



SAN ANTONIO WATER SYSTEM
FAR WEST SEWER RELIEF MAIN (FW-01)

SAWS Job No. 09-2501
Solicitation No. B-11-052-RA

ADDENDUM NO. 2

October 04, 2011

To Bidder of Record:

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

Questions and Clarifications:

- Q1) We may be interested in looking at and bidding the project above. In order to do so, we would need soil reports for the project area. I am inquiring to see if there are any available for this project. If so, where may I obtain them? Thank you in advance for your prompt response.
- A1) There is a geotechnical report available on the SAWS website as supplemental information. This information is included for informational purposes only.
- Q2) Bid item 848, 20" PVC Sewer Pipe is not made in SDR26 in that size could that line be up size to 21" or down size to 18"? If the 20" line is required, what other pipe would be considered.
- A2) The 20" PVC Air Jumper Pipe shown on pages 3-5, 7-12, 17-20, 24, and 28 will be changed to a 21" PVC pipe. Sheets 3-5, 7-12, 17-20, 24, and 28 are hereby re-issued to reflect this change.
- Q3) At the site visit for the above referenced project yesterday it was stated by SAWS that the Alignment Staking will be provided by SAWS to the contractor for construction. Please confirm or clarify this in writing on the addendum.
- A3) Control points are staked in the field and included in the bid set. No alignment of the proposed improvements has been staked. SAWS through its consultant will provide a one-time construction staking of the project, contractor will be responsible for all re-staking.
- Q4) Regarding the above referenced project, please clarify in the addendum if the onsite brush clearing will be required to be hauled off site or left in R.O.W. as mulch? This topic was addressed in the pre-bid meeting, but I would like to confirm that all brush will be hauled offsite.
- A4) Clearing is required as necessary for construction as delineated on the tree protection plans. The brush will be removed and hauled offsite by contractor as NSPI.
- Q5) Item No. 30 under the "Site Specific Notes" heading on Sheet 2 references, "...contractor is responsible for all construction staking." This appears to be in conflict with Section 5.16 of the General Conditions. Is the contractor responsible for all construction staking or does the contractor abide by what is to be provided by the Owner, as stated within GC 5.16?

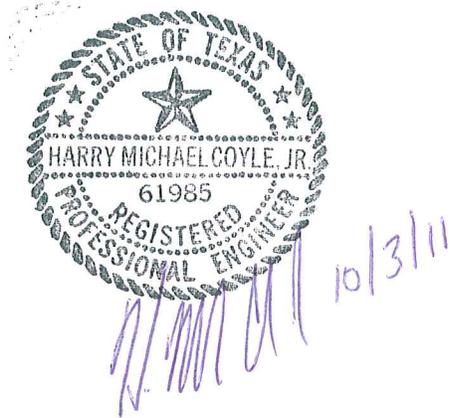
- A5) Note No. 30 under the "Site Specific Notes" has been changed and sheet two has been re-issued
- Q6) Is the contractor required to have Pollution Liability and/or Builders Risk Insurance coverage for this project?
- A6) The contractor will be required to carry pollution liability insurance coverage for the project.
- Q7) Will the contractor be allowed to bench the bore pit to eliminate the vertical height of the excavation on the bore wall of the pit?
- A7) It is up to the contractor to determine the means and methods for construction. The 100 year flood plain limits are included on the plan to ensure a separation between the bore pit and the designated flood plain. The extent of the bore pit cannot encroach on the floodplain.
- Q8) Is the existing 8" water line which is to be relocated in a casing? if not is the pipe D.I.? What is the elevation of the water line, is it in conflict with the proposed bores?
- A8) According to the construction "as built" plans for the water line, the pipe is concrete encased PVC and will not conflict with the proposed bore depths.
- Q9) The Manhole details call for flowable fill, is this accurate given the location of the project?
- A9) The manholes will be backfilled with flowable fill according to the SAWS standard details and specifications.
- Q10) What are the sewer flows from the force main at Hwy 90 and Hunt Lane?
- A10) The flows measured from the force main are as follows; Minimum flows: 0.26 MGD, Average Flow: 2.44 MGD, and the Maximum Flow: 5.75 MGD
- Q11) On sheets 24, 28 and 30 there is a discrepancy on the height of the boxes from section B-B and C-C. Which height is correct?
- A11) On sheet 24 the correct box height is shown on Section B-B (11 feet), on sheet 28 the correct box height is shown on Section C-C (9.75 feet), and on sheet 30 the correct height is shown on Section B-B (8.25 feet).
- Q12) We have review the drawings and specs both myself and Whipps, the gate manufacturer and we do not seem to seem to find the schedule. We need to know the head that would be applied to each of the gates to make sure that we have the right frames and seals for them.
- A12) The gate schedule is shown on sheet 22 of 48 in the attached revised plans.

REVISIONS TO CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

- 1) Section "BP-1, Bid Proposal" *Item 848 20" PVC Sanitary Sewer Line (6' – 10')*, 720 Linear Feet (L.F.); shall be changed to *Item 848 21" PVC Sanitary Sewer Line (6' – 10')*, 720 Linear Feet (L.F.). Replace the Bid Proposal in its entirety with the enclosed bid proposal.
- 2) The gate schedule is shown on sheet 22 of 48 in the attached revised plans



H. Michael Coyle, Jr., P.E.
President, Coyle Engineering



ACKNOWLEDGEMENT BY BIDDER

Each bidder is requested to acknowledge receipt of this Addendum No. 2 on the Bid Proposal and by his/her signature affixed hereto and to file same as an attachment to his/her bid. The undersigned acknowledges receipt of this Addendum No. 2 and the bid submitted herewith is in accordance with the information and stipulation set forth.

Signature of Bidder

Date

End of Addendum

BID PROPOSAL

PROPOSAL OF _____, a corporation

a partnership consisting of

an individual doing business as

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitations to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the construction of pipelines and appurtenances, San Antonio Water System Job Number 09-2501 in accordance with the Plans and Specifications for the following prices to wit:

Item No.	Description & Estimated Quantities (Unit Price to be written in Words)	Unit Price (Figures)	Total Price (Figures)
550	Trench Excavation Safety Protection 545 linear feet (L.F.) _____ Dollars and _____ Cents	_____	_____
818	8 PVC Waterline " 545 linear feet (L.F.) _____ Dollars and _____ Cents	_____	_____
828	8" Gate Valves 2 each (E.A.) _____ Dollars and _____ Cents	_____	_____
831	8" x 8" Tee Cut In 2 each (E.A.) _____ Dollars and _____ Cents	_____	_____
841	Hydrostatic Testing 1 each (E.A.) _____ Dollars and _____ Cents	_____	_____
844	2" Blowoff, Temporary 2 each (E.A.) _____ Dollars and _____ Cents	_____	_____

856.1 Jacking, Boring, or Tunneling 24"
 220 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

856.2 8" Carrier Pipe for Jacking, Boring, Tunneling
 220 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

856.3 Casing or Liner 24"
 220 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

SUBTOTAL SAWS JOB NO. 09-2501 (WATER): \$ _____

550 Trench Excavation Safety Protection
 2691 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

848 10" PVC Sanitary Sewer Line. (6'-10')
 310 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

848 12" PVC Sanitary Sewer Line. (6'-10')
 350 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

848 21" PVC Sanitary Sewer Line. (6'-10')
 710 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

848 24" PVC Sanitary Sewer Line. (0'-6')
 1374 linear feet (L.F.)
 _____ Dollars
 and _____ Cents

848	27" PVC Sanitary Sewer Line. (6'-10') 111 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
848	30" PVC Sanitary Sewer Line. (0'-6') 250 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
848	30" PVC Sanitary Sewer Line. (6'-10') 1828 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
850	Sanitary Sewer Structures – Junction Box (JB-1) 1 each (E.A.)	_____ Dollars and _____ Cents	_____	_____
850	Sanitary Sewer Structures – Siphon Box (S1-I) 1 each (E.A.)	_____ Dollars and _____ Cents	_____	_____
850	Sanitary Sewer Structures – Siphon Box (S1-O) 1 each (E.A.)	_____ Dollars and _____ Cents	_____	_____
850	Sanitary Sewer Structures – Siphon Box (S2-I) 1 each (E.A.)	_____ Dollars and _____ Cents	_____	_____
850	Sanitary Sewer Structures – Siphon Box (S2-O) 1 each (E.A.)	_____ Dollars and _____ Cents	_____	_____

852.1 Sanitary Sewer Manhole (0' – 6')
1 each (E.A.)

_____ Dollars
and _____ Cents

852.1 Sanitary Sewer Manhole (0' – 6')
6 each (E.A.)

_____ Dollars
and _____ Cents

856.1 Jacking, Boring, or tunneling 24"
225 linear feet (L.F.)

_____ Dollars
and _____ Cents

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856.1 Jacking, Boring, or tunneling 36"
225 linear feet (L.F.)

_____ Dollars
and _____ Cents

856.1 Jacking, Boring, or tunneling 42"
450 linear feet (L.F.)

_____ Dollars
and _____ Cents

856.2 12" Carrier Pipe for Jacking, Boring, or tunneling
225 linear feet (L.F.)

_____ Dollars
and _____ Cents

856.2 20" Carrier Pipe for Jacking, Boring, or tunneling
225 linear feet (L.F.)

_____ Dollars
and _____ Cents

856.2 24" Carrier Pipe for Jacking, Boring, or tunneling
450 linear feet (L.F.)

_____ Dollars
and _____ Cents

856.3	Casing or Liner 24" 225 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
856.3	Casing or Liner 36" 225 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
856.3	Casing or Liner 42" 450 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
858	Concrete Encasement, Cradles, Saddles and Collars 26 cubic yard (C.Y.)	_____ Dollars and _____ Cents	_____	_____
862	Abandonment of Sanitary Sewer Manholes 5 each (E.A.)	_____ Dollars and _____ Cents	_____	_____
866	Sewer Main Television Inspection (18"-24") 1374 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
866	Sewer Main Television Inspection (30") 2189 linear feet (L.F.)	_____ Dollars and _____ Cents	_____	_____
842	Sanitary Sewer Air Testing 1 each (E.A.)	_____ Dollars and _____ Cents	_____	_____

520.1 Hydro Seed Native Grass
 28504 square feet (S.F.)
 _____ Dollars
 and _____ Cents _____

540.1 Rock Filter Dams (Install/Remove) (Type 3)
 150 linear feet (L.F.)
 _____ Dollars
 and _____ Cents _____

540.6 Construction Exits (Install/Remove)
 334 square yards (S.Y.)
 _____ Dollars
 and _____ Cents _____

540.9 Temporary Sediment Control Fence
 3210 linear feet (L.F.)
 _____ Dollars
 and _____ Cents _____

SUBTOTAL SAWS JOB NO. 09-2501 (WATER): \$ _____

SUBTOTAL SAWS JOB NO. 09-2501 (SEWER): \$ _____

LINE ITEM "A"

SUBTOTAL BASE BID (WATER & SEWER) \$ _____

	Unit Price (Figures)	Total Price (Figures)
100 MOBILIZATION 1 LUMP SUM-Percent of the <u>Line Item "A"</u> Sub total Base Bid written in words _____ Percent (Maximum of 10% of the <u>Line Item "A"</u> Sub-total Base Bid amount)	_____	\$ _____
101 PREPARING R.O.W. 1 LUMP SUM- Percent of the <u>Line Item "A"</u> Sub total Base Bid written in words _____ Percent (Maximum of 5% of the <u>Line Item "A"</u> Sub-total Base Bid amount)	_____	\$ _____
MOBILIZATION AND PREPARING ROW SUB-TOTAL		\$ _____

Job No. 09-2501
Far West Sewer Relief Main (FW-01)
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Mobilization lump sum bid shall be limited to a maximum 10% of the Line Item "A" Sub-total Base Bid amount. Preparing Right-of-Way lump sum bid shall be limited to a maximum of 5% of the Line Item "A" Sub-total Base Bid amount. The Line Item "A" Sub-total base bid is defined as all bid items **EXCLUDING** Item 100, Mobilization and Item 101, Preparing Right-of-Way. **In the event of a discrepancy between the written percentage and dollar amount shown for Mobilization and Preparation of ROW bid items the written percentage will govern. If the percentage written exceeds the allowable maximum stated for mobilization and or preparation of ROW, SAWS reserves the right to cap the amount at the percentages shown and adjust the extensions of the bid items accordingly.**

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

\$ _____

_____ DOLLARS AND

_____ CENTS

BIDDER'S SIGNATURE & TITLE

FIRM'S NAME (TYPE OR PRINT)

FIRM'S ADDRESS

FIRM'S PHONE NO. /FAX NO.

FIRM'S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following:
Addendum Nos. _____

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

The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within 180 calendar days after the start date, as set forth in the Authorization to Proceed. **The bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.** Complete the additional requirements of the Proposal which are included on the following pages.

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE FOLLOWING AS APPLICABLE:
 - CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) FOR SEWERAGE SYSTEMS [31 TAC 317.1, 31 TAC 317.2, 31 TAC 317.3, AND 31 TAC 317.13 AND 213]
 - CURRENT TxDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
 - CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR CONSTRUCTION."
 - CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION."
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 233-3500 AND THE INVOLVED HOME RESIDENTS AND /OR PROPERTY OWNERS 48 HOURS PRIOR TO EXCAVATION.
- THE LOCATION AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL HOURS LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO CONSTRUCTION AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

GENERAL SEWER NOTES

- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO OVERFLOWS OR SPILLAGE OF SEWAGE OCCURS. SHOULD THIS OCCUR, THE CONTRACTOR SHALL:
 - IDENTIFY THE SOURCE OF THE SPILL AND ATTEMPT TO ELIMINATE ANY ADDITIONAL SPILLAGE. NOTIFY CONSTRUCTION INSPECTIONS.
 - CONTAIN THE SPILL IN PLACE AND PREVENT CONTAMINATION OF STREAMS.
 - CLEAN UP THE SPILL AND DISPOSE OF CONTAMINATED MATERIALS.
 - DISINFECT THE AREA OF THE SPILL WITH A MIXTURE OF HTH CHLORINE AND WATER.
 - IDENTIFY AND TRAIN PERSONNEL RESPONSIBLE FOR SPILLAGE PREVENTION AND CONTROL. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND THE SAN ANTONIO WATER SYSTEM.
- SERVICE LATERAL CONNECTIONS:
 - THE EXACT LOCATION AND ELEVATION OF THE SERVICE LATERALS AND MANHOLES SHALL BE FIELD VERIFIED BY THE CONTRACTOR. (NSP)
 - A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER LATERALS AT SUBGRADE.
 - ALL SEWER LATERAL SERVICES FOR FUTURE CONNECTIONS AS IDENTIFIED ON PLAN AND PROFILES, SHALL BE CAPPED AND SEALED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING EACH EXISTING SERVICE LINE FROM THE EXISTING MAIN AND RE-CONNECTING THE SERVICE TO THE NEW SERVICE MAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SERVICE (NO SEPARATE PAY ITEM).
 - LATERALS SHALL BE CONSTRUCTED TO SERVE ALL EXISTING HOUSES AND VACANT LOTS.

- THE CONTRACTOR SHALL PROVIDE BY-PASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED, IN ACCORDANCE WITH SAWS SPECIAL SPECIFICATION "SANITARY SEWER". PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE BID ITEM "SANITARY SEWER (BY-PASS PUMPING)" AS PER SAWS SPECIAL SPECIFICATION "SANITARY SEWER".
- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS INSPECTION AND/OR SAWS PRODUCTION GROUPS AT LEAST ONE WEEK OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS, THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

SITE SPECIFIC NOTES

- THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE (CURRENT EDITION), THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY REGULATIONS (CURRENT EDITION), AND ALL OTHER APPLICABLE REGULATIONS AT ALL TIMES.
- THE WORK TO BE PERFORMED UNDER THIS PROJECT SHALL BE PERFORMED WITH STRICT ADHERENCE TO THE ACCOMPANYING SPECIFICATIONS AND CITY OF SAN ANTONIO STANDARD SPECIFICATIONS (CURRENT EDITION).
- THE PROJECT SPECIFICATIONS ARE COMPLEMENTARY TO THIS SET OF DRAWINGS.
- THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS) OF THE ARCHITECTURAL BARRIERS ACT (CURRENT EDITION).
- THE OWNER'S REPRESENTATIVE WILL MAKE FINAL DECISIONS OR JUDGMENTS ON MATTERS NOT SPECIFICALLY COVERED IN THE PROJECT CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DEVIATIONS FROM THE PLANS OR CONFLICTS BETWEEN PLANS AND FIELD CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONSTRUCTION WITH ALL DESIGN DOCUMENTS BY THE OTHER DESIGN PROFESSIONALS AND TRADES.
- THE CONTRACTOR IS REQUIRED TO OBTAIN ALL PERMITS, IF ANY, THAT ARE NECESSARY TO CONSTRUCT THE PROJECT IMPROVEMENTS. THE CONTRACTOR MUST KEEP ALL PERMITS ON THE JOB SITE.
- THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS, INCLUDING BUT NOT LIMITED TO THE SAFETY OF ALL PERSONS AND PROPERTY, DURING THE CONSTRUCTION OF THESE IMPROVEMENTS. THIS RESPONSIBILITY IS CONTINUOUS (NOT LIMITED TO NORMAL WORKING HOURS). THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- THE CONTRACTOR SHALL PERFORM CLEAN-UP CONTINUOUSLY DURING WORKING DAYS TO KEEP SITE FREE FROM ACCUMULATION OF WASTE MATERIALS AND RUBBISH. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL WASTE, RUBBISH, AND UNUSED SURPLUS MATERIALS FROM AND ABOUT THE SITE.
- THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES SHALL GOVERN THE SETUP OF BARRICADES AND WARNING SIGNS. THE CONTRACTOR SHALL LOCATE BARRICADES AND WARNING SIGNS IN A MANNER THAT AFFORDS MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT. BARRICADES AND WARNING SIGNS SHALL BE POSITIONED TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. BARRICADES AND TRAFFIC CONTROL SIGNAGE AND DEVICES SHALL BE ERRECTED AS REQUIRED BY THE LOCAL TxDOT REPRESENTATIVE AND/OR CITY REPRESENTATIVE.
- THE CONTRACTOR WILL NOTIFY ALL GOVERNMENTAL OR UTILITY AGENCIES THAT MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR IS REQUIRED TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON A COMBINATION OF FIELD SURVEYING AND AVAILABLE UTILITY MAPS. THE CONTRACTOR SHALL DETERMINE VERTICAL AND HORIZONTAL LOCATIONS OF ALL SUCH UTILITIES (WHETHER SHOWN ON PLANS OR NOT) BY COORDINATING WITH THE RESPECTIVE AGENCIES.
- THE CONTRACTOR IS REQUIRED TO VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING IMPROVEMENTS THAT ARE BEING TIED INTO AT THE BEGINNING OF CONSTRUCTION AND SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS ANY ANTICIPATED PROBLEM WITH THE PROPOSED IMPROVEMENTS.
- PUBLIC UTILITIES REQUIRING RELOCATION OR ADJUSTMENT TO CONFORM TO PROJECT ALIGNMENT OR GRADES SHALL BE COORDINATED WITH THE PROPER AUTHORITIES.
- THE CONTRACTOR IS REQUIRED TO CONTACT A ONE-CALL SYSTEM AT LEAST 48 HOURS BEFORE DIGGING.

