



**Central Sewershed Package 7-Brackenridge High School**  
**Solicitation Number: CO-00423**  
**Job No.: 18-4543**

**ADDENDUM 02**  
**May 28, 2021**

To Bidder of Record:

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

<b>RESPONSES TO QUESTIONS</b>
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1. Can you clarify the type of Backfill for Polymer Manholes and can you provide a detail? Also, can Fiberglass manholes be considered in lieu of Polymer?

*Answer: Flowable fill will be used as backfill for polymer concrete manholes included in this project. Flowable fill as backfill shall be considered incidental to the manhole bid item and will not be paid separately. A detail is attached to this Addendum showing the use of flowable fill as backfill. Fiberglass manholes will not be considered as an alternative.*

2. Will the allowance cost be provided by Owner or do we provide an estimated cost for that allowance?

*Answer: The Contractor will provide an estimated cost for allowances.*

3. Will all bores require annular grouting between the casing and the carrier pipe and can you provide casing thickness?

*Answer: Per SAWS 2017 Specification 856, sections 856.4.5 and 856.3.3 the annular space between the casing and carrier pipe shall be pressure grouted.*

4. The allowance for the relocation of Utilities cannot be assessed until the respective agency provides a price to SAWS. This item cannot be estimated by the contractor and needs to be provided by SAWS. There is not enough information provided to assess the size of utilities, and type of material. ONLY owner of utilities can do the relocation with their approved list of contractors.

*Answer: The intention is for the bidder to provide an estimated cost of the line item concerning the allowance for relocation of existing utilities, this will allow all parties to anticipate a certain amount of money to be allocated to such bid item. However, as stated on the specifications, Contractor shall expose all potential conflicts with the existing utilities at the earliest practical date after contract has been awarded and also submit a cost proposal. To our knowledge the existing utilities serve BHS. Coordination with Utilities, SAISD and BHS will be required for the shutdown of these utilities during the construction of the new 10-inch lateral.*

5. Are there any work hour restrictions?

*Answer: The only restrictions are those listed under the special conditions.*

However, Contractor shall coordinate with SAISD and COSA prior to bid and throughout the project on a constant basis to finish construction of the project on time. Sharing schedules with SAISD and COSA and constantly updating them will be deemed necessary for the execution of this project and therefore being considered part of the Contractor's responsibilities. SAISD and COSA's schedules of events are subject to change, therefore it is the contractor's obligations to coordinate with said agencies to anticipate and/or avoid interruptions due to the NO WORK PERIODS. Also, contractor shall work around SAISD and COSA's schedule to continue with work and finish construction on schedule.

6. Is there a temporary yard available for material storage?

*Answer: There is not currently a material storage yard identified on the BHS campus. The Contractor will coordinate with SAWS and SAISD to determine an appropriate location on campus at the beginning of the project, or the Contractor will procure an off-site location for material storage. If the location is off-site, the lease agreement for the material storage yard will be provided to SAWS.*

7. Is there any existing irrigation at school property and how will we get paid for relocating (please provide size and the location on the plans)? please add a bid item.

*Answer: According to the BHS Phase 1 improvements, there are several irrigation pipelines that will be impacted by the construction of the new pipeline. The pipeline sizes include ½ - ¾ -, 1-, 1 ¼ -, 1 ½ -inch, 2 ½ -, and 3 -inch. Refer to the Attachment 6 for the best available information regarding the location of these lines.*

*Bid item SS 1203 – Removal and Replacement of Existing Irrigation System has been added, refer to Attachment 1. Any removal and replacement of the existing irrigation system will be paid under bid item SS 1203. Contractor shall coordinate any irrigation shut down with BHS and SAISD. If the irrigation system is offline more than 24 hours, the contractor shall provide water trucks to water areas where irrigation system is offline. The delivery of water by trucks, materials, labor, and any other item needed for the removal and replacement of the irrigation system shall be paid under bid item SS 1203.*

8. Can you provide existing manholes to be abandoned flow lines and rim elevations?

*Answer: The plan sheet labeled "Brackenridge Lateral 1, Plan and Profile Sta. 13+50 – 16+34', currently page 19 of 32 of the plan set, shows the only manhole to be abandoned for the project (SAWS MH #27592). The manhole callout on that sheet provides the flowline and rim elevations for that manhole, which are 614.63 and 626.02, respectively.*

9. Will fiberglass manholes be bid as an alternative?

*Answer: Fiberglass manholes risers will not be bid as an alternative. Please refer to the polymer concrete manhole detail included in this Addendum for more information.*

10. Does the bypass need to be buried at school locations? It seems that it crosses buildings, track field, streets and driveways?

*Answer: Per Specification 864-S2 Bypass Pumping Large Diameter Sanitary Sewers Section 4.R, the Contractor is required to submit "a Traffic Control Plan that pertains solely to the bypass pumping operations. This may differ than the project's traffic control plan for the overall scope of work. The Traffic Control Plan shall include all required permits including street cut permits. Contractor shall maintain pedestrian and vehicular traffic and comply with ADA regulations for access to all residential and commercial property unless written approval is otherwise obtained from the property owner allowing for reduced access." This section applies to all Right-of-Ways, including COSA and/or SAISD, within the project limits. If the Contractor desires to include buried bypass lines as part of this Traffic Control Plan, they may present it for approval.*

11. Will sodding be required at school property?

*Answer: Sodding will not be required at the school property, Bid Item 520.1 Hydromulching will cover restoration of the grass areas that will be impacted by the project.*

12. Can you add an item for temporary fencing?

*Answer: Bid Item SS1204 – Temporary Fencing has been added, refer to Attachment 1.*

13. Is there any erosion control plans?

*Answer: There are no erosion control plans, please refer to Special Provisions to Technical Specifications E. Revision to COSA Specification Item 540 Temporary Erosion, Sedimentation and Water Pollution Prevention and Control.*

14. Can you add a bid item for tree protection and tree removal?

*Answer: Please refer to the revised Special Specification ITEM No. SS 801 Tree and Landscape Protection Section 5 for Payment, see Attachment 4. A new bid item, item SS 801 has been included.*

15. I do not see an embedment detail, can you provide a detail.

*Answer: Please refer to detail DD-804-01 from Specification Item No. 804 EXCAVATION, TRENCHING AND BACKFILL.*

16. Is there a detail for Polymer Manholes backfill requirements?

*Answer: Please refer to manhole detail included in this Addendum, see Attachment 3.*

17. Will Tee-Base Fiberglass Manholes be allowed as an alternate to bid line item No. 11 “60” Polymer Concrete Manholes”? The Tee-Base Fiberglass Manholes are used in conjunction with FRP pipe. Tee-Base Fiberglass Manholes are approved and specified by SAWS Item No. 852. Recently bid projects have specified Tee-Base Manholes.

*Answer: Tee bases will be allowed; however, Fiberglass manholes risers will not be bid as an alternative. Please refer to Attachment 3, polymer concrete manhole detail included in this Addendum for more information.*

18. Are there pipe inspection videos available for this project? If so, please provide the Disclosure Form and any instructions necessary for the bidders to access them.

*Answer: Video clips are being made available for the sole purpose of providing historical background information that may assist bidders in preparing their response to this solicitation. To obtain disclaimer form and access to the video information, please go to the solicitation on the SAWS website ([https://apps.saws.org/business\\_center/contractsol/Drill.cfm?id=3962&View=Yes](https://apps.saws.org/business_center/contractsol/Drill.cfm?id=3962&View=Yes)). Complete the form and email the document to Janie Powell who will provide access via SAWS FTP site. The videos are provided for informational purposes only and are not included in the bid documents. Sewer line and manhole deterioration is an ongoing process, so the conditions at the time of construction may be substantially different from the conditions shown in the video.*

19. CIPP standard specification section 901.4-3.e.6 requires a soil modulus of 500 psi be used in the CIPP thickness designs, but this soil modulus is overly conservative and will produce CIPP thicknesses that are thicker than needed, which will increase the difficulty of installation and overall project cost. On previous projects, this section has been replaced with language saying the Contractor was allowed to submit calculations signed and sealed by a Texas Professional Engineer utilizing other values for soil modulus so long as those values were part of the sealed calculations, the calculation method complied with ASTM F1216, and the soil modulus utilized did not exceed 1,000 psi. Please confirm that the Contractor will again be allowed to use values other than 500 psi for the soil modulus on this project.

*Answer: Please see Changes to Specifications section below.*

20. CIPP standard specification section 901.4-3.e.7 specifies that the groundwater to be used in the CIPP thickness designs shall be at the ground surface or the elevation of the 100-year floodplain, whichever is greater. On previous projects, this section has been modified so that the reference to floodwater being used as a design parameter has been deleted. Please confirm that the floodwater will again not need to be considered in the CIPP thickness designs, and that this section shall be modified to simply require the groundwater depth to be at the ground surface. If floodwater loading must be included as a design parameter, please provide the elevation of the floodwater level to be applied at each of the applicable manholes on the CIPP alignment.

*Answer: For this project and due to the proximity to the San Antonio River, the 100-year floodplain elevation shall be considered for the design of the CIPP thickness. The 100-year floodplain elevation, according to the FEMA National Flood Hazard map is 620.57.*

21. General Civil Note 5 on drawing sheet 4 requires the contractor to confirm which laterals are active prior to the installation of the CIPP and only reinstate the active laterals. Will a pan and tilt CCTV inspection up the lateral connection from the main showing that the lateral is not capped be sufficient for proving a lateral is active, or will additional work be required to prove a lateral is active. Please clarify what activities must be performed to prove a lateral is active and needs to be reinstated.

*Answer: Pan and tilt CCTV inspection in conjunction with dye testing of sewer fixtures will be acceptable. Dye testing will be coordinated with SAISD for access to building fixtures.*

22. The estimated quantities on drawing sheet 20 shows that there is 1 EA lateral to be reconnected by remote cutting, but there is no lateral shown connecting directly to the pipe outside of a manhole on the drawing plan view. Please clarify.

*Answer: Currently, we are only aware of one active lateral within the CIPP work, between Sta. 14+35 and 15+82; refer to sheet titled "Brackenridge CIPP Improvements", currently Sheet 20 of 32. Contractor shall locate and confirm all laterals.*

23. The estimated quantities on drawing sheet 19 shows that there is 1 EA lateral to be reconnected by remote cutting, but there is no CIPP lining work on this sheet or other work that would normally require a lateral to be remotely reinstated. Please clarify.

*Answer: There is no remote cutting bid item on Sheet 19. Contractor shall reconnect existing lateral to new manhole at Sta. 16+34, at no additional cost to the owner.*

24. Note 3 on drawing sheet 20 indicates that the temporary manhole would be incidental work to the CIPP bid item, but since it appears this manhole is needed for bypass, shouldn't it be incidental to the bypass bid item instead?

*Answer: Note 3 under the sheet titled Brackenridge CIPP Improvements, sheet 20 of 32, will be corrected to state that the temporary manhole will be incidental work to the Bypass Bid Item No. 48, Large Diameter Bypass Pumping for Sanitary Sewers (S. St. Mary's St.) – Bypass Pumping No. 2 & 3.*

25. Are there profile plans available for the 39" Sanitary Sewer main that is to be lined with CIPP on this project? The over head plan is included in the plan set but I was unable to locate a profile.

*Answer: As-built record drawings for the existing 39-in sanitary sewer are not available, but Sewer Block Map 162570 is provided as Attachment 7 to show manhole rim and invert elevations on the existing 39-in sewer line.*

#### CHANGES TO THE PLANS

1. Remove Sheet 5, Quantities, and replace with revised Sheet 5 attached to this Addendum.

- a. Updated Summary of Quantities
2. Remove Sheet 6, Quantities Cont'd, and replace with revised Sheet 6 attached to this Addendum.
    - a. Updated Summary of Quantities
  3. Remove Sheet 8, Brackenridge Overall Site Map & Control Points, and replace with revised Sheet 8 attached to this Addendum.
    - a. Added quantity table
  4. Remove Sheet 19, Brackenridge Lateral 1 Plan and Profile Sta. 13+50 – 16+34, and replace with revised Sheet 19 attached to this Addendum.
    - a. Remove bid item 1109, Reconnect Lateral – Remote Cutting, and update call note at Sta. 16+34 to include the following:
      - i. “RECONNECT EXISTING LATERAL, AT NO ADDITIONAL COST TO THE OWNER.”
  5. Remove Sheet 20, Brackenridge CIPP Improvements, and replace with revised Sheet 20 attached to this Addendum.
    - a. Replace Note 3 with the following:
      - i. “INSTALLATION AND ABANDONMENT OF TEMPORARY MANHOLE, WITH ITS RESPECTIVE REPAIR AND RESTORATION WORK OF THE AREA, SHALL BE COORDINATED WITH SAISD AND SAWS AND SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 864-S2, LARGE DIAMETER BYPASS PUMPING FOR SANITARY SEWERS (S. ST. MARY’S ST.) – BYPASS PUMPING NO. 2 & 3.”
  6. Remove Sheet 25, Tree Survey Plan Location Sheet, and replace with revised Sheet 25 attached to this Addendum.
    - a. Added quantity table

<b>CHANGES TO THE SPECIFICATIONS</b>
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1. Bid Proposal – Remove Bid Proposal and replace with the revised Bid Proposal attached to this Addendum. Updated Bid Proposal Estimated Quantity Table. This version of the bid proposal should be used by bidders when submitting a bid for this project.
2. Remove Wage Decision and replace with the revised version Wage Decision “General Decision Number: TX20210231” attached to this Addendum (Attachment No. 2.)
3. Replace the unit identified under Special Provisions to the Technical Specifications, Section F. Revision to SAWS Standard Specification Item 100 Mobilization, Bid Item 100.2, Intermediate Demob/Remob to EA (Each).
4. Insert the following section to Special Provisions to the Technical Specifications, P. Revision to Standard Specification Item 901 Rehabilitation of Sanitary Sewer by Cured-In-Place Pipe (Hot Water or Steam Cured), to the end of Section 901.4.3.e.3
  - a. 901.4 MATERIALS: ADD the following item to the end of this section:
    - 6). A soil modulus different than 500 psi may be used if documented site-specific soil data (signed and sealed by a professional Engineer registered in the State of Texas) is provided with liner thickness design calculations required in 901.3 Submittals, Section 4.

5. Special Specifications - Remove and replace Special Specification SS 801 with Attachment No. 4.
  - a. Modified measurement and payment section (SS 801.5) to allow for lump sum bid item.

<b>CLARIFICATIONS</b>
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1. The attached Bid Proposal shall be used when submitting bid (Attachment No. 1).
2. The estimated cost for this project has changed to \$4,027,741.85, which is also now reflected on SAWS website at the following:  
  
[https://apps.saws.org/business\\_center/contractsol/Drill.cfm?id=3962&View=Yes](https://apps.saws.org/business_center/contractsol/Drill.cfm?id=3962&View=Yes)
3. This project is referencing the 2014/2017 SAWS specifications as listed under the Archive files located in the SAWS Specifications website.

<b>END OF ADDENDUM</b>
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This Addendum, including these six (6) pages, is forty-seven (47) pages with attachments in its entirety.

Attachments:

- 1 - Revised Bid Tab
- 2 - Wage Decision Building
- 3 - Polymer Concrete Manhole Detail
- 4 - Tree and Landscape Protection
- 5 - Plan Sheets
- 6 - Bond Irrigation Plan
- 7 - Sewer Block Map 162570



Digitally Signed 05/27/2021  
Marco A. Ramirez  
Marco A. Ramirez, P.E.  
Garver

**ATTACHMENT 1:  
REVISED BID TAB**

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 in the bid proposal to wit:

**PLEASE SEE ATTACHED LIST OF BID ITEMS.**

\_\_\_\_\_  
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 **425** 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.

**Statement on President's Executive Orders**

Has your firm previously performed work subject to the President's Executive Orders Numbers 11246 and 11375 or any preceding similar executive orders (Numbers 10925 and 11114)?

