



W-1 LEON CREEK: HWY 151 TO HWY 90 - UPPER SEGMENT

Solicitation Number: CO-00351

Job No.: 19-4528

ADDENDUM 1

September 16, 2020

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the price proposal, 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 price proposal.

RESPONSES TO QUESTIONS

Q1: We were wondering if the Tunneling and Shaft qualifications required for this project can be met with experience provided by the Staff of Geotechnical Engineering with projects they have completed before working with Geotechnical Engineering.

Response: *SAWS will need to evaluate the firm's and personnel's qualifications. However, it is expected the contractor or subcontractor performing the work have some previous project experience comparable to the tunneling and shaft work anticipated in this project.*

Q2: Will SAWS Permit use of Tri-Loc interlocking joint steel casing pipe in lieu of 102" Diameter welded steel casing? This method of joint connection provides significant advantage in reducing installation time.

Response: *Per Section SS 2610, 1.04, B, press-fit connections are an acceptable method for connecting steel casing pipe. Contractor shall submit the manufactured details and engineering calculations for review and acceptance by SAWS.*

Q3: Is the use of Steel liner plate required as shown on sheets 33, 34, & 35 or can that be substituted with 102" Steel Casing pipe?

Response: *Contractor is only approved to use liner plate for the tunnel from STA 49+27.07 to STA 54+83.83. Steel Casing pipe will not be allowed as a substitute.*

Q4: Will Polymer Concrete (Armorock), be allowed as an alternate bid for the wastewater structures?

Response: *Respondents shall provide a price based on the advertised Plans and Contract Documents. Alternatives should be submitted in the innovative ideas for cost savings section of the proposal (see SIR - Sec. 3.a.iv). With the best valued Respondent selected, SAWS will negotiate any changes to scope.*

Q5: Can an allowance be provided for the handling of groundwater and surface water?

Response: *No, per SS 2140 the Control of Surface and Groundwater Controls are subsidiary to the work and not a separate line item.*

Q6: Please confirm what permits that will be needed to construct the project.

Response: *Permits needed to construct the project are:*

1. *CoSA Floodplain Development Permit*
2. *CoSA Tree Permit*
3. *TXDOT Utility Installation Request Permit*
4. *CoSA Right-of-Way Permit*
5. *USACE NWP 12*

Q7: The proposed 84” main intersects the existing 42-inch line at station 33+25. Is the intent for the contractor to remain on bypass for the remainder of the construction moving upstream?

Response: *The 84” main does cross the existing 42” main at approximately STA 33+25. The bypass plan recommendation is to leave the installation of the segment of proposed 84” main between MH-4 and MH-5 until the end of construction so that the existing 42” main is undisturbed and remains in service throughout most of the construction. Once construction of the proposed 84” main is complete all the way upstream of MH-5 (up to and including MH-16) and downstream of MH-4 then “Bypass Line 4” can be installed to divert the flow from the existing 42” so that the segment between the two manholes can be constructed and put into service. This recommendation results in the need for a bypass of the 42” main only during construction of the segment between MH-4 and MH-5 and not for the entire duration of construction.*

The Contractor shall submit a bypass plan and phasing plan to SAWS for review and approval prior to the commencement of construction. Therefore, the Contractor has the ability to control the phasing of the bypass and sewer main construction and is not bound to the recommended plan.

Q8: Please confirm that the contractor is required to provide a Karst Geologist/Biologist duration of all excavation as outlined in SC6 &9.

Response: *The Contractor is required to provide a Karst Geologist/Biologist once a week during open-cut construction.*

Q9: Please confirm that the required Nest Survey is only required if clearing operations occur between March and August.

Response: *That is correct. Nest Survey is only required if clearing operations occur from March 15th thru September 15th.*

Q10: Please confirm which manholes will require the top slab as shown on D-5.A. Details on D-4 call out top slabs as “SAWS Standard Ring Encasement” with 3 foot toe down.

Response: *Manholes MH-1, MH-2, MH-3, MH-4, MH-8, MH-11, MH-14, MH-15 and MH-16 will require top slabs and reference Detail D-5/2. Detail D-4/1, Section A will be revised to show SAWS Standard Concrete Ring Encasement.*

Q11: Is a RPLS required to check all manholes line and grade?

Response: *Yes, an RPLS is required to check all manholes line and grade. Refer to Specification Section 1050 – Survey Controls.*

Q12: Is a tunnel shield required for all tunnels with liner plate?

Response: *Yes, per Tunnel Liner Table in Sheet D-1 (Sheet 50 of 67) a tunnel shield is required at all tunnel locations.*

- Q13:** Sheet S-1 requires repair of vapor barrier and interior coating of the existing structure. Will only the damaged areas be required to be replaced or will the whole structure need repair? In addition, what coating will is currently approved?
- Response:** *Correct, only internal surfaces damaged by coring and placement of the new FRP will need to be repaired and only exterior vapor barrier damaged due to coring and placement of the new FRP will need to be repaired. Contractor shall refer to SAWS Approved Product List (APL).*
- Q14:** SS2422 is included as part of the proposal documents. Are any of the tunnels expected to be constructed by Direct Pipe-jacking Method?
- Response:** *Direct Pipe-jacking is an allowable tunneling method for the Leon Creek Tunnel (STA 24+25 – STA 29+75) and Pinn Road Tunnel (STA 36+26 – STA 37+18.06). The contractor has the option to select other allowable tunneling methods as presented in the Tunnel Liner Table in Sheet D-2 (Sheet 50 of 67). It is the contractor's responsibility to select the appropriate tunnel methodology, as approved by SAWS, based on experience and the anticipated soils conditions to be encountered*
- Q15:** Under section SS 2314 2.01.B.4 there are 2 tables shown. Both indicate 2 flange liner plate. Please clarify if one of these tables is intended to be for 4 flange liner plate.
- Response:** *Table 2 from Section SS 2314 is intended to be for 4-flange liner plate.*
- Q16:** Will SAWS consider the addition of an allowance for fees associated with the requirement for a biologist or geologist to monitor all excavation activities.
- Response:** *No.*

CHANGES TO THE SPECIFICATIONS

1. Price Proposal

Remove and Replace the Price Proposal with the Price Proposal included in this Addendum. The revised documents should be used by Respondents submitting a proposal for this project.

2. Wage Decisions

Due to an update in the General Wage Decision for Building Construction Type, remove the Building Wage decision document from the solicitation in its entirety and replace with the revised version attached (rev. 08/28/2020, General Decision Number: TX20200231). This version should be utilized by the awarded contractor for the project.

3. Supplemental Conditions, modifications include the following:

Article III – CONTRACT DOCUMENTS & BONDS

Remove First Sentence of 3.3.1 of the general conditions and replace with the following:

RECORD DRAWING – Each month as the Work progresses, the Contractor shall formally submit to SAWS, along with the monthly payment application, a set of red line drawings noting work completed during that period.

The remaining sections of Article III shall remain the same.

Article V – CONTRACT RESPONSIBILITIES

Section 5.3 shall be amended by adding Section 5.3.14 after Section 5.3.13 as follows:

14 The personnel specified below are considered by SAWS to be essential to the work being performed under this Contract, and as such are defined as Key Personnel. Key Personnel include the Project Manager, Construction Manager, Quality Assurance and Quality Control Lead, Project Scheduler, Project Superintendent, Open Cut Superintendent, and Pipe Jacking / Tunneling Superintendent. Key Personnel shall be dedicated exclusively to this Project and shall be assigned as full-time employees for the duration of the Project. Prior to diverting any of the specified individuals to other projects, the contractor shall notify the Owner reasonably in advance and shall submit justification (including proposed

substitutions) in sufficient detail to permit evaluation of the impact on the project. No diversion shall be made by the contractor without the written consent of the Owner.

Subcontractor is defined in Article I, Contract Definitions of the General Conditions of the Contract Documents. Respondents should reference this definition prior to submitting a proposal in response to this Request for Competitive Sealed Proposals (“RFCSP”).

Key Subcontractors are defined as subcontractors that are responsible for executing a significant portion of the work, and as such are deemed to be essential to the work being performed under this Contract. The Key Subcontractor roles could include pipe jacking, tunneling, hand mining, large diameter open cut pipe installation, and large diameter sanitary sewer bypass which are considered by SAWS to be essential to the work being performed under this Contract, amount to a significant portion of the work, and as such shall be performed by Key Subcontractors. Prior to diverting any of the specified Key Subcontractors and associated Key Personnel to other projects, the contractor shall notify the Owner reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the project. No diversion shall be made by the contractor without the written consent of the Owner.

Section 5.13.5 shall be amended to remove the last sentence and replace with the following:

The Respondent is required to submit a baseline schedule as part of the proposal. The baseline schedule shall be a detailed, precedence-style critical path management schedule in Primavera or Microsoft Project format. The baseline schedule must encompass the entire contract duration from Notice to Proceed to the Contract End Date. This baseline schedule must show a completion date that corresponds to the Contract End Date. The baseline schedule must be inclusive of all work necessary to complete the project including sufficient time necessary for submission and review of submittals, permits, etc. The schedule shall take into consideration sequencing and contractual limitations as described within the Contract Documents. The anticipated notice to proceed (NTP) for this Project is January 4, 2021. Respondent shall use this date for developing the proposed project schedule. The remaining sections of Article V shall remain the same.

4. Special Conditions, replace SC7. Rock Excavation in its entirety with the following:

SC7. Rock Excavation

Soil borings completed for this project are widely spaced and therefore subsurface materials and conditions can and likely will vary between soil borings. Marl and Shale bedrock were encountered in our borings at relatively shallow depths, thus the need for rock excavation equipment should be anticipated for construction at this site. All hard rock excavation costs associated with this work are incidental to the pipe installation.

5. Supplemental Specifications, SS 2314 Tunneling with Steel Liner Plate:

Remove Table 2 title: “2 Flange Liner Plate, H-20 Live Load” and “Replace with 4 Flange Liner Plate, H-20 Live Load”

CHANGES TO THE PLANS

1. Remove the following plan sheets in their entirety and replace them with the attached, revised plan sheets. (Revisions made from the original sheets are depicted by revision clouds around the changed portions.)
 - Sheet G-4: QUANTITIES AND SAWS GENERAL CONSTRUCTION NOTES SHEET – Replace sheet in its entirety.
 - Reduce quantity of Line Item 39 – Extra Depth Tee Base Manhole
 - Added Line Item 69 – Concrete Manhole Top Slab
 - Revised Excavation Equipment note to indicate that rock excavation is considered incidental to the pipe installation and there is no separate line item.
 - Sheet C-1: Line “A” Plan and Profile Sheet STA 9+94.15 to 14+00 – Replace sheet in its entirety.
 - Added concrete top slabs to MHs 1 and 2
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table

- Sheet C-3: Line “A” Plan and Profile Sheet STA 18+00 to 22+00 – Replace sheet in its entirety.
 - Added concrete top slab to MH-3
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table
- Sheet C-6: Line “A” Plan and Profile Sheet STA 30+00 to 34+00 – Replace sheet in its entirety.
 - Added concrete top slab to MH-4
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table
- Sheet C-9: Line “A” Plan and Profile Sheet STA 42+00 to 46+00 – Replace sheet in its entirety.
 - Added concrete top slab to MH-8
 - Added Line Item D-5- Concrete Manhole Top Slab to Quantity Table
- Sheet C-12: Line “A” Plan and Profile Sheet STA 54+00 to 58+00 – Replace sheet in its entirety.
 - Added concrete top slab to MH-11
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table
- Sheet C-16: Line “A” Plan and Profile Sheet STA 70+00 to 74+00 - Replace sheet in its entirety.
 - Added concrete top slab to MH-14
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table
- Sheet C-17: Line “A” Plan and Profile Sheet STA 74+00 to 78+00 – Replace sheet in its entirety.
 - Added concrete top slab to MH-15
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table
- Sheet C-20: Line “A” Plan and Profile Sheet STA 86+00 to 88+07.68 – Replace sheet in its entirety.
 - Added concrete top slab to MH-16
 - Added Line Item D-5 – Concrete Manhole Top Slab to Quantity Table
- Sheet D-4: Manhole Details, revised Manhole Section “A” – Replace sheet in its entirety.
 - Revised Detail D-4/1 Section A to show SAWS STD Concrete Ring Encasement

CLARIFICATIONS

1. Supplemental Specifications, SS 804A Contaminated Soil and Water Control:

Neither contaminated groundwater nor contaminated soil is expected on this project. However line items 70, 71 and 72 have been added as an allowance should contaminated soils be encountered during construction of the sewer main.

END OF ADDENDUM 1

This Addendum is 28 pages in its entirety, including attachments.

Attachments:

- Contract Documents – Price Proposal (4 pages)
- General Wage Decision Number: TX20200231 (rev. 08/28/2020) (7 pages)
- Supplemental Specifications - SS 2314 Tunneling with Steel Liner Plate: Page 2314-13
- Plans – Sheet G-4: Quantities and SAWS General Construction Notes Sheet
- Plans – Sheet C-1: Line “A” Plan and Profile STA 9+94.15 to 14+00
- Plans – Sheet C-3: Line “A” Plan and Profile STA 18+00 to 22+00
- Plans – Sheet C-6: Line “A” Plan and Profile STA 30+00 to 34+00
- Plans – Sheet C-9: Line “A” Plan and Profile STA 42+00 to 46+00
- Plans – Sheet C-12: Line “A” Plan and Profile STA 54+00 to 58+00
- Plans – Sheet C-16: Line “A” Plan and Profile STA 70+00 to 74+00
- Plans – Sheet C-17: Line “A” Plan and Profile STA 74+00 to 78+00
- Plans – Sheet C-20: Line “A” Plan and Profile STA 86+00 to 88+07.68
- Plans - Sheet D-4: Manhole Details, revised Manhole Section “A”

Jason T. Diamond
Jason Diamond
Pape-Dawson Engineers, Inc.



9-16-20

PRICE PROPOSAL

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

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitation for Competitive Sealed Proposals, 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 in the bid proposal to wit:

PLEASE SEE ATTACHED LIST OF PRICE PROPOSAL ITEMS.

RESPONDENT'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 PROPOSAL.

PROPOSAL

The Respondent offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **563** calendar days after the start date, as set forth in the Authorization to Proceed. **The Respondent 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.