DIG TESS	1-800-344-8377 / 811
LONE STAR NOTIFICATION	1-800-669-8344 / 811
TEXAS ONE-CALL	1-800-245-4545 / 811
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ABOVE-GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE THAT ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL SUITABLY CAP DEAD UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION AT NO ADDITIONAL EXPENSE TO THE OWNER.
- EXISTING IMPROVEMENTS OR UTILITIES THAT ARE REMOVED, DAMAGED OR UNDERCUT BY THE CONTRACTOR'S PERFORMANCE UNDER THIS CONTRACT WILL BE REPAIRED OR REPLACED AS REQUIRED BY THE ENGINEER AND AS APPROVED BY THE RESPECTIVE UTILITY AGENCY AT THE CONTRACTOR'S EXPENSE.

- ALL ERRORS OF WORKMANSHIP ON THE PROJECT SHALL BE CORRECTED IMMEDIATELY.
- CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATION. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
- REMOVE ALL ASPHALT AND CONCRETE WITH A SMOOTH SAW-CUT.
- REMOVE AND PROPERLY DISPOSE OF EXCESS EXCAVATION AND DEBRIS.
- ALL EXCAVATION SHALL BE UNCLASSIFIED.
- ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S/OWNER'S APPROVAL.
- CONCRETE SHALL BE CLASS "A" ACCORDING TO TxDOT ITEM 421 WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS OTHERWISE SPECIFIED ON PLANS.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, THE GAS PURVEYOR MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES IN THE PROJECT AREA.
- SAWS THROUGH ITS CONSULTANT WILL PROVIDE A ONE-TIME CONSTRUCTION STAKING OF THE PROJECT, CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL RE-STAKING.
- THE CONTRACTOR SHALL PROVIDE PEDESTRIAN AND VEHICULAR ACCESS DURING CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY TO RESIDENCES, BUSINESSES AND DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
- THE CONTRACTOR SHALL MAINTAIN TWO WAY TRAFFIC AT ALL TIMES ON ALL EXISTING STREETS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREAS OF EXCAVATION.
- WHEN POWER POLES ARE ADJACENT TO THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SHORING OR OTHER SUITABLE SUPPORT DURING CONSTRUCTION.

GRADING

- AREAS WITH FLOW ARROWS AND SWALES MUST DRAIN IN THE DIRECTIONS SHOWN.
- CAREFULLY GRADE NEAR TREES TO REMAIN.
- FINISHED EARTH SLOPES SHALL NOT EXCEED 3:1.
- IF CONFLICTS WITH SPOT ELEVATIONS OR CONTOURS EXIST ON PLAN, NOTIFY ENGINEER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COMPACT AREAS TO RECEIVE LANDSCAPING AND/OR GRASS TO 98% MAXIMUM DRY DENSITY.
- IF GROUNDWATER OR SEEPAGE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.

UTILITIES

- THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ALL NECESSARY FITTINGS AND APPURTENANCES REQUIRED TO COMPLETE THE INSTALLATION OF THE UTILITIES AS SHOWN ON THE PLANS.
- ALL WATER SYSTEM MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARD SPECIFICATIONS AND CERTIFIED TO NATIONAL SANITATION FOUNDATION (NSF) STANDARD 61.
- ALL UTILITY TRENCHING, BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH APPLICABLE ASTM AND ANSI SPECIFICATIONS.
- PVC (POLYVINYL CHLORIDE) PIPE FOR WATER LINES SHALL BE AWWA DR18 CLASS 200. AWWA STANDARD C900 SHALL GOVERN THE DESIGN COMPONENTS, MATERIALS, MANUFACTURE, JOINTING AND TESTING OF ALL PVC WATER PIPE. THE ENDS OF THE PIPE SHALL BE THE SPIGOT AND BELL TYPE DESIGNED FOR RUBBER GASKET SLIP ON JOINTS.
- THE CONTRACTOR SHALL FURNISH THE OWNER WITH AS-BUILT DRAWINGS AT THE END OF CONSTRUCTION INDICATING THE LOCATION AND LENGTH OF ALL MAINS, FITTINGS, VALVES, SERVICES, MANHOLES AND FIRE HYDRANTS.
- ONLY WATER PURVEYOR PERSONNEL SHALL OPERATE EXISTING VALVES.
- SANITARY SEWER PIPE CROSSING A WATER MAIN SHALL BE 150 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE TWENTY (20) FOOT PIPE SECTION CENTERED ON THE WATER MAIN.
- SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND SHALL CONFORM TO ASTM D-3034 FOR SDR 35. JOINTS SHALL BE ELASTOMERIC GASKET MATERIAL CONFORMING TO ASTM D-3212. INSTALLATION SHALL CONFORM TO ASTM D-2321.
- BEDDING AND BACKFILL WILL CONFORM TO GEOTECHNICAL REPORT LABELED "GEOTECHNICAL EXPLORATION ON SAWS FAR WEST SEWER RELIEF MAIN, HIGHWAY 90 NEAR HUNT LANE, SAN ANTONIO, TEXAS, ADDULA REPORT NO. H100155," DATED 4/26/2010 OR REVIEWED AND APPROVED BY ADDULA CONSULTING ENGINEERS PRIOR TO CONSTRUCTION.

- FOR SEWER LINES LESS THAN TWENTY-FOUR (24) INCHES IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO (2) LIFTS. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID-POINT OR SPRING LINE OF THE PIPE. THE SECOND LIFT SHALL EXTEND AS DETAILED.
- SECONDARY BACKFILL SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE OF BRUSH, DEBRIS AND JUNK. NO ROCK OR STONES HAVING ANY DIMENSION LARGER THAN EIGHT (8) INCHES AT THE LARGEST DIMENSION, WHATEVER IS LESS, SHALL BE USED IN THE SECONDARY BACKFILLING ZONE.
- ON ALL GRAVITY LINES, THE CONTRACTOR MUST START AT DOWNSTREAM END AND PROCEED UPSTREAM TAKING CARE TO EXPOSE ALL EXISTING UTILITIES AND STRUCTURES WHICH MAY CONFLICT WITH THE PROPOSED LINE. ANY OTHER SEQUENCE OF CONSTRUCTION WILL BE AT THE CONTRACTOR'S RISK.
- ALL DUCTILE IRON PIPE USED IN THIS SYSTEM SHALL BE CORROSION PROTECTED ON BOTH THE INTERIOR AND EXTERIOR SURFACES. ALL CORROSION PROTECTION SHALL BE APPLIED AND INSTALLED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUSLY PROTECTED SURFACE AFTER FINAL PIPE INSTALLATION.
- PVC PIPE IS NOT INTENDED TO BE CONTINUOUSLY STORED IN DIRECT SUNLIGHT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN AREA, CLOSE TO THE AREA OF WORK, TO PROTECT THE PVC PIPE FROM DAMAGE DUE TO DIRECT SUNLIGHT EXPOSURE.

DRAINAGE

- THE CONTRACTOR IS TO MAINTAIN UNRESTRICTED DRAINAGE OF THE PROJECT SITE AND ADJACENT AREAS DURING CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ALLOW STORM WATER TO POND AND SATURATE ANY PREPARED SUBGRADE, EXCAVATION OR EMBANKMENT SOILS. THE CONTRACTOR SHALL IMMEDIATELY PUMP ALL WATER OUT OF AREAS WHICH CANNOT DRAIN BY GRAVITY FLOW.

DEMOLITION

- CONTRACTOR SHALL CAREFULLY DEMOLISH AND REMOVE ALL ITEMS (ABOVE AND BELOW GROUND) AS REQUIRED TO CONSTRUCT THE PROJECTS AS SHOWN. ALL REMOVAL AND DISPOSAL ACTIVITIES MUST COMPLY WITH APPLICABLE CODES, LAWS AND ORDINANCES.

SAN ANTONIO WATER SYSTEM

- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
- CONTRACTOR SHALL OUTFIT ALL WORKERS WITH NECESSARY PERSONAL PROTECTIVE EQUIPMENT (PPE) REGARDING VENOMOUS AND NON-VENOMOUS NATIVE SPECIES ON SITE.

REGISTRATION No. F-1755



COYLE
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San Antonio, Texas 78015 F.830-755-8435

PHASE D

REGISTRATION No. F-1755



GENERAL NOTES			
UTILITY LEGEND			
PROP. WATER MAIN	—●—		
EXIST. WATER MAIN	—○—		
GAS MAIN	—○—		
SANITARY SEWER	—○—		
STORM SEWER	—○—		
UTILITY POLE LINE	—○—		
ELECTRIC CABLE	—○—		
TELEPHONE CABLE	—○—		
Addendum No. 2			
No.	Revision	Drawn	Approved
REVISIONS			
FAR WEST SEWER RELIEF MAIN (FW-01)			
SAN ANTONIO WATER SYSTEM			
CONT.		BUDGET PROJ.	
SUBMITTED			
APPROVED			
MAP No. 104-566, 106-566, 108-568, 108-570		SHEET	
SECT. No.		2	
DR. MVT	CK. HMC	JOB No. 09-2501 OF 48	

**SAWS SEWER CONSTRUCTION ESTIMATE
FOR JOINT BID PROJECT ONLY**

DESCRIPTION: FAR WEST SEWER RELIEF MAIN
JOB NUMBER: 09-2501
DATE: 4/8/2011



SAWS WATER CONSTRUCTION ESTIMATE			
ITEM NO.	DESCRIPTION	QUAN.	UNIT
100.00	Mobilization	1	LS
101.00	Preparing Right of Way	1	LS
550	Trench Excavation Safety Protection	533	LF
818	8" PVC Waterline "	533	LF
828	8" Gate Valves	2	EA
831	8" x 8" Tee Cut In	2	EA
841	Hydrostatic Testing	1	EA
844	2" Blowoff, Temporary	2	EA
856.1	Jacking, Boring, or Tunneling 24"	225	LF
856.2	8" Carrier Pipe for Jacking, Boring, Tunneling	225	LF
856.3	Casing or Liner 24"	225	LF

SAWS SEWER CONSTRUCTION ESTIMATE			
ITEM NO.	DESCRIPTION	QUAN.	UNIT
550	Trench Excavation Safety Protection	2691	LF
848	10" PVC Sanitary Sewer Line. (6'-10')	310	LF
848	12" PVC Sanitary Sewer Line. (6'-10')	350	LF
848	21" PVC Sanitary Sewer Line. (6'-10')	710	LF
848	24" PVC Sanitary Sewer Line. (0'-6')	1374	LF
848	27" PVC Sanitary Sewer Line. (6'-10')	111	LF
848	30" PVC Sanitary Sewer Line. (0'-6')	250	LF
848	30" PVC Sanitary Sewer Line. (6'-10')	1828	LF
850	Sanitary Sewer Structures - Junction Box (JB-1)	1	EA
850	Sanitary Sewer Structures - Siphon Box (S1-I)	1	EA
850	Sanitary Sewer Structures - Siphon Box (S1-O)	1	EA
850	Sanitary Sewer Structures - Siphon Box (S2-I)	1	EA
850	Sanitary Sewer Structures - Siphon Box (S2-O)	1	EA
852.1	Sanitary Sewer Manhole (0' - 6')	1	EA
852.1	Sanitary Sewer Structure (0' - 6')	6	EA
856.1	Jacking, Boring, or Tunneling 24"	225	LF
856.1	Jacking, Boring, or Tunneling 36"	225	LF
856.1	Jacking, Boring, or Tunneling 42"	450	LF

856.2	12" Carrier Pipe for Jacking, Boring, Tunneling	225	LF
856.2	21" Carrier Pipe for Jacking, Boring, Tunneling	225	LF
856.2	24" Carrier Pipe for Jacking, Boring, Tunneling	450	LF
856.3	Casing or Liner 24"	225	LF
856.3	Casing or Liner 36"	225	LF
856.3	Casing or Liner 42"	450	LF
858	Concrete Encasement, Cradles, Saddles and Collars	29	CY
862	Abandonment of Sanitary Sewer Manholes	5	EA
866	Sewer Main Television Inspection (18" - 24")	1374	LF
866	Sewer Main Television Inspection (30")	2189	LF
520.1	Hydro Seed Native Grass	28504	SF

STORM WATER POLLUTION PREVENTION PLAN			
ITEM NO.	DESCRIPTION	QUAN.	UNIT
540.1	ROCK FILTER DAMS (INSTALL/REMOVE) (TYPE 3)	150	LF
540.6	CONSTRUCTION EXISTS (INSTALL/REMOVE)	334	SY
540.9	TEMPORARY SEDIMENT CONTROL FENCE	3210	LF

NOTE:
ALL SEWER SERVICES ARE LOCATED USING S.A.W.S. BLOCK MAPS, FIELD VERIFICATION OF LOCATION IS RESPONSIBILITY OF CONTRACTOR. LOCATION INDICATED INDICATED ON PLANS IS DISTANCE FROM DOWN SLOPE MANHOLE.

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PHASE D

REGISTRATION No. F-1755



QUANTITY SUMMARY			
PROF. WATER MAIN	0		
EXIST. WATER MAIN	0		
GAS MAIN	0		
SANITARY SEWER	0		
STORM SEWER	0		
UTILITY POLE LINE	0		
ELECTRIC CABLE	0		
TELEPHONE CABLE	0		

1	Addendum No. 2	10/3/11
No.	Revision	Drawn Approved Date

REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)	
SAN ANTONIO WATER SYSTEM	
CONT. BUDGET PROJ.	
SUBMITTED _____	
APPROVED _____	
MAP No. 104-566, 106-566, 108-568, 108-570	
SECT. No. _____	
DR. TM CK. HMC JOB No. 09-2501	

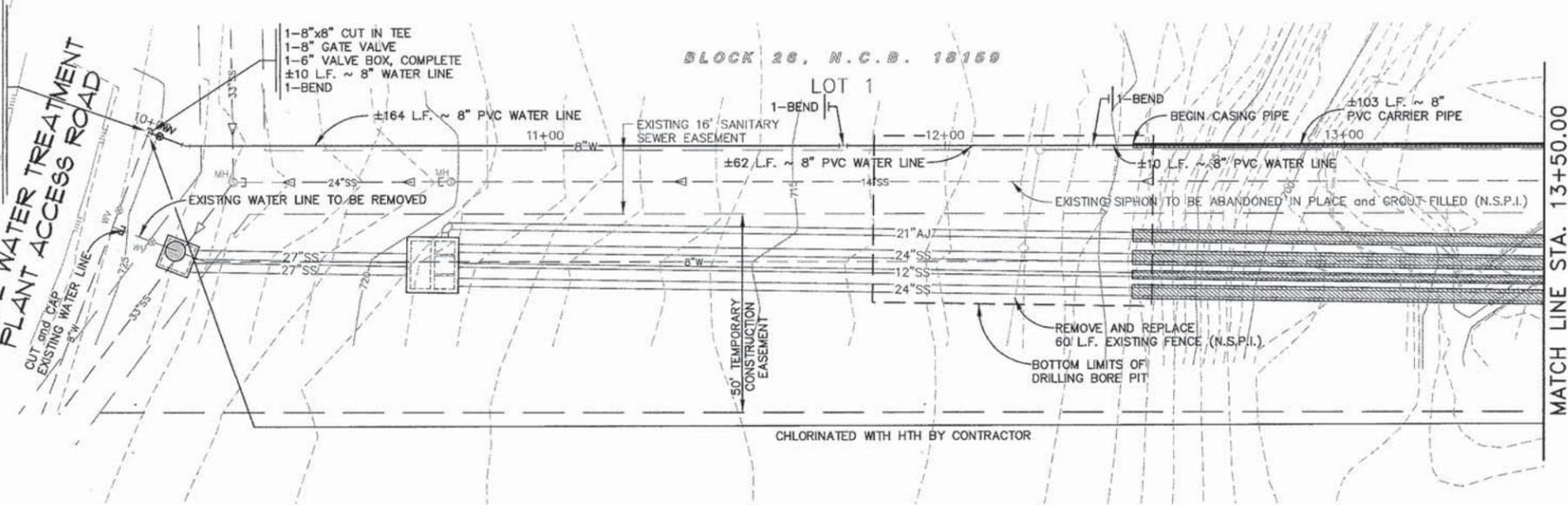
SHEET 3 OF 48

1-8" Mx2" THRD. C.I. ECCENTRIC REDUCER (TEMP)
 1-2" STD. BLOW OFF (TEMP)
 (SAWS STD. DWG. DD-844-01)

INSTALL FOR CHLORINATION
 2-1" CORP. STOP C.C.xI.P.
 2-1 1/4" SOLID CAPS, THR.
 2-1" COPPER TUBING, CUT AS REQUIRED
 2-1" COMP. 1/4" COUPLING, CURB STOP
 (SEE S.A.W.S. STD. DWG. DD-847-01)