Yes  No



ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
1	103.1	Remove Concrete Curb, (COSA Spec)	LF	144	\$	\$
2	103.3	Remove Concrete Sidewalk and Driveways, (COSA Spec)	SF	1,235	\$	\$
3	202.1	Prime Coat, (COSA Spec)	GAL	104	\$	\$
4	203.1	Tack Coat, (COSA Spec)	GAL	104	\$	\$
5	205.2	2.5" Type D HMAC, (COSA Spec): Inside SAISD ROW	SY	1,011	\$	\$
6	205.4	2" Type D HMAC, (COSA Spec): Inside COSA's ROW	SY	72	\$	\$
7	207.1	Single Course Bituminous Slurry Seal, (COSA Spec)	SY	12,649	\$	\$
8	208.1	Salv/haul/stckpl Reclaimed Asphalt, (COSA Spec): 2.5" in SAISD ROW	SY	1,011	\$	\$
9	208.1	Salv/haul/stckpl Reclaimed Asphalt, (COSA Spec): 2" in COSA's ROW	SY	72	\$	\$
10	307.5	Storm Sewer >4'-0" Diameter Manhole (COSA Spec)	EA	2	\$	\$

ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
11	SS 308	Polymer Concrete 60" Diameter Manhole	EA	8	\$	\$
12	SS 308.1	Precast Polymer Concrete Manhole w/72" Diameter Cast-in- Place Manhole Base	EA	1	\$	\$
13	401	RCP (24"), (COSA Spec)	LF	18	\$	\$
14	401	RCP (36"), (COSA Spec)	LF	72	\$	\$
15	401	RCP (48"), (COSA Spec)	LF	40	\$	\$
16	500.1	Concrete Curb, (COSA Spec)	LF	144	\$	\$
17	502.1	Concrete Sidewalk, (COSA Spec)	SY	96	\$	\$
18	503.1	Concrete Driveway, (COSA Spec)	SY	251	\$	\$
19	503.4	Asphaltic Concrete Driveway (COSA Spec)	SY	83	\$	\$
20	511.3	Cutting and Replacing Pavement (Trench Repair): 6.5" Thickness in SAISD ROW (COSA Spec)	SY	1,343	\$	\$

ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
21	511.3	Cutting and Replacing Pavement (Trench Repair): 12" Thickness in COSA's ROW (COSA Spec)	SY	60	\$	\$
22	511.4	Cutting and Replacing Pavement (Trench Repair): up to 6" in SAISD ROW (COSA Spec)	SY	181	\$	\$
23	520.1	Hydromulching, (COSA Spec)	SY	7,530	\$	\$
24	530.1	Traffic Control, (COSA Spec)	LS	1	\$	\$
25	535.1	4" Yellow Line, (COSA Spec)	LF	30	\$	\$
26	535.2	4" White Line, (COSA Spec)	LF	6,457	\$	\$
27	535.7	24" White Line, (COSA Spec)	LF	14	\$	\$
28	688.1	Vehicle Loop Detectors (6'x30' perimeter), (COSA Spec)	LF	72	\$	\$
29	550	Trench Safety, (SAWS Spec)	LF	2,920	\$	\$
30	808	Water Meter Vault	EA	1	\$	\$
31	809	Fire Main Vault	EA	1	\$	\$

ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
32	812	8" PVC C-900 Water	LF	218	\$	\$
33	836	Grey-Iron & DI Fittings	TN	0.5	\$	\$
34	840	Water Tie-Ins	EA	4	\$	\$
35	841	Hydrostatic Testing Operations	EA	2	\$	\$
36	844	Blow-Off Assemblies	EA	2	\$	\$
37	848	8" PVC Sewer	LF	30	\$	\$
38	848	10" PVC Sewer	LF	634	\$	\$
39	852	Sanitary Sewer 4'-0" Diameter Manhole	EA	5	\$	\$
40	856	60" Casing	LF	535	\$	\$
41	856	Jacking, Boring or Tunneling for Casing & Carrier Pipe	LF	535	\$	\$
42	856	42" Carrier Pipe for Jacking, Boring, or Tunneling	LF	535	\$	\$
43	857	42" FRP Sewer	LF	1,908	\$	\$
44	862	Abandon 39" Sewer	LF	935	\$	\$
45	862	Manhole Abandonment	EA	1	\$	\$

ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
46	862.1	Removal of Exist. 39" main (5-ft section)	EA	2	\$	\$
47	864 S-2	Large Diameter Bypass Pumping for Sanitary Sewers and 8" lateral (Eagleland Dr. & E. Guenther St.) - Bypass Pumping No. 1	LS	1	\$	\$
48	864 S-2	Large Diameter Bypass Pumping for Sanitary Sewers (S. St. Mary's St.) - Bypass Pumping No. 2 & 3	LS	1	\$	\$
49	864 S-1	Bypass Pumping Small Diameter Sanitary Sewers	LS	1	\$	\$
50	866	Sewer Main Television Inspection, (>30") CIPP	LF	582	\$	\$
51	866	Sewer Main Television Inspection - New Pipe Installation	LF	2,443	\$	\$
52	901.1	39" CIPP Sewer	LF	582	\$	\$
53	910.2	Manhole Rehabilitation	VF	20	\$	\$

ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
2 ADD-2-1	SS 801	Tree and Landscaping Protection	LS	1	\$	\$
54	SS 1020	Allowance for Replacement of 100 LF of 39-inch of Collapsed Pipe	EA	1	\$	\$
2 55	1109	Reconnect Lateral - Remote Cutting	EA	1	\$	\$
56	SS 1200	Allowance for Relocation of Utilities	LS	1	\$	\$
57	SS 1201	Allowance for Replacement & Relocation of Dual Face Digital Marquee Sign	LS	1	\$	\$
58	SS 1202	Allowance for Replacement & Relocation of Flag Pole	LS	1	\$	\$
2 ADD-2-2	SS1203	Removal and replacement of Existing Irrigation System	LS	1	\$	\$
2 ADD-2-3	SS1204	Temporary Fencing	LS	1	\$	\$
SUBTOTAL (ITEMS 1-58) & ADD-2 ITEMS				\$		

2

ITEM NO	SPEC NO	DESCRIPTION	UNIT	EST. QUANTITY	AMOUNT	
59	100.2	Intermediate Demo/Remob (Owner Written Approval Required for Payment)	EA	1	\$	
60	100.3	Intermediate Demob/Remob: Bypass Pumping Operations for Large Diameter Pipe (Daily Bypass Rental Equipment/ Daily Fuel/ Daily Manning of Pumps) (Owner Written Approval Required for Payment)	MD	20	\$	
61	100.4	Intermediate Demob/Remob: Bypass Pumping Operations for Small Diameter Pipe (Daily Bypass Rental Equipment/ Daily Fuel/ Daily Manning of Pumps) (Owner Written Approval Required for Payment)	MD	10	\$	
2	62	100.1	MOBILIZATION AND DEMOBILIZATION, MAX 10% OF <b>LINE ITEMS 1-58 AND ADD-2 ITEMS</b>	L.S.	1	\$
2	63	101.4	PREPARING ROW, MAX 5% OF <b>LINE ITEMS 1-58 AND ADD-2 ITEMS</b>	L.S.	1	\$
SUBTOTAL (ITEMS 59 - 63)					\$	

Mobilization, Demobilization, 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 percentages shown and adjust the extensions of the bid items accordingly.**

2	<b>TOTAL BID PRICE (TO INCLUDE LINE ITEMS 1-58, 59-63 AND ADD-2 ITEMS)</b>	\$
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**ATTACHMENT 2:  
WAGE DECISION BUILDING**



"General Decision Number: TX20210231 05/07/2021

Superseded General Decision Number: TX20200231

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 \$10.95 for calendar year 2021 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 \$10.95 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 2021. 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](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/01/2021
1	03/12/2021
2	05/07/2021

ASBE0087-014 03/02/2020

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 23.97	10.79

BOIL0074-003 01/01/2017

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

ELEC0060-003 07/27/2020

	Rates	Fringes
ELECTRICIAN (Communication Technician Only).....	\$ 29.60	15%+5.45

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 ELEC0060-004 07/27/2020

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring).....	\$ 29.60	18%+5.45

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 ELEV0081-001 01/01/2021

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 43.31	36.365

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.

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 ENGI0450-002 04/01/2014

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

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 IRON0066-013 06/01/2020

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 23.45	6.83

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 IRON0084-011 06/01/2020

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 25.26	7.13

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 PLUM0142-009 07/01/2020

	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).....	\$ 31.90	13.76
Including HVAC Pipe Installation		
PLUMBER (Excludes HVAC Pipe Installation).....	\$ 31.90	13.76
Excludes HVAC Pipe Installation		

-----  
 \* SFTX0669-002 04/01/2021

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 31.68	22.50

-----  
 \* SHEE0067-004 04/01/2021

	Rates	Fringes
Sheet metal worker		
Excludes HVAC Duct		
Installation.....	\$ 27.58	15.76
HVAC Duct Installation Only.	\$ 27.58	15.76

-----  
 SUTX2014-006 07/21/2014

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

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

=====

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](http://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

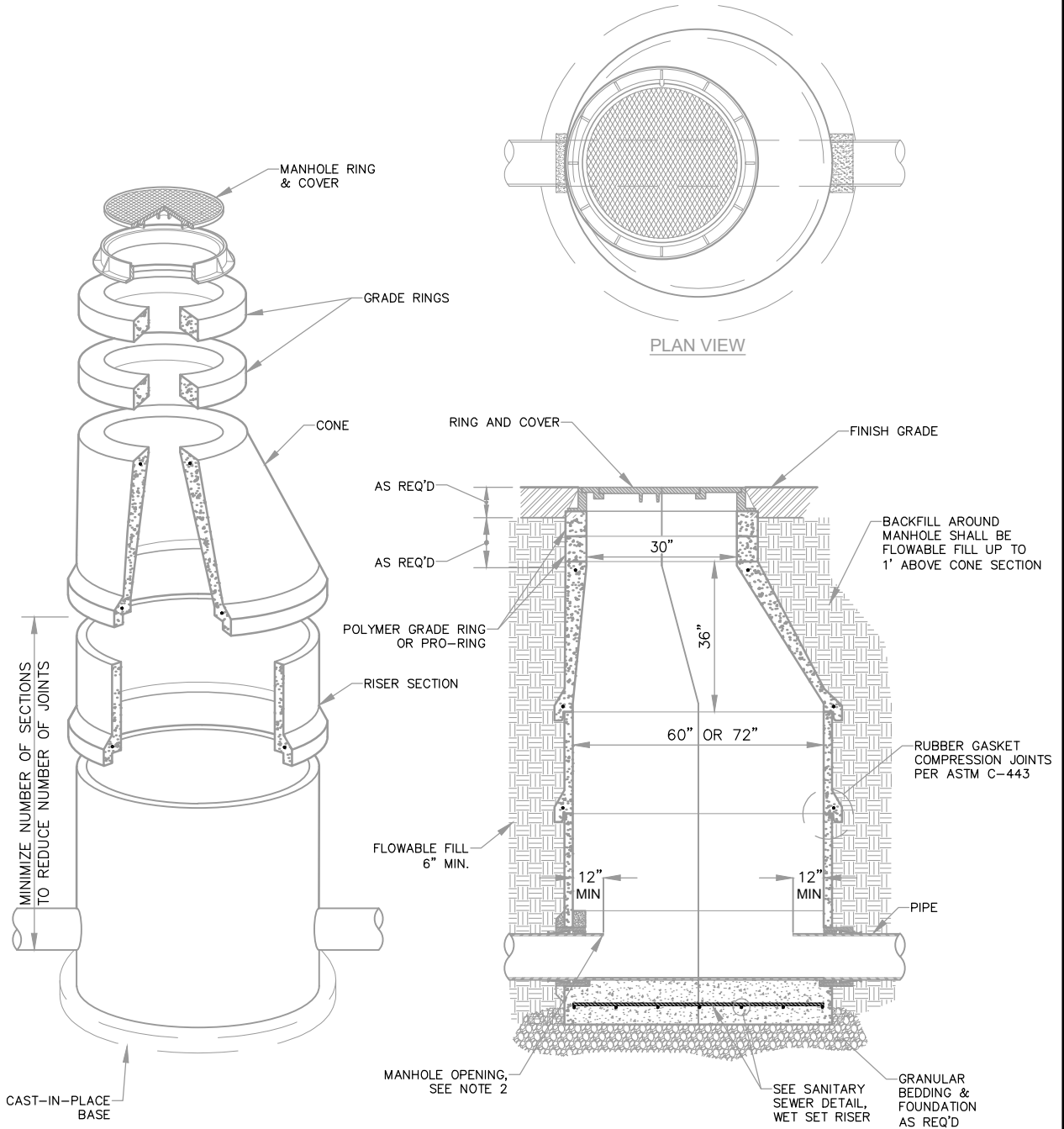
4.) All decisions by the Administrative Review Board are final.

=====  
END OF GENERAL DECISION"



**ATTACHMENT 3:  
POLYMER CONCRETE MANHOLE DETAIL**





**TYPICAL 60" & 72" POLYMER MONOLITHIC  
MANHOLE W/ CAST IN PLACE BASE**

SCALE: NOT TO SCALE

- GENERAL NOTE:
1. REFER TO DD-852-07 FOR WATERTIGHT MANHOLE RINGS AND COVERS
  2. THE OPENING CAN BE RECTANGULAR CUT 24" X 30" OR A FABRICATED TEE BASE 42" X 36"

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San Antonio, TX 78232  
(210) 447-6250

**SAN ANTONIO WATER SYSTEM**  
SAN ANTONIO, TEXAS



**CENTRAL SEWERSHED PACKAGE 7**  
**-BRACKENRIDGE HIGH SCHOOL**

FIGURE NUMBER  
SHT 27 - DETAIL REV.

SHEET NUMBER  
D-01

**ATTACHMENT 4:**  
**TREE AND LANDSCAPE PROTECTION**

**SPECIAL SPECIFICATION**

**ITEM NO. SS 801  
TREE AND LANDSCAPE PROTECTION**

**801.1 DESCRIPTION:** This item shall govern the placing of protection for trees and other landscape plant material or natural areas to be protected during construction. No site preparation work shall begin in areas where tree preservation and treatment measures have not been completed and approved. Where removal of trees is indicated on the drawings, they shall be marked as directed by the engineer or designated representatives. This item shall also govern the excavation, filling, trenching and boring around trees described on the plans, and for furnishing all materials, water, labor, tools, equipment and supplies required as specified by this item or as indicated on the plans.

Reference Standards: City of San Antonio Tree Preservation ordinance # 85262

**801.2 MATERIALS:**

**LEVEL I FENCE PROTECTION (Detail 1.1.2):**

Fabric: Fabric (4 foot height or 1.2 m) shall consist of orange plastic fencing as shown on the plans and shall be woven with 2-inch (50 mm) mesh openings such that in a vertical dimension of 23 inches (584 mm) along the diagonals of the openings there shall be at least seven meshes.

1. Installation Posts: Installation posts shall be a minimum of 72 inches (1.5 m) long and steel "T" shaped with a minimum weight of 1.3 pounds per linear foot (6.3 kg per meter).
2. Tie Wire: Wire for attaching the fabric to the t-posts shall be not less than No. 12 gauge galvanized wire. Sufficient fastening material shall be furnished to provide for the securing of the fabric to the "T" line posts.
3. Used Materials: Previously-used materials, meeting the above requirements and when approved by the Engineer, may be used.

**LEVEL IIA FENCE PROTECTION (Detail 1.1.3):**

Materials same as Level I -OR-

**LEVEL IIB FENCE PROTECTION (Detail 1.1.4):**

1. Sleeve: 2x4 lumber to a height of 4 feet above the root crown.
2. 2x4 shall be utilized as called for on plan.
3. Tie Wire: Wire for securing the 2x4s shall not be less than No. 12 gauge.

**OTHER MATERIALS:**

1. Tree Dressing - Asphaltic Tree Wound Paint

**SPECIAL SPECIFICATION****801.3****CONSTRUCTION METHODS:****LEVEL I FENCE PROTECTION:**

All trees and shrubs in the proximity of the construction site shall be protected prior to beginning any development activity.

Protective fencing shall be erected outside the dripline at locations shown in the plans or as directed by the Inspector and/or City Arborist or in accordance with the details shown on the plans at the drip line of trees (Root Protection Zone, RPZ) and/or landscape plant material including natural areas. Fencing shall be maintained and repaired by the contractor during site construction.

Protective fence locations in close proximity to street intersections or drives shall adhere to the City of San Antonio's site distance criteria.

The protective fencing shall be erected before site work commences and shall remain in place during the entire construction phase. Access to fenced areas will be permitted only with the approval of the engineer.

The installation posts will be placed every 6 feet (2 m) around the drip line or RPZ and embedded to 18 inches (457 mm) deep. Fabric attachment shall be attached to the installation posts by the use of sufficient wire ties to securely fasten the fabric to the "T" posts as to hold the fabric in a stable and upright position.

1. Do not clear, fill or grade in the RPZ of any tree.
2. Do not store, stockpile or dump any job material, soil or rubbish under the spread of the tree branches.
3. Do not park or store any equipment or supplies under the spread of the tree branches.
4. Do not set up any construction operations under the spread of the tree branches. (E.g. pipe cutting and threading, mortar mixing, painting or lumber cutting)
5. Do not nail or attach temporary signs, meters, switches, wires, bracing or any other item to the trees.
6. Do not permit runoff from waste materials including solvents, concrete washouts, asphalt tack coats (MC-30 oil), etc. to enter the RPZ. Barriers are to be provided to prevent such runoff substances from entering the RPZ whenever possible, including in an area where rain or surface water could carry such materials to the root system of the tree.

The contractor shall avoid cutting roots larger than one inch in diameter when

**SPECIAL SPECIFICATION**

excavation occurs near existing trees. Excavation in the vicinity of trees shall proceed with caution. The contractor shall contact the city inspector.

Remove all trees, shrubs or bushes to be cleared from protected root zone areas as directed by engineer by hand.

Trees damaged or lost due to contractor's negligence during construction shall be mitigated at the contractor's expense and to the engineer's satisfaction.

Any tree removal shall be approved by the city arborist prior to its removal. Cover exposed roots at the end of each day with soil, mulch or wet burlap.

In critical root zone areas that cannot be protected during construction and where heavy traffic is anticipated, cover those areas with (8) inches of organic mulch to minimize soil compaction. This (8) inch depth of mulch shall be maintained throughout construction.

Water all trees, most heavily impacted by construction activities, deeply once a week during periods of hot dry weather. Spray tree crowns with water periodically to reduce dust accumulation on the leaves.

When installing concrete adjacent to the root zone of a tree, use a plastic vapor barrier behind the concrete to prohibit leaching of lime into the soil. See related specifications.

When an excavation or embankment is placed within the dripline of any tree greater than (8) inches in diameter, a Tree well shall be constructed to protect the tree as indicated, when the cut or fill exceeds (8) inches. See related specifications.

Where paving or filling is necessary within the dripline of any tree (8) inches or greater, a permeable pavement and aeration system must be installed as indicated. See related specifications.

**LEVEL II A FENCE PROTECTION:**

Protective fencing shall be erected within the RPZ at locations shown in the plans or as directed by the Inspector and/or City Arborist or in accordance with the details shown on the plans at the drip line of trees (Root Protection Zone, RPZ) and/or landscape plant material including natural areas. Fencing shall be maintained and repaired by the contractor during site construction.

Fabric: Fabric (4 foot height or 1.2 m) shall consist of orange plastic fencing as shown on the plans and shall be woven with 2-inch (50 mm) mesh openings such that in a vertical dimension of 23 inches (584 mm) along the diagonals of the openings there shall be at least seven meshes.

1. Installation Posts: Installation posts shall be a minimum of 72 inches (1.5 m) long and steel "T" shaped with a minimum weight of 1.3 pounds per linear

**SPECIAL SPECIFICATION**

foot (6.3 kg per meter).

2. Tie Wire: Wire for attaching the fabric to the t-posts shall be not less than No. 12 gauge galvanized wire. Sufficient fastening material shall be furnished to provide for the securing of the fabric to the "T" line posts.
3. Used Materials: Previously-used materials, meeting the above requirements and when approved by the Engineer, may be used.

**LEVEL II B FENCE PROTECTION:**

Trunk protection shall be erected at locations shown in the plans or as directed by the Inspector and/or City Arborist shall be maintained and repaired by the contractor during site construction.

