



JOINT BASE SAN ANTONIO WATER MAINS – FT. SAM HOUSTON

Solicitation Number: #CO-00099

SAWS Job No.: 16-7004

ADDENDUM 2

November 3, 2016

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the proposal and plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the proposal.

MODIFICATIONS

1. Contract Documents – Bid Proposal – Remove and replace the Bid Proposal with the attached, items and quantities have been updated to reflect the plan changes of this Addendum. Bidder shall use this version of the Bid Proposal when submitting a bid for this project.
2. Plan Sheet 2 – Revise Total Quantities table to reflect the plan changes of this Addendum. Remove and replace Sheet 2 of the plans with the attached.
3. Plan Sheet 6 – Revise callouts regarding water main crossing of concrete box culvert to clarify that the box culvert shall be protected in place during construction, that the crossing of the box culvert will be trenchless, and modify quantities and notes. Modify design to include a jack and bore crossing of the Acequia Madre, modify alignment and stationing, add notes related to Acequia Madre. Remove and replace Sheet 6 of the plans with the attached.
4. Plan Sheet 7 – Modify design to include a jack and bore crossing of the Acequia Madre, modify alignment and stationing, add detail for jack and bore crossing, modify quantities and add notes related to Acequia Madre. Remove and replace Sheet 7 of the plans with the attached.
5. Special Provision SP856 – Jacking, Boring, or Tunneling Pipe – Delete Special Provision SP856 in its entirety. The work will be in accordance with Standard Specification 856.

RESPONSES TO QUESTIONS

1. I had a question regarding the initial backfill, will the backfill for this project be based on SAWS specs or COSA specs? If it's COSA specs there are four types of initial backfill allowed, which one will be allowed for this project or can we use any one of the four? Also, on the secondary backfill it references the spec for glass cullet. Is this what will be required for use?

Answer: SAWS specifications for excavation and backfill shall be followed for the project as required in SAWS Standard Specification 804 and 812. Materials to be used for backfill shall meet SAWS Standard Specification 804.

Dale P. Murphy, P.E.
K Friese + Associates, Inc.



END OF ADDENDUM

BID PROPOSAL

PROPOSAL OF _____, a corporation

a partnership consisting of

an individual doing business as

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitation to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the project as specified, in accordance with the Plans and Specifications for the following prices to wit:

(PLEASE SEE ATTACHED PDF LIST OF BID ITEMS)

TOTAL BID PRICE

\$ _____

Mobilization and Prep of ROW shall be limited to the maximum percentage shown. **If the percentage 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.**

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 **210** 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 Bid Proposal which are included on the following pages.

Joint Base San Antonio Water Mains - Ft. Sam Houston

SAWS Water Job No. 16-7004

Solicitation No. CO-00099

Item No.	Bid Items Specification No. & Description	Unit	Qty.	Unit Price	Total Price
1	(103) REMOVE CONCRETE CURB (COSA SPEC)	LF	100	\$	\$
2	(103) REMOVE CONCRETE SIDEWALKS AND DRIVEWAYS (COSA SPEC)	SF	424	\$	\$
3	(202) PRIME COAT (COSA SPEC)	GAL	228.8	\$	\$
4	(203) TACK COAT (COSA SPEC)	GAL	114.4	\$	\$
5	(205) HOT MIX ASPHALTIC PAVEMENT - TYPE C (3" COMPACTED DEPTH) (COSA SPEC)	SY	1144	\$	\$
6	(206) ASPHALT TREATED BASE (10" COMPACTED DEPTH) (COSA SPEC)	SY	939	\$	\$
7	(413) FLOWABLE FILL (COSA SPEC)	CY	222	\$	\$
8	(500) CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER (COSA SPEC)	LF	100	\$	\$
9	(502) CONCRETE SIDEWALKS (COSA SPEC)	SY	43	\$	\$
10	(503) PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (COSA SPEC)	SY	5	\$	\$
11	(530) BARRICADES, SIGNS, AND TRAFFIC HANDLING (COSA SPEC)	LS	1	\$	\$
12	(535) 4 INCH WIDE YELLOW LINE (COSA SPEC)	LF	30	\$	\$
13	(535) 4 INCH WIDE WHITE LINE (COSA SPEC)	LF	118	\$	\$
14	(535) 8 INCH WIDE WHITE LINE (COSA SPEC)	LF	25	\$	\$
15	(535) 24 INCH WIDE WHITE LINE (COSA SPEC)	LF	106	\$	\$
16	(535) LEFT WHITE ARROW (COSA SPEC)	EA	1	\$	\$
17	(537) PAVEMENT MARKER (TYPE II-A-A) (COSA SPEC)	EA	2	\$	\$
18	(550) TRENCH PROTECTION	LF	2041	\$	\$
19	(808) 3' x 5' x 3' REINFORCED CONCRETE METER VAULT	EA	4	\$	\$
20	(814) 12" DUCTILE IRON CLASS 350 WATERLINE	LF	1941	\$	\$
21	(818) 8" PVC WATERLINE (RESTRAINED)	LF	100	\$	\$
22	(824) 8" TURBINE METER ASSEMBLY	EA	4	\$	\$
23	(828) 6" GATE VALVE	EA	2	\$	\$
24	(828) 8" GATE VALVE	EA	1	\$	\$
25	(828) 12" GATE VALVE	EA	5	\$	\$
26	(831) 6" x 6" TEE CUT-IN	EA	1	\$	\$
27	(831) 8" x 8" TEE CUT-IN	EA	1	\$	\$
28	(831) 12" x 12" TEE CUT-IN	EA	2	\$	\$
29	(832) 24" x 12" TAPPING SLEEVE & VALVE	EA	1	\$	\$
30	(834) FIRE HYDRANT	EA	2	\$	\$
31	(836) PIPE FITTINGS, ALL SIZES & TYPES	TN	2	\$	\$
32	(841) HYDROSTATIC TESTING	EA	4	\$	\$
33	(844) 2" BLOW-OFF, TEMPORARY	EA	9	\$	\$
34	(856) JACK, BORING AND TUNNELING, 18"-24" CASING	LF	62	\$	\$
35	(856) 24" STEEL CASING	LF	62	\$	\$
36	(856) 12" CARRIER PIPE	LF	62	\$	\$
37	(3000) REMOVAL, TRANSPORTATION, AND DISPOSAL OF VARIOUS SIZES OF AC PIPE	LF	52	\$	\$
38	(100) MOBILIZATION (MAXIMUM OF 10% OF THE TOTAL OF LINE ITEMS 1-37)	LS	1	\$	\$
39	(101) PREPARING RIGHT-OF-WAY (MAXIMUM OF 5% OF THE TOTAL OF LINE ITEMS 1-37)	LS	1	\$	\$