Price Proposal
SAWS Job No. 19-4528
W-1 Leon Creek: Hwy 151 to Hwy 90 - Upper Segment
Solicitation No. CO-00351

Line No	Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	202.1	PRIME COAT	GAL	588	\$	\$
2	203.1	TACK COAT	GAL	708	\$	\$
3	205.2	HOTMIX ASPHALT PAVEMENT TYPE B - 10 INCHES PAVEMENT THICKNESS	SY	1,654	\$	\$
4	205.3	HOTMIX ASPHALT PAVEMENT TYPE D - 3 INCHES PAVEMENT THICKNESS	SY	1,200	\$	\$
5	205.4	HOTMIX ASPHALT PAVEMENT TYPE D - 2 INCHES PAVEMENT THICKNESS	SY	5,856	\$	\$
6	208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (2 INCHES DEPTH)	SY	5,856	\$	\$
7	208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (3 INCHES DEPTH)	SY	1,200	\$	\$
8	500.1	CONCRETE CURB	LF	64	\$	\$
9	502.1	CONCRETE SIDEWALKS	SY	12	\$	\$
10	503.1	PORTLAND CEMENT CONCRETE DRIVEWAYS	SY	57	\$	\$
11	505.1	CONCRETE RIPRAP (6" THICK)	SY	61	\$	\$
12	103.4	REMOVE MISC. CONCRETE	SF	420	\$	\$
13	SP-13	BYPASS PUMPING PAD 10'x10' WITH 4"-6" (D50) RIPRAP (COMPLETE)	LS	1	\$	\$
14	SP-13	EXISTING PAD RESTORATION	LS	1	\$	\$
15	511.1	REPLACING WITH FLEXIBLE BASE & PAVEMENT (12" COMPACTED DEPTH)	SY	16	\$	\$
16	522.1	SIDEWALK PIPE RAILING	LF	44	\$	\$
17	536.1	4" WIDE YELLOW LINE	LF	480	\$	\$
18	536.2	4" WIDE WHITE LINE	LF	480	\$	\$
19	814	24" DI WATERLINE (OPEN CUT)	LF	85	\$	\$
20	836	PIPE FITTINGS (ALL TYPES & SIZES)	TN	1.55	\$	\$
21	840	24" WATER TIE-INS	EA	2	\$	\$
22	841.0	HYDROSTATIC TESTING	EA	1	\$	\$
23	844.4	4" BLOW-OFF, TEMPORARY	EA	1	\$	\$
24	110/820	36" CSC RECYCLED WATER MAIN, RESTRAINED	LF	61	\$	\$
25	110	30" MANWAY	EA	1	\$	\$
26	846	2" AIR RELEASE VALVE	EA	1	\$	\$
27	3100	TEMPORARY WATER MAIN (12" HDPE)	LS	1	\$	\$
28	507	TEMPORARY CONSTRUCTION FENCE (4 FEET HIGH)	LF	111	\$	\$
29	530	BARRICADES, SIGNS & TRAFFIC HANDLING	LS	1	\$	\$
30	SPTS 540	TEMPORARY EROSION, SEDIMENTATION AND WATER POLLUTION PREVENTION AND CONTROL	LS	1	\$	\$
31	550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	6,979	\$	\$
32	848A	8" PVC SDR 26 (OPEN CUT 0'-10')	LF	106	\$	\$
33	848A	12" PVC SDR 26 (OPEN CUT 10'-20')	LF	67	\$	\$
34	848B	TESTING AND ACCEPTANCE OF PVC SDR 26 PIPE (ALL DEPTHS)	LS	1	\$	\$
35	852A	EXTRA DEPTH MANHOLE	VF	13	\$	\$
36	852A	4 FEET SANITARY SEWER MANHOLE	EA	1	\$	\$
37	852A	REMOVE & REPLACE 4' SANITARY SEWER MANHOLE	EA	2	\$	\$
38	852B	TESTING AND ACCEPTANCE OF SANITARY SEWER MANHOLES (ALL TYPES)	LS	1	\$	\$
39	853	EXTRA DEPTH TEE BASE MANHOLE	VF	194	\$	\$
40	853A	TEE BASE FIBERGLASS MANHOLE	EA	3	\$	\$
41	853A	TEE BASE FIBERGLASS MANHOLE, MITER	EA	9	\$	\$

Price Proposal
SAWS Job No. 19-4528
W-1 Leon Creek: Hwy 151 to Hwy 90 - Upper Segment
Solicitation No. CO-00351

Line No	Item No.	Description	Unit	Quantity	Unit Price	Total Price
42	853A	TEE BASE FIBERGLASS MANHOLE, MITER W/ SUMP	EA	1	\$	\$
43	853A	TEE BASE FIBERGLASS DROP MANHOLE	EA	2	\$	\$
44	853A	TEE BASE FIBERGLASS DROP MANHOLE, MITER	EA	1	\$	\$
45	853B	TESTING AND ACCEPTANCE OF FRP MANHOLES (ALL TYPES)	LS	1	\$	\$
46	SS 2426	CARRIER PIPE IN TUNNELS - 84" FRP (ASTM D-3262)(SN 72)	LF	1,196	\$	\$
47	SS2610/SS2314	102" STEEL CASING PIPE (0.5" THICKNESS) / 108" STEEL LINER PLATE	LF	550	\$	\$
48	SS2441/SS2314	PIPE-JACKED TUNNEL/TUNNELING WITH LINER PLATE	LF	550	\$	\$
49	SS2610	102" STEEL CASING PIPE (0.5" THICKNESS)	LF	89	\$	\$
50	SS2441	PIPE-JACKED TUNNEL	LF	89	\$	\$
51	SS2314	108" STEEL LINER PLATE	LF	557	\$	\$
52	SS2314	TUNNELING WITH LINER PLATE	LF	557	\$	\$
53	857A	24" FRP (ASTM D-3262)(SN 72)(OPEN CUT 5'-10')	LF	43	\$	\$
54	857A	66" FRP (ASTM D-3262)(SN 72)(OPEN CUT 15'-20')	LF	67	\$	\$
55	857A	84" FRP (ASTM D-3262)(SN 72)(OPEN CUT 10'-15')	LF	1,075	\$	\$
56	857A	84" FRP (ASTM D-3262)(SN 72)(OPEN CUT 15'-20')	LF	4,940	\$	\$
57	857A	84" FRP (ASTM D-3262)(SN 72)(OPEN CUT 20'-25')	LF	525	\$	\$
58	857B	TESTING AND ACCEPTANCE OF FRP GRAVITY SEWER (ALL SIZES AND DEPTHS)	LS	1	\$	\$
59	858	CONCRETE ENCASEMENT (MIN STRENGTH, 2,000 PSI)	CY	4,126	\$	\$
60	413	FLOWABLE FILL	CY	351	\$	\$
61	862	ABANDON EXISTING SEWER MAIN (>15-INCH DIAMETER)	LF	7,706	\$	\$
62	862	ABANDON EXISTING SEWER MAIN (<15-INCH DIAMETER)	LF	70	\$	\$
63	864-S1	BYPASS PUMPING SMALL DIAMETER (<24")	LS	1	\$	\$
64	SP 864-S2	BYPASS PUMPING LARGE DIAMETER (>24")	LS	1	\$	\$
65	866	SEWER MAIN TV INSPECTION (ALL SIZES)	LF	8,080	\$	\$
66	866	SEWER MAIN TV INSPECTION (PRE-ABANDONMENT)	LF	7,776	\$	\$
67	910	MANHOLE REHABILITATION	SF	692	\$	\$
68	TP7-TP10	DRILL SEEDING (WITH NATIVE SEED MIXTURE)	SY	630,506	\$	\$
69	D-5	CONCRETE MANHOLE TOP SLAB	EA	9		
SUBTOTAL (ITEMS 1-69)					\$	\$
70	SS 804A	ENVIRONMENTAL SERVICES, INCLUSIVE OF AIR MONITORING, WASTE CHARACTERIZATION, SAMPLING (LABOR, LAB, OTHER DIRECT COSTS), REPORTING, AND ENVIRONMENTAL OVERSIGHT	LS	1	\$	\$
71	SS 804A	CLASS 1 SOIL WASTE DISPOSAL INCLUSIVE OF REMOVING, MANAGING, CHARACTERIZING, MANIFESTING, TRANSPORTING AND DISPOSING AT A PERMITTED LANDFILL	TON	156	\$	\$
72	SS 804A	CLASS 2 SOIL WASTE DISPOSAL INCLUSIVE OF REMOVING, MANAGING, CHARACTERIZING, MANIFESTING, TRANSPORTING AND DISPOSING AT A PERMITTED LANDFILL	TON	1,440	\$	\$
73	SPTS 100A	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (OPEN-CUT CONSTRUCTION)	EA	2	\$	\$
74	SPTS 100B	INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (TUNNEL CONSTRUCTION)	EA	2	\$	\$
75	864-S1.3	BYPASS PUMPING DURING DEMOBILIZATION (SMALL DIAMETER) INTERMEDIATE DEMOBILIZATION BYPASS PUMPING EQUIPMENT RENTAL	DAY	30	\$	\$
76	864-S1.4	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING FUEL	DAY	30	\$	\$
77	864-S1.5	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING MONITORING	DAY	30	\$	\$
78	864-SP-S2.3	BYPASS PUMPING DURING DEMOBILIZATION (LARGE DIAMETER) INTERMEDIATE DEMOBILIZATION BYPASS PUMPING EQUIPMENT RENTAL	DAY	30	\$	\$

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Solicitation No. CO-00351

Line No	Item No.	Description	Unit	Quantity	Unit Price	Total Price
79	864-SP-S2.4	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING FUEL	DAY	30	\$	\$
80	864-SP-S2.5	INTERMEDIATE DEMOBILIZATION BYPASS PUMPING MONITORING	DAY	30	\$	\$
81	100	MOBILIZATION (MAXIMUM 8% OF ITEMS 1-69)	LS	1	\$	\$
82	101	PREPARATION OF RIGHT-OF-WAY (MAXIMUM 4% OF ITEMS 1-69)	LS	1	\$	\$
TOTAL PRICE PROPOSAL						
(TO INCLUDE LINE ITEMS 1-69 AND 70-82)					\$	

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.

"General Decision Number: TX20200231 08/28/2020

Superseded General Decision Number: TX20190231

State: Texas

Construction Type: Building

County: Bexar County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	02/14/2020
2	08/28/2020

ASBE0087-014 01/01/2018

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 22.72	10.02

BOIL0074-003 01/01/2017

	Rates	Fringes
BOILERMAKER.....	\$ 28.00	22.35

ELEC0060-003 06/01/2019

	Rates	Fringes
ELECTRICIAN (Communication)		

Technician Only).....\$ 22.55 9%+5.45

ELEC0060-004 06/01/2019

Rates Fringes

ELECTRICIAN (Excludes Low Voltage Wiring).....\$ 28.60 18%+5.45

ELEV0081-001 01/01/2020

Rates Fringes

ELEVATOR MECHANIC.....\$ 41.90 34.765

FOOTNOTES:

A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

B. Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day.

ENGI0450-002 04/01/2014

Rates Fringes

POWER EQUIPMENT OPERATOR
Cranes.....\$ 34.85 9.85

IRON0066-013 06/01/2019

Rates Fringes

IRONWORKER, STRUCTURAL.....\$ 22.70 6.73

IRON0084-011 06/01/2019

Rates Fringes

IRONWORKER, ORNAMENTAL.....\$ 24.42 7.12

PLUM0142-009 08/07/2019

Rates Fringes

HVAC MECHANIC (HVAC Electrical Temperature Control Installation Only).....\$ 30.25 13.36

HVAC MECHANIC (HVAC Unit Installation Only).....\$ 30.25 13.36

PIPEFITTER (Including HVAC Pipe Installation).....\$ 31.05 13.76

PLUMBER (Excludes HVAC Pipe Installation).....\$ 31.05 13.76

Excludes HVAC Pipe Installation

* SFTX0669-002 04/01/2020

Rates Fringes

SPRINKLER FITTER (Fire
Sprinklers).....\$ 30.64 21.68

* SHEE0067-004 07/01/2020

	Rates	Fringes
Sheet metal worker		
Excludes HVAC Duct		
Installation.....\$ 27.31	27.31	15.51
HVAC Duct Installation Only.\$ 27.31	27.31	15.51

SUTX2014-006 07/21/2014

	Rates	Fringes
BRICKLAYER.....\$ 22.15	22.15	0.00
CARPENTER (Acoustical Ceiling Installation Only).....\$ 17.83	17.83	0.00
CARPENTER (Form Work Only).....\$ 13.63	13.63	0.00
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal Stud Installation.....\$ 16.86	16.86	4.17
CAULKER.....\$ 15.00	15.00	0.00
CEMENT MASON/CONCRETE FINISHER...\$ 22.27	22.27	5.30
DRYWALL FINISHER/TAPER.....\$ 13.81	13.81	0.00
DRYWALL HANGER AND METAL STUD INSTALLER.....\$ 15.18	15.18	0.00
ELECTRICIAN (Low Voltage Wiring Only).....\$ 20.39	20.39	3.04
IRONWORKER, REINFORCING.....\$ 12.27	12.27	0.00
LABORER: Common or General.....\$ 10.75	10.75	0.00
LABORER: Mason Tender - Brick...\$ 11.88	11.88	0.00
LABORER: Mason Tender - Cement/Concrete.....\$ 12.00	12.00	0.00
LABORER: Pipelayer.....\$ 11.00	11.00	0.00
LABORER: Roof Tearoff.....\$ 11.28	11.28	0.00
LABORER: Landscape and Irrigation.....\$ 8.00	8.00	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....\$ 15.98	15.98	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....\$ 14.00	14.00	0.00

OPERATOR: Bulldozer.....	\$ 14.00	0.00
OPERATOR: Drill.....	\$ 14.50	0.00
OPERATOR: Forklift.....	\$ 12.50	0.00
OPERATOR: Grader/Blade.....	\$ 23.00	5.07
OPERATOR: Loader.....	\$ 12.79	0.00
OPERATOR: Mechanic.....	\$ 18.75	5.12
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03	0.00
OPERATOR: Roller.....	\$ 12.00	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 13.07	0.00
ROOFER.....	\$ 12.00	0.00
TILE FINISHER.....	\$ 11.32	0.00
TILE SETTER.....	\$ 14.94	0.00
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after

award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union

average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

4. Tunnel Liner Plates and fasteners shall comply with the requirements of AASHTO HB-17.
- a. The minimum thickness gauge of liner plates shall meet or exceed the values tabulated below, which are calculated by the design methods of AASHTO HB-17.

TABLE 1: 2 FLANGE LINER PLATE, H-20 LIVE LOAD					
Nominal Diameter		Thickness		Height of Fill	
feet, inches	meters, m	Gauge	mm	feet	meters, m
7' & less	2.1 m & less	12	2.7	All fill heights	
7' 2" to 9'	2.15 m to 2.7 m	10	3.4	All fill heights	
9' 2" to 11'	2.75 m to 3.3 m	8	4.2	All fill heights	

Note: For diameters larger than 11 feet (3.3 meters) or for any diameter with unstable soil conditions, consult the manufacturer.

TABLE 2: 4 FLANGE LINER PLATE, H-20 LIVE LOAD					
Nominal Diameter		Thickness		Height of Fill	
feet, inches	meters, m	Gauge	mm	feet	meters, m
7' & less	2.1 m & less	10	3.4	All fill heights	
7' 2" to 9'	2.15 m to 2.7 m	8	4.2	All fill heights	
9' 2" to 11'	2.75 m to 3.3 m	7	4.6	to 28'	to 8.4 m
9' 2" to 11'	2.75 m to 3.3 m	5	5.3	over 28'	over 8.4 m

Note: For diameters larger than 11 feet (3.3 meters) or for any diameter with unstable soil conditions, consult the manufacturer.

- b. Liner plates shall be punched for bolting on both longitudinal and circumferential seams and fabricated to permit complete erection from the inside of the tunnel.
- c. Where shown on the Drawings, gasketed liner plates shall be used.
- d. Field welding of Tunnel Liner Plate, including grout couplings shall not be allowed.
- e. The material used for the construction of these plates shall be new, unused and suitable for the purpose intended.
- f. Bolts used with lapped-seam (2-flange) liner plates shall be not less than 5/8" diameter. Bolts shall conform to ASTM A-449 for plate thickness equal to or greater than 0.209", and to ASTM A-307 for plate thickness less than 0.209". The nuts shall conform to ASTM A-307.
- g. Bolts used with 4-flange liner plates shall be not less than 1/2" diameter for plate thickness up to and including 0.179", and not less than 5/8" diameter for plates of greater thickness. The bolts and nuts shall be quick-acting coarse thread and shall conform to ASTM A-307, Grade A.