1. Installation Sleeve: 2x4 lumber to a height of 4 feet above the root crown.
2. Tie Wire for securing the 2x4s shall not be less than No. 12 gauge

**801.4** **MEASUREMENT:** Protective fencing will be incidental to the Project, complete in place for the duration of construction activity.



**801.5** **PAYMENT:** Tree and Landscape Protective Fencing will be pay under bid item SS 801. This shall include cost for furnishing and placing all materials, manipulation, labor, tools, equipment and incidentals necessary to complete the work.

**ATTACHMENT 5:**  
**PLAN SHEETS**  
**(5, 6, 8, 19, 20, 25)**






ESTIMATED QUANTITIES CONT'D

49	864 S-1	Bypass Pumping Small Diameter Sanitary Sewers	LS	1									1										
50	866	Sewer Main Television Inspection (>30') CPP	LF	582										582									
51	866	Sewer Main Television Inspection - New Pipe Installation	LF	2,443		350	350	350	350	350	350	343											
52	901.1	39" CPP Sewer	LF	582										582									
53	910.2	Manhole Rehabilitation	VF	20										20									
54	SS 1020	Allowance for Replacement of 100 LF of 39-inch of Collapsed Pipe	EA	1										1									
55	1109	Reconnect Lateral - Remote Cutting	EA	1										1									
56	SS 1200	Allowance for Relocation of Utilities	LS	1								1											
57	SS 1201	Allowance for Replacement & Relocation of Dual Face Digital Marquee Sign	LS	1								1											
58	SS 1202	Allowance for Replacement & Relocation of Flag Pole	LS	1								1											
59	100.2	Intermediate Demo/Remob	EA	1																			
60	100.3	Intermediate Demob/Remob: Bypass Pumping Operations for Large Diameter Pipe (Daily Bypass Rental Equipment/ Daily Fuel/ Daily Manning of Pumps)	MD	20												10	10						
61	100.4	Intermediate Demob/Remob: Bypass Pumping Operations for Small Diameter Pipe (Daily Bypass Rental Equipment/ Daily Fuel/ Daily Manning of Pumps)	MD	10									10										
Add-2-1	SS 801	Tree and Landscape Protection	LS	1																			1
Add-2-2	SS 1203	Removal and replacement of Existing Irrigation System	LS	1		1																	
Add-2-3	SS 1204	Temporary Fencing	LS	1		1																	
62	100.1	MOBILIZATION AND DEMOBILIZATION	LS	1																			
63	101.4	PREPARING ROW, MAX	LS	1																			

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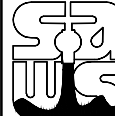
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1	ADDENDUM NO.2	AJD	MR	5/21
No.	Revision	Drawn	Approved	Date

REVISIONS



CENTRAL SEWERSHED PACKAGE  
7-BRACKENRIDGE HIGH SCHOOL

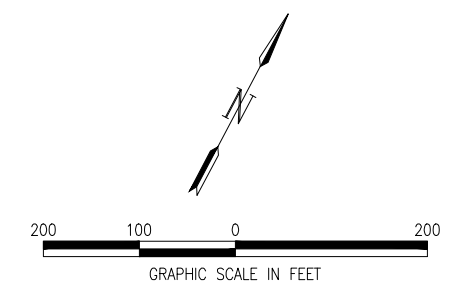
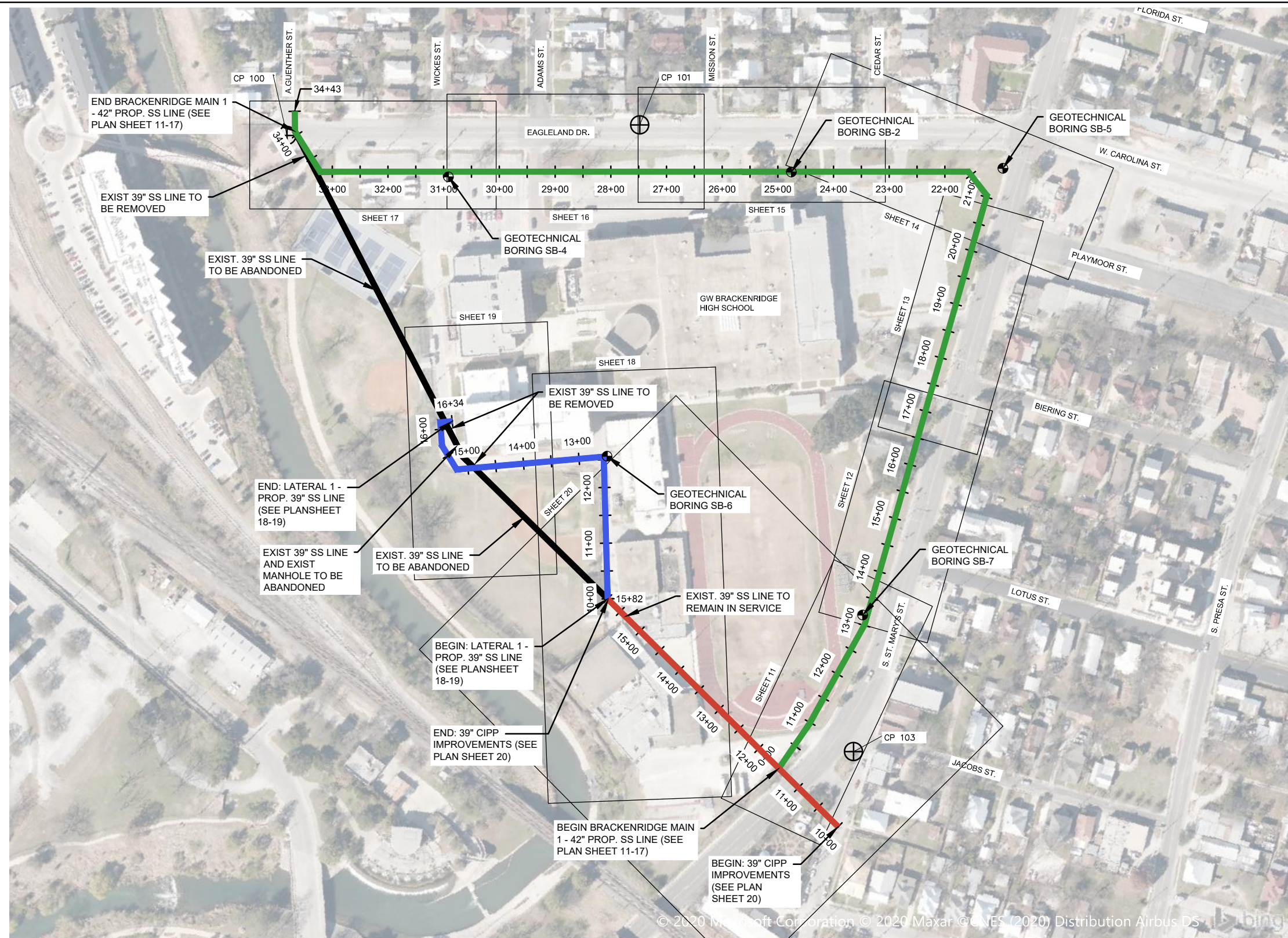
QUANTITIES CONT'D

DEVELOPER: SAN-ANTONIO-WATER-SYSTEM  
 CONT. BUDGET PROJ. 00-00-00

SUBMITTED \_\_\_\_\_  
 APPROVED \_\_\_\_\_

MAP No. 000-000	SHEET
SECT. No.	06
DR. ADG/KS/CK. MRJOB No.18-4543	OF 32

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- LEGEND**
- CP # CONTROL POINT LOCATION
  - PROPOSED 42" SANITARY SEWER PIPELINE ALIGNMENT
  - REHABILITATE EXISTING 39" BRICK SANITARY SEWER SEGMENT
  - PROPOSED 10" SANITARY SEWER LATERAL ALIGNMENT
  - EXISTING 39" SANITARY SEWER PIPELINE TO BE ABANDONED
  - GEOTECHNICAL BORING LOCATION



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ADDENDUM NO.2	JFM	MR	5/21
No.	Revision	Drawn	Approved

**REVISIONS**

CENTRAL SEWERSHED PACKAGE  
 7-BRACKENRIDGE HIGH SCHOOL  
**BRACKENRIDGE OVERALL SITE  
 MAP & CONTROL POINTS**

DEVELOPER: SAN-ANTONIO-WATER-SYSTEM  
 CONT. BUDGET PROJ. 00-00-00

SUBMITTED \_\_\_\_\_  
 APPROVED \_\_\_\_\_

MAP No. 000-000 SHEET **08**  
 SECT. No. \_\_\_\_\_ OF 32  
 DR. ADG/KS/CK. MR. JOB No. **18-4543**

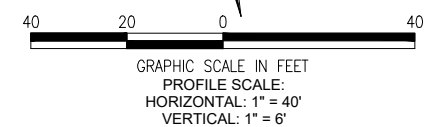
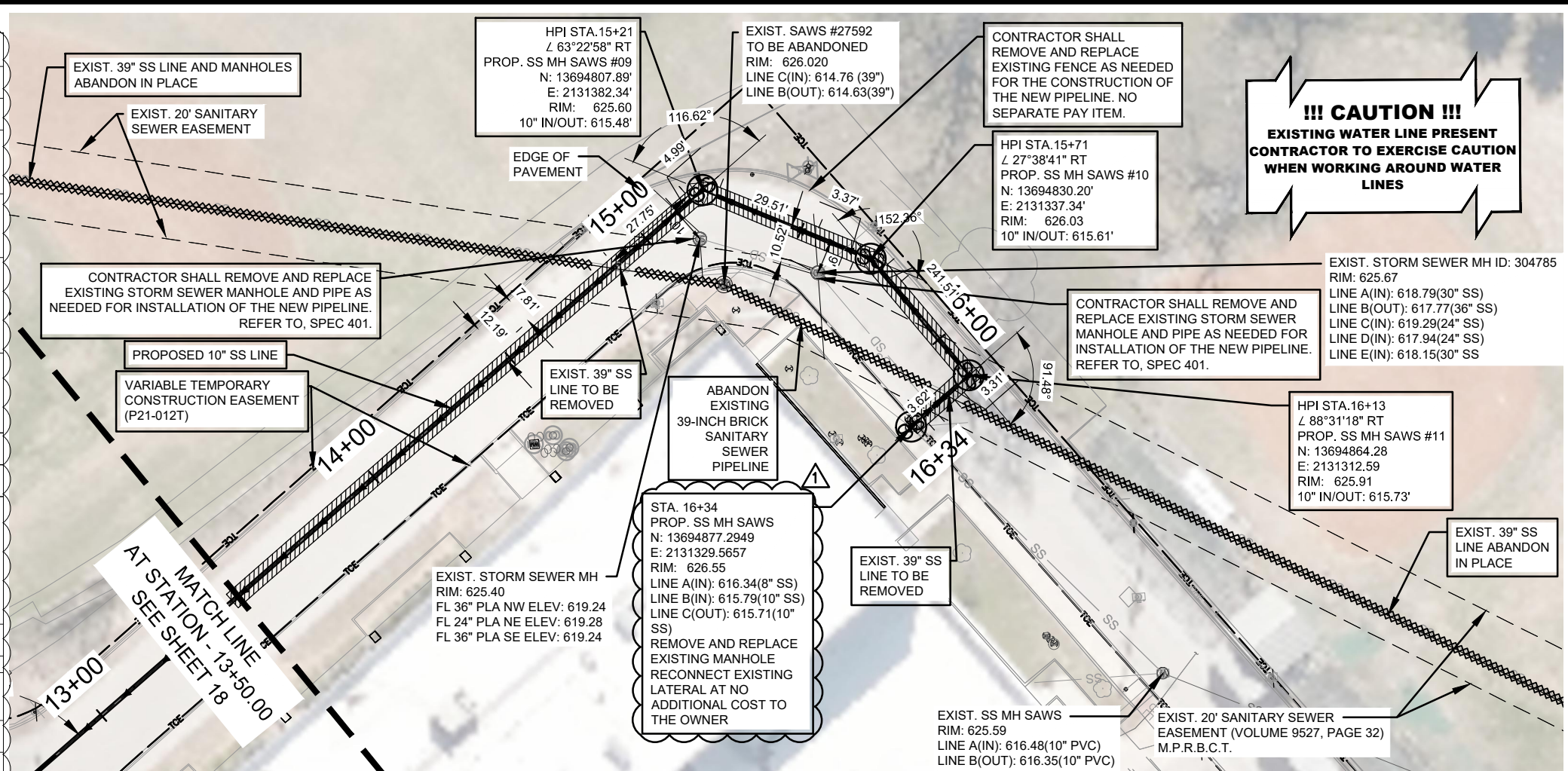
CONTROL POINTS				
POINT#	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 100	13695154.60	2130805.67	624.79	MAGNAIL SET
CP 101	13695506.95	2131332.51	629.65	MAGNAIL SET
CP 103	13694756.95	2132255.64	632.02	IRON SET W/ CAPS

SPEC NO	DESCRIPTION	UNIT	SHEET 8 QUANTITIES
SS 1203	Removal and replacement of Existing Irrigation System	LS	1
SS 1204	Temporary Fencing	LS	1

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**ESTIMATE QUANTITIES**

SPEC NO	DESCRIPTION	UNIT	SHEET 19 QUANTITIES
202.1	Prime Coat, (COSA Spec)	GAL	16
203.1	Tack Coat, (COSA Spec)	GAL	16
205.2	2.5" Type D HMAC, (COSA Spec): Inside SAISD ROW	SY	158
207.1	Single Course Bituminous Slurry Seal, (COSA Spec)	SY	2,670
208.1	Salv/haul/stckpl Reclaimed Asphalt, (COSA Spec): 2.5" in SAISD ROW	SY	158
307.5	Storm Sewer >4'-0" Diameter Manhole (COSA Spec)	EA	2
401	RCP (24"), (COSA Spec)	LF	18
401	RCP (36"), (COSA Spec)	LF	72
511.3	Cutting and Replacing Pavement (Trench Repair): 6.5" Thickness in SAISD ROW (COSA Spec)	SY	158
550	Trench Safety, (SAWS Spec)	LF	374
848	10" PVC Sewer	LF	284
852	Sanitary Sewer 4'-0" Diameter Manhole	EA	4
862	Abandon 39" Sewer Manhole	EA	133
862	Abandonment	EA	1
862.1	Removal of Exist. 39" main (5-ft section)	EA	2
864 S-1	Bypass Pumping Small Diameter Sanitary Sewers	LS	1
100.4	Intermediate Demob/Remob: Bypass Pumping Operations for Small Diameter Pipe (Daily Bypass Rental Equipment/ Daily Fuel/ Daily Manning of Pumps)	MD	10



**SHEET SPECIFIC NOTES**

- CONTRACTOR SHALL COORDINATE WITH SAISD TO INSTALL BITUMINOUS SLURRY SEAL AND PAVEMENT MARKINGS ALONG THE PARKING LOT AREA AS DIRECTED BY THE ENGINEER.
- REMOVE AND REPLACE EXISTING MANHOLE AT STA. 16+34. CONTRACTOR SHALL INSTALL A STUB OUT AND CONNECT EXISTING LATERAL. CONTRACTOR SHALL REMOVE ANY CONNECTION TO THE EXISTING 39" SANITARY SEWER PIPE AND DIVERT FLOWS TO THE PROPOSED 10" LATERAL.
- CONTRACTOR SHALL REMOVE THE 39" PIPE BEFORE CONSTRUCTION OF THE NEW 10" PIPELINE. TEMPORARY SEWER LINE MAY BE REQUIRED TO PROVIDE SANITARY SEWER SERVICES TO THE EXISTING BHS AND FOR THE INSTALLATION OF THE NEW 10" PIPELINE. NO SEPARATE PAY ITEM.