SAWS GENERAL CONSTRUCTION NOTES

GENERAL SECTION

- All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
 - Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
 - Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage."
 - Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction."
 - Current City of San Antonio "Standard Specifications for Public Works Construction."
 - Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- The Contractor shall obtain SAWS Standard Details from SAWS website, http://www.saws.org/business_center/specs. Unless otherwise noted within design plans.
- The Contractor is to notify and make arrangements with the SAWS Construction Inspection Division at 233-3500, and provide notification procedures the contractor will use to notify affected home residents and/or property owners 48 hours prior to excavation.
- Locations and depths of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.
- The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
 - San Antonio Water System:
 - SAWS Utility Locates: <http://www.saws.org/Service/Locates>
 - COSA Drainage 207-8048
 - COSA Traffic Signal Operations 207-7720
 - Texas State Wide One Call Locator 1-800-545-6005 or 811
- The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition as a result of damages done by the project's construction.
- All work in Texas Highway Department and Bexar County right-of-way shall be done in accordance with respective construction specifications and permit.
- The Contractor shall comply with City of San Antonio or other governing Municipality's tree ordinances when excavating near trees.
- The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
- Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.
- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be sent to constworkreq@saws.org.
- Weekend Work: Contractors are required to notify the SAWS Inspection Construction department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.
- Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
- PRE CON SITE VIDEO: Before the start of any construction. The site must be video recorded by the contractor with one copy submitted to SAWS Inspections. A pre-site video will provide accurate documentation of the existing conditions. (NSPI)
- POWER POLE BRACING: Contractors should be advised that there are existing overhead utility poles along the project corridor. Contractors should further be advised that if the distance from the outside face of a utility trench to the face of a utility pole is less than 5 feet, said utility pole is subject to bracing, based on a determination made by utility pole owner. Costs incurred by contractor for bracing of these utility poles is subsidiary to that respective utility company's work. It is advisable for the contractor to review the construction documents, and visit the construction site to determine potential impacts.

WATER SECTION:

- Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Inspection and/or SAWS Production groups at least one week or more in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.
 - SAWS Production Control Center 233-2016
- Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), maybe located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Payment for such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
- VALVE REMOVAL: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)

CPS ENERGY NOTE:

- CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377. 48 HOURS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN PROJECT AREA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING CPS ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREAS.
- CONTRACTOR TO COORDINATE WITH CPS ENERGY AND FIELD VERIFY THE DEPTH OF GAS MAINS BEFORE BEGINNING OF CONSTRUCTION.
- POWER POLES ARE TO BE BRACED BY THE CONTRACTOR, IF NECESSARY. (NSPI)

NOTES:

- CONTRACTOR SHALL RESTRAIN ALL PROPOSED PIPES, VALVES AND FITTINGS AT NO ADDITIONAL COST (RL=RESTRAINT LENGTH)
- CONTRACTOR TO MAINTAIN WATER SERVICE CONNECTIONS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL ALSO MAINTAIN ACCESS TO ALL EXISTING AND PROPOSED WATER VALVES AT ALL TIMES (NSPI).
- NSPI - NOT A SEPARATE PAY ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OPERATION OF ALL EXISTING UTILITIES AFFECTED BY PROPOSED CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER CONDITION, ANY DAMAGE DONE TO EXISTING CURBS, SIDEWALKS, OR DRIVEWAYS.
- SERVICE LINES SHALL BE LAID AT A MINIMUM OF 3-FEET OF COVER THROUGHOUT THE PROJECT.
- ALL STREE REPAIRS ARE REQUIRED TO BE SQUARE CUTS.
- TREE PROTECTION IS NSPI.
- CONTRACTOR SHALL INSTALL NEW SERVICES WITH 3 FOOT COVER MINIMUM TO AVOID CONFLICT WITH COSA ROADWAY IMPROVEMENTS.
- THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO FEET OF VERTICAL SEPARATION DISTANCE BETWEEN ALL PROPOSED WATER LINES (MAINS AND SERVICES) AND EXISTING GAS MAINS.

