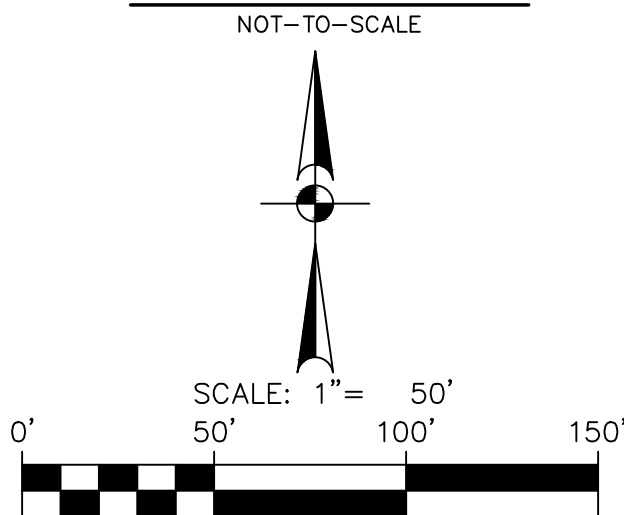
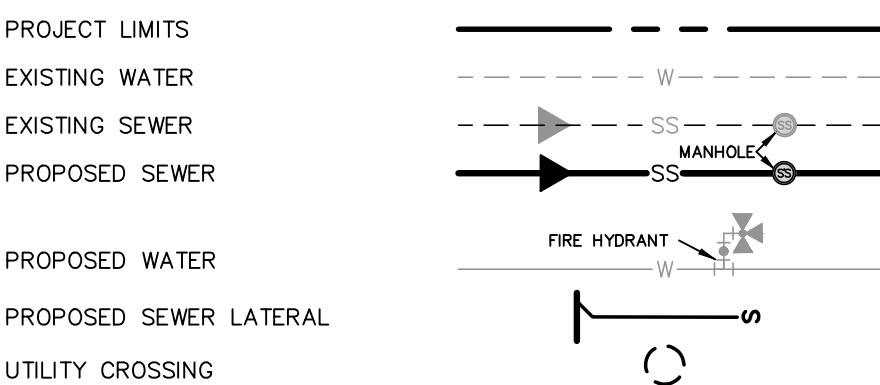


LOCATION MAP

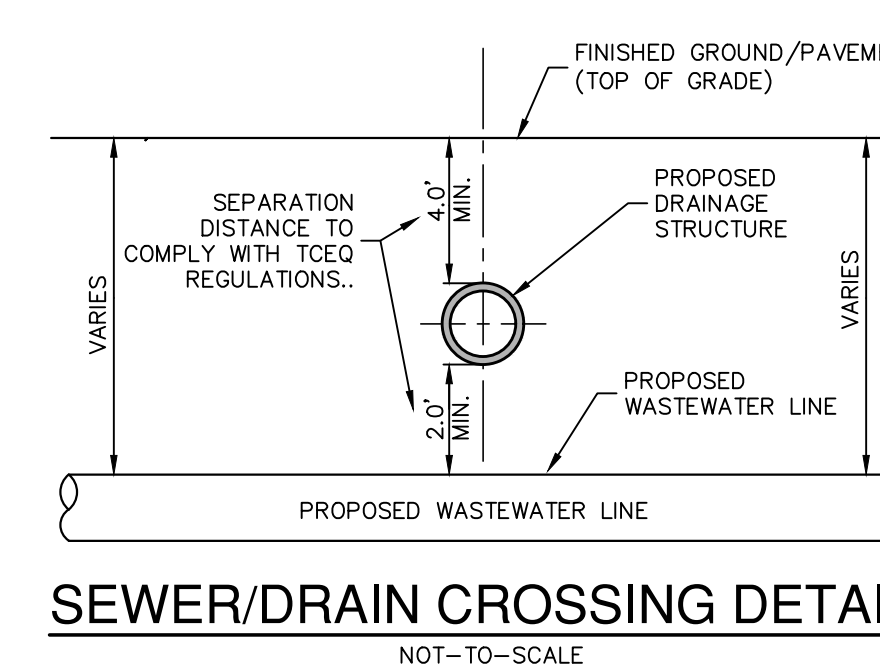
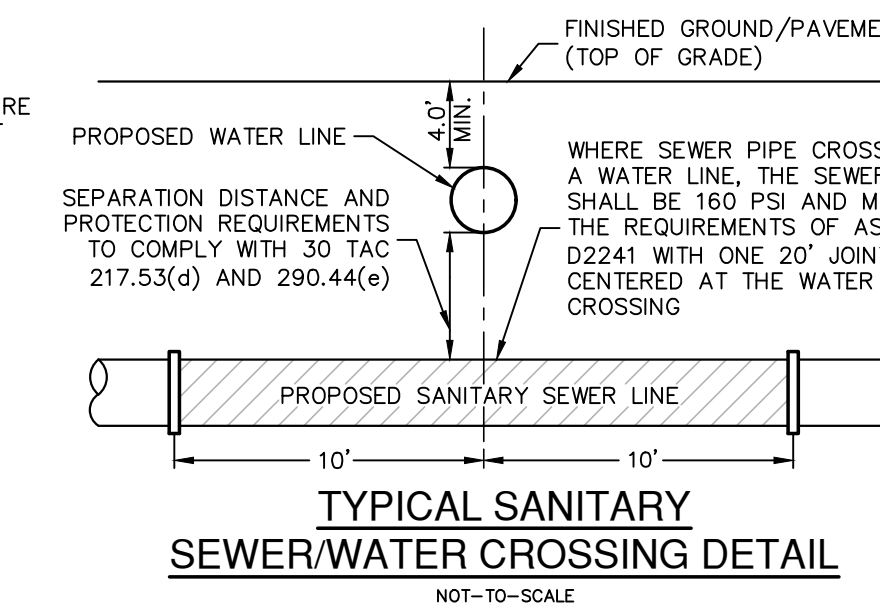


SEWER LEGEND



KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- (B) 20' SANITARY SEWER EASEMENT
- (L) MANHOLE TIE-INS FOR FUTURE UNITS TO BE COMPLETED AT TIME OF CONSTRUCTION FOR FUTURE UNIT



CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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 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 EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

PAPE-DAWSON
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #170 | TBPUS FIRM REGISTRATION #10028890

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS

OVERALL SANITARY SEWER PLAN

PLAT NO.	-
JOB NO.	11100-17
DATE	JANUARY 2021
DRAWN	LM
CHECKED	JA
DRAWN	LM
SHEET	C5.00

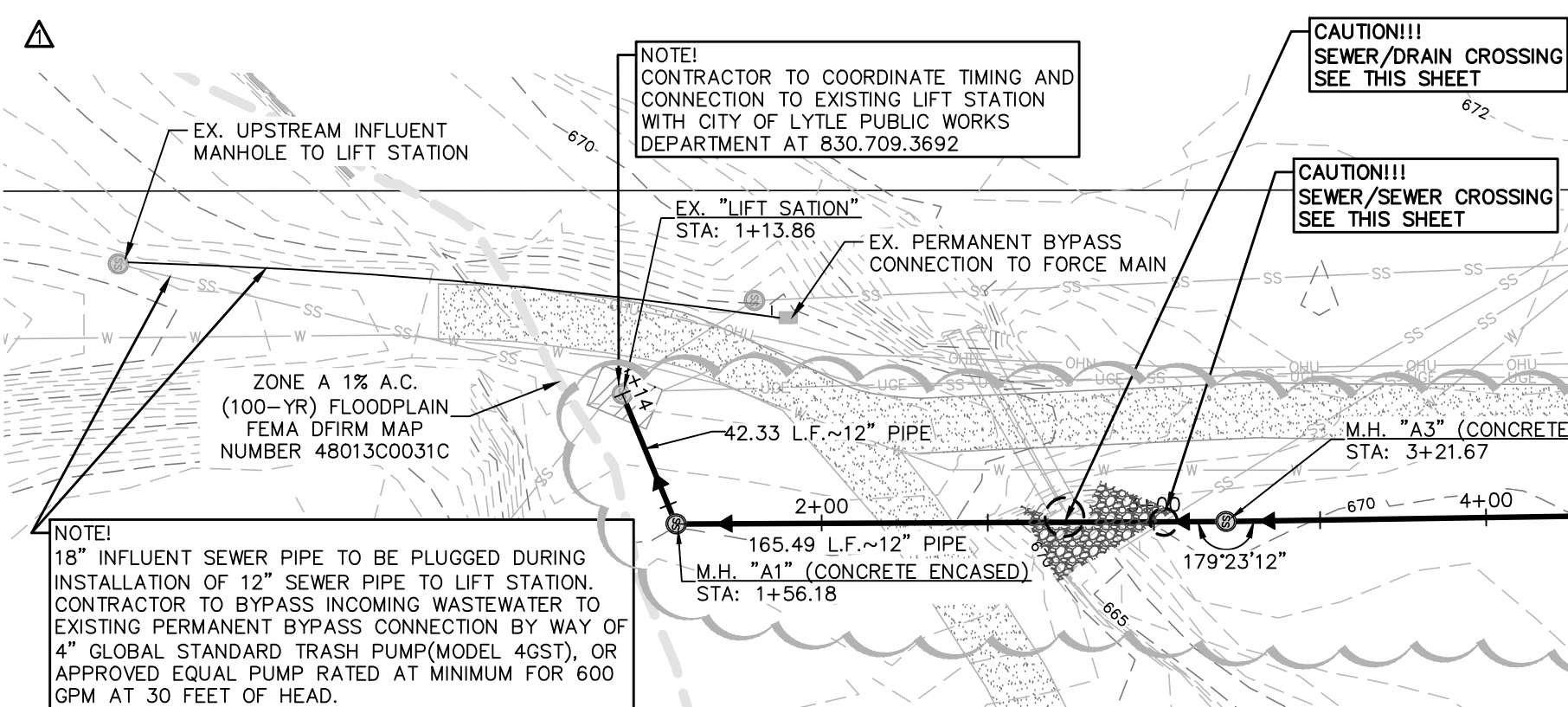
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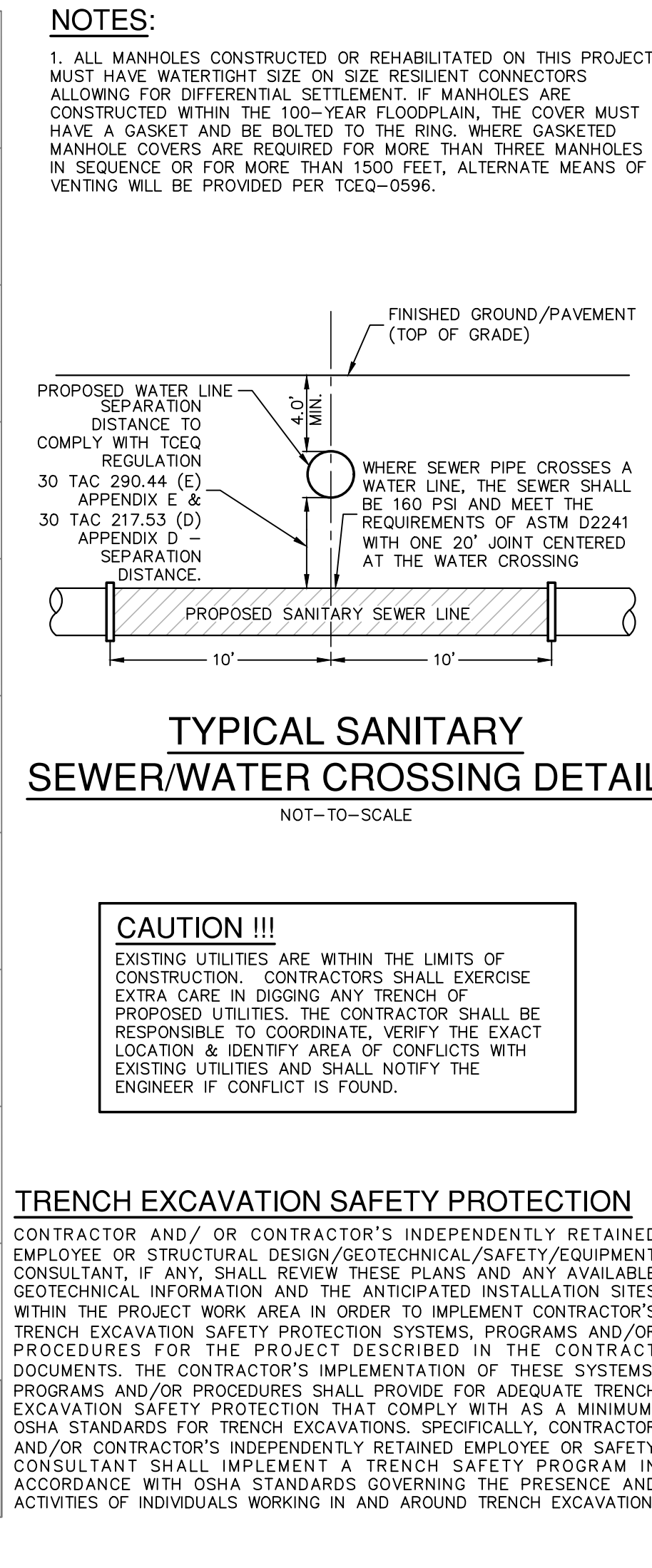
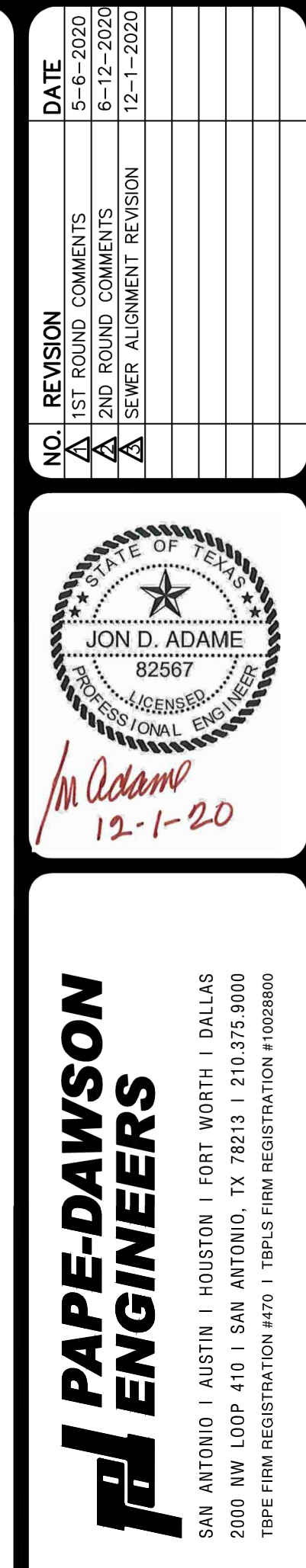
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MATCHLINE "A-A" ~ SEE SHEET C5.00

SADDLE RIDGE ESTATES FUTURE UNITS

MATCHLINE "B-B" ~ SEE THIS SHEET



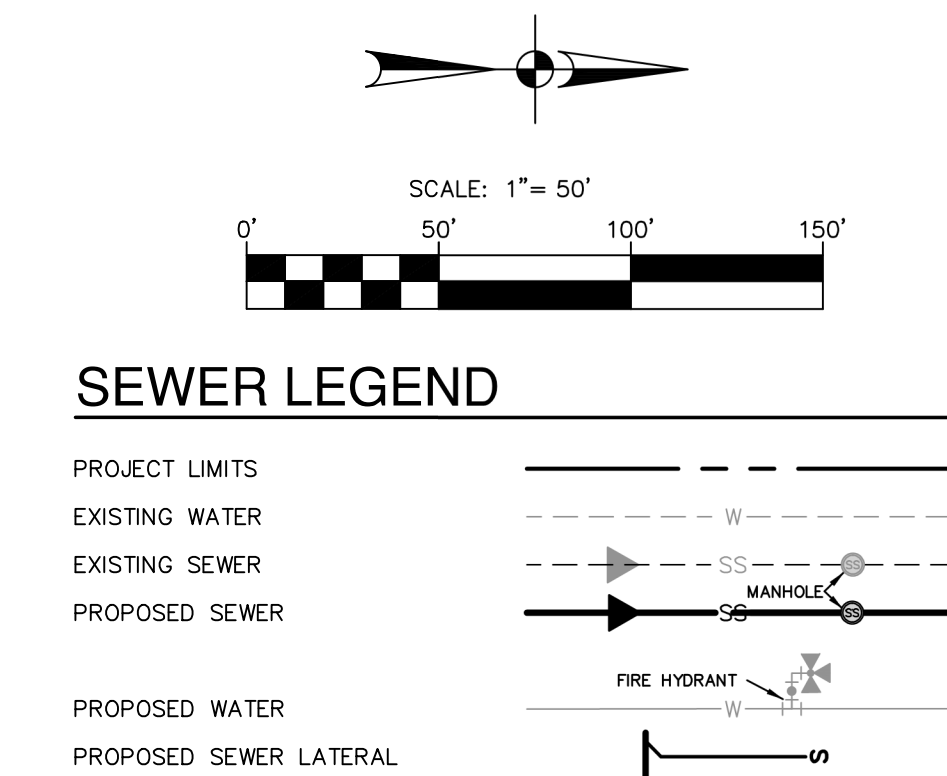


PLAT NO. _____
JOB NO. 11100-17
DATE DECEMBER 2020
DESIGNER LM
CHECKED JA DRAWN RM

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS

SEWER LINE A ~ STA. 1+00 - 12+50
SANITARY SEWER PLAN & PROFILE

C502



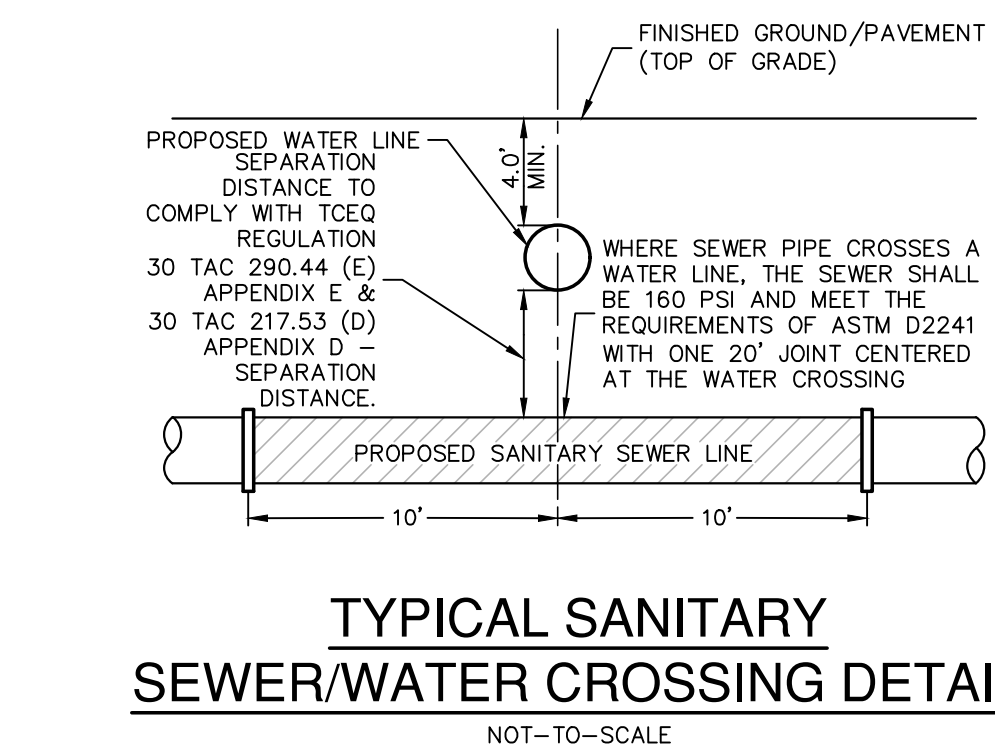
 20' SANITARY SEWER
EASEMENT

ALL SEWER PIPE LATERALS
SHALL BE SDR26

CONTOURS SHOWN ARE FOR
GRAPHICAL USE ONLY

MANHOLE OPENING INCREASED TO 30"
AS PER TCEQ CHAPTER 217.55

ALL MANHOLES CONSTRUCTED OVER THE
EDWARDS AQUIFER RECHARGE ZONE
SHALL BE WATERTIGHT AS PER TCEQ
CHAPTER 213.5



NOTES:

1. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT, IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE FRAME. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED PER TCEQ-0596.

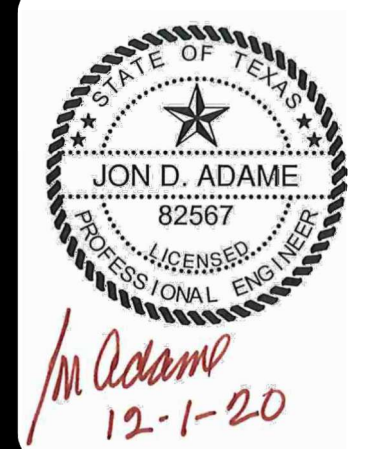
CAUTION !!!