AFTER CHLORINATION, REMOVE BOTH CORP. STOPS

WASTE WATER TREATMENT PLANT ACCESS ROAD



PROPOSED 8" WATER LINE
 SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

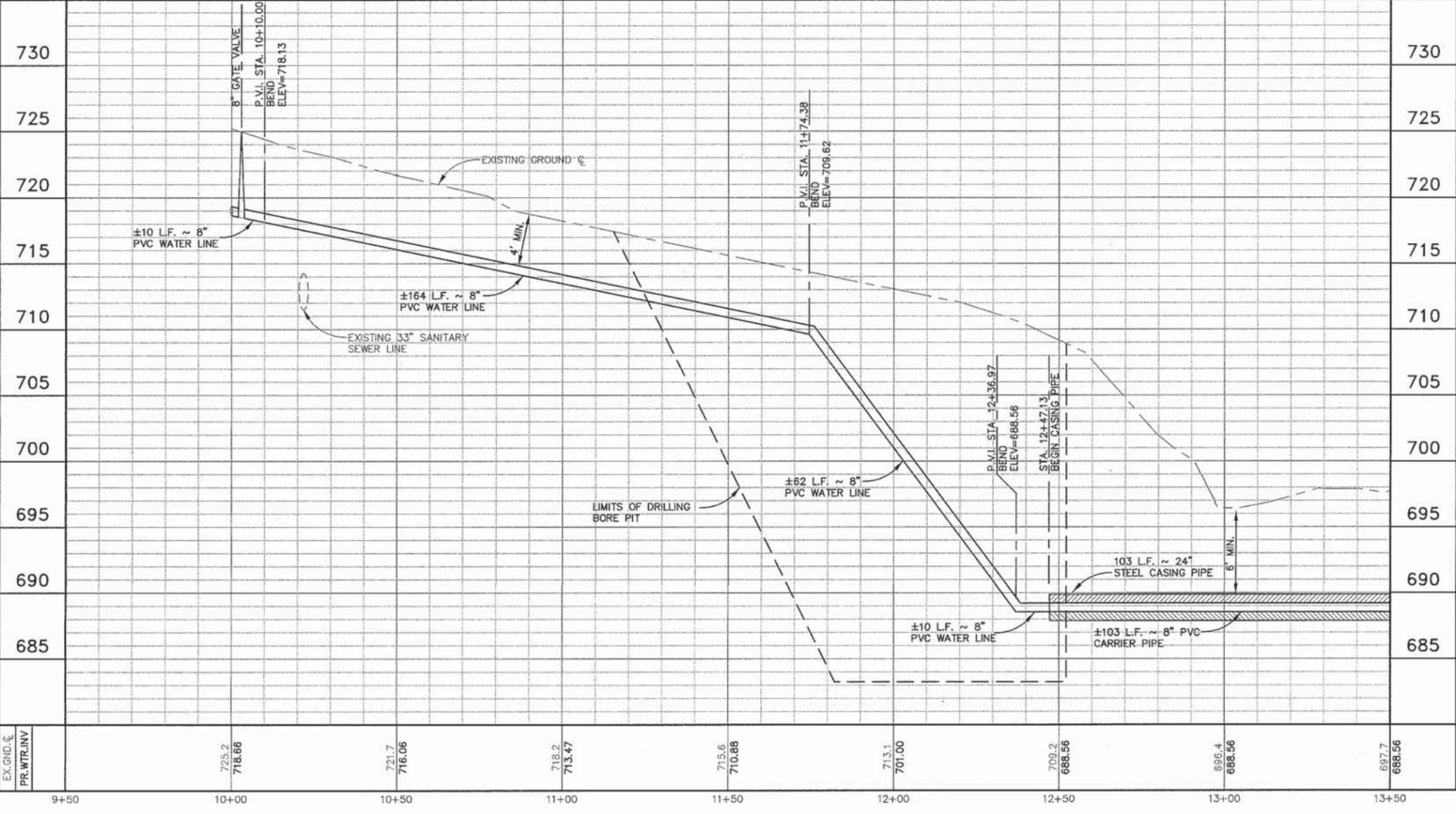
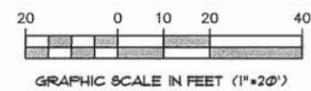
MATCH LINE STA. 13+50.00

C.P.S. ENERGY UTILITIES NOTE:
 CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
 DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
 THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREA (N.S.P.I.)

SHEET NOTES:
 1. THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THESE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE, AND ARE NOT GUARANTEED TO BE ACCURATE. THE CONTRACTOR SHOULD CALL FOR LOCATES THROUGH THE "ONE CALL" UTILITY LOCATE SERVICE (1-800-344-8377) 48 HOURS PRIOR TO CONSTRUCTION/EXCAVATION WORK. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANE DURING CONSTRUCTION.
 2. ALL FITTINGS ARE TO BE JOINT RESTRAINED EXCEPT AT WATER MAIN TIE INS.

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

TREE NOTES:
 1. CONTRACTOR SHALL USE EXTREME CAUTION DURING CONSTRUCTION OPERATIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING TREES.
 2. NO TREES SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY AUTHORIZED BY THE CITY OF SAN ANTONIO.



SHEET TOTALS			
ITEM	EST.	UNIT	DESCRIPTION
550	246	LF	TRENCH EXCAVATION SAFETY PROTECTION
818	246	LF	8" PVC WATER LINE C900 DR18 (RESTRAINED)
828	1	EA	8" GATE VALVE
831	1	EA	8"x8" TEE CUT IN
844	1	EA	2" BLOWOFF (TEMPORARY)
856.1	103	LF	JACKING, BORING OR TUNNELING 24"
856.2	103	LF	8" PVC CARRIER PIPE FOR JACKING, BORING OR TUNNELING
856.3	103	LF	STEEL CASING OR LINER 24"

REGISTRATION No. F-1755

COYLE ENGINEERING
 INTEGRITY KNOWLEDGE RESPONSIVENESS
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 San Antonio, Texas 78015 F.830-755-8435

PHASE D

STATE OF TEXAS
 HARRY MICHAEL COYLE JR.
 61985
 REGISTERED PROFESSIONAL ENGINEER

PROPOSED 8" WATER LINE STA. 10+00.00 TO 13+00.00

UTILITY LEGEND

PROP. WATER MAIN	8"
EXIST. WATER MAIN	8"CLW
GAS MAIN	2"
SANITARY SEWER	8"SA
STORM SEWER	24"ST
UTILITY POLE LINE	UT
ELECTRIC CABLE	E
TELEPHONE CABLE	UT

1. Addendum No. 2

No. Revision Drawn Approved Date

REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)

SAN ANTONIO WATER SYSTEM

CONT. BUDGET PROJ.

SUBMITTED

APPROVED

MAP No. 104-566, 106-566, 106-568, 106-570 SHEET 4 OF 48

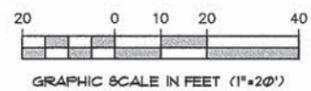
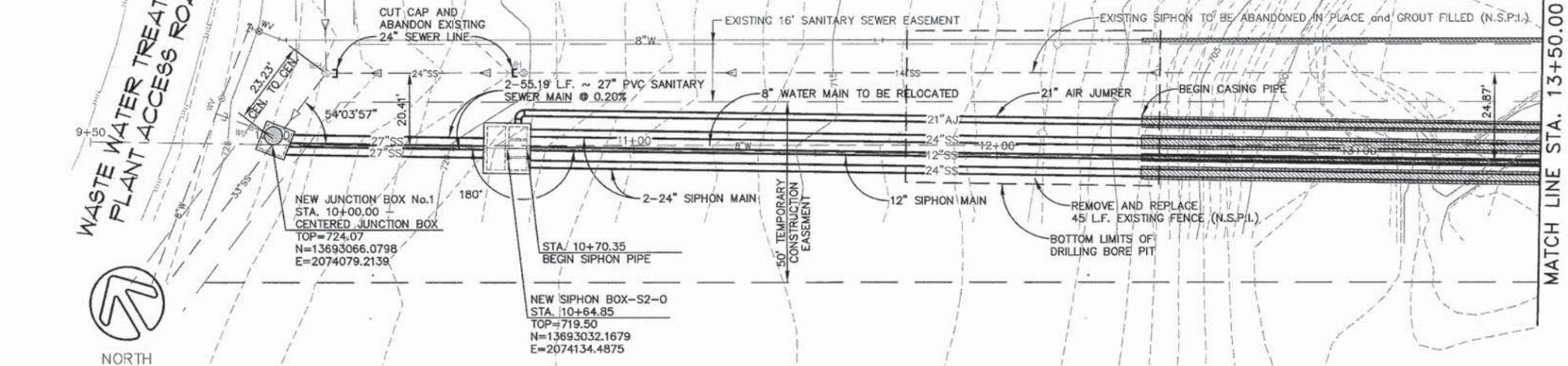
SECT. No. 4

DR. MVT CK. HMC JOB No. 09-2501

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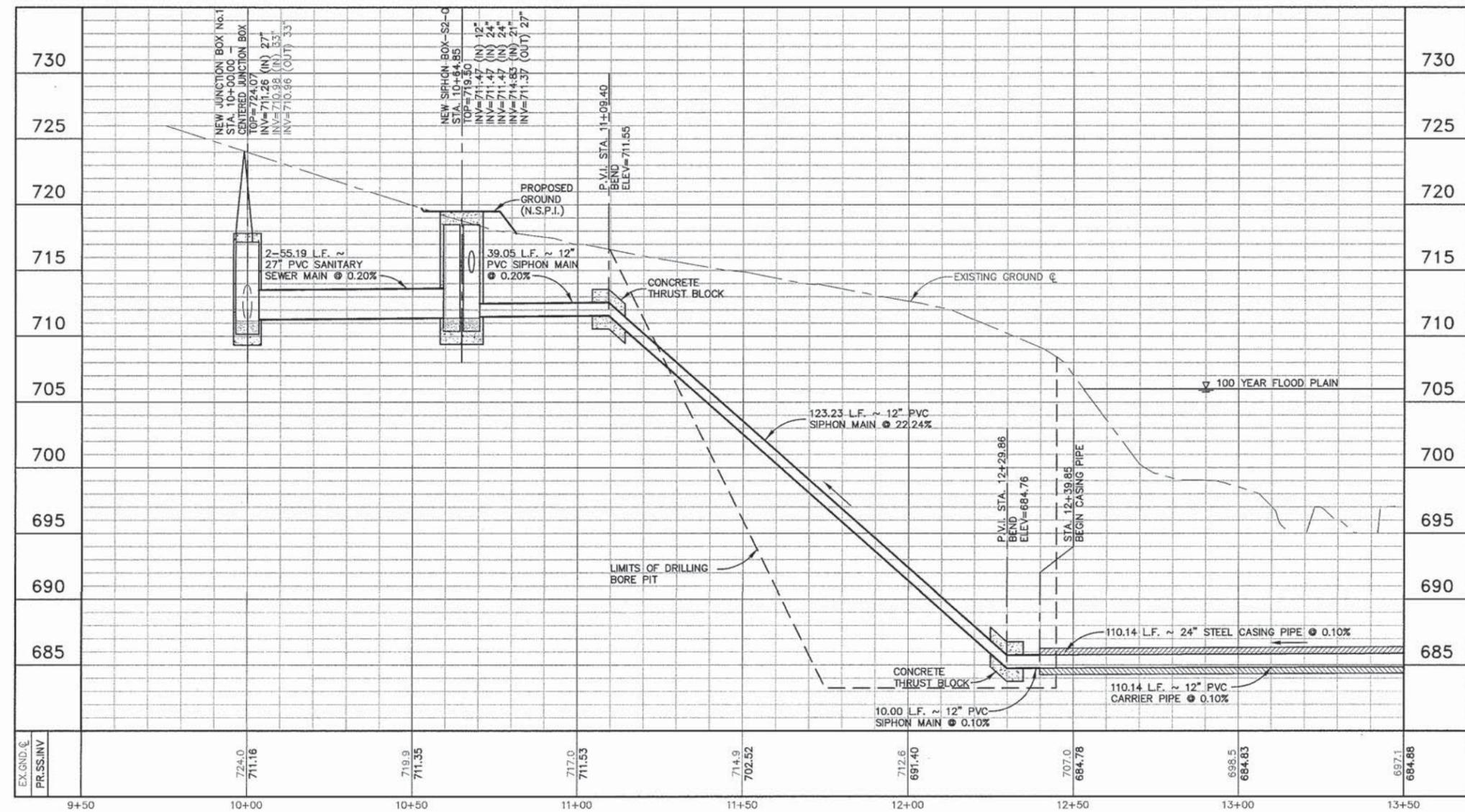
WASTE WATER TREATMENT PLANT ACCESS ROAD

BLOCK 28, N.C.D. 18159
LOT 1



PROPOSED SEWER RELIEF MAIN (MIDDLE PIPE)
SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

NOTE:
SEE JUNCTION BOX DETAILS ON SHEET 23
SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31



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CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
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SHEET NOTES:
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2. ALL SEWER MAIN PIPE SHALL BE IN ACCORDANCE WITH S.A.W.S. STANDARDS. SEWER SERVICES SHALL BE SDR26 PVC UNLESS OTHERWISE NOTED.
3. ABANDON 24" SANITARY SEWER MAIN IN PLACE WITHOUT GROUT. CAP 24" MAIN AT MANHOLE AND ABANDON MANHOLES PER ITEM No. 862, SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS. GROUT AND ABANDON SIPHON MAINS IN PLACE.

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

TREE NOTES:
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2. NO TREES SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY AUTHORIZED BY THE CITY OF SAN ANTONIO.

SHEETS 7, 8, & 9 TOTALS

ITEM	EST.	UNIT	DESCRIPTION
550	230	LF	TRENCH EXCAVATION SAFETY PROTECTION
848	172	LF	12" PVC SANITARY SEWER SDR 26
848	176	LF	21" PVC SANITARY SEWER SDR 26
848	344	LF	24" PVC SANITARY SEWER SDR 26
848	111	LF	27" PVC SANITARY SEWER SDR 26
850	1	EA	CAST-IN-PLACE SIPHON BOX (S2-D)
850	1	EA	CONCRETE JUNCTION BOX (JB-1)
856.1	110	LF	24" JACKING, BORING, or TUNNELING
856.1	110	LF	36" JACKING, BORING, or TUNNELING
856.1	220	LF	42" JACKING, BORING, or TUNNELING
856.2	110	LF	12" PVC CARRIER PIPE FOR JACKING, BORING, TUNNELING
856.2	110	LF	21" PVC CARRIER PIPE FOR JACKING, BORING, TUNNELING
856.2	220	LF	24" PVC CARRIER PIPE FOR JACKING, BORING, TUNNELING
856.3	110	LF	24" STEEL CASING or LINER
856.3	110	LF	36" STEEL CASING or LINER
856.3	220	LF	42" STEEL CASING or LINER
858	6	CY	CONCRETE THRUST BLOCKING

REGISTRATION No. F-1755

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PHASE D

STATE OF TEXAS
HARRY MICHAEL COYLE JR.
61985
REGISTERED PROFESSIONAL ENGINEER

PROPOSED SEWER RELIEF MAIN STA. 10+00.00 TO 13+50.00

UTILITY LEGEND:
PROP. WATER MAIN: 6" CLW
EXIST. WATER MAIN: 2"
GAS MAIN: 8" SA
SANITARY SEWER: 24" ST
STORM SEWER: 24" ST
UTILITY POLE LINE: UT
ELECTRIC CABLE: E
TELEPHONE CABLE: T

Addendum No. 2
No. Revision Drawn Approved Date

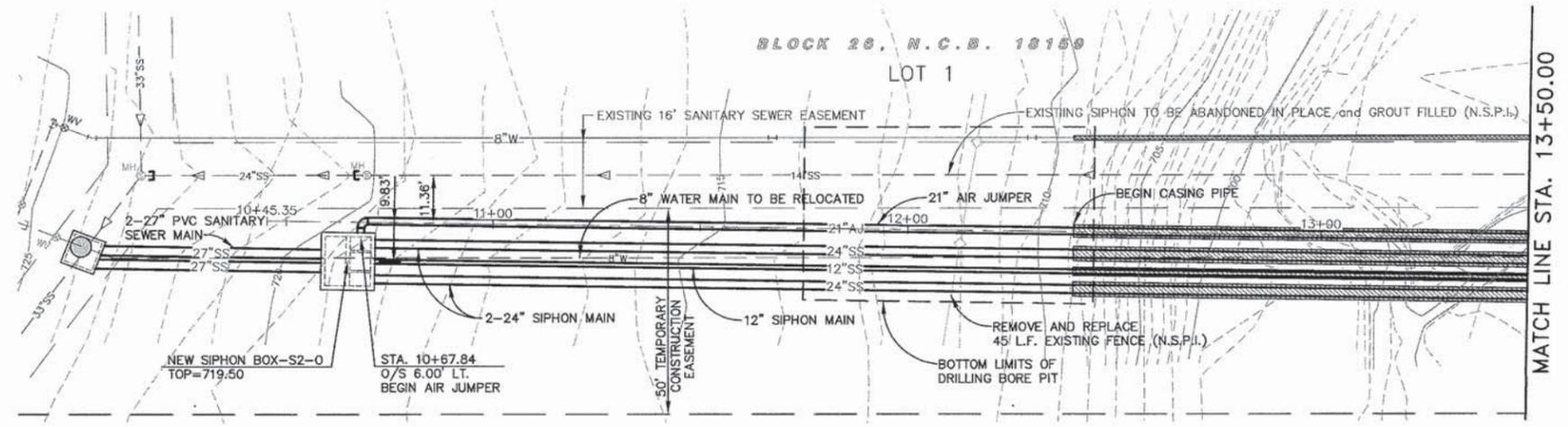
REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)
SAN ANTONIO WATER SYSTEM
CONT. BUDGET PROJ.