**!!! CAUTION !!!**  
EXISTING OVERHEAD ELECTRICAL LINES PRESENT CONTRACTOR TO EXERCISE CAUTION WHEN WORKING AROUND WATER LINES



**GARVER** Registration No. F-5713  
13750 San Pedro Avenue  
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ADDENDUM NO.2	JFM	MR	5/21
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**REVISIONS**

No.	Revision	Drawn	Approved	Date

**CENTRAL SEWERSHED PACKAGE 7 - BRACKENRIDGE HIGH SCHOOL**

**BRACKENRIDGE LATERAL 1 PLAN AND PROFILE STA. 13+50 - 16+34**

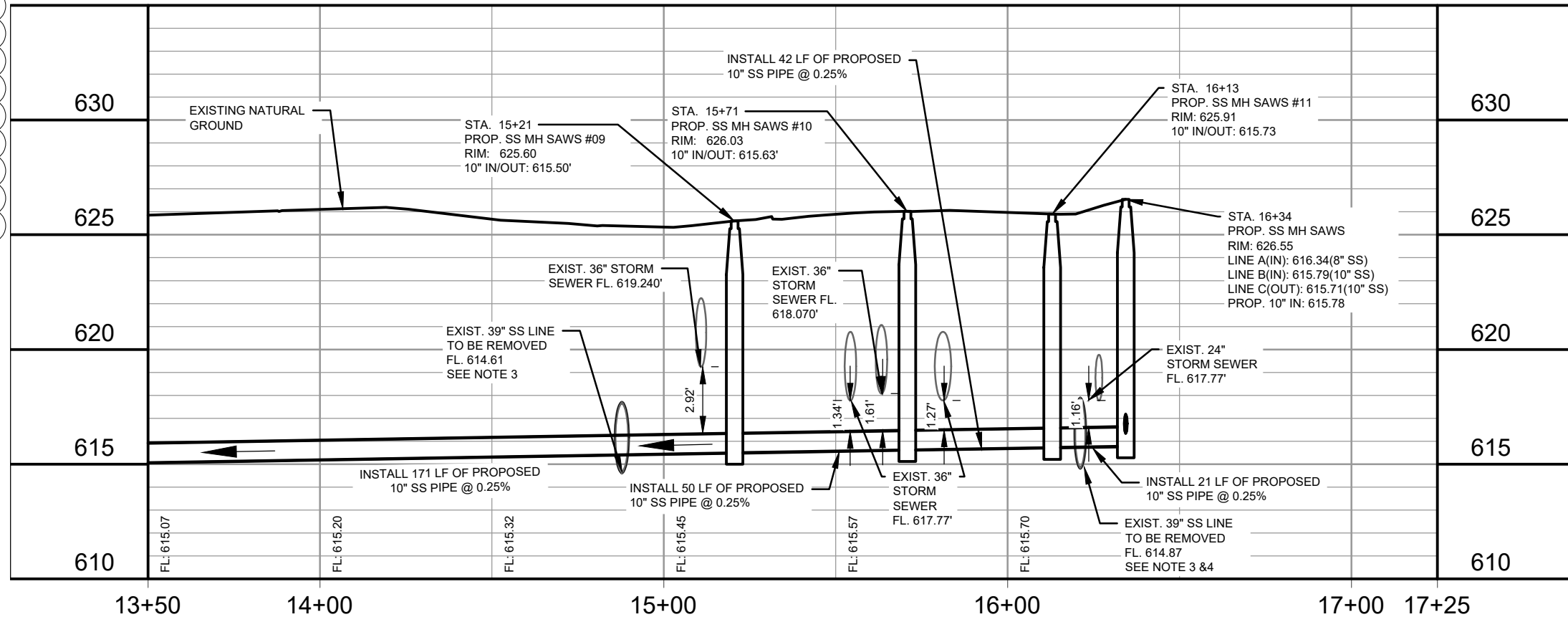
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CONT. BUDGET PROJ. 00-00-00

SUBMITTED \_\_\_\_\_  
APPROVED \_\_\_\_\_

MAP No. 000-000 SHEET 19  
SECT. No. OF 32  
DR. ADG/KSCK. MRJOB No. 18-4543

**PROP. 10" SS SEGMENT - 284 L.F.**

SCALE: 1" = 40'

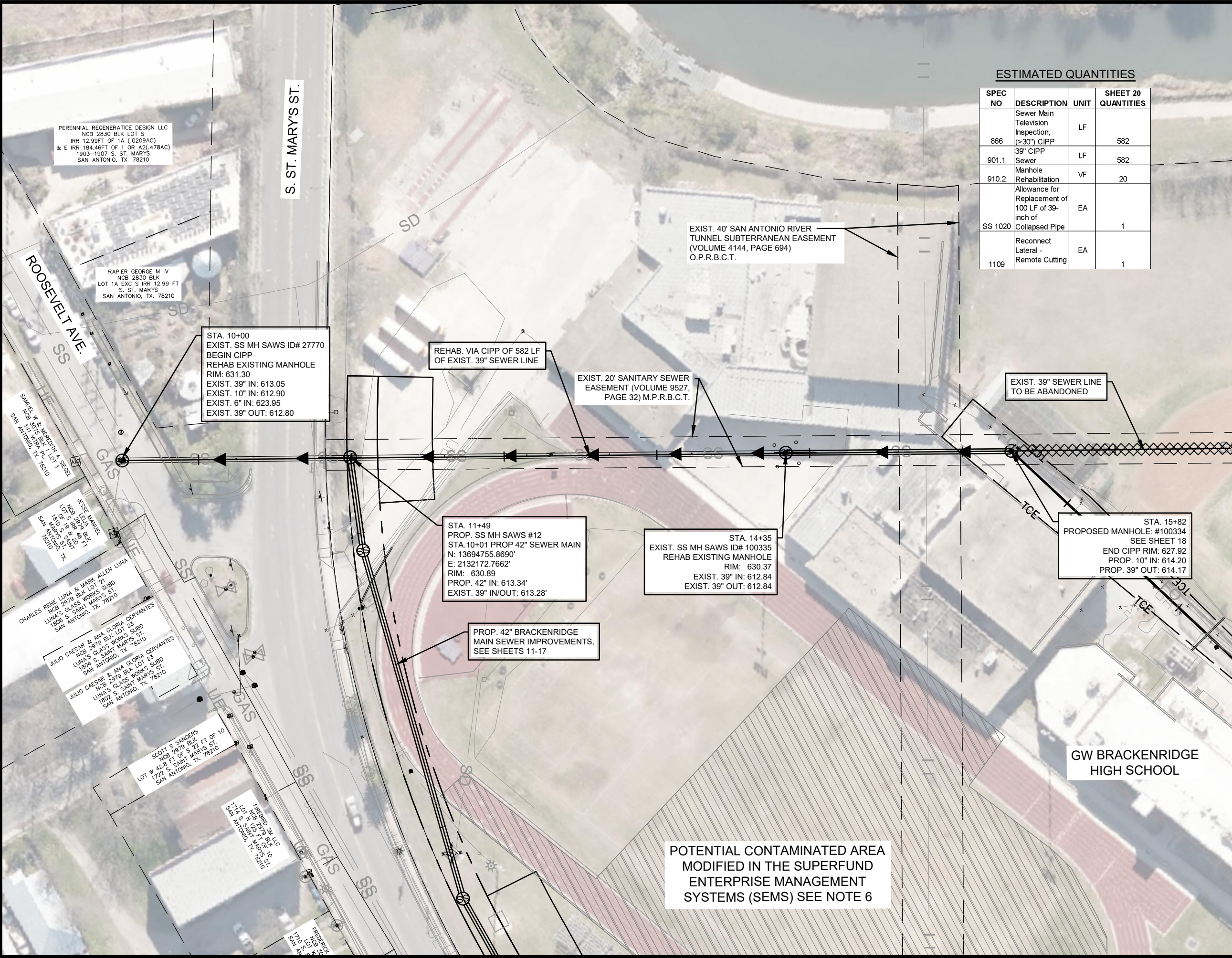


**NOTES**

ALL SERVICES TO BE FIELD VERIFIED AND TABLE IS PROVIDED FOR INFORMATION PURPOSES ONLY

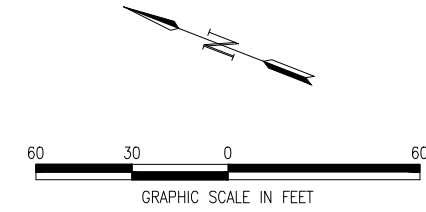
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 Last plotted by: Maia, Juan F. Plot Style: AECmonochrome.ctb Plot Scale: 1:1 Plot Date: 5/27/2021 10:18 AM Plotter used: DWG To PDF v3



**ESTIMATED QUANTITIES**

SPEC NO	DESCRIPTION	UNIT	SHEET 20 QUANTITIES
866	Sewer Main Television Inspection, (>30") CIPP	LF	582
901.1	39" CIPP Sewer	LF	582
910.2	Manhole Rehabilitation	VF	20
SS 1020	Allowance for Replacement of 100 LF of 39- inch of Collapsed Pipe	EA	1
1109	Reconnect Lateral - Remote Cutting	EA	1



**SHEET SPECIFIC NOTES**

- CONTRACTOR SHALL IDENTIFY ANY POTENTIAL POINT REPAIRS WITHIN THE PIPELINE PRIOR COMMENCEMENT OF CIPP LINING WORK.
- CONTRACTOR SHALL INSTALL A TEMPORARY MANHOLE APPROXIMATELY 20 FT DOWNSTREAM OF EXIST. MH#100334 FOR SUCTION POINT FOR PROPOSED BYPASS PUMPING SYSTEM. SEE SHEET 22.
- INSTALLATION AND ABANDONMENT OF TEMPORARY MANHOLE, WITH ITS RESPECTIVE REPAIR AND RESTORATION WORK OF THE AREA, SHALL BE COORDINATED WITH SAWS AND SAWS AND SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 864-S2. LARGE DIAMETER BYPASS PUMPING FOR SANITARY SEWERS (S. ST. MARY'S ST.) - BYPASS PUMPING NO. 2 & 3.
- SPECIAL SHORING MIGHT BE REQUIRED FOR THE INSTALLATION FOR THE TEMPORARY MANHOLES. CONTRACTOR SHALL SUBMIT A TRENCH SAFETY AND SHORING PLAN PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL PROTECT AND NOT DAMAGE NOR DISTURB THE EXISTING ALL-WEATHER SURFACE TRACK ON TRACK AND FIELD. IF CONTRACTOR FAILS TO PROTECT THE ALL-WEATHER SURFACE TRACK, THEN ALL COSTS ASSOCIATED WITH WORK AND TIME FOR REPAIRING THE ALL-WEATHER SURFACE TRACK PER SAWS'S CRITERIA WILL BE AT CONTRACTOR'S EXPENSE. COORDINATION WITH SAWS WILL BE NECESSARY AND OWNER SHALL NOT BE HELD LIABLE FOR ANY COST OR TIME ASSOCIATED WITH THESE ACTIVITIES. NO SEPARATE PAY ITEM.
- CONTRACTOR SHALL AVOID EXCAVATION NEAR THIS AREA. POTENTIAL CONTAMINATED SOILS.



Digitally Signed 05/27/2021  
 Marco A Ramirez

**GARVER** Registration No. F-5713  
 13750 San Pedro Avenue  
 Suite 350  
 San Antonio, TX 78232  
 (210) 447-6250

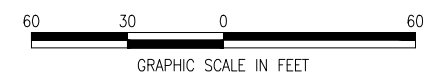
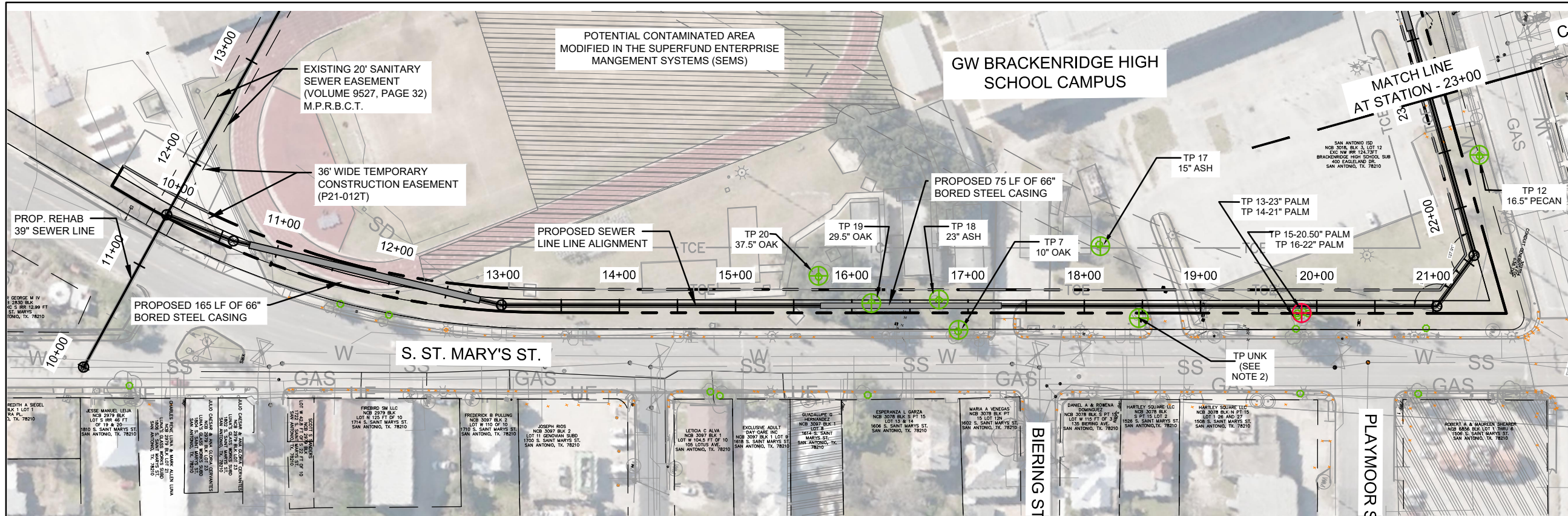
No.	Revision	Drawn	Approved	Date
1	ADDENDUM NO.2	JFM	MR	5/21

**REVISIONS**  
 CENTRAL SEWERSHED PACKAGE 7  
 - BRACKENRIDGE HIGH SCHOOL  
**BRACKENRIDGE CIPP IMPROVEMENTS**

DEVELOPER: SAN-ANTONIO-WATER-SYSTEM  
 CONT. BUDGET PROJ. 00-00-00

SUBMITTED \_\_\_\_\_  
 APPROVED \_\_\_\_\_  
 MAP No. 000-000 SHEET 20  
 SECT. No. \_\_\_\_\_  
 DR. ADG/KSCK. MRJOB No. 18-4543 OF 32

POTENTIAL CONTAMINATED AREA  
 MODIFIED IN THE SUPERFUND  
 ENTERPRISE MANAGEMENT  
 SYSTEMS (SEMS) SEE NOTE 6



**LEGEND**

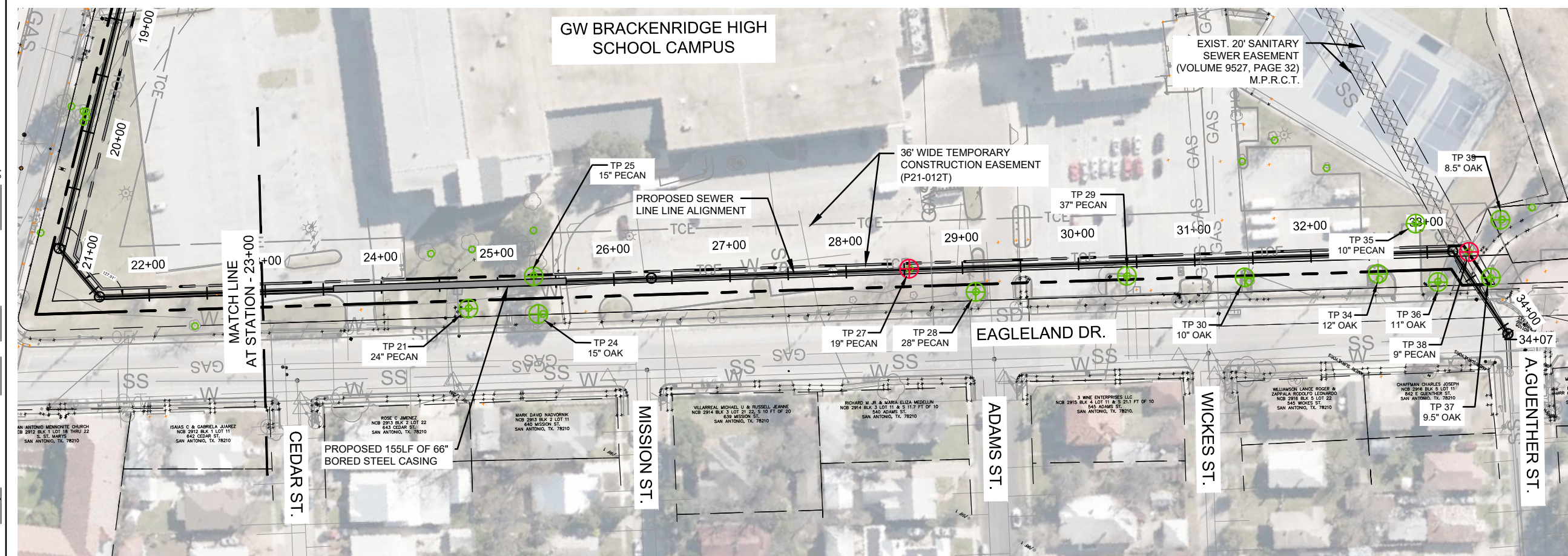
- TP # TREE PROTECTION LOCATION
- TP # REMOVE TREE
- DISTURBANCE AREA= 77,090 SQ. FT.

- SHEET SPECIFIC NOTES**
- TREES BEING REMOVED CANNOT BE AVOIDED DUE TO THE RESTRICTED CONSTRUCTION LIMITS. TREES BEING REMOVED INCLUDE ONE PECAN, ONE LIVE OAK, AND FOUR PALM TREES. THE PECAN AND PALM TREES WERE PRESERVED UNDER A PREVIOUS TREE PRESERVATION PLAN FOR CONSTRUCTION AT THE HIGH SCHOOL. REFERENCE TREE PRESERVATION PLAN FOR MORE INFO.
  - TREE NOT LISTED IN PRESERVATION PLAN TO BE PROTECTED.