ASBESTOS CEMENT PIPE CONNECTIONS & REMOVAL NOTE:

ASBESTOS CEMENT (A.C.) PIPE, ALSO KNOWN AS TRANSITE PIPE AND WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), IS LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCUR. PAYMENT FOR SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE."

NOTE FOR THE CITY OF SAN ANTONIO FLATWORK:

ALL LIMITS FOR CURB, SIDEWALK, AND TREE PREP BEYOND WHAT IS CONSIDERED INCIDENTAL TO NORMAL UTILITY CONSTRUCTION WILL BE ADDRESSED BY THE SAWS INSPECTOR. SAWS INSPECTOR WILL ALSO DETERMINE IF ADDITIONAL COMPENSATION IS WARRANTED IF LIMITS EXCEED INCIDENTALS.

AT&T NOTES:

- THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE.
- THE CONTRACTOR SHOULD CALL FOR LOCATES THROUGH THE "ONE CALL" UTILITY LOCATE SERVICE (1-800-545-6005) 48 HOURS PRIOR TO CONSTRUCTION/EXCAVATION WORK. CONTRACTORS HAVE THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

VIA NOTES:

- THE CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA ASSETS.
- THE CONTRACTOR MUST CONTACT VIA ((210)362-2155 OR (210)362-2096) FOURTEEN DAYS PRIOR TO ANY WORK IN THE VICINITY OF VIA BUS STOPS.
- THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA.
- THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

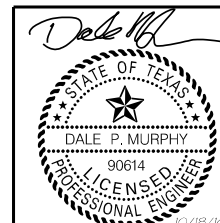
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

TOTAL QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
GENERAL WATER BID ITEMS			
1	(103) REMOVE CONCRETE CURB (COSA SPEC)	LF	100
2	(103) REMOVE CONCRETE SIDEWALKS AND DRIVEWAYS (COSA SPEC)	SF	424
3	(202) PRIME COAT (COSA SPEC)	GAL	228.8
4	(203) TACK COAT (COSA SPEC)	GAL	114.4
5	(205) HOT MIX ASPHALTIC PAVEMENT - TYPE C (3" COMPACTED DEPTH) (COSA SPEC)	SY	1144
6	(206) ASPHALT TREATED BASE (10" COMPACTED DEPTH) (COSA SPEC)	SY	939
7	(413) FLOWABLE FILL (COSA SPEC)	CY	222
8	(500) CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER (COSA SPEC)	LF	100
9	(502) CONCRETE SIDEWALKS (COSA SPEC)	SY	43
10	(503) PORTLAND CEMENT CONCRETE DRIVEWAY - COMMERCIAL (COSA SPEC)	SY	5
11	(530) BARRICADES, SIGNS, AND TRAFFIC HANDLING (COSA SPEC)	LS	1
12	(535) 4 INCH WIDE YELLOW LINE (COSA SPEC)	LF	30
13	(535) 4 INCH WIDE WHITE LINE (COSA SPEC)	LF	118
14	(535) 8 INCH WIDE WHITE LINE (COSA SPEC)	LF	25
15	(535) 24 INCH WIDE WHITE LINE (COSA SPEC)	LF	106
16	(535) LEFT WHITE ARROW (COSA SPEC)	EA	1
17	(537) PAVEMENT MARKER (TYPE II-A-A) (COSA SPEC)	EA	2
18	(550) TRENCH PROTECTION	LF	2041
19	(808) 3' x 5' x 3' REINFORCED CONCRETE METER VAULT	EA	4
20	(814) 12" DUCTILE IRON CLASS 350 WATERLINE	LF	1941
21	(818) 8" PVC WATERLINE (RESTRAINED)	LF	100
22	(824) 8" TURBINE METER ASSEMBLY	EA	4
23	(828) 6" GATE VALVE	EA	2
24	(828) 8" GATE VALVE	EA	1
25	(828) 12" GATE VALVE	EA	5
26	(831) 6" x 6" TEE CUT-IN	EA	1
27	(831) 8" x 8" TEE CUT-IN	EA	1
28	(831) 12" x 12" TEE CUT-IN	EA	2
29	(832) 24" x 12" TAPPING SLEEVE & VALVE	EA	1
30	(834) FIRE HYDRANT	EA	2
31	(836) PIPE FITTINGS, ALL SIZES & TYPES	TN	1.5
32	(841) HYDROSTATIC TESTING	EA	4
33	(844) 2" BLOW-OFF, TEMPORARY	EA	9
34	(856) JACK, BORING AND TUNNELING, 18"-24" CASING	LF	62
35	(856) 24" STEEL CASING	LF	62
36	(856) 12" CARRIER PIPE	LF	62
37	(3000) REMOVAL, TRANSPORTATION, AND DISPOSAL OF VARIOUS SIZES OF AC PIPE	LF	52
38	(100) MOBILIZATION (MAXIMUM OF 10% OF THE TOTAL OF LINE ITEMS 1-37)	LS	1
39	(101) PREPARING RIGHT-OF-WAY (MAXIMUM OF 5% OF THE TOTAL OF LINE ITEMS 1-37)	LS	1