PLOTTED ON: 9/16/2020

DESIGN FILENAME: P:\8918\00\Design\Civil\Sewer\Phase 1\SS891800-01-C04.dgn

QUANTITIES TABLE

NO	ITEM	UNIT	QUANTITY
1	202.1 PRIME COAT	GAL	588
2	203.1 TACK COAT	GAL	708
3	205.2 HOTMIX ASPHALT PAVEMENT TYPE B - 10 INCHES PAVEMENT THICKNESS	SY	1,654
4	205.3 HOTMIX ASPHALT PAVEMENT TYPE D - 3 INCHES PAVEMENT THICKNESS	SY	1,200
5	205.4 HOTMIX ASPHALT PAVEMENT TYPE D - 2 INCHES PAVEMENT THICKNESS	SY	5,856
6	208.1 SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (2 INCHES DEPTH)	SY	5,856
7	208.1 SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (3 INCHES DEPTH)	SY	1,200
8	500.1 CONCRETE CURB	LF	64
9	502.1 CONCRETE SIDEWALKS	SY	12
10	503.1 PORTLAND CEMENT CONCRETE DRIVEWAYS	SY	57
11	505.1 CONCRETE RIPRAP (6" THICK)	SY	61
12	103.4 REMOVE MISC. CONCRETE	SF	420
13	SP-13 BYPASS PUMPING PAD 10'x10' WITH 4"-6" (D50) RIPRAP (COMPLETE)	LS	1
14	SP-13 EXISTING PAD RESTORATION	LS	1
15	511.1 REPLACING WITH FLEXIBLE BASE & PAVEMENT (12" COMPACTED DEPTH)	SY	16
16	522.1 SIDEWALK PIPE RAILING	LF	44
17	536.1 4" WIDE YELLOW LINE	LF	480
18	536.2 4" WIDE WHITE LINE	LF	480
19	814 24" DI WATERLINE (OPEN CUT)	LF	85
20	836 PIPE FITTINGS (ALL TYPES & SIZES)	TN	1,55
21	840 24" WATER TIE-INS	EA	2
22	841 HYDROSTATIC TESTING	EA	1
23	844.4 4" BLOW-OFF, TEMPORARY	EA	1
24	110/820 36" CSC RECYCLED WATER MAIN, RESTRAINED	LF	61
25	110 30" MANWAY	EA	1
26	846 2" AIR RELEASE VALVE	EA	1
27	3100 TEMPORARY WATER MAIN (12" HDPE)	LS	1
28	507.1 TEMPORARY CONSTRUCTION FENCE (4 FEET HIGH)	LF	111
29	530 BARRICADES, SIGNS & TRAFFIC HANDLING	LS	1
30	SPTS 540 TEMPORARY EROSION, SEDIMENTATION AND WATER POLLUTION PREVENTION AND CONTROL	LS	1
31	550.1 TRENCH EXCAVATION SAFETY PROTECTION	LF	6,979
32	848A 8" PVC SDR 26 (OPEN CUT 0'-10')	LF	106
33	848A 12" PVC SDR 26 (OPEN CUT 10'-20')	LF	67
34	848B TESTING AND ACCEPTANCE OF PVC SDR 26 PIPE (ALL DEPTHS)	LS	1
35	852A EXTRA DEPTH MANHOLE	VF	13
36	852A 4 FEET SANITARY SEWER MANHOLE	EA	1
37	852A REMOVE & REPLACE 4' SANITARY SEWER MANHOLE	EA	2
38	852B TESTING AND ACCEPTANCE OF SANITARY SEWER MANHOLES (ALL TYPES)	LS	1
39	853 EXTRA DEPTH TEE BASE MANHOLE	VF	194
40	853A TEE BASE FIBERGLASS MANHOLE	EA	3
41	853A TEE BASE FIBERGLASS MANHOLE, MITER	EA	9
42	853A TEE BASE FIBERGLASS MANHOLE, MITER W/ SUMP	EA	1
43	853A TEE BASE FIBERGLASS DROP MANHOLE	EA	2
44	853A TEE BASE FIBERGLASS DROP MANHOLE, MITER	EA	1
45	853B TESTING AND ACCEPTANCE OF FRP MANHOLES (ALL TYPES)	LS	1
46	SS 2426 CARRIER PIPE IN TUNNELS - 84" FRP (ASTM D-3262)(SN 72)	LF	1,196
47	SS2610/SS2314 102" STEEL CASING PIPE (0.5" THICKNESS) / 108" STEEL LINER PLATE	LF	550
48	SS2441/SS2314 PIPE-JACKED TUNNEL/TUNNELING WITH LINER PLATE	LF	550
49	SS2610 102" STEEL CASING PIPE (0.5" THICKNESS)	LF	89
50	SS2441 PIPE-JACKED TUNNEL	LF	89
51	SS2314 108" STEEL LINER PLATE	LF	557
52	SS2314 TUNNELING WITH LINER PLATE	LF	557
53	857A 24" FRP (ASTM D-3262)(SN 72)(OPEN CUT 5'-10')	LF	43
54	857A 66" FRP (ASTM D-3262)(SN 72)(OPEN CUT 15'-20')	LF	67
55	857A 84" FRP (ASTM D-3262)(SN 72)(OPEN CUT 10'-15')	LF	1,075
56	857A 84" FRP (ASTM D-3262)(SN 72)(OPEN CUT 15'-20')	LF	4,940
57	857A 84" FRP (ASTM D-3262)(SN 72)(OPEN CUT 20'-25')	LF	525
58	857B TESTING AND ACCEPTANCE OF FRP GRAVITY SEWER (ALL SIZES AND DEPTHS)	LS	1
59	858 CONCRETE ENCASEMENT (MIN STRENGTH, 2,000 PSI)	CY	4,126
60	413 FLOWABLE FILL	CY	351
61	862 ABANDON EXISTING SEWER MAIN (>15-INCH DIAMETER)	LF	7,706
62	862 ABANDON EXISTING SEWER MAIN (<15-INCH DIAMETER)	LF	70
63	864-S1 BYPASS PUMPING SMALL DIAMETER (<24")	LS	1
64	SP 864-S2 BYPASS PUMPING LARGE DIAMETER (>24")	LS	1
65	866 SEWER MAIN TV INSPECTION (ALL SIZES)	LF	8,080
66	866 SEWER MAIN TV INSPECTION (PRE-ABANDONMENT)	LF	7,776
67	910 MANHOLE REHABILITATION	SF	692
68	TP7-TP10 DRILL SEEDING (WITH NATIVE SEED MIXTURE)	SY	630,506
69	D-5 CONCRETE MANHOLE TOP SLAB	EA	9
70	SS 804A ENVIRONMENTAL SERVICES, INCLUSIVE OF AIR MONITORING, WASTE CHARACTERIZATION, (LABOR, LAB, OTHER DIRECT COSTS), REPORTING, AND ENVIRONMENTAL OVERSIGHT	LS	1
71	SS 804A CLASS 1 SOIL WASTE DISPOSAL INCLUSIVE OF REMOVING, MANAGING, CHARACTERIZING, MANIFESTING, TRANSPORTING AND DISPOSING AT A PERMITTED LANDFILL	TON	156
72	SS 804A CLASS 2 SOIL WASTE DISPOSAL INCLUSIVE OF REMOVING, MANAGING, CHARACTERIZING, MANIFESTING, TRANSPORTING AND DISPOSING AT A PERMITTED LANDFILL	TON	1,440
73	SPTS 100A INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (OPEN-CUT CONSTRUCTION)	EA	2
74	SPTS 100B INTERMEDIATE DEMOBILIZATION/REMOBILIZATION (TUNNEL CONSTRUCTION)	EA	2
75	864-S1.3 BYPASS PUMPING DURING DEMOBILIZATION (SMALL DIAMETER)	DAY	30
76	864-S1.4 INTERMEDIATE DEMOBILIZATION BYPASS PUMPING FUEL	DAY	30
77	864-S1.5 INTERMEDIATE DEMOBILIZATION BYPASS PUMPING MONITORING	DAY	30
78	864-SP-S2.3 BYPASS PUMPING DURING DEMOBILIZATION (LARGE DIAMETER)	DAY	30
79	864-SP-S2.4 INTERMEDIATE DEMOBILIZATION BYPASS PUMPING FUEL	DAY	30
80	864-SP-S2.5 INTERMEDIATE DEMOBILIZATION BYPASS PUMPING MONITORING	DAY	30
81	100 MOBILIZATION (MAXIMUM 8% OF ITEMS 1-69)	LS	1
82	101 PREPARATION OF RIGHT-OF-WAY (MAXIMUM 4% OF ITEMS 1-69)	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 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](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 210-233-3500, AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 72 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](http://www.saws.org/service/locates)

COSA DRAINAGE 210-206-8433
COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720
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 (NSPI).

- CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.

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)

SEWER SECTION

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
 - IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT 210 704-SAWS (210-704-7297). PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
 - ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
 - CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
 - CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
 - CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
 - MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISIONING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA.

NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.
- THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864 S-1A DND SP 864-S2, "BYPASS PUMPING". PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE BID ITEM "SANITARY SEWER (BYPASS PUMPING)"(LUMP SUM) AS PER SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".
- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-3500 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.
- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS (NSPI).
- THE CONTRACTOR SHALL NOTIFY JUAN C. RAMIREZ AT (210) 233-3558 AND SAWS E.O.C. AT (210) 233-2015 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE SMART COVER. ANY DAMAGE DONE TO THE SMART COVER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

EXCAVATION EQUIPMENT

OUR EXPLORATORY BORING LOGS ARE NOT INTENDED FOR USE IN DETERMINING CONSTRUCTION MEANS AND METHODS AND MAY THEREFORE BE MISLEADING IF USED FOR THAT PURPOSE. WE RECOMMEND THAT EARTH-WORK AND UTILITY CONTRACTORS INTERESTED IN BIDDING ON THE WORK PERFORM THEIR OWN TESTS IN THE FORM OF TEST PITS TO DETERMINE AND QUANTITIES OF THE DIFFERENT MATERIALS TO BE EXCAVATED, AS WELL AS THE PREFERRED EXCAVATION METHODS AND EQUIPMENT FOR THIS SITE. BORINGS COMPLETED FOR THIS PROJECT ARE WIDELY SPACED AND THEREFORE SUBSURFACE MATERIALS AND CONDITIONS CAN AND LIKELY WILL VARY BETWEEN BORINGS. MARL AND SHALE BEDROCK WERE ENCOUNTERED IN OUR BORINGS AT RELATIVELY SHALLOW DEPTHS, THUS THE NEED OF ROCK EXCAVATION EQUIPMENT SHOULD BE ANTICIPATED FOR CONSTRUCTION AT THIS SITE. ALL HARD ROCK EXCAVATION COSTS ASSOCIATED WITH THIS WORK ARE INCIDENTAL TO PIPE INSTALLATION.

PAPE-DAWSON
Job No.
8918-00

DATE: AUG 2020
DESIGNED BY: MP
DRAWN BY: BS
CHECKED BY: JO
SCALE: NOT TO SCALE

PAPE-DAWSON ENGINEERS

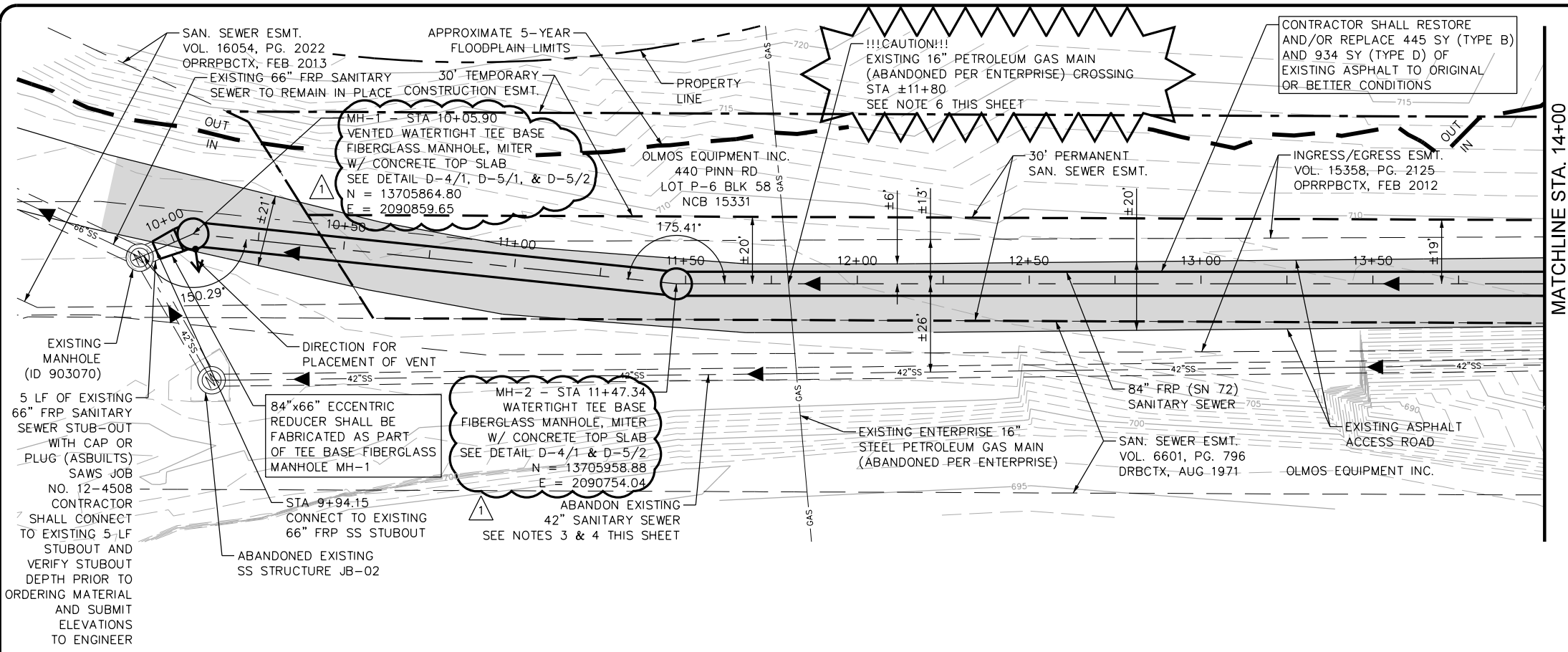
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HWY LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.8000
TXPE FIRM REGISTRATION # 475 | TXPLS FIRM REGISTRATION # 0036890

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
QUANTITIES AND SAWS GENERAL
CONSTRUCTION NOTES SHEET

PLOTTED ON: 9/12/2020

DESIGN FILENAME: P:\89\18\00\Design\Civil\Sewer\Phase 1\SS891800-01-C01.dgn



REVISIONS

NO.	DATE	REVISIONS
1	8/14/20	

DATE: AUG 2020
 DESIGNED BY: MP
 DRAWN BY: BS
 CHECKED BY: JO

SCALE: 1" = 40' HORZ
 1" = 10' VERT

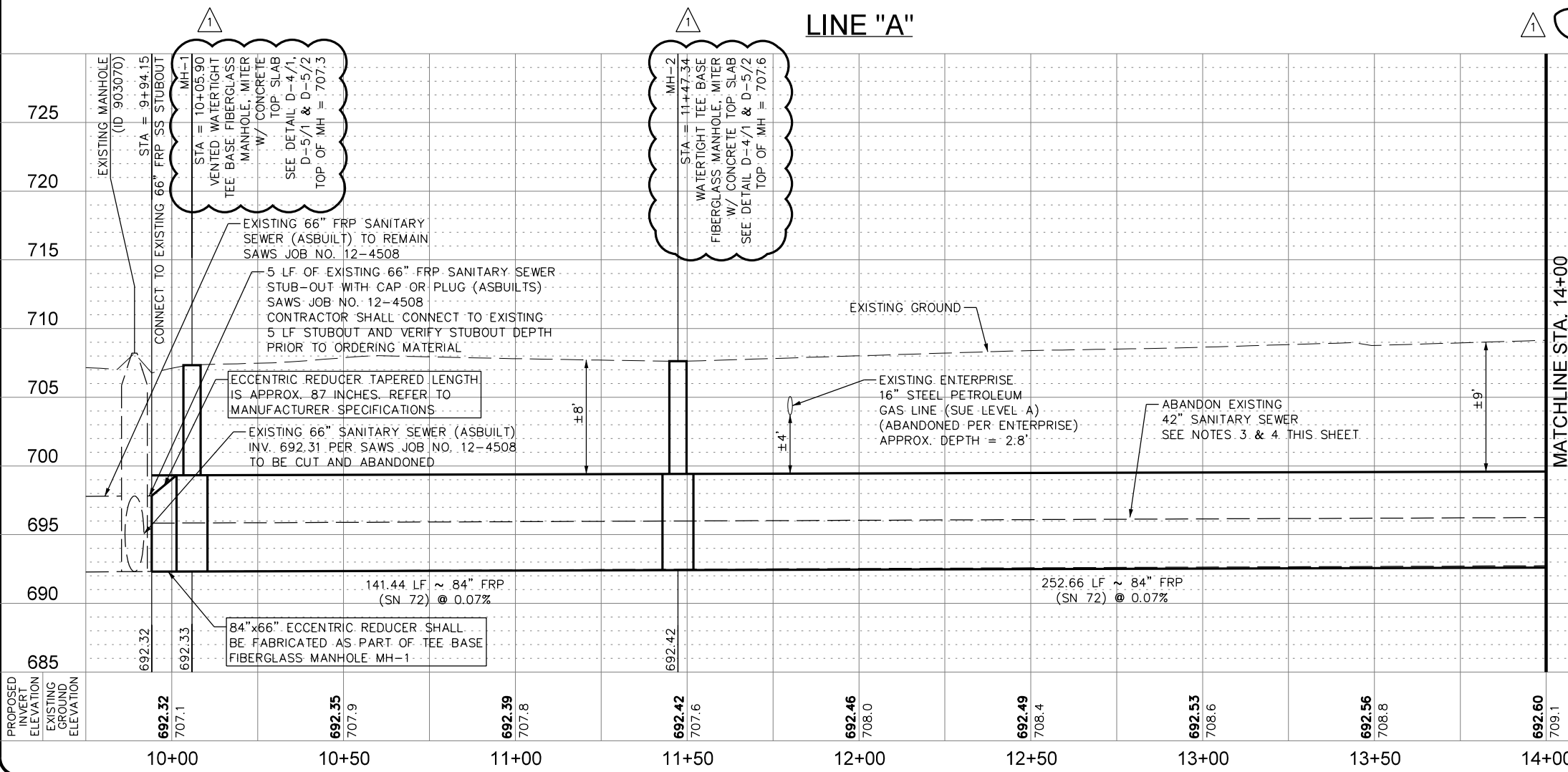
APP. JASON T. DIAMOND
 8-17-20

PAPE-DAWSON
 Job No. 8918-00

GRAPHIC SCALE IN FEET
 HORIZONTAL: 0, 20, 40
 VERTICAL: 0, 5, 10

QUANTITY TABLE

ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	395
853A	TEE BASE FIBERGLASS MANHOLE, MITER	EA	2
853	EXTRA DEPTH TEE BASE MANHOLE	VF	18
202.1	PRIME COAT	GAL	95
203.1	TACK COAT	GAL	95
205.2	HOTMIX ASPHALT PAVEMENT TYPE B - 10 INCHES PAVEMENT THICKNESS	SY	445
205.4	HOTMIX ASPHALT PAVEMENT TYPE D - 2 INCHES PAVEMENT THICKNESS	SY	943
208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (2 INCHES DEPTH)	SY	943
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	405
866	SEWER MAIN TV INSPECTION	LF	405
D-5	CONCRETE MANHOLE TOP SLAB	EA	2



