

### ADDENDUM NO. 3

CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES

PROJECT NAME: **Houston Street – AT&T Parkway to IH 10**

DATE: 1/24/13

This addendum should be included in and be considered part of the plans and specifications for the name of this project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their bid.

CIMS PROJECT NO.: **40-00212**

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#### **UPDATES:**

- **Q: Where can we find the information on the dirty dirt at the drill shaft locations?**  
*A: Special Provision 006-030 provides a map of the impacted areas as part of the waste management plan.*
  
- **Q: Will all the dirty dirt from the drill shaft excavation be able to stay on the project and used for fill?**  
*A: Yes. Special Provision 006-030 has been modified and outlines the process.*
  
- **Q: We downloaded the cross sections off the CIMS website. However, we cannot use them. There are 30 sections on one sheet of paper. Can they be reloaded so that we can print them to scale and use them for our takeoffs?**  
*A: No. In the interest of time, the Contractor can obtain a hard copy (roll) of the cross sections from CDS Muery. A request can be made to John Dunivan at [jld@cdsmuery.com](mailto:jld@cdsmuery.com) or call 210-581-1111.*
  
- Special Provision 006-030 COSA – Control of Materials has been modified and reissued for the Project. See attachment for revised special provision and corresponding attachments showing the areas of impacted soils and the estimated quantities.
  
- Special Provision 007-1179 COSA – Legal Relations and Responsibilities to the Public will be added to the Project. See attachment.
  
- Special Provision 400-030 COSA – Excavation and Backfill for Structures will be added to the Project. See attachment.
  
- Special Specification 1134 COSA – Impermeable Liner will be added to the Project but will not be paid for directly but considered subsidiary to Item 400 – Excavation and Backfill for Structures. See attachment for specification.

- Special Specification 1135 COSA – Water Tank and Pump will be added to the Project and paid for as 5 – 1,000 gallon units. See attachment for specification and revised Bid Proposal Form for added item.
- Special Specification 1136 COSA – Steel or Polyethylene Mobil Water Storage Tank will be added to the Project and paid for as 1 – Each. See attachment for specification, revised SWPPP Summary Sheet, and revised Bid Proposal Form for added item.

**ATTACHMENTS:**

- **Modified Special Provision 006-030 COSA & corresponding attachments**
- **Special Provision 007-1179 COSA**
- **Special Provision 400-030 COSA**
- **Special Specification 1134 COSA – Impermeable Liner**
- **Special Specification 1135 COSA – Water Tank and Pump**
- **Special Specification 1136 COSA – Steel or Polyethylene Mobil Water Storage Tank**
- **Revised SWPPP Summary Sheet**
- **Revised Bid Proposal Form**

**CITY OF SAN ANTONIO  
DEPARTMENT OF CAPITAL IMPROVEMENTS MANAGEMENT SERVICES  
CONTRACT SERVICES DIVISION**

RECEIPT OF ADDENDUM NUMBER(S) 3 IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF Houston Street: AT&T Parkway to IH-10 FOR WHICH BIDS WILL BE OPENED ON TUESDAY, January 29, 2013 AT 2:00 P.M.

**THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.**

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

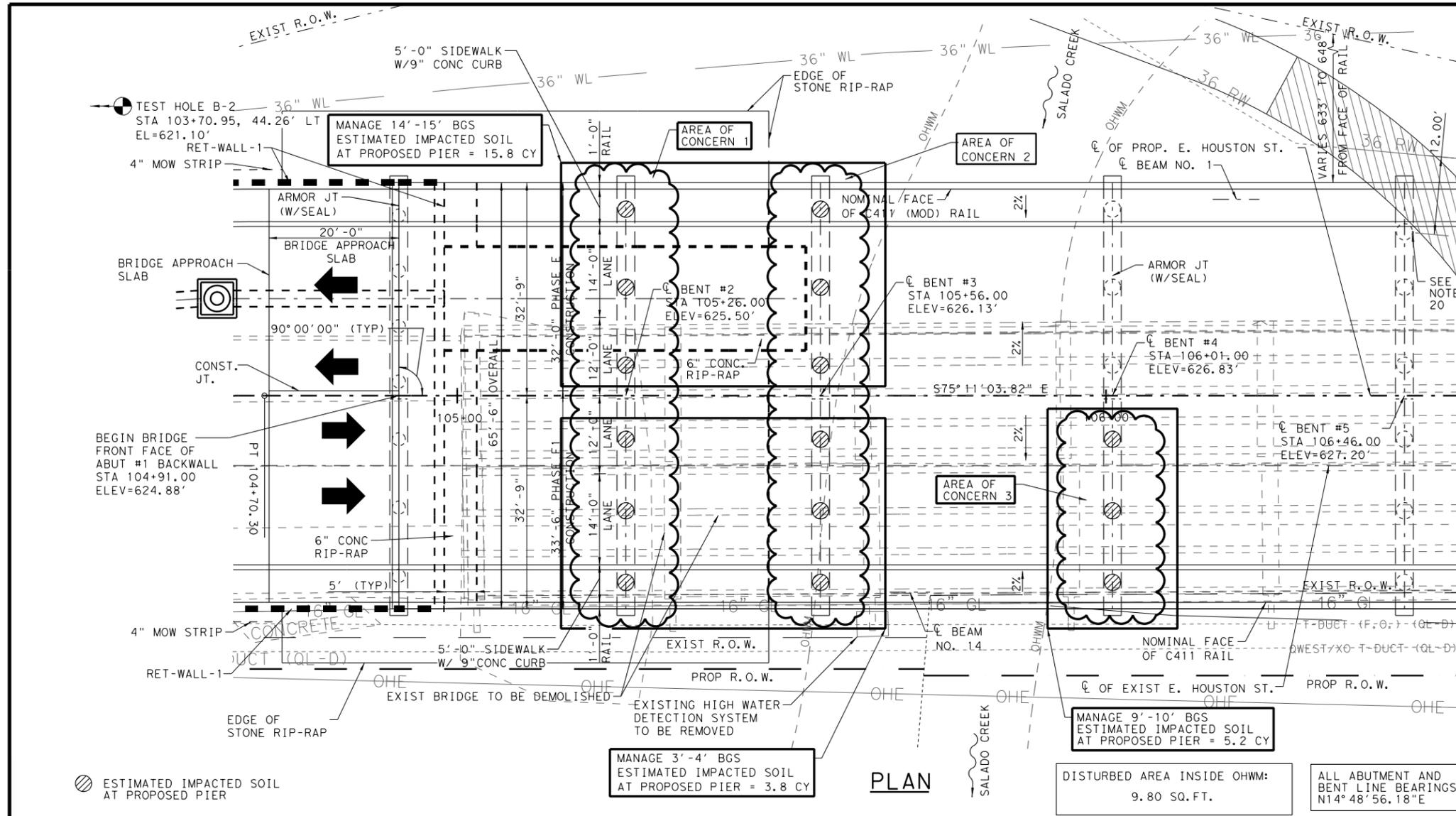
Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name/Title

- GENERAL NOTES:**
- DESIGNED IN ACCORDANCE WITH 4TH EDITION AASHTO LRFD SPECIFICATIONS AND INTERIM REVISIONS THERETO.
  - ALLOWANCE FOR FUTURE WEARING SURFACE: 25 PSF.
  - ALL DIMENSIONS ARE EITHER HORIZONTAL OR VERTICAL AND MUST BE CORRECTED FOR GRADE AND CROWN.
  - ALL EDGES OF SLAB ARE PARALLEL AND CONCENTRIC TO THE CENTER LINE OF E. HOUSTON STREET.
  - REFER TO ABUTMENT DETAIL SHEETS AND BENT DETAIL SHEETS FOR CALCULATED DRILL SHAFT LOADS.
  - SEE "BRIDGE CONSTRUCTION SEQUENCE" AND "BRIDGE TYPICAL SECTIONS" SHEETS FOR TYPICAL BRIDGE SECTIONS.
  - CONTRACTOR SHALL NOT ALLOW ANY CONSTRUCTION MATERIALS OR REMOVED MATERIALS TO DISCHARGE INTO THE ORDINARY HIGH WATER MARK DURING ALL PHASE OF THE CONSTRUCTION.
  - SEE ROADWAY GRADING SHEET FOR RIPRAP CONSTRUCTION DETAILS.
  - THE CONTRACTOR, AT THE COMPLETION OF CONSTRUCTION ACTIVITIES SHALL FINISH AND RESTORE THE CREEK BED TO ITS ORIGINAL CONDITION.
  - SEE RETAINING WALL PLAN/PROFILE SHEETS FOR RETAINING WALL DETAILS.
  - SEE BORING LOG SHEET FOR BORE HOLES INFORMATION.
  - SEE "BRIDGE APPROACH SLAB, BAS-A" FOR BRIDGE APPROACH SLAB DETAILS.
  - REMOVAL OF EXISTING CONCRETE BRIDGE SHALL BE INCLUDED IN TXDOT STANDARD SPECIFICATIONS ITEM 496.
  - PROVIDE COVER PLATE OVER ALL EXPANSION JOINTS AS SHOWN IN "BRIDGE SIDEWALK EXPANSION JOINT COVER PLATE, BS-EUCP" SHEET.
  - PROVIDE 3" EXPANSION JOINT BETWEEN CONCRETE COLUMN AND CONCRETE RIPRAP.
  - CONTRACTOR SHALL SUBMIT BRIDGE CONSTRUCTION METHOD(S) FOR ENGINEER APPROVAL PRIOR TO CONSTRUCTION. IF TEMPORARY RELOCATING THE OVERHEAD ELECTRICAL LINE IS AN OPTION, CONTRACTOR SHALL COORDINATE WITH CPS AND UTILITY COMPANIES FOR TEMPORARY RELOCATION DURING CONSTRUCTION AND RESTORING BACK AFTER CONSTRUCTION. ALL COST OF CONSTRUCTION METHODS SHALL BE INCLUDED IN ITEM 100 "PREPARING RIGHT OF WAY".
  - REMOVAL OF EXISTING CONCRETE RIP-RAP UNDER THE EXISTING BRIDGE SHALL BE CONSIDERED SUBSIDIARY TO ITEM 100, "PREPARING RIGHT OF WAY".
  - SEE "RAIL DETAILS" SHEET FOR RAIL DETAILS ON BRIDGE.
  - CONTAMINATION WAS ENCOUNTERED AT A DEPTH OF 2 FT TO 14 FT BELOW GROUND, CONTRACTOR SHALL FOLLOW WASTE MANAGEMENT PLAN FOR SOIL AND UNDERGROUND WATER HANDLING AND TREATMENTS.
  - IF CONSTRUCTION OF DRILL SHAFT IS AFTER THE TRAIL WAS BUILT, THE CONTRACTOR NEEDS TO RESTORE THE TRAIL TO ITS ORIGINAL CONDITION.