SPEC NO	DESCRIPTION	UNIT	SHEET 23 QUANTITIES
SS 801	Tree and Landscape Protection	LS	1

**1 EXISTING TREE LOCATIONS**  
SCALE: 1" = 100'

PROJECT NORTH



Digitally Signed 05/27/2021

**GARVER** Registration No. F-5713  
13750 San Pedro Avenue  
Suite 350  
San Antonio, TX 78232  
(210) 447-6250

No.	Revision	Drawn	Approved	Date
1	ADDENDUM NO.2	AJD	MR	5/21

**REVISIONS**

CENTRAL SEWERSHED PACKAGE  
7-BRACKENRIDGE HIGH SCHOOL

**TREE SURVEY PLAN  
LOCATION SHEET**

DEVELOPER: SAN-ANTONIO-WATER-SYSTEM  
CONT. BUDGET PROJ. 00-00-00

SUBMITTED \_\_\_\_\_  
APPROVED \_\_\_\_\_

MAP No. 000-000 SHEET 25  
SECT. No. \_\_\_\_\_ OF 32  
DR. ADG/KSCK. MRJOB No. 18-4543

**2 EXISTING TREE LOCATIONS**  
SCALE: 1" = 100'

PROJECT NORTH








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**ATTACHMENT 6:  
BOND IRRIGATION PLAN**



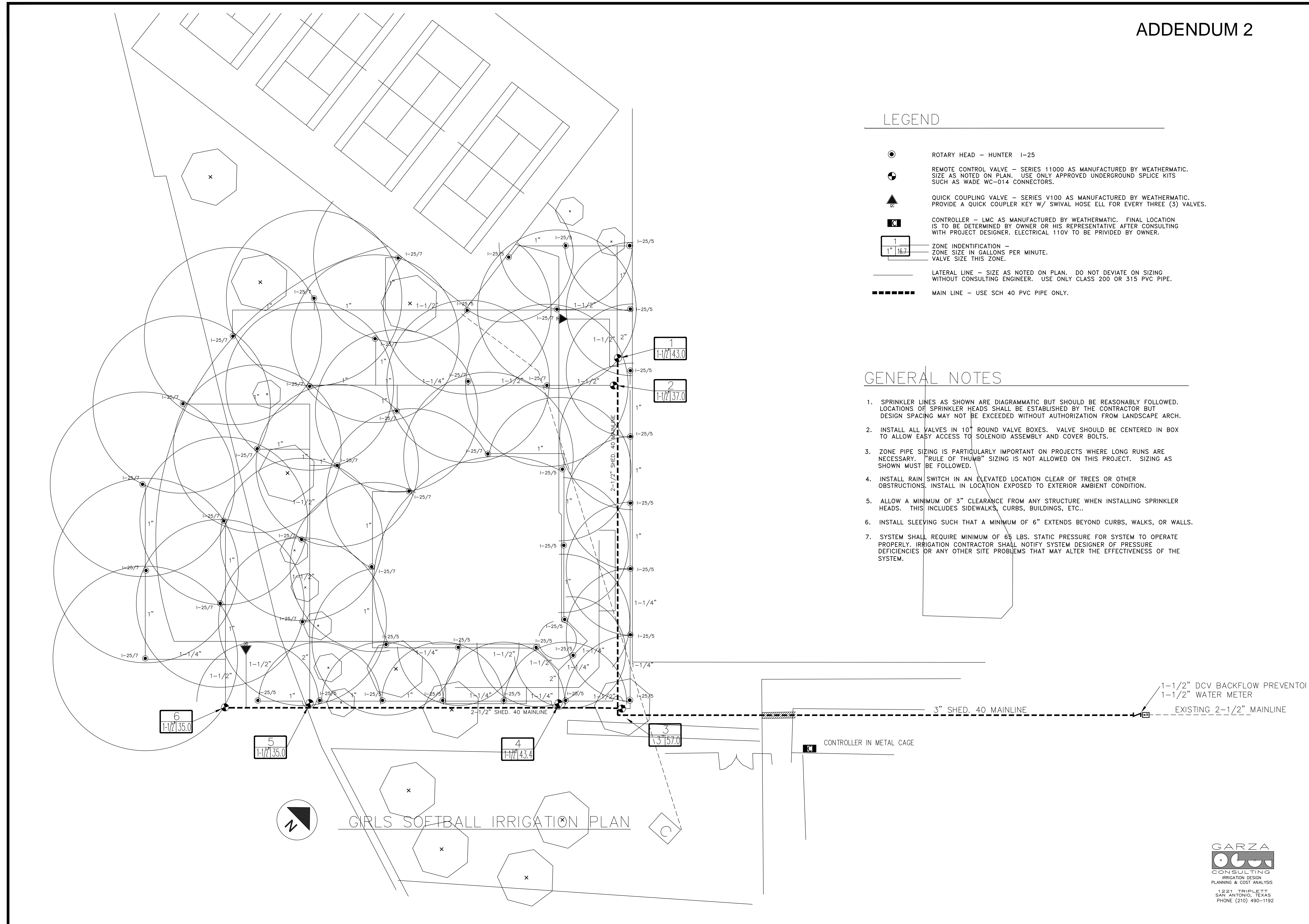
# ADDENDUM 2

## LEGEND

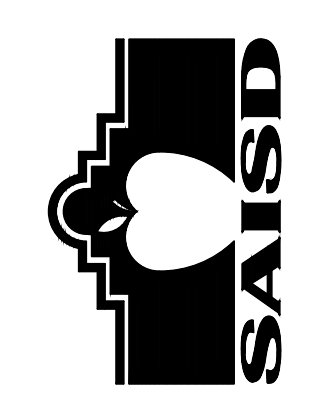
-  ROTARY HEAD - HUNTER I-25
-  REMOTE CONTROL VALVE - SERIES 11000 AS MANUFACTURED BY WEATHERMATIC. SIZE AS NOTED ON PLAN. USE ONLY APPROVED UNDERGROUND SPICE KITS SUCH AS WADE WC-014 CONNECTORS.
-  QUICK COUPLING VALVE - SERIES V100 AS MANUFACTURED BY WEATHERMATIC. PROVIDE A QUICK COUPLER KEY W/ SWIVAL HOSE ELL FOR EVERY THREE (3) VALVES.
-  CONTROLLER - LMC AS MANUFACTURED BY WEATHERMATIC. FINAL LOCATION IS TO BE DETERMINED BY OWNER OR HIS REPRESENTATIVE AFTER CONSULTING WITH PROJECT DESIGNER. ELECTRICAL 110V TO BE PROVIDED BY OWNER.
-  ZONE IDENTIFICATION - ZONE SIZE IN GALLONS PER MINUTE. VALVE SIZE THIS ZONE.
-  LATERAL LINE - SIZE AS NOTED ON PLAN. DO NOT DEVIATE ON SIZING WITHOUT CONSULTING ENGINEER. USE ONLY CLASS 200 OR 315 PVC PIPE.
-  MAIN LINE - USE SCH 40 PVC PIPE ONLY.

## GENERAL NOTES

1. SPRINKLER LINES AS SHOWN ARE DIAGRAMMATIC BUT SHOULD BE REASONABLY FOLLOWED. LOCATIONS OF SPRINKLER HEADS SHALL BE ESTABLISHED BY THE CONTRACTOR BUT DESIGN SPACING MAY NOT BE EXCEEDED WITHOUT AUTHORIZATION FROM LANDSCAPE ARCH.
2. INSTALL ALL VALVES IN 10" ROUND VALVE BOXES. VALVE SHOULD BE CENTERED IN BOX TO ALLOW EASY ACCESS TO SOLENOID ASSEMBLY AND COVER BOLTS.
3. ZONE PIPE SIZING IS PARTICULARLY IMPORTANT ON PROJECTS WHERE LONG RUNS ARE NECESSARY. "RULE OF THUMB" SIZING IS NOT ALLOWED ON THIS PROJECT. SIZING AS SHOWN MUST BE FOLLOWED.
4. INSTALL RAIN SWITCH IN AN ELEVATED LOCATION CLEAR OF TREES OR OTHER OBSTRUCTIONS. INSTALL IN LOCATION EXPOSED TO EXTERIOR AMBIENT CONDITION.
5. ALLOW A MINIMUM OF 3" CLEARANCE FROM ANY STRUCTURE WHEN INSTALLING SPRINKLER HEADS. THIS INCLUDES SIDEWALKS, CURBS, BUILDINGS, ETC..
6. INSTALL SLEEVING SUCH THAT A MINIMUM OF 6" EXTENDS BEYOND CURBS, WALKS, OR WALLS.
7. SYSTEM SHALL REQUIRE MINIMUM OF 65 LBS. STATIC PRESSURE FOR SYSTEM TO OPERATE PROPERLY. IRRIGATION CONTRACTOR SHALL NOTIFY SYSTEM DESIGNER OF PRESSURE DEFICIENCIES OR ANY OTHER SITE PROBLEMS THAT MAY ALTER THE EFFECTIVENESS OF THE SYSTEM.



MALDONADO  
NURSERY & LANDSCAPING



BRACKENRIDGE HIGH SCHOOL  
GIRLS SOFTBALL FIELD IRRIGATION  
400 EAGLELAND  
SAN ANTONIO, TEXAS

REVISIONS

NO.	DATE	DESCRIPTION

DESIGNED BY:	DRAWN BY:
JC	JC
CHECKED BY:	DATE:
AG	5/10/99

SCALE  
1" = 20'-0"

SHEET NO. 1  
OF 8 SHEETS

**GARZA**  
CONSULTING  
IRRIGATION DESIGN  
PLANNING & COST ANALYSIS  
1221 TRIPLETT  
SAN ANTONIO, TEXAS  
PHONE (210) 490-1192



**LEGEND**

- ⊗ F TURF ROTARY HUNTER PGP/NOZZLE 9  
SEE DTL. 10/L2.2
- ⊗ TQ TURF ROTARY HUNTER PGP/NOZZLE 8  
SEE DTL. 10/L2.2
- ⊗ TT TURF ROTARY HUNTER PGP/NOZZLE 7  
SEE DTL. 10/L2.2
- ⊗ H TURF ROTARY HUNTER PGP/NOZZLE 6  
SEE DTL. 10/L2.2
- ⊗ T TURF ROTARY HUNTER PGP/NOZZLE 5  
SEE DTL. 10/L2.2
- ⊗ Q TURF ROTARY HUNTER PGP/NOZZLE 4  
SEE DTL. 10/L2.2
- F H TT  
● TQ T Q  
● H H Q  
● F H Q  
● F H Q  
● F H Q  
● F H Q
- 15' SPRAY/RADIUS HEAD, SEE DTL. 6/L2.2
- 12' SPRAY/RADIUS HEAD, SEE DTL. 6/L2.2
- 10' SPRAY/RADIUS HEAD, SEE DTL. 6/L2.2
- 8' SPRAY/RADIUS HEAD, SEE DTL. 6/L2.2
- 5' SPRAY/RADIUS HEAD, SEE DTL. 6/L2.2
- STRIP SPRAY/RADIUS HEAD, SEE DTL. 6/L2.2
- TREE BUBBLER ASSEMBLY, SEE DTL. 7/L2.2
- REMOTE CONTROL VALVE, SEE DTL. 5/L2.2
- ⊗ MANUAL VALVE, SEE DTL. 2/L2.2
- ⊗ QUICK COUPLER, SEE DTL. 9/L2.2
- ⊗ BACKFLOW PREVENTER, SEE DTL. 1/L2.2
- ⊗ NEW 1-1/2" IRRIGATION WATER METER
- LATERAL PIPING, SEE DTL. 8/L2.2
- SUPPLY LINE, SEE DTL. 8/L2.2
- IRRIGATION SLEEVE— SIZE 2 TIMES DIAMETER OF PIPE(S)
- ⊗ CONTROLLER, SEE DTL. 3/L2.2
- ⊗ WEATHER SENSORS, SEE DTL. 4/L2.2
- 17  
HIC 7816  
— VALVE DESIGNATION
- GALLONS PER MINUTE
- VALVE SIZE

**VALVE SCHEDULE**

STATION NO.	SIZE	GPM	*PRECIP RATE	**SCHEDULE MIN./DAY	
1	SL	2"	65.17	1.0	20 min./3 days
2	BUB	1-1/2"	15.8	1.69	12 min./3 days
3	SL	2"	42.79	1.10	19 min./3 days
4	SB	1"	5.33	.82	25 min./3 days
5	SL	2"	54.4	.88	10 min./3 days
6	BUB	2"	14.96	.88	10 min./3 days
7	ROT	2"	55.60	.88	10 min./3 days
8	SL	2"	25.6	.88	10 min./3 days
9	SPARE				
10	SPARE				
11	SPARE				
12	SPARE				
13	SPARE				
14	SPARE				
15	SPARE				
16	SPARE				
17	SPARE				
18	SPARE				
19	SPARE				
20	SPARE				
21	SPARE				
22	SPARE				
23	SPARE				
24	SPARE				

\*REQUIRED PRECIPITATION RATE = .275"/HOUR  
\*\*WATER SCHEDULE REQUIRED TO PROVIDE 1"/WEEK

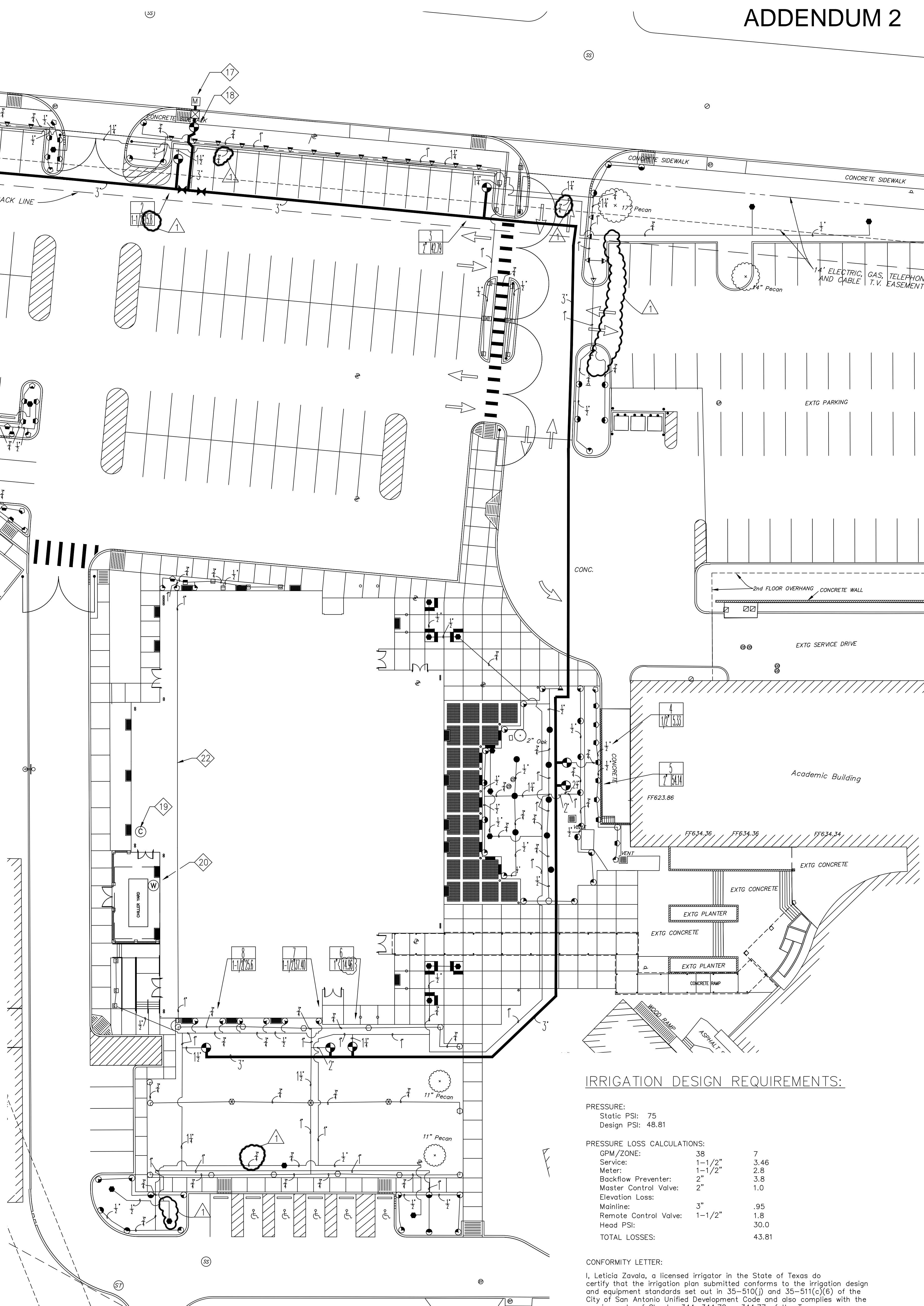
DRAWING FILE IS PROVIDED TO PFLUGER ASSOCIATES ARCHITECTS AS A PROFESSIONAL COURTESY. THE INFORMATION IS IN NO WAY INTENDED TO REPLACE THE ORIGINAL TRACINGS USED AS CONTRACT DOCUMENTS & AS BID BY CONTRACTOR. THE ORIGINAL TRACING OF THIS DRAWING FILE IS ON RECORD AT THE OFFICE OF C.F.ZAVALA GROUP, 302 W. RHAPSODY DRIVE, 78216. THIS ELECTRONIC DOCUMENT IS RELEASED FOR THE PURPOSES OF REFERENCE, COORDINATION, AND/OR FACILITY MANAGEMENT UNDER THE AUTHORITY OF ALBERT B FERNANDEZ JR., TEXAS REGISTRATION NO. 1218, ON DECEMBER 8, 2005. ANY MODIFICATIONS TO THIS DRAWING FILE SHALL BE IN COMPLIANCE WITH THE BOARD OF ARCHITECTURAL EXAMINER'S RULES.

**IRRIGATION NOTES** — Keyed Note

- Irrigation contractor shall be responsible for making himself familiar with the specifications and all submittal requirements. It is the responsibility of the Irrigation contractor to notify the Landscape Architect for site inspections as specified in the specifications. Failure to notify the Landscape Architect does not relieve the contractor from inspection approval and will require the contractor to uncover work as required for approval at the cost of the contractor. Irrigation contractor is to inform Landscape Architect of the start date of work.
- The irrigation contractor is required by law to notify Texas One Call (800-245-4545) 72 hours prior to any excavation. Irrigation contractor shall be responsible for making himself familiar with all underground utilities, pipes and structures. Irrigation contractor shall take sole responsibility for any cost incurred due to damage of said utilities whether or not Texas One Call is notified.
- Do not willfully proceed with construction as designed without verifying actual on-site water pressure from the source. Do not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Landscape Architect or Owner's Representative. The Irrigation contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
- Irrigation contractor shall be responsible for any coordination with other contractors as required to accomplish irrigation installation.
- Due to scale of drawings, it is not possible to indicate all offsets, fittings sleeves, etc., which may be required. Irrigation contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting and architectural features. This design is diagrammatic. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas and within property lines.
- It is the Irrigation contractor's responsibility to coordinate piping with the landscape subcontractor to avoid conflict with planting beds. It will be the responsibility of the irrigation subcontractor to move piping to allow proper placement of plant material.
- No machine trenching is to be done with dripline of trees. Trenching is to be done by hand or by tunneling under root system by method approved by Landscape Architect. Piping layout is diagrammatic and piping shall be routed around existing plant material to avoid damage to existing plants. Do not cut any root over 3/4" diameter. Any cuts made shall be clean and without frayed ends.
- Irrigation contractor shall be responsible for sleeves and chases wherever piping or conduit passes, under all paving, through walls, etc. All sleeve locations may not be shown on plan, coordinate with architectural and civil drawings, general contractor and other subcontractors as required. All sleeve and chase locations are not noted on plan. All sleeves shall be Sch 40 PVC, sized twice the diameter of pipe or combination of pipes enclosed within the sleeve.
- All work will be in accordance with the requirements of the City of San Antonio Unified Development Code 35-510(j) and 35-511(c)(6) and the Texas Administrative Code Chapter 344, 344.72-344.77.
- If actual site static pressure exceeds design pressure by 10%, a pressure reducing valve shall be installed. See specifications.
- Pressure at any point within a zone shall not vary by more than 10% from the design sprinkler operating pressure. See specifications for Testing.
- All irrigation work shall be installed under the supervision of a licensed (in the State of Texas) irrigation contractor.
- Obtain coverage test approval from Landscape Architect or Owner's Representative prior to planting, sodding or seeding.
- All undesignated end lateral piping shall be 1/2" in spray zones and 3/4" in rotary zones.
- Irrigation Contractor is to provide 5-spray heads and 3-rotors and associated fittings and piping for use on irrigation zone(s) as directed in the field by Landscape Architect.
- Refer to civil dwgs. for grading plan.
- Irrigation meter to be supplied by existing water line along Guadalupe Street. Refer to Civil Dwg.
- 2" Master control valve.
- Locate controller in Boiler Room. Contractor is responsible for coordinating with other trades as required to provide power.
- Locate weather sensors at outside of Chiller Yard.
- Provide gate valve in valve box for future expansion.
- Hang PVC pipe under building. Clamp as necessary to prevent sagging.