SUBMITTED _____
APPROVED _____

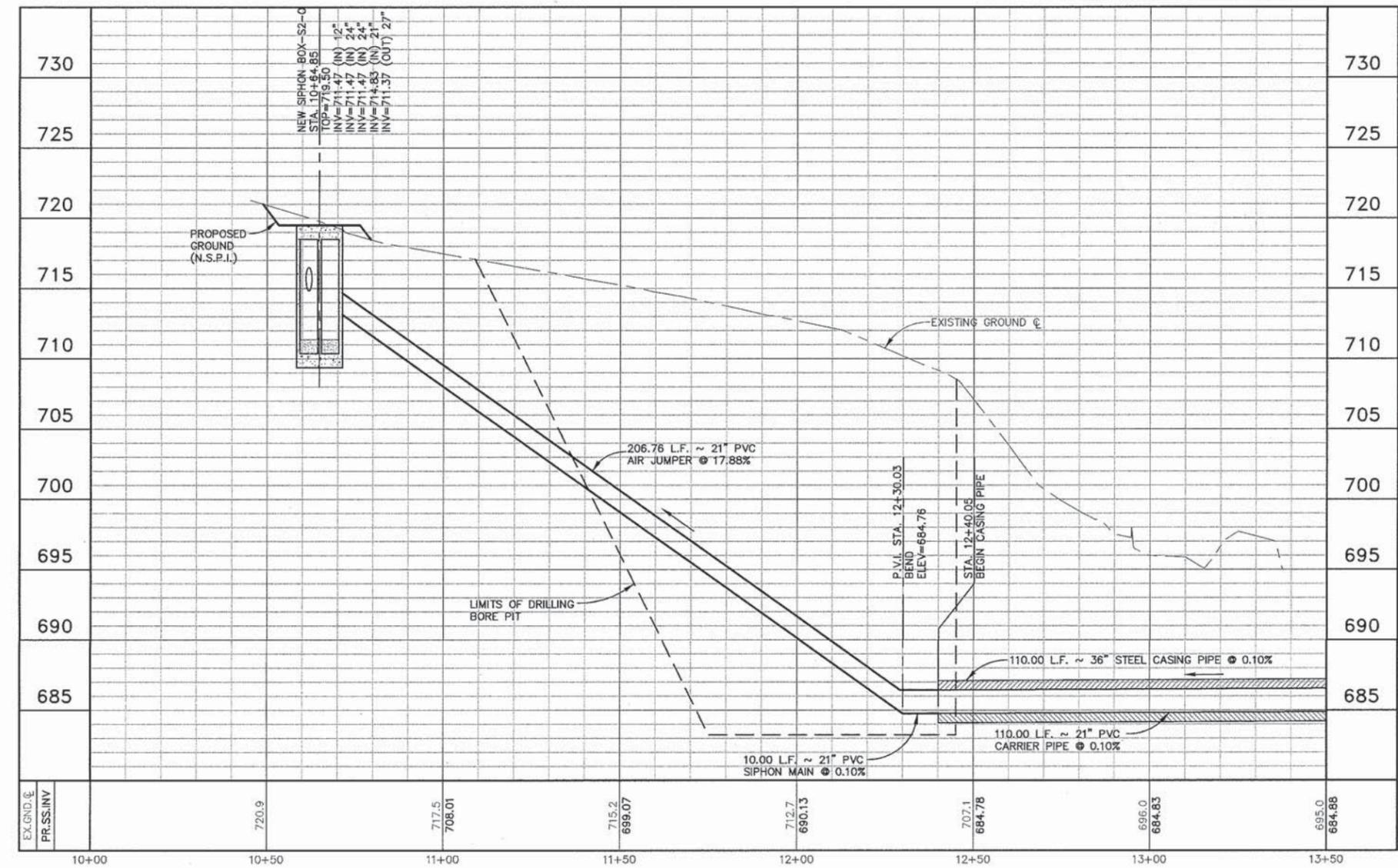
MAP No. 104-566, 106-566, 108-566, 109-570 SHEET 7 OF 48
SECT. No. 7
DR. MVT CK. HMC JOB No. 09-2501

Y:\08044-00 (SAMS For West)\CADD\ParWest-SS1.dwg 2011/10/03 5:47pm



1 PROPOSED SEWER RELIEF MAIN (AIR JUMPER)
 SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

NOTE:
 SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31

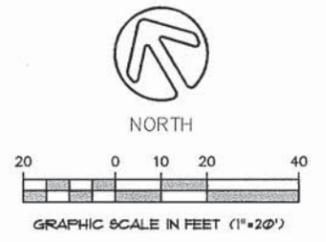


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 - ABANDON 24" SANITARY SEWER MAIN IN PLACE WITHOUT GROUT. CAP 24" MAIN AT MANHOLE AND ABANDON MANHOLES PER ITEM NO. 862, SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS. GROUT AND ABANDON SIPHON MAINS IN PLACE.
 - QUANTITY TOTALS SHOWN ON SHEET 7.
 - SHEET 7, 8, AND 9 ARE THE SAME ALIGNMENT, BUT EACH SHEET SHOWS THE DIFFERENT PARALLEL PIPES THAT COMPOSE THE TRIPLE BARRELL SIPHON AND AIR JUMPER.

TRENCH EXCAVATION SAFETY PROTECTION:
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PROPOSED SEWER RELIEF MAIN STA. 10+64.85 TO 13+50.00

UTILITY LEGEND

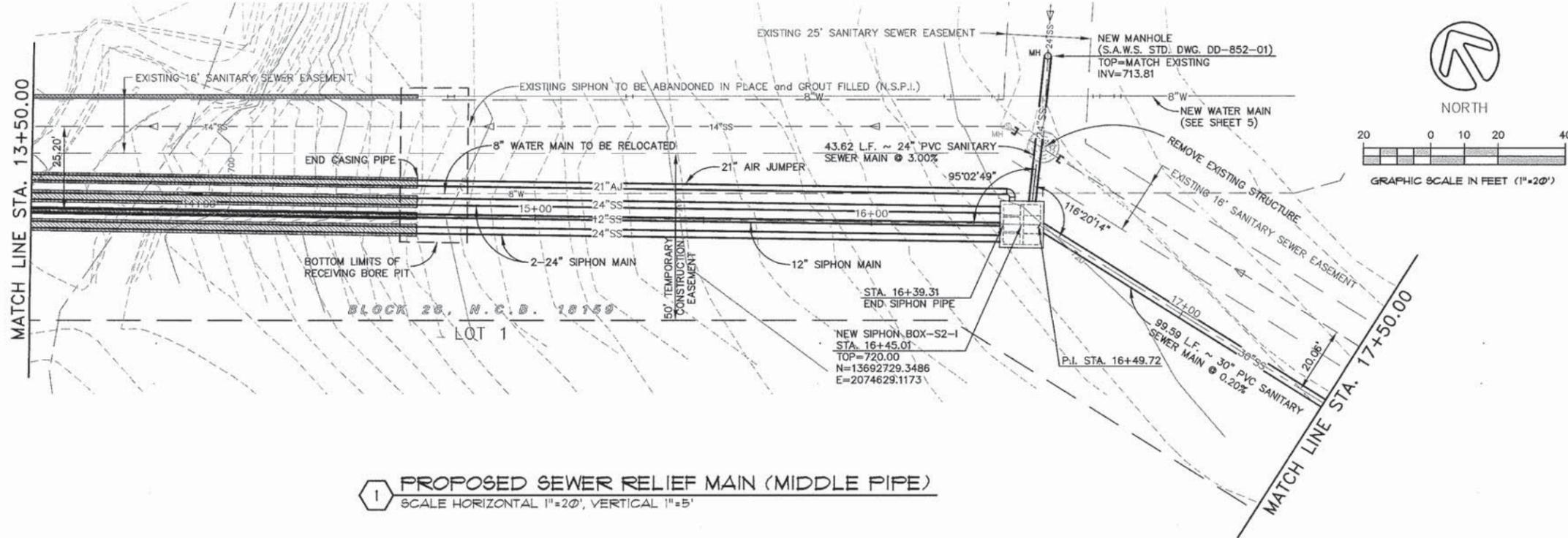
PROP. WATER MAIN	— 6" C.I.W. —
EXIST. WATER MAIN	— 2" C —
GAS MAIN	— 8" SA —
SANITARY SEWER	— 24" ST —
STORM SEWER	— 24" ST —
UTILITY POLE LINE	— UT —
ELECTRIC CABLE	— E —
TELEPHONE CABLE	— T —

Addendum No. 2
 No. Revision Drawn Approved Date
 10/3/11

REVISIONS

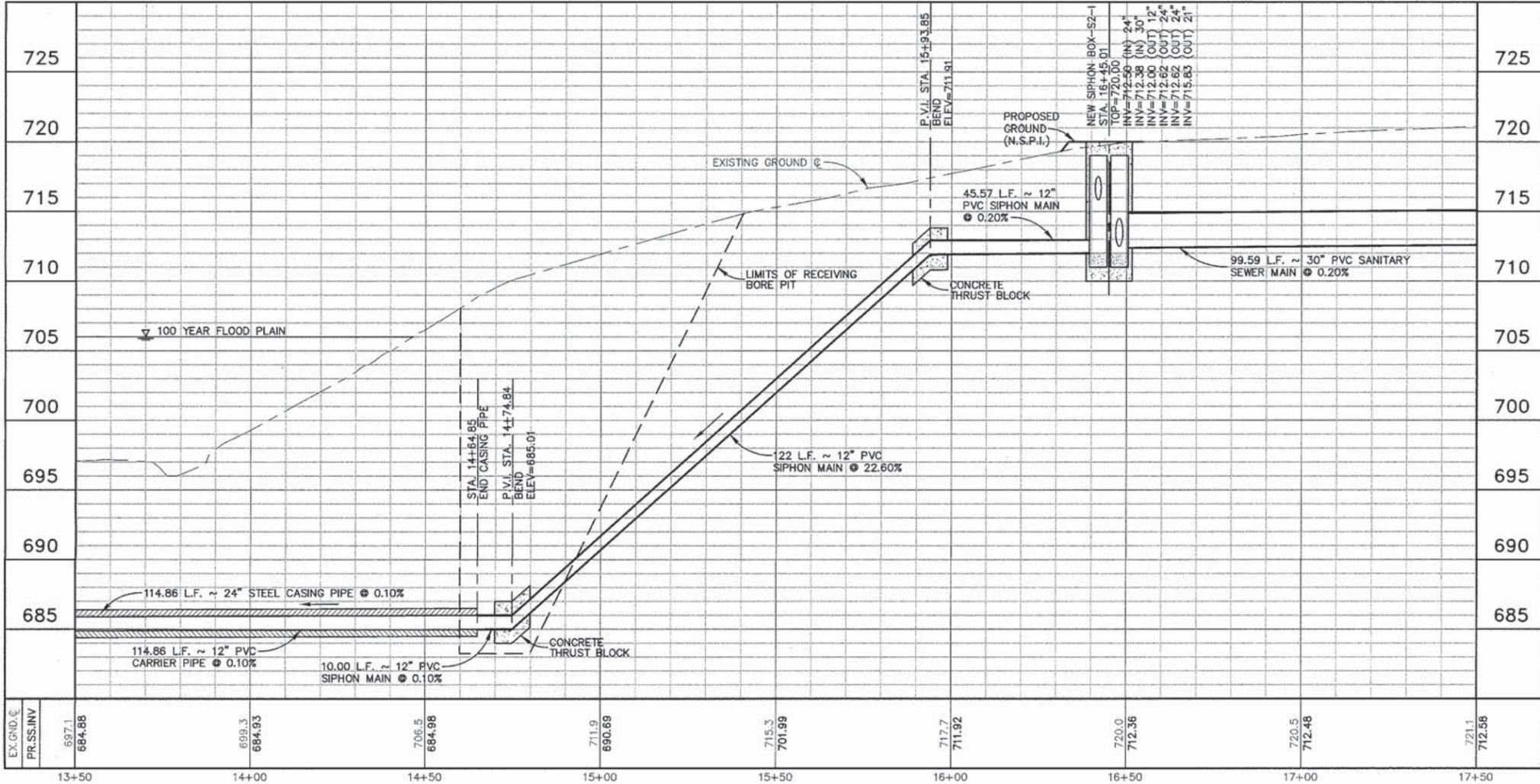
FAR WEST SEWER RELIEF MAIN (FW-01)
 SAN ANTONIO WATER SYSTEM
 CONT. BUDGET PROJ.
 SUBMITTED _____
 APPROVED _____
 MAP No. 104-566, 108-566, 108-568, 106-570 SHEET 9
 SECT. No. 9
 DR. MVT CK. HMC JOB No. 09-2501 OF 48

Y:\09044-00 (SAMS For West)\CAD\ForWest-551b.dwg 2011/10/03 5:42pm



PROPOSED SEWER RELIEF MAIN (MIDDLE PIPE)
SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

NOTE:
SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31



C.P.S. ENERGY UTILITIES NOTE:
CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
DUE TO FEDERAL REGULATION TITLE 49, PART 192.161, C.P.S. ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREA (N.S.P.I.)

SHEET NOTES:
1. THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THESE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE, AND ARE NOT GUARANTEED TO BE ACCURATE. THE CONTRACTOR SHOULD CALL FOR LOCATES THROUGH THE "ONE CALL" UTILITY LOCATE SERVICE (1-800-344-8377) 48 HOURS PRIOR TO CONSTRUCTION/EXCAVATION WORK. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANE DURING CONSTRUCTION.
2. ALL SEWER MAIN PIPE SHALL BE IN ACCORDANCE WITH S.A.W.S. STANDARDS. SEWER SERVICES SHALL BE SDR26 PVC UNLESS OTHERWISE NOTED.
3. ABANDON 24" SANITARY SEWER MAIN IN PLACE WITHOUT GROUT. CAP 24" MAIN AT MANHOLE AND ABANDON MANHOLES PER ITEM NO. 862, SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS. GROUT AND ABANDON SIPHON MAINS IN PLACE.

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

TREE NOTES:
1. CONTRACTOR SHALL USE EXTREME CAUTION DURING CONSTRUCTION OPERATIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING TREES.
2. NO TREES SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY AUTHORIZED BY THE CITY OF SAN ANTONIO.

SHEETS 10, 11, & 12 TOTALS			
ITEM	EST.	UNIT	DESCRIPTION
550	270	LF	TRENCH EXCAVATION SAFETY PROTECTION
848	178	LF	12" PVC SANITARY SEWER SDR 26
848	198	LF	21" PVC SANITARY SEWER SDR 26
848	400	LF	24" PVC SANITARY SEWER SDR 26
848	100	LF	30" PVC SANITARY SEWER SDR 26
850	1	EA	CAST-IN-PLACE SIPHON BOX (S2-1)
852.1	1	EA	SANITARY SEWER MANHOLE (0-6)
852.1	1	EA	SANITARY SEWER STRUCTURE
856.1	115	LF	24" JACKING, BORING, or TUNNELING
856.1	115	LF	36" JACKING, BORING, or TUNNELING
856.1	230	LF	42" JACKING, BORING, or TUNNELING
856.2	115	LF	12" PVC CARRIER PIPE FOR JACKING, BORING, TUNNELING
856.2	115	LF	21" PVC CARRIER PIPE FOR JACKING, BORING, TUNNELING
856.2	230	LF	24" PVC CARRIER PIPE FOR JACKING, BORING, TUNNELING
856.3	115	LF	24" STEEL CASING or LINER
856.3	115	LF	36" STEEL CASING or LINER
856.3	230	LF	42" STEEL CASING or LINER
858	6	CY	CONCRETE THRUST BLOCKING

REGISTRATION No. F-1755

COYLE ENGINEERING
INTEGRITY KNOWLEDGE RESPONSIVENESS
9120 Old Dietz Elkhorn Road T.210-691-8434
San Antonio, Texas 78015 F.830-755-8435

PHASE D

HARRY MICHAEL COYLE, JR.
REGISTERED PROFESSIONAL ENGINEER
61985
10/31/11

PROPOSED SEWER RELIEF MAIN STA. 13+50.00 TO 17+50.00

UTILITY LEGEND:
PROP. WATER MAIN: 8" W, 12" W, 18" W, 24" W
EXIST. WATER MAIN: 8" W, 12" W, 18" W, 24" W
GAS MAIN: 8" SA, 12" SA, 18" SA, 24" SA
SANITARY SEWER: 8" SA, 12" SA, 18" SA, 24" SA
STORM SEWER: 8" SA, 12" SA, 18" SA, 24" SA
UTILITY POLE LINE: E, UT
ELECTRIC CABLE: E
TELEPHONE CABLE: UT

1 Addendum No. 2
No. Revision Drawn Approved Date
10/31/11

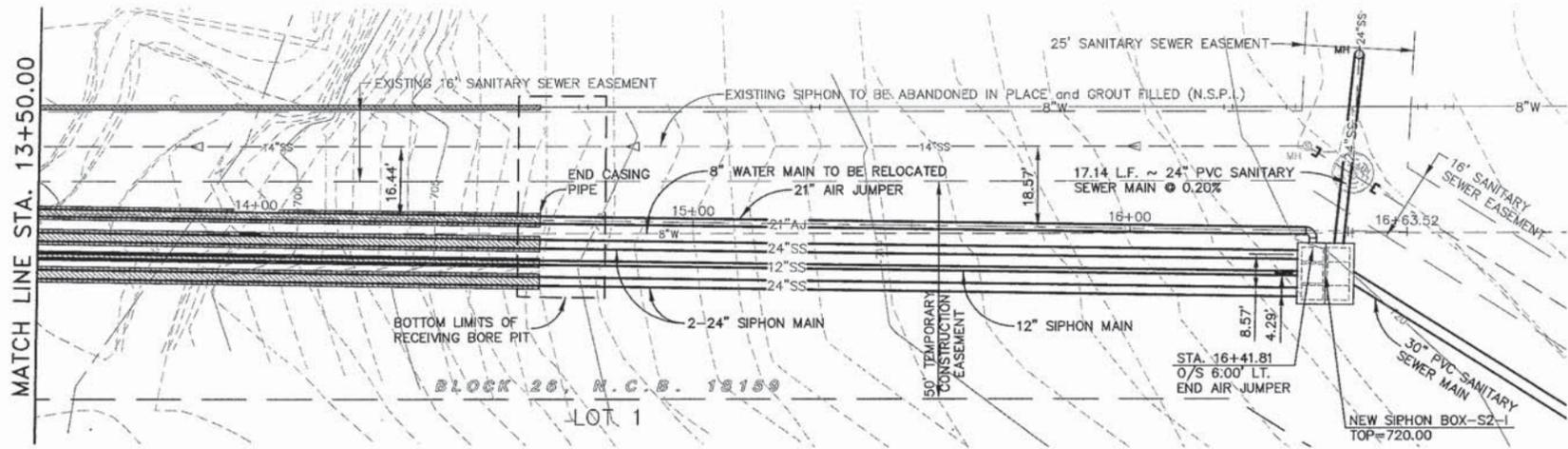
REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)

SAN ANTONIO WATER SYSTEM
CONT. BUDGET PROJ.