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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 ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES AND METHODS OF THE PROJECT AND SHALL PREPARE AND SUBMIT TO THE TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT AGREEMENT. THE TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, THE OSHA STANDARDS, REGULATIONS, SPECIFICATIONS, ORDINANCES AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND PROTECTION OF UTILITIES.

NO.	REVISION	DATE
△	1ST ROUND COMMENTS	5-6-2020
△	2ND ROUND COMMENTS	6-12-2020
△	SEWER ALIGNMENT REVISION	12-1-2020



PAPE-DAWSON
PE ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TSPE FIRM REGISTRATION #70 | TPPLS FIRM REGISTRATION # 10028690

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS

SEWER LINE A ~ STA. 12+50 - 21+50
SANITARY SEWER PLAN & PROFILE

PLAT NO. _____
JOB NO. 11100-17
DATE DECEMBER 2020
DESIGNER LM
CHECKED JA DRAWN LM
SHEET C5.03

Date: Apr 08, 2020, 4:57pm User ID: Leadmartinez
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MICHAEL R. ABBE
AN UNDIVIDED ONE SIXTH (1/6) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND
(BOOK 24, PAGES 130-133 O.P.R.)

MICHAEL R. ABBE
AN UNDIVIDED ONE SIXTH (1/6) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND
(BOOK 856, PAGES 284-286 O.P.R.)

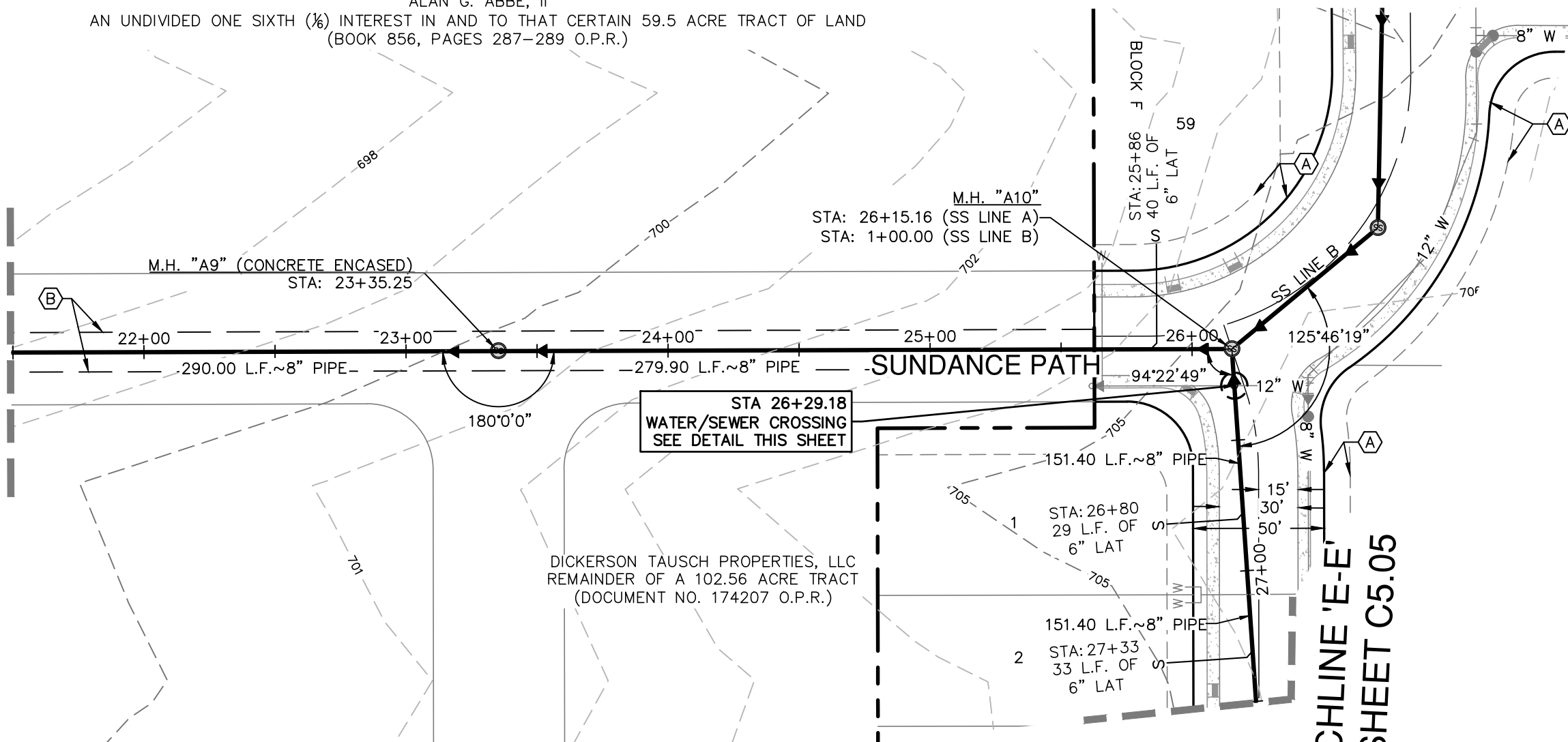
LAURA J. ABBE
AN UNDIVIDED ONE SIXTH (1/6) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND
(BOOK 24, PAGES 134-137 O.P.R.)

LAURA J. ABBE
AN UNDIVIDED ONE SIXTH (1/6) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND
(BOOK 856, PAGES 281-283 O.P.R.)

ALAN G. ABBE, II
AN UNDIVIDED ONE SIXTH (1/6) INTEREST IN AND TO THAT CERTAIN 59.5 ACRE TRACT OF LAND
(BOOK 24, PAGES 126-129 O.P.R.)

ALAN G. ABBE, II
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(BOOK 856, PAGES 287-289 O.P.R.)

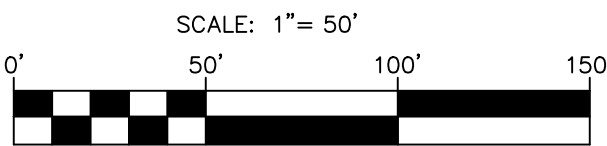
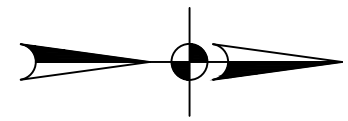
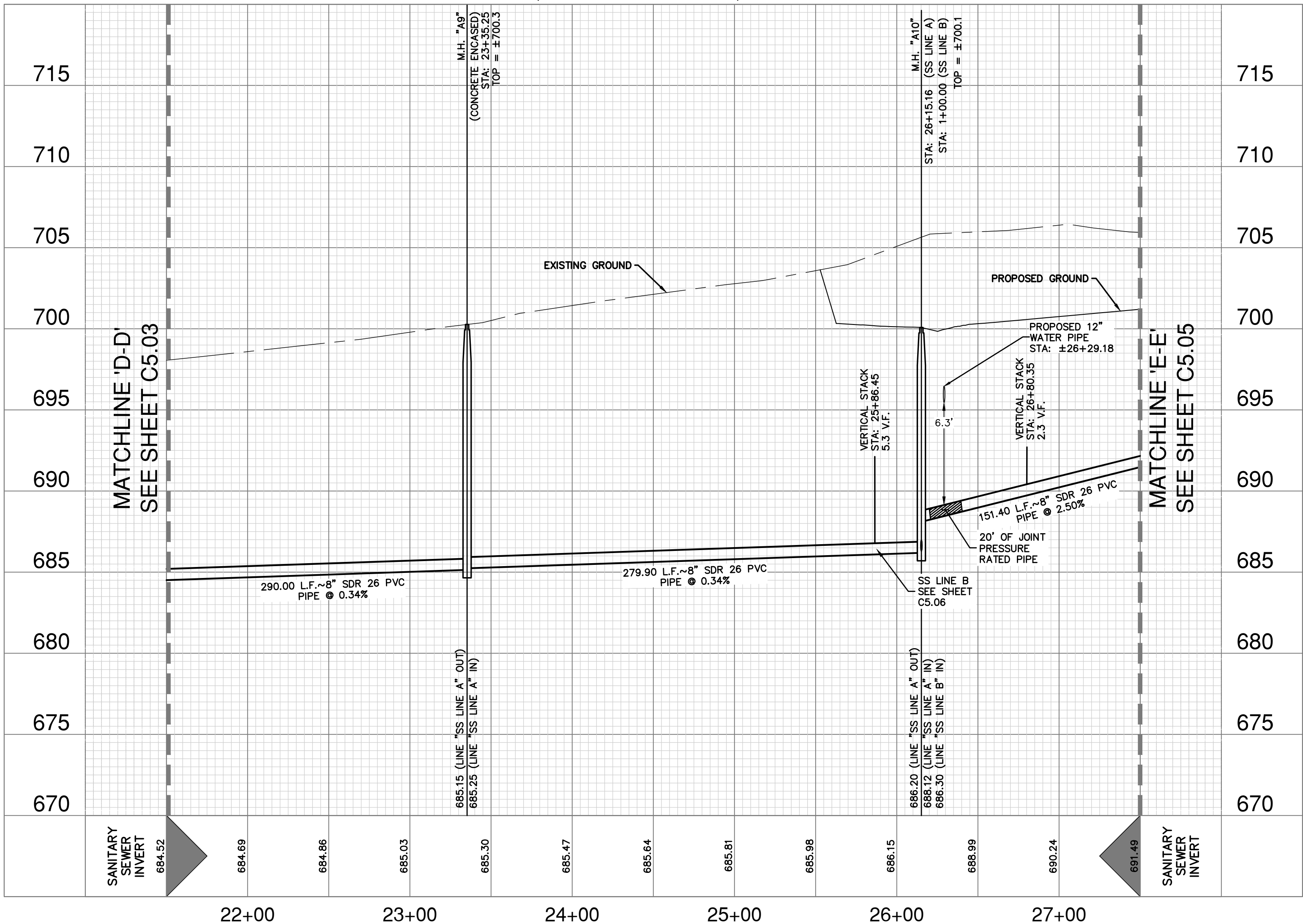
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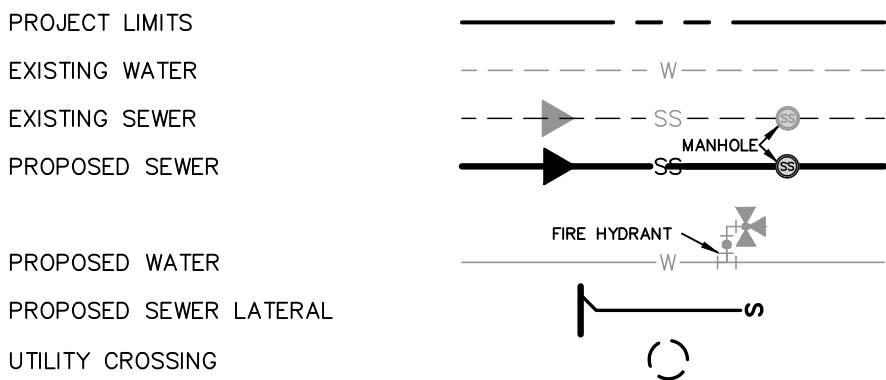
MATCHLINE 'E-E'
SEE SHEET C5.05

SEWER LINE "A"
(STA: 21+50.00 - 27+50.00)

HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'



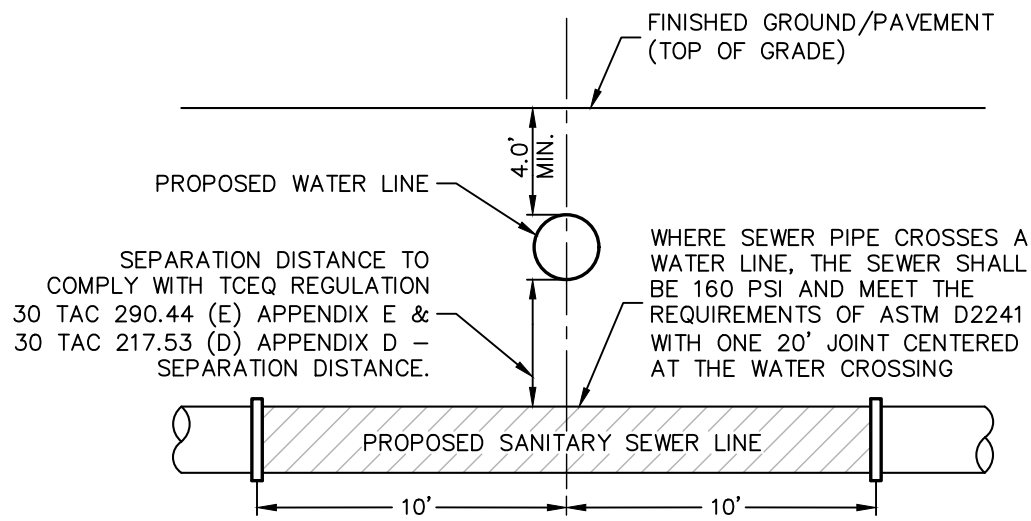
SEWER LEGEND



KEY LEGEND

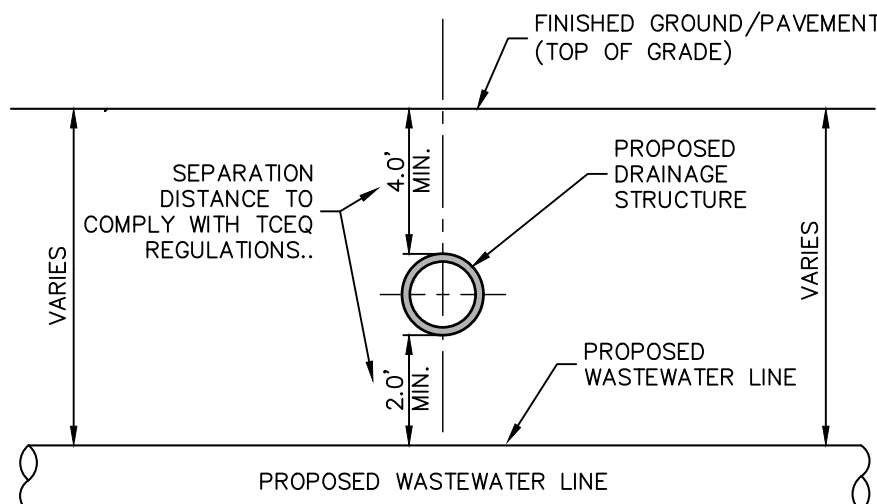
- (A) 10' ELEC., GAS, TELE., &
CA. T.V. EASEMENT
- (B) 15' SANITARY SEWER
EASEMENT

- ALL SEWER PIPE LATERALS
SHALL BE SDR26
- CONTOURS SHOWN ARE FOR
GRAPHICAL USE ONLY
- MANHOLE OPENING INCREASED TO 30"
AS PER TCEQ CHAPTER 217.55
- ALL MANHOLES CONSTRUCTED OVER THE
EDWARDS AQUIFER RECHARGE ZONE
SHALL BE WATERTIGHT AS PER TCEQ
CHAPTER 213.5



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



SEWER/DRAIN CROSSING DETAIL

NOT-TO-SCALE

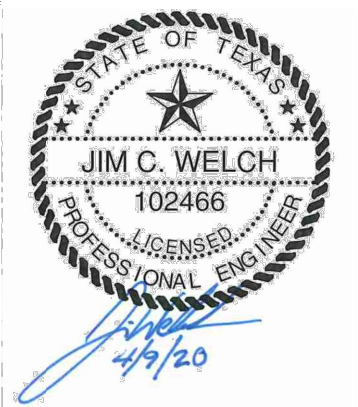
CAUTION !!!

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ENGINEER IF CONFLICT IS FOUND.

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 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 EXCAVATIONS. SPECIFICALLY, CONTRACTOR
AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY
CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN
ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND
ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

NO.	REVISION	DATE



**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBP# FIRM REGISTRATION #470 | TBP# FIRM REGISTRATION #10028800

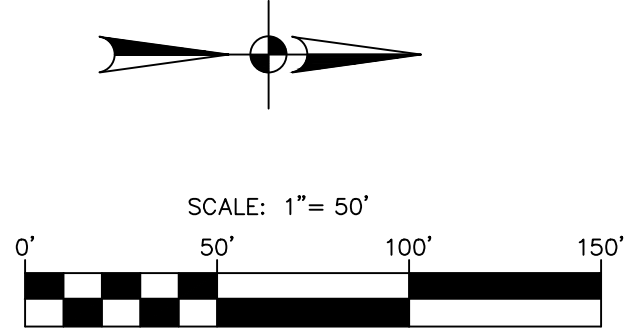
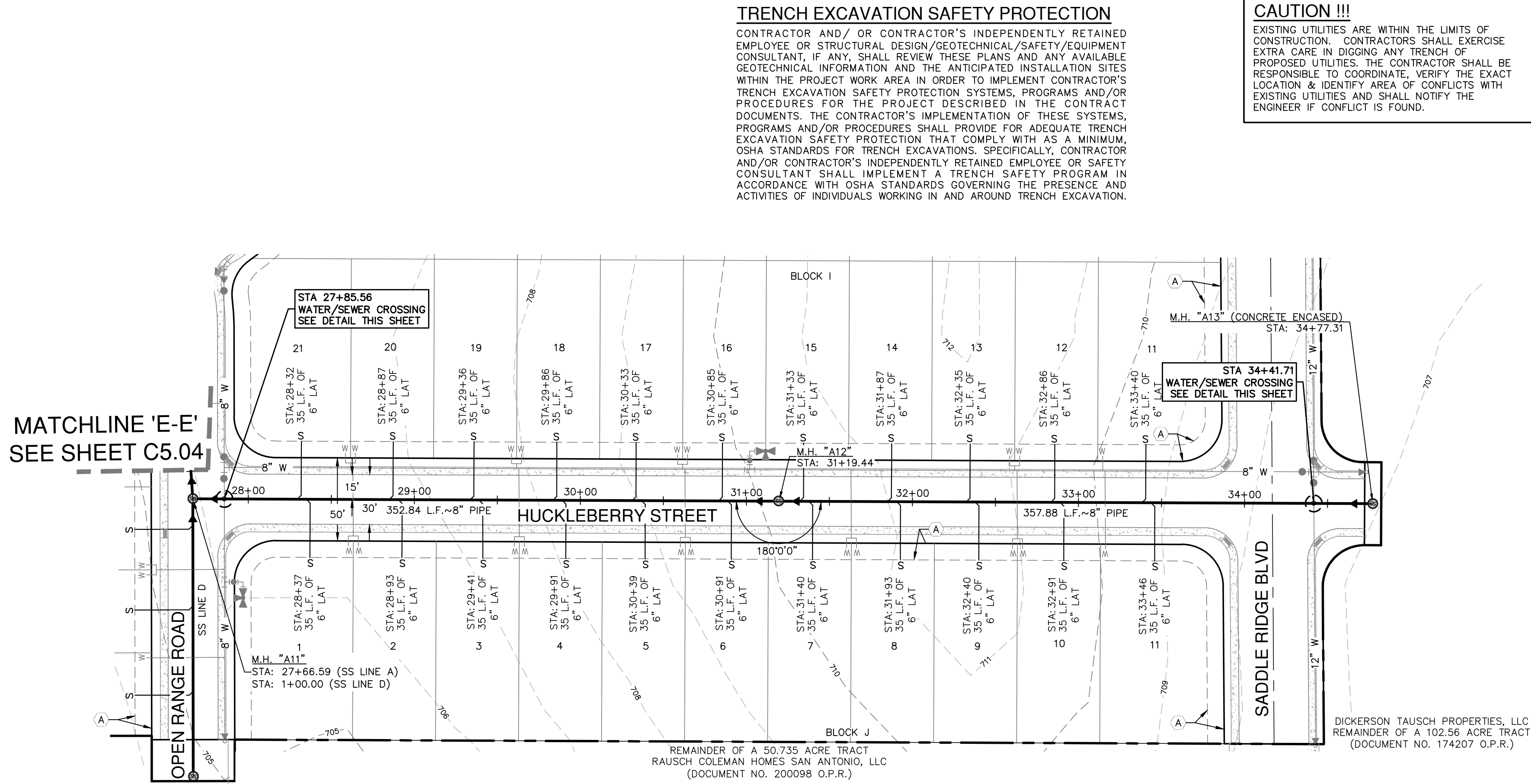
SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS

SEWER LINE A ~ STA. 21+50 - 27+50
SANITARY SEWER PLAN & PROFILE

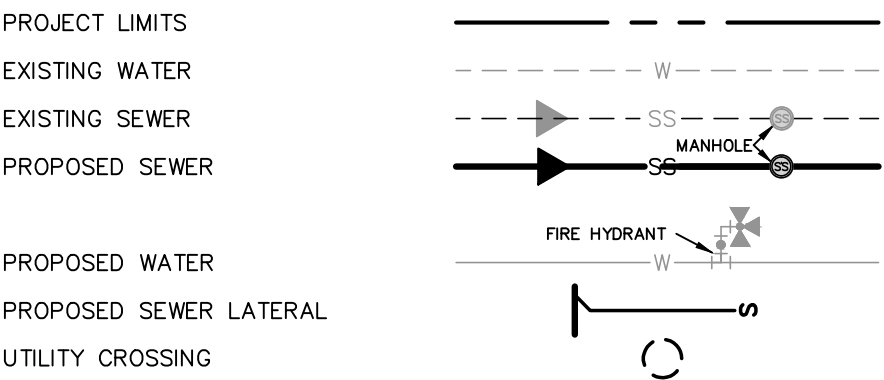
PLAT NO.	-
JOB NO.	11100-17
DATE	APRIL 2020
DESIGNER	LM
CHECKED JA	DRAWN LM
SHEET	C5.04

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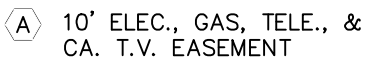
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SEWER LEGEND



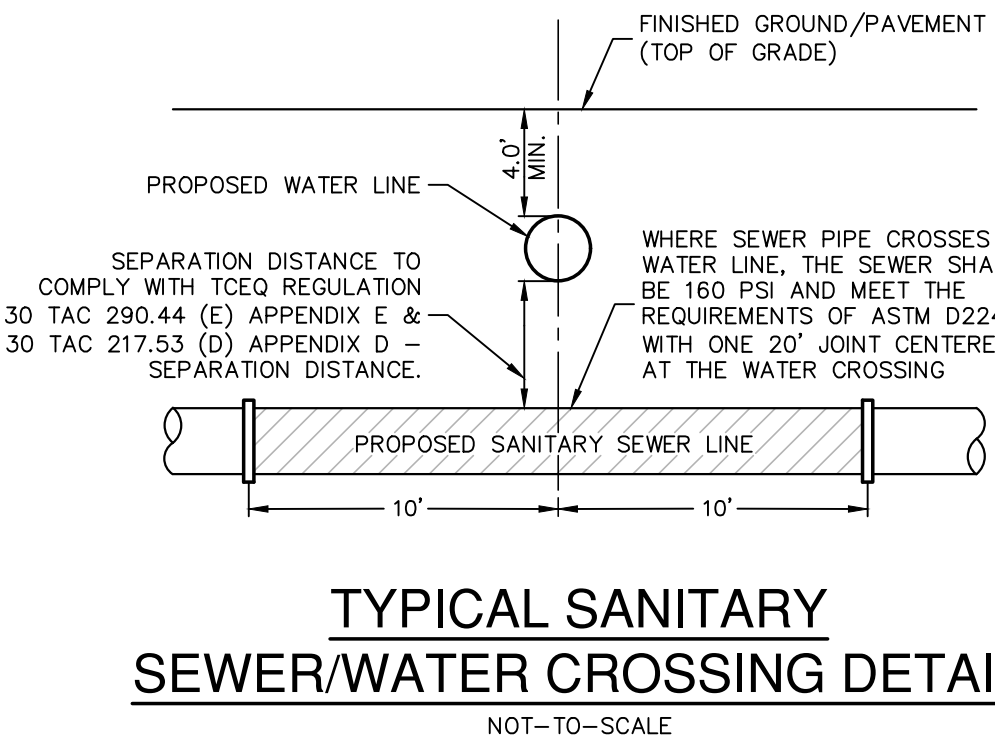
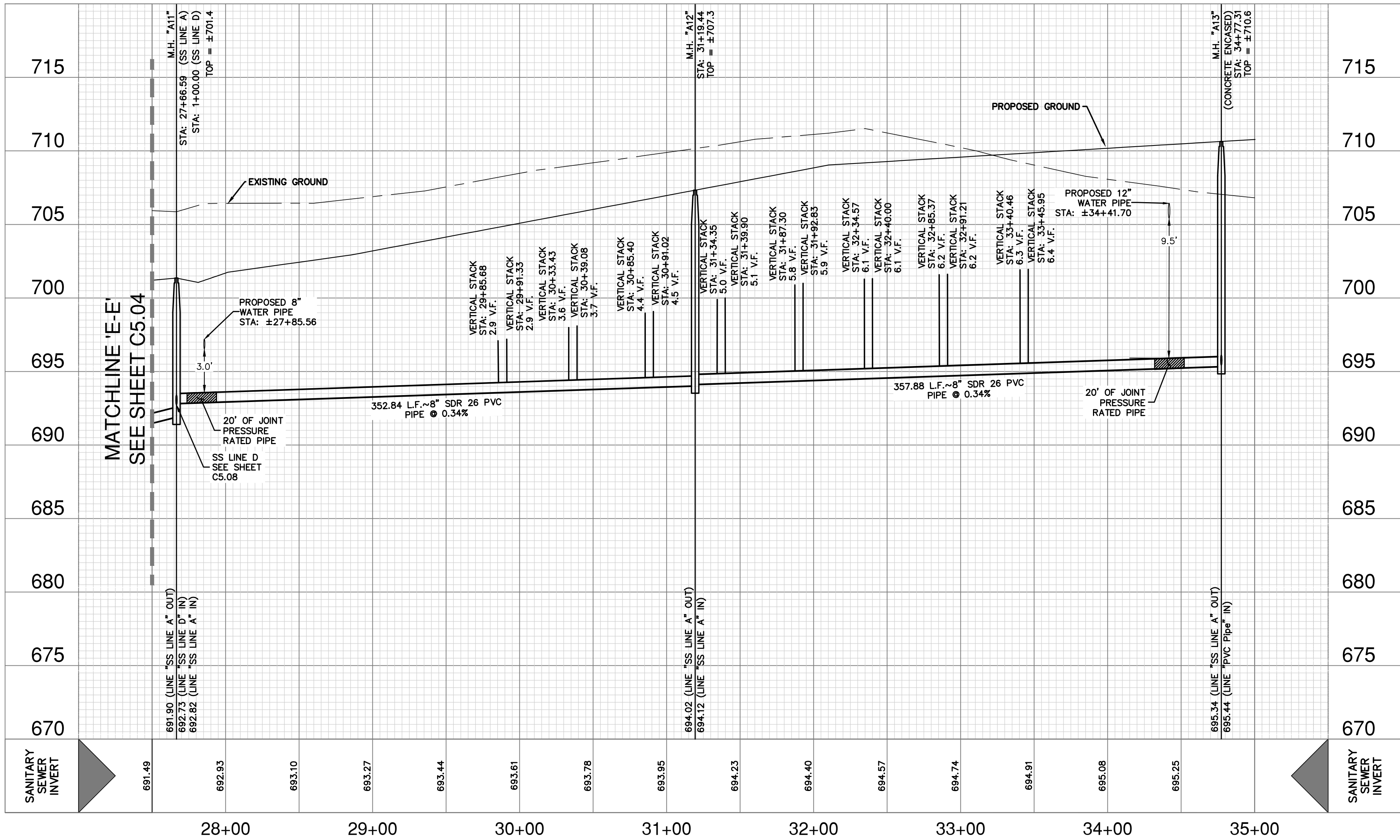
KEY LEGEND



- ALL SEWER PIPE LATERALS SHALL BE SDR26
- CONTOURS SHOWN ARE FOR GRAPHICAL USE ONLY
- MANHOLE OPENING INCREASED TO 30" AS PER TCEQ CHAPTER 217.55
- ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL BE WATERTIGHT AS PER TCEQ CHAPTER 213.5

SEWER LINE "A"
(STA: 27+50.00 - END)

HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'



NOTES:

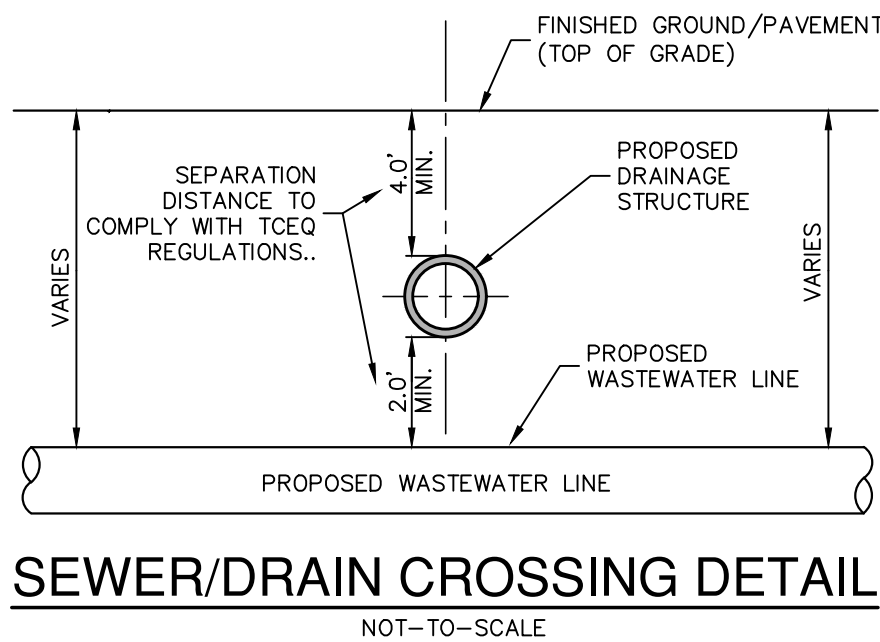
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CAUTION !!!

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TRENCH EXCAVATION SAFETY PROTECTION

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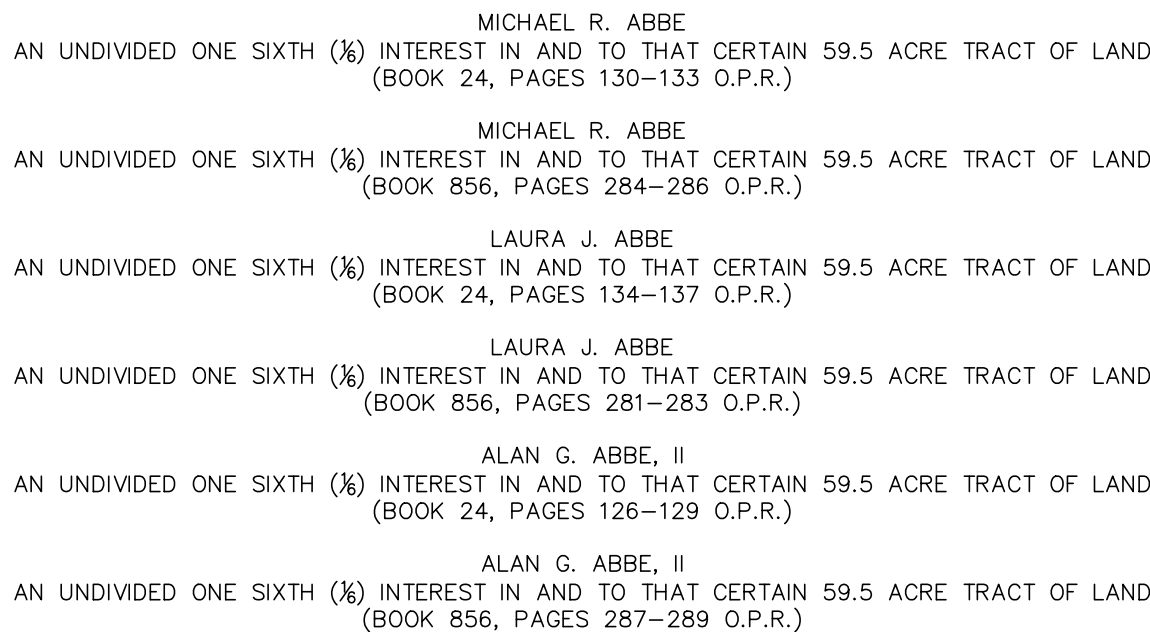


PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #170 | TBPUS FIRM REGISTRATION #10028800

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS
SEWER LINE A ~ STA. 27+50 - END
SANITARY SEWER PLAN & PROFILE

PLAT NO. -
JOB NO. 11100-17
DATE MAY 2020
DESIGNER LM
CHECKED JA DRAWN LM
SHEET C5.05

NO.	REVISION	DATE
1	1ST ROUND COMMENTS	5-6-2020



Sanitary sewer layout plan showing existing and proposed ground, manholes, and sewer lines. The plan includes stationing (1+00 to 6+00) and elevations (665 to 710). Key features include:

- Manholes:** M.H. "A10", M.H. "B9", M.H. "B2", and M.H. "B3".
- Existing Ground:** Dashed line representing the current ground surface.
- Proposed Ground:** Solid line representing the planned ground surface.
- Sewer Lines:**
 - SS LINE A (8" SDR 26 PVC PIPE, 0.34% slope, 72.42 L.F. ~)
 - SS LINE B (8" SDR 26 PVC PIPE, 0.34% slope, 92.48 L.F. ~)
 - SS LINE C (8" SDR 26 PVC PIPE, 0.34% slope, 286.12 L.F. ~)
 - SS LINE D (12" SDR 35 PVC PIPE, 0.34% slope, 20' OF JOINT PRESSURE RATED PIPE)
- Proposed 30" RCP PIPE:** STA: ±5+71.96
- Proposed 12" WATER PIPE:** STA: ±5+86.46
- Matchline:** MATCHLINE 'F-F' SEE SHEET C5.07



SEWER/RAIN CROSSING DETAIL

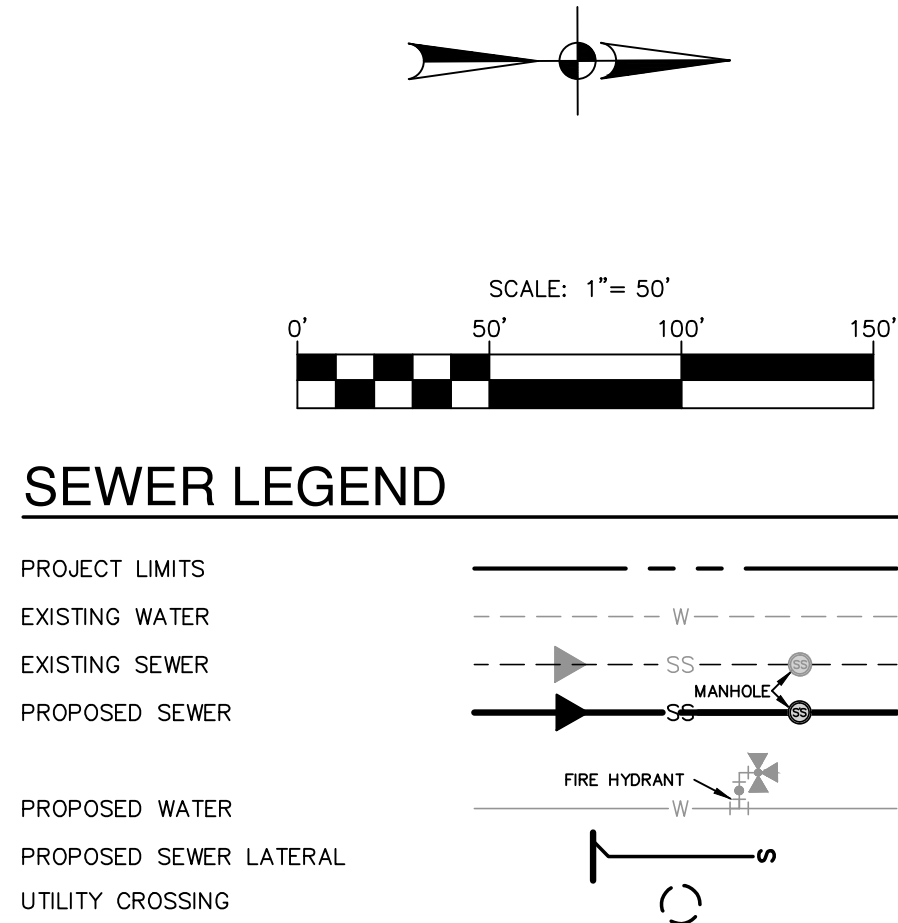
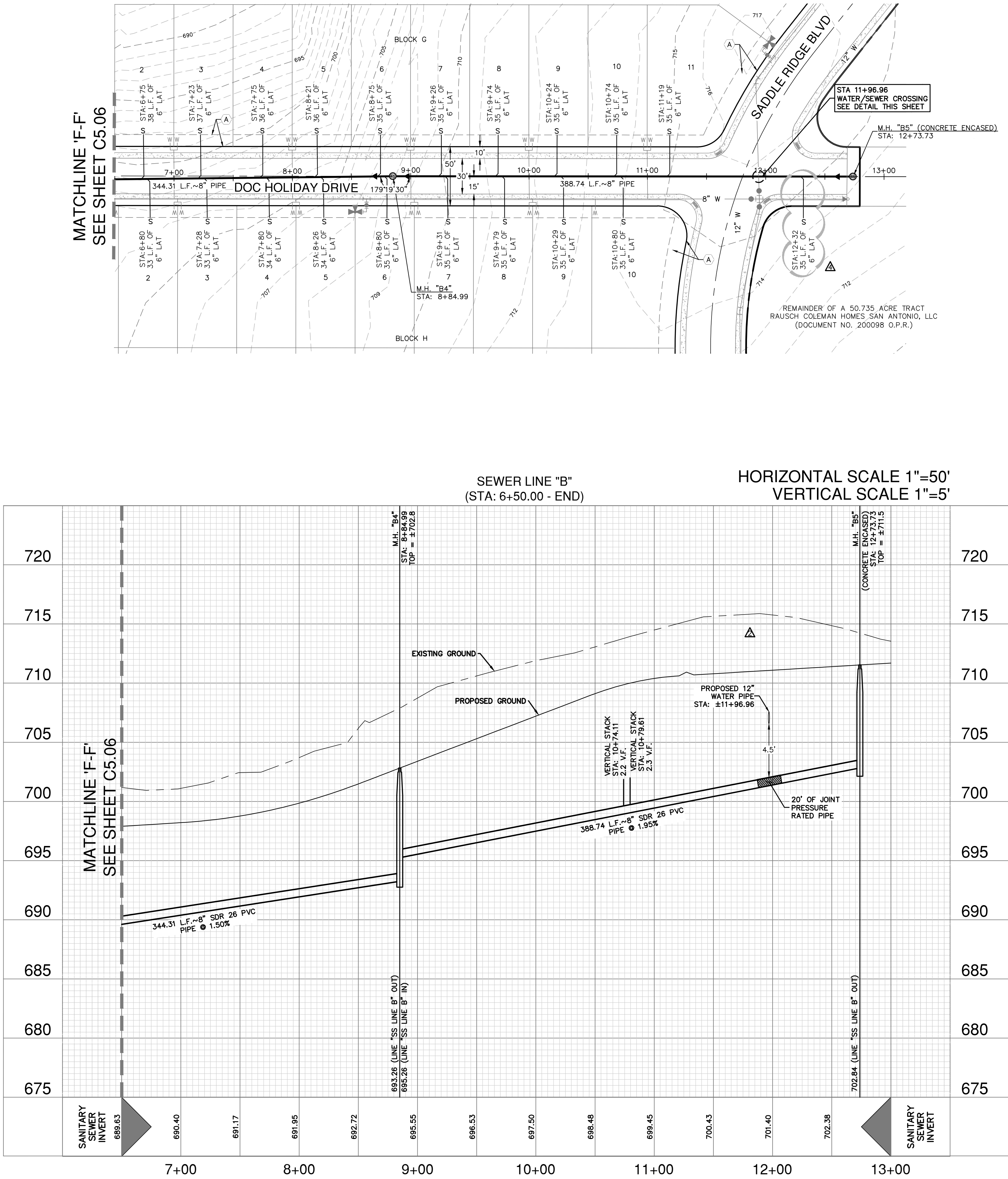
NOT-TO-SCALE

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYED OR STRUCTURAL DESIGN, GEOTECHNICAL, SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE/S AND SOIL CONDITIONS TO DETERMINE THE NECESSITY FOR 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 BE FOR ADULTS ONLY. TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR SHALL IMPLEMENT A TRENCH EXCAVATION SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND PROHIBITION OF UNAUTHORIZED PERSONNEL IN TRENCHES.