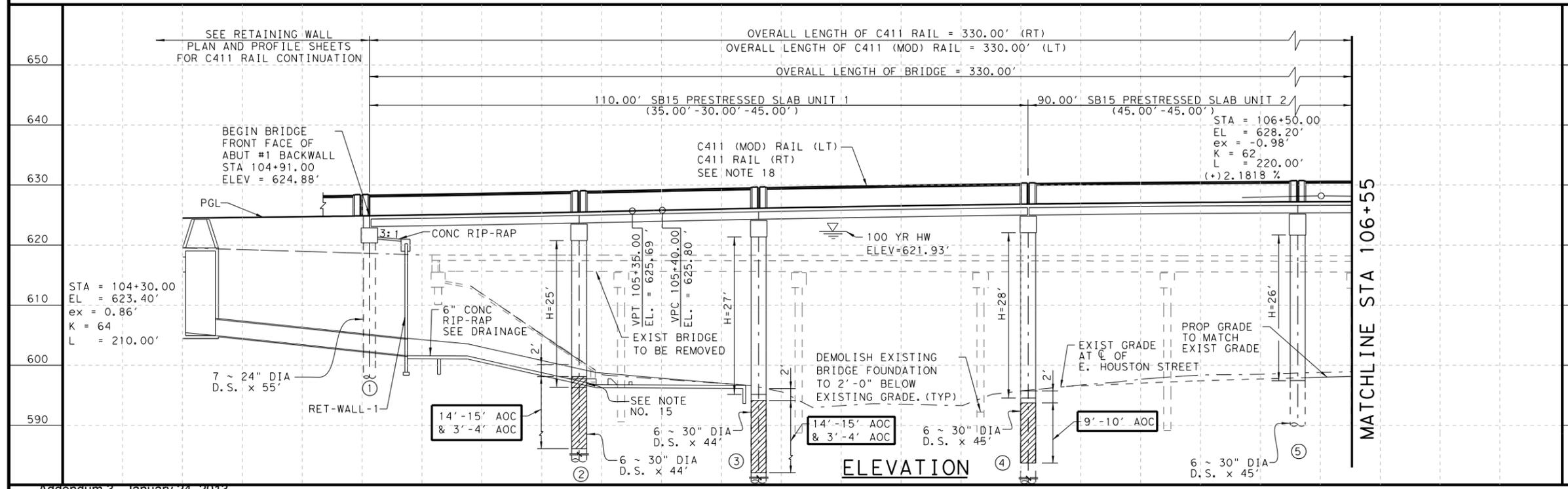
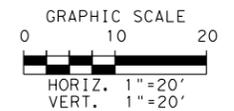
MATCHLINE STA 106+55



**PLAN**

BRIDGE NBI NO.: 15-015-B197-70-006  
 DESIGN SPEED = 45 MPH  
 ADT = 10,700 VPD  
 FUNCTIONAL CLASS: SECONDARY ARTERIAL TY B

DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES  
 TAO WANG, P.E.  
 103820  
 TEXAS SERIAL NO.  
 MARCH 25, 2011  
 DATE



**ELEVATION**

MATCHLINE STA 106+55

HL93 LOADING

REV NO.	DATE	DESCRIPTION	BY

**HOUSTON STREET**

**Figure 1  
BRIDGE LAYOUT  
STA 104+91 TO STA 106+55**

SHEET 1 OF 2

**CITY OF SAN ANTONIO  
DEPARTMENT OF CAPITAL  
IMPROVEMENTS MANAGEMENT SERVICES**

**TEXAS DEPARTMENT  
OF TRANSPORTATION**

**UNINTECH CONSULTING ENGINEERS, INC.**  
 2431 E. EVANS ROAD  
 SAN ANTONIO, TEXAS 78259  
 PHONE: (210) 641-6003 FAX: (210) 641-8279 WWW.UNINTECH.COM

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	SHEET NO.	
6			
STATE	DIST.	COUNTY	
TX	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	481	E. HOUSTON ST.

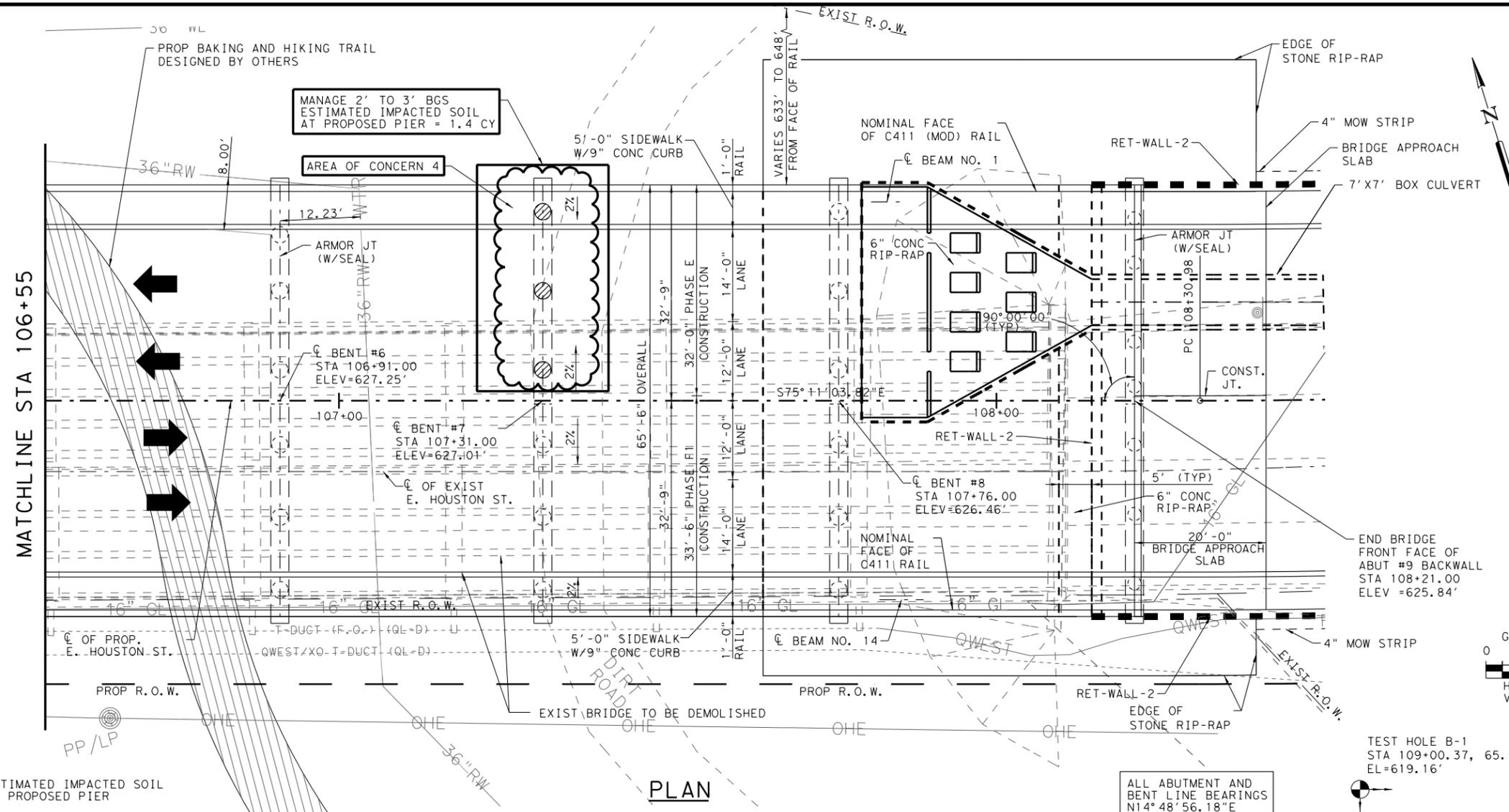
\$DATE\$ \$FILE\$

Addendum 3 - January 24, 2013

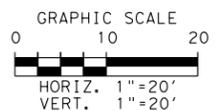
105+00

106+00

NOTES:  
1. SEE SHEET 1 OF 2 FOR GENERAL NOTES.