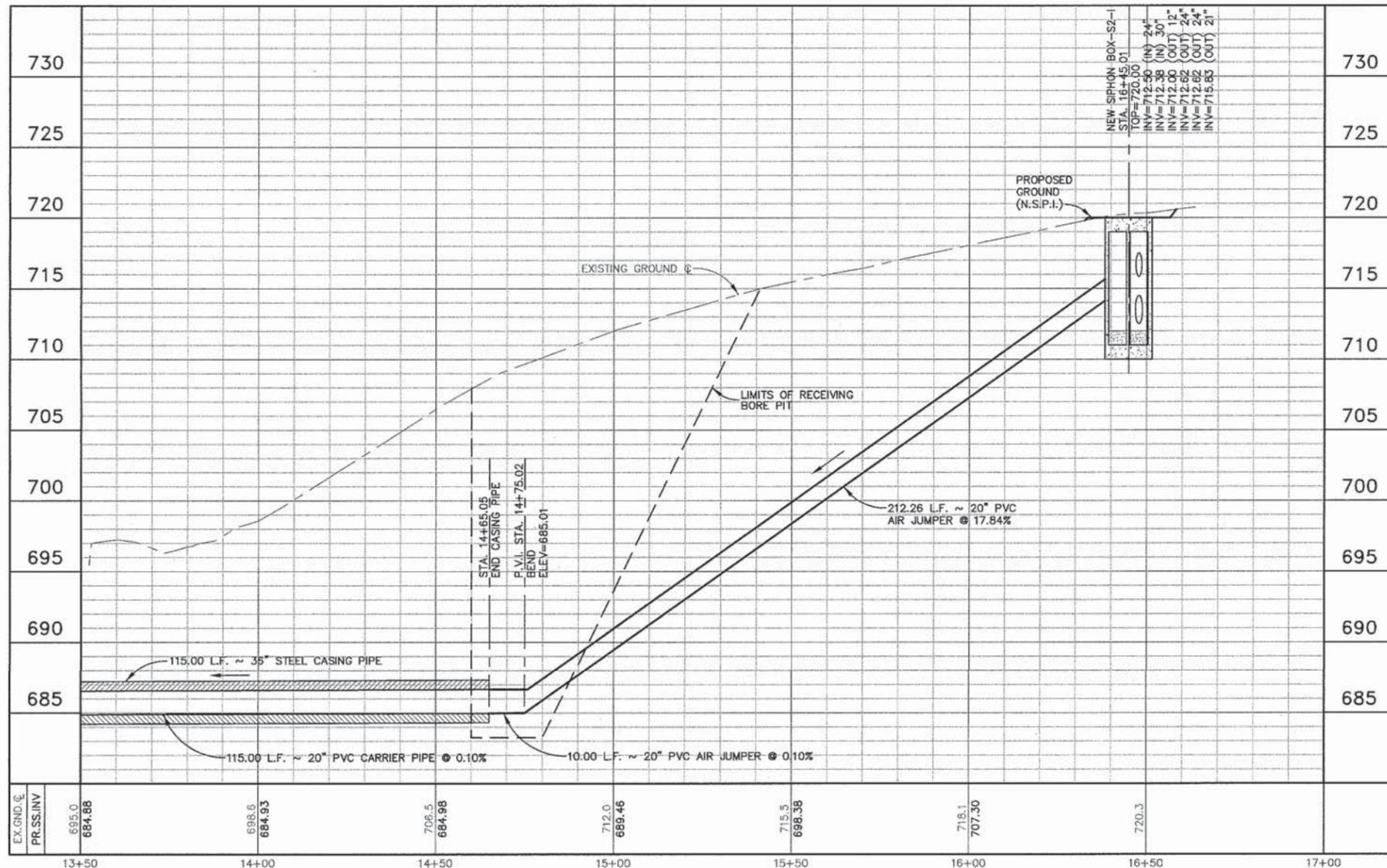
SUBMITTED _____
APPROVED _____

MAP No. 104-566, 106-566, 108-566, 106-570 SHEET
SECT. No. 10
DR. MVT CK. HMC JOB No. 09-2501 OF 48



PROPOSED SEWER RELIEF MAIN (AIR JUMPER)
 SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

NOTE:
 SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31



C.P.S. ENERGY UTILITIES NOTE:

CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
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SHEET NOTES:

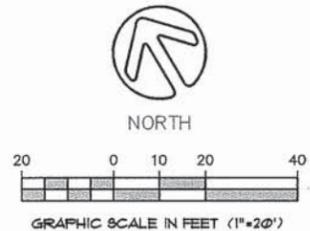
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- ALL SEWER MAIN PIPE SHALL BE IN ACCORDANCE WITH S.A.W.S. STANDARDS. SEWER SERVICES SHALL BE SDR26 PVC UNLESS OTHERWISE NOTED.
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- QUANTITY TOTALS SHOWN ON SHEET 10.
- SHEET 10, 11, AND 12 ARE THE SAME ALIGNMENT, BUT EACH SHEET SHOWS THE DIFFERENT PARALLEL PIPES THAT COMPOSE THE TRIPLE BARRELL SIPHON AND AIR JUMPER.

TRENCH EXCAVATION SAFETY PROTECTION:

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 INTEGRITY KNOWLEDGE RESPONSIVENESS
 9120 Old Dietz Elkhorn Road T.210-691-8434
 San Antonio, Texas 78015 F.830-755-8435

REGISTRATION No. F-1755
 STATE OF TEXAS
 HARRY MICHAEL COYLE JR.
 61985
 PROFESSIONAL ENGINEER

PROPOSED SEWER RELIEF MAIN STA. 13+50.00 to 16+45.01

UTILITY LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE

1. Addendum No. 2
 No. Revision Drawn Approved Date
 10/3/11

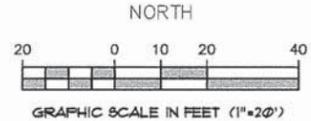
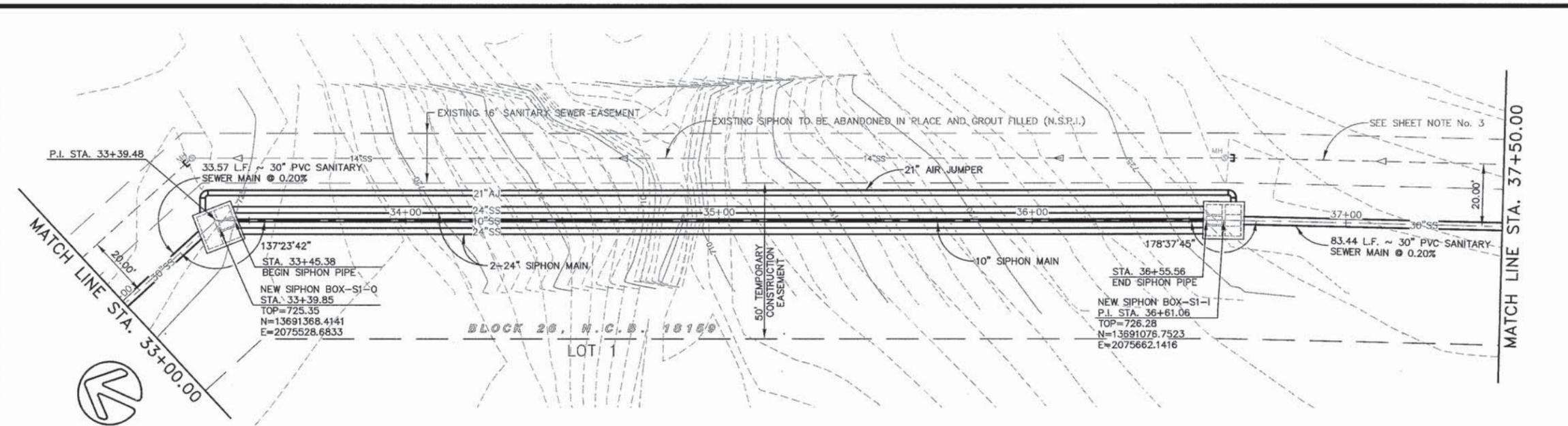
REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)

SAN ANTONIO WATER SYSTEM
 CONT. BUDGET PROJ.

SUBMITTED
 APPROVED

MAP No. 104-566, 106-566, 106-568, 106-570 SHEET
 SECT. No. 12
 DR. MVT CK. HMC JOB No. 09-2501 OF 48



1 PROPOSED SEWER RELIEF MAIN (MIDDLE PIPE)
 SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

C.P.S. ENERGY UTILITIES NOTE:
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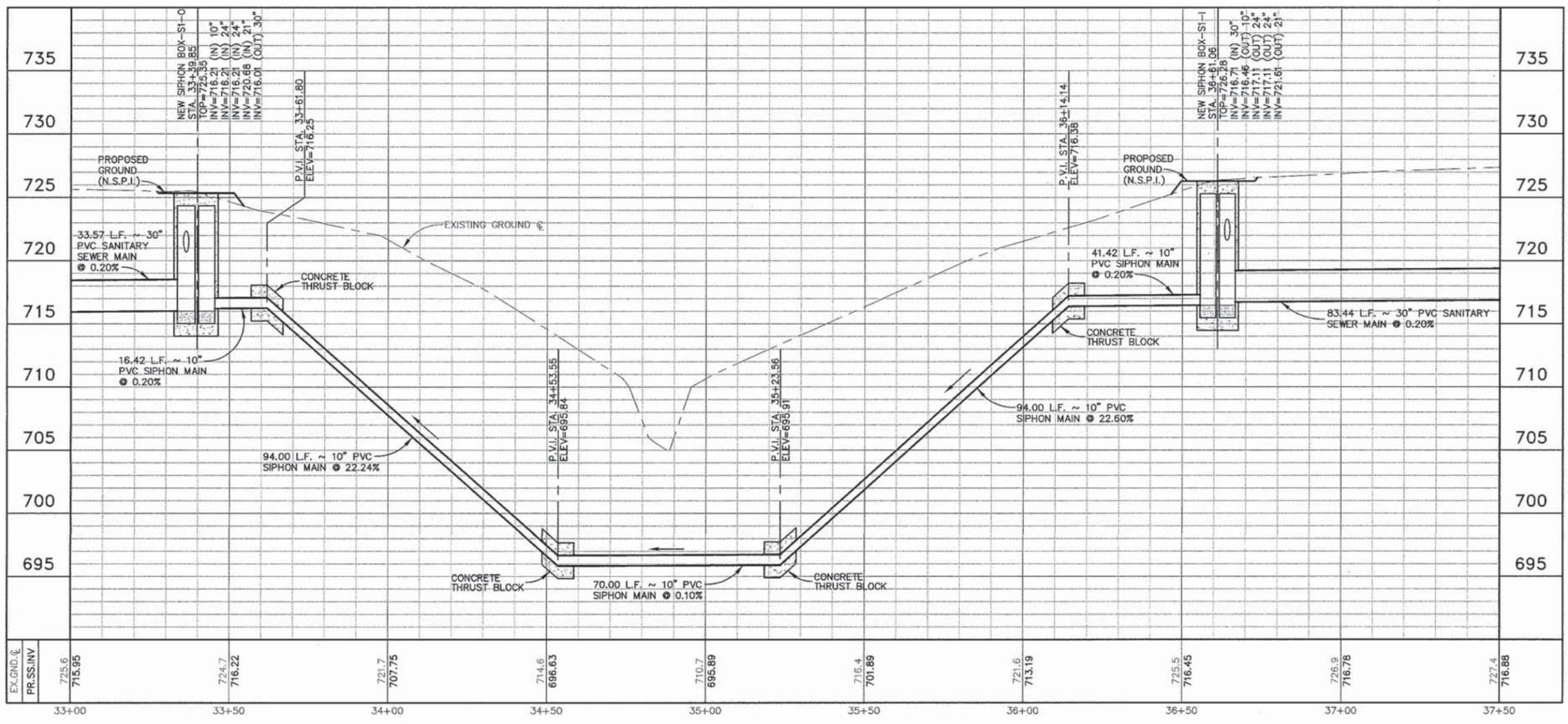
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TREE NOTES:

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NOTE:
 SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31



SHEETS 17, 18, 19, & 20 TOTALS

ITEM	EST.	UNIT	DESCRIPTION
550	330	LF	TRENCH EXCAVATION SAFETY PROTECTION
848	310	LF	10" PVC SANITARY SEWER SDR 26
848	336	LF	21" PVC SANITARY SEWER SDR 26
848	630	LF	24" PVC SANITARY SEWER SDR 26
848	117	LF	30" PVC SANITARY SEWER SDR 26
850	1	EA	CAST-IN-PLACE DISCHARGE SIPHON BOX (S1-1)
850	1	EA	CAST-IN-PLACE INLET SIPHON BOX (S1-0)
858	6	CY	THRUST BLOCK

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 San Antonio, Texas 78015 F.830-755-8435
 PHASE D

REGISTRATION No. F-1755

PROPOSED SEWER RELIEF MAIN STA. 33+00.00 to 37+50.00

UTILITY LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE

REVISIONS

No.	Revision	Drawn	Approved	Date
1	Addendum No. 2			10/31/11

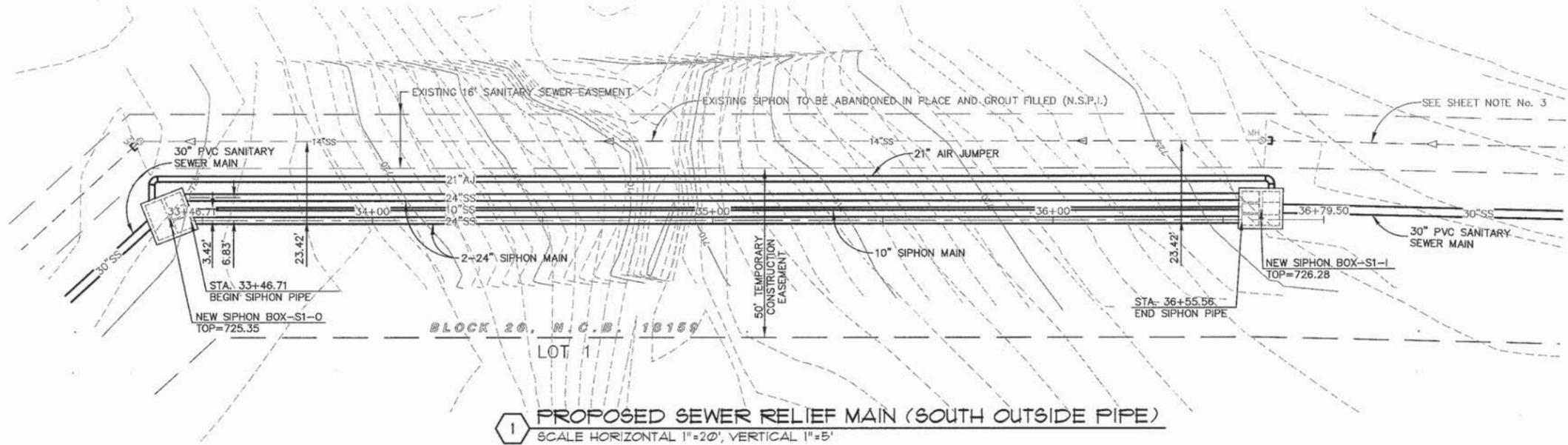
FAR WEST SEWER RELIEF MAIN (FW-01)

SAN ANTONIO WATER SYSTEM
 CONT. BUDGET PROJ.

SUBMITTED _____
 APPROVED _____

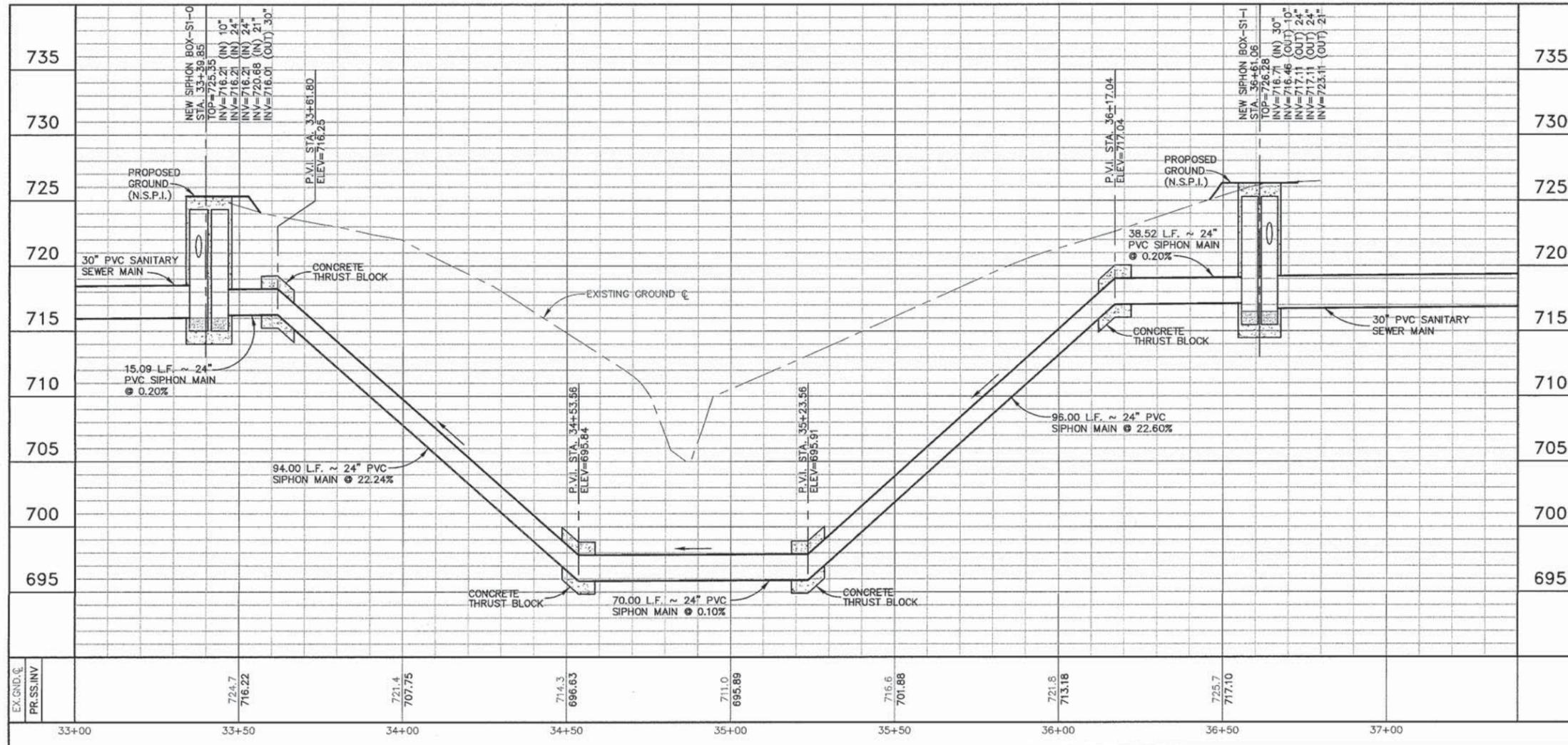
MAP No. 104-566, 106-566, 108-568, 108-570 SHEET
 SECT. No. 17
 DR. MVT CK. HMC JOB No. 09-2501 OF 48

X:\0904-00 (SANS Far West)\CAD\Drawings\SS7.dwg 2011/10/03 8:31pm



1 PROPOSED SEWER RELIEF MAIN (SOUTH OUTSIDE PIPE)
SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

NOTE:
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SHEET NOTES:

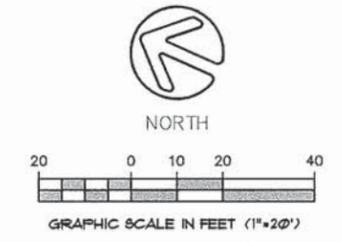
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- SHEET 17, 18, 19, AND 20 ARE THE SAME ALIGNMENT, BUT EACH SHEET SHOWS THE DIFFERENT PARALLEL PIPES THAT COMPOSE THE TRIPLE BARRELL SIPHON AND AIR JUMPER.