**1 IRRIGATION PLAN**  
SCALE: 1"=20'-0"



**IRRIGATION DESIGN REQUIREMENTS:**

**PRESSURE:**  
Static PSI: 75  
Design PSI: 48.81

**PRESSURE LOSS CALCULATIONS:**

GPM/ZONE:	Service:	Meter:	Backflow Preventer:	Master Control Valve:	Elevation Loss:	Mainline:	Remote Control Valve:	Head PSI:	TOTAL LOSSES:
38	1-1/2"	1-1/2"	2"	2"		3"	1-1/2"		43.81
	7	3.46	2.8	3.8		.95	1.8	30.0	

**CONFORMITY LETTER:**  
I, Leticia Zavala, a licensed irrigator in the State of Texas do certify that the irrigation plan submitted conforms to the irrigation and equipment standards set out in 35-510(j) and 35-511(c)(6) of the City of San Antonio Unified Development Code and also complies with the requirements of Chapter 344, 344.72 - 344.77 of the Texas Administrative Code.  
By,  
Licensed Irrigator's Number: #8650

9/24/03 LANDSCAPE ORDINANCE REVISION

PROPOSED

**Brackenridge High School New 5A Music Facility**

400 Eagleland  
San Antonio, Texas 78210  
Telephone: 210-533-8144  
Fax: 210-534-9770

**San Antonio Independent School District**

141 Lovaco Street  
San Antonio, Texas 78210  
Telephone: 210-299-5500  
www.SAISD.NET

PROJECT NO.	DATE	REVISIONS
02-34	06-16-03	

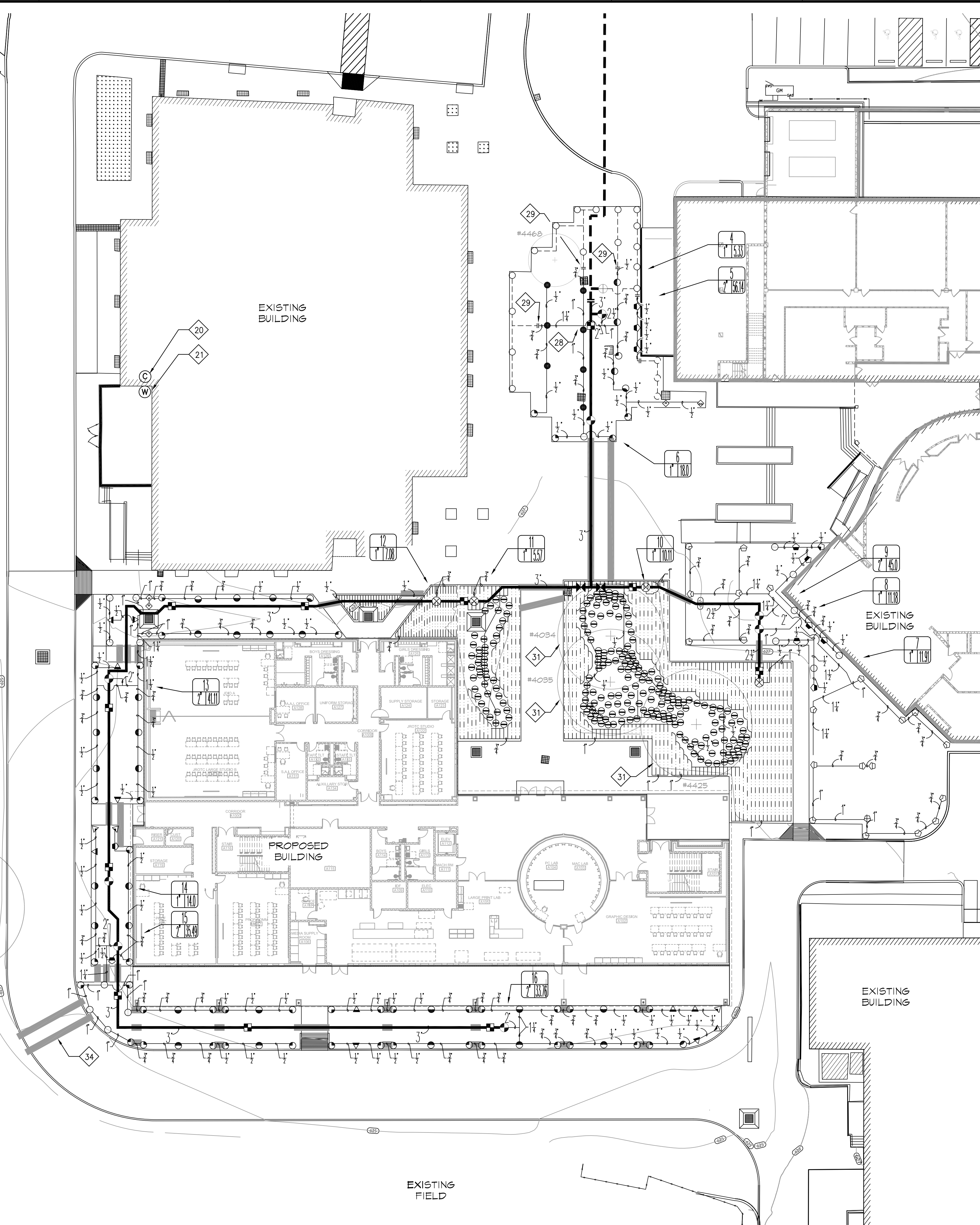
**L2.1**

**LEGEND**

- +--- TIE NEW LATERAL TO EXISTING LATERAL LINE
- +--- TIE NEW SUPPLY TO EXISTING SUPPLY LINE
- (C) EXISTING CONTROLLER
- (W) EXISTING WEATHER SENSORS
- ⊙ TQ TURF ROTARY HUNTER P6J/NOZZLE 4.0  
SEE DTL. 5/L2005
- ⊙ H TURF ROTARY HUNTER P6J/NOZZLE 2.5  
SEE DTL. 5/L2005
- ⊙ T TURF ROTARY HUNTER P6J/NOZZLE 2.0  
SEE DTL. 5/L2005
- ⊙ Q TURF ROTARY HUNTER P6J/NOZZLE 1.5  
SEE DTL. 5/L2005
- ⊙ F T Q 15' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- ⊙ H T Q 12' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- ⊙ F T Q 10' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- ⊙ H T Q 8' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- TREE BUBBLER ASSEMBLY, SEE DTL. 4/L2005
- DRIP EMITTER, SEE DTL. 13/L2005
- ⊗ DRIP REMOTE CONTROL VALVE, SEE DTL. 12/L2005
- ⊗ REMOTE CONTROL VALVE, SEE DTL. 2/L2005
- ⊗ MANUAL VALVE, SEE DTL. 18/L2005
- ⊗ QUICK COUPLER, SEE DTL. 7/L2005
- ⊗ EXISTING BACKFLOW PREVENTER
- ⊗ EXISTING IRRIGATION WATER METER
- LATERAL PIPING, SEE DTL. 8/L2005
- TREE BUBBLER LATERAL PIPING, SEE DTL. 8/L2005
- DRIP LINE, SEE DTL. 8/L2005
- SUPPLY LINE, SEE DTL. 8/L2005
- IRRIGATION SLEEVE, SEE DTL. 9/L2005
- BED EDGER, SEE SHEET L1135
- 17 VALVE DESIGNATION
- 17 GALLONS PER MINUTE
- 17 VALVE SIZE

**IRRIGATION NOTES ( # - Keyed Note)**

1. Irrigation contractor shall be responsible for making himself familiar with the specifications and all submittal requirements. It is the responsibility of the irrigation contractor to notify the Landscape Architect of any inspections as specified in the specifications. Failure to notify the Landscape Architect does not relieve the contractor from inspection approval and will require the contractor to uncover work as required for approval at the cost of the contractor. Irrigation contractor is to inform Landscape Architect of the start date of work.
2. The irrigation contractor is required by law to notify Texas One Call (800-245-4545) and (800) DIG TESS (800-344-2311) 12 hours prior to any excavation. Irrigation contractor shall be responsible for making himself familiar with all underground utilities, pipes and structures. Irrigation contractor shall take sole responsibility for any cost incurred due to damage of said utilities whether or not Texas One Call is notified.
3. Do not willfully proceed with construction as designed without verifying actual on-site water pressure from the source. Do not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Landscape Architect or Owner's Representative. The irrigation contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
4. Irrigation contractor shall be responsible for any coordination with other contractors as required to accomplish irrigation installation.
5. Due to scale of drawings, it is not possible to indicate all offsets, fittings sleeves, etc., which may be required. Irrigation contractor shall carefully investigate the structure and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting and architectural features. This design is diagrammatic. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas and within property lines.
6. It is the irrigation contractor's responsibility to coordinate piping with the landscape subcontractor to avoid conflict with planting beds. It will be the responsibility of the irrigation subcontractor to move piping to allow proper placement of plant material.
7. Irrigation contractor shall be responsible for sleeves and chases wherever piping or conduit passes, under all paving, through walls, etc. All sleeve locations may not be shown on plan, coordinate with architectural and civil drawings, general contractor and other subcontractors as required. All sleeves and chase locations are not noted on plan. All sleeves shall be Sch 40 PVC, sized twice the diameter of pipe or combination of pipes enclosed within the sleeve.
8. No cutting, filling, trenching, root disturbance, soil disturbance, or construction impacts shall occur closer to the trunk than 1/2 the root projection zone radius in accordance with City of San Antonio UDC 35-523(XI) unless done by hand. Trenching is to be done by hand or by tunneling under root system by method approved by Landscape Architect. Piping layout is diagrammatic and piping shall be routed around existing plant material to avoid damage to existing plants. Do not cut any root over 3/4" diameter. Any cuts made shall be clean and without frayed ends.
9. All work shall be in accordance with the requirements of the City of San Antonio Unified Development Code 35-512(j) and 35-511(c)(6) and the Texas Administrative Code Chapter 344, 344.12-344.11.
10. If actual site static pressure exceeds design pressure by 10%, a pressure reducing valve shall be installed. See specifications.
11. Pressure at any point within a zone shall not vary by more than 10% from the design sprinkler operating pressure. See specifications for testing.
12. All irrigation work shall be installed under the supervision of a licensed (in the State of Texas) irrigation contractor.
13. Obtain coverage test approval from Landscape Architect or Owner's Representative prior to planting, sodding or seeding.
14. All undesignated end lateral piping shall be 1/2" in spray zones and 3/4" in rotary zones.
15. Irrigation Contractor is to provide 5-spray heads and 3-rotors and associated fittings and piping for use on irrigation zone(s) as directed in the field by Landscape Architect.
16. Refer to civil dugs. for grading plan.
17. Statement of Area Coverage: Drawing does not provide for 100% coverage of the site. See plans and specifications for areas to be irrigated.
18. Existing irrigation meter is supplied by existing water line along Eagleland Drive. Refer to Civil Dug.
19. Existing 2" backflow preventer.
20. Existing irrigation controller is located in Mechanical Room. Existing controller to be replaced with new controller. See Dtl. 1/L2005
21. Existing weather sensors are located outside of Mechanical Room. Weather sensor to be relocated to top of building.
22. Demo existing mainline.
23. Cap existing mainline.
24. Demo existing lateral lines.
25. Cap existing lateral lines.
26. Store existing wires in a 10" splice box.
27. Demo existing valves.
28. Tie existing irrigation mainline to new mainline. Size to match existing.
29. Tie existing irrigation lateral line to new lateral line. Size to match existing.
30. Existing zones 9, 10, 11, and 12 are located in baseball practice field area.
31. No trenching for drip lines under trees RFP. Install drip lines on top of existing grade and under mulch.
32. Repair/replace existing tree bubblers.
33. Re-wire existing zones 9, 10, 11, and 12 to zones 17, 18, 19 and 20 respectively.
34. Install 6" Sch. 40 PVC sleeve for future expansion.



**1 ENLARGED IRRIGATION PLAN**  
SCALE: 1"=20'-0"

**ADDENDUM 2**

THESE CONTRACT DOCUMENTS HAVE BEEN REVISED TO INDICATE FIELD CHANGES MADE DURING CONSTRUCTION BASED ON RECORDS SUBMITTED BY THE CONTRACTOR AND DO NOT REPRESENT FIELD OBSERVATIONS OR VERIFICATIONS BY CFZ GROUP, LLC. OR THE ENGINEER.

DATE: 02-24-15  
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**CONSTRUCTION DOCUMENTS**

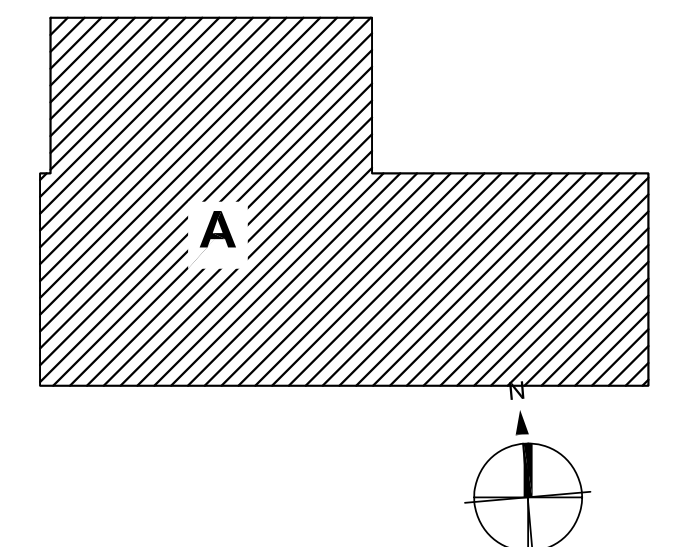
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**BRACKENRIDGE HIGH SCHOOL ADDITION AND RENOVATION SAN ANTONIO, TX**

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FILE:  
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**GATE ADDITION**



SHEET TITLE:  
**Enlarged Irrigation Plan**

**L124S-R**  
SHW Project: 4511.003.00

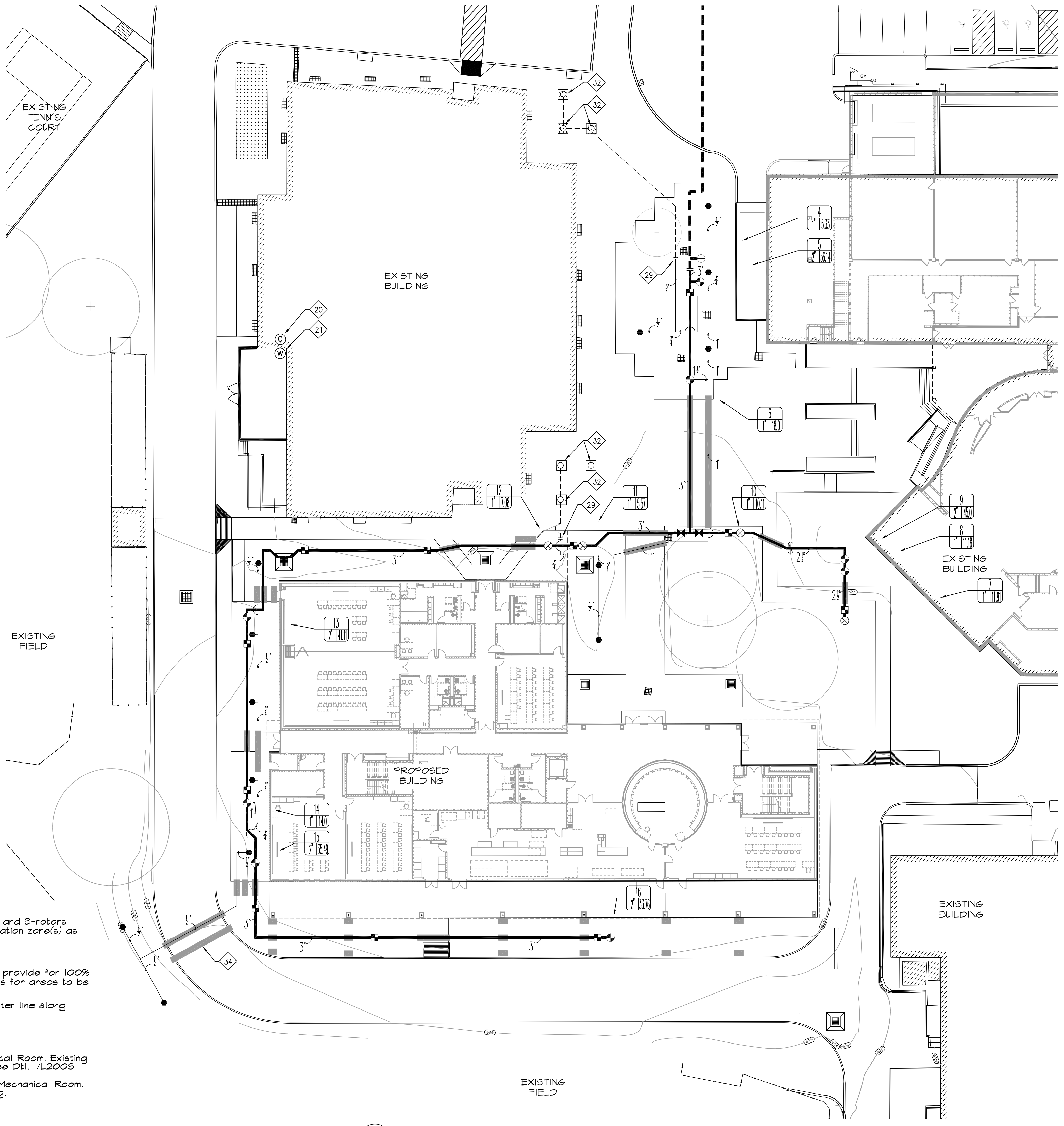
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**LEGEND**