BRIDGE NBI NO.: 15-015-B197-70-006  
DESIGN SPEED = 45 MPH  
ADT = 10,700 VPD  
FUNCTIONAL CLASS: SECONDARY ARTERIAL TY B



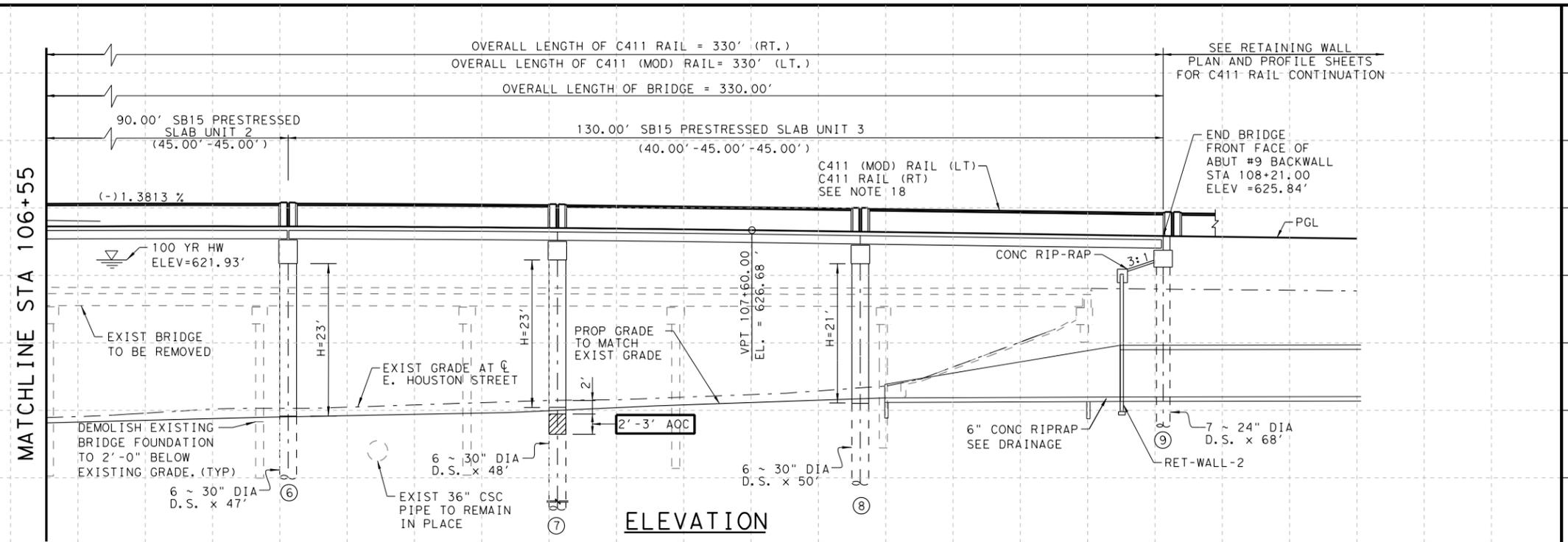
DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES  
TAO WANG, P.E.  
103820  
TEXAS SERIAL NO.  
MARCH 25, 2011  
DATE

TEST HOLE B-1  
STA 109+00.37, 65.53' RT  
EL=619.16'

ALL ABUTMENT AND BENT LINE BEARINGS  
N14°48'56.18"E

ESTIMATED IMPACTED SOIL AT PROPOSED PIER

PLAN



ELEVATION

REV NO.	DATE	DESCRIPTION	BY

HOUSTON STREET  
Figure 2  
BRIDGE LAYOUT  
STA 106+55 TO STA 108+21  
SHEET 2 OF 2

CITY OF SAN ANTONIO  
DEPARTMENT OF CAPITAL  
IMPROVEMENTS MANAGEMENT SERVICES  
TEXAS DEPARTMENT  
OF TRANSPORTATION

UNINTECH CONSULTING ENGINEERS, INC.  
2431 E. EVANS ROAD  
SAN ANTONIO, TEXAS 78259  
PHONE: (210) 641-6003 FAX: (210) 641-8279 WWW.UNINTECH.COM

FED. RD. DIV. NO. 6	FEDERAL AID PROJECT NO.	SHEET NO.
STATE TX	DIST. SAT	COUNTY BEXAR
CONT. 0915	SECT. 12	JOB 481
HIGHWAY NO. E. HOUSTON ST.		

4/12/2011 10:13:12 AM T: 08-138 Houston St., Bridge Over Salado Creek (CoSA) \BRIDGE\BRIDGE-PP02.dgn

Addendum 3 - January 24, 2013

107+00

108+00

FIGURE NO.3

QUANTITY OF EXCAVATION IMPACTED BY MEDIA

Houston Street Bridge Areas of Concern

ESTIMATED IMPACT QUANTITIES

CONSTRUCTION ITEM	CL Bent Number	@ Station Number	Piers impacted	DEPTH BELOW 2' UNDER GROUND SURFACE (FT)	IMPACTED AREA (ft)	EST. IMPACT AREA (CY)	NOTES
Piers							
AOC 1 B-12 (14'-15')	#2	North of Sta. No. 105+26.00	3	14-15	1	47.4	14'-15' BELOW GROUND SURFACE(BGS); FIELD SCREENING
AOC 1 B-12 (3'-4')	#2	South of Sta. No. 105+26.00	3	3-4	1	11.4	3'-4' BGS; Field screening
AOC 2 B-12 (14'-15')	#3	North of Sta.No. 105+56.00	3	14-15	1	47.4	14'-15 BGS; Field screening
AOC 2 B-12 (3' to 4')	#3	South of Sta.No. 105+56.00	3	3-4	1	11.4	3'-4' BGS; Field screening
AOC 3 B-5 (9'-10')	#4	South of Sta No. 106+01.00	3	9-10	1	15.6	9'-10' BGS; Field screening
AOC 4 B-9 (2'-3')	#7	North of Sta No. 107+31.00	3	2-3	1	4.2	2'-3' BGS; Field screening
						137.4	EXCAVATED VOLUME (IN-PLACE)
						199.23	LOOSE VOLUME (EXPANSION FACTOR OF 1.45)

**SPECIAL PROVISION****007—1179--CoSA****Legal Relations and Responsibilities to the Public**

For this project, Item 007, “LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC,” of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 7.1, Laws to be Observed, the first paragraph is supplemented by the following:

The work includes potential exposure to soil contaminants. Prepare and follow a Site Health and Safety Plan (SHSP) that has been written in accordance with and in fulfillment of Occupational Safety and Health Administration (OSHA) regulations, and all other applicable laws, ordinances and regulations. The Contractor shall be solely responsible for their SHSP and compliance with its requirements in performing the work. A copy of the SHSP, including any revisions or changes, and any required documentation shall be maintained on site and be available for review by the Engineer. Upon request the SHSP, including any revisions or changes, and any required documentation shall be provided to the Engineer.

**SPECIAL PROVISION****400---030--CoSA****Excavation and Backfill for Structures**

For this project, Item 400, "Excavation and Backfill for Structures," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 400.2. Excavation,** is supplemented by the following:

**400.2.(1)(a) Disposal of Excavation,** is supplemented by the following:

All materials identified from the contaminated areas shown in the plans and outlined in the Waste Management Plan for the project shall not become the property of the Contractor.

Refer to Special Provision "Important Notice to Contractor's (Contamination Information)" for more details.

**400.2.(1)(e) Dewatering of Excavation Area,** is supplemented by the following:

In areas of designated contamination, any removal of water from the excavation shall be performed by the Contractor. The contractor shall supply an adequate temporary storage tank for dewatering activities at the site. The contractor shall pump the water into the tank. CoSA representatives shall be responsible for sampling, analysis, and ultimate disposal of the water. The contractor shall be responsible for placing pre-cast members, or pipe on a dry firm bed in coordination with CoSA or their designated representatives by any method approved.

Refer to Special Provision "Important Notice to Contractor's (Contamination Information)" for more details.

**Article 400.7. Measurement** is voided and replaced by the following:

**400.7. Measurement.** Except for Excavation and Backfill for Structure, excavation quantities shown on the plans are for information purposes only. Cutting and restoring of pavement will be measured by the square yard. Excavation and Backfill for Structure and Cement Stabilized Backfill will be measured by the cubic yard.

This is a plans quantity measurement Item and the quantity to be paid for will be that quantity shown in the proposal and on the "Estimate and Quantity" sheet of the contract plans, except as may be modified by Article 9.8. If no adjustment of quantities is required, additional measurements or calculations will not be required.

