Faith Effort Plan.....	GFEP-5
SMWB Reporting Requirements	GFEP-5
Conflict of Interest	Form CIQ - 1
General Conditions of the Contract	GC-49
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Performance and Payment Bond.....	PB-1
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Request for Taxpayer Identification Number and Certification Form.....	W-9
Instructions for Completing the ACORD Certificate of Liability Insurance.....	ICS
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Technical Specifications	TS-2
Special Provisions to SAWS Specifications	

(Separate Documents)

TECHNICAL SPECIFICATIONS FOR WATER AND SANITARY SEWER
CONSTRUCTION (Latest Edition)

COSA STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
(Latest Edition)

TEXAS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR
CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES
(Latest Edition)

UTILITY EXCAVATION CRITERIA MANUAL (UECM) FIRST EDITION, GENERAL
REQUIREMENTS AND PROCEDURES FOR EXCAVATION IN CITY OF SAN ANTONIO

428863B.GN1

PUBLIC RIGHTS OF WAY, CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT
(Latest Edition)

END OF SECTION

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PW/WBG/428863.03
NOVEMBER 11, 2013
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NO.	DATE	BY	CHKD.
1107	11/07	JPM	JPM
1107	11/07	JPM	JPM
ADDENDUM NO. 1			
ADDENDUM NO. 2			

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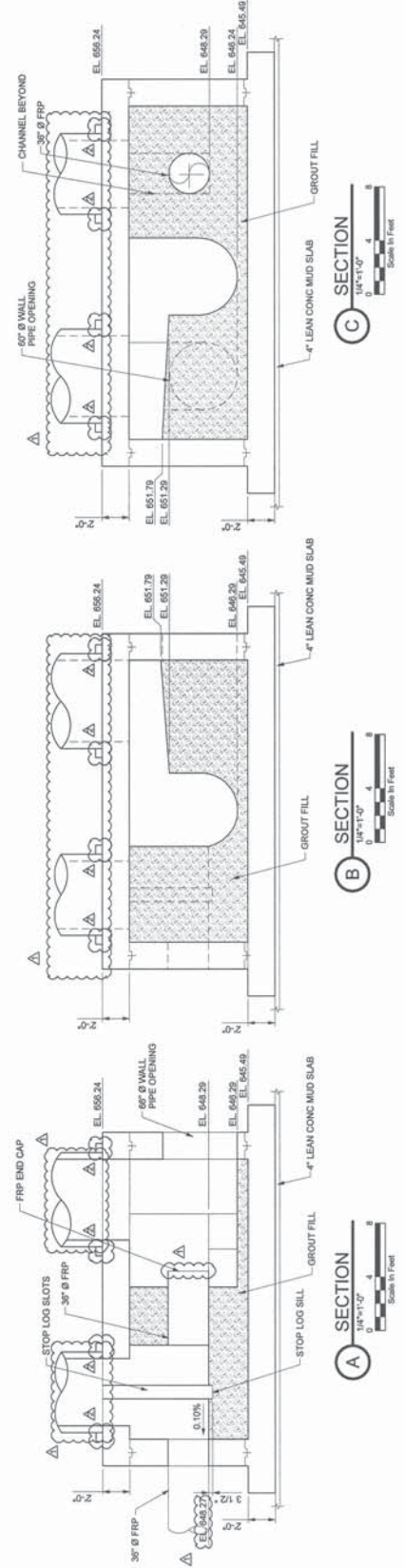
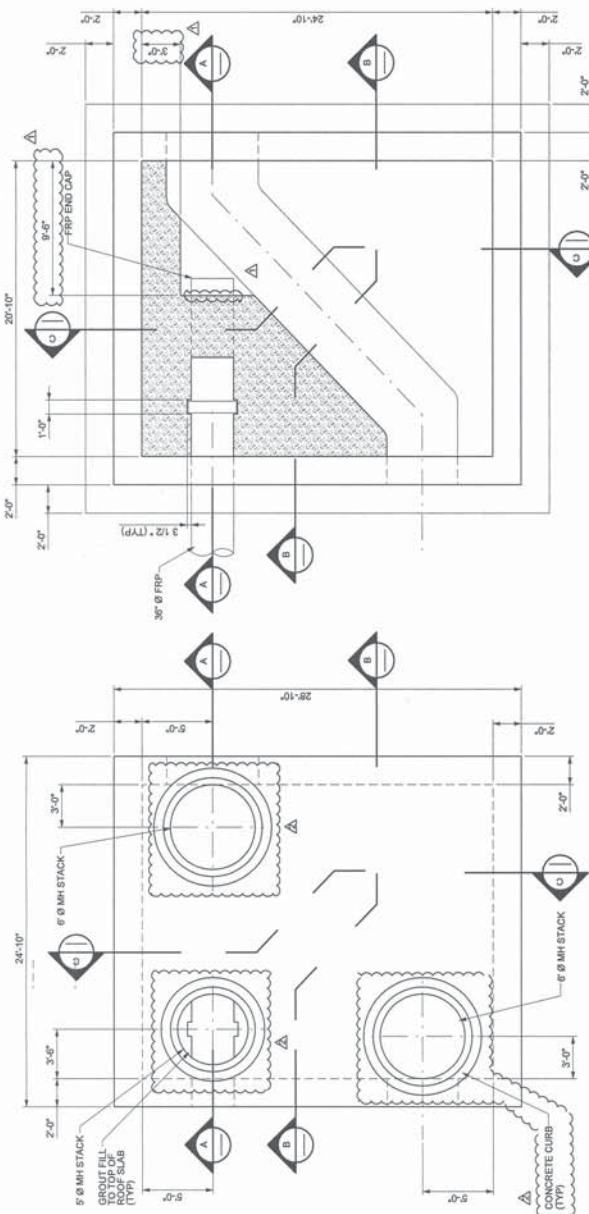
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WATER SYSTEM
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CORPORATION
1601 GULF Fwy
Houston, TX 77058