- +--- TIE NEW LATERAL TO EXISTING LATERAL LINE
- +--- TIE NEW SUPPLY TO EXISTING SUPPLY LINE
- (C) EXISTING CONTROLLER
- (W) EXISTING WEATHER SENSORS
- (TQ) TURF ROTARY HUNTER P6/J/NOZZLE 4.0  
SEE DTL. 5/L2005
- (TH) TURF ROTARY HUNTER P6/J/NOZZLE 2.5  
SEE DTL. 5/L2005
- (T) TURF ROTARY HUNTER P6/J/NOZZLE 2.0  
SEE DTL. 5/L2005
- (Q) TURF ROTARY HUNTER P6/J/NOZZLE 1.5  
SEE DTL. 5/L2005
- (F) 15' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- (H) 12' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- (T) 10' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- (Q) 8' RADIUS/SPRAY HEAD, SEE DTL. 3/L2005
- (e) TREE BUBBLER ASSEMBLY, SEE DTL. 4/L2005
- (e) DRIP EMITTER, SEE DTL. 13/L2005
- (X) DRIP REMOTE CONTROL VALVE, SEE DTL. 12/L2005
- (X) REMOTE CONTROL VALVE, SEE DTL. 2/L2005
- (X) MANUAL VALVE, SEE DTL. 18/L2005
- (X) QUICK COUPLER, SEE DTL. 7/L2005
- (X) EXISTING BACKFLOW PREVENTER
- (X) EXISTING IRRIGATION WATER METER
- LATERAL PIPING, SEE DTL. 8/L2005
- TREE BUBBLER LATERAL PIPING, SEE DTL. 8/L2005
- DRIP LINE, SEE DTL. 8/L2005
- SUPPLY LINE, SEE DTL. 8/L2005
- IRRIGATION SLEEVE, SEE DTL. 9/L2005
- BED EDGER, SEE SHEET L135
- (17) VALVE DESIGNATION
- (17) GALLONS PER MINUTE
- (17) VALVE SIZE

**IRRIGATION NOTES ( # - Keyed Note)**

1. Irrigation contractor shall be responsible for making himself familiar with the specifications and all submittal requirements. It is the responsibility of the irrigation contractor to notify the Landscape Architect for site inspections as specified in the specifications. Failure to notify the Landscape Architect does not relieve the contractor from inspection approval and will require the contractor to uncover work as required for approval at the cost of the contractor. Irrigation contractor is to inform Landscape Architect of the start date of work.
2. The irrigation contractor is required by law to notify Texas One Call (800-245-4545) and (800) DIG TESS (800-344-8311) 12 hours prior to any excavation. Irrigation contractor shall be responsible for making himself familiar with all underground utilities, pipes and structures. Irrigation contractor shall take sole responsibility for any cost incurred due to damage of said utilities whether or not Texas One Call is notified.
3. Do not willfully proceed with construction as designed without verifying actual on-site water pressure from the source. Do not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Landscape Architect or Owner's Representative. The irrigation contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
4. Irrigation contractor shall be responsible for any coordination with other contractors as required to accomplish irrigation installation.
5. Due to scale of drawings, it is not possible to indicate all offsets, fittings sleeves, etc., which may be required. Irrigation contractor shall carefully investigate the structure and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation system, planting and architectural features. This design is diagrammatic. All piping, valves, etc., shown within paved areas is for design clarification only and shall be installed in planting areas and within property lines.
6. It is the irrigation contractor's responsibility to coordinate piping with the landscape subcontractor to avoid conflict with planting beds. It will be the responsibility of the irrigation subcontractor to move piping to allow proper placement of plant material.
7. Irrigation contractor shall be responsible for sleeves and chases wherever piping or conduit passes, under all paving, through walls, etc. All sleeve locations may not be shown on plan. Coordinate with architectural and civil drawings, general contractor and other subcontractors as required. All sleeve and chase locations are not noted on plan. All sleeves shall be Sch 40 PVC, sized twice the diameter of pipe or combination of pipes enclosed within the sleeve.
8. No cutting, filling, trenching, root disturbance, soil disturbance, or construction impacts shall occur closer to the trunk than 1/2 the root protection zone radius in accordance with City of San Antonio UDC 35-523(XI) unless done by hand. Trenching is to be done by hand or by tunneling under root system by method approved by Landscape Architect. Piping layout is diagrammatic and piping shall be routed around existing plant material to avoid damage to existing plants. Do not cut any root over 3/4" diameter. Any cuts made shall be clean and without frayed ends.
9. All work will be in accordance with the requirements of the City of San Antonio Unified Development Code 35-512(1) and 35-511(2)(e) and the Texas Administrative Code Chapter 344, 344.12-344.11.
10. If actual site static pressure exceeds design pressure by 10%, a pressure reducing valve shall be installed. See specifications.
11. Pressure at any point within a zone shall not vary by more than 10% from the design sprinkler operating pressure. See specifications for testing.
12. All irrigation work shall be installed under the supervision of a licensed (in the State of Texas) irrigation contractor.
13. Obtain coverage test approval from Landscape Architect or Owner's Representative prior to planting, sodding or seeding.
14. All undesignated end lateral piping shall be 1/2" in spray zones and 3/4" in rotary zones.
15. Irrigation Contractor is to provide 5-spray heads and 3-rotors and associated fittings and piping for use on irrigation zone(s) as directed in the field by Landscape Architect.
16. Refer to civil dwgs. for grading plan.
17. Statement of Area Coverage: Drawing does not provide for 100% coverage of the site. See plans and specifications for areas to be irrigated.
18. Existing irrigation meter is supplied by existing water line along Eagleland Drive. Refer to Civil Dwg.
19. Existing 2" backflow preventer.
20. Existing irrigation controller is located in Mechanical Room. Existing controller to be replaced with new controller. See Dtl. 1/L2005
21. Existing weather sensors are located outside of Mechanical Room. Weather sensor to be relocated to top of building.
22. Demo existing mainlines.
23. Cap existing mainline.
24. Demo existing lateral lines.
25. Cap existing lateral lines.
26. Store existing wires in a 10" splice box.
27. Demo existing valves.
28. Tie existing irrigation mainline to new mainline. Size to match existing.
29. Tie existing irrigation lateral line to new lateral line. Size to match existing.
30. Existing zones 9, 10, 11, and 12 are located in baseball practice field area.
31. No trenching for drip lines under tree RPZ. Install drip lines on top of existing grade and under mulch.
32. Repair/replace existing tree bubblers.
33. Re-wire existing zones 9, 10, 11, and 12 to zones 17, 18, 19 and 20 respectively.
34. Install 6" Sch. 40 PVC sleeve for future expansion.



**1 ENLARGED TREE BUBBLER PLAN**  
SCALE: 1"=20'-0"

**ADDENDUM 2**

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DATE: 02-24-15  
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**CONSTRUCTION DOCUMENTS**

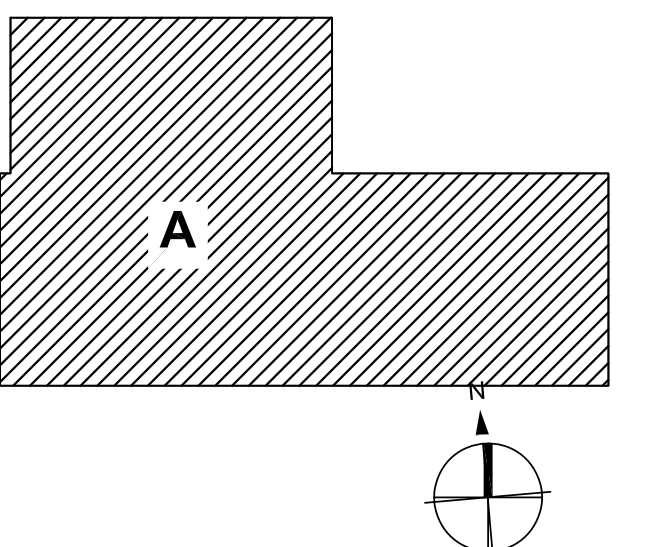
**SAN ANTONIO INDEPENDENT SCHOOL DISTRICT**



**BRACKENRIDGE HIGH SCHOOL ADDITION AND RENOVATION SAN ANTONIO, TX**

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ISSUE: April 22, 2013

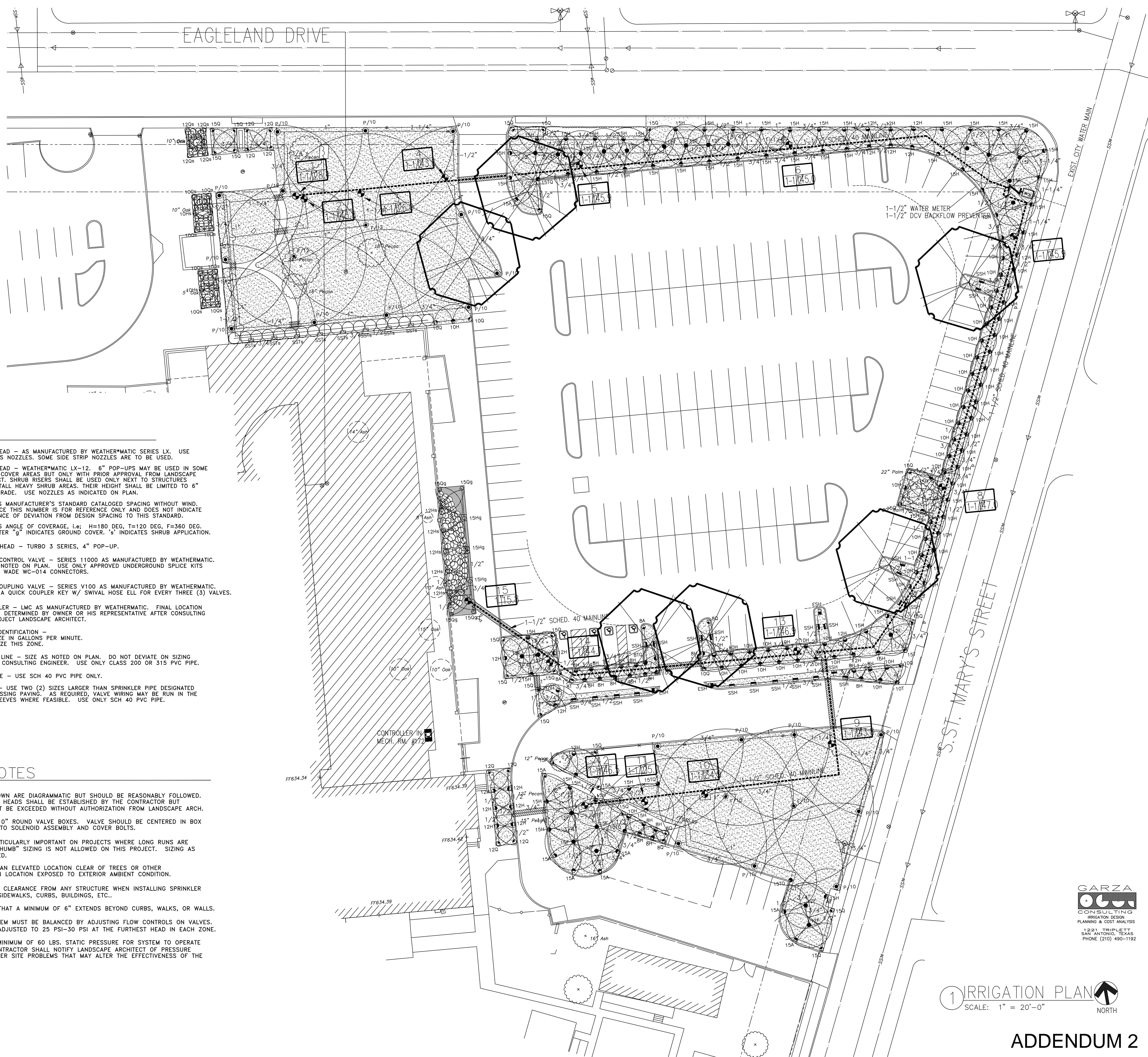
**GATE ADDITION**



SHEET TITLE:  
**Enlarged Tree Bubbler Plan**

**L125S-R**  
SHW Project: 4511.003.00

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**LEGEND**

- ● ● ● SPRAY HEAD - AS MANUFACTURED BY WEATHERMATIC SERIES LX. USE LX SERIES NOZZLES. SOME SIDE STRIP NOZZLES ARE TO BE USED.
- ○ ○ ○ SPRAY HEAD - WEATHERMATIC LX-12. 6" POP-UPS MAY BE USED IN SOME GROUND COVER AREAS BUT ONLY WITH PRIOR APPROVAL FROM LANDSCAPE ARCHITECT. SHRUB RISERS SHALL BE USED ONLY NEXT TO STRUCTURES AND IN TALL HEAVY SHRUB AREAS. THEIR HEIGHT SHALL BE LIMITED TO 6" ABOVE GRADE. USE NOZZLES AS INDICATED ON PLAN.
- ⌈ ⌋ INDICATES MANUFACTURER'S STANDARD CATALOGED SPACING WITHOUT WIND. ALLOWANCE THIS NUMBER IS FOR REFERENCE ONLY AND DOES NOT INDICATE ACCEPTANCE OF DEVIATION FROM DESIGN SPACING TO THIS STANDARD.
- ⌈ ⌋ INDICATES ANGLE OF COVERAGE. L=180 DEG, T=120 DEG, F=360 DEG. SUB-LETTER 'g' INDICATES GROUND COVER. 's' INDICATES SHRUB APPLICATION.
- ⊙ ROTARY HEAD - TURBO 3 SERIES, 4" POP-UP.
- ⊕ REMOTE CONTROL VALVE - SERIES 11000 AS MANUFACTURED BY WEATHERMATIC. SIZE AS NOTED ON PLAN. USE ONLY APPROVED UNDERGROUND SPLICE KITS SUCH AS WADE WC-014 CONNECTORS.
- ⚡ QUICK COUPLING VALVE - SERIES V100 AS MANUFACTURED BY WEATHERMATIC. PROVIDE A QUICK COUPLER KEY W/ SWIVAL HOSE ELL FOR EVERY THREE (3) VALVES.
- ⊞ CONTROLLER - LMC AS MANUFACTURED BY WEATHERMATIC. FINAL LOCATION IS TO BE DETERMINED BY OWNER OR HIS REPRESENTATIVE AFTER CONSULTING WITH PROJECT LANDSCAPE ARCHITECT.
- 1 1' 16.7 ZONE IDENTIFICATION - ZONE SIZE IN GALLONS PER MINUTE. VALVE SIZE THIS ZONE.
- LATERAL LINE - SIZE AS NOTED ON PLAN. DO NOT DEVIATE ON SIZING WITHOUT CONSULTING ENGINEER. USE ONLY CLASS 200 OR 315 PVC PIPE.
- MAIN LINE - USE SCH 40 PVC PIPE ONLY.
- ▨ SLEEVE - USE TWO (2) SIZES LARGER THAN SPRINKLER PIPE DESIGNATED FOR CROSSING PAVING. AS REQUIRED, VALVE WRING MAY BE RUN IN THE SAME SLEEVES WHERE FEASIBLE. USE ONLY SCH 40 PVC PIPE.

**GENERAL NOTES**

1. SPRINKLER LINES AS SHOWN ARE DIAGRAMMATIC BUT SHOULD BE REASONABLY FOLLOWED. LOCATIONS OF SPRINKLER HEADS SHALL BE ESTABLISHED BY THE CONTRACTOR BUT DESIGN SPACING MAY NOT BE EXCEEDED WITHOUT AUTHORIZATION FROM LANDSCAPE ARCH.
2. INSTALL ALL VALVES IN 10" ROUND VALVE BOXES. VALVE SHOULD BE CENTERED IN BOX TO ALLOW EASY ACCESS TO SOLENOID ASSEMBLY AND COVER BOLTS.
3. ZONE PIPE SIZING IS PARTICULARLY IMPORTANT ON PROJECTS WHERE LONG RUNS ARE NECESSARY. "RULE OF THUMB" SIZING IS NOT ALLOWED ON THIS PROJECT. SIZING AS SHOWN MUST BE FOLLOWED.
4. INSTALL RAIN SWITCH IN AN ELEVATED LOCATION CLEAR OF TREES OR OTHER OBSTRUCTIONS. INSTALL IN LOCATION EXPOSED TO EXTERIOR AMBIENT CONDITION.
5. ALLOW A MINIMUM OF 3" CLEARANCE FROM ANY STRUCTURE WHEN INSTALLING SPRINKLER HEADS. THIS INCLUDES SIDEWALKS, CURBS, BUILDINGS, ETC..
6. INSTALL SLEEVING SUCH THAT A MINIMUM OF 6" EXTENDS BEYOND CURBS, WALKS, OR WALLS.
7. AFTER INSTALLATION SYSTEM MUST BE BALANCED BY ADJUSTING FLOW CONTROLS ON VALVES. SPRAY ZONES SHALL BE ADJUSTED TO 25 PSI-30 PSI AT THE FURTHEST HEAD IN EACH ZONE.
8. SYSTEM SHALL REQUIRE MINIMUM OF 60 LBS. STATIC PRESSURE FOR SYSTEM TO OPERATE PROPERLY. IRRIGATION CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF PRESSURE DEFICIENCIES OR ANY OTHER SITE PROBLEMS THAT MAY ALTER THE EFFECTIVENESS OF THE SYSTEM.