**SPECIAL SPECIFICATION****1134--CoSA****Impermeable Liner**

- 1. Description.** This Item shall govern for the furnishing and installation of the impermeable liner (geomembrane) shown on the plans. The geomembrane shall be high-density polyethylene (HDPE) membrane. The geomembrane shall be capable of preventing the migration of petroleum products (benzene, toluene, ethylbenzene, xylene) from soils excavated in contaminated areas. HDPE membrane shall be used in areas designated as contaminated soil stockpile, as shown on the plans. It shall also be used to wrap storm sewer pipe, box culverts, inlets, manholes, junction boxes, utility pipes and manholes, in contaminated areas, as shown on the plans.
- 2. Materials.** Geomembrane.
  - (1)** The geomembrane liner shall be new and comprised of HDPE material manufactured of first-quality products designed and manufactured specifically for the purpose of liquid containment in hydraulic structures. The nominal thickness of the HDPE membrane shall be 0.039 inch.
  - (2)** At the time of award, submit a certification from the manufacturer of the sheeting, stating that the sheeting meets physical property requirements for the intended application.
  - (3)** The surface of the geomembrane shall not have striation, roughness, pinholes or bubbles and shall be manufactured free of holes, blisters, undispersed raw materials, or any sign of contamination by foreign matter. Any defects shall be reported immediately after discovery and replaced or repaired at the Contractor's expense. If repair is required, extrusion fusion welding technique shall be performed in accordance with the manufacturer's recommendations.
  - (4)** The geomembrane shall be manufactured in a minimum of 22 ft. seamless widths. Labels on the roll shall identify the thickness, length, width and manufacturer's batch and roll number. There shall be no factory seams.
  - (5)** The geomembrane rolls shall meet the minimum values shown in the following chart:

## Geomembrane Specifications \*

Property	Value	Test Method
Nominal Thickness	0.039 in.	
Actual Thickness (Min)	0.035 in.	ASTM D1593
Density (Min)	0.033 oz/cc	ASTM D1505
Melt Flow Index (Max)	0.014 oz/10 min	ASTM D1238 Condition E (374°F, 4.76 lb)
Tensile Properties (Typical)		ASTM D638 Type IV Dumb-bell at 2.0 in/min
Tensile Strength at Break	63.1 (lb/in width)	
Tensile Strength at Yield	36.2 (lb/in width)	
Elongation at Break	750%	
Elongation at Yield	13%	
Tear Resistance Initiation (Typical)	28.0 lb	ASTM D1004 Die C
Low Temperature Brittleness (Typical)	-94°F	ASTM D746 Procedure B
Dimensional Stability Change Each Direction (Max)	± 1%	ASTM D1204 212 F, 1hr.
Environmental Stress Crack. (Min)	2,000 Hours	ASTM D1693 (10% Igepal, 60 C)
Puncture Resistance (Typical)	59.5 lb	FTMS 1010 Method 2065
Coefficient of Linear	0.0002	ASTM D696
Thermal Expansion (Typical)	in/in F	
Thermal Stability Oxidative Induction Time (OIT)	2,000 Minutes	ASTM D3895 266 F, 800.03 PSI Oxygen (Min)
Carbon Black	2-3 %	

\* Note: Minimum values, unless otherwise specified, are the average roll values as reported by the specified test methods.

- (6) **Raw Material.** All compound ingredients of the HDPE materials shall be randomly sampled on delivery to the HDPE manufacturing plant to ensure compliance with the required specifications. Tests to be carried out shall include Density ASTM D1505 and Melt Index ASTM D1238, Condition E.
- (7) **Manufactured Roll Goods.** Samples of the production run shall be taken and tested according to ASTM D638 to ensure that tensile strength at yield and break, and elongation at yield and break meet the minimum specifications. A quality control certificate shall be issued with the material.
- (8) All welding material shall be of a type recommended by the manufacturer.
3. **Construction Methods.** The liner method system shall consist of a layer of 0.039 in. HDPE geomembrane. The Engineer reserves the right to inspect the manufacturer's or the fabricator's facilities to ensure compliance with these specifications.
- (1) **Area Subgrade Preparation.** Surfaces to be lined shall be smooth and free of all rocks, stones, sticks, roots, sharp objects, or debris of any kind and shall be approved prior to liner installation. The surface shall provide a firm, unyielding foundation for the geomembrane with no sudden, sharp or abrupt changes or break in grade, except as

shown on the plans. Bends indicated on the plans shall be field fabricated using Manufacturer's recommendation and approved by the Engineer.

No standing water or excessive moisture shall be allowed. Certify in writing that the surface on which the geomembrane is to be installed is acceptable before commencing work.

- (2) **Weather Conditions.** Geomembrane deployment shall proceed between ambient temperatures of 32°F to 105°F. Placement can proceed below 32°F only after it has been verified by the Engineer that the material can be seamed according to the specification. Geomembrane placement shall not be done during any precipitation, in the presence of excessive moisture (e.g., fog, rain, dew) or in the presence of excessive winds, as determined by the Engineer.
- (3) **Method of Placement.** The liner shall not be installed with any equipment or tools than can damage the liner materials by handling, trafficking or other means. The method used to unroll the liner panels shall not cause scratches or crimps in the geomembrane and shall not damage the supporting soil. Panels of geomembrane shall be placed using a method that shall minimize wrinkles.
- (4) **Field Seams.** Individual panels of geomembrane shall be laid out and overlapped by a maximum of 4 in. for an extrusion weld prior to welding or 5 in. for a hot wedge weld prior to welding. Extreme care shall be taken in the preparation of the areas to be welded. The area to be welded shall be cleaned and prepared according to the procedures of the material manufacturer. All sheeting shall be welded together by means of integration of the extrudate bead with the lining material. The composition of the extrudate shall be identical to the lining material, or all sheeting shall be welded together using the hot wedge welding system.

The welding equipment used shall be capable of continuously monitoring and controlling the temperatures in the zone of contact where the machine is actually fusing the lining material to ensure that changes in environmental conditions will not affect the integrity of the weld. No "fish mouths" shall be allowed within the seam area. Where "fish mouths" occur, the material shall be cut, overlapped, and an overlap extrusion weld shall be applied.

- (5) **Field Seam Testing/Quality Control.** The Contractor shall employ on-site physical non-destructive testing on 100% of all welds.

A quality-control technician furnished by the Contractor shall inspect each seam. Any area showing a defect shall be marked and repaired in accordance with HDPE repair procedures.

A test weld 3 ft. long from each welding machine shall be run each day prior to liner welding and under the same conditions as exist for the liner welding. The test weld shall be marked with date, ambient temperature, and welding machine number. Samples of weld 1/2 in. to 3/4 in. wide shall be cut from the test weld and pulled by hand in peel. The weld shall not peel. Seams shall exhibit a film tear bond. The weld sample shall be kept for subsequent testing on laboratory tensometer equipment in accordance with the applicable ASTM standards. Random weld samples may be

removed from the installed welded sheeting at a frequency to be approved by the Engineer (example 1/46 ft. of weld).

4. **Measurement and Payment.** The impermeable liner will not be measured or paid for directly. All material, equipment, and labor required at the Stockpile location and the complete installation for wrapping Storm Sewer pipe, box culverts, inlets, manholes, junction boxes, utility pipes, and manholes, and at stockpile location, as specified, shall be considered subsidiary to Item 400, "Excavation and Backfill for Structures".

## SPECIAL SPECIFICATION

### 1135--CoSA

#### Water Tank and Pump

- 1. Description.** This Item shall govern for the furnishing and operation of vacuum removal or pumping of contaminated groundwater and intrusion water encountered during construction activities within the designated contamination area into a portable storage tank and transported to an on-site storage tank provided by the Contractor.
- 2. Materials.** The pump or vacuum device shall utilize a diaphragm or non-sparking system capable of pumping or withdrawing a minimum of 30 gal. per min. The pump or vacuum device shall be equipped with a meter capable of measuring the amount of water withdrawn or pumped in and out of the portable tank by the gallon.

The tank must hold a minimum of 450 gal. and be constructed of a material that is non reactive to the contaminants that may be encountered as indicated in the Waste Management Plan Report.

The portable tank and pump/vacuum system shall be either truck or trailer mounted.

- 3. Measurement.** This Item will be measured by the 1,000 gallons delivered to the approved on-site storage tank. Generate a haul ticket indicating the pump meter reading before groundwater is drawn, after the groundwater is pumped into the portable tank and a reading after the groundwater has been relocated to the storage tank.
- 4. Payment.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Water Tank and Pump". This price shall be full compensation for furnishing all equipment, water tank, pump/vacuum system, meters, pumping into the tank, delivering the water to the approved storage tank and for all labor, tools equipment and incidentals necessary to complete the work.

## SPECIAL SPECIFICATION

### 1136--CoSA

#### Steel or Polyethylene Mobile Water Storage Tank

- 1. Description.** This Item shall govern for the furnishing and operation of a steel or polyethylene mobile water storage tank to provide adequate temporary storage for construction water or ground water contaminated with petroleum hydrocarbons that is encountered during construction activities, within the designated contamination area. The tank shall be placed within the project limits or at the temporary stockpile storage site shown on the plans as approved. Tanks shall be certified clean upon delivery. Locks for all intake and discharge points shall be supplied with keys. All intake and discharge points shall be closed and locked when not in use.
- 2. Materials.**

**Type I.** A Type I tank shall be a 21,000 gal. steel water tank not to exceed 8.5 ft. in width and shall not exceed the tank towering height of 13.5 ft. and the overall length shall not exceed 41 ft. The walls and roof shall be corrugated or externally reinforced. The floors shall be "V" shaped. The tanks shall include a minimum of a 2 ft. man way to access the tank for sampling, gauging and inspection. A minimum 3 in. overflow line is required. The topfill nozzle shall be at least 3 in. in diameter. A minimum 4 in. drain valve shall be located at the tank rear and shall have a maximum 4 in. suction valve at the front center of the tank. The tank shall also be equipped with a minimum 2 ft. steel stairway containing a steel handrail.