SAWS C-13
PACKAGE A
BROADWAY CORRIDOR PROJECT
STRUCTURAL - DOWNSTREAM
SIPHON DIVERSION STRUCTURE
Dwg No. A-5-03
Sheet 3B of 3B

- NOTES:
- FOR STRUCTURAL GENERAL NOTES AND ABBREVIATIONS SEE SHEETS A-5-01 AND A-5-02.
 - FOR ADDITIONAL REINFORCEMENT AT OPENINGS AND CORNERS, SEE STANDARD DETAILS SHEETS.
 - SEE CIVIL AND MECH SHEETS FOR DIMENSIONS AND INFORMATION NOT SHOWN.
 - CONTRACTOR TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN FIELD PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO COORDINATE ALL WALL, SLAB, SHEETS, ALL PIPE PENETRATIONS SHALL HAVE WALL FITTING PER PIPE MANUFACTURER.
 - ALL VERTICAL DIMENSIONS MEASURED FROM HIGH POINT UNCL.
 - INSTALL 4" MUD SLAB TO COVER BOTTOM OF ALL VERTICAL PIPE PENETRATIONS OR MATERIALS ALLOWED TO DESCEND TO OR BELOW.
 - GRAVEL IN ACCORDANCE WITH THE SPECIFICATIONS FOR SYPHON DIVERSION STRUCTURE.
 - PIPE PENETRATIONS TO BE COATED PER SAWS SPECIFICATION NO. 854.
 - REFER TO SHEET A-5-04 FOR INFORMATION ON REINFORCING.
 - STOP LOG GUIDE FRAME AND MANHOLE STACK.



066 RD Firm
428863



DESIGNED BY: JMW
CHECKED BY: GJ
DATE: OCT 2013
REV: 1-16-20

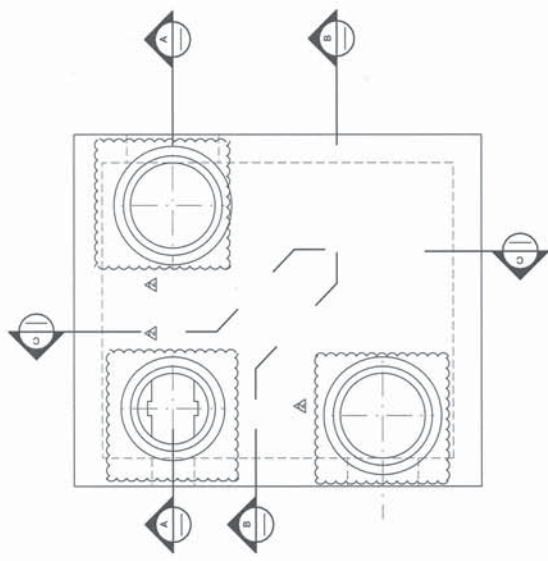
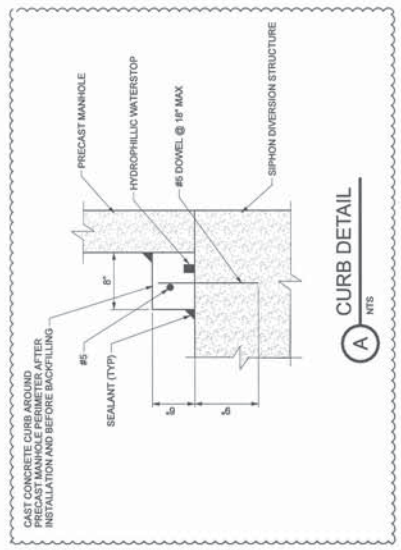
CH2MHILL
SAN ANTONIO WATER SYSTEM
CP&I, Inc.
1401 CHIEF OF HIGHWAY
GENERAL OFFICE