**GARZA CONSULTING**  
IRRIGATION DESIGN  
PLANNING & COST ANALYSIS  
1221 TRIPLETT  
SAN ANTONIO, TEXAS  
PHONE (210) 490-1192

**IRRIGATION PLAN**  
SCALE: 1" = 20'-0"  
NORTH

**ADDENDUM 2**

**KELAMUÑOZ ARCHITECTS**  
700 CPM NORTH TOWER  
800 NW LOOP #10  
SAN ANTONIO, TEXAS 78216  
PHONE 210 349.1163  
FAX 210 926.1038

Seal  
Consultant Seal

**RECORD DRAWING**  
DATE: 2/22/05  
These Record Drawings have been prepared, in part, on the basis of information compiled and furnished by others. The Architect/Engineer cannot assure its accuracy, and therefore cannot be responsible for any errors or omissions which have been incorporated into this document as a result.

LANDSCAPE ARCHITECTURE  
MASTER PLANNING  
URBAN DESIGN  
**LAFFOON**  
DESIGN + ARCHITECTURE  
319 HARMON DR, SUITE 100  
SAN ANTONIO, TEXAS 78209  
PHONE / FAX (210) 828-0455



BRACKENRIDGE HIGH SCHOOL  
ADDITIONS & RENOVATIONS  
400 EAGLELAND DRIVE  
SAN ANTONIO, TEXAS

Revisions  
Sheet Title

Date  
**02 APRIL, 2001**  
Project Number  
**98017AS05**  
Sheet Number

Drawn By  
**D.B.**  
**L-201**

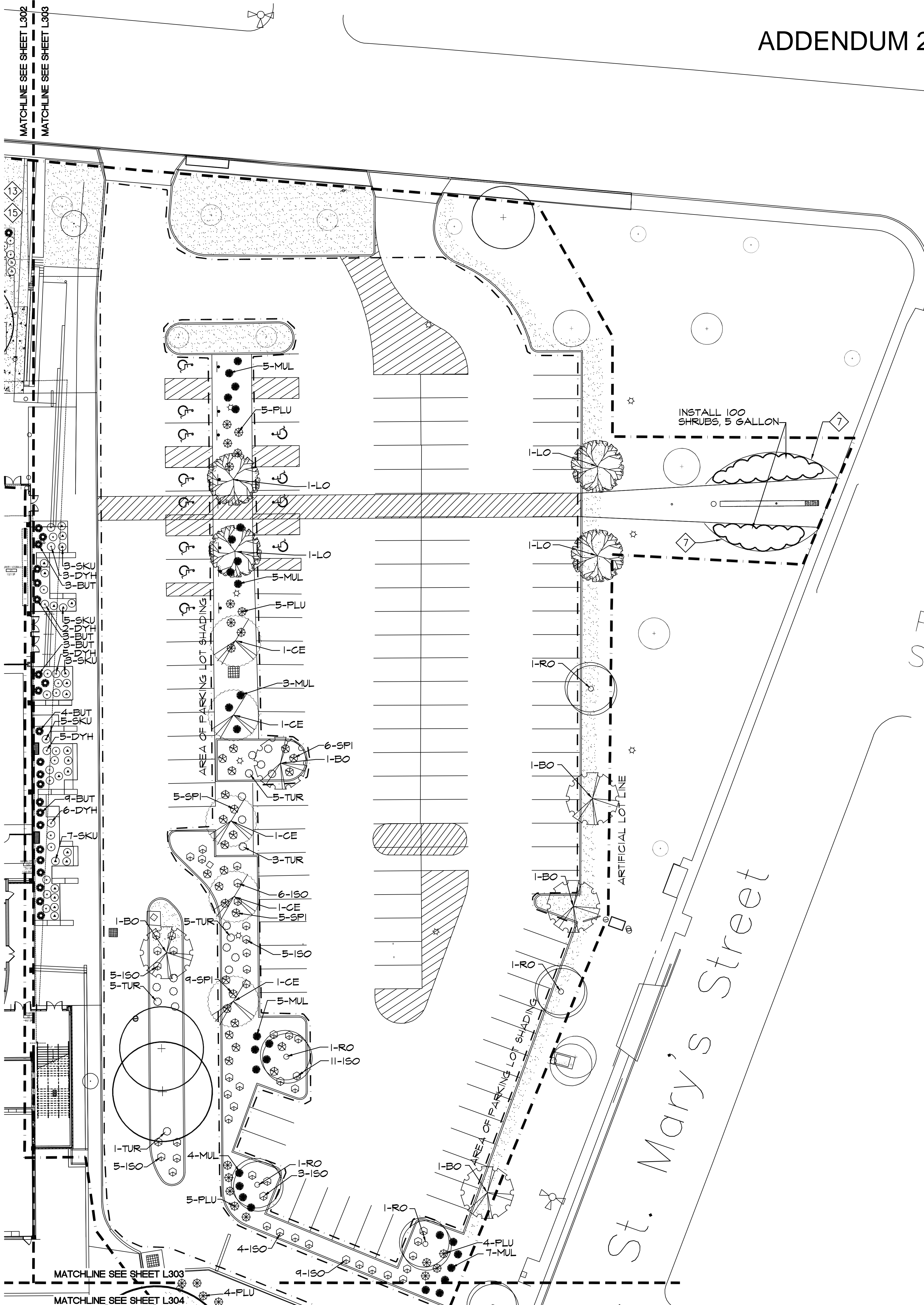
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ADDENDUM 2

### LEGEND

(+)	EXISTING TREES TO BE REMOVED	(*)	ACCENT TREE 8'-10' HEIGHT 6'-7' SPREAD CONTAINER
(+)	EXISTING TREES TO REMAIN	(SOD)	TIF 419 BERMUDA GRASS SOLID SOD
(O)	RED OAK 3" CALIPER CONTAINER	(ZSO)	JAMUR ZOYSIA SOLID SOD
(L)	LIVE OAK 3" CALIPER CONTAINER	(CBG)	COMMON BERMUDA GRASS HYDROMULCH SEED
(CE)	CEDAR ELM 3" CALIPER CONTAINER	(FLS)	(FLS) PARKING LOT SHADING
(BO)	BUR OAK 3" CALIPER CONTAINER	(ST)	(ST) STREET TREES
		(MIT)	(MIT) MITIGATION TREES
		(SY)	(SY) STREET YARD
		(ASH)	(ASH) AREA OF PARKING LOT SHADING

- ### PLANTING NOTES: (Keyed Notes)
- Landscape contractor shall be responsible for making himself familiar with the specifications and all submittal requirements. It is the responsibility of the landscape contractor to notify the Landscape Architect for site inspections as specified in the specifications. Failure to notify the Landscape Architect does not relieve the contractor from inspection approval and will require the contractor to install/repair work as required for approval at the cost of the contractor. Landscape contractor is to inform Landscape Architect of the start date of work.
  - The landscape contractor is to notify Texas One Call (800-245-4545) and 800 DIG TESS (800-344-8311) 72 hours prior to any excavation. Landscape contractor shall be responsible for making himself familiar with all underground utilities, pipes and structures. Landscape contractor shall take sole responsibility for any cost incurred due to damage of said utilities whether or not Texas One Call is notified.
  - Do not willingly proceed with construction as designed when it is obvious that unknown obstruction and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Landscape Architect. The Contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
  - The Contractor shall be responsible for any coordination with subcontractors as required to accomplish planting operations.
  - If conflicts arise between size of areas and plans, Contractor is to contact Landscape Architect for resolution. Failure to make such conflicts known will result in Contractor's liability to relocate the materials.
  - See specifications for planting requirements, materials and executor.
- (7) Steel edger, See Dtl.
  - (8) Sod to limits of grading and to repair construction Damage, See Civil Dngs.
  - (9) Seed to limits of grading, See Civil Dngs.



1 ENLARGED LANDSCAPE PLAN  
 SCALE: 1"=20'-0"

\*NOTE: ALL UNIDENTIFIED SHRUBS SHALL BE 5 GALLON CONTAINERS.

#### PROPOSED PLANT SCHEDULE:

KEY	SCIENTIFIC NAME	COMMON NAME	CONDITION	REMARKS
<b>TREES</b>				
CM	Lagerstroemia indica 'Muskogee'	Muskogee Crape Myrtle	B&B	8'-10" ht., 4'-5" sprd, multi-trunk, 3 cane min.
MTL	Sophora secundiflora	Texas Mt. Laurel	B & B	5'-6" ht; 4'-5' sprd, multi-trunk
BUR	Quercus macrocarpa	Bur Oak	Container	3" cal. Single trunk, 10'-12' ht; 4'-6" sprd
RO	Quercus shumardii	Shumard Red Oak	Container	3" cal. Single trunk, 10'-12' ht; 4'-6" sprd
LO	Quercus virginiana	Live Oak	Container	3" cal. Single trunk, 10'-12' ht; 4'-6" sprd
CE	Ulmus crassifolia	Cedar Elm	Container	3" cal. Single trunk, 11'-13' ht; 5'-7" sprd
<b>SHRUBS</b>				
DBOT	Callistemon citrinus 'Little John'	Little John Dwarf Bottlebrush	5 gal.	18" ht., 18" sprd, full, 48" o.c.
SAGO	Cycas revoluta	Sago Palm	10 gal.	20" ht., 20 sprd, full as shown
BUT	Dietes iridoides	Butterfly Iris	5 gal.	18" ht., 18" sprd, full, 36" o.c.
RY	Hesperaloe parviflora	Red Yucca	5 gal.	15" ht., 12" sprd, full, 36" o.c.
DBH	Ilex comuta 'Burfordii Nana'	Dwf. Burford Holly	5 gal.	22" ht., 18" sprd, full, 36" o.c.
DYH	Ilex vomitoria 'Stokes'	Stokes Dwf. Yaupon Holly	5 gal.	12" ht., 12" sprd, full, 24" o.c.
GLR	Liriope gigantea	Giant Liriope	5 gal.	15" ht., 12" sprd, full, 36" o.c.
LOR	Loropetalum chinense 'Rubrum Burgandy'	Burgandy Loropetalum	5 gal.	18" ht., 18" sprd, full, 36" o.c.
NAN	Nandina domestica 'Compacta'	Compact Nandina	5 gal.	20" ht., 18" sprd, full, 36" o.c.
ROS	Rosa chinensis 'Radtko'	Knockout Rose	5 gal.	15" ht., 15" sprd, full, 36" o.c.
<b>GRASSES</b>				
ISO	Chasmanthium latifolium	Inland Sea Oats	1 gal.	12" ht., 8" sprd, full, 36" o.c.
GMU	Muhlenbergia capillaris	Gulf Muhly Grass	5 gal.	15" ht., 15" sprd, full, 36" o.c.
MUL	Muhlenbergia lindheimeri	Muhly Grass	5 gal.	20" ht., 18" sprd, full, 36" o.c.
<b>PERENNIALS</b>				
SPI	Hymenocallis maximilliana	Maximilian Spider Lily	3 gal.	15" ht., 12" sprd., full
YL	Lantana camara 'New Gold'	New Gold Lantana	1 gal.	12" ht., 12" sprd, full, 36" o.c.
PL	Lantana montevidensis	Purple Lantana	1 gal.	12" ht., 12" sprd, full, 36" o.c.
TUR	Malvaviscus drummondii	Red Turk's Cap	3 gal.	15" ht., 12" sprd., full
PLU	Plumbago auriculata	Plumbago	1 gal.	12" ht., 10" sprd, full, 36" o.c.
KR	Ruellia brittoniana 'Katie Pink'	Pink Katie Ruellia	1 gal.	12" ht., 8" sprd, full, 24" o.c.
SAL	Salvia farinacea	Mauy Blue Salvia	1 gal.	12" ht., 8" sprd, full, 36" o.c.
SALP	Salvia greggii 'Cherry Pink'	Cherry Pink Salvia	1 gal.	12" ht., 8" sprd, full, 36" o.c.
IS	Salvia x 'Indigo Spires'	Indigo Spires Salvia	1 gal.	12" ht., 12" sprd, full, 36" o.c.
SKU	Scutellaria suffruticosa	Pink Skullcap	1 gal.	8" ht., 8" sprd, full, 24" o.c.
<b>GROUNDCOVER/VINES</b>				
LIR	Liriope muscari 'Big Blue'	Big Blue Liriope	4" pots	full, 12" o.c.
RUE	Ruellia brittoniana 'Katie Blue'	Blue Katie Ruellia	1 gal.	12" ht., 8" sprd, full, 24" o.c.
<b>LAWN</b>				
CYN	Cynodon dactylon	Common Bermuda	S.F.	seed hydromulch
CYN	Cynodon dactylon 'Tifway 419'	Tifway 419 Bermuda	S.Y.	solid sod
ZOY	Zoysia ssp. 'Jamur'	Jamur Zoysia	S.Y.	solid sod



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 San Antonio, TX 78216-5893  
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Notes

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 1-8-19



Revision		By	Appd	YYYY MM DD
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Client/Project  
 San Antonio ISD

SAISD Bond 2016 - Brackenridge High School

400 Eagleland Drive  
 San Antonio, Texas 78210

ENLARGED LANDSCAPE PLAN

Project No. 214000588  
 Revision  
 Scale  
 Drawing No.

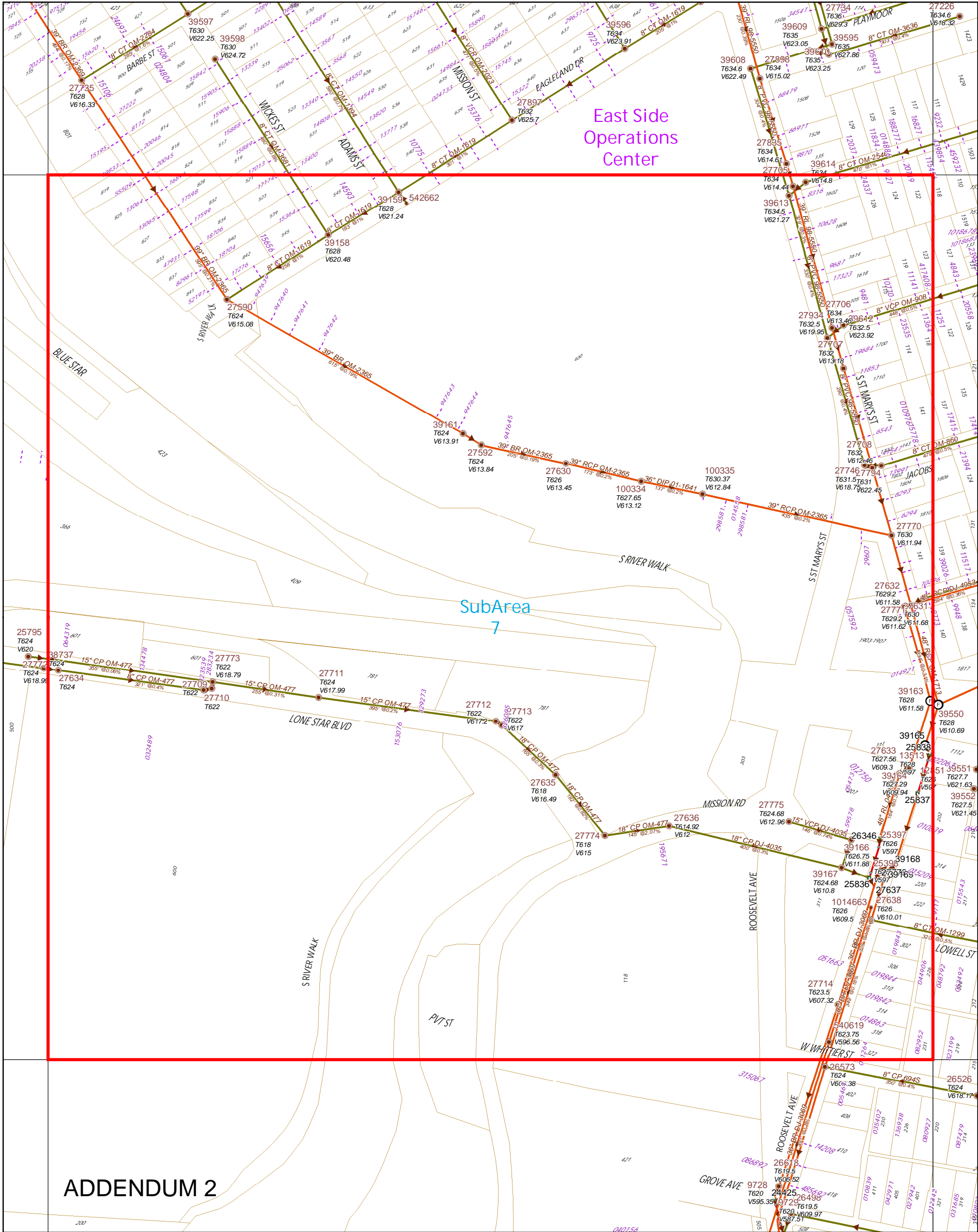
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ORIGINAL SHEET - ARCHT

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**ATTACHMENT 7:**  
**SEWER BLOCK MAP 162570**



B	BLOW OFF	ä	LIFT STATION	•	OTHER
\$	CLEAN OUT	•	MONOLITHIC	K	STUB OUT
¥	AIR RELEASE	•	JUNCTION BOX	Q	STANDARD
•	BREAK NODE	h	PLUG VALVE	#	AIR RELEASE
≡	SIPHON INLET	⊕	DROP MANHOLE	@	FLOW METER
≡	SIPHON OUTLET	A	FLOW METER w\ SMART COVER	D	SMART COVER
—2—	AIR BYPASS	—2—	OUTFALL MAIN	→	PROP. MAINS
—2—	SLUDGE	—2—	SIPHON MAIN	---	SEWER LATERALS
—2—	FORCE MAIN	—2—	GRAVITY MAIN	---	PVT MAINS

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**San Antonio Water System**

**4**

0 100 200  
Feet

**SEWER BLOCK MAP**

**162570**

SAN ANTONIO WATER SYSTEM  
INFRASTRUCTURE PLANNING  
GIS MAPPING DIVISION

Revised Date: Feb 01, 2019

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160	162	164
572	572	572
160	162	164
570	570	570
160	162	164
568	568	568