**Type II.** A Type II tank shall be a 6,500 gal. polyethylene water storage tank and shall have a diameter not to exceed 12 ft., height not to exceed 14 ft. and equipped with a minimum 2 ft. man way. The top nozzle shall not exceed 4 in. in diameter and shall be equipped with a 50 mm PVC air vent.
- 3. Measurement.** This Item will be measured by the each tank delivered on-site for use in the designated contamination areas on the project.
- 4. Payment.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Mobile Water Storage Tank (Ty I)" or "Mobile Water Storage Tank (Ty II)". This price shall be full compensation for furnishing all equipment, delivery, labor, tools and incidentals necessary to complete the work. CoSA shall be responsible for disposal of any contaminated water.

SW3P												
ITEM NO.	ITEM DESCRIPTION	UNIT	Sheet 1	Sheet 2	Sheet 3	Sheet 4	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Sheet 9	TOTAL
162 2002	BLOCK SODDING	SY	130	790	0	6,400	3,484	1,026	3,121	4,862	143	19,956
164 2005	BROADCAST SEED (PERM) (URBAN) (SANDY)	SY	0	0	12,778	0	0	0	0	0	0	12,778
169 2006	SOIL RETENTION BLANKETS (CL 2) (TY F)	SY	0	0	12,778	0	0	0	0	0	0	12,778
506 2001	ROCK FILTER DAMS (INSTALL) (TY 1)	LF	0	50	215	0	0	0	70	0	0	335
506 2003	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	0	0	70	0	0	0	0	0	0	70
506 2009	ROCK FILTER DAMS (REMOVE)	LF	0	50	285	0	0	0	70	0	0	405
506 2016	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	0	0	0	0	0	320	0	0	0	320
506 2019	CONSTRUCTION EXITS (REMOVE)	SY	0	0	0	0	0	320	0	0	0	320
506 2034	TEMPORARY SEDIMENT CONTROL FENCE	LF	65	490	910	515	514	530	440	592	270	4,326
506 2040	TEMP SEDIMENT CONTROL FENCE (REMOVE)	LF	65	490	910	515	514	530	440	592	270	4,326
SS 1135	WATER TANK AND PUMP	MG										5
SS 1136	TY II STORAGE TANK	EA										1

4-2A-12



*Chan King*

REV NO.	DATE	DESCRIPTION	BY

E. HOUSTON STREET  
AT&T PKWY. TO I.H. 10  
STORM WATER POLLUTION  
PREVENTION PLAN  
(SW3P) SUMMARY

SHEET 1 OF 1

CITY OF SAN ANTONIO  
DEPARTMENT OF CAPITAL  
IMPROVEMENTS MANAGEMENT SERVICES



**K. M. NG & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
SAN ANTONIO, TEXAS 78201  
TEXAS REGISTERED ENGINEERING FIRM F-442

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	SHEET NO.	
6	XXXXX	31	
STATE	DIST.	COUNTY	
TX	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	481	HOUSTON ST.

**CITY OF SAN ANTONIO**  
025 UNIT PRICING FORM

PROJECT NAME: HOUSTON STREET

PROJECT NO.

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
<b>TxDOT 2004 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES</b>									
	100	2002		PREPARING ROW	STA	42.85			
	104	2009		REMOVING CONC (RIPRAP)	SY	820.00			
	104	2015		REMOVING CONC (SIDEWALK)	SY	998.00			
	104	2017		REMOVING CONC (DRIVEWAYS)	SY	1,075.00			
	104	2021		REMOVING CONC (CURB)	LF	2,098.00			
	104	2024		REMOVING CONC (RETAINING WALLS)	SY	44.00			
	110	2001		EXCAVATION (ROADWAY)	CY	6,958.00			
	132	2004		EMBANKMENT (FINAL)(DES CONT)(TY B)	CY	25,615.00			
	160	2003		FURNISHING AND PLACING TOPSOIL (4")	SY	8,856.00			
	162	2002		BLOCK SODDING	SY	19,956.00			
	164	2005		BROADCAST SEED (PERM)(URBAN)(SANDY)	SY	12,778.00			
	168	2001		VEGETATIVE WATERING	MG	510.50			
	169	2006		SOIL RETENTION BLANKETS (CL 2) (TY F)	SY	12,778.00			
	260	2002		LIME (HYDRATED LIME)(SLURRY)	TON	354.80			
	260	2006		LIME TRT (EXST MATL)(6")	SY	25,342.00			
	340	2011		D-GR HMA (METH) TY-B PG64-22	TON	12,551.00			
	340	2034		D-GR HMA (METH) TY-C PG64-22	TON	4,087.00			
	340	2104		D-GR HMA (METH) TY-D SAC-B PG64-22	TON	2,618.00			
	354	2029		PLANE ASPH CONC PAV (0" TO 6")	SY	22,478.00			
	360	2003		CONC PVMT (CONT REINF - CRCP)(10")	SY	535.00			
	400	2001		STRUCT EXCAV	CY	15,292.00			
	402	2001		TRENCH EXCAVATION PROTECTION	LF	4,236.14			
	403	2001		TEMPORARY SPL SHORING	SF	9,000.00			
	416	2002		DRILLED SHAFT (24 IN)	LF	861.00			
	416	2003		DRILLED SHAFT (30 IN)	LF	1,938.00			
	416	2034		DRILL SHAFT(TRF SIG POLE)(48 IN)	LF	136.00			
	420	2001		CL A CONC (MISC)	CY	10.80			

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420	2003		CL C CONC (ABUT)	CY	39.20			
420	2004		CL C CONC (BENT)	CY	332.70			
420	2029		CL S CONC (SLAB)	CY	376.00			
420	2033		CL S CONC (APPR SLAB)	CY	102.00			
420	2034		CL S CONC (BRIDGE SDWLK)	CY	108.50			
420	2053		CL S CONC (MEDIAN)	CY	637.00			
423	2001		RETAINING WALL (MSE)	SF	22,455.00			
425	2016		PRESTR CONC SLAB BEAM (4SB15)	LF	1,956.18			
425	2017		PRESTR CONC SLAB BEAM (5SB15)	LF	2,608.24			
432	2001		RIPRAP (CONC) (4 IN)	CY	4.62			
432	2002		RIPRAP (CONC) (5 IN)	CY	15.2			
432	2035		RIPRAP (CONC)(6 IN)	CY	60.00			
432	2039		RIPRAP (MOW STRIP) (4 IN)	CY	65.30			
432	2045		RIPRAP (STONE TYPE R)(DRY)(24 IN)	CY	912.00			
432	2074		RIPRAP (CONC)(8 IN)	CY	20.00			
432	9999		RIPRAP (CONC)(12 IN)	CY	36.00			
442	2048		STRUCTURAL STEEL (MISC NON - BRIDGE)	LB	588.00			
450	2018		RAIL (TY C411)	LF	2,116.00			
450	9999		RAIL (TY C411)(MODIFIED)	LF	330.00			
450	2025		RAIL (TY PR1)	LF	819.00			
454	2005		ARMOR JOINT (WITH SEAL)	LF	211.60			
460	2004		CMP (GAL STL 24")	LF	140.00			
460	9999		CMP 18", 16 GA (DROP LATERAL)	LF	27.24			
462	2002		CONC BOX CULV (3 FT X 3 FT)	LF	6.09			
462	2012		CONC BOX CULV (6 FT X 5 FT)	LF	410.79			
462	2016		CONC BOX CULV (7 FT X 5 FT)	LF	789.95			
462	2017		CONC BOX CULV (7 FT X 6 FT)	LF	227.67			
462	2018		CONC BOX CULV (7 FT X 7 FT)	LF	813.66			
464	2001		RC PIPE (CL III) (12 IN)	LF	15.73			
464	2002		RC PIPE (CL III) (15 IN)	LF	16.00			
464	2003		RC PIPE (CL III) (18 IN)	LF	444.67			
464	2005		RC PIPE (CL III) (24 IN)	LF	265.17			
464	2007		RC PIPE (CL III) (30 IN)	LF	324.03			
464	2009		RC PIPE (CL III) (36 IN)	LF	188.10			
464	2010		RC PIPE (CL III) (42 IN)	LF	109.42			