SAWS C-13
BROADWAY CORRIDOR PROJECT
PACKAGE A
STRUCTURAL - DOWNSTREAM
SIPHON DIVERSION STRUCTURE, REINFORCING

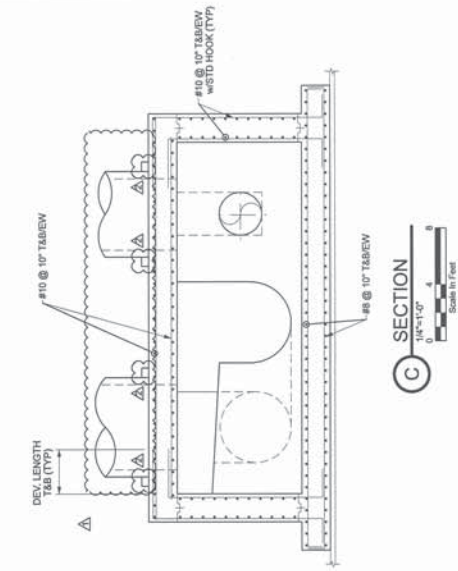
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Sheet 50 of 53

NO.	DATE	BY	APP
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1108	11/01	JMW	JMW

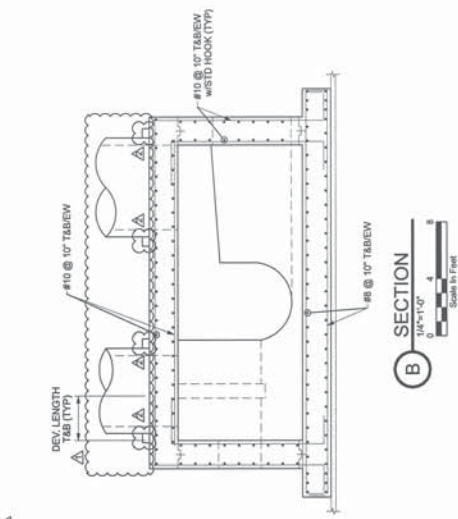
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 - CONTRACTOR TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN FIELD PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO COORDINATE ALL WALL SCAB SHEETS. ALL PIPE PENETRATIONS SHALL HAVE WALL FITTING PER PIPE MANUFACTURER.
 - ALL VERTICAL DIMENSIONS MEASURED FROM HIGH POINT.
 - INSTALL 4" MUD SLAB TO COVER BOTTOM OF SIPHON DIVERSION STRUCTURE. PROVIDE 1" MINIMUM ALLOWANCE BETWEEN SIPHON DIVERSION STRUCTURE AND MUD SLAB.
 - ENTIRE INSIDE OF BOX TO BE COATED PER SAWS SPECIFICATION (P. 8).



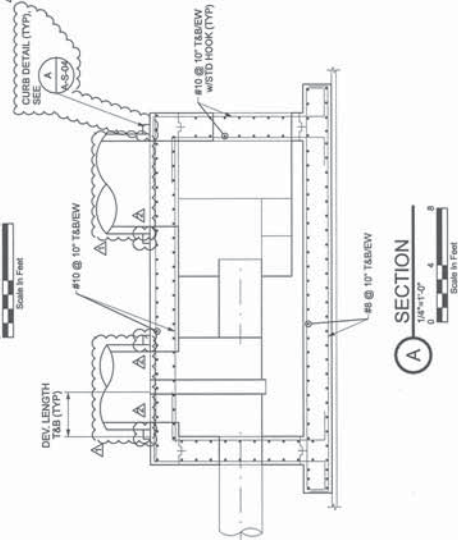
TOP PLAN
1/4" = 1'-0"
Scale In Feet



SECTION (C)
1/4" = 1'-0"
Scale In Feet



SECTION (B)
1/4" = 1'-0"
Scale In Feet



SECTION (A)
1/4" = 1'-0"
Scale In Feet

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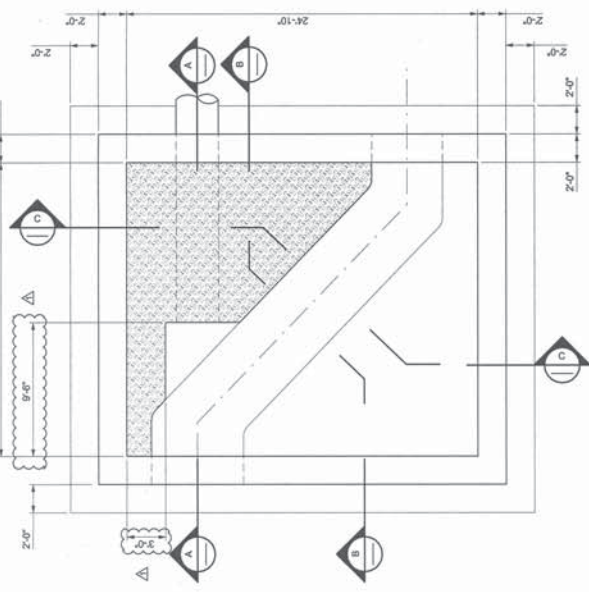


DATE: OCT 2013
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 2 JMW
 1 ADD. ADDRESS NO. 2
 11-01-2013