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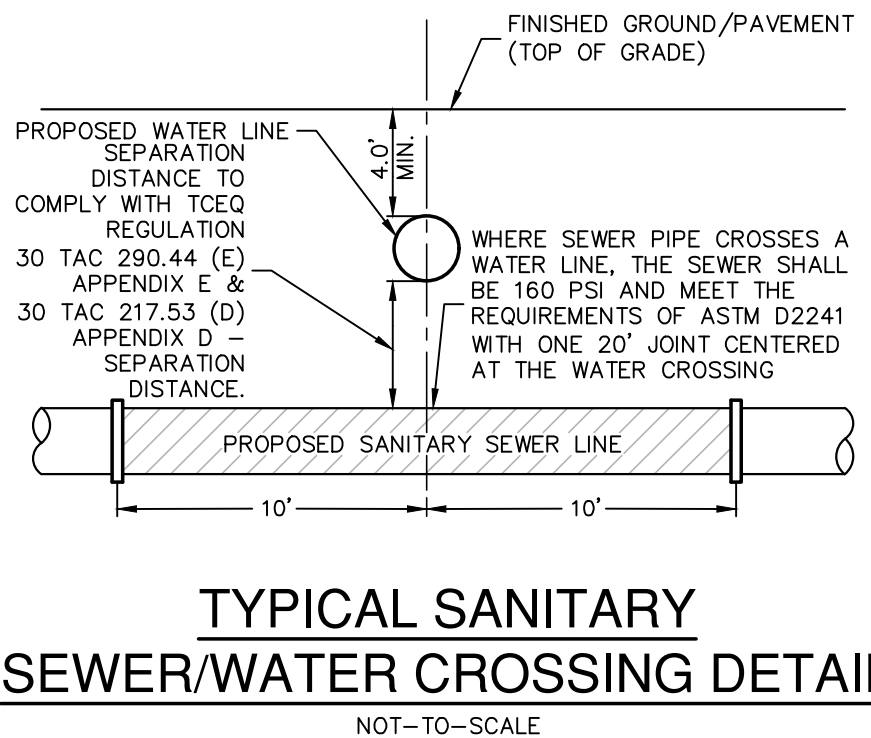
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KEY LEGEND

10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

- ALL SEWER PIPE LATERALS SHALL BE SDR26
- CONTOURS SHOWN ARE FOR GRAPHICAL USE ONLY
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- ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL BE WATERTIGHT AS PER TCEQ CHAPTER 213.5

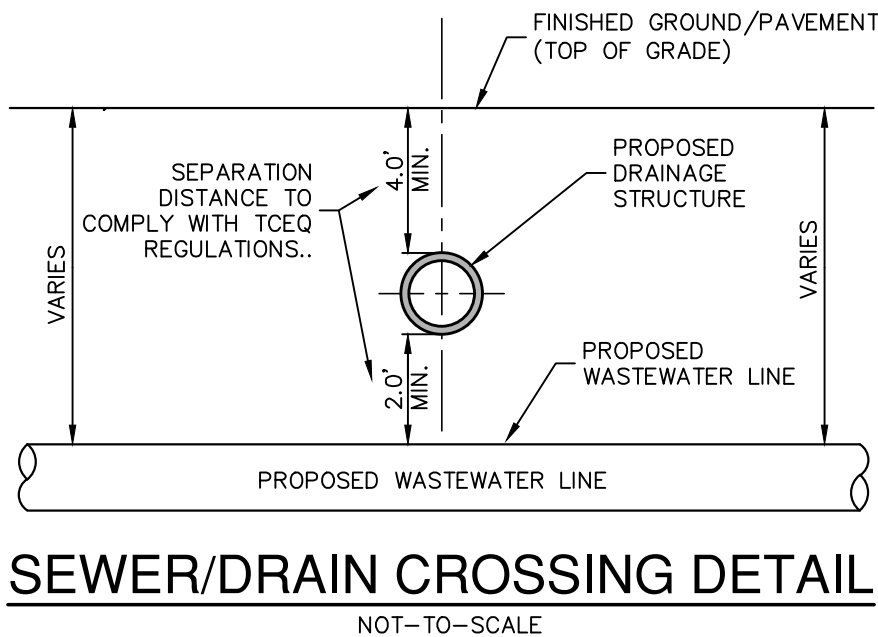


NOTES:

1. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED PER TCEQ-0596.

CAUTION !!!

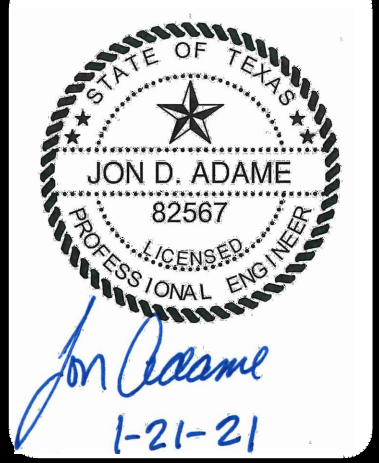
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TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND 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 EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

NO.	REVISION	DATE
1	1ST ROUND COMMENTS	5-6-2020
2	2ND ROUND COMMENTS	6-12-2020
3	SEWER ALIGNMENT REVISION	12-1-2020
4	SEWER LATERAL ADD-ON	1-20-2021
5	DEVELOPER SIDEWALK REMOVAL	1-20-2021



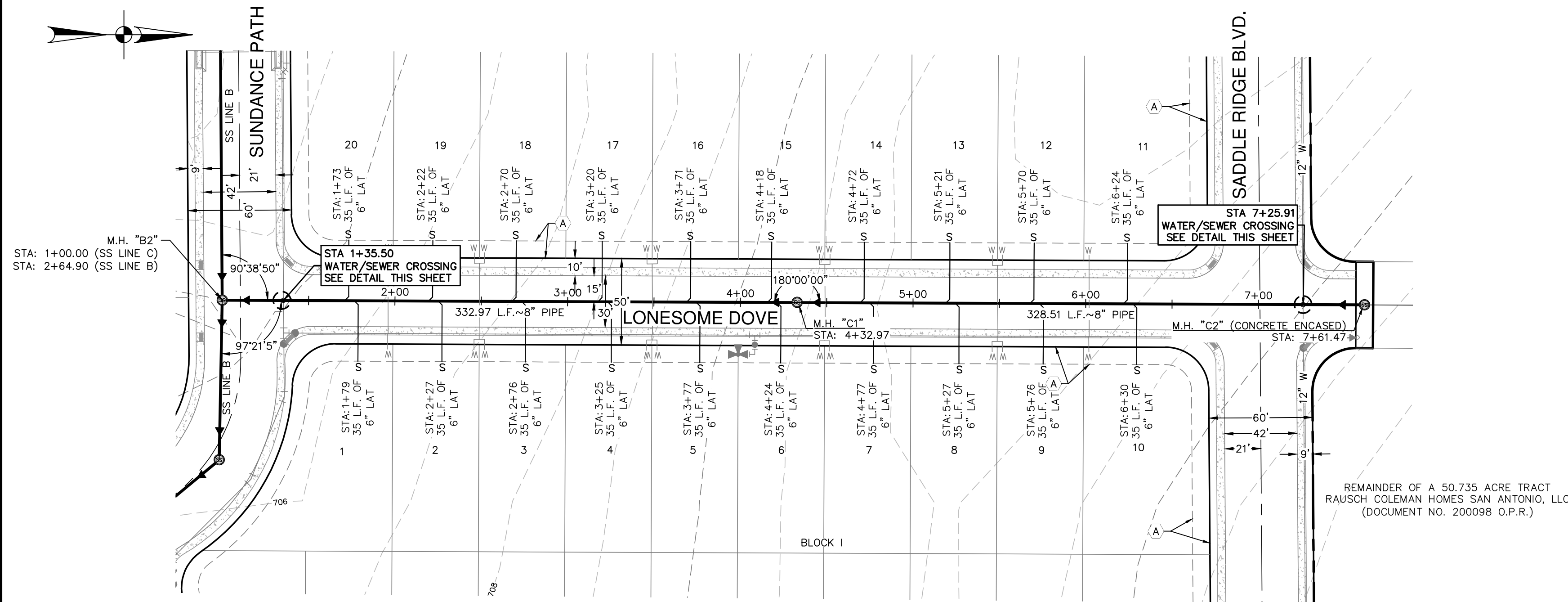
PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBP# FIRM REGISTRATION #10028800

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS

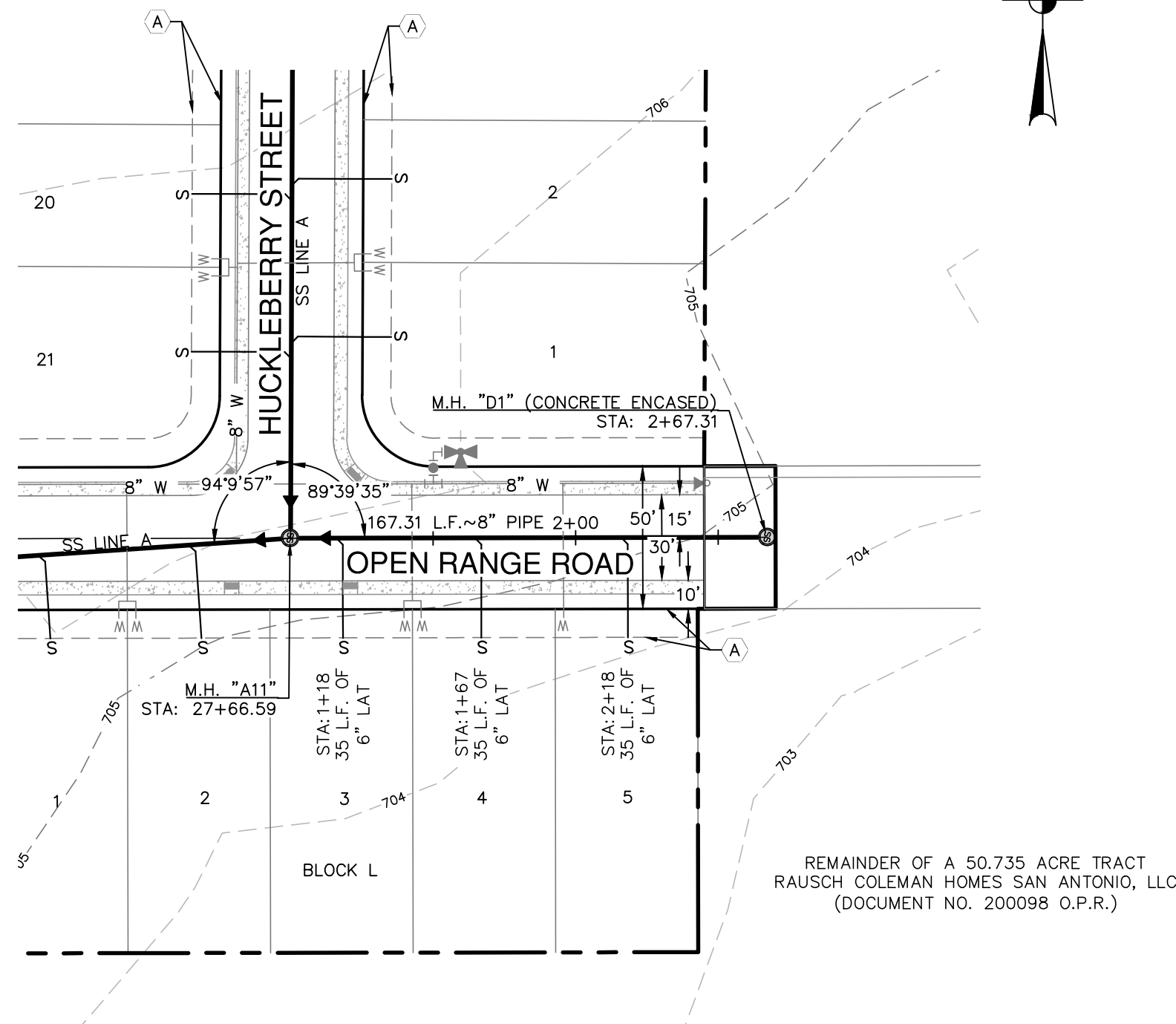
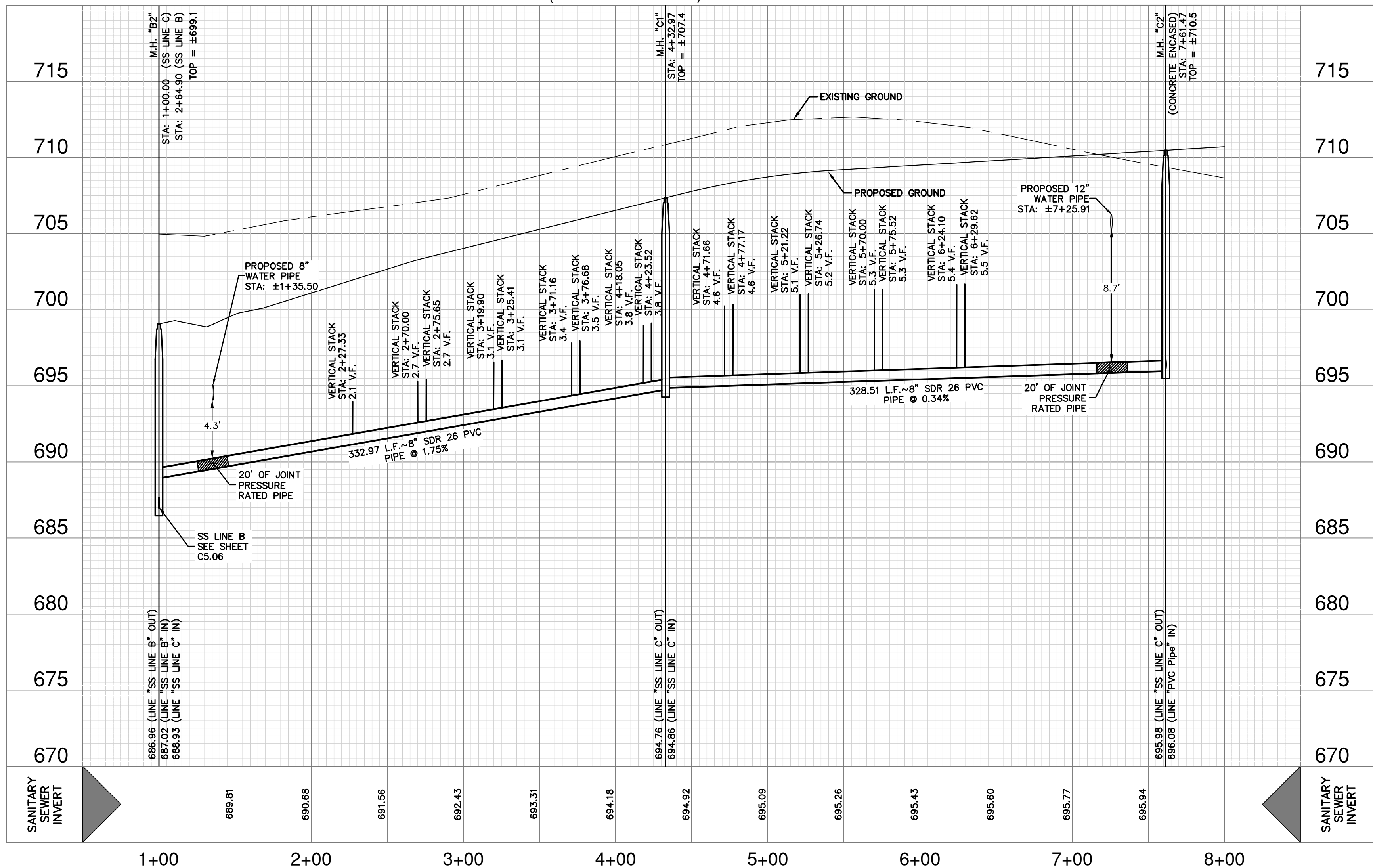
SEWER LINE B ~ STA. 6+50.00 TO END
SANITARY SEWER PLAN & PROFILE

PLAT NO.	-
JOB NO.	11100-17
DATE	JANUARY 2021
DRAWN	LM
CHECKED	JA
SHEET	C5.07



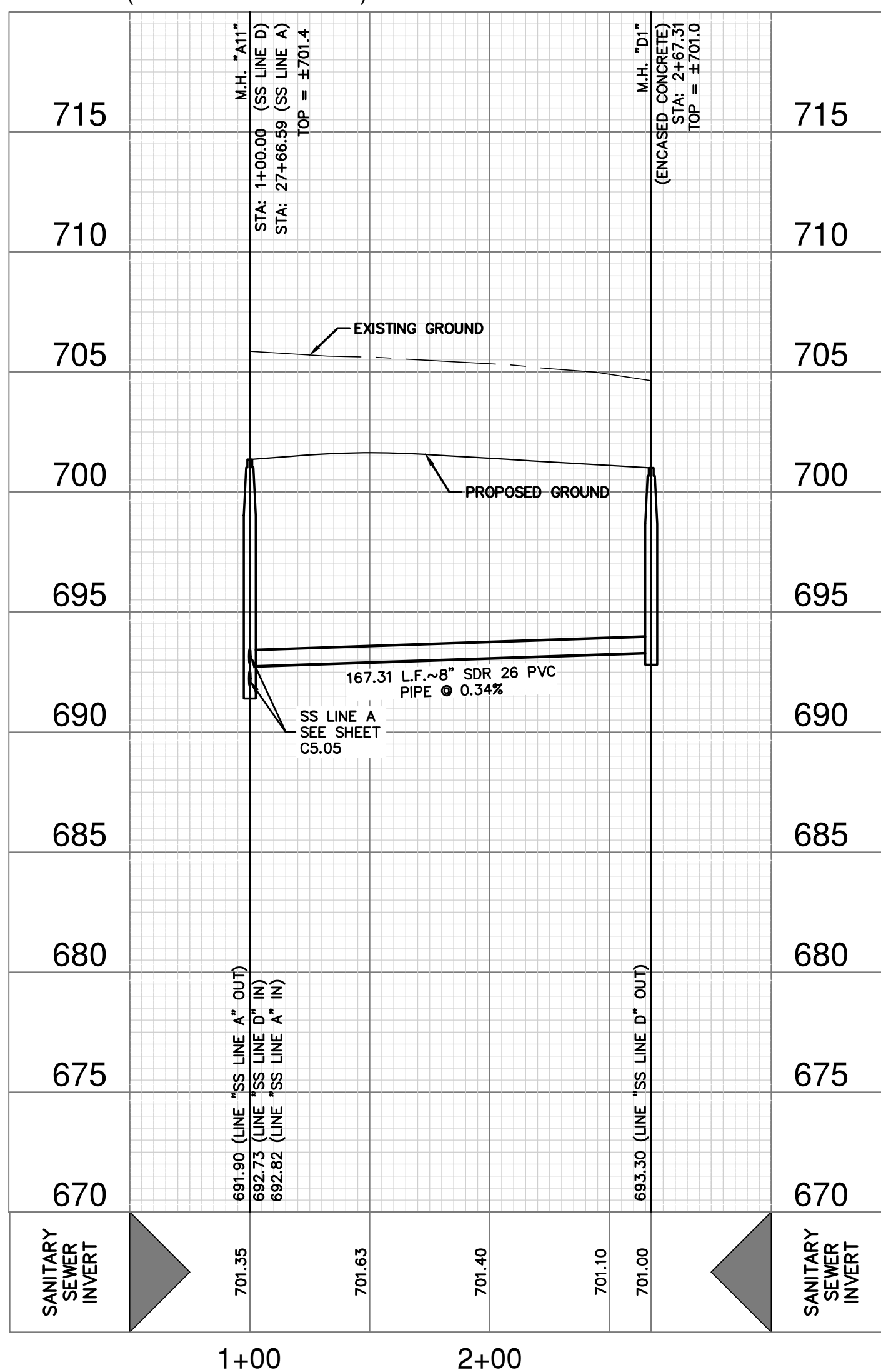
SEWER LINE "C"
(STA: 1+00.00 - END)

HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'



SEWER LINE "D"
(STA: 1+00.00 - END)

HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'



SEWER LEGEND

- PROJECT LIMITS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER
PROPOSED WATER
PROPOSED SEWER LATERAL
UTILITY CROSSING

KEY LEGEND

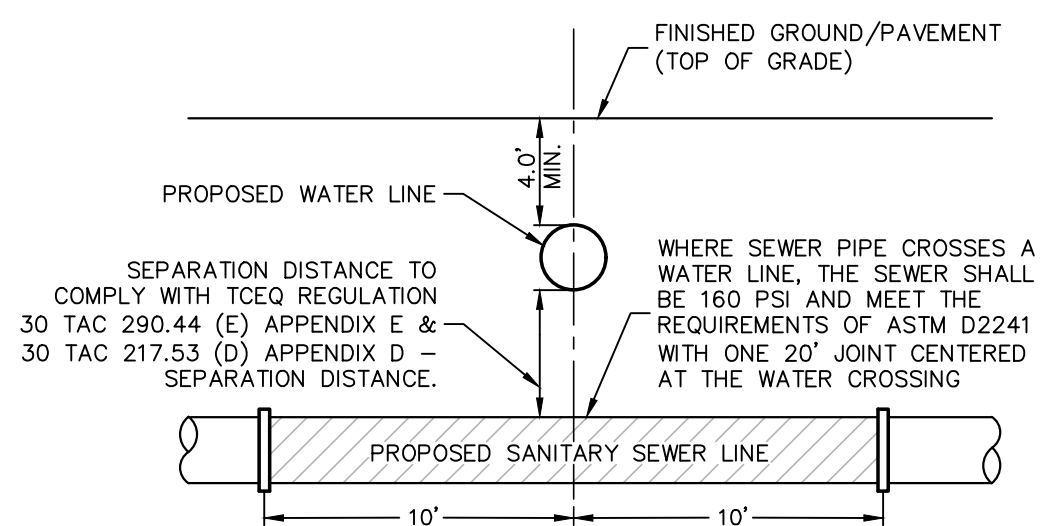
- A 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