NOTES:

- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
- CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
- CONTRACTOR SHALL REFER TO SHEETS G-21 TO G-23 FOR ABANDONMENT PLAN, NOTES AND QUANTITIES.
- CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
- ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF THE EXISTING GAS LINE. CONTRACTOR SHALL REPORT, TO THE ENGINEERS, ANY DEVIATION FROM PLAN LOCATION OR ELEVATION.

SAWS JOB NO. 19-4528
 W-1 LEON CREEK: HWY 151 TO HWY 90
 UPPER SEGMENT
 LINE "A" PLAN AND PROFILE
 STA 9+94.15 TO STA 14+00

Sheet **C-1**
 24 of 67

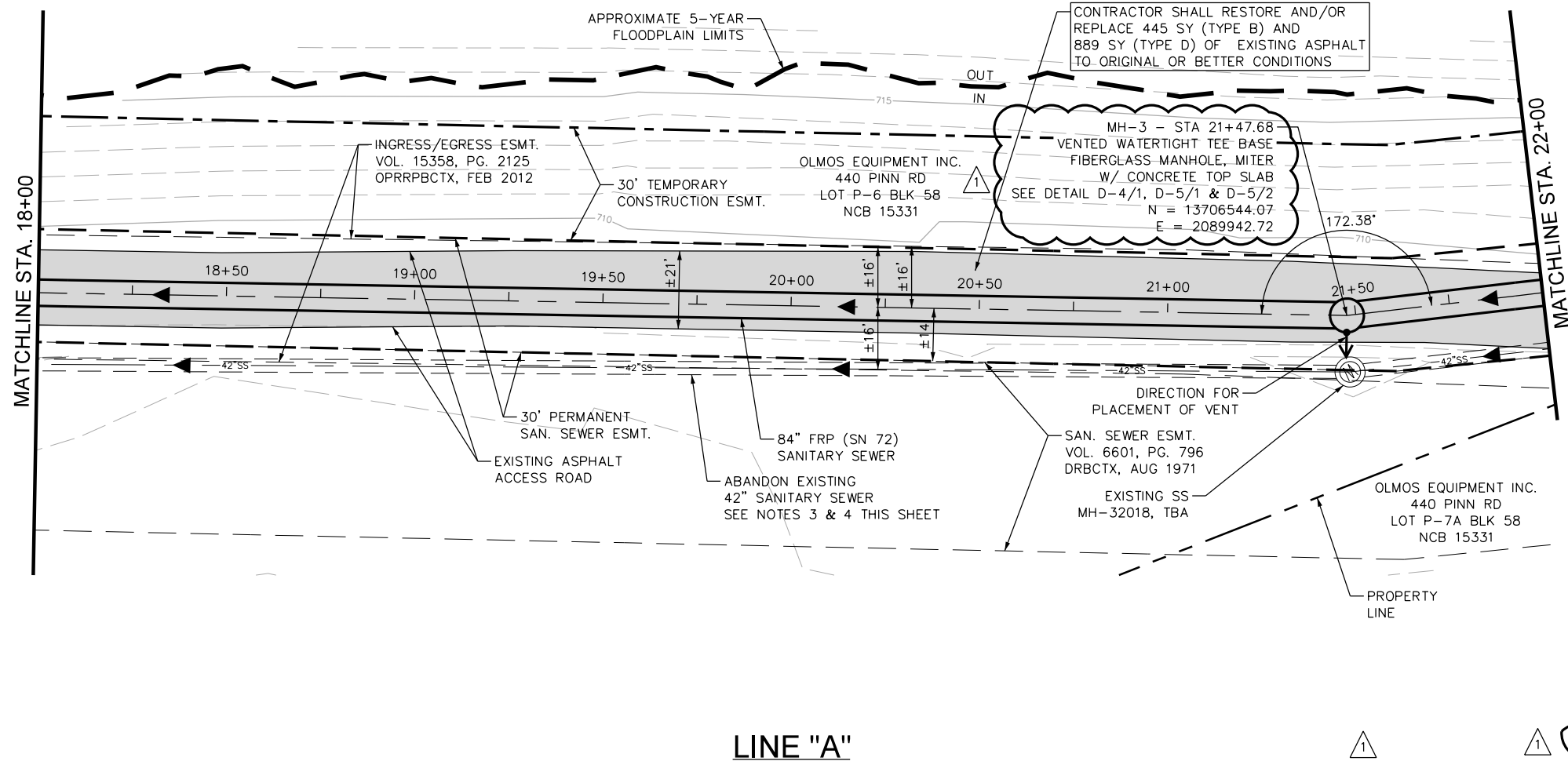
PAPE-DAWSON ENGINEERS

SAN ANTONIO WATER SYSTEM

STATE OF TEXAS
 JASON T. DIAMOND
 96532
 LICENSED PROFESSIONAL ENGINEER

SAWS JOB NO. 19-4528
 W-1 LEON CREEK: HWY 151 TO HWY 90
 UPPER SEGMENT
 LINE "A" PLAN AND PROFILE
 STA 9+94.15 TO STA 14+00

Sheet **C-1**
 24 of 67



QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	400
853A	TEE BASE FIBERGLASS MANHOLE, MITER	EA	1
853	EXTRA DEPTH TEE BASE MANHOLE	VF	11
202.1	PRIME COAT	GAL	89
203.1	TACK COAT	GAL	89
205.2	HOTMIX ASPHALT PAVEMENT TYPE B - 10 INCHES PAVEMENT THICKNESS	SY	445
205.4	HOTMIX ASPHALT PAVEMENT TYPE D - 2 INCHES PAVEMENT THICKNESS	SY	889
208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (2 INCHES DEPTH)	SY	889
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
866	SEWER MAIN TV INSPECTION	LF	400
D-5	CONCRETE MANHOLE TOP SLAB	EA	1

CONTRACTOR SHALL RESTORE AND/OR REPLACE 445 SY (TYPE B) AND 889 SY (TYPE D) OF EXISTING ASPHALT TO ORIGINAL OR BETTER CONDITIONS

MH-3 - STA 21+47.68
VENTED WATERTIGHT TEE BASE FIBERGLASS MANHOLE, MITER W/ CONCRETE TOP SLAB
SEE DETAIL D-4/1, D-5/1 & D-5/2
N = 13706544.07
E = 2089942.72

OLMOS EQUIPMENT INC.
440 PINN RD
LOT P-6 BLK 58
NCB 15331

OLMOS EQUIPMENT INC.
440 PINN RD
LOT P-7A BLK 58
NCB 15331

PROPERTY LINE

APPROXIMATE 5-YEAR FLOODPLAIN LIMITS

INGRESS/EGRESS ESMT. VOL. 15358, PG. 2125 OPRRPBCTX, FEB 2012

30' TEMPORARY CONSTRUCTION ESMT.

30' PERMANENT SAN. SEWER ESMT.

EXISTING ASPHALT ACCESS ROAD

ABANDON EXISTING 42" SANITARY SEWER SEE NOTES 3 & 4 THIS SHEET

SAN. SEWER ESMT. VOL. 6601, PG. 796 DRBCTX, AUG 1971

EXISTING SS MH-32018, TBA

DIRECTION FOR PLACEMENT OF VENT

GRAPHIC SCALE IN FEET
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 10'

DATE: AUG 2020
DESIGNED BY: MP
DRAWN BY: BS
CHECKED BY: JO

SCALE: 1" = 40' HORZ
1" = 10' VERT

PAPE-DAWSON
Job No.
8918-00

STATE OF TEXAS
JASON T. DIAMOND
96532
LICENSED PROFESSIONAL ENGINEER

8-17-20

REVISIONS

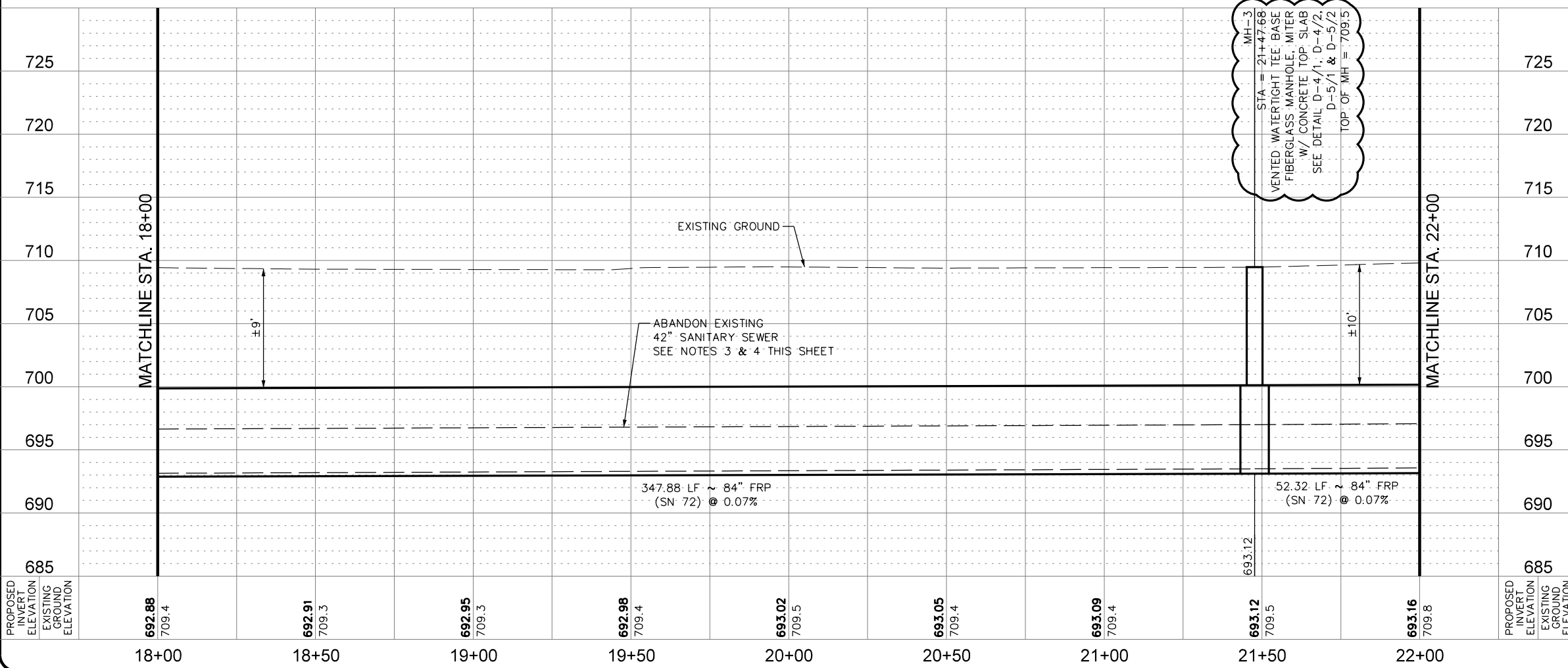
APP. #1

ADDITION #1

NO. DATE

1 9/14/20

LINE "A"



- NOTES:**
- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
 - CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
 - CONTRACTOR SHALL REFER TO SHEETS G-21 TO G-23 FOR ABANDONMENT PLAN, NOTES AND QUANTITIES.
 - CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
 - ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN.

PAPE-DAWSON ENGINEERS

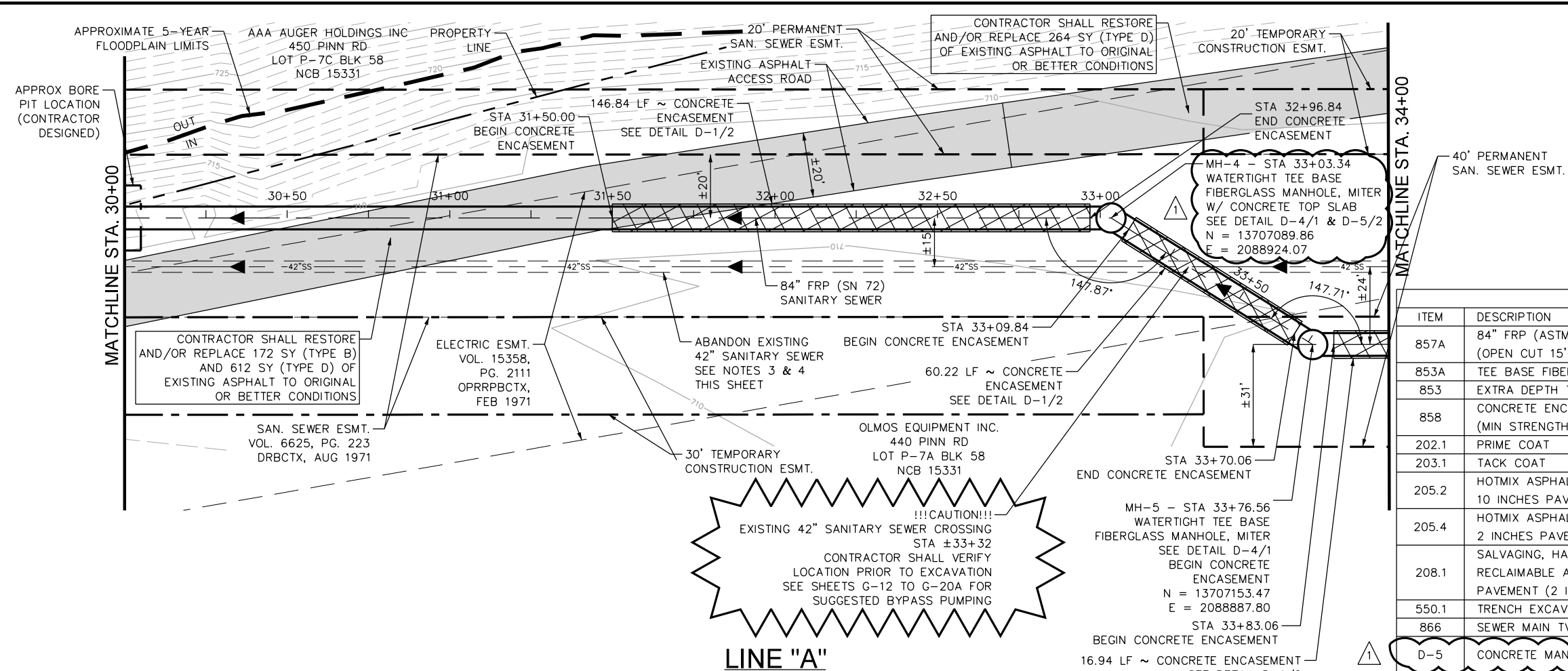
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HWY LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #1006880