1120 S. Capital of Texas Highway
Cityview 2, Suite 100
Austin, Texas 78746
P - 512.338.1704 F - 512.338.1784
TBPE Firm Number 6535
www.kfriese.com

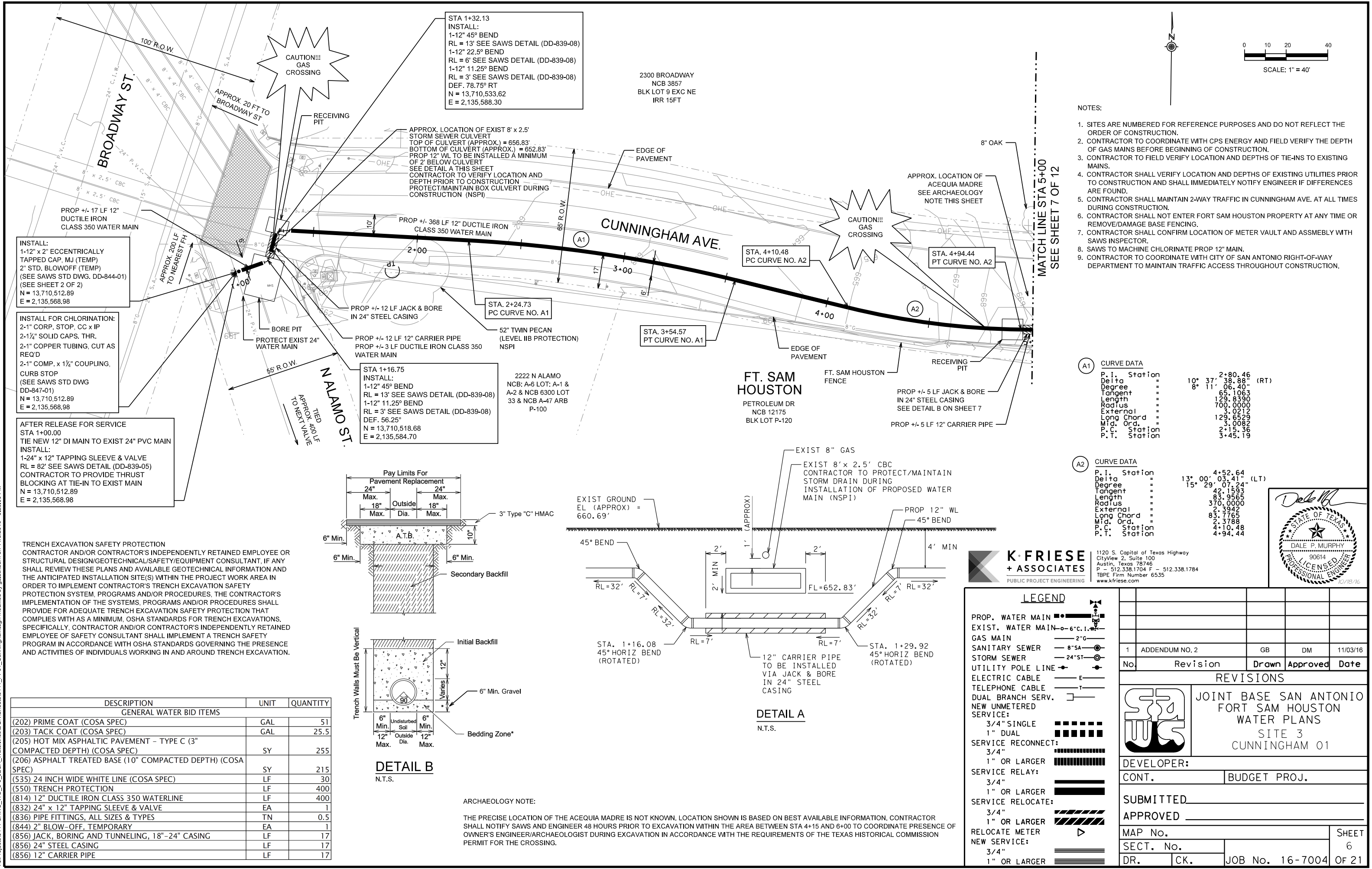


LEGEND				
PROP. WATER MAIN				
EXIST. WATER MAIN				
GAS MAIN				
SANITARY SEWER				
STORM SEWER				
UTILITY POLE LINE				
ELECTRIC CABLE				
TELEPHONE CABLE				
DUAL BRANCH SERV.				
NEW UNMETERED SERVICE:				
3/4" SINGLE				
1" DUAL				
SERVICE RECONNECT:				
3/4"				
1" OR LARGER				
SERVICE RELAY:				
3/4"				
1" OR LARGER				
SERVICE RELOCATE:				
3/4"				
1" OR LARGER				
RELOCATE METER				
NEW SERVICE:				
3/4"				
1" OR LARGER				

1	ADDENDUM NO. 2	GB	DM	11/03/16
No.	Revision	Drawn	Approved	Date
REVISIONS				
JOINT BASE SAN ANTONIO FORT SAM HOUSTON WATER PLANS GENERAL NOTES AND QUANTITIES				
DEVELOPER: _____				
CONT. _____		BUDGET PROJ. _____		
SUBMITTED _____				
APPROVED _____				
MAP No. _____				SHEET
SECT. No. _____				2
DR. _____	CK. _____	JOB No. 16-7004 OF 21		