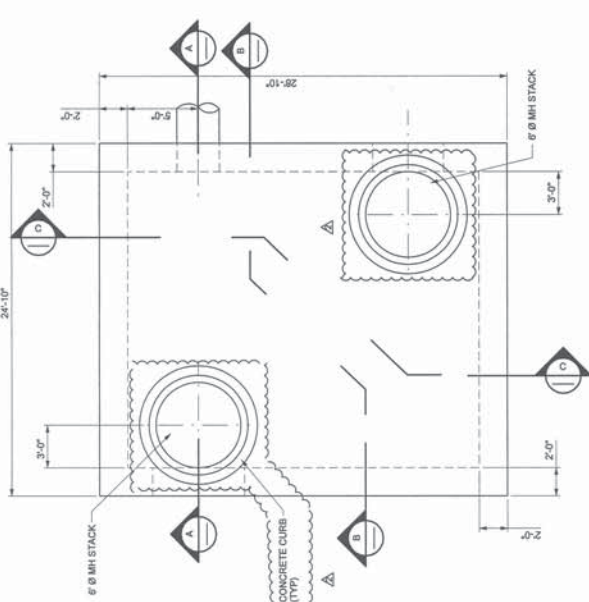
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 CP&H
 WATER SYSTEM
 SAN ANTONIO

STRUCTURAL - UPSTREAM
 SIPHON DIVERSION STRUCTURE
 PACKAGE A
 BROADWAY CORRIDOR PROJECT
 DWG NO. A-S-06
 SHEET - 11 of 13

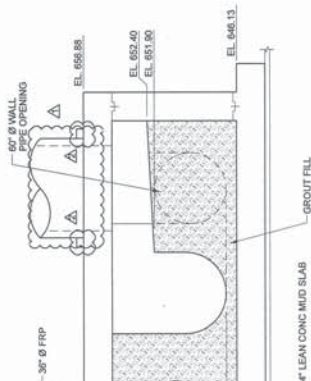
- NOTES:
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 - CONTRACTOR TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN FIELD PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO COORDINATE ALL WALL SLAB PENETRATIONS WITH ALL OTHER TRADES. ALL PENETRATIONS SHALL HAVE WALL FITTING PER PIPE MANUFACTURER.
 - ALL VERTICAL DIMENSIONS MEASURED FROM HIGH POINT UNO.
 - INSTALL 4" MUD SLAB TO COVER BOTTOM OF ALL PENETRATIONS AND ALL OTHER MATERIALS SHALL BE INSTALLED BEFORE MUD SLAB.
 - CONCRETE SHALL BE CURABLE AND SHALL BE PROTECTED FOR 14 DAYS.
 - ENTIRE INSIDE OF BOX TO BE COATED PER SAWS SPECIFICATION 10.03A.
 - REFER TO SHEET A-S-06 FOR INFORMATION ON REINFORCEMENT.
 - SEE STANDARD DETAILS FOR INFORMATION ON STOP LOGS, FRAME AND MANHOLE STACK.



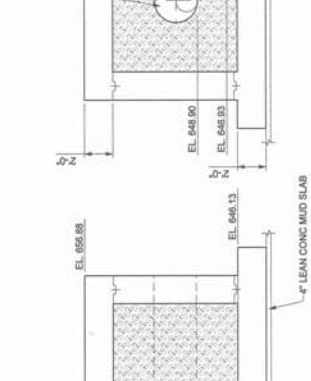
SECTIONAL PLAN
 1/4" = 1'-0"
 Scale In Feet