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REGISTRATION No. F-1755
HARRY MICHAEL COYLE JR.
REGISTERED PROFESSIONAL ENGINEER
61985

PHASE D

PROPOSED SEWER RELIEF MAIN STA. 33+39.85 TO 36+61.06

UTILITY LEGEND

PROP. WATER MAIN	— 6"CL.W.—
EXIST. WATER MAIN	— 6"CL.W.—
GAS MAIN	— 2"CL.G.—
SANITARY SEWER	— 8"SA—
STORM SEWER	— 24"ST—
UTILITY POLE LINE	— UT—
ELECTRIC CABLE	— E—
TELEPHONE CABLE	— T—

Addendum No. 2
No. Revision Drawn Approved Date

REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)

SAN ANTONIO WATER SYSTEM
CONT. BUDGET PROJ.

SUBMITTED _____
APPROVED _____

MAP No. 104-566, 108-566, 108-568, 108-570 SHEET 18
SECT. No. _____ OF 48
DR. MVT CK. HMC JOB No. 09-2501

Y:\09044-00 (SAMS For West)\CADD\For West-SS76.dwg 2011/10/03 5:23pm

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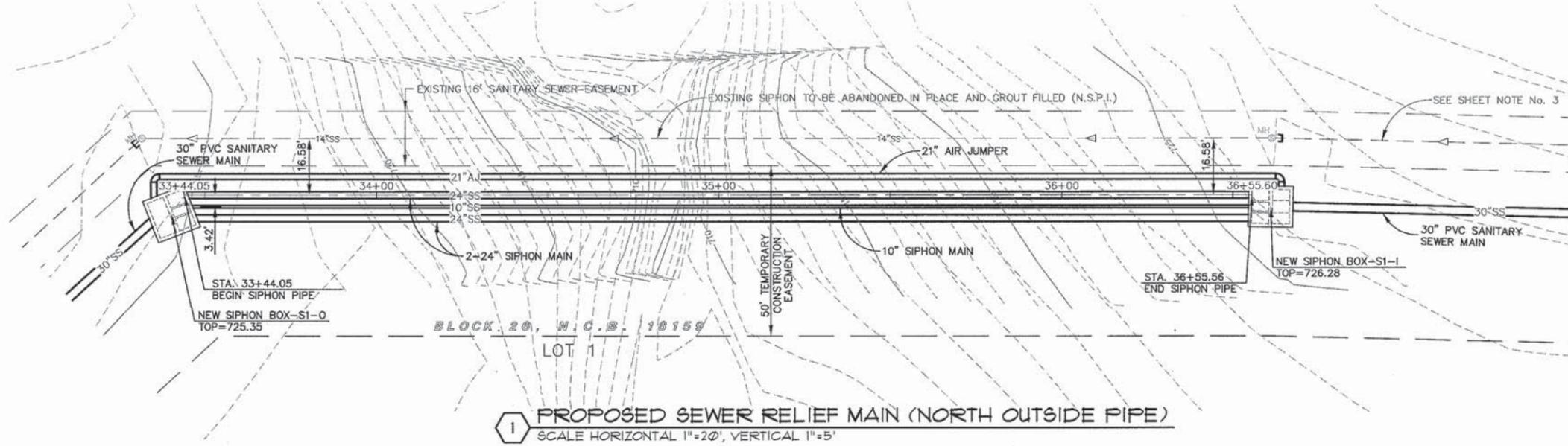
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- SHEET 17, 18, 19, AND 20 ARE THE SAME ALIGNMENT, BUT EACH SHEET SHOWS THE DIFFERENT PARALLEL PIPES THAT COMPOSE THE TRIPLE BARRELL SIPHON AND AIR JUMPER.

TRENCH EXCAVATION SAFETY PROTECTION:

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

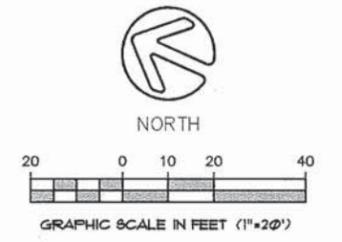
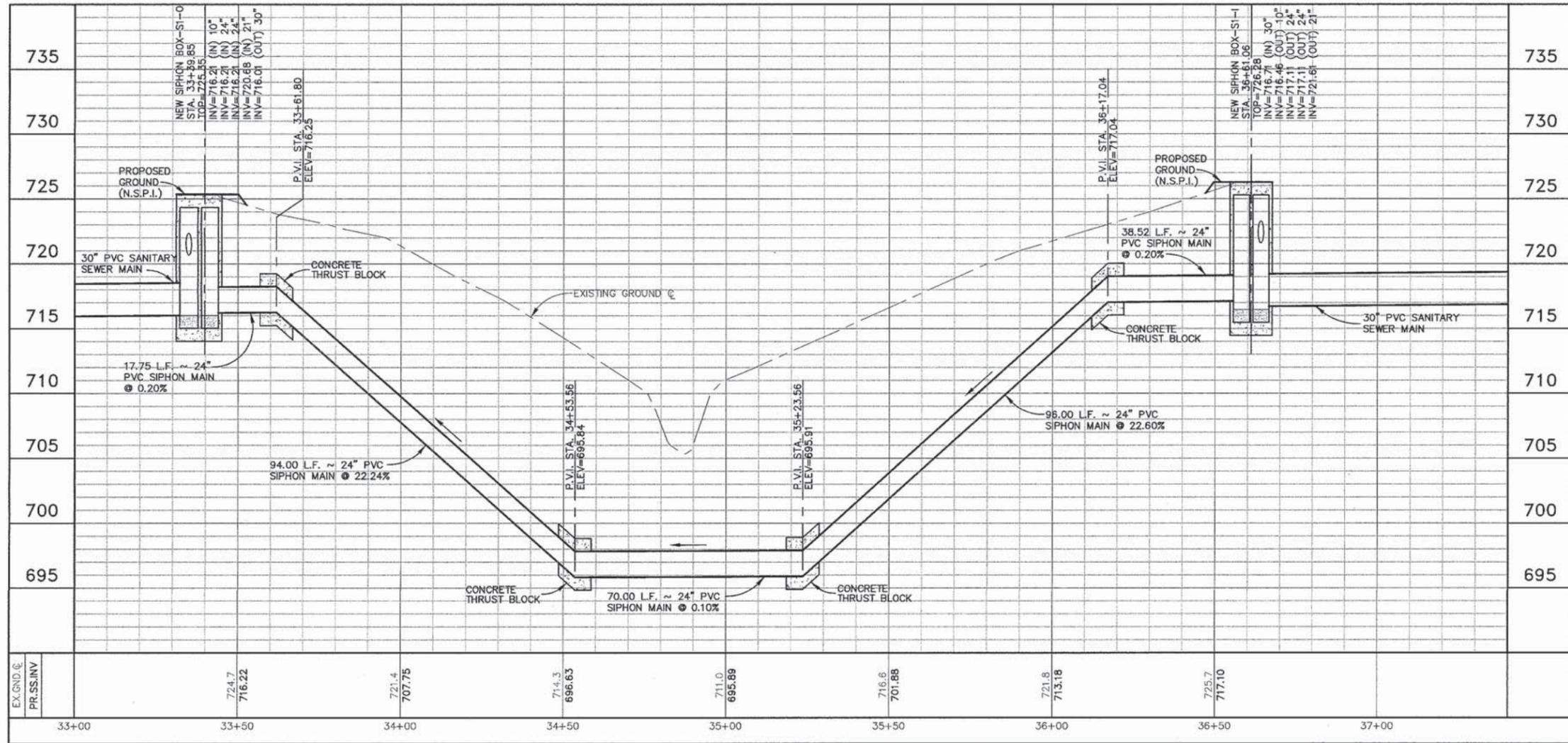
TREE NOTES:

- CONTRACTOR SHALL USE EXTREME CAUTION DURING CONSTRUCTION OPERATIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING TREES.
- NO TREES SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY AUTHORIZED BY THE CITY OF SAN ANTONIO.



1 PROPOSED SEWER RELIEF MAIN (NORTH OUTSIDE PIPE)
 SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

NOTE:
 SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31



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 San Antonio, Texas 78015 F.830-755-8435
 PHASE D

REGISTRATION No. F-1755

 HARRY MICHAEL COYLE, JR.
 61985
 REGISTERED PROFESSIONAL ENGINEER

PROPOSED SEWER RELIEF MAIN STA. 33+39.85 TO 36+61.06

No.	Revision	Drawn	Approved	Date
1	Addendum No. 2	AW	MC	8/3/18

UTILTY LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE

REVISIONS

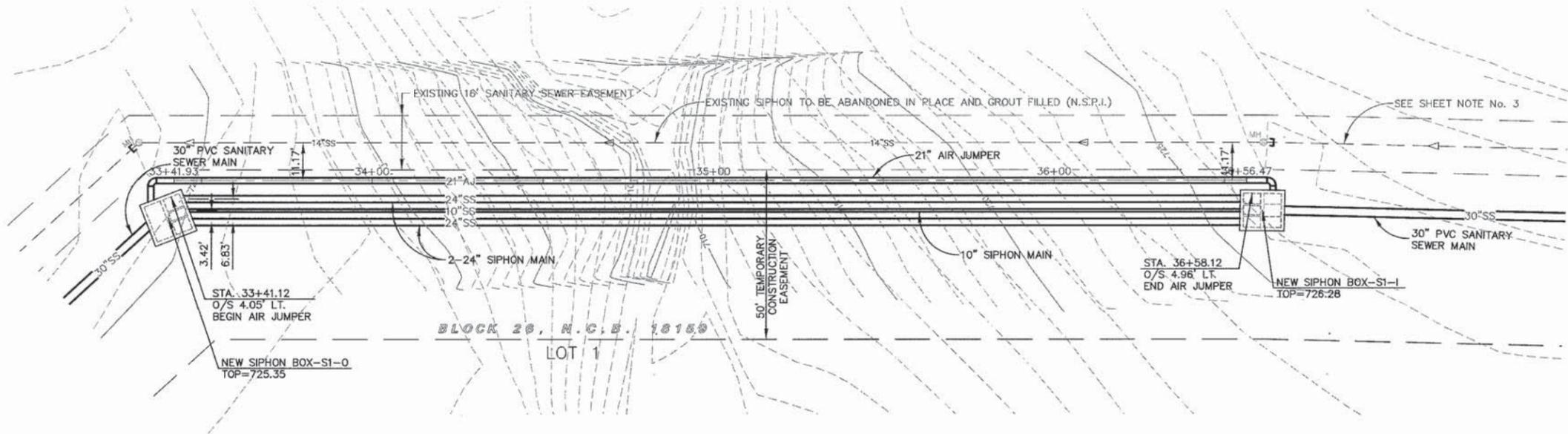
FAR WEST SEWER RELIEF MAIN (FW-01)

SAN ANTONIO WATER SYSTEM
 CONT. BUDGET PROJ.

SUBMITTED _____
 APPROVED _____

MAP No. 104-566, 106-566, 108-568, 106-570 SHEET 19
 SECT. No. _____ OF 48
 DR. MVT CK. HMC JOB No. 09-2501

X:\09044-00 (SANS For West)\CADD\ForWest-SS7b.dwg 2011/10/03 6:00pm



1 PROPOSED SEWER RELIEF MAIN (AIR JUMPER)
 SCALE HORIZONTAL 1"=20', VERTICAL 1"=5'

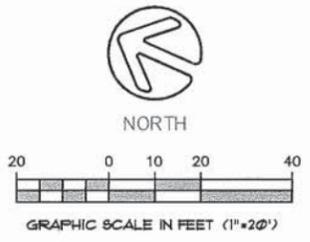
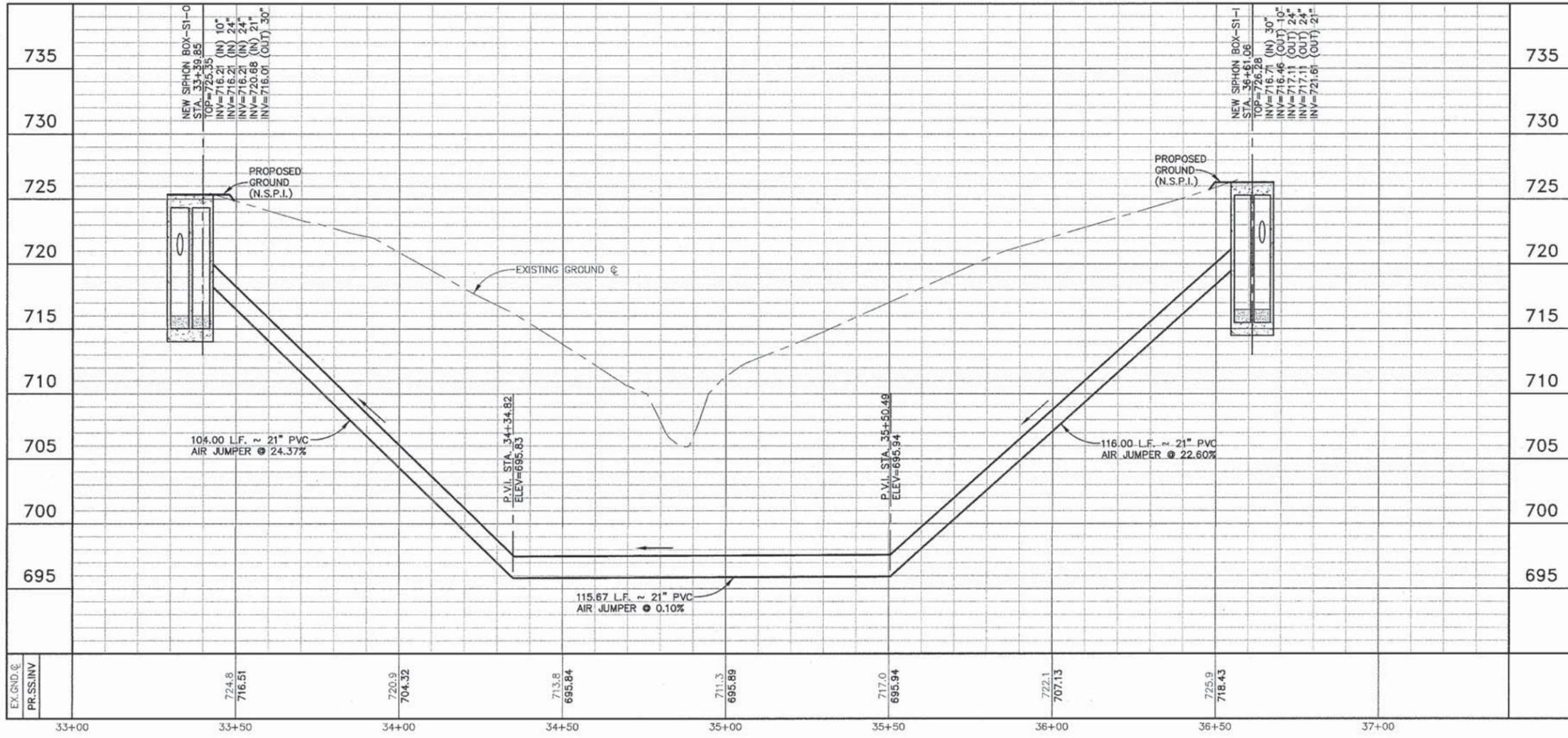
C.P.S. ENERGY UTILITIES NOTE:
 CALL THE TEXAS STATE WIDE ONE CALL LOCATOR NUMBER 1-800-344-8377, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.
 DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, C.P.S. ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
 THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING C.P.S. ENERGY OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES IF ADJACENT TO WORK AREA (N.S.P.I.)

- SHEET NOTES:**
- THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THESE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE, AND ARE NOT GUARANTEED TO BE ACCURATE. THE CONTRACTOR SHOULD CALL FOR LOCATES THROUGH THE "ONE CALL" UTILITY LOCATE SERVICE (1-800-344-8377) 48 HOURS PRIOR TO CONSTRUCTION/EXCAVATION WORK. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANE DURING CONSTRUCTION.
 - ALL SEWER MAIN PIPE SHALL BE IN ACCORDANCE WITH S.A.W.S. STANDARDS. SEWER SERVICES SHALL BE SDR26 PVC UNLESS OTHERWISE NOTED.
 - ABANDON 24" SANITARY SEWER MAIN IN PLACE WITHOUT GROUT. CAP 24" MAIN AT MANHOLE AND ABANDON MANHOLES PER ITEM No. 862, SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS. GROUT AND ABANDON SIPHON MAINS IN PLACE.
 - QUANTITY TOTALS SHOWN ON SHEET 17.
 - SHEET 17, 18, 19, AND 20 ARE THE SAME ALIGNMENT, BUT EACH SHEET SHOWS THE DIFFERENT PARALLEL PIPES THAT COMPOSE THE TRIPLE BARRELL SIPHON AND AIR JUMPER.

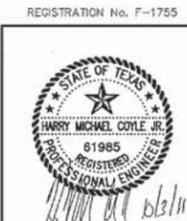
TRENCH EXCAVATION SAFETY PROTECTION:
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL / SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK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

- TREE NOTES:**
- CONTRACTOR SHALL USE EXTREME CAUTION DURING CONSTRUCTION OPERATIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING TREES.
 - NO TREES SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY AUTHORIZED BY THE CITY OF SAN ANTONIO.