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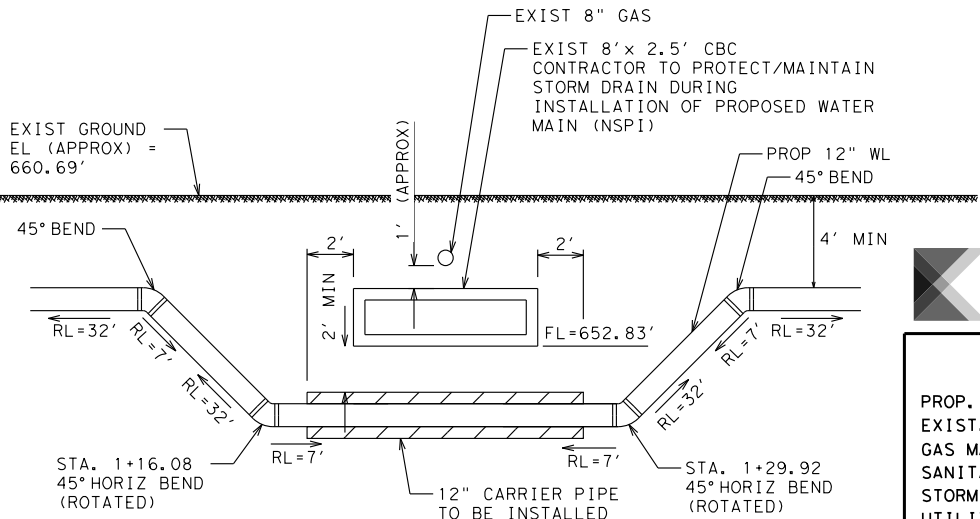
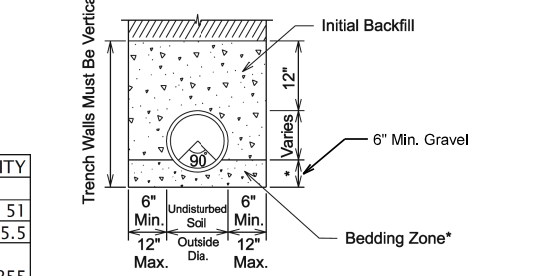
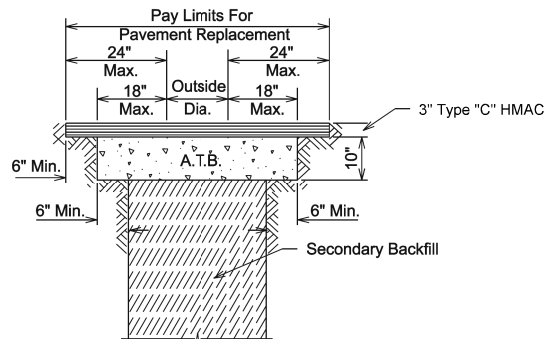
INSTALL:
 1-12" x 2" ECCENTRICALLY TAPPED CAP, MJ (TEMP)
 2" STD. BLOWOFF (TEMP)
 (SEE SAWS STD DWG. DD-844-01)
 (SEE SHEET 2 OF 2)
 N = 13,710,512.89
 E = 2,135,568.98

INSTALL FOR CHLORINATION:
 2-1" CORP. STOP, CC x IP
 2-1 1/4" SOLID CAPS, THR.
 2-1" COPPER TUBING, CUT AS REQ'D
 2-1" COMP. x 1 1/4" COUPLING,
 CURB STOP
 (SEE SAWS STD DWG DD-847-01)
 N = 13,710,512.89
 E = 2,135,568.98

AFTER RELEASE FOR SERVICE
 STA 1+00.00
 TIE NEW 12" DI MAIN TO EXIST 24" PVC MAIN
INSTALL:
 1-24" x 12" TAPPING SLEEVE & VALVE
 RL = 82' SEE SAWS DETAIL (DD-839-05)
 CONTRACTOR TO PROVIDE THRUST BLOCKING AT TIE-IN TO EXIST MAIN
 N = 13,710,512.89
 E = 2,135,568.98

TRENCH EXCAVATION SAFETY PROTECTION
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

DESCRIPTION	UNIT	QUANTITY
GENERAL WATER BID ITEMS		
(202) PRIME COAT (COSA SPEC)	GAL	51
(203) TACK COAT (COSA SPEC)	GAL	25.5
(205) HOT MIX ASPHALTIC PAVEMENT - TYPE C (3" COMPACTED DEPTH) (COSA SPEC)	SY	255
(206) ASPHALT TREATED BASE (10" COMPACTED DEPTH) (COSA SPEC)	SY	215
(535) 24 INCH WIDE WHITE LINE (COSA SPEC)	LF	30
(550) TRENCH PROTECTION	LF	400
(814) 12" DUCTILE IRON CLASS 350 WATERLINE	LF	400
(832) 24" x 12" TAPPING SLEEVE & VALVE	EA	1
(836) PIPE FITTINGS, ALL SIZES & TYPES	TN	0.5
(844) 2" BLOW-OFF, TEMPORARY	EA	1
(856) JACK, BORING AND TUNNELING, 18"-24" CASING	LF	17
(856) 24" STEEL CASING	LF	17
(856) 12" CARRIER PIPE	LF	17



ARCHAEOLOGY NOTE:
 THE PRECISE LOCATION OF THE ACEQUIA MADRE IS NOT KNOWN. LOCATION SHOWN IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL NOTIFY SAWS AND ENGINEER 48 HOURS PRIOR TO EXCAVATION WITHIN THE AREA BETWEEN STA 4+15 AND 6+00 TO COORDINATE PRESENCE OF OWNER'S ENGINEER/ARCHAEOLOGIST DURING EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE TEXAS HISTORICAL COMMISSION PERMIT FOR THE CROSSING.