SAN ANTONIO WATER SYSTEM

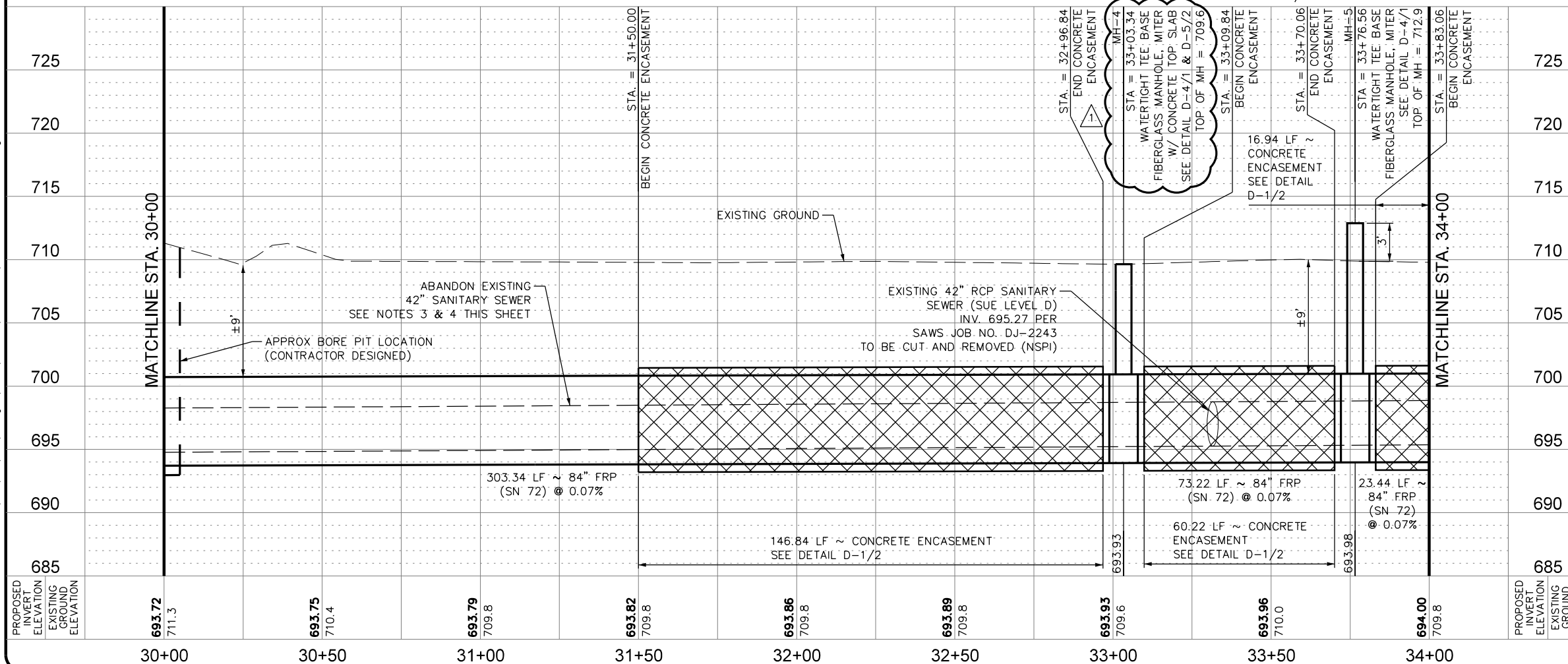
SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
LINE "A" PLAN AND PROFILE
STA 18+00 TO STA 22+00

PLOTTED ON: 9/12/2020

DESIGN FILENAME: P:\89\18\00\Design\Civil\Sewer\Phase 1\SS891800-01-C06.dgn



QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	400
853A	TEE BASE FIBERGLASS MANHOLE, MITER	EA	2
853	EXTRA DEPTH TEE BASE MANHOLE	VF	23
858	CONCRETE ENCASEMENT (MIN STRENGTH, 2,000 PSI)	CY	409
202.1	PRIME COAT	GAL	88
203.1	TACK COAT	GAL	88
205.2	HOTMIX ASPHALT PAVEMENT TYPE B - 10 INCHES PAVEMENT THICKNESS	SY	172
205.4	HOTMIX ASPHALT PAVEMENT TYPE D - 2 INCHES PAVEMENT THICKNESS	SY	876
208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALT PAVEMENT (2 INCHES DEPTH)	SY	876
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
866	SEWER MAIN TV INSPECTION	LF	400
D-5	CONCRETE MANHOLE TOP SLAB	EA	1



- NOTES:**
- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
 - CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER & SURFACE WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
 - CONTRACTOR SHALL REFER TO SHEETS G-21 TO G-23 FOR ABANDONMENT PLAN, NOTES AND QUANTITIES.
 - CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
 - ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN.

APP.	J.D.	PAPE-DAWSON Job No. 8918-00
REVISIONS	ADDITION #1	
DATE	9/14/20	DESIGNED BY: MP DRAWN BY: BS CHECKED BY: JO
NO.	1	SCALE: 1" = 40' HORZ 1" = 10' VERT

PAPE-DAWSON ENGINEERS

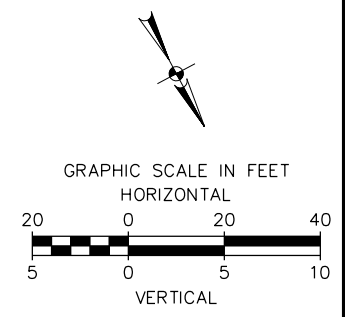
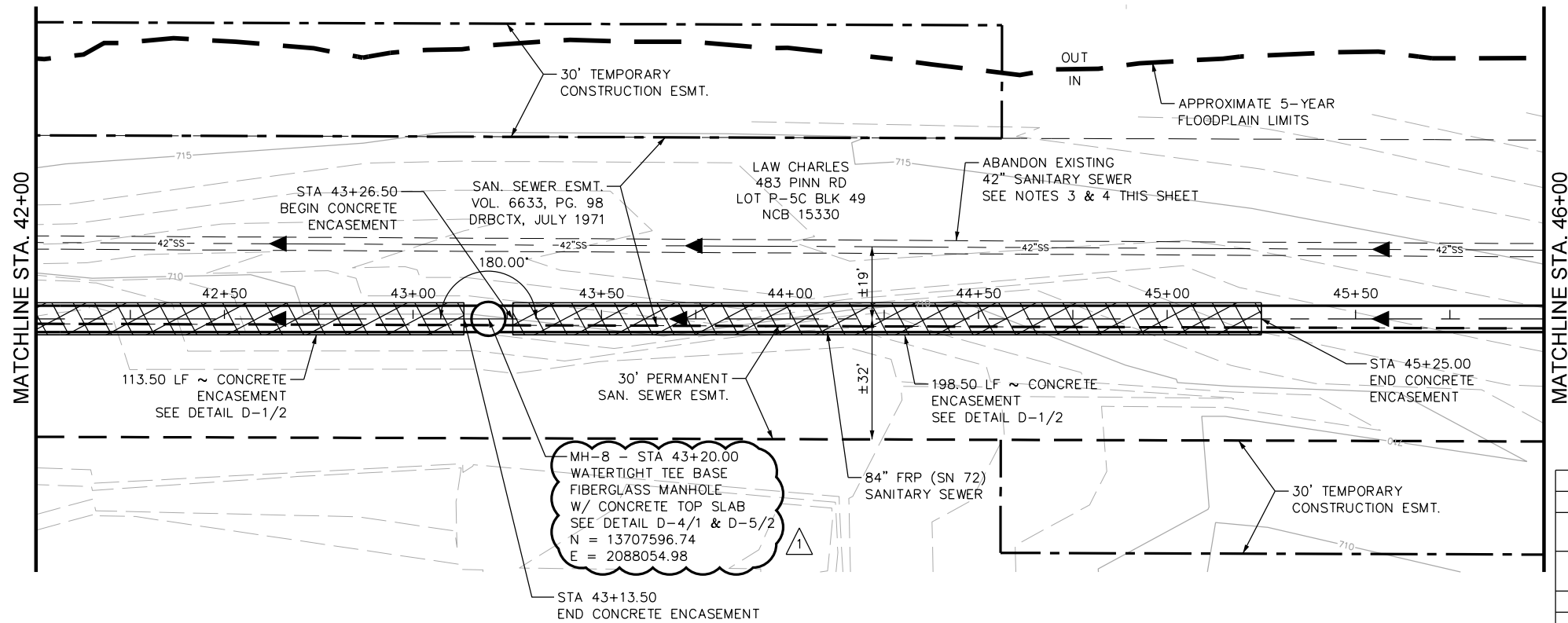
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HWY LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.0000
TXPE REGISTRATION #470 | TXPLS REGISTRATION #1008880

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
LINE "A" PLAN AND PROFILE
STA 30+00 TO STA 34+00

PLOTTED ON: 9/12/2020

DESIGN FILENAME: P:\89\18\00\Design\Civil\Sewer\Phase 1\SS891800-01-C09.dgn

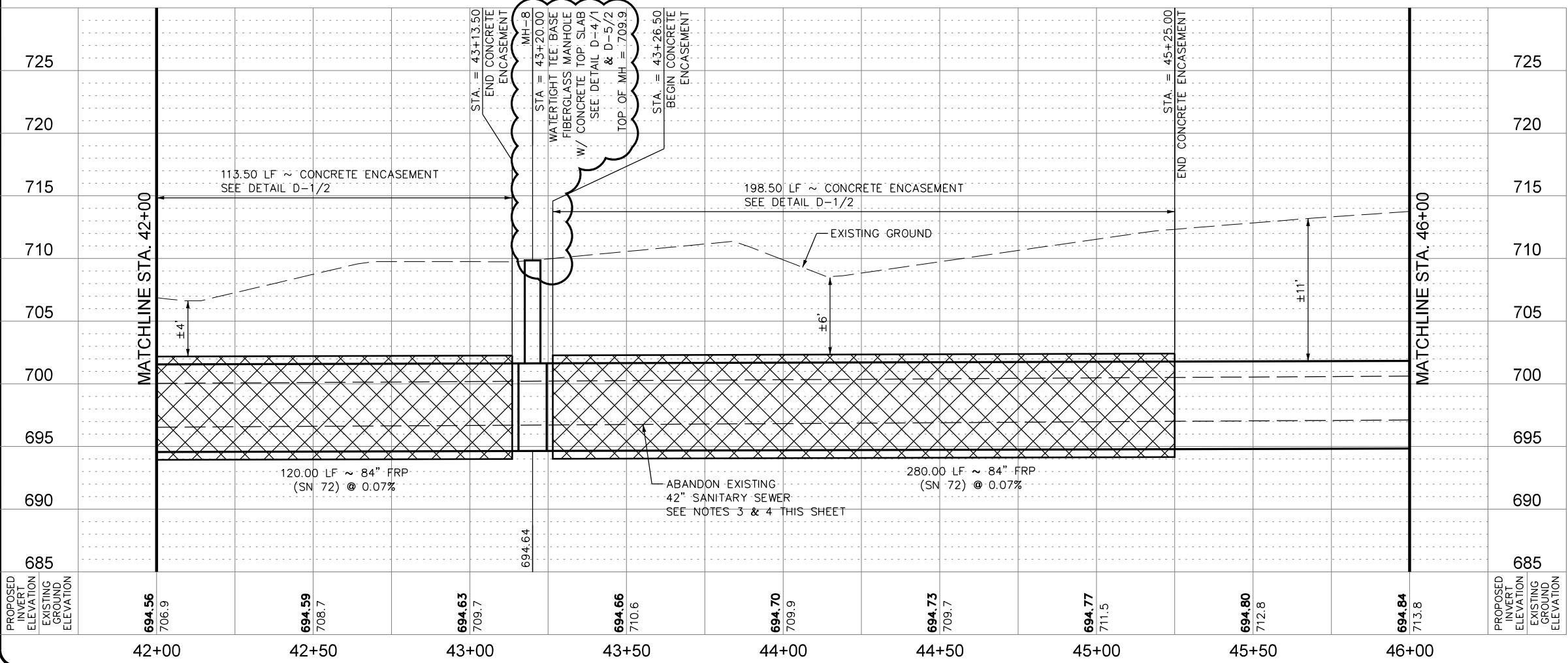


APP.	J.D.	PAPE-DAWSON Job No. 8918-00
REVISIONS	ADDITION #1	
DATE	NO.	DATE
9/14/20	1	9/14/20
DESIGNED BY: MP	DRAWN BY: BS	CHECKED BY: JO
DATE: AUG 2020		
SCALE: 1" = 40' HORZ 1" = 10' VERT		

PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HWY LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.8000
 TYPE FIRM REGISTRATION #470 | TYPE FIRM REGISTRATION #1008880

QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 10'-15')	LF	250
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	150
853A	TEE BASE FIBERGLASS MANHOLE	EA	1
853	EXTRA DEPTH TEE BASE MANHOLE	VF	10
858	CONCRETE ENCASEMENT (MIN STRENGTH, 2,000 PSI)	CY	571
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
866	SEWER MAIN TV INSPECTION	LF	400
D-5	CONCRETE MANHOLE TOP SLAB	EA	1

LINE "A"



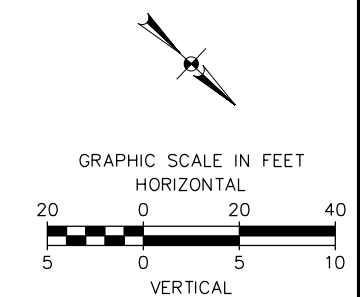
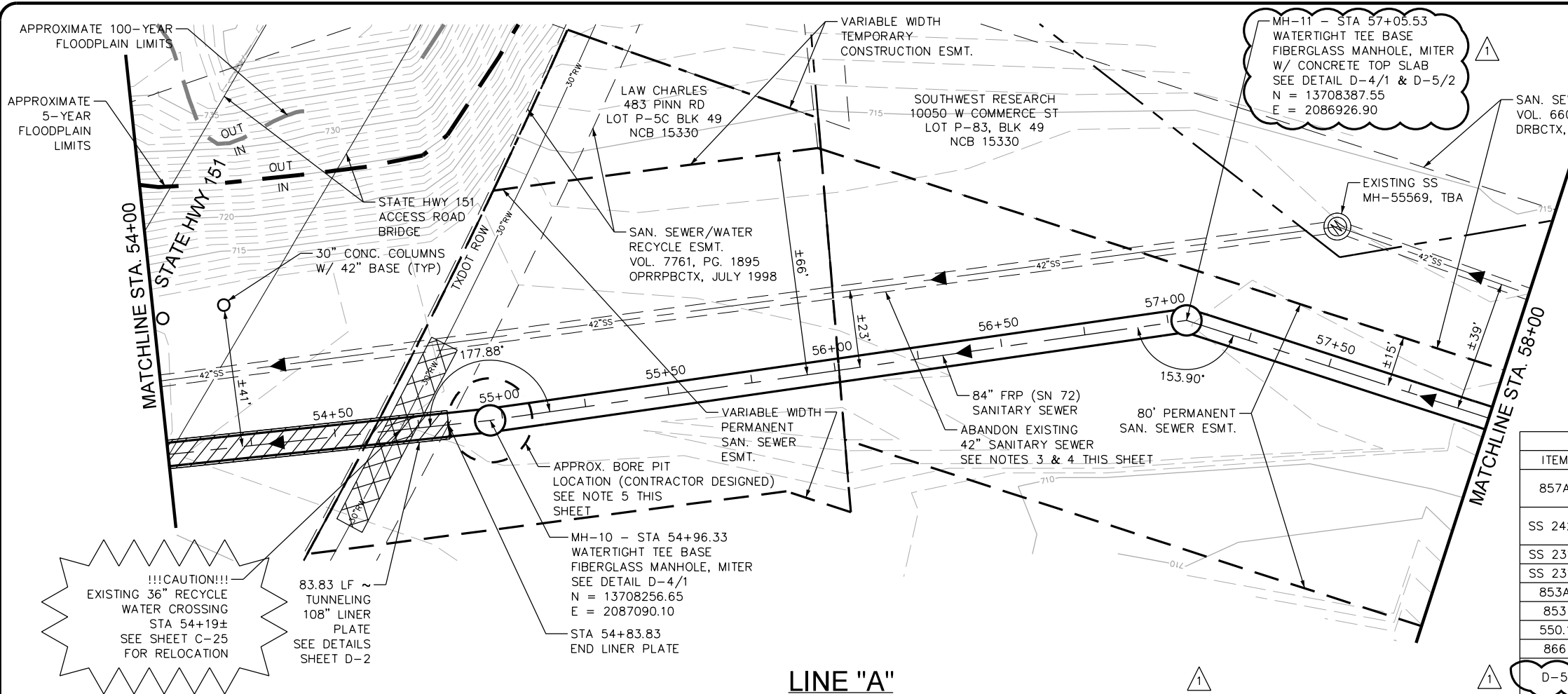
- NOTES:**
- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
 - CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
 - CONTRACTOR SHALL REFER TO SHEETS G-21 TO G-23 FOR ABANDONMENT PLAN, NOTES AND QUANTITIES.
 - CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
 - ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN.