ALL SEWER PIPE LATERALS SHALL BE SDR26

CONTOURS SHOWN ARE FOR GRAPHICAL USE ONLY

MANHOLE OPENING INCREASED TO 30" AS PER TCEQ CHAPTER 217.55

ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL BE WATERTIGHT AS PER TCEQ CHAPTER 213.5



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

NOTES:

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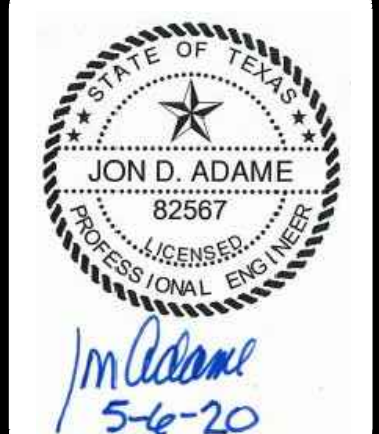
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TRENCH EXCAVATION SAFETY PROTECTION

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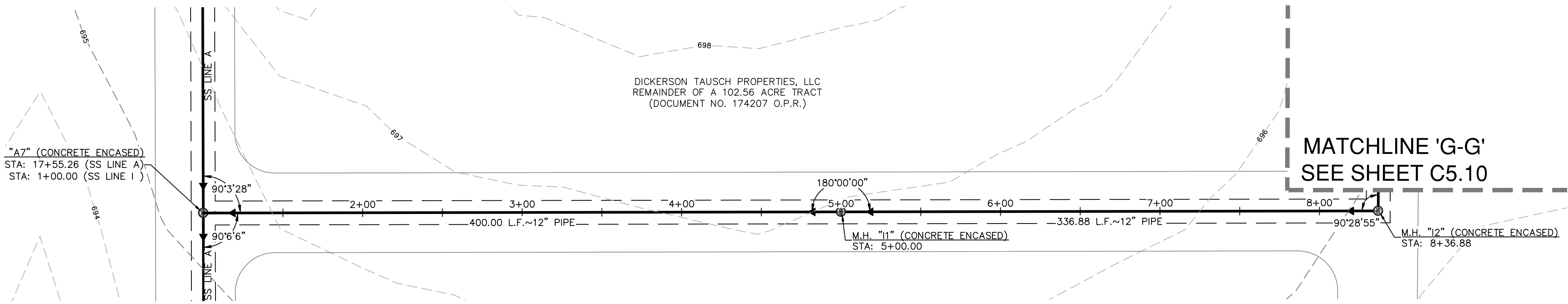
NO.	REVISION	DATE
1	1ST ROUND COMMENTS	5-6-2020



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2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TUBE FIRM REGISTRATION #170 | TBPUS FIRM REGISTRATION #10028800

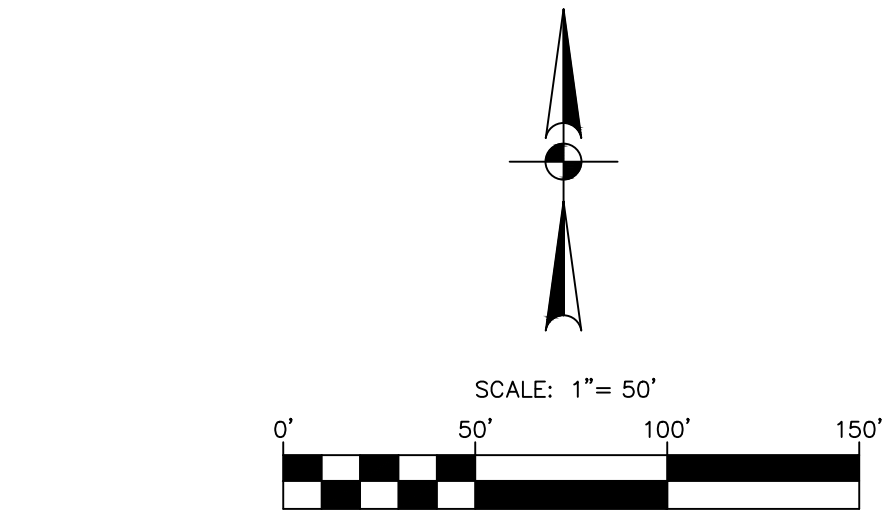
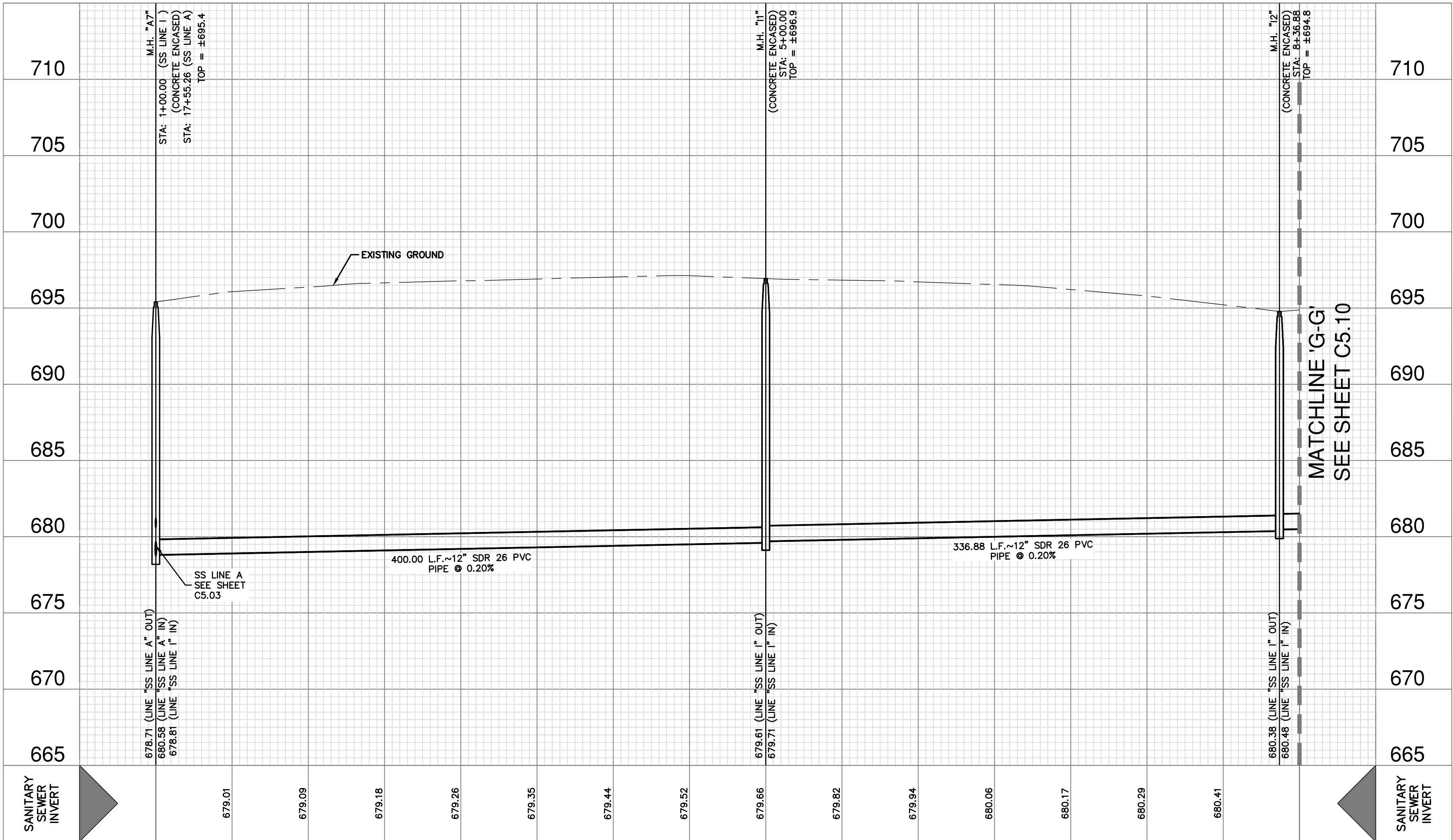
SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS
SEWER LINE C ~ STA. 1+00.00 TO END
SEWER LINE D ~ STA. 1+00.00 TO END
SANITARY SEWER PLAN & PROFILE

PLAT NO.	-
JOB NO.	11100-17
DATE	MAY 2020
DRAWN	LM
CHECKED	JA
SHEET	C5.08

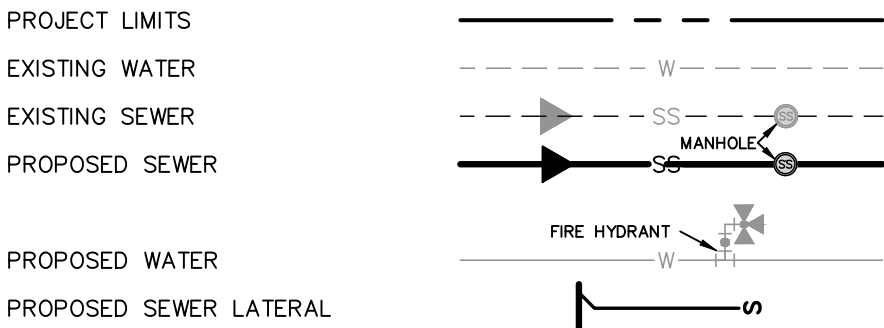


SEWER LINE "I"
(STA: 1+00.00 - 8+50.00)

HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'



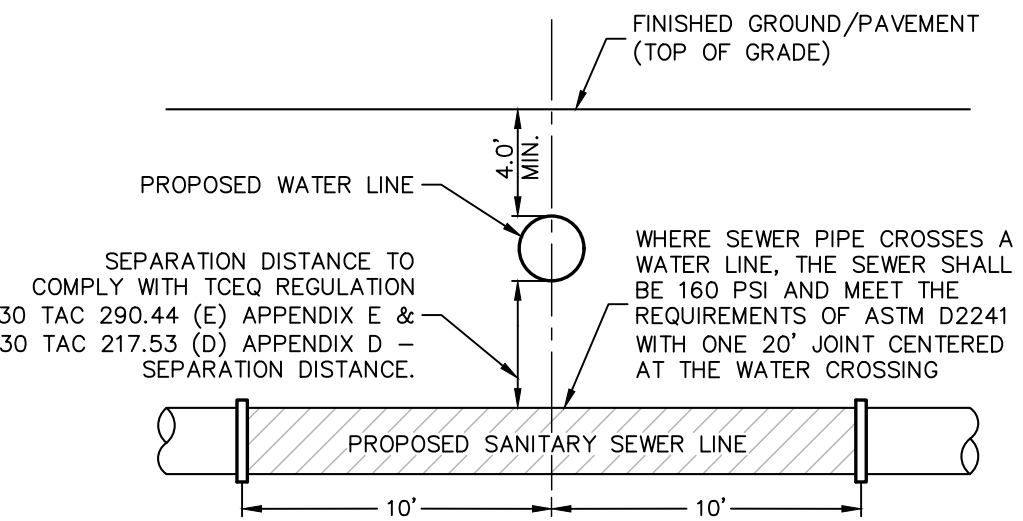
SEWER LEGEND



KEY LEGEND

(A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

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TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

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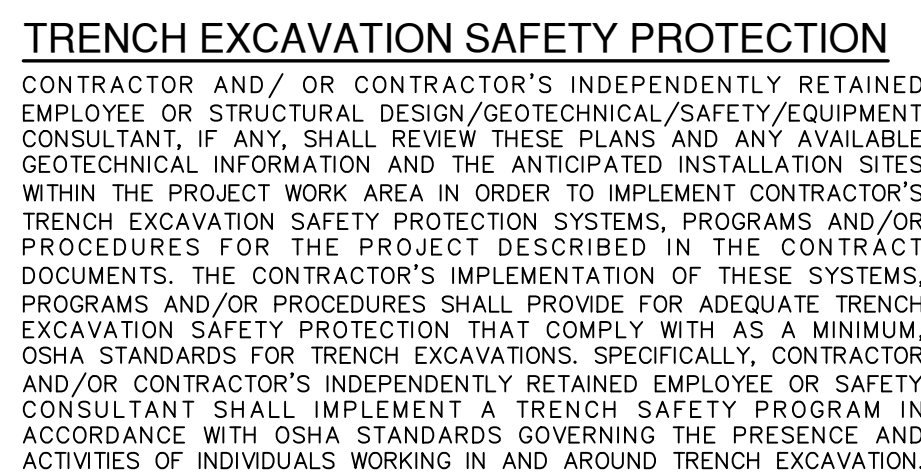
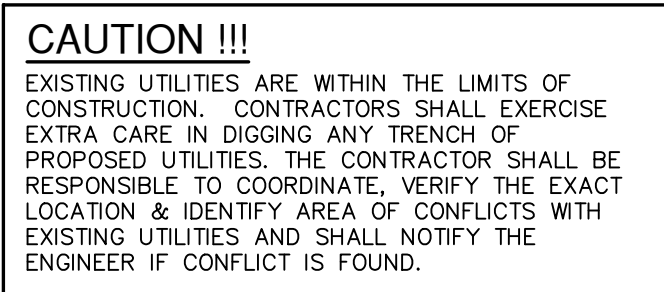
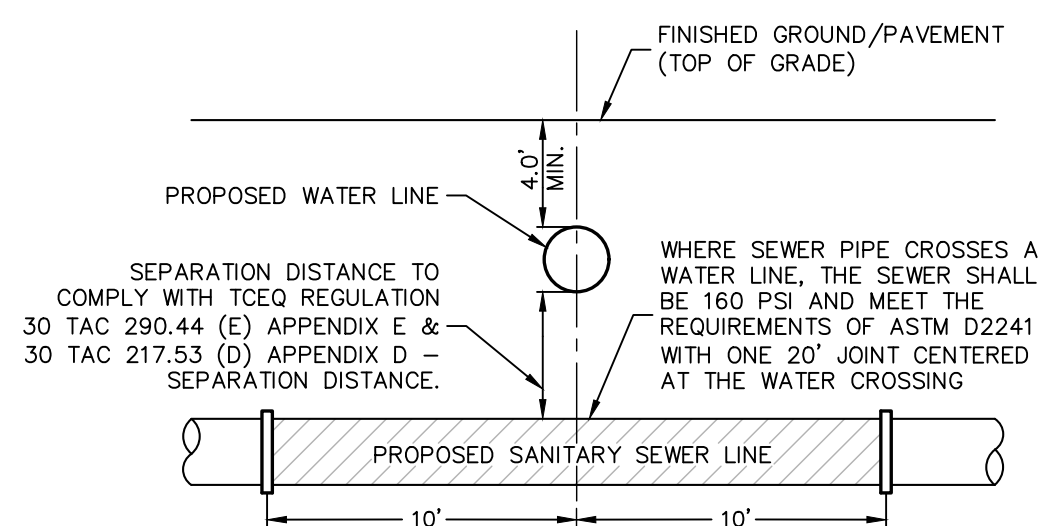
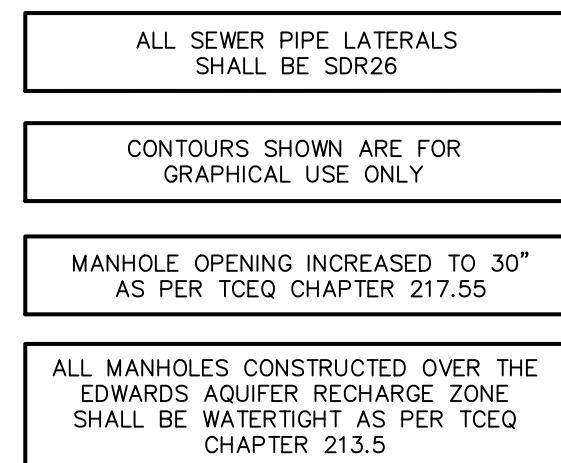
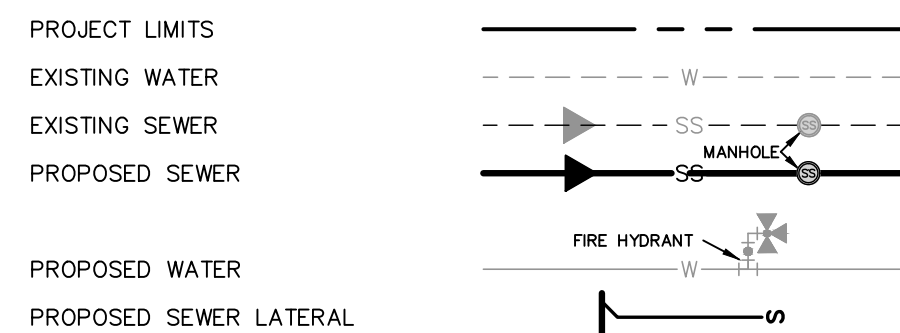
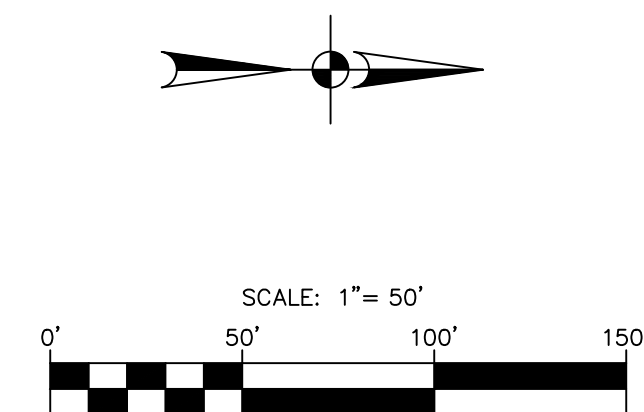
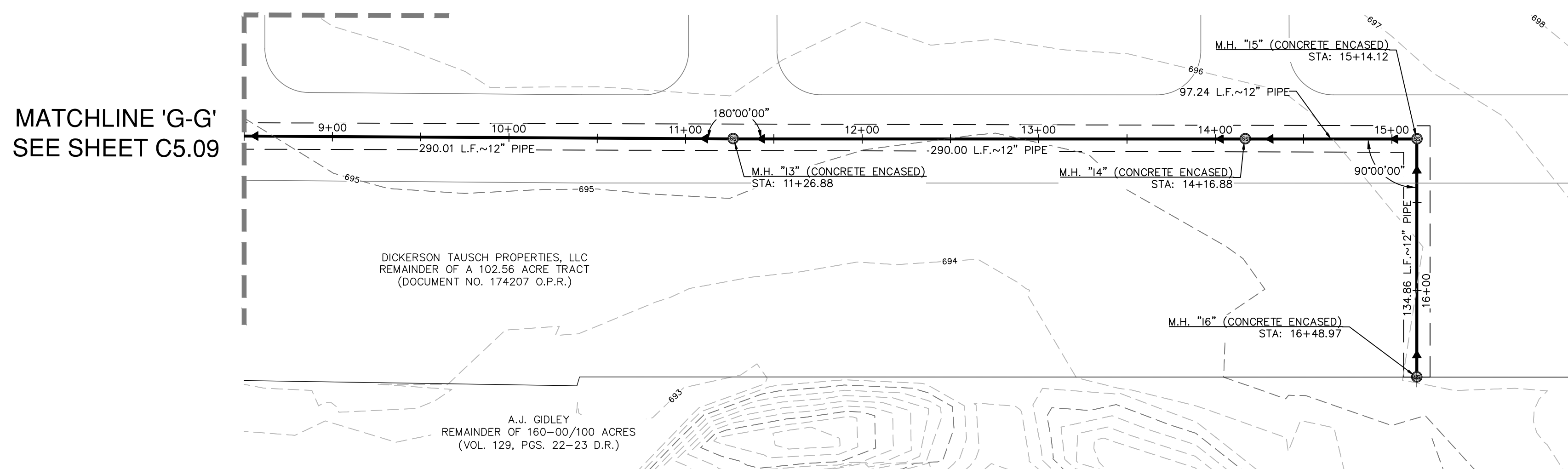
NO.	REVISION	DATE



**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #170 | TBPUS FIRM REGISTRATION #10028800

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS
SEWER LINE I ~ STA. 1+00.00 TO 8+50.00
SANITARY SEWER PLAN & PROFILE