- NOTES:**
- SITES ARE NUMBERED FOR REFERENCE PURPOSES AND DO NOT REFLECT THE ORDER OF CONSTRUCTION.
 - CONTRACTOR TO COORDINATE WITH CPS ENERGY AND FIELD VERIFY THE DEPTH OF GAS MAINS BEFORE BEGINNING OF CONSTRUCTION.
 - CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTHS OF TIE-INS TO EXISTING MAINS.
 - CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY ENGINEER IF DIFFERENCES ARE FOUND.
 - CONTRACTOR SHALL MAINTAIN 2-WAY TRAFFIC IN CUNNINGHAM AVE. AT ALL TIMES DURING CONSTRUCTION.
 - CONTRACTOR SHALL NOT ENTER FORT SAM HOUSTON PROPERTY AT ANY TIME OR REMOVE/DAMAGE BASE FENCING.
 - CONTRACTOR SHALL CONFIRM LOCATION OF METER VAULT AND ASSEMBLY WITH SAWS INSPECTOR.
 - SAWS TO MACHINE CHLORINATE PROP 12" MAIN.
 - CONTRACTOR TO COORDINATE WITH CITY OF SAN ANTONIO RIGHT-OF-WAY DEPARTMENT TO MAINTAIN TRAFFIC ACCESS THROUGHOUT CONSTRUCTION.

LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED SERVICE:
- 3/4" SINGLE
- 1" DUAL
- SERVICE RECONNECT:
- 3/4"
- 1" OR LARGER
- SERVICE RELAY:
- 3/4"
- 1" OR LARGER
- SERVICE RELOCATE:
- 3/4"
- 1" OR LARGER
- RELOCATE METER
- NEW SERVICE:
- 3/4"
- 1" OR LARGER

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 TBPE Firm Number 6535
 www.kfriesee.com

DALE P. MURPHY
 90614
 LICENSED PROFESSIONAL ENGINEER
 10/18/16

1	ADDENDUM NO. 2	GB	DM	11/03/16
No.	Revision	Drawn	Approved	Date

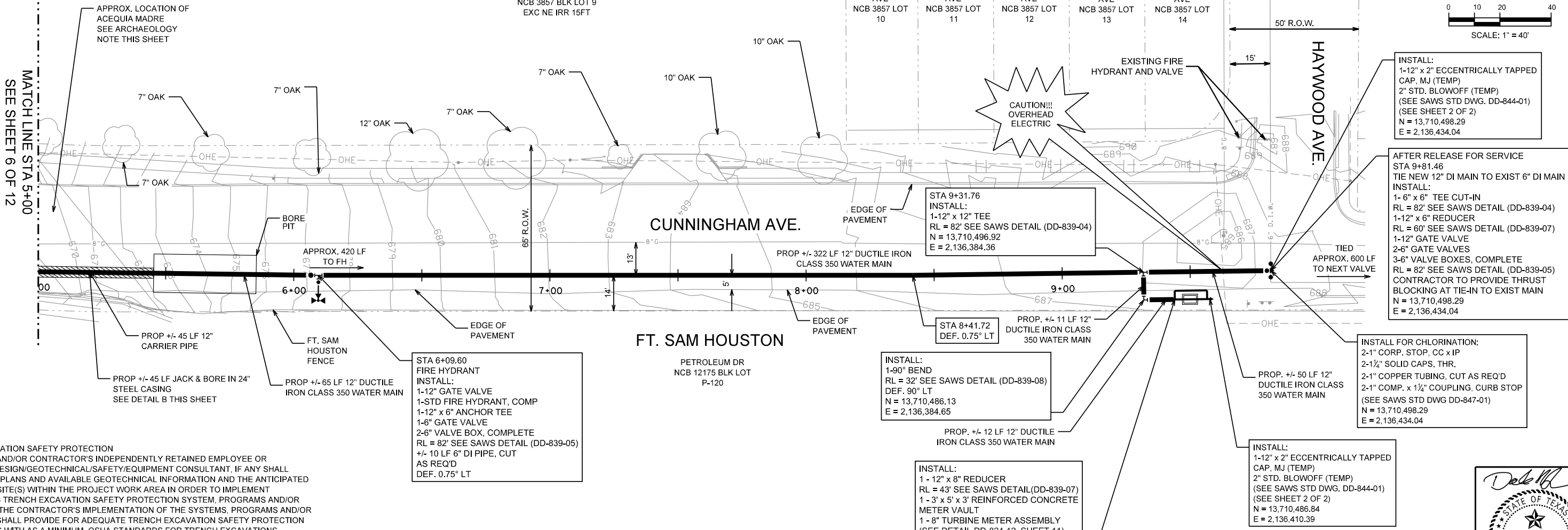
REVISIONS

**JOINT BASE SAN ANTONIO
 FORT SAM HOUSTON
 WATER PLANS
 SITE 3
 CUNNINGHAM 01**

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	SHEET
SECT. No.	6
DR.	CK.
JOB No. 16-7004 OF 21	