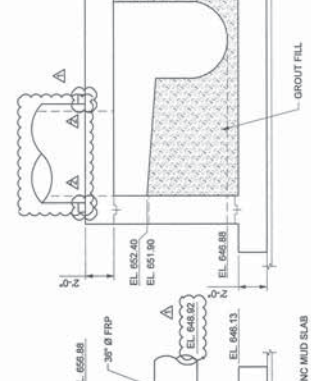
TOP PLAN
 1/4" = 1'-0"
 Scale In Feet



SECTION A
 1/4" = 1'-0"
 Scale In Feet



SECTION B
 1/4" = 1'-0"
 Scale In Feet



SECTION C
 1/4" = 1'-0"
 Scale In Feet

Appendum 2

428863



NO.	DATE	BY	APP.
1107	11/01	JMF	JMF
1107	ADDENDUM NO. 2	JMF	JMF
1107	ADDENDUM NO. 1	JMF	JMF

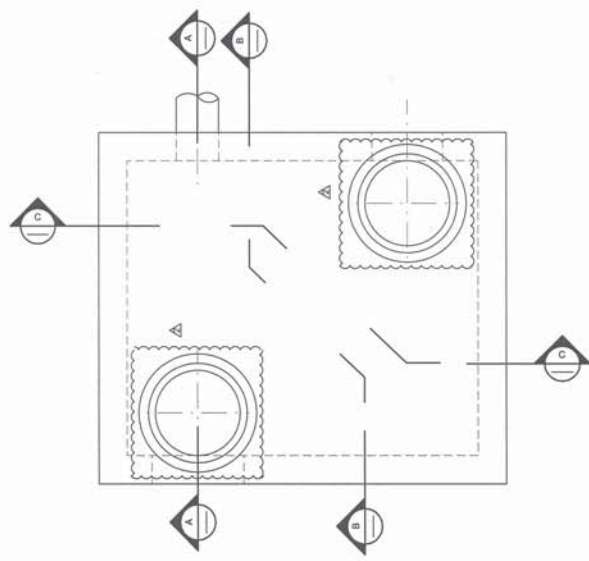
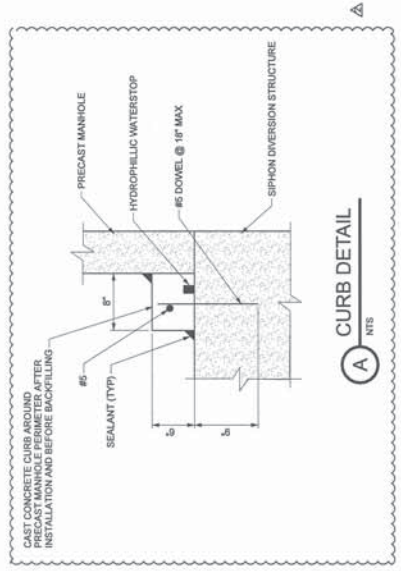
DATE: OCT 2013
 DESIGNED BY: JMF
 CHECKED BY: JMF
 SCALE: 1/8"=1'-0"

CH2MHILL
 CP&I, Inc.
 WATER SYSTEM

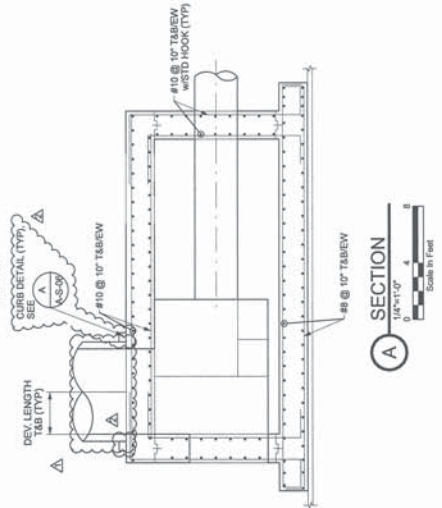
SAN ANTONIO
 BROADWAY CORRIDOR PROJECT
 PACKAGE A
 SAWS C-13
 STRUCTURAL - UPSTREAM
 SIPHON DIVERSION STRUCTURE, REINFORCING

SHEET 22 OF 23

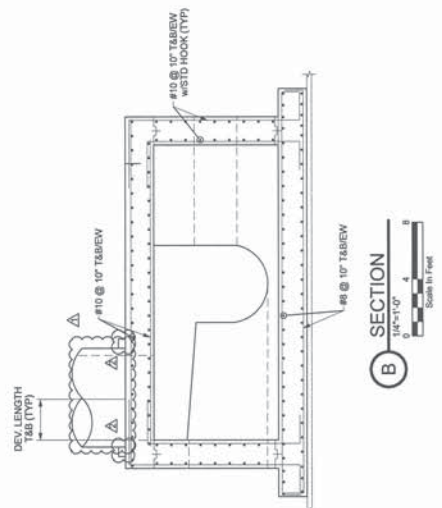
- NOTES:
- FOR STRUCTURAL GENERAL NOTES AND ABBREVIATIONS SEE SHEETS A-S-01 AND A-S-02.
 - FOR ADDITIONAL REINFORCEMENT AT OPENINGS AND CORNERS, SEE STANDARD DETAILS SHEETS.
 - SEE CIVIL AND MECH SHEETS FOR DIMENSIONS AND INFORMATION NOT SHOWN.
 - CONTRACTOR TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN FIELD PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO COORDINATE ALL WALL, SLAB SHEETS. ALL PIPE PENETRATIONS SHALL HAVE WALL FITTING PER PIPE MANUFACTURER.
 - ALL VERTICAL DIMENSIONS MEASURED FROM HIGH POINT JUNCTION.
 - INSTALL 4" MUD SLAB TO COVER BOTTOM OF SIPHON DIVERSION STRUCTURE. ALL MATERIAL IS ALLOWED TO DEGRADATE OR SETTLE.
 - GRAVEL IN ACCORDANCE WITH THE SPECIFICATION.
 - ENTIRE INSIDE OF BOX TO BE COATED PER SAWS SPECIFICATION NO. 10.