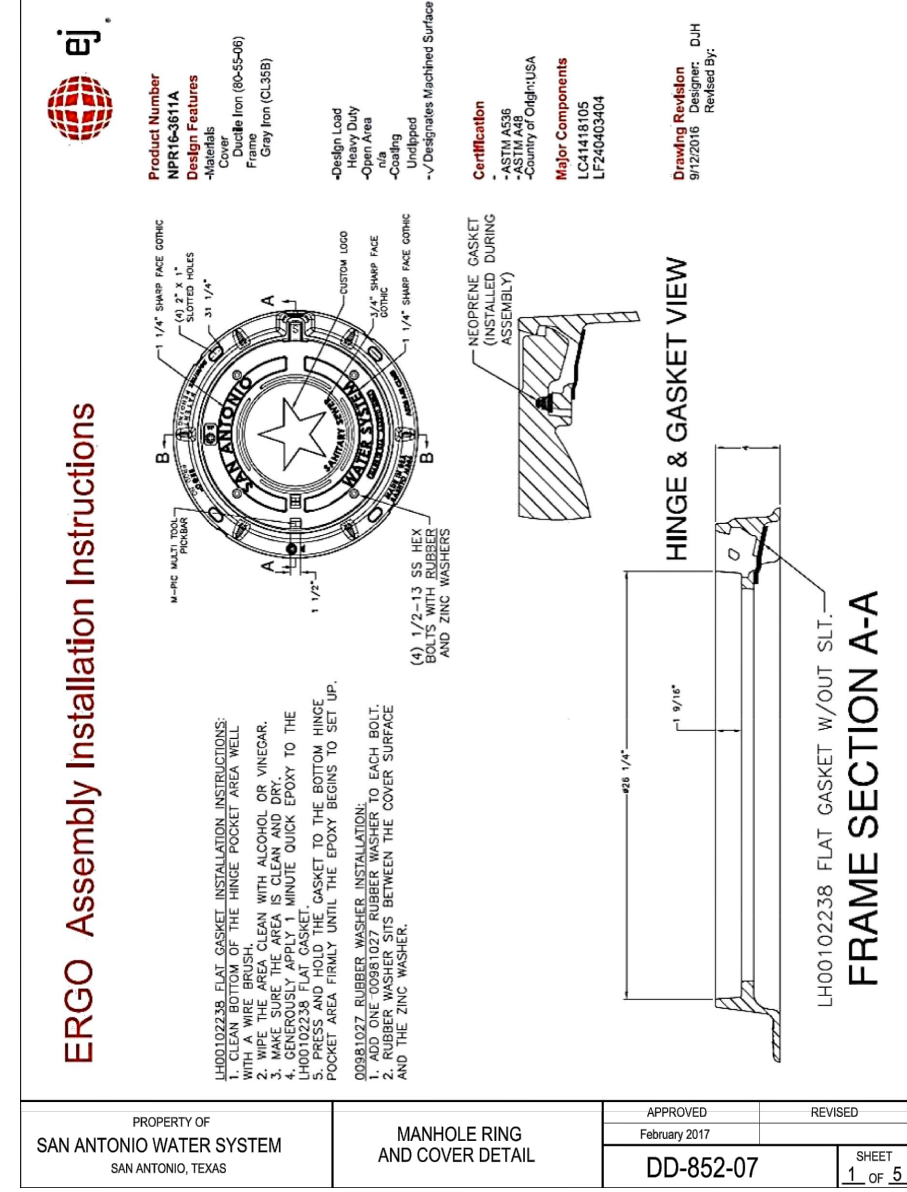
PLAT NO.	-
JOB NO.	11100-17
DATE	APRIL 2020
DESIGNER	LM
CHECKED	JA DRAWN LM
SHEET	C5.09



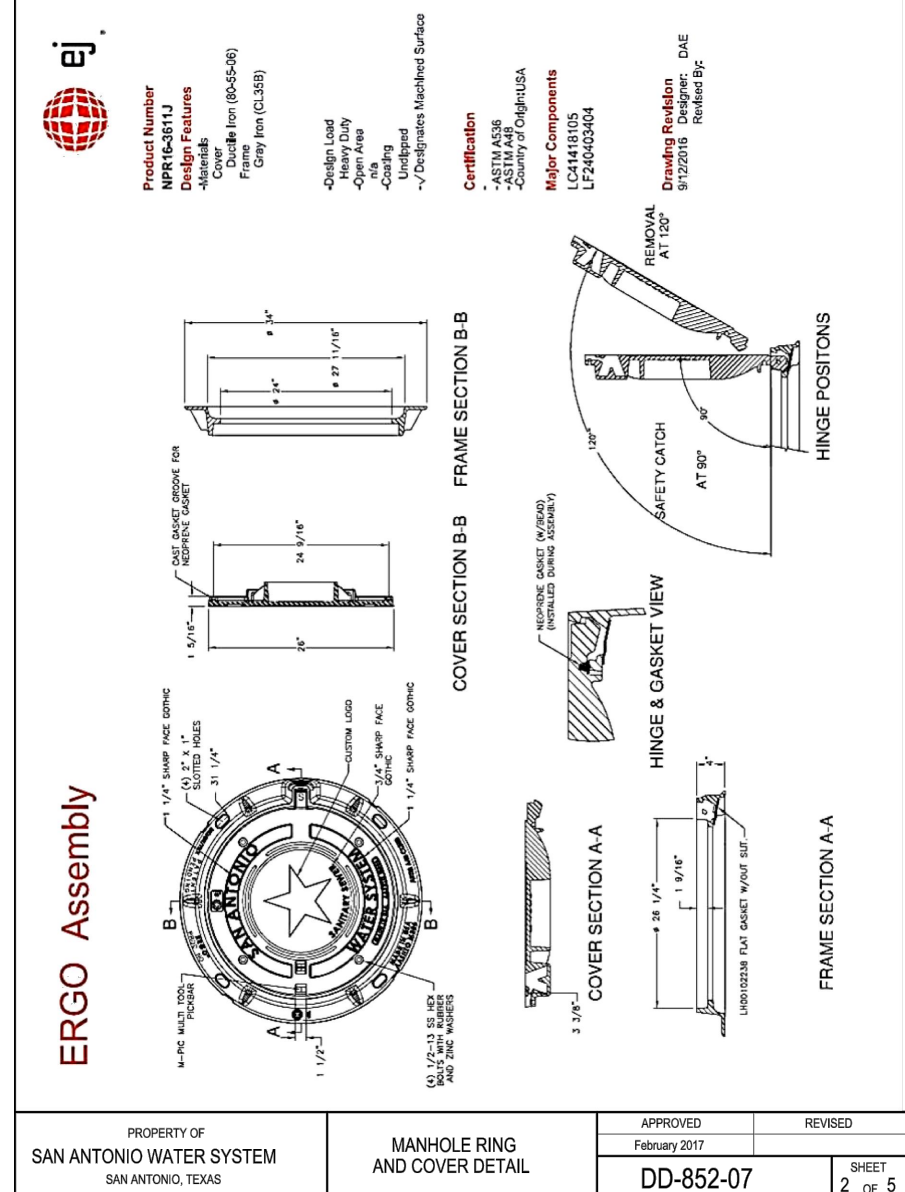
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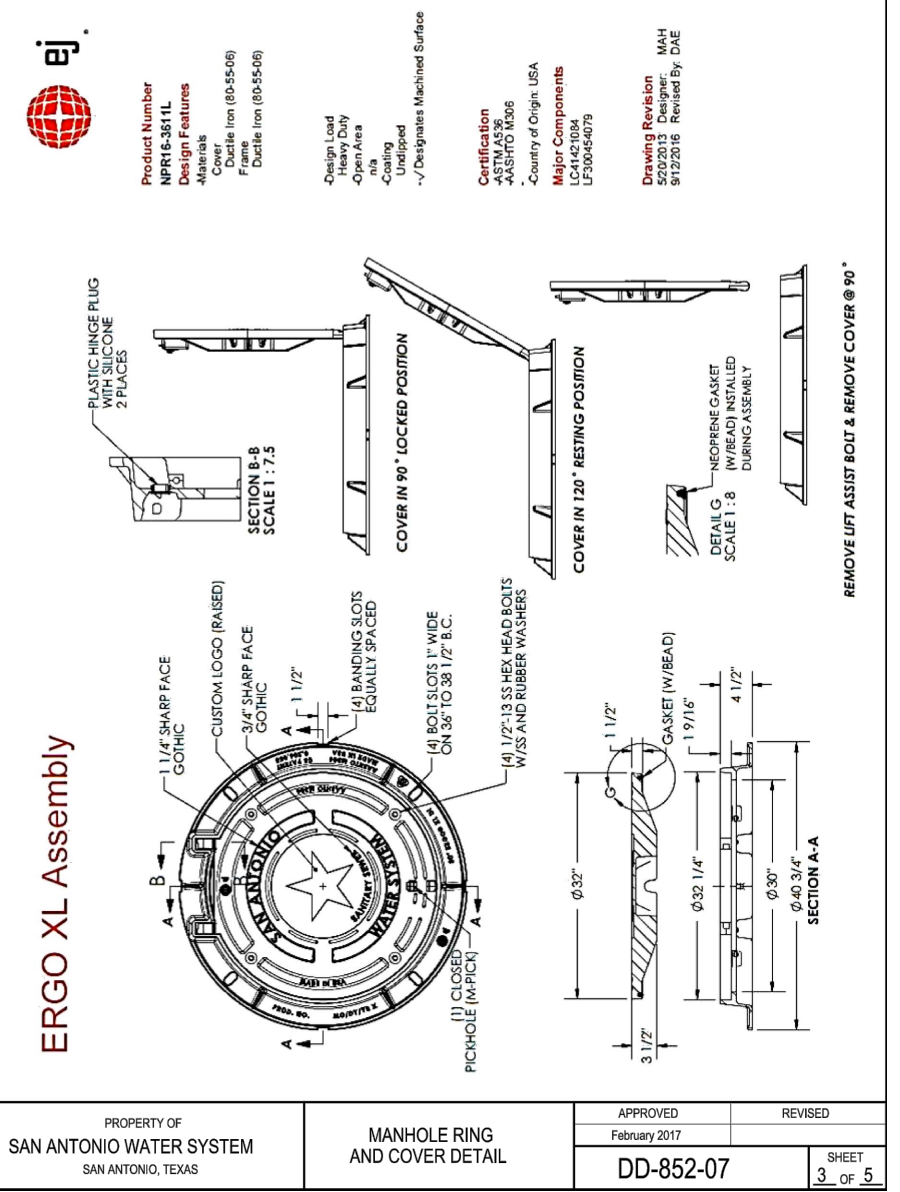
ERGO Assembly Installation Instructions