NOTE:
 SEE SIPHON BOX DETAILS ON SHEETS 22, 24-31



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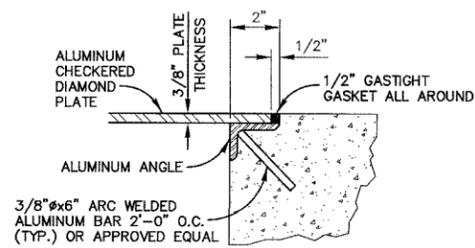


PROPOSED SEWER RELIEF MAIN STA. 33+39.85 to 36+55.56

UTILITY LEGEND	
PROP. WATER MAIN	— 12" —
EXIST. WATER MAIN	— 6" C.L.W. —
GAS MAIN	— 2" G —
SANITARY SEWER	— 8" SA —
STORM SEWER	— 24" ST —
UTILITY POLE LINE	— U —
ELECTRIC CABLE	— E —
TELEPHONE CABLE	— T —

Addendum No. 2	10/3/11			
No.	Revision	Drawn	Approved	Date
REVISIONS				
FAR WEST SEWER RELIEF MAIN (FW-01)				
SAN ANTONIO WATER SYSTEM				
CONT. BUDGET PROJ.				
SUBMITTED _____				
APPROVED _____				
MAP No. 104-566, 106-566, 106-568, 106-570				SHEET
SECT. No.				20
DR. MVT	CK. HMC	JOB No. 09-2501		OF 48

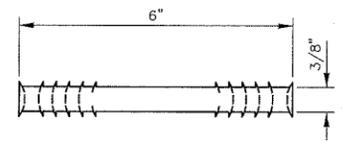
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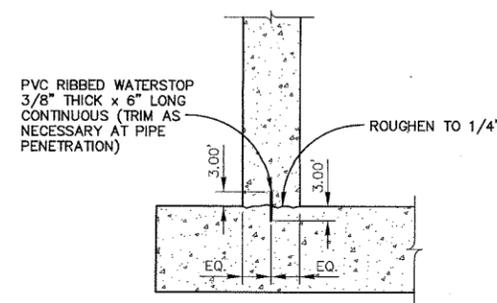
ALUMINUM CHECKERED DIAMOND PLATE NOTES:

1. GAS TIGHT INSTALLATION REQUIRED AT INVERTED SIPHON STRUCTURES AND TRANSITION BOX STRUCTURE. GAS TIGHT GASKET MATERIAL AND DETAILS TO BE SUBMITTED ON SHOP DRAWINGS.
2. REMOVABLE DIAMOND PLATES SHALL BE FASTENED WITH BOLTS, FASTENING DETAILS TO BE FURNISHED ON SHOP DRAWINGS. FASTENER SHALL BE OF A COMPATIBLE MATERIAL WITH PLATE/FRAME TO REST GALVANIC CORROSION DURING A SUBMERGED CONDITION.
3. REMOVABLE DIAMOND PLATES TO BE SIZED FOR MAXIMUM LIFTING WEIGHT OF 50 POUNDS AND MANAGEABLE LENGTH AND WIDTH.
4. ALUMINUM ANGLE SIZES TO BE SUBMITTED ON SHOP DRAWINGS.

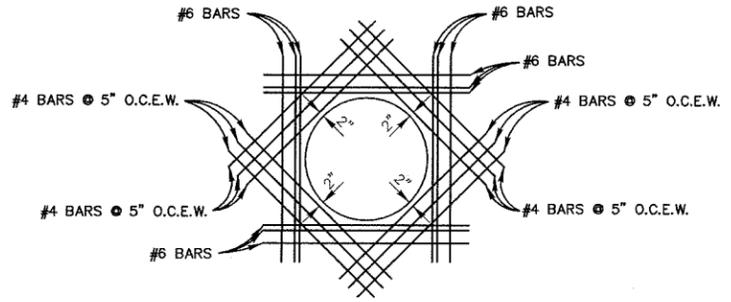
1 ALUMINUM EMBEDDED PLATE
SCALE: N.T.S.



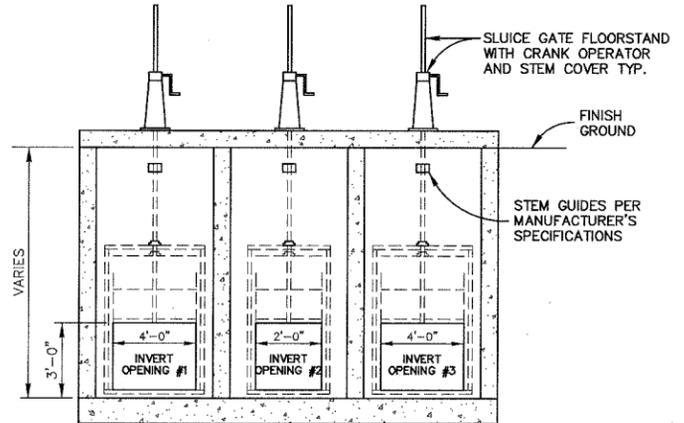
SERRATED WATERSTOP



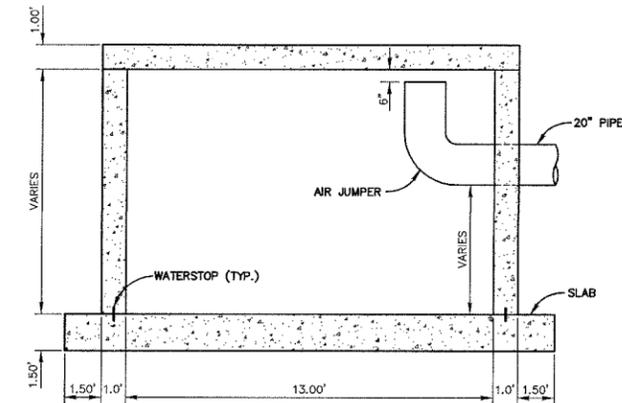
2 WATERSTOP DETAIL
SCALE: N.T.S.



3 MANHOLE OPENING
SCALE: N.T.S.



4 INVERTED SIPHON SLUICE GATE DETAIL
SCALE: N.T.S.



5 AIR BYPASS
SCALE: N.T.S.

SCHEDULE OF WASTEWATER CONTROL GATES

STRUCTURE	GATE	TYPE	OPENING WIDTH (INCHES)	OPENING HEIGHT (INCHES)	LIFT	DIMENSIONS * (INCHES)	
						GATE WIDTH	GATE HEIGHT
S1-I	1	SLIDE	48	36	SINGLE	54	42
S1-I	2	SLIDE	24	36	SINGLE	30	42
S1-I	3	SLIDE	48	36	SINGLE	54	42
S2-I	1	SLIDE	48	36	SINGLE	54	42
S2-I	2	SLIDE	24	36	SINGLE	30	42
S2-I	3	SLIDE	48	36	SINGLE	54	42
S1-O	1	SLIDE	48	36	SINGLE	54	42
S1-O	2	SLIDE	24	36	SINGLE	30	42
S1-O	3	SLIDE	48	36	SINGLE	54	42
S2-O	1	SLIDE	48	36	SINGLE	54	42
S2-O	2	SLIDE	24	36	SINGLE	30	42
S2-O	3	SLIDE	48	36	SINGLE	54	42

* NOTE: DIMENSIONS SHOWN ARE ESTIMATED ACTUAL DIMENSIONS SHALL BE DETERMINED BY GATE MANUFACTURER.

SIPHON INLET/JUNCTION BOX NOTES

- 1.) ALL FOUNDATION AND BACKFILL DESIGN WILL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT LABELED "GEOTECHNICAL EXPLORATION ON SAWS FAR WEST SEWER RELIEF MAIN, HIGHWAY 90 NEAR HUNT LANE, SAN ANTONIO, TEXAS, ADDULA REPORT NO. H100155," DATED 4/26/2010 OR REVIEWED AND APPROVED BY ADDULA CONSULTING ENGINEERS PRIOR TO CONSTRUCTION.
- 2.) CONCRETE SHALL BE CLASS "A" ACCORDING TO TxDOT ITEM 421 WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS OTHERWISE STATED ON THE PLANS.
- 3.) REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL HAVE DEFORMATIONS CONFORMING TO ASTM A-615 AND SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
 A-615, GRADE 40.....#3 BARS AND DOWELS
 A-185.....WELDED WIRE FABRIC
 A-615, GRADE 60.....ALL OTHER REINFORCING
 ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS, EXCEPT WHEN REFERRING TO CLEARANCE.
- 4.) REFER TO SLUICE GATE MANUFACTURER FOR THROUGH SLAB HOLE DETAILS
- 5.) THE CONTRACTOR SHALL GROUT FILL THE EDGES OF THE BOX TO ENSURE POSITIVE DRAINAGE AWAY FROM EDGES AND CORNERS TO THE OUTFALL PIPES. (MIN. SLOPE 1/2" TO 1") (N.S.P.I.)
- 6.) NO CONSTRUCTION JOINTS ARE ALLOWED ON SLAB ON GRADE.
- 7.) ROOF SLAB SHALL BE CAST AND FULLY CURED PRIOR TO BACKFILLING OF STRUCTURES WITH COMPACTED SELECT FILL MATERIAL.
- 8.) ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
- 9.) BAR SIZE AND SPACING BASED ON SPANS AS SHOWN, ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE-DESIGN ON STEEL REQUIRED.

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PHASE D

GENERAL NOTES & GENERAL DETAILS

UTILITY LEGEND

PROP. WATER MAIN	—●—
EXIST. WATER MAIN	—○—
GAS MAIN	—2"○—
SANITARY SEWER	—8"SA—
STORM SEWER	—24"ST—
UTILITY POLE LINE	—○—
ELECTRIC CABLE	—E—
TELEPHONE CABLE	—UT—

1	ADDENDUM 2	HMC	10/3/11
No.	Revision	Drawn	Approved

REVISIONS

FAR WEST SEWER RELIEF MAIN (FW-01)

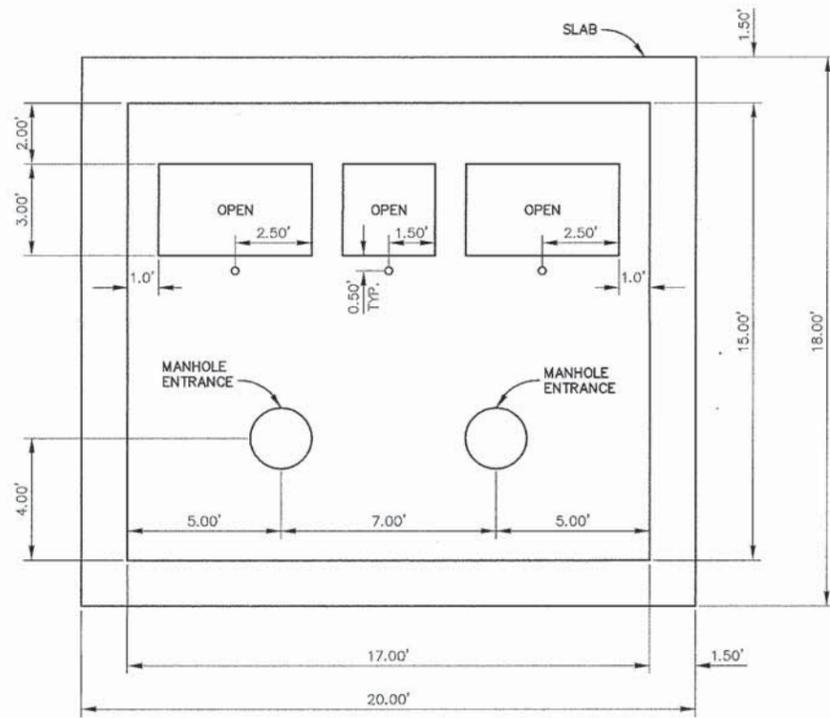
SAN ANTONIO WATER SYSTEM

CONT. BUDGET PROJ.

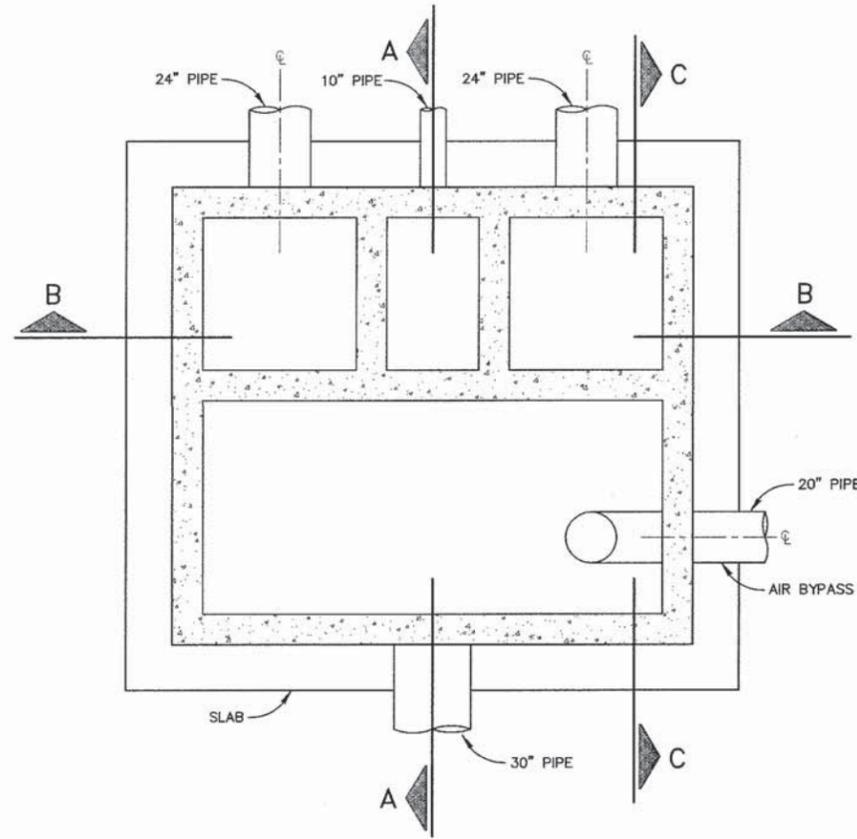
SUBMITTED _____
 APPROVED _____

MAP No. 104-566, 106-566, 108-568, 108-570 SHEET 22
 SECT. No. OF 48
 DR. TM CK. HMC JOB No. 09-2501

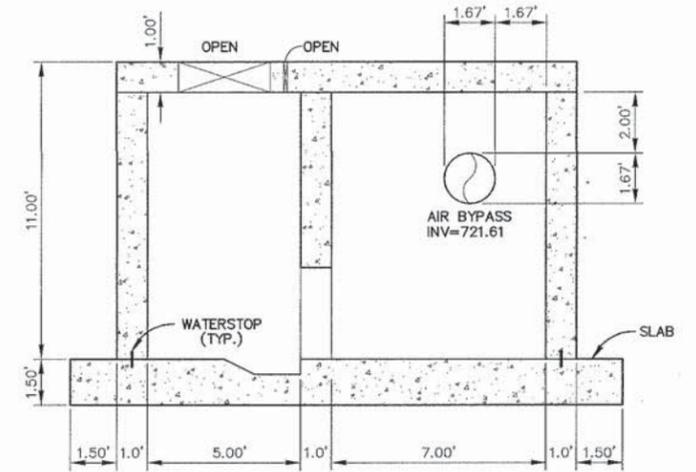
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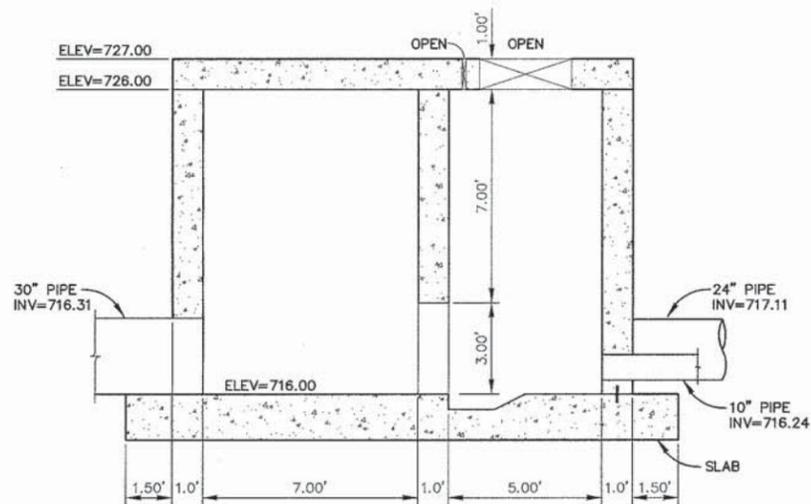
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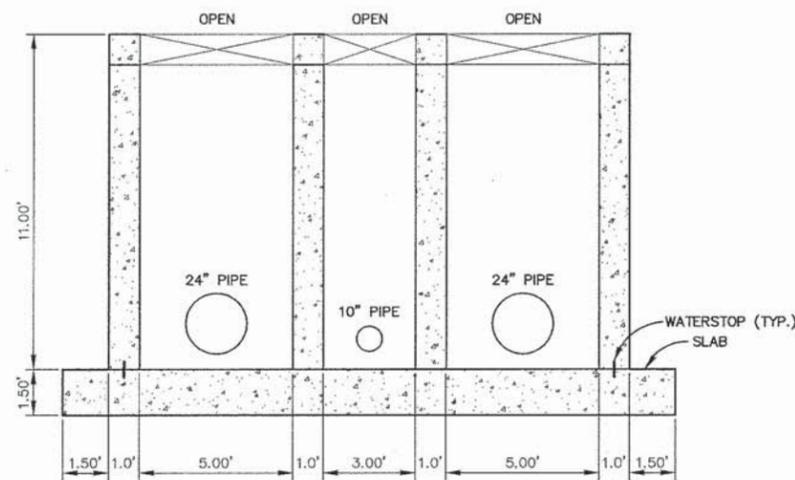
2 TOP VIEW SECTION
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5 SECTION C-C
SCALE: N.T.S.