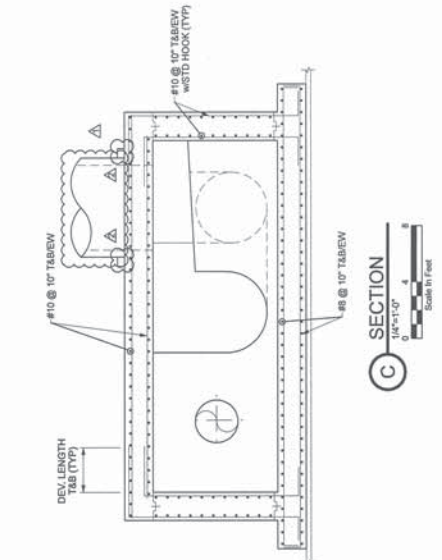
TOP PLAN
 1/4"=1'-0"
 Scale In Feet



SECTION A
 1/4"=1'-0"
 Scale In Feet

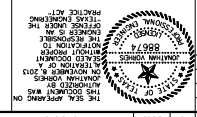


SECTION B
 1/4"=1'-0"
 Scale In Feet



SECTION C
 1/4"=1'-0"
 Scale In Feet

Design Firm
Job No.
42863

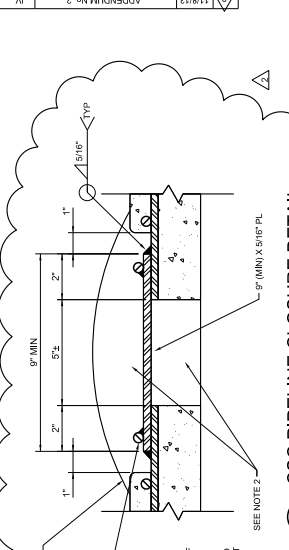


Checked By: SAG
Drawn By: MDH
Designed By: J.V.
Date: OCT 2013

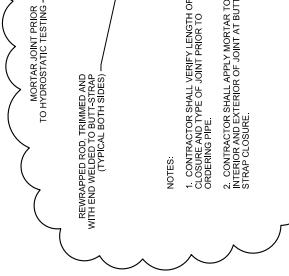
CH2MHILL
REG. NO.: F-3699
SAN ANTONIO
WATER SYSTEM

SAN ANTONIO
WATER SYSTEM
BROADWAY CORRIDOR PROJECT
PACKAGE A
CIVIL
DETAILS SHEET 3 OF 4

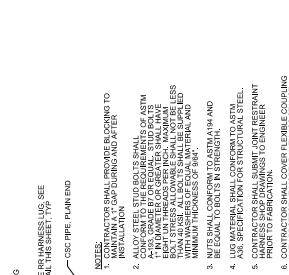
SAMS C 13
DWG No: A-D-13
Sheet 26 of 83



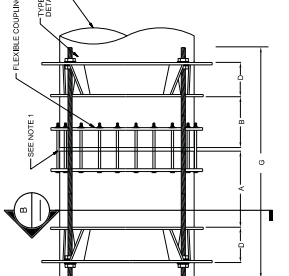
1 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



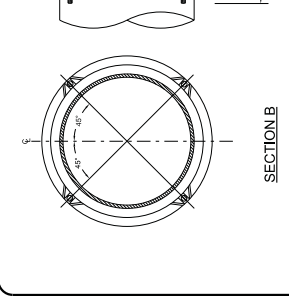
2 CSC PIPELINE CLOSURE DETAIL
NTS



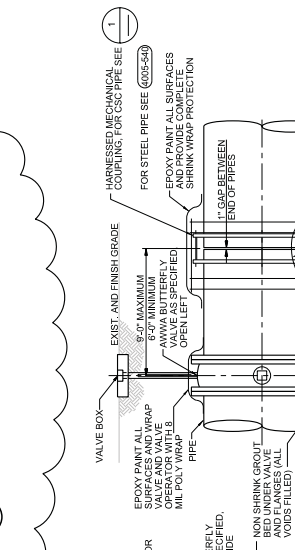
3 HARNESS LUG DETAIL FOR CSC PIPE
NTS



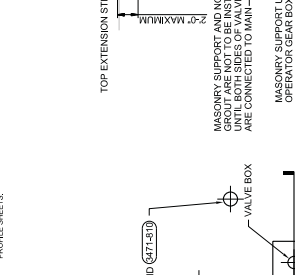
4 ISOLATION VALVE DETAIL
NTS



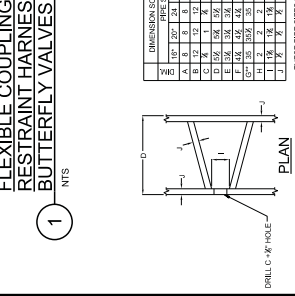
5 BUTTERFLY VALVE DETAIL FOR CSC PIPE
NTS