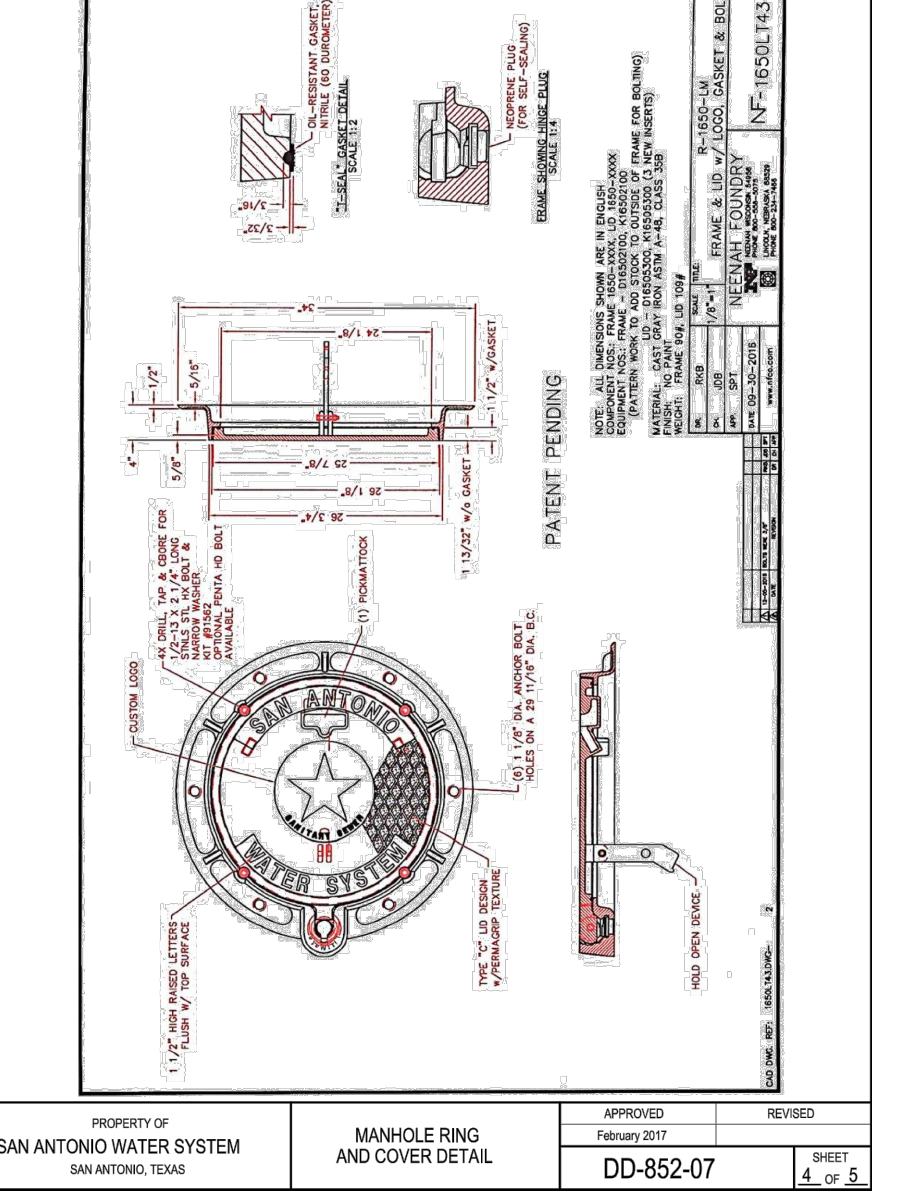
ERGO Assembly



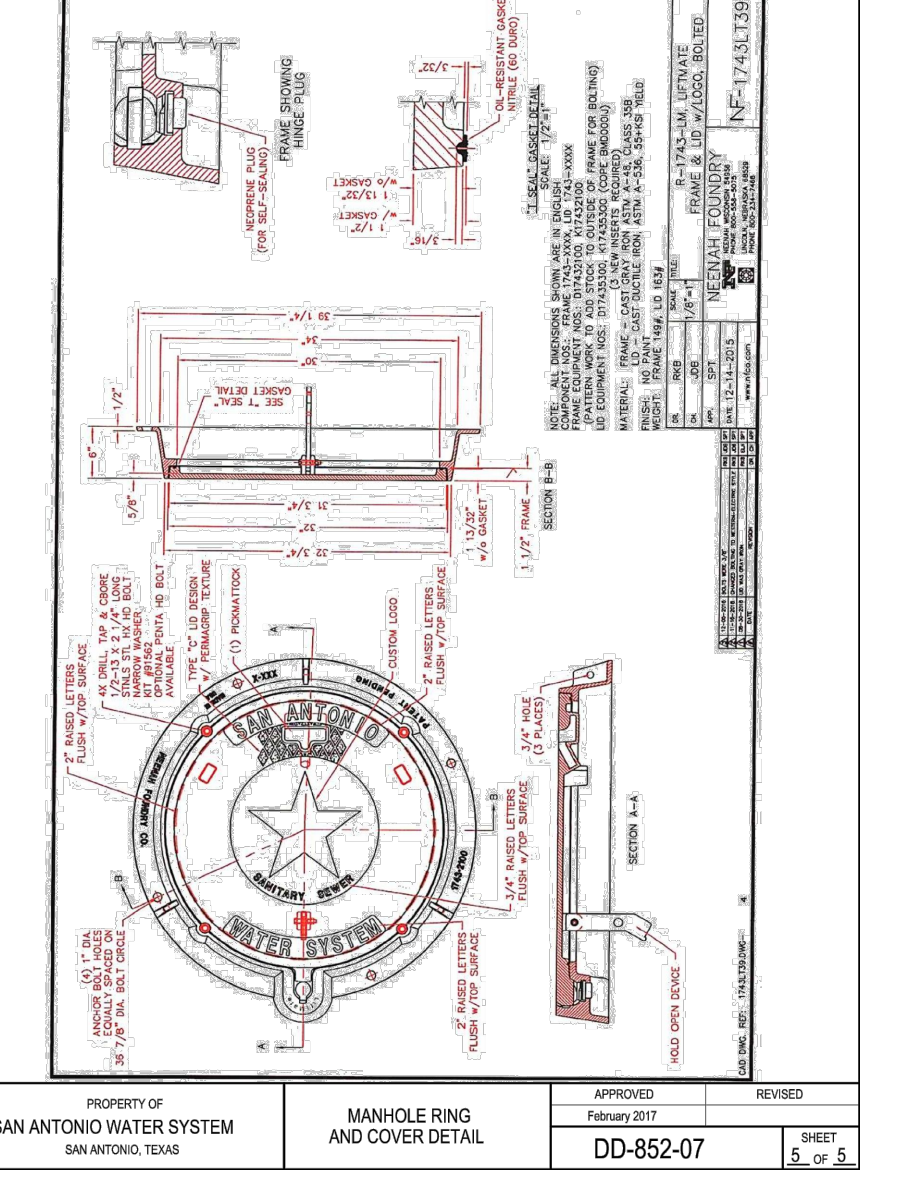
ERGO XL Assembly



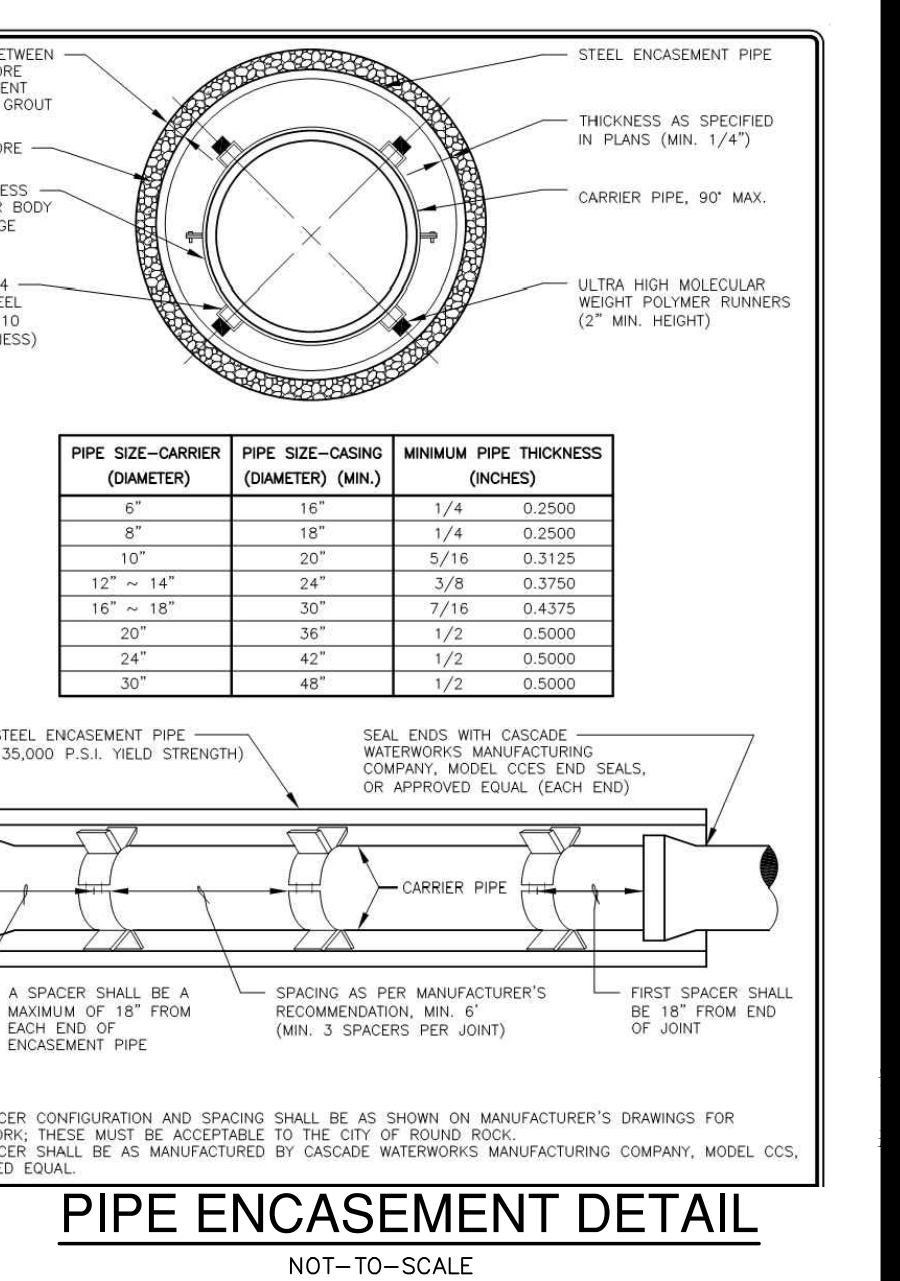
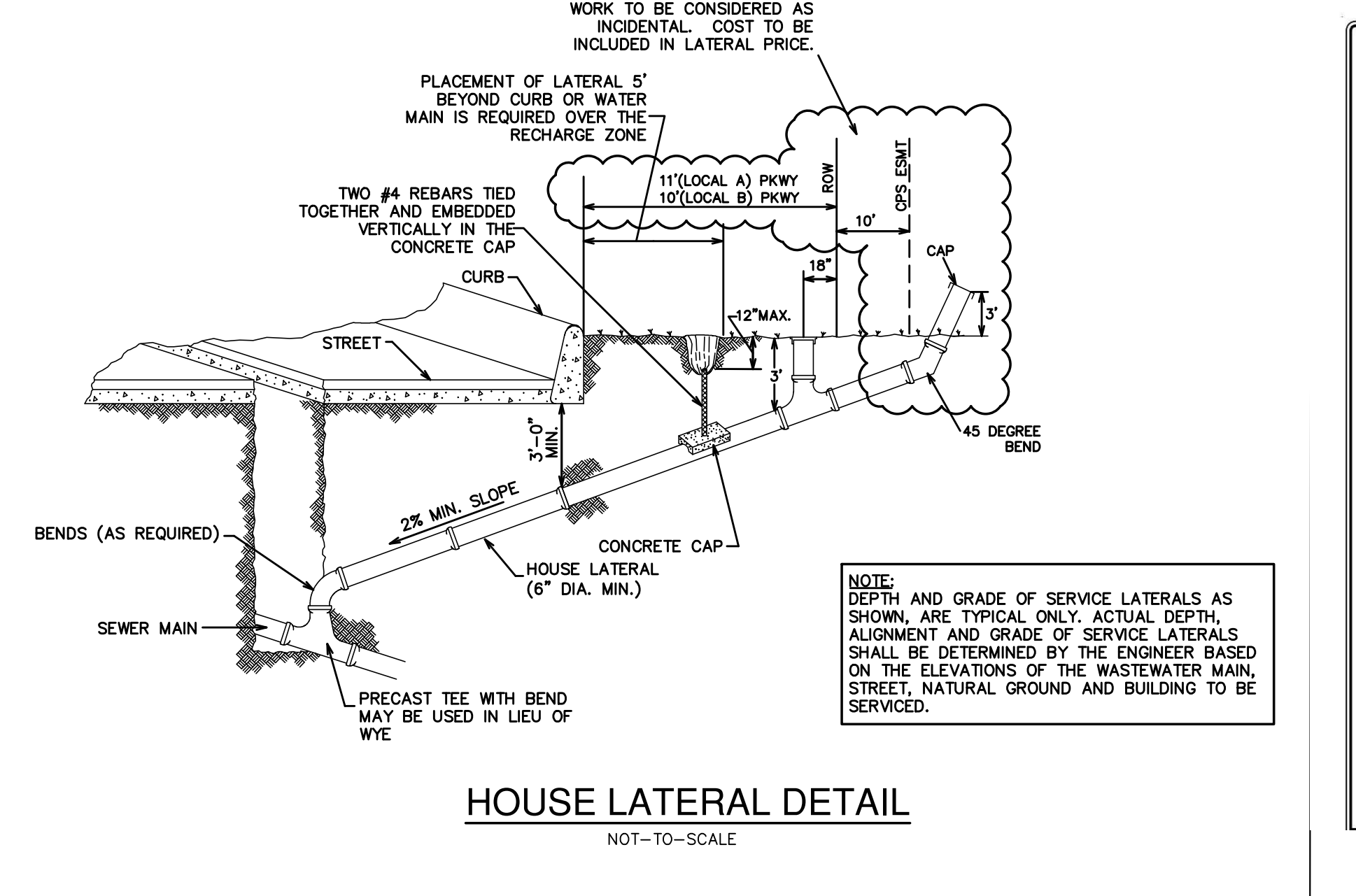
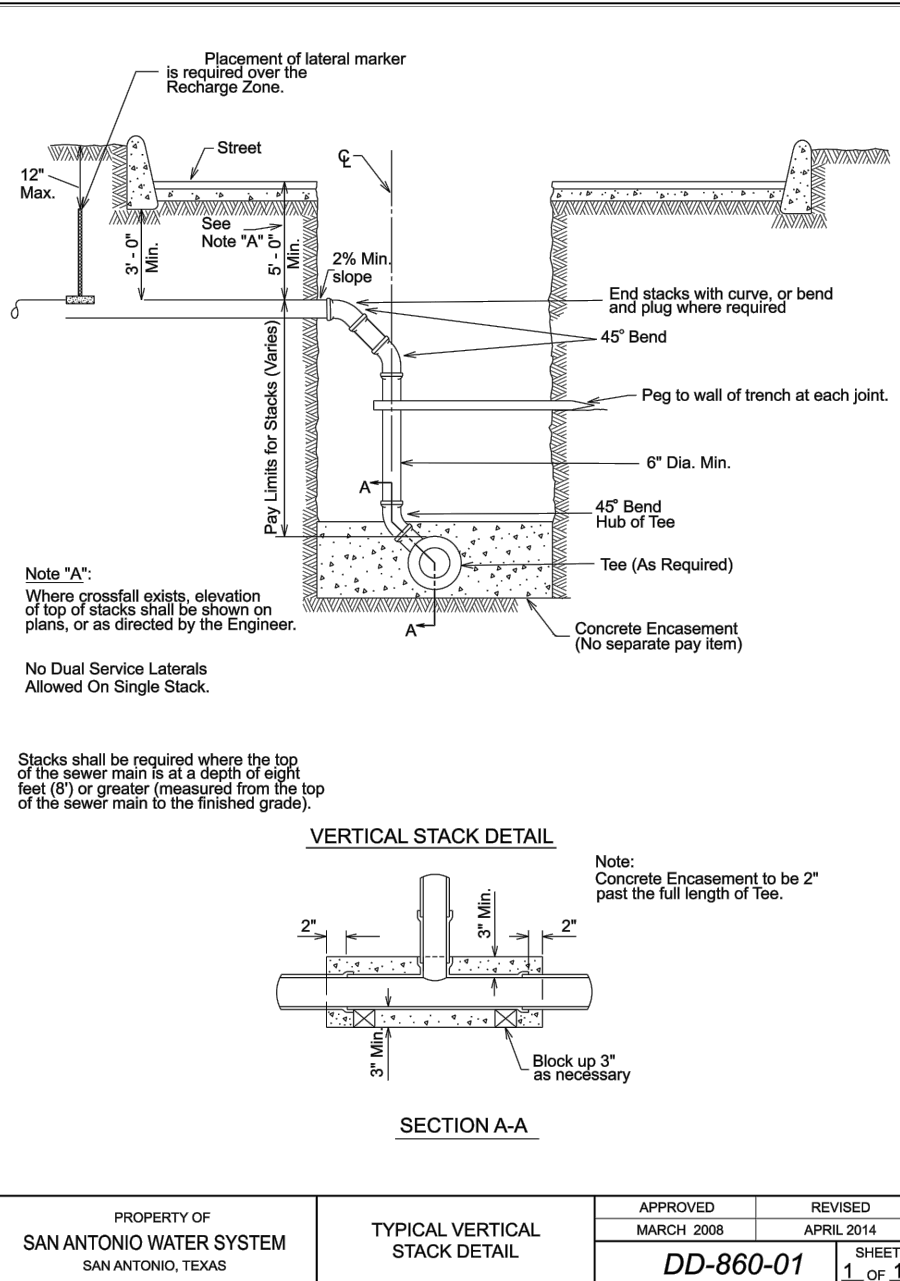
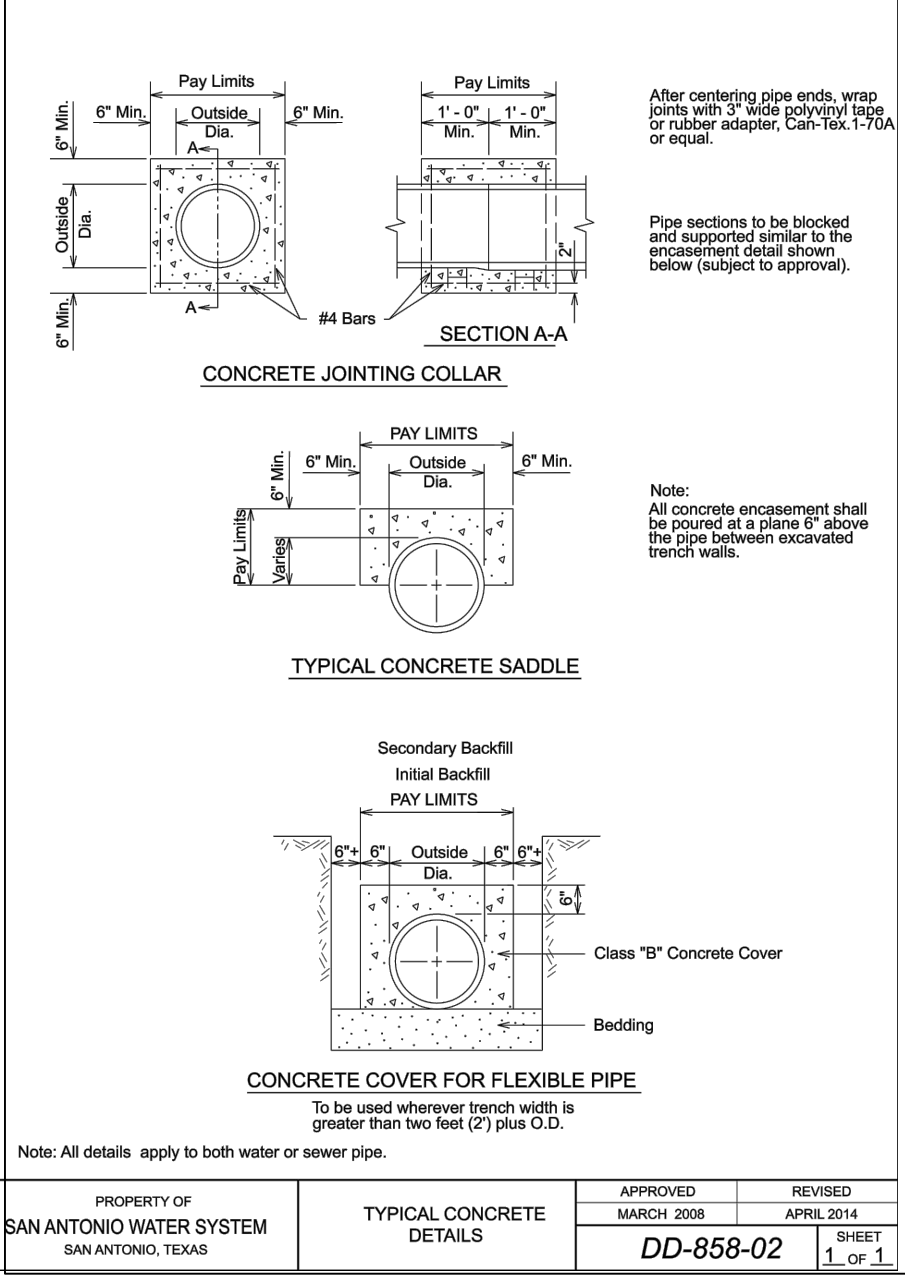
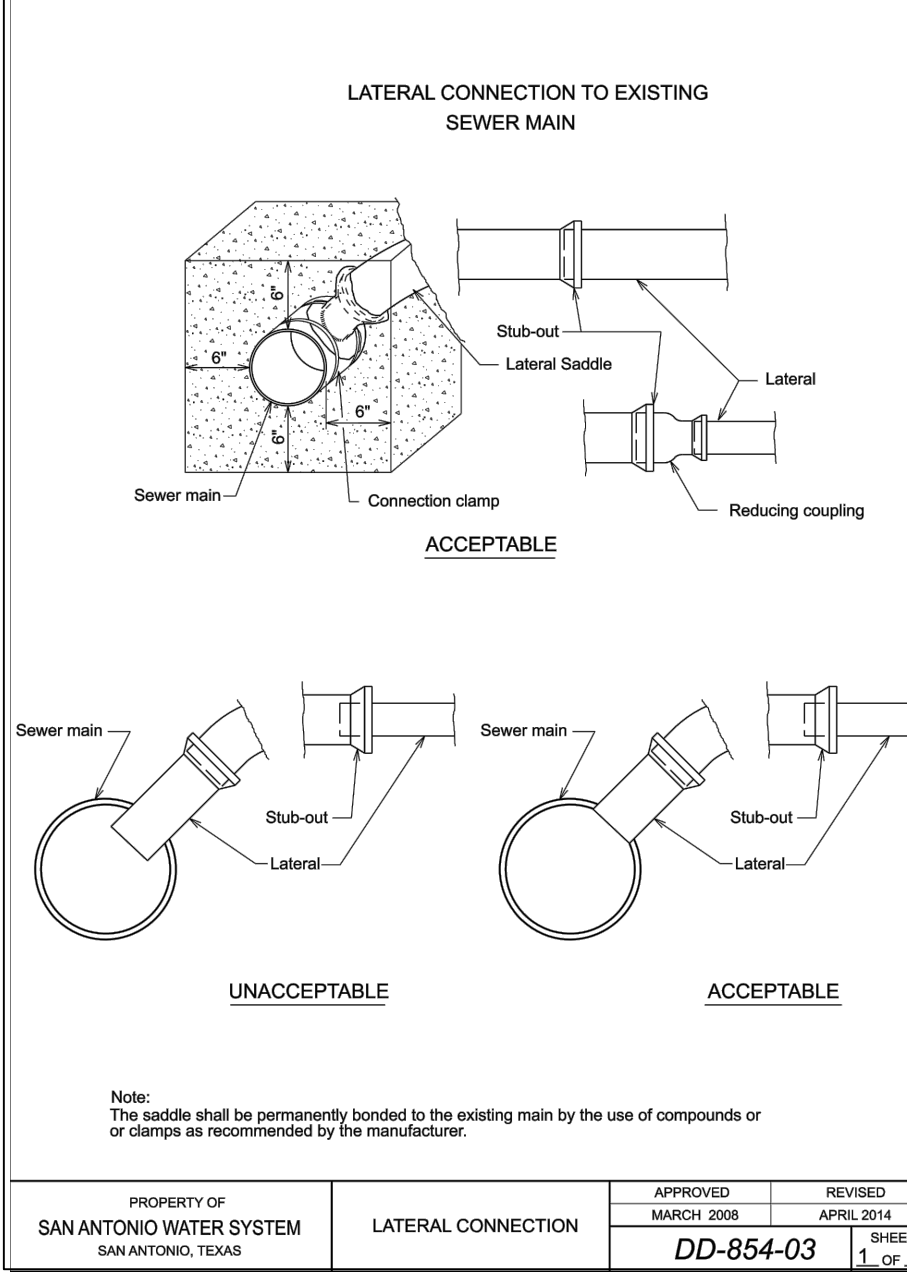
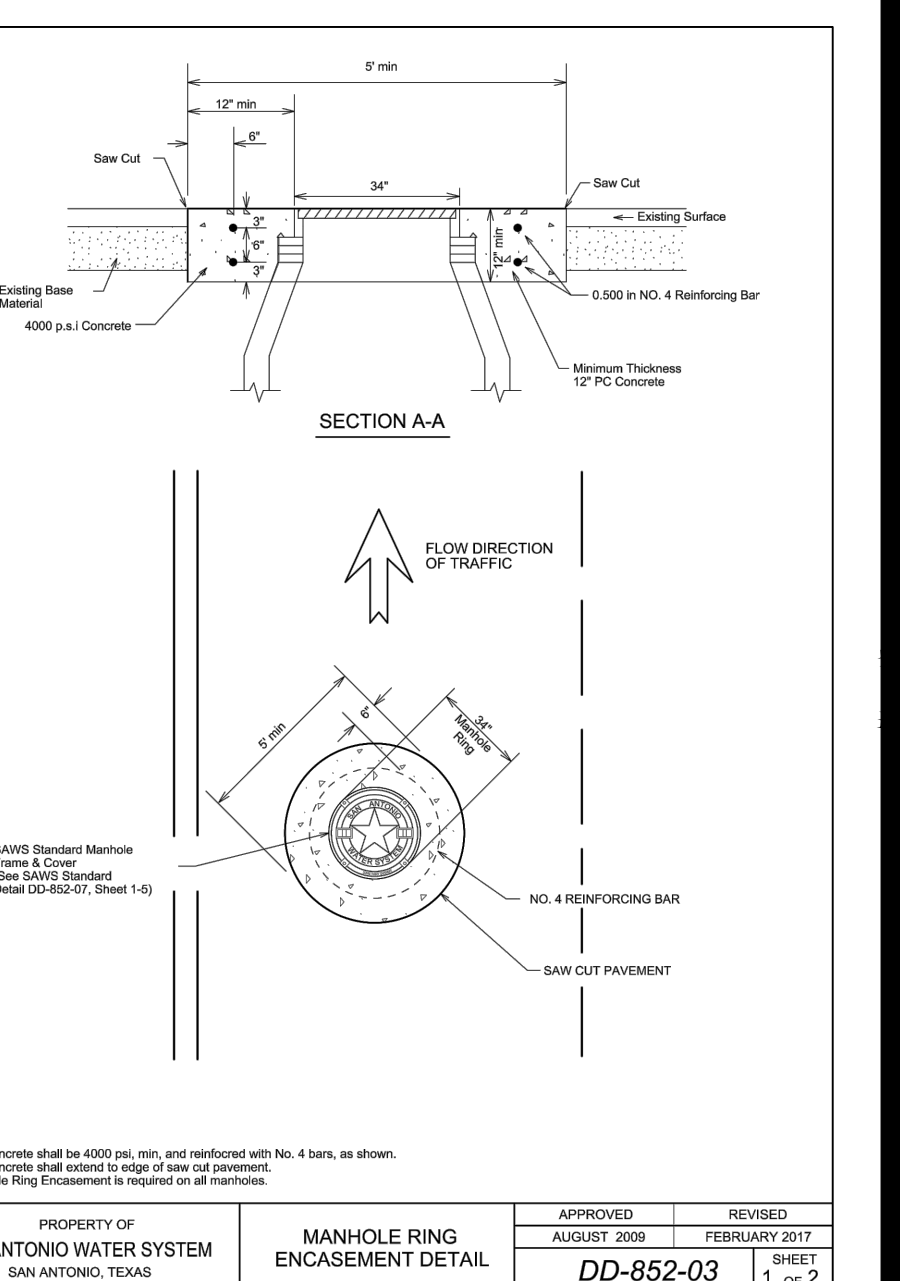
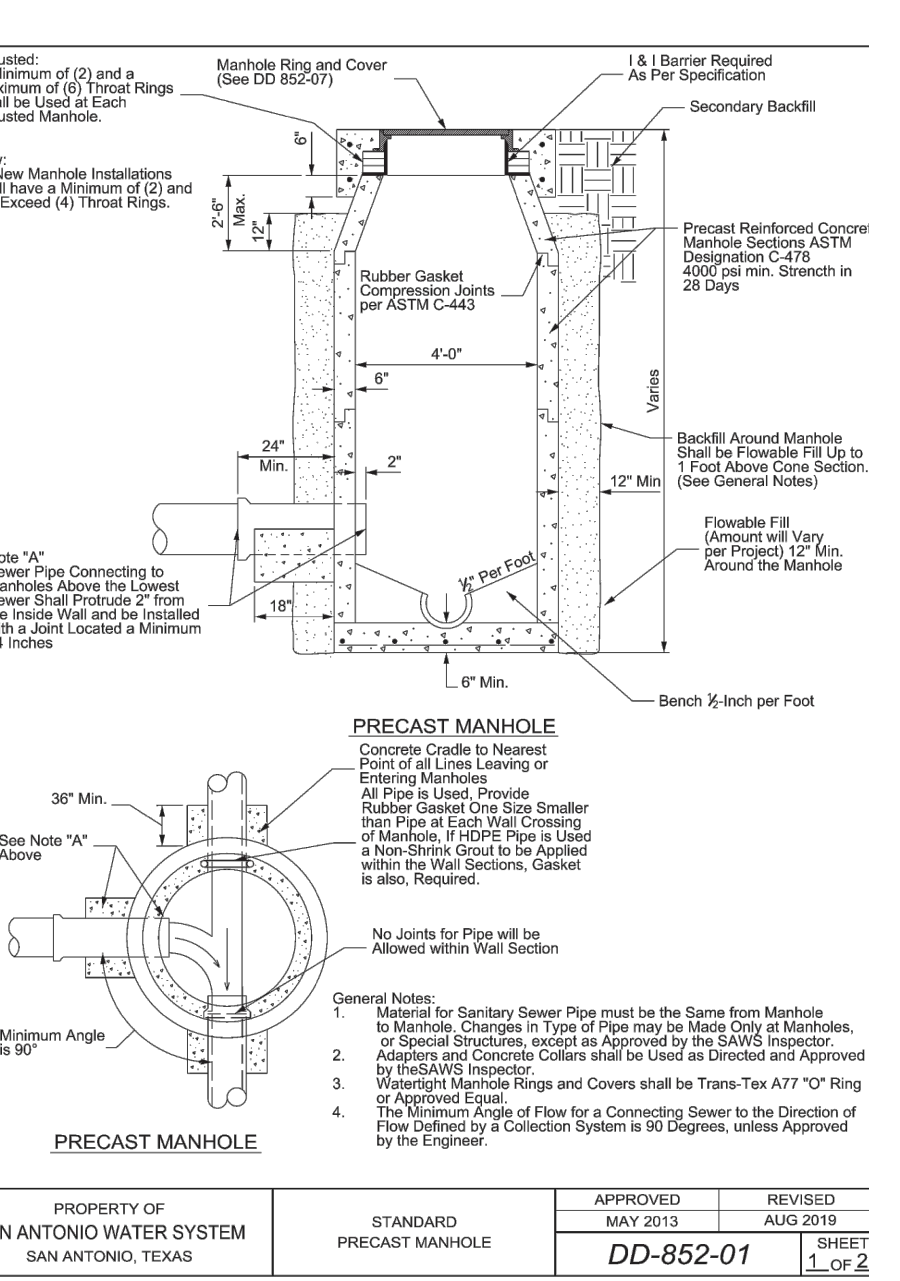
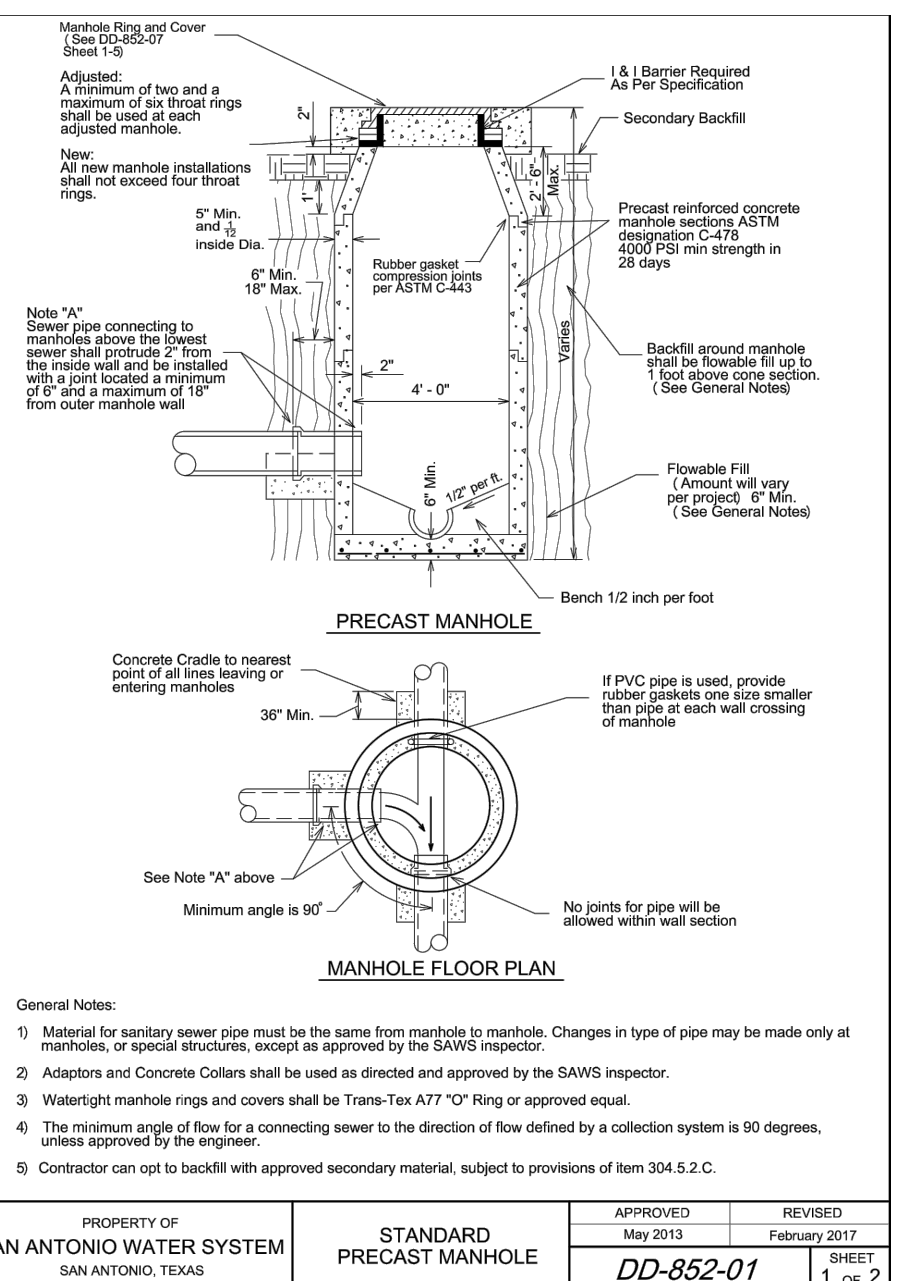
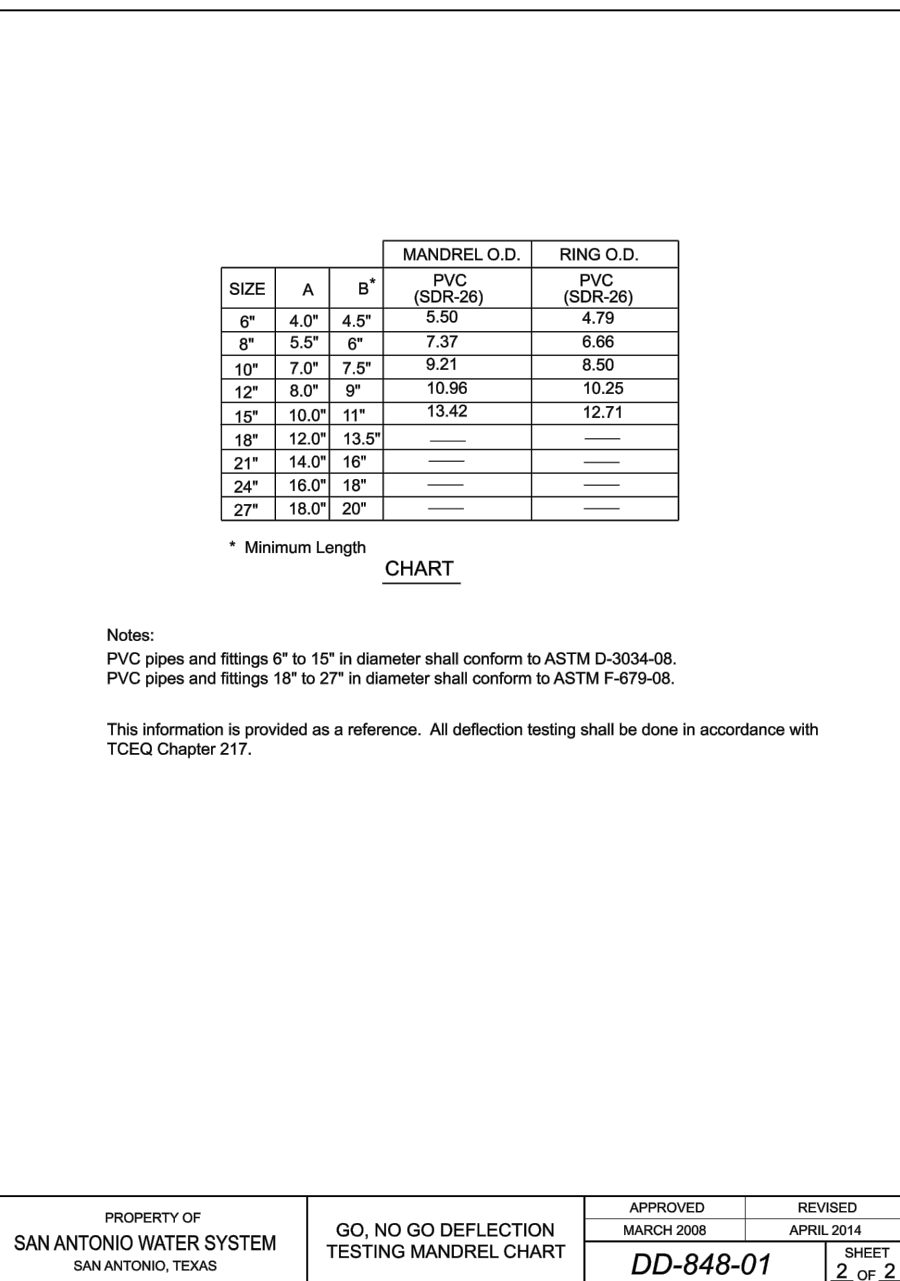
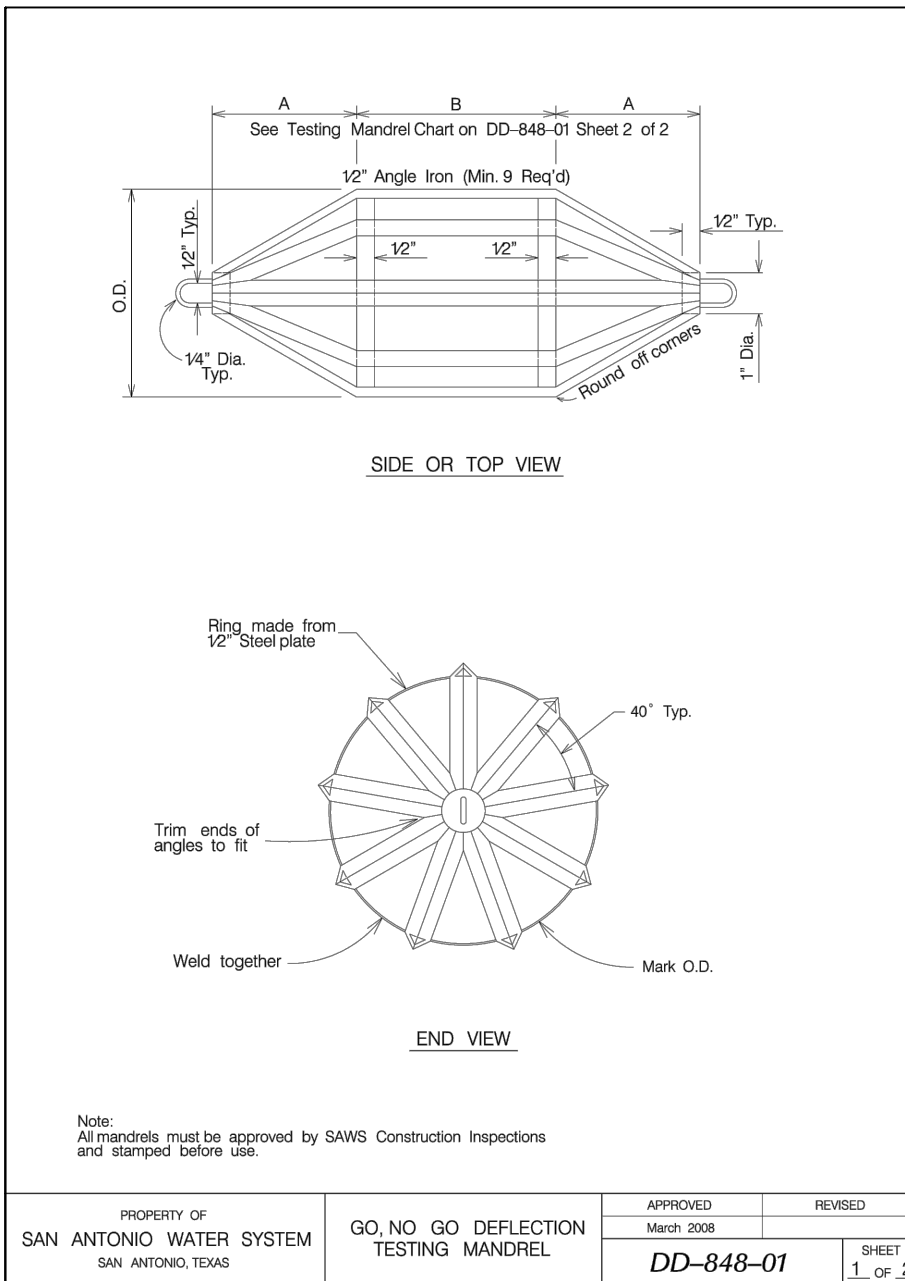
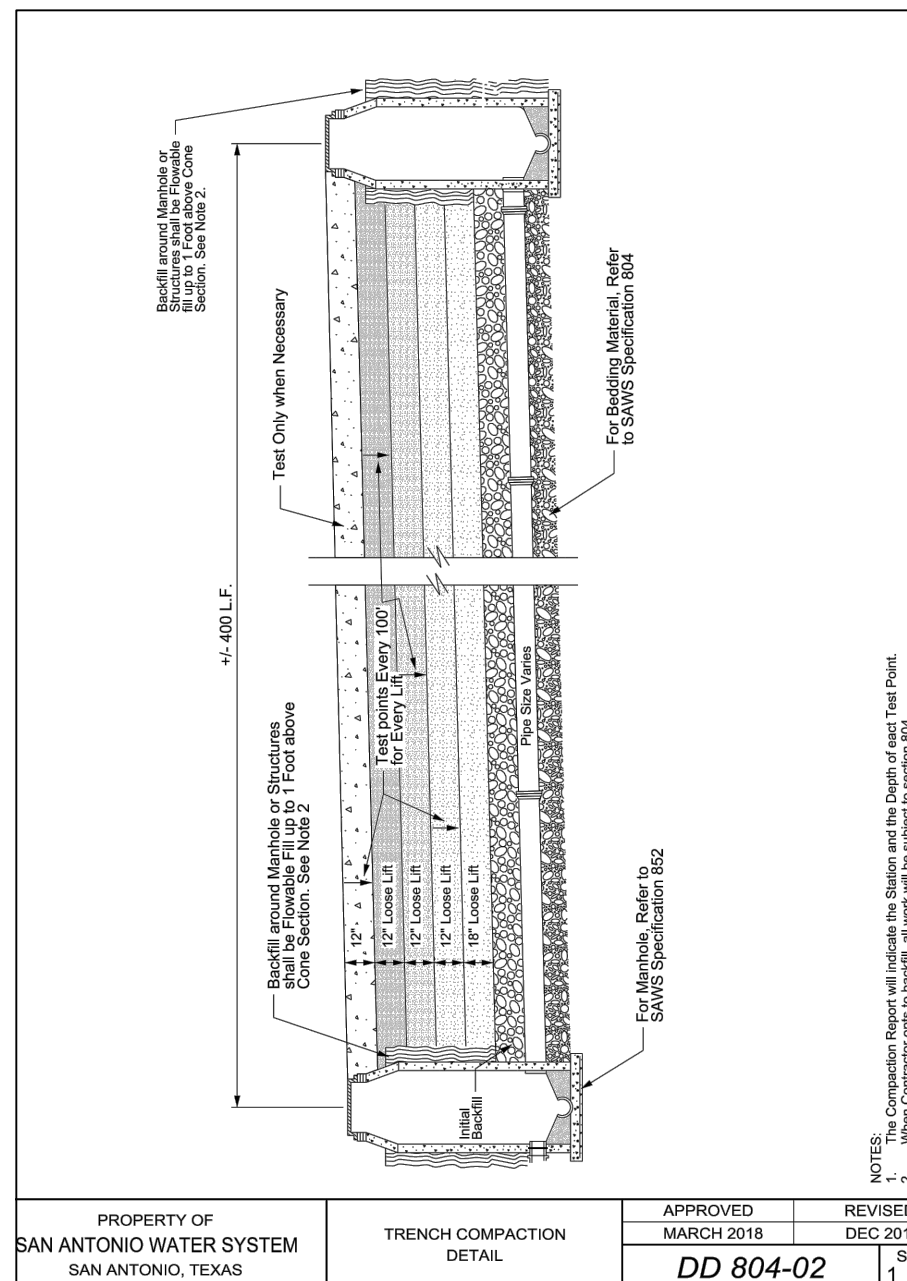
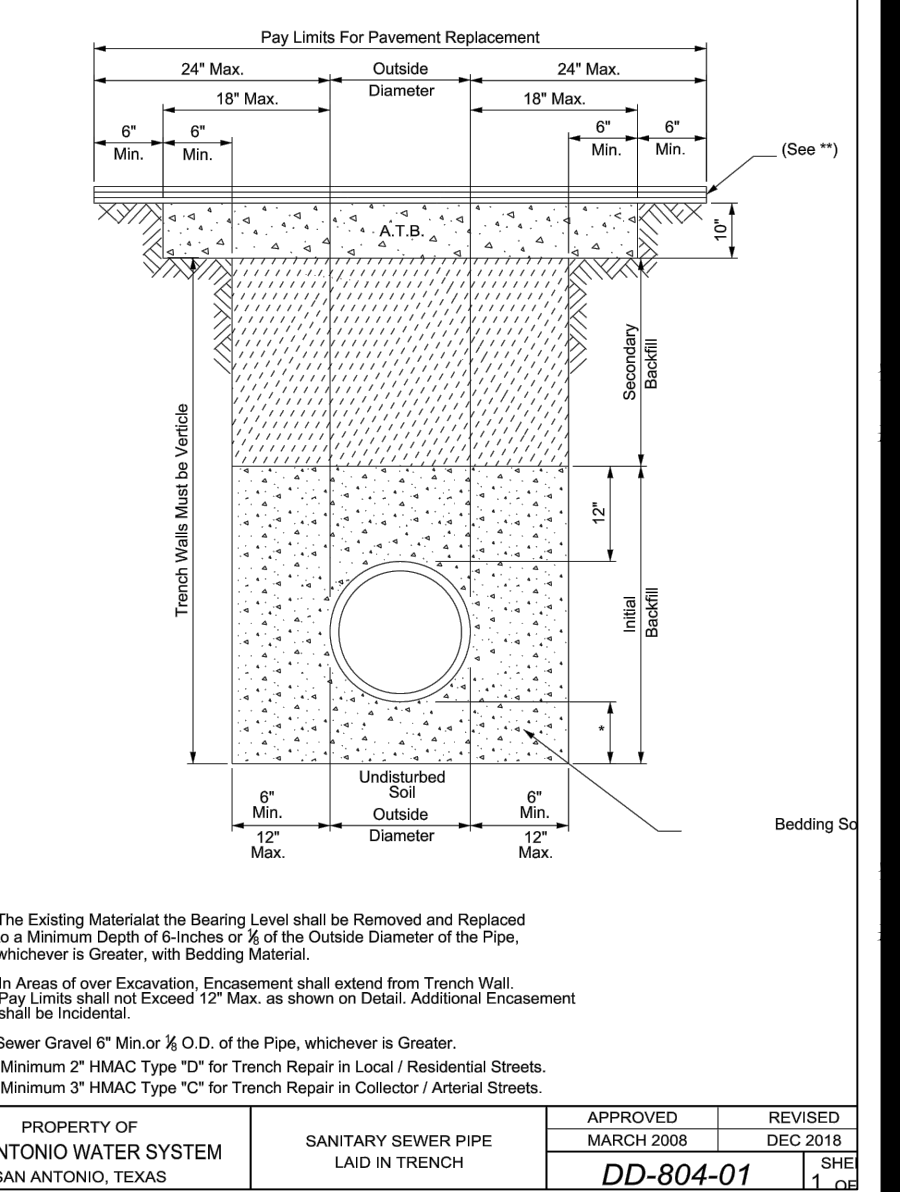
ERGO XL Assembly