NOTES:

- SITES ARE NUMBERED FOR REFERENCE PURPOSES AND DO NOT REFLECT THE ORDER OF CONSTRUCTION.
- CONTRACTOR TO COORDINATE WITH CPS ENERGY AND FIELD VERIFY THE DEPTH OF GAS MAINS BEFORE BEGINNING OF CONSTRUCTION.
- CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTHS OF TIE-INS TO EXISTING MAINS.
- CONTRACTOR SHALL MAINTAIN 2-WAY TRAFFIC IN CUNNINGHAM AVE. AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL NOT ENTER FORT SAM HOUSTON PROPERTY AT ANY TIME OR REMOVE/DAMAGE BASE FENCING.
- CONTRACTOR SHALL CONFIRM LOCATION OF METER VAULT AND ASSEMBLY WITH SAWS INSPECTOR.
- SAWS TO MACHINE CHLORINATE PROP 12" MAIN.



MATCH LINE STA 5+00
SEE SHEET 6 OF 12

INSTALL:
1-12" x 2" ECCENTRICALLY TAPPED CAP, MJ (TEMP)
2" STD. BLOWOFF (TEMP)
(SEE SAWS STD DWG. DD-844-01)
(SEE SHEET 2 OF 2)
N = 13,710,498.29
E = 2,136,434.04

AFTER RELEASE FOR SERVICE STA 9+81.46
TIE NEW 12" DI MAIN TO EXIST 6" DI MAIN
INSTALL:
1- 6" x 6" TEE CUT-IN
RL = 82' SEE SAWS DETAIL (DD-839-04)
1-12" x 6" REDUCER
RL = 60' SEE SAWS DETAIL (DD-839-07)
1-12" GATE VALVE
2-6" GATE VALVES
3-6" VALVE BOXES, COMPLETE
RL = 82' SEE SAWS DETAIL (DD-839-05)
CONTRACTOR TO PROVIDE THRUST BLOCKING AT TIE-IN TO EXIST MAIN
N = 13,710,498.29
E = 2,136,434.04

INSTALL FOR CHLORINATION:
2-1" CORP. STOP, CC x IP
2-1 1/2" SOLID CAPS, THR.
2-1" COPPER TUBING, CUT AS REQ'D
2-1" COMP. x 1 1/2" COUPLING, CURB STOP
(SEE SAWS STD DWG DD-847-01)
N = 13,710,498.29
E = 2,136,434.04

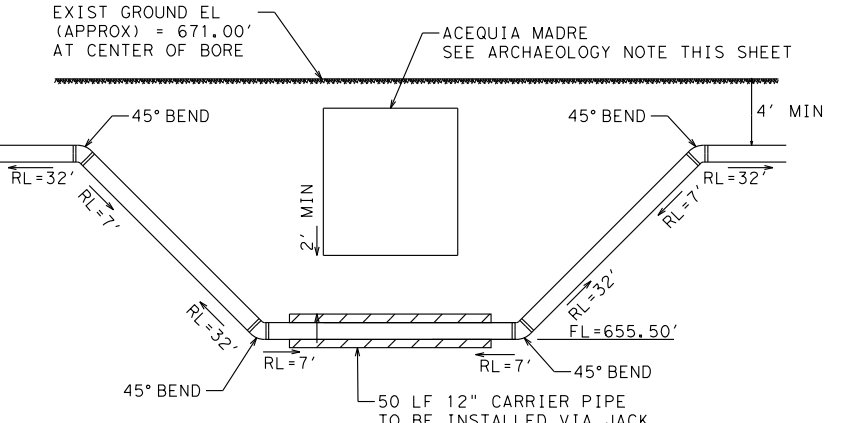
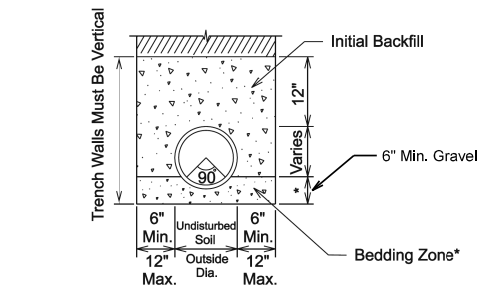
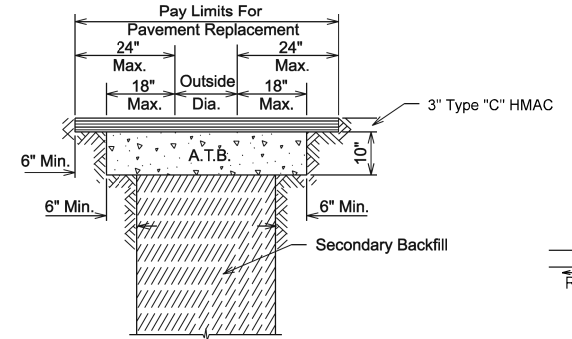
INSTALL:
1-12" x 2" ECCENTRICALLY TAPPED CAP, MJ (TEMP)
2" STD. BLOWOFF (TEMP)
(SEE SAWS STD DWG. DD-844-01)
(SEE SHEET 2 OF 2)
N = 13,710,486.84
E = 2,136,410.39