6 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



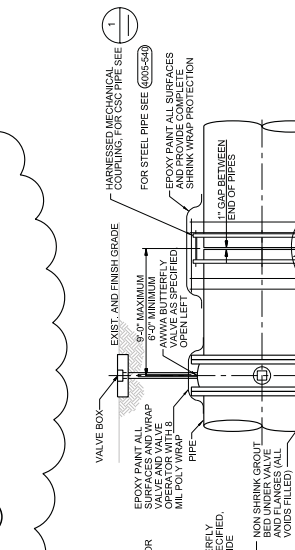
7 CSC PIPELINE CLOSURE DETAIL
NTS



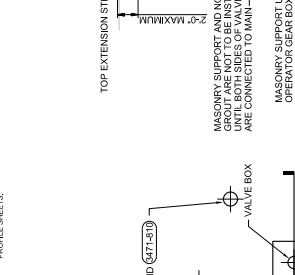
8 HARNESS LUG DETAIL FOR CSC PIPE
NTS



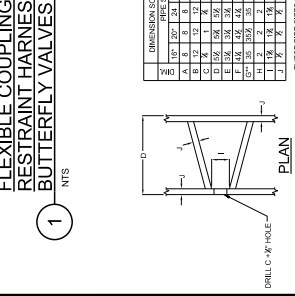
9 ISOLATION VALVE DETAIL
NTS



10 BUTTERFLY VALVE DETAIL FOR CSC PIPE
NTS



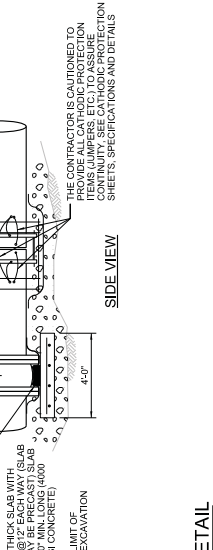
11 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



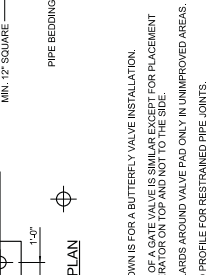
12 CSC PIPELINE CLOSURE DETAIL
NTS



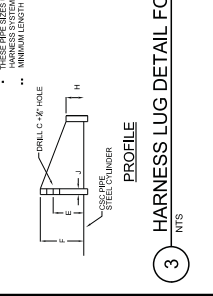
13 HARNESS LUG DETAIL FOR CSC PIPE
NTS



14 ISOLATION VALVE DETAIL
NTS



15 BUTTERFLY VALVE DETAIL FOR CSC PIPE
NTS



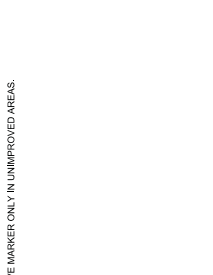
16 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



17 CSC PIPELINE CLOSURE DETAIL
NTS



18 HARNESS LUG DETAIL FOR CSC PIPE
NTS



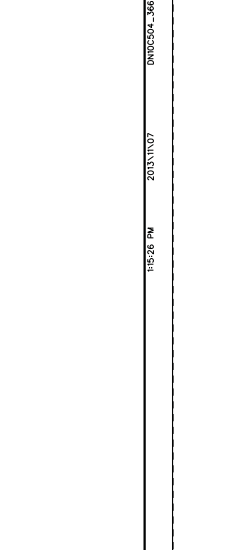
19 ISOLATION VALVE DETAIL
NTS



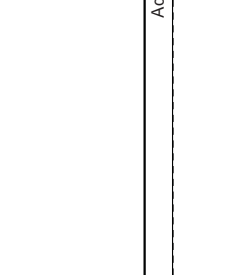
20 BUTTERFLY VALVE DETAIL FOR CSC PIPE
NTS



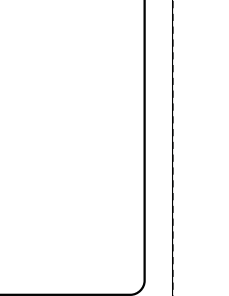
21 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



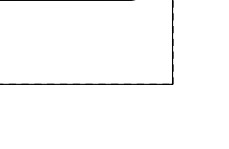
22 CSC PIPELINE CLOSURE DETAIL
NTS



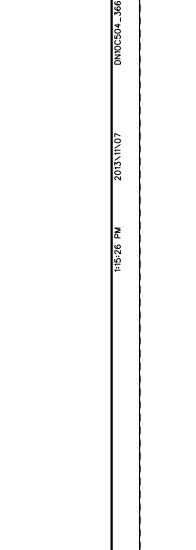
23 HARNESS LUG DETAIL FOR CSC PIPE
NTS



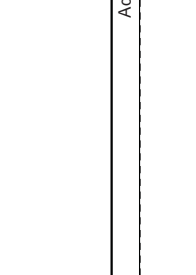
24 ISOLATION VALVE DETAIL
NTS



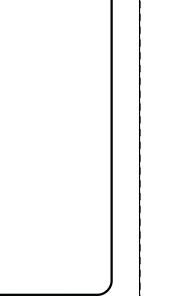
25 BUTTERFLY VALVE DETAIL FOR CSC PIPE
NTS



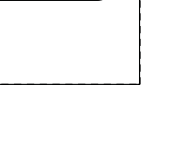
26 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



27 CSC PIPELINE CLOSURE DETAIL
NTS



28 HARNESS LUG DETAIL FOR CSC PIPE
NTS



29 ISOLATION VALVE DETAIL
NTS



30 BUTTERFLY VALVE DETAIL FOR CSC PIPE
NTS



31 FLEXIBLE COUPLING AND THRUST RESTRAINT HARNESS DETAIL FOR CSC PIPE
NTS



32 CSC PIPELINE CLOSURE DETAIL
NTS



33 HARNESS LUG DETAIL FOR CSC PIPE
NTS

APPENDIX A

REVISIONS

No.	Date	Revisions
1	11/8/13	APPENDIX A.2

Design Firm: CH2MHILL
Job No.: 42863
Checked By: SAG
Drawn By: MDH
Designed By: J.V.
Date: OCT 2013