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 19-4528
 W-1 LEON CREEK: HWY 151 TO HWY 90
 UPPER SEGMENT
 LINE "A" PLAN AND PROFILE
 STA 42+00 TO STA 46+00

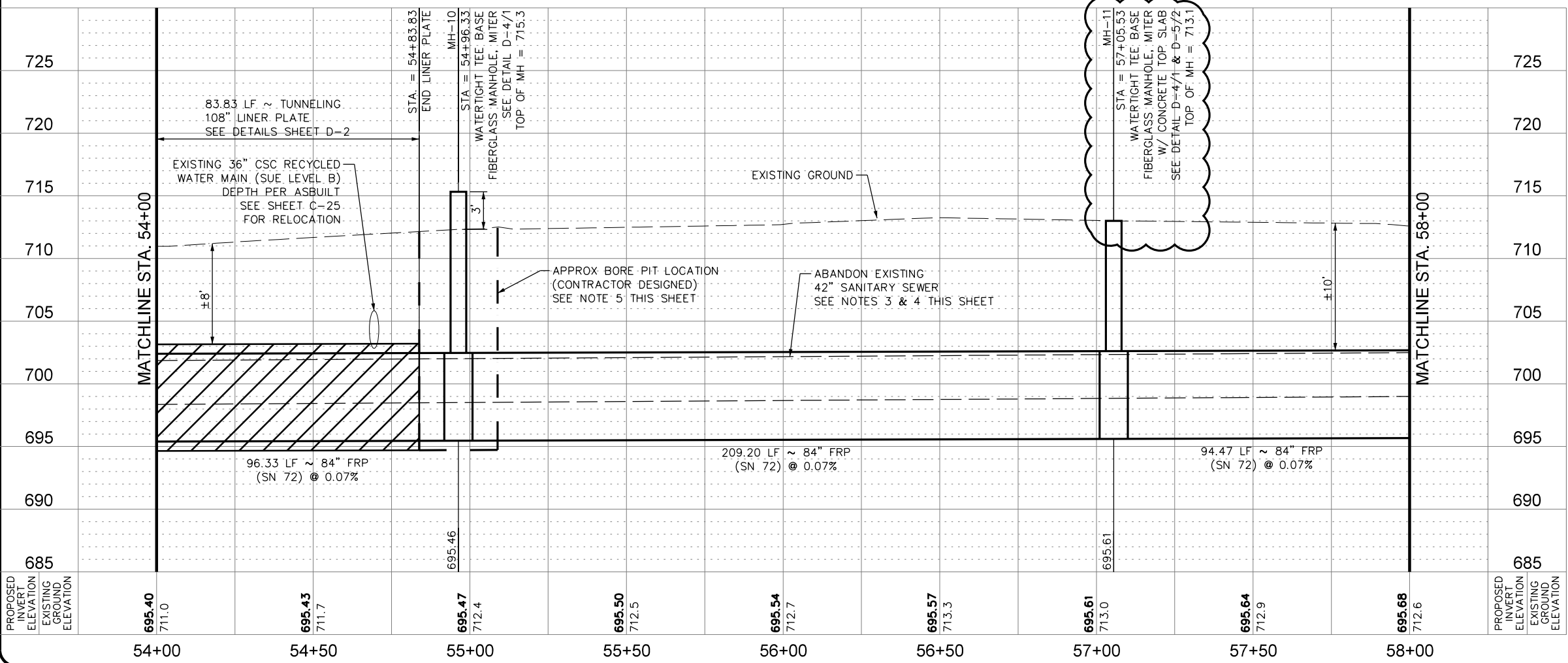
PLOTTED ON: 9/12/2020

DESIGN FILENAME: P:\89\18\00\Design\Civil\Sewer\Phase 1\SS891800-01-C12.dgn



QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	316
SS 2426	CARRIER PIPE IN TUNNELS	LF	84
SS 2314	108" STEEL LINER PLATE	LF	84
SS 2314	TUNNELING WITH LINER PLATE	LF	84
853A	TEE BASE FIBERGLASS MANHOLE, MITER	EA	2
853	EXTRA DEPTH TEE BASE MANHOLE	VF	26
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	316
866	SEWER MAIN TV INSPECTION	LF	400
D-5	CONCRETE MANHOLE TOP SLAB	EA	1

LINE "A"



- NOTES:**
- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
 - CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
 - CONTRACTOR SHALL REFER TO SHEETS G-21 TO G-23 FOR ABANDONMENT PLAN, NOTES AND QUANTITIES.
 - CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
 - CONTRACTOR NEEDS TO ADEQUATELY SHORE TUNNEL SHAFT TO PREVENT DISTURBING BACKFILL OF EXISTING 42-INCH SANITARY SEWER MAIN.
 - ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN.
 - ACCESS TO SOUTHWEST RESEARCH INSTITUTE IS LIMITED TO THE ACQUIRED SAWS EASEMENTS SHOWN ON PLANS, NO OTHER ACCESS WILL BE ALLOWED.

PAPE-DAWSON
Job No.
8918-00

STATE OF TEXAS
JASON T. DIAMOND
96532
LICENSED PROFESSIONAL ENGINEER

DATE: AUG 2020
DESIGNED BY: MP
DRAWN BY: BS
CHECKED BY: JO
SCALE: 1" = 40' HORZ
1" = 10' VERT

PAPE-DAWSON ENGINEERS

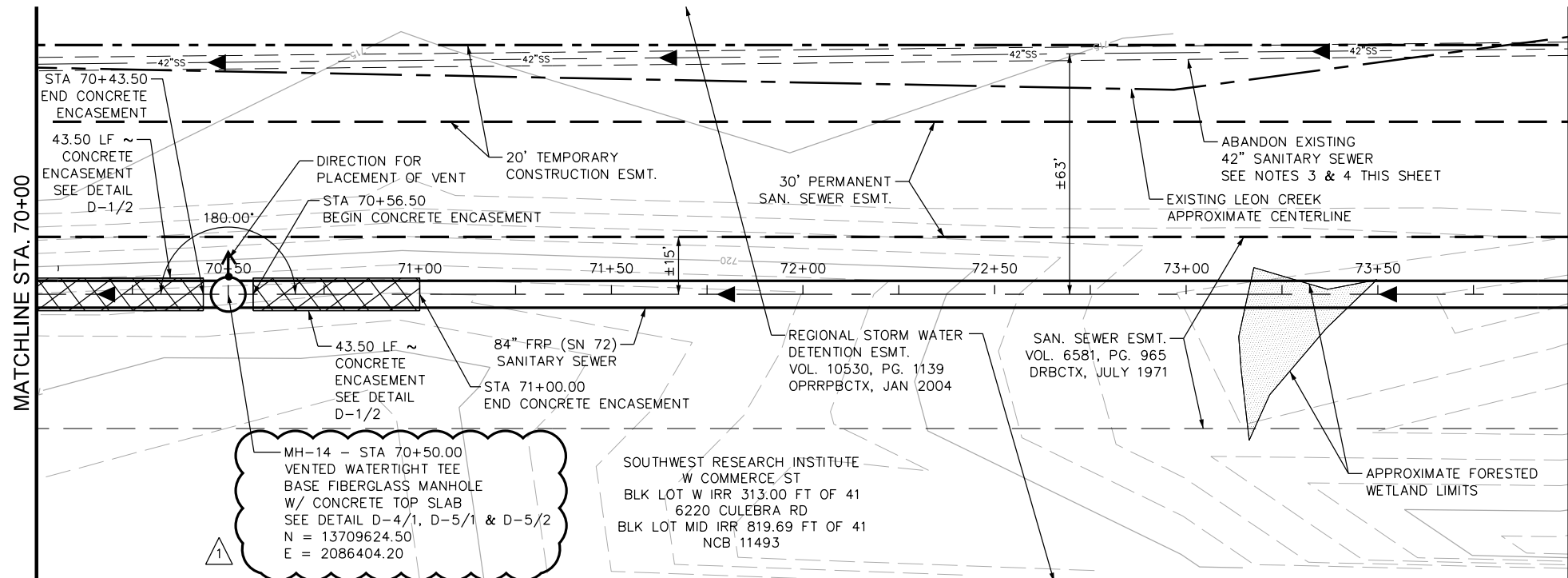
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TDP: FIRM REGISTRATION #03800

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
LINE "A" PLAN AND PROFILE
STA 54+00 TO STA 58+00

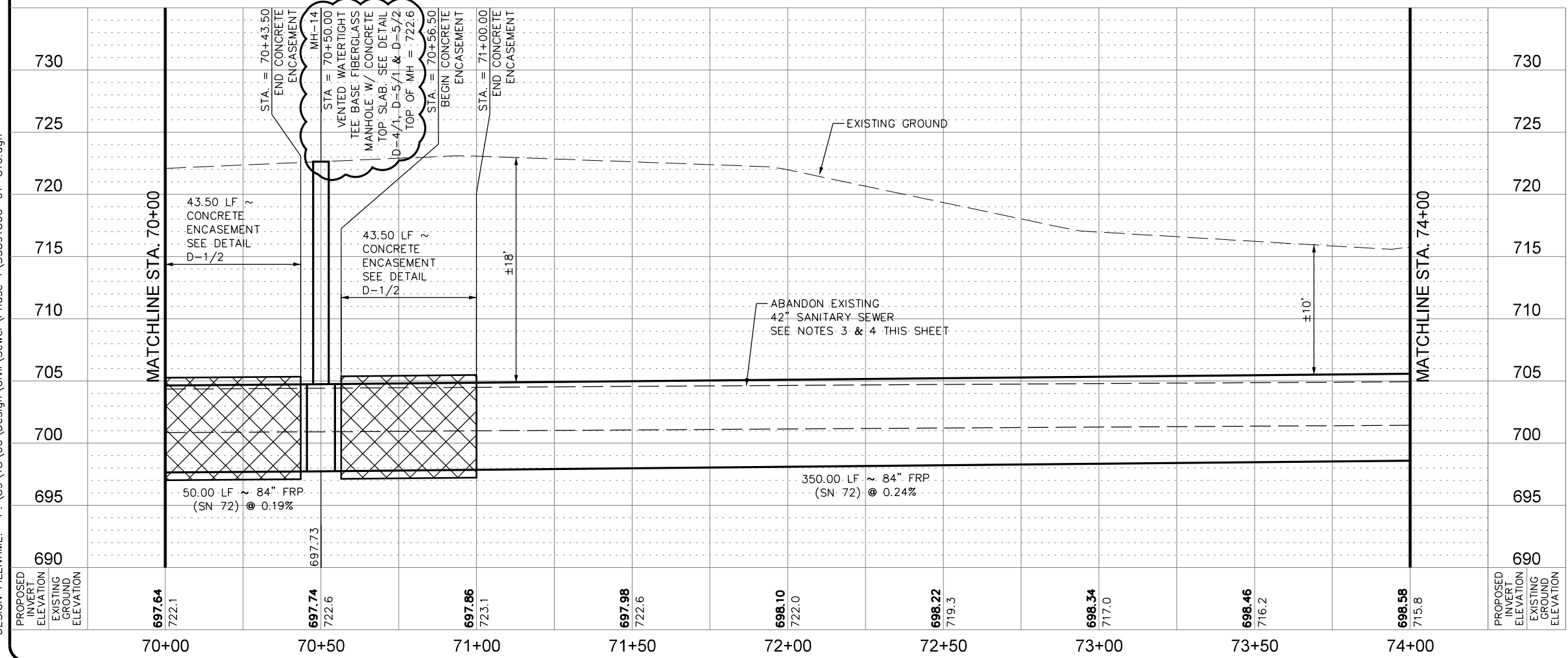
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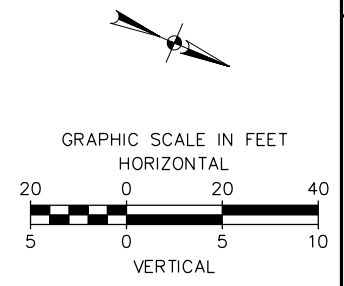


QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	125
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 20'-25')	LF	275
853A	TEE BASE FIBERGLASS MANHOLE	EA	1
853	EXTRA DEPTH TEE BASE MANHOLE	VF	19
858	CONCRETE ENCASUREMENT (MIN STRENGTH, 2,000 PSI)	CY	160
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
866	SEWER MAIN TV INSPECTION	LF	400
D-5	CONCRETE MANHOLE TOP SLAB	EA	1

LINE "A"



- NOTES:**
- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
 - CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
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 - CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
 - ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN AND 5-YEAR FLOODPLAIN.
 - ACCESS TO SOUTHWEST RESEARCH INSTITUTE IS LIMITED TO THE ACQUIRED SAWS EASEMENTS SHOWN ON PLANS, NO OTHER ACCESS WILL BE ALLOWED.