INSTALL:
1-90° BEND
RL = 32' SEE SAWS DETAIL (DD-839-08)
DEF. 90° LT
N = 13,710,486.13
E = 2,136,384.65

INSTALL:
1 - 12" x 8" REDUCER
RL = 43' SEE SAWS DETAIL (DD-839-07)
1 - 3' x 5' x 3' REINFORCED CONCRETE METER VAULT
(SEE DETAIL DD-824-12, SHEET 11)
N = 13,710,486.47
E = 2,136,396.77

STA 9+31.76
INSTALL:
1-12" x 12" TEE
RL = 82' SEE SAWS DETAIL (DD-839-04)
N = 13,710,496.92
E = 2,136,384.36

STA 6+09.60
FIRE HYDRANT
INSTALL:
1-12" GATE VALVE
1-STD FIRE HYDRANT, COMP
1-12" x 6" ANCHOR TEE
1-6" GATE VALVE
2-6" VALVE BOX, COMPLETE
RL = 82' SEE SAWS DETAIL (DD-839-05)
+/- 10 LF 6" DI PIPE, CUT AS REQ'D
DEF. 0.75" LT



DETAIL B
N.T.S.

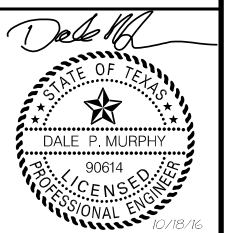
ARCHAEOLOGY NOTE:
THE PRECISE LOCATION OF THE ACEQUIA MADRE IS NOT KNOWN. LOCATION SHOWN IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL NOTIFY SAWS AND ENGINEER 48 HOURS PRIOR TO EXCAVATION WITHIN THE AREA BETWEEN STA 4+15 AND 6+00 TO COORDINATE PRESENCE OF OWNER'S ENGINEER/ARCHAEOLOGIST DURING EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE TEXAS HISTORICAL COMMISSION PERMIT FOR THE CROSSING.

TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OF SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

DESCRIPTION	UNIT	QUANTITY
GENERAL WATER BID ITEMS		
(202) PRIME COAT (COSA SPEC)	GAL	60.2
(203) TACK COAT (COSA SPEC)	GAL	30.1
(205) HOT MIX ASPHALTIC PAVEMENT - TYPE C (3" COMPACTED DEPTH) (COSA SPEC)	SY	301
(206) ASPHALT TREATED BASE (10" COMPACTED DEPTH) (COSA SPEC)	SY	254
(550) TRENCH PROTECTION	LF	460
(808) 3' x 5' x 3' REINFORCED CONCRETE METER VAULT	EA	1
(814) 12" DUCTILE IRON CLASS 350 WATERLINE	LF	460
(824) 8" TURBINE METER ASSEMBLY	EA	1
(828) 6" GATE VALVE	EA	2
(828) 12" GATE VALVE	EA	2
(831) 6" x 6" TEE CUT-IN	EA	1
(834) FIRE HYDRANT	EA	1
(836) PIPE FITTINGS, ALL SIZES & TYPES	TN	0.3
(844) 2" BLOW-OFF, TEMPORARY	EA	2
(856) JACK, BORING AND TUNNELING, 18"-24" CASING	LF	45
(856) 24" STEEL CASING	LF	45
(856) 12" CARRIER PIPE	LF	45

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LEGEND

PROP. WATER MAIN	—●—●—●—
EXIST. WATER MAIN	—○—○—○—
GAS MAIN	—2" G—
SANITARY SEWER	—8" SA—
STORM SEWER	—24" ST—
UTILITY POLE LINE	—E—
ELECTRIC CABLE	—T—
TELEPHONE CABLE	—T—
DUAL BRANCH SERV. NEW UNMETERED SERVICE:	
3/4" SINGLE	▬▬▬▬▬▬
1" DUAL	▬▬▬▬▬▬
SERVICE RECONNECT:	
3/4"	▬▬▬▬▬▬
1" OR LARGER	▬▬▬▬▬▬
SERVICE RELAY:	
3/4"	▬▬▬▬▬▬
1" OR LARGER	▬▬▬▬▬▬
SERVICE RELOCATE:	
3/4"	▬▬▬▬▬▬
1" OR LARGER	▬▬▬▬▬▬
RELOCATE METER	▷
NEW SERVICE:	
3/4"	▬▬▬▬▬▬
1" OR LARGER	▬▬▬▬▬▬

No.	Revision	Drawn	Approved	Date
1	ADDENDUM NO. 2	GB	DM	11/03/16

REVISIONS

JOINT BASE SAN ANTONIO
FORT SAM HOUSTON
WATER PLANS
SITE 3
CUNNINGHAM 02

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED _____	
APPROVED _____	
MAP No.	SHEET 7
SECT. No.	OF 21
DR.	CK.
JOB No. 16-7004	

X:\Projects\0441-SAWS_WO_3-0_JBSA_Water\Drawings\Sheets\0441_PP02_Cunningham.dgn modified by glackburn on 11/3/2016 - 3:22:37 PM