REG. NO.: F-3699
SAN ANTONIO
WATER SYSTEM

SAN ANTONIO
WATER SYSTEM
BROADWAY CORRIDOR PROJECT
PACKAGE A
CIVIL
DETAILS SHEET 3 OF 4

SAMS C 13
DWG No: A-D-13
Sheet 26 of 83

APPENDIX A

REVISIONS

No.	Date	Revisions
1	11/8/13	APPENDIX A.2

Design Firm: CH2MHILL
Job No.: 42863
Checked By: SAG
Drawn By: MDH
Designed By: J.V.
Date: OCT 2013

REG. NO.: F-3699
SAN ANTONIO
WATER SYSTEM

SAN ANTONIO
WATER SYSTEM
BROADWAY CORRIDOR PROJECT
PACKAGE A
CIVIL
DETAILS SHEET 3 OF 4

SAMS C 13
DWG No: A-D-13
Sheet 26 of 83

Des. Ign. Firm
Job No. 428863

DATE: SEP 2012
DESIGNED BY: [Redacted]
CHECKED BY: [Redacted]
SCALE: ORIGINAL DIMENSIONS

CH2MHILL
SAN ANTONIO
WATER SYSTEM
REG. NO. 1-F-3699

CobbFendley
SURFACE UTILITY ENGINEERING

SAN ANTONIO
WATER SYSTEM

SAWS C-13 PROJECT
BROADWAY CORRIDOR
TEST HOLE
DATA SHEET

DWG NO. A.-D-13
Sheet_B4_of_B5

No.	Date	Revisions

CobbFendley
SURFACE UTILITY ENGINEERING

TEST HOLE DATA SHEET

Contract No. _____ Test Hole No. _____
 County Name _____ Utility _____
 District _____ City _____
 Project Limits _____ Meter _____

TEST HOLE DATA

1. HOLE NO. _____
 2. HOLE DEPTH _____
 3. HOLE DIAMETER _____
 4. HOLE LOCATION _____
 5. HOLE TYPE _____
 6. HOLE CONDITION _____
 7. HOLE OBSERVATIONS _____
 8. HOLE PHOTO SKETCH _____

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 SCALE: _____

CobbFendley
SURFACE UTILITY ENGINEERING

TEST HOLE DATA SHEET

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SURFACE UTILITY ENGINEERING

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CobbFendley
SURFACE UTILITY ENGINEERING

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CobbFendley
SURFACE UTILITY ENGINEERING

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 CHECKED BY: _____
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CobbFendley
SURFACE UTILITY ENGINEERING

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 8. HOLE PHOTO SKETCH _____

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 SCALE: _____

No.	Date	Revisions

CobbFendley
SURFACE UTILITY ENGINEERS

TEST HOLE DATA SHEET

County No.: **31000**
 County Name: **BROWARD**
 Project Name: **SAWS C-13 PROJECT**
 City: **BROWARD COUNTY**
 Utility: **WATER**
 Worksheet: **TEST HOLE DATA SHEET**

TEST HOLE DATA

A. Location: **1.00' R/W**
 B. Direction of Test Hole: **AS SHOWN**
 C. Diameter of Hole: **12" DIA**
 D. Location of Test Hole: **AS SHOWN**
 E. Material of Hole: **AS SHOWN**
 F. Material of Hole: **AS SHOWN**
 G. Material of Hole: **AS SHOWN**
 H. Material of Hole: **AS SHOWN**
 I. Material of Hole: **AS SHOWN**
 J. Material of Hole: **AS SHOWN**
 K. Material of Hole: **AS SHOWN**
 L. Material of Hole: **AS SHOWN**
 M. Material of Hole: **AS SHOWN**
 N. Material of Hole: **AS SHOWN**
 O. Material of Hole: **AS SHOWN**
 P. Material of Hole: **AS SHOWN**
 Q. Material of Hole: **AS SHOWN**
 R. Material of Hole: **AS SHOWN**
 S. Material of Hole: **AS SHOWN**
 T. Material of Hole: **AS SHOWN**
 U. Material of Hole: **AS SHOWN**
 V. Material of Hole: **AS SHOWN**
 W. Material of Hole: **AS SHOWN**
 X. Material of Hole: **AS SHOWN**
 Y. Material of Hole: **AS SHOWN**
 Z. Material of Hole: **AS SHOWN**

B.M. **100**
 Elevation: **100.00**
 Description: **AS SHOWN**
 Stationing: **AS SHOWN**
 Notes: **AS SHOWN**
 Remarks: **AS SHOWN**
 Date: **SEP 2012**
 Scale: **1" = 4'**

CobbFendley
SURFACE UTILITY ENGINEERS

TEST HOLE DATA SHEET

County No.: **31000**
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 Project Name: **SAWS C-13 PROJECT**
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CobbFendley
SURFACE UTILITY ENGINEERS

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 Elevation: **100.00**
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 Stationing: **AS SHOWN**
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CobbFendley
SURFACE UTILITY ENGINEERS

TEST HOLE DATA SHEET

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