PAPE-DAWSON
Job No. 8918-00

DESIGNED BY: MP
DRAWN BY: BS
CHECKED BY: JO

DATE: AUG 2020

SCALE: 1" = 40' HORZ
1" = 10' VERT

PAPE-DAWSON ENGINEERS

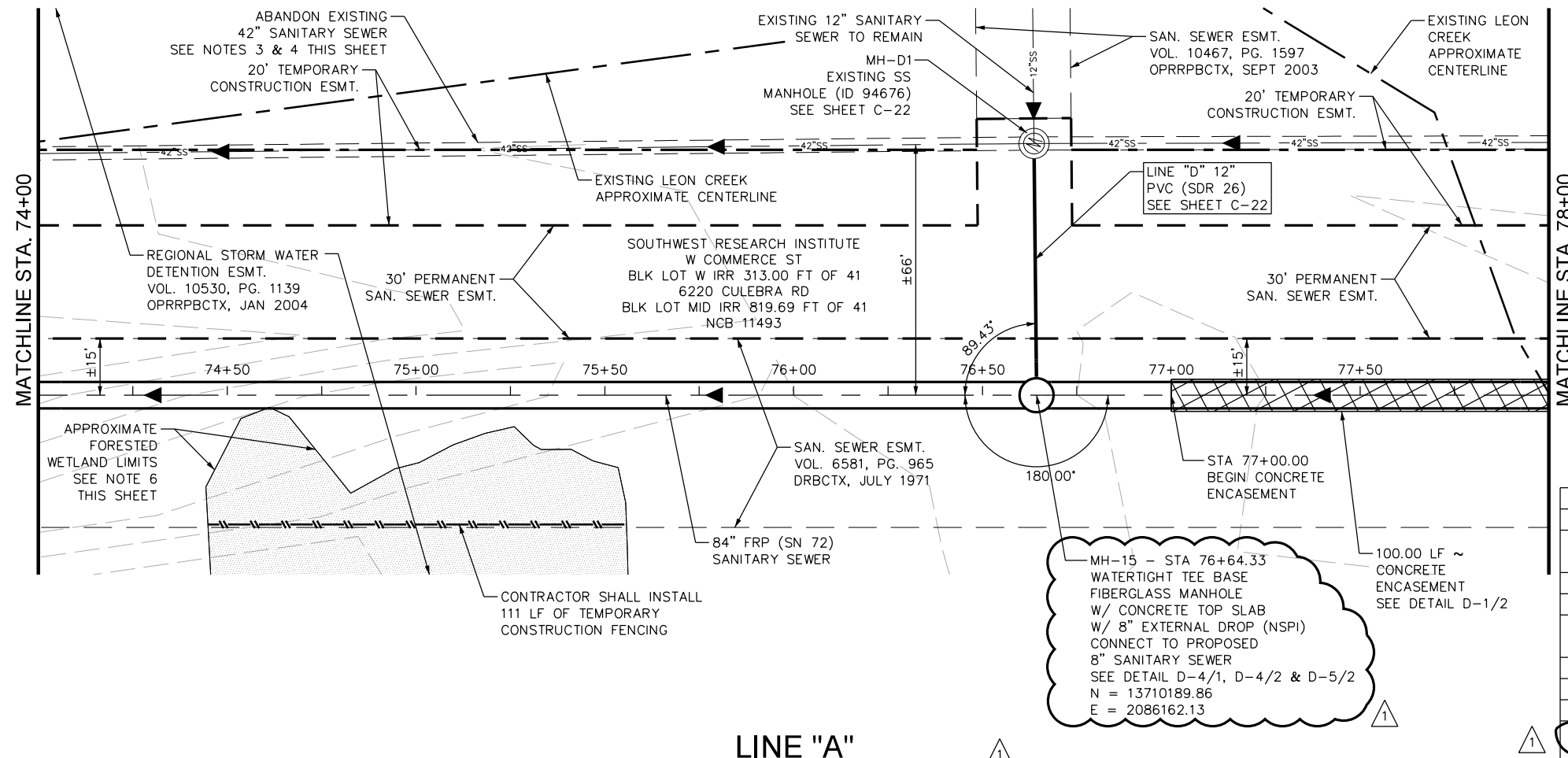
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TELE FIRM REGISTRATION #070 | TEXAS FIRM REGISTRATION #1008890

SAN ANTONIO WATER SYSTEM

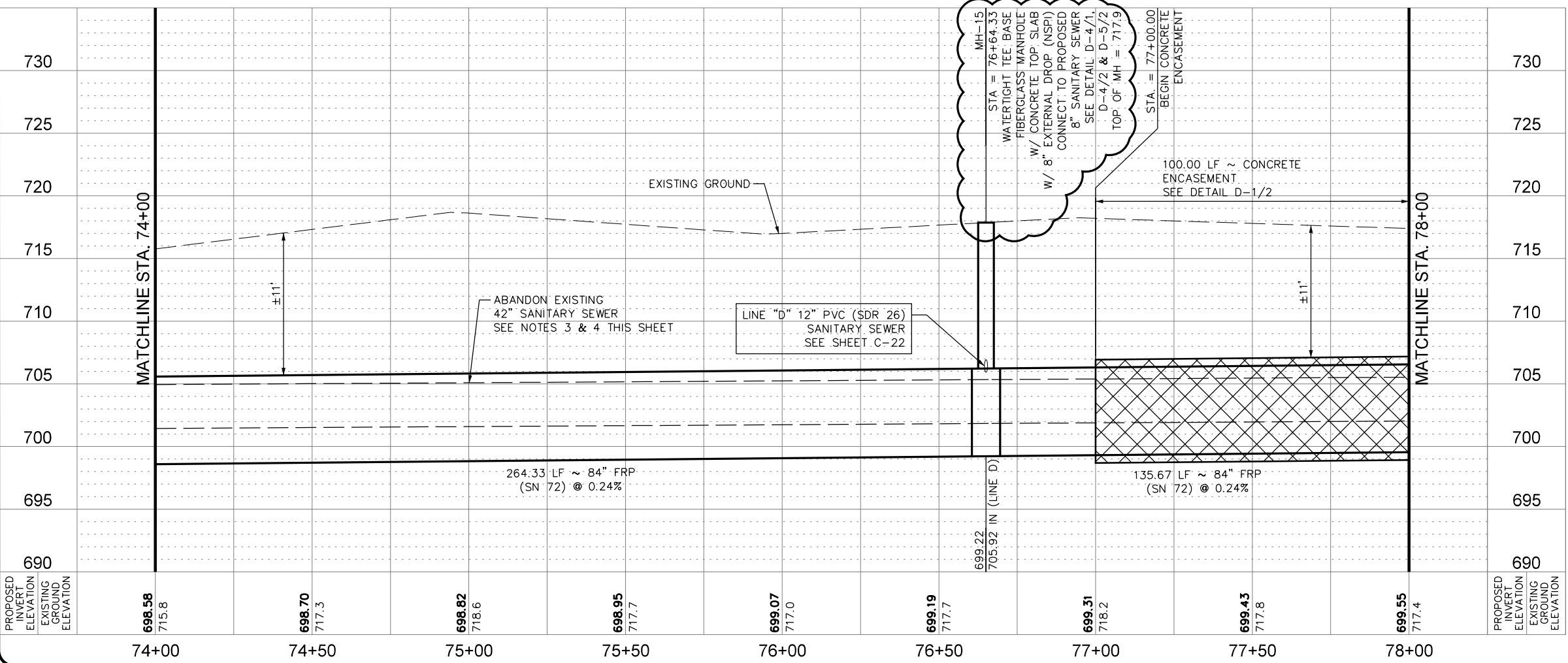
SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
LINE "A" PLAN AND PROFILE
STA 70+00 TO STA 74+00

PLOTTED ON: 9/12/2020

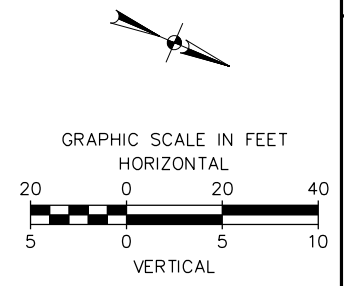
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QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	400
853A	TEE BASE FIBERGLASS DROP MANHOLE	EA	1
853	EXTRA DEPTH TEE BASE MANHOLE	VF	13
858	CONCRETE ENCASEMENT (MIN STRENGTH, 2,000 PSI)	CY	183
507.1	TEMPORARY CONST. FENCE (4' HIGH)	LF	111
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	400
866	SEWER MAIN TV INSPECTION	LF	400
D-5	CONCRETE MANHOLE TOP SLAB	EA	1



- NOTES:**
- CONTRACTOR SHALL REFER TO THE TREE PRESERVATION PLAN SHEETS TP-1 TO TP-10 FOR TREE REMOVAL AND PRESERVATION.
 - CONTRACTOR MAY ENCOUNTER THE PRESENCE OF GROUND WATER DURING CONSTRUCTION. CONTRACTOR SHALL REFER TO THE SUPPLEMENTARY SPECIFICATIONS FOR CONTROL OF GROUND WATER.
 - CONTRACTOR SHALL REFER TO SHEETS G-21 TO G-23 FOR ABANDONMENT PLAN, NOTES AND QUANTITIES.
 - CONTRACTOR SHALL PROTECT EXISTING 42" SANITARY SEWER DURING CONSTRUCTION OF PROPOSED SANITARY SEWER MAIN.
 - ENTIRE AREA SHOWN ON THIS PLAN SHEET IS IN THE 100-YEAR FLOODPLAIN AND 5-YEAR FLOODPLAIN.
 - APPROXIMATE FORESTED WETLAND LIMITS. CONTRACTOR SHALL INSTALL ORANGE PLASTIC CONSTRUCTION FENCING (APPROXIMATELY 4' TALL) ALONG BOUNDARY SHOWN ON PLAN VIEW OF FORESTED WETLANDS. CONTRACTOR SHALL NOT DISTURB FENCED AREA.
 - ACCESS TO SOUTHWEST RESEARCH INSTITUTE IS LIMITED TO THE ACQUIRED SAWS EASEMENTS SHOWN ON PLANS, NO OTHER ACCESS WILL BE ALLOWED.



PAPE-DAWSON
Job No. 8918-00

STATE OF TEXAS
JASON T. DIAMOND
96532
LICENSED PROFESSIONAL ENGINEER

DATE: AUG 2020
DESIGNED BY: MP
DRAWN BY: BS
CHECKED BY: JO
SCALE: 1" = 40' HORZ
1" = 10' VERT

PAPE-DAWSON ENGINEERS

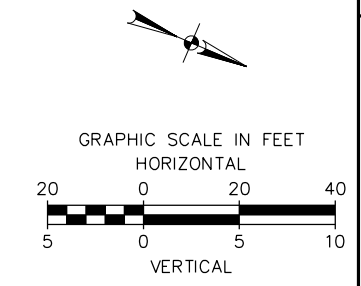
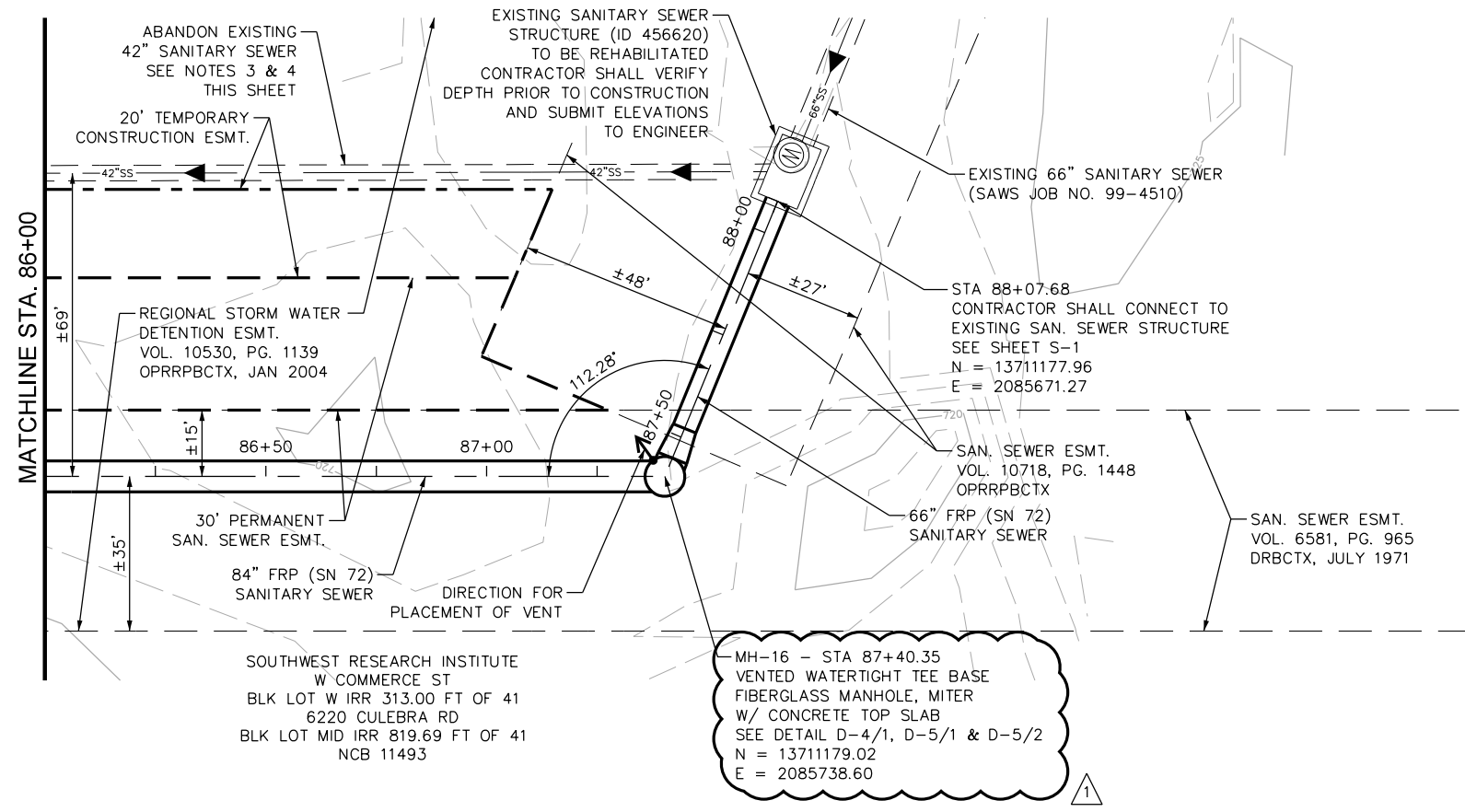
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #1008980

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
LINE "A" PLAN AND PROFILE
STA 74+00 TO STA 78+00

PLOTTED ON: 9/12/2020

DESIGN FILENAME: P:\89\18\00\Design\Civil\Sewer\Phase 1\SS891800-01-C20.dgn



APP.	JD.	NO.	DATE
1	1	9/14/20	

ADDENDUM #1

REVISIONS

DATE: AUG 2020

DESIGNED BY: MP

DRAWN BY: BS

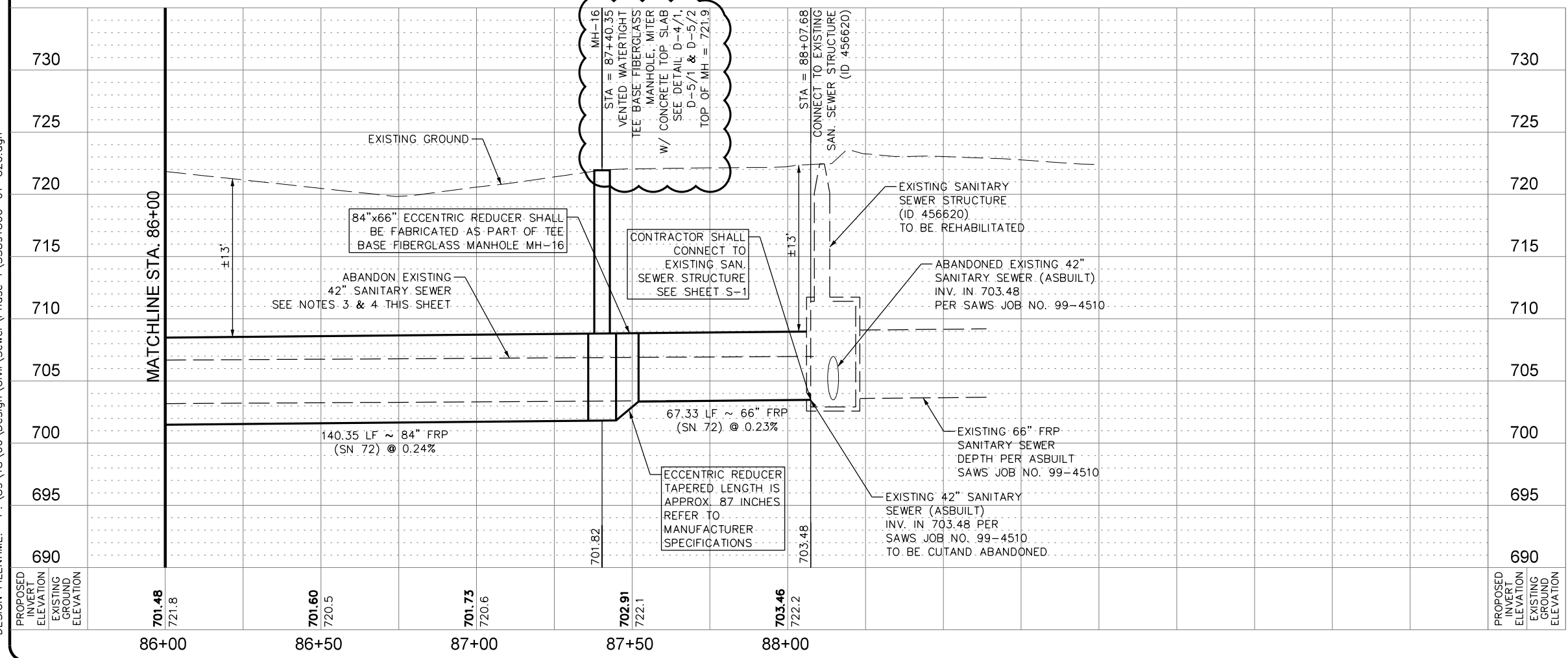
CHECKED BY: JO

SCALE: 1" = 40' HORZ
1" = 10' VERT



QUANTITY TABLE			
ITEM	DESCRIPTION	UNIT	QUANTITY
857A	84" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	141
857A	66" FRP (ASTM D-3262)(SN 72) (OPEN CUT 15'-20')	LF	67
853A	TEE BASE FIBERGLASS MANHOLE, MITER	EA	15
853	EXTRA DEPTH TEE BASE MANHOLE	VF	1
910.2	MANHOLE REHABILITATION	SF	692
550.1	TRENCH EXCAVATION SAFETY PROTECTION	LF	208
866	SEWER MAIN TV INSPECTION	LF	208
D-5	CONCRETE MANHOLE TOP SLAB	EA	1