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464	2011		RC PIPE (CL III) (48 IN)	LF	243.01			
464	2021		RC PIPE (CL IV) (18 IN)	LF	77.28			
464	2022		RC PIPE (CL IV) (24 IN)	LF	347.85			
464	2038		RC PIPE (CL V) (30 IN)	LF	34.00			
465	2154		INLET (COMPL)(TY C) (5 FT)	EA	6.00			
465	2155		INLET (COMPL)(TY C) (10 FT)	EA	12.00			
465	9999		INLET (COMPL)(TY H) W/ GRATE (4.0'X4.0')(MODIFIED)	EA	1.00			
465	9998		INLET (COMPL)(TY H) W/ LID (3.5'X3.5')(MODIFIED)	EA	4.00			
465	9997		INLET (COMPL)(TY H) W/ LID (4.0'X4.0')(MODIFIED)	EA	3.00			
465	9996		INLET (COMPL)(TY H) W/ LID (5.0'X5.0')(MODIFIED)	EA	1.00			
465	9995		INLET (COMPL)(TY H) W/ LID (6.0'X6.0')(MODIFIED)	EA	1.00			
465	9994		TxDOT TRAFFIC GRATE TYPE 5 (MODIFIED)	EA	3.00			
465	9993		MANH RISER (COMPL)	EA	1.00			
465	2092		MANH (COMPL) (TY 1)	EA	1.00			
465	2193		MANH (COMPL) (TY 2)	EA	8.00			
465	9992		MANH (COMPL) (TY 5)	EA	1.00			
465	9991		MANH (COMPL) (TY 5)(MODIFIED)	EA	1.00			
467	9999		SET (TY II) (18 IN) (RCP) (9.8: 1) (P)	EA	1.00			
467	9998		SET (TY II) (18 IN) (RCP) (10.7: 1) (P)	EA	1.00			
496	2001		REMOV STR (BOX CULVERT)	EA	4.00			
496	2010		REMOV STR (BRIDGE 100 - 499 FT LENGTH)	EA	1.00			
500	2001		MOBILIZATION	LS	1.00			
502	2001		BARRICADES, SIGNS, AND TRAFFIC HANDLING	MO	24.00			
506	2001		ROCK FILTER DAMS (INSTALL)( TY 1)	LF	335.00			
506	2003		ROCK FILTER DAMS (INSTALL)( TY 3)	LF	70.00			
506	2009		ROCK FILTER DAMS (REMOVE)	LF	405.00			
506	2016		CONSTRUCTION EXITS (INSTALL)(TY 1)	SY	320.00			
506	2019		CONSTRUCTION EXITS (REMOVE)	SY	320.00			
506	2034		TEMPORARY SEDIMENT CONTROL FENCE	LF	4,326.00			
506	2040		TEMPORARY SEDIMENT CONTROL FENCE (REMOVE)	LF	4,326.00			
508	2002		CONSTRUCTING DETOURS	SY	1,375.00			
512	2008		PORT CTB (FUR & INST)(LOW PROF)(TY 1)	LF	3,550.00			
512	2026		PORT CTB (MOVE)(LOW PROF)(TY 1)	LF	9,460.00			
512	2044		PORT CTB (REMOVE)(LOW PROF)(TY 1)	LF	3,550.00			
529	2009		CONC CURB (SPECIAL)	LF	7,989.00			

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	529	2016		CONC CURB TYP "F1"	LF	64.00			
	529	2026		CONC CURB (ARMOR CURB SLOT)	LF	28.00			
	529	2061		CONC CURB TYPE "C1"	LF	158.00			
	529	2071		CONC CURB (SLOTTED)	LF	40.00			
	530	2010		DRIVEWAYS (CONC)	SY	2,155.00			
	530	2011		DRIVEWAYS (ACP)	SY	1,052.00			
	531	2006		CURB RAMPS (TY 2)	EA	9.00			
	531	2031		CONC SIDEWALKS (4 IN)	SY	4,003.00			
	531	9999		CONC SIDEWALK (BRIDGE) (6') (4 IN)	LF	14.00			
	531	2041		CURB RAMPS (TY 10)	EA	4.00			
	542	2001		REMOVING METAL BEAM GUARD FENCE	LF	1,537.00			
	542	2002		REMOVING TERMINAL ANCHOR SECTIONS	EA	2.00			
	544	2001		GUARDRAIL END TREATMENT (INSTALL)	EA	1.00			
	545	2049		CRASH CUSH ATTEN (INSTL)(WORK ZONE)	EA	29.00			
	545	2050		CRASH CUSH ATTEN (MOVE & RESET)(WORK ZONE)	EA	63.00			
	545	2051		CRASH CUSH ATTEN (REMOVE)(WORK ZONE)	EA	12.00			
	550	2037		CHAIN LINK FENCE (INSTALL)(6')BARB TOP	LF	347.00			
	550	2003		CHAIN LINK FENCE (REMOVE)	LF	398.00			
	550	XXXX		GATE (INSTALL)(SINGLE)(BARB TOP)(6'X6')	EA	1.00			
	618	2018		CONDT(PVC)(SCHD 40)(2")	LF	2,475.00			
	618	2019		CONDT(PVC)(SCHD 40)(2")(BORE)	LF	810.00			
	618	2022		CONDT(PVC)(SCHD 40)(3")	LF	50.00			
	618	2023		CONDT(PVC)(SCHD 40)(3")(BORE)	LF	250.00			
	618	2024		CONDT(PVC)(SCHD 40)(4")	LF	30.00			
	618	2038		CONDT (PVC)(SCHD 80)(3 IN)	LF	750.00			
	618	2052		CONDT (RM)(2 IN)	LF	60.00			
	618	2056		CONDT (RM)(3 IN)	LF	30.00			
	620	2007		ELEC CONDR (NO.4) BARE	LF	60.00			
	620	2008		ELEC CONDR (NO.4) INSULATED	LF	120.00			
	620	2009		ELEC CONDR (NO.6) BARE	LF	4,080.00			
	620	2010		ELEC CONDR (NO.6) INSULATED	LF	150.00			
	624	2004		TRAY CABLE (4 CONDR) (12 AWG)	LF	985.00			
	624	2008		GROUND BOX TY D (162922) W/APRON	EA	15.00			
	624	2014		GROUND BOX TY A (122311) W/APRON	EA	7.00			
	628	2063		ELC SRV TY D 120/240 070 (NS) SS (E) SP (O)	EA	2.00			

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636	2001		ALUMINUM SIGNS (TY A)	SF	15.00			
644	XXXX		IN SM RD SN SUP & AM TYS80(1)WS(P)	EA	2.00			
644	2058		RELOCATE SM RD SN SUP & AM TY S80	EA	5.00			
644	2060		REMOVE SM RD SN SUP & AM	EA	6.00			
662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD)	LF	5,807.00			
662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD)	LF	49,613.00			
662	2114		WK ZN PAV MRK SHT TERM (TAB) TY Y	EA	1,042.00			
666	2003		REFL PAV MRK TY 1 (W) 4 IN (BRK) (100 MIL)	LF	1,401.00			
666	2036		REFL PAV MRK TY I (W) 8" (SLD) (100MIL)	LF	103.00			
666	2048		REFL PAV MRK TY 1 (W) 24 IN (SLD) (100 MIL)	LF	702.00			
666	2054		REFL PAV MRK TY I (W) (ARROW) (100MIL)	EA	2.00			
666	2096		REFL PAV MRK TY I (W) (WORD) (100MIL)	EA	1.00			
666	2105		REFL PAV MRK TY 1 (Y) 4 IN (BRK) (100 MIL)	LF	18,856.00			
666	2111		REFL PAV MRK TY 1 (Y) 4 IN (SLD) (100 MIL)	LF	2,993.00			
666	2132		REFL PAV MRK TY 1 (Y) 24 IN (BRK) (100 MIL)	LF	117.00			
672	2012		REFL PAV MRKR TY I-C	EA	17.00			
672	2015		REFL PAV MRKR TY II-A-A	EA	536.00			
677	2003		ELIM EXT PAV MRK & MRKS (8")	LF	7,945.00			
680	2002		INSTALL HWY TRF SIG (ISOLATED)	EA	2.00			
682	2001		BACK PLATE (12 IN)(3 SEC)	EA	12.00			
682	2003		BACK PLATE (12 IN)(5 SEC)	EA	2.00			
682	2012		LOUVER (12 IN)(ADJUSTABLE)	EA	32.00			
682	2014		PED SIG SEC (12 IN) LED (2 INDICATIONS)	EA	8.00			
682	2022		VEH SIG SEC (12 IN) LED (GRN ARW)	EA	2.00			
682	2023		VEH SIG SEC (12 IN) LED (GRN)	EA	14.00			
682	2024		VEH SIG SEC (12 IN) LED (YEL ARW)	EA	2.00			
682	2025		VEH SIG SEC (12 IN) LED (YEL)	EA	14.00			
682	2027		VEH SIG SEC (12 IN) LED (RED)	EA	14.00			
682	2028		BACK PLATE (12 IN)(1 SEC)	EA	16.00			
682	9999		CHANGEABLE TRAFFIC SIGNAL SECTION	EA	16.00			
684	2009		TRF SIG CBL (TY A)(12 AWG)(4 CONDR)	LF	970.00			
684	2029		TRF SIG CBL (TY A)(14 AWG)(3 CONDR)	LF	3,261.00			
684	2030		TRF SIG CBL (TY A)(14 AWG)(4 CONDR)	LF	560.00			
684	2035		TRF SIG CBL (TY A)(14 AWG)(9 CONDR)	LF	4,143.00			
686	2055		INS TRF SIG PL AM (S) 1 ARM (55')	EA	10.00			