3 SECTION A-A
SCALE: N.T.S.



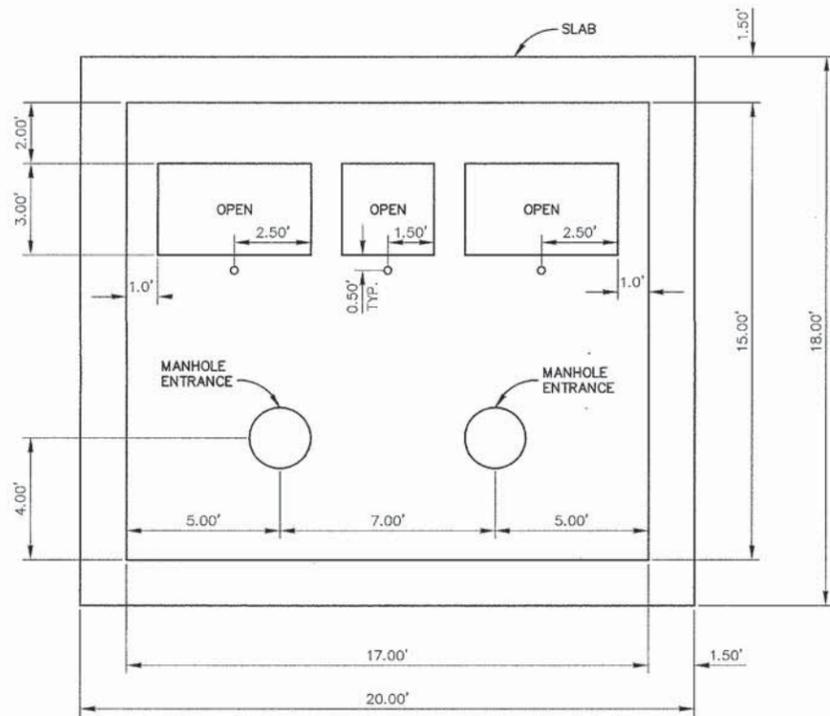
4 SECTION B-B
SCALE: N.T.S.

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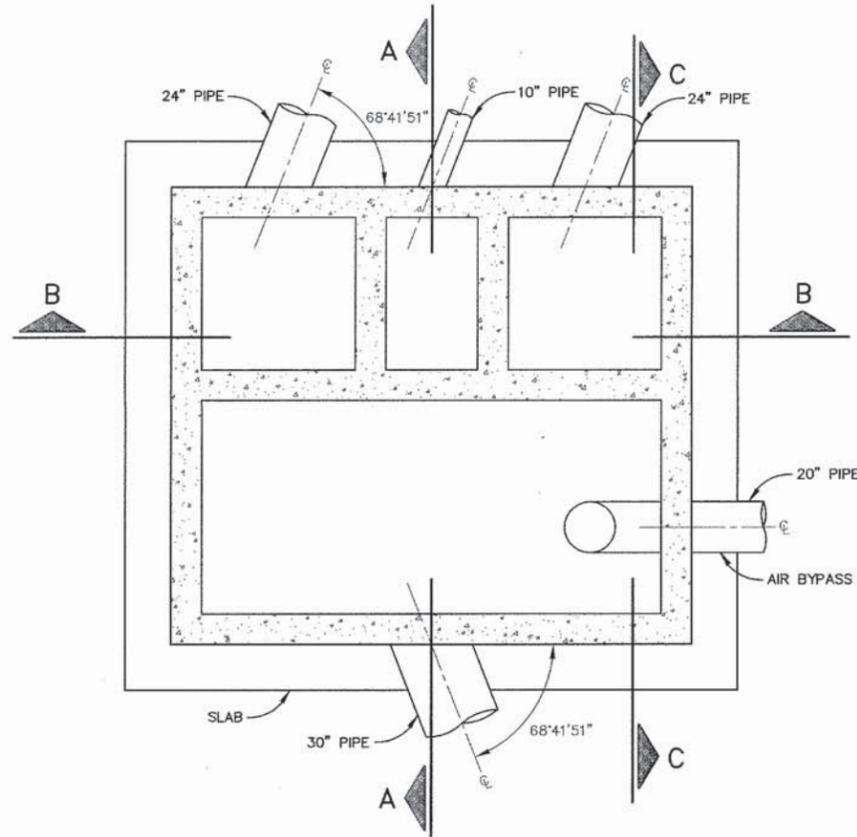
REGISTRATION No. F-1755



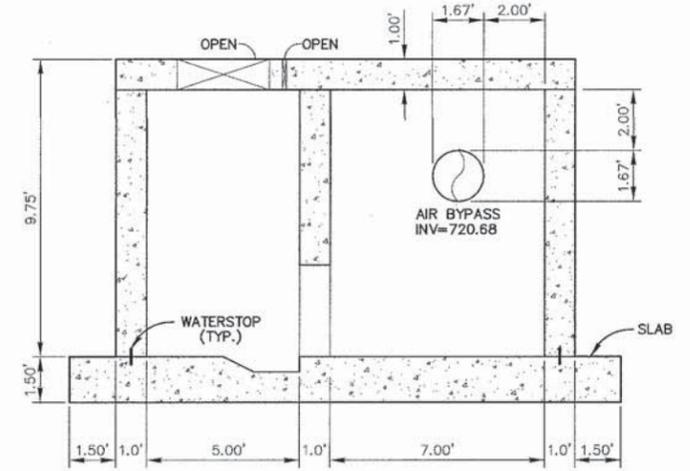
SIPHON INLET BOX #1 (S1-1) DETAILS/SECTIONS			
UTILITY LEGEND PROP. WATER MAIN — 6"CL.W.— EXIST. WATER MAIN — 6"CL.W.— GAS MAIN — 2"CL.W.— SANITARY SEWER — 8"SA— STORM SEWER — 24"ST— UTILITY POLE LINE — UT— ELECTRIC CABLE — E— TELEPHONE CABLE — T—			
Addendum No. 2		10/3/11	
No.	Revision	Drawn	Approved
REVISIONS			
FAR WEST SEWER RELIEF MAIN (FW-01)			
SAN ANTONIO WATER SYSTEM			
CONT. BUDGET PROJ.			
SUBMITTED _____			
APPROVED _____			
MAP No. 104-566, 106-566, 108-566, 109-570			SHEET
SECT. No. _____			24
DR. TM	CK. HMC	JOB No. 09-2501	OF 48



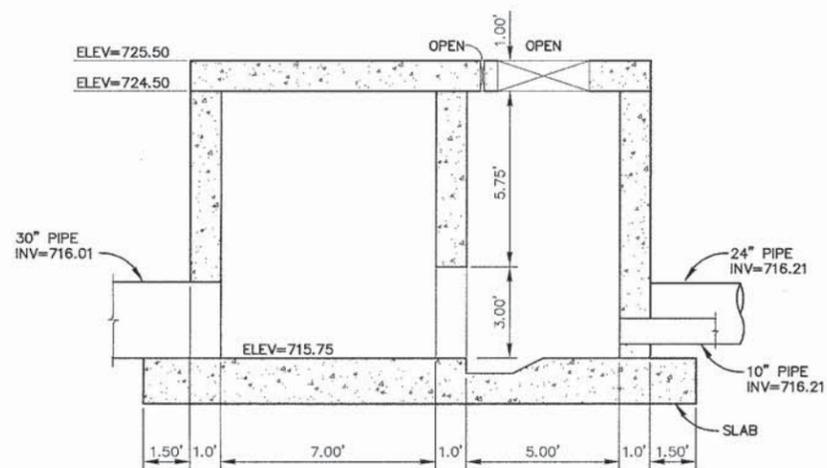
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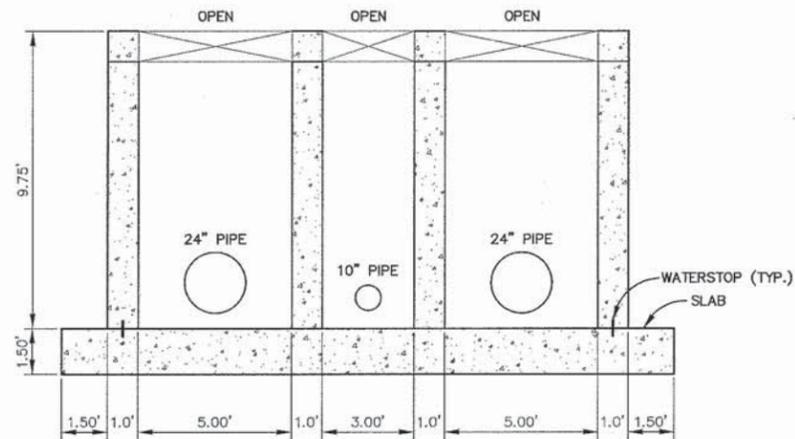
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5 SECTION C-C
SCALE: N.T.S.



3 SECTION A-A
SCALE: N.T.S.



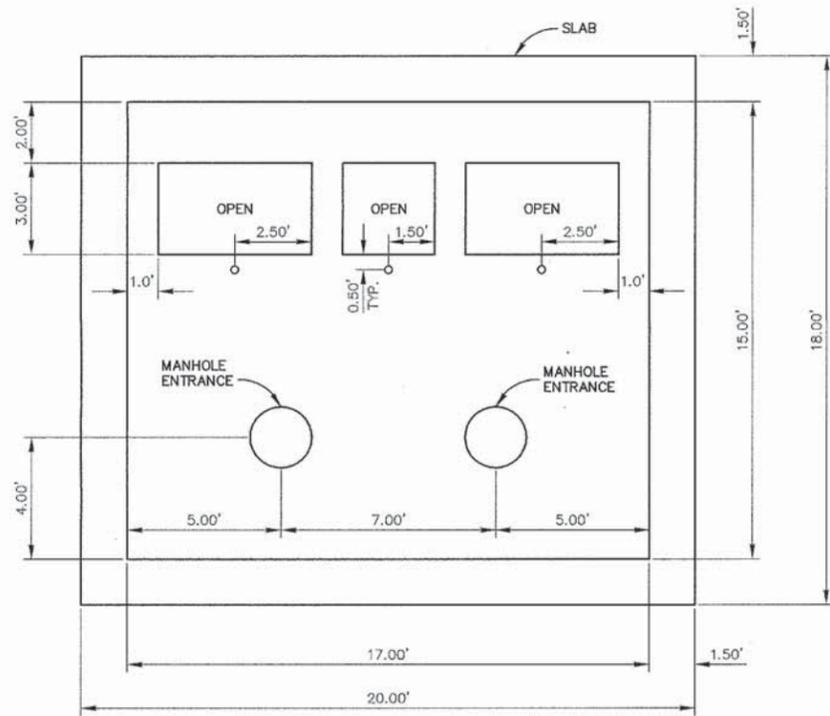
4 SECTION B-B
SCALE: N.T.S.

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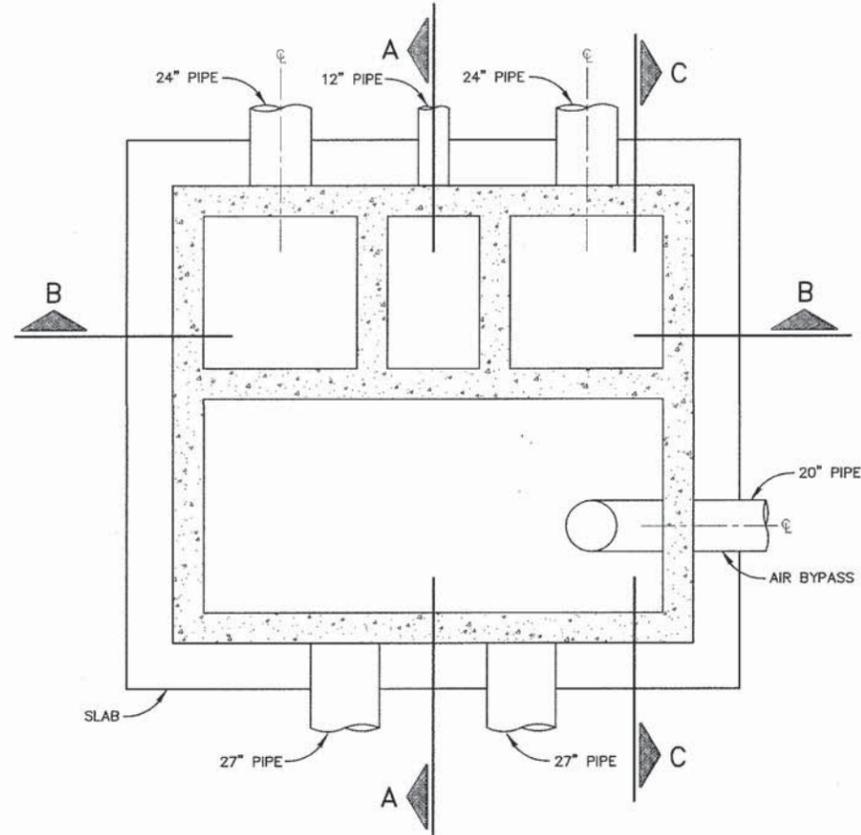
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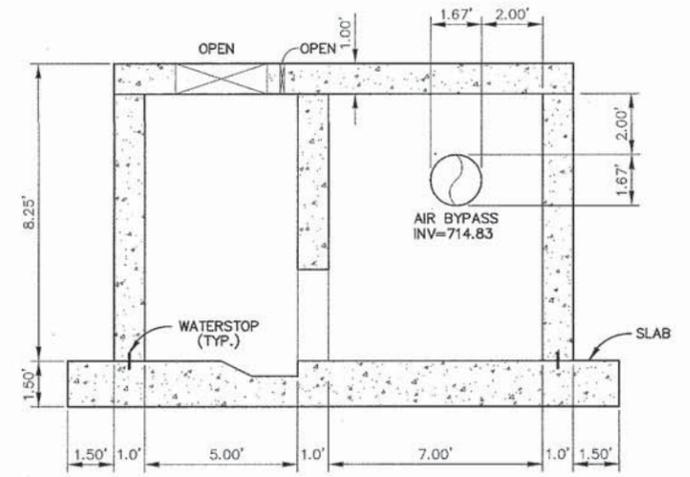
SIPHON OUTLET BOX #1 (S1-0) DETAILS/SECTIONS			
UTILITY LEGEND			
PROP. WATER MAIN	—	6"CL.W.	6"
EXIST. WATER MAIN	—	6"CL.W.	6"
GAS MAIN	—	2"CL.W.	2"
SANITARY SEWER	—	8"SA	8"
STORM SEWER	—	24"ST	24"
UTILITY POLE LINE	—	UT	UT
ELECTRIC CABLE	—	E	E
TELEPHONE CABLE	—	UT	UT
REVISIONS			
Addendum No. 2			
No.	Revision	Drawn	Approved
1		HMC	10/31/11
FAR WEST SEWER RELIEF MAIN (FW-01) SAN ANTONIO WATER SYSTEM CONT. BUDGET PROJ.			
SUBMITTED _____			
APPROVED _____			
MAP No. 104-566, 106-566, 106-568, 106-570			SHEET 28
SECT. No. _____			OF 48
DR. TM	CK. HMC	JOB No. 09-2501	



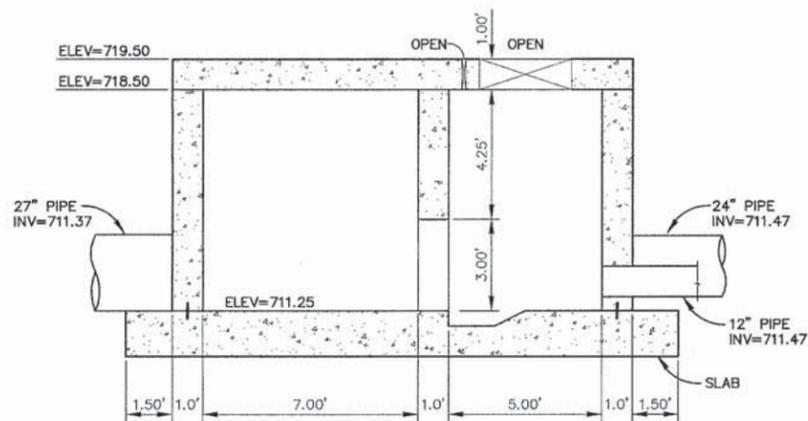
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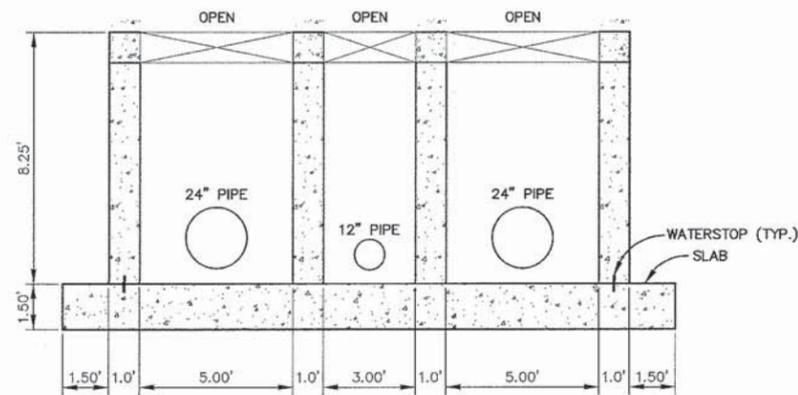
2 TOP VIEW SECTION
SCALE: N.T.S.



5 SECTION C-C
SCALE: N.T.S.



3 SECTION A-A
SCALE: N.T.S.



4 SECTION B-B
SCALE: N.T.S.

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PHASE D

REGISTRATION No. F-1755



SIPHON OUTLET BOX #2 (S2-0) DETAILS/SECTIONS			
UTILITY LEGEND			
PROP. WATER MAIN	—	5"	CLW
EXIST. WATER MAIN	—	5"	CLW
GAS MAIN	—	2"	C
SANITARY SEWER	—	6"	SA
STORM SEWER	—	24"	ST
UTILITY POLE LINE	—	E	UT
ELECTRIC CABLE	—	E	UT
TELEPHONE CABLE	—	UT	UT
REVISIONS			
No.	Revision	Drawn	Approved
1	Addendum No. 2	HMC	10/3/11
FAR WEST SEWER RELIEF MAIN (FW-01)			
SAN ANTONIO WATER SYSTEM			
CONT. BUDGET PROJ.			
SUBMITTED			
APPROVED			
MAP No. 104-566, 106-566, 106-568, 106-570			SHEET
SECT. No.			30
DR. TM CK. HMC JOB No. 09-2501			OF 48