LINE "A"



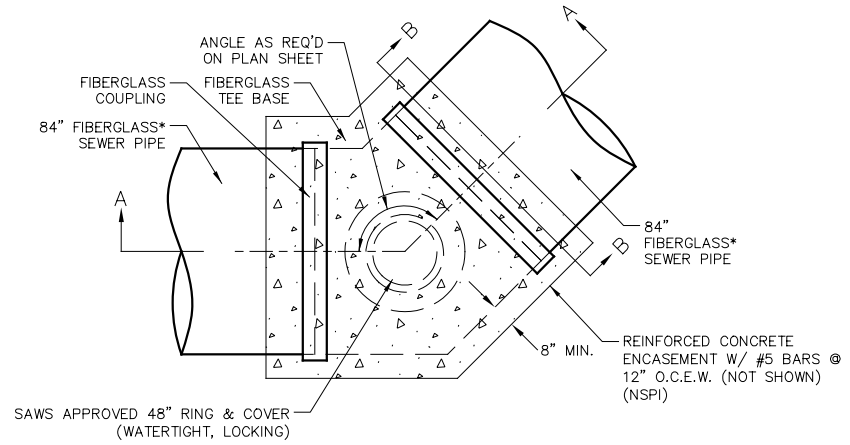
- NOTES:**
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PAPE-DAWSON ENGINEERS

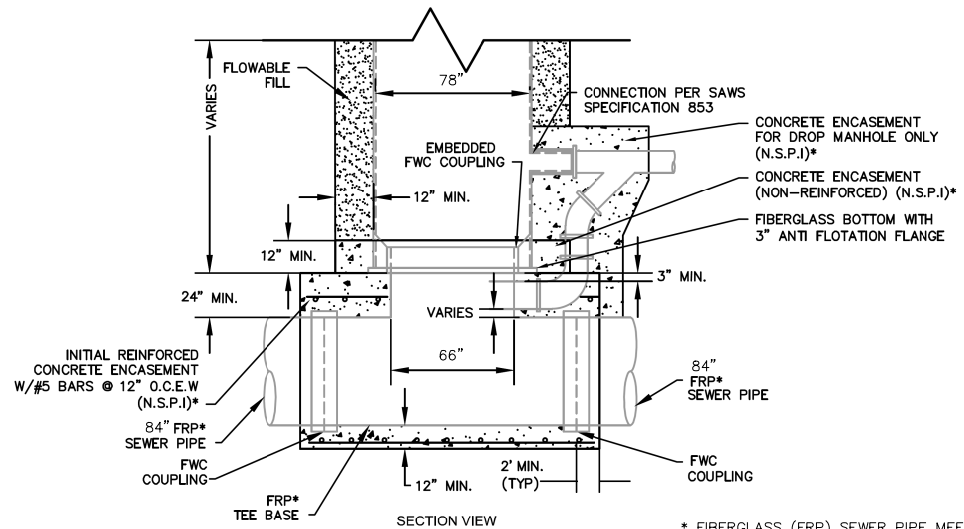
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.8000
TXPE FIRM REGISTRATION #1002890

SAN ANTONIO WATER SYSTEM

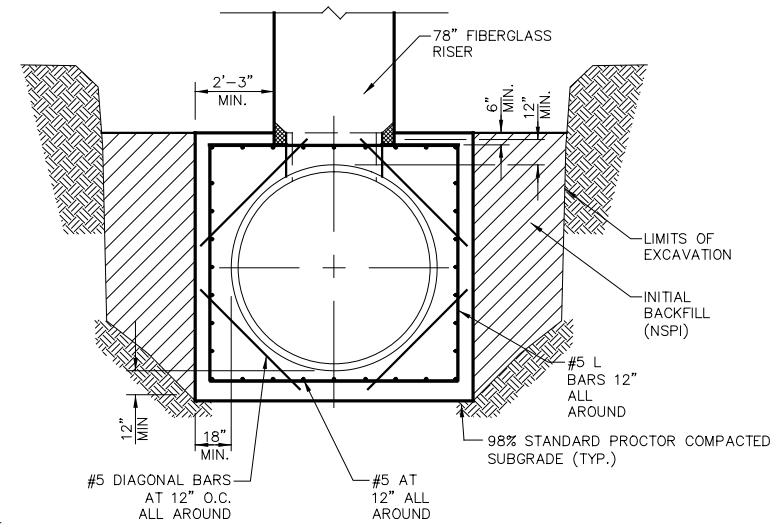
SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
LINE "A" PLAN AND PROFILE SHEET
STA 86+00 TO STA 88+07.68



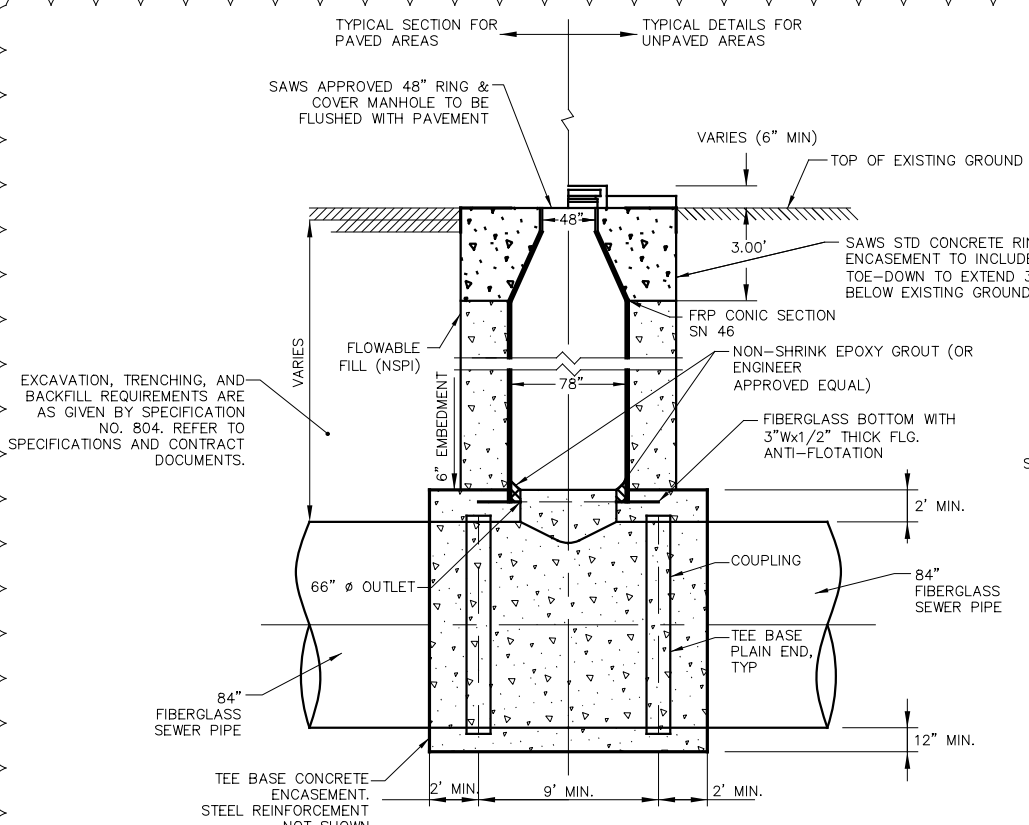
1 TEE-BASE FIBERGLASS MANHOLE DETAIL PLAN VIEW
N.T.S.



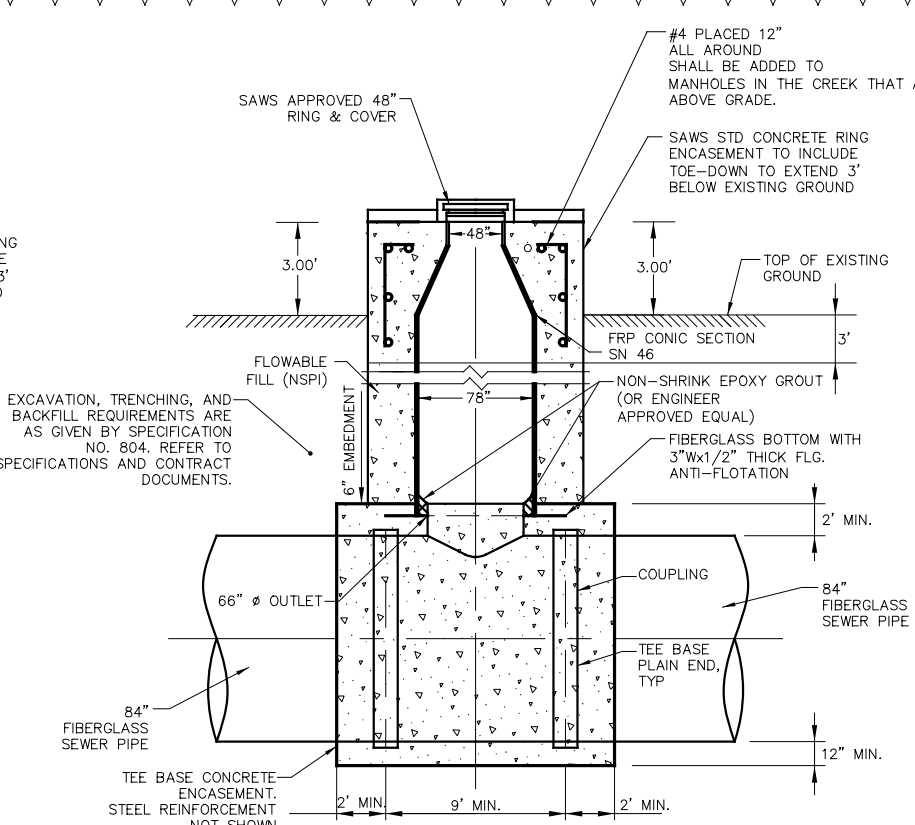
2 FRP TEE BASE DROP MANHOLE
N.T.S.



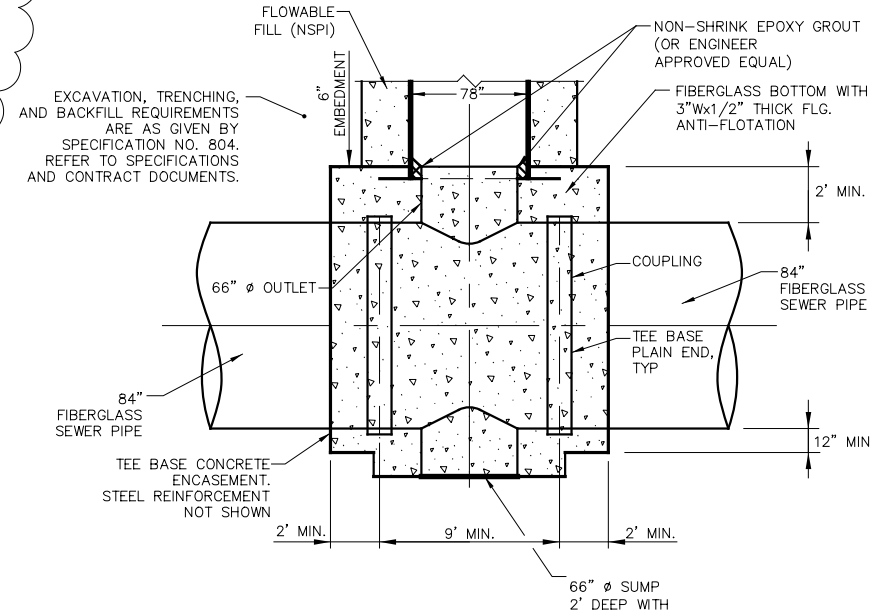
SECTION B
N.T.S.



SECTION A
MANHOLE TO EXISTING GRADE SECTION
N.T.S.



SECTION A
MANHOLE RAISED ±3' ABOVE EXISTING GRADE SECTION
N.T.S.



SECTION A
MANHOLE WITH SUMP SECTION
N.T.S.

- NOTES:
1. ALL TEE-BASE MANHOLES SHALL CONSIST OF FIBERGLASS RISER AND WITH PREFABRICATED FRP TEES.
 2. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
 3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND MAKE NECESSARY ALLOWANCES FOR RISER LENGTHS, BEARINGS PADS, SPACE FILLERS AND RING & COVER (NSPI).
 4. TEE-BASE MANHOLE SHALL BE CONCRETE ENCASED TO CONFORM H2O LOADING.
 5. REFER TO SANITARY SEWER SPECIFICATIONS FOR ALL STANDARDS GOVERNING T-BASE MANHOLES.
 6. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DEFORMATION WHILE POURING ENCASEMENT. FIBERGLASS RISER TO BE SUPPORTED BY CONCRETE ENCASEMENT.
 7. FLOTATION TO BE PREVENTED DURING ENCASEMENT CONCRETE POURS.
 8. ALL CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 4000 PSI.
 9. ENCASEMENT TO BE DESIGNED TO RESIST ALL TEE BASE DEFORMATIONS AND IS TO EXTEND PAST THE FIRST JOINT ON EITHER SIDE OF THE TEE BASE BY 2' TO 3'.

- NOTES CONT:
10. ALL CONCRETE ENCASEMENT REQUIRED FOR TEE BASE MANHOLES SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE MANHOLES.
 11. THE TEE-BASE IS TO BE FULLY CONCRETE ENCASED AND ALLOWED TO CURE PRIOR TO INSTALLATION OF MANHOLE RISER.
 12. THE TEE-BASE THROAT SHALL BE FLUSH WITH THE UPPER EDGE OF THE FRP COUPLING CONNECTING THE MANHOLE RISER TO THE TEE BASE.
 13. BACKFILL AROUND MANHOLE SHALL BE FLOWABLE WITH A MINIMUM THICKNESS OF 12-INCHES AND FILL SHALL BE PLACED TO WITHIN 36-INCHES OF FINAL GRADE. THIS COST SHALL BE SUBSIDIARY TO THE COST OF THE MANHOLE.
 14. CONCRETE ENCASEMENT (DESIGNED BY OTHERS) IS TO RESIST ALL T-BASE DEFORMATIONS.
 15. CONTRACTOR TO COORDINATE TOP ELEVATION OF CONCRETE ENCASEMENT WITH FRP MANHOLE MANUFACTURER

MAI Job No. M061
Date: 9/13/2020 Designed by: ETM Drawn by: CAD Checked by: ETM Scale:
ADDENDUM #1 Revisions:

PAPE-DAWSON ENGINEERS
SAN ANTONIO, TEXAS
MAESTAS
8122 DATAPoint DR., STE. 800 SAN ANTONIO, TX 78229
(210) 396-1888

SAN ANTONIO WATER SYSTEM

SAWS JOB NO. 19-4528
W-1 LEON CREEK: HWY 151 TO HWY 90
UPPER SEGMENT
MANHOLE DETAILS