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	6007	2001		REMOVING TRAFFIC SIGNALS	EA	6.00			
	6027	2009		LCS EQUIPMENT (REPLACE LED)	EA	32.00			
	6266	2001		VIVDS PROCESSOR SYSTEM	EA	1.00			
	6266	2002		VIVDS CAMERA ASSEMBLY	EA	8.00			
	6266	2003		VIVDS SET-UP SYSTEM	EA	1.00			
	6266	2005		VIVDS COMMUNICATION CABLE (COAXIAL)	LF	2,178.00			
	8260	2001		LED COUNTDOWN PEDESTRIAN MODULE	EA	8.00			
	8835	2001		ACCESSIBLE PEDESTRIAN SIGNAL UNITS	EA	8.00			
	SS 1135			WATER TANK AND PUMP	MG	5.00			
	SS 1136			TY II STORAGE TANK	EA	1.00			
<b>CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION</b>									
<b>JUNE 2008</b>									
	308.1			DRILLED SHAFTS (24")	LF	24.00			
	615.1			TRAFFIC SIGNAL CONTROLLER ASSEMBLY (TYPE 332 CABINET)	EA	5.00			
	628.1			ELECTRICAL SERVICES (PER INSTALLATION)	EA	4.00			
	633.1			BATTERY BACKUP SYSTEM	EA	1.00			
	655.1			TYPE 332 CONTROLLER FOUNDATION	EA	5.00			
	687.1			PEDESTAL POLE ASSEMBLY	EA	4.00			
	693.1			INTERNALLY LIGHTED STREET NAME SIGNS (LED/8D)	EA	4.00			
<b>SAN ANTONIO WATER SYSTEMS (SAWS) - SPECIAL SPECIFICATION 9999</b>									
<b>WATER MAINS AND SERVICE LINES</b>									
<b>FOR TxDOT/LAM PROJECTS</b>									
	9999	2001		CUT AND REPLACE ASPHALT PAVEMENT - 12 INCHES COMP DEPTH	SY	400.00			
	9999	2002		TRENCH EXCAVATION SAFETY PROTECTION	LF	884.00			
	9999	2003		6" PVC (C-900) WATER MAIN INSTALLATION	LF	42.00			
	9999	2004		8" PVC (C-900) WATER MAIN INSTALLATION	LF	786.00			
	9999	2005		12" PVC (C-900) WATER MAIN INSTALLATION	LF	56.00			
	9999	2006		RELAY 1 1/2" SHORT SERVICE ON NEW MAIN	EA	1.00			
	9999	2007		RELAY 1 1/2" LONG SERVICE ON EXISTING MAIN	EA	1.00			
	9999	2008		VALVE BOX ADJUSTMENT	EA	15.00			
	9999	2009		6" GATE VALVE	EA	2.00			
	9999	2010		8" GATE VALVE	EA	6.00			
	9999	2011		RELOCATE METER AND METER BOX	EA	1.00			
	9999	2012		FIRE HYDRANT	EA	3.00			
	9999	2013		RELOCATE FIRE HYDRANT	EA	2.00			

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	9999	2014		PIPE FITTINGS, ALL SIZES AND TYPES	TON	2.16			
	9999	2015		6" WATER TIE-IN	EA	2.00			
	9999	2016		8" WATER TIE-IN	EA	8.00			
	9999	2017		12" WATER TIE-IN	EA	2.00			
	9999	2018		HYDROSTATIC PRESSURE TEST	EA	4.00			
	9999	2019		2" BLOWOFF, TEMPORARY	EA	8.00			
	9999	2020		ADJUSTING EXISTING AIR RELEASE VAULTS TO GRADE	EA	2.00			
	9999	2025		REMOVAL, TRANSPORTATION AND DISPOSAL OF AC PIPE	LS	1.00			
	9999	2026		ASBESTOS ABATEMENT WORK PLAN	LS	1.00			
<b>SAN ANTONIO WATER SYSTEMS (SAWS) - SPECIAL SPECIFICATION 9998</b>									
<b>SANITARY SEWER</b>									
<b>FOR TxDOT/LAM PROJECTS</b>									
	9998	2001		SANITARY SEWERS - CONCRETE DRIVEWAY - COMMERCIAL	SY	356.00			
	9998	2002		SANITARY SEWERS - CUT AND RESTORE PAVEMENT - 12" COMP DEPTH	SY	911.00			
	9998	2003		TRENCH EXCAVATION SAFETY PROTECTION	LF	1,285.77			
	9998	2004		8" PVC GRAVITY SAN SWR (6'-10')	LF	191.29			
	9998	2005		8" PVC GRAVITY SAN SWR (10'-14')(PRESSURE PIPE)	LF	16.50			
	9998	2006		8" PVC GRAVITY SAN SWR (10'-14')	LF	22.50			
	9998	2007		8" PVC GRAVITY SAN SWR (14'-18')(PRESSURE PIPE)	LF	103.00			
	9998	2008		8" PVC GRAVITY SAN SWR (14'-18')	LF	312.44			
	9998	2009		8" PVC GRAVITY SAN SWR (18'-22')(PRESSURE PIPE)	LF	62.58			
	9998	2010		8" PVC GRAVITY SAN SWR (18'-22')	LF	89.90			
	9998	2011		10" PVC GRAVITY SAN SWR (18'-22')	LF	377.56			
	9998	2012		10" PVC GRAVITY SAN SWR (22'-26')	LF	110.00			
	9998	2013		ADJUST EXISTING MANHOLES	EA	2.00			
	9998	2014		SANITARY SEWER MANHOLES	EA	7.00			
	9998	2015		SANITARY SEWER DROP MANHOLES	EA	1.00			
	9998	2016		EXTRA DEPTH MANHOLES (>6')	VF	73.76			
	9998	2017		SANITARY SEWER, HOUSE LATERAL (6")	LF	55.00			
	9998	2018		SANITARY SEWER, HOUSE LATERAL (ONE-WAY CLEANOUTS)	EA	2.00			
	9998	2019		CONCRETE ENCASMENT, CRADLES, SADDLES & COLLARS	CY	4.32			
	9998	2020		ABANDONMENT OF SANITARY SEWER MAIN AND MANHOLES	LF	333.50			
	9998	2021		BYPASS PUMPING	LS	1.00			
	9998	2022		PRE-TELEVISION INSPECTION SEWER MAIN (8"-15")	LF	1,155.98			
	9998	2023		POST-TELEVISION INSPECTION SEWER MAIN (8"-15")	LF	1,285.77			

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**SPECIAL SPECIFICATION 9997**

**CPS ENERGY (CPS)**

**SPECIFICATIONS FOR CONSTRUCTION OF  
NATURAL GAS DISTRIBUTION FACILITIES**

	9997	2001		GAS SHORT SERVICE OFF NEW MAIN (1/2" - 4")(MAIN TO 1' INSIDE PROPERTY)	EA	2.00			
	9997	2002		GAS LONG SERVICE (1/2" - 4")(MAIN TO 1' INSIDE PROPERTY)	EA	2.00			
	9997	2003		GAS SHORT SERVICE OFF NEW MAIN (1/2" - 4")(MAIN TO METER)	EA	1.00			
	9997	2004		INSTALL GAS MAIN OR CASING 4" PLASTIC PIPE W/ TRACER WIRE	LF	480.00			
	9997	2005		INSTALL GAS MAIN OR CASING 16" STEEL	LF	1,708.00			
	9997	2006		INSTALL GAS MAIN JOINT TRENCH 4" PLASTIC PIPE W/ TRACER WIRE & 16" STEEL	LF	1,301.00			
	9997	2007		INSTALL GAS MAIN (DIRECTIONAL DRILLING) 16" STEEL	LF	911.00			
	9997	2008		STREET RESTORATION ADJUSTMENT (WHEN REQUIRED) - FLOWABLE FILL	CY	170.00			
	9997	2009		STREET RESTORATION ADJUSTMENT (WHEN REQUIRED) - ASPHALT	SY	740.00			

**TOTAL TxDOT & COSA ITEMS**

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**TOTAL SAWS WATER ITEMS**

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**TOTAL SAWS SANITARY SEWER ITEMS**

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**TOTAL CPS GAS ITEMS**

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**GRAND TOTAL**

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**SPECIAL PROVISION****006---CoSA****Control of Materials**

For this project, Item 006 “Control of Materials,” of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 6.10. Hazardous Materials.**

If/When the Contractor encounters existing materials within the project limits or in required material sources that are suspected by visual observation or smell to contain hazardous materials/waste, immediately notify the CoSA representative.

**a.** CoSA is responsible for all work within the limits identified in the Waste Management Plan (WMP). Item 416, “Drill Shafts”, - related work within the Limits of the WMP shall be measured and paid for as specified under the respective items. Within the limits of the WMP, field screening tests of soil for contamination; construction equipment decontamination costs; other items that involve handling contaminated soil or water, if necessary; and any hazardous materials/waste collection, handling, storage, and transportation costs shall be paid for under State, Force Account.

**b.** CoSA will be responsible for the testing, removal, transporting and disposal of hazardous materials/waste except as noted above, related to work within the limits of the WMP 6.10 (a).

The CoSA representative may suspend the work wholly or in part during the testing, removal or disposition of hazardous materials/waste.

This Item is supplemented by the following:

**Article 6.12. Waste Management Plan.**

Construction of the planned roadway and utility improvements for this project will require monitoring and management of potential lead impacted soils. The environmental subsurface investigation was conducted by the City of San Antonio, Environmental Management Division (EMD) to determine the absence or presence of potential impacts released from the adjacent closed and abandoned landfills along Salado Creek between station numbers 104+91.00 and 107+76.00. Results of this investigation identified lead and arsenic impacts between 2 to 15 feet in the subsurface soils within the project limits. The investigation for the project area identified an area of known contamination where affected soil will be potentially encountered (see Table 1 and Table 2, and as shown in the plans figures 1 and 2).

Contaminated soils encountered in the project limits may be categorized as special waste. Special waste type contaminants may be encountered in subsurface soils generated by construction activities. All potentially impacted soils must be managed according to applicable environmental rules, regulations, and the guidelines set forth in this plan. Construction practices must comply with all applicable

regulations concerning the prevention of storm water pollution, as detailed in the project's Storm Water Pollution Prevention Plan (SW3P).

CoSA or their designated representatives shall be on site to confirm field-screening of excavated soils conducted by the Contractor's Representative. Monitoring of excavations will cease outside the limits unless contamination is detected. Field Screening activities will consist of soils inspection, incidental odors, and use of air monitoring equipment.

CoSA shall be notified immediately when suspect contaminated soils and/or groundwater are encountered at locations not identified in this report. The notification should include the station number, type of contaminated media, evidence of contamination, and measures taken to contain the contaminated media and prevent public access. Contaminated soil and/or groundwater shall not be removed from the location without prior approval.

Soils excavated from areas not addressed in this report, and that do not exhibit signs of contamination, shall be handled as non-contaminated material and managed separately from suspect contaminated soils.

Surface intrusion water within the Area of Concern (AOC) as described in Table 1, Table 2, and as shown in the Plans will require management in accordance with the waste practices described in this WMP.

Soils, sediments, or surface intrusion water from potentially contaminated areas will not become the property of the Contractor.

#### **B. Site Contaminants and Concentrations.**

Table 1 identifies the contaminant of concern by location and media with the approximate limits identified by station number. Table 2 identifies the analytical information for the AOCs. A soil vapor survey was not performed during this investigation.

**TABLE 1**

**PROJECT DATA SUMMARY  
Environmental Data  
Houston Street, San Antonio, Texas , San Antonio, Texas**

AOCs	From Station No.	Location	Contamination	Contaminant Type On-Site Monitoring Required
			Groundwater / Soil	
AOC 1 CL Bent 2	*North of Station Number 105+26.00	Bridge Drill Shafts	Groundwater 9 ft / Soil 14-15 ft	Lead/ Yes
AOC 1 CL Bent 2	*South of Station Number 105+26.00	Bridge Drill Shafts	Groundwater 9 ft / Soil 3-4 ft	Lead/ yes
AOC 2 CL Bent 3	*North of Station Number 105+56.00	Bridge Drill Shafts	Groundwater 4 ft / Soil 14-15 ft	Lead / Yes
AOC 2 CL Bent 3	*South of Station Number 105+56.00	Bridge Drill Shafts	Groundwater 4 ft / Soil 3-4 ft	Lead / yes
AOC 3 CL Bent 4	*South of Station Number 106+01.00	Bridge Drill Shafts	Groundwater 10 ft / Soil 10ft	Lead / yes
AOC 4 CL Bent 7	*North of Station Number 107+31.00	Bridge Drill Shafts	Groundwater 15 ft / Soil 2-3 ft	Lead / yes

\* See Exhibit Nos. 1, 2, and 3 for specific station numbers and estimated quantity

**TABLE 2**

**PROJECT CONTAMINATION RESULTS  
(Maximum Concentrations)  
Houston Street, San Antonio, Texas , San Antonio, Texas**

	<b>Depth of soil impact (ft)</b>	<b>AOC 1 CL Bent 2 Soil (mg/kg)</b>	<b>AOC 2 CL Bent 3 Soil (mg/kg)</b>	<b>AOC 3 CL Bent 4 Soil (mg/kg)</b>	<b>AOC 4 CL Bent 7 Soil (mg/kg)</b>
<b>Lead</b>	<b>14-15</b>	<b>16.8</b>	<b>16.8</b>	ND	ND
<b>Lead</b>	<b>3-4</b>	<b>72.4</b>	<b>72.4</b>	ND	ND
<b>Lead</b>	<b>9-10</b>	ND	ND	<b>28.0</b>	ND
<b>Lead</b>	<b>2-3</b>	ND	ND	ND	<b>59.9</b>

\*ND-Not Detected

**C. Soil Management Procedures within Contaminated Locations.**

These procedures are applicable to the locations identified in Table 1. The best available engineering controls shall be utilized to minimize potential on-site and off-site impacts to human health and the environment from construction in locations with known or suspected contamination. Management of this waste shall be governed at a minimum by the following management procedures and guidelines.

CoSA or their designated representatives shall be on site to confirm field-screening samples of excavated soils are conducted by the Contractor's Representative. The field screening activities shall be conducted during the excavation activities throughout the AOCs. Monitoring excavations will cease outside the limits unless contamination is detected. Field Screening activities will consist of soils inspection, incidental odors, and using a field-screening device. Soils removed from the drill shaft areas between 2' below ground surface (bgs) and 15' bgs are considered impacted in AOCs 1, 2, 3, and 4 as described in Table 1, Table 2, and as shown in the Plans (figures 1 and 2). The Contractor shall excavate, place, and secure the impacted soils to a temporary staging area designated by the Engineer. Temporary staging area shall be lined with 6 mil poly and silt fencing to prevent runoff. A pre-environmental meeting will be held to discuss and approve the site where the excavated soils will be temporarily staged and the area where reuse will occur. All soils excavated from the AOC's will be reused at the approved site and will be placed under a minimum 2 feet of cover. It's the Contractor's responsibility to protect the stockpiles from storm water run-off and cross contamination. A minimum of a one-week notification for scheduling of the Specialty Contractor is required. Daily schedules will be coordinated in a preconstruction conference prior to drilling activities in this location and as construction progresses.

All excavated soil shall be appropriately managed in accordance with this Waste Management Plan. No unprotected, excavated contaminated soils shall remain on site at the end of the workday without CoSA approval. Excavations shall be opened and closed within the same working day to minimize surface water contact with potentially contaminated soils. Excavations that are left open overnight with CoSA approval shall be bermed to prevent run-off and controlled (i.e. fencing, trench covers, warning signs, barricades) to prevent public access.

**D. Groundwater Management and Surface Water Intrusion Procedures.**

No constituents were detected in the groundwater sample adjacent to the ROW. Depth to groundwater within the proposed construction area may vary with seasonal changes. Groundwater was encountered during the environmental investigation of the site at 9 ft. bgs ( AOC No.1 ), 4 feet bgs ( AOC 2 ), 10 feet bgs ( AOC 3 ), and 15 feet bgs ( AOC 4 ).

Groundwater removed from any location within the contaminated areas identified in Table 1 may potentially contain lead and must be collected, containerized, and tested to determine disposal options.

All surface intrusion water, including water from broken water lines, which contacts soils within the designated contaminated areas, as show in the plans and described in Table 1, shall be collected, transported and managed in an appropriate tank provided by the contractor, as approved by CoSA. CoSA will be responsible for testing and disposal of contaminated water. Pumps and tanks shall be decontaminated by the Contractor before reuse at other contaminated or clean locations.

A secured temporary storage tank area shall be located within the project limits for a minimum of one 6,500-gallon temporary storage tank. This tank shall be of sufficient capacity to handle and segregate the volume of construction-generated wastewater. The tank shall be placed on pavement or a liner of PVC, LLPDE, HDPE, or a product approved to prevent spills from making contact with soils. Tank leaks shall be repaired immediately. The secured temporary storage tank area will require a management plan to prevent surface water from entering the tank area and to contain any minor spills from wastewater handling. This Plan and secured tank storage location must be submitted to the Engineer in writing for approval.

Notify CoSA when the capacity of the tank is estimated to be 75% capacity. Upon notification, CoSA shall perform analysis of the tank contents. Non-contaminated, non-sediment laden water may be discharged into the CoSA storm sewer system. CoSA shall dispose of contaminated water. Estimated time for analysis and disposal is two weeks.

#### **E. Stormwater Pollution Prevention (SW3P) Requirements.**

An SW3P is required to prevent degradation of receiving waters in accordance with the planned construction activities to comply with Federal, State and local regulations. Review, understand, implement, and inspect both the general SW3P and the following additional SW3P requirements presented below for the contaminated locations and associated staging areas identified in this section.

The following SW3P requirements are specific to construction activities that will occur within all of the impacted locations identified in Table 1, as well as soil stockpiles, water containment areas and specific requirements for locations identified as potentially containing contaminated wastes.

Decontamination procedures shall be selected and implemented by the Contractor. Decontamination measures shall be incorporated into the SW3P. Decontamination of equipment must be conducted prior to moving from a suspect contaminated area to a non-contaminated area.

Limit tracking soil from contaminated areas into non-contaminated areas by minimizing wet soil removal operations. Construct a decontamination pad or a method of decontamination that will be used to prevent offsite tracking of contaminants during construction activities. Remove excess soil from equipment and trucks prior to exiting contaminated locations either by dry decontamination or by cleaning at a decontamination pad with a pressure washer. Dry decontamination methods, i.e., using a broom to remove visible soil, are preferred. If wet methods are employed, utilize methods to minimize waste generation and contain all fluids from running off the site.

The contractor is required to document decontamination of heavy equipment when moving from a suspect contaminated area to a non-contaminated area. Soils from potential impacted areas shall not be tracked on roadways. Any soils tracked onto roadways shall be immediately removed. These decontamination wastes shall be placed into appropriate containers for characterization and profiling prior to final disposal. The Contractor, at his discretion, will place the decontamination waste with the suspect contaminated soil. CoSA is responsible for waste disposal associated with the contaminated areas.

#### **F. Health and Safety Plan Requirements.**

Prudent safety and health measures and monitoring should be conducted during construction activities in the areas described in Table 1 and Table 2.

The work includes potential exposure to soil contaminants. The Contractor shall prepare and follow a Site Health and Safety Plan (SHSP) that has been written in accordance with and in fulfillment of Occupational Safety and Health Administration (OSHA) regulations, and all other applicable laws, ordinances and regulations. The Contractor shall be solely responsible for their SHSP and compliance with its requirements in performing the work. The Contractor will not be compensated for the SHSP. A copy of the SHSP, including any revisions or changes, and any required documentation, shall be maintained on site and be available for review by the Engineer. Upon request the SHSP, including any revisions or changes, and any required documentation shall be provided to the Engineer.