ERGO XL Assembly



ERGO XL Assembly



DATE
5-6-2020

NO. REVISION
1ST ROUND COMMENTS

Jon D. Adame
5-6-20

SADDLE RIDGE ESTATES - PHASE 1
LYTLE, TEXAS

SANITARY SEWER DETAILS

PLAT NO.
-

JOB NO.
111001-17

DATE
MAY 2020

DRAWN
LM

CHECKED
JA

SHEET
C5.20

CITY OF LYTLE CONSTRUCTION NOTES
 (LAST REVISED JULY 2017)

CITY OF LYTLE GENERAL SECTION

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE CITY OF LYTLE AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

A.CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.

B.CURRENT TxDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".

C.CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".

D.CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".

E.CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY CITY OF LYTLE CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.
- THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE CITY OF LYTLE CONSTRUCTION INSPECTION DIVISION ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
- LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO THE CITY OF LYTLE.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON CITY OF LYTLE FACILITIES FACILITIES. THE FOLLOWING CONTACT INFORMATION IS SUPPLIED FOR VERIFICATION PURPOSES:

• TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR ATASCOSA COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF LYTLE OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM CITY OF LYTLE WORK ON CITY OF LYTLE RECOGNIZED HOLIDAYS.

WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE CITY OF LYTLE INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK.

ANY AND ALL CITY OF LYTLE UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE CITY OF LYTLE INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
- A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO CITY OF LYTLE CONSTRUCTION INSPECTION DIVISION.

CITY OF LYTLE SEWER NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY THE CITY OF LYTLE PUBLIC WORKS DIRECTOR IMMEDIATELY AT (830) 709-3692. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.

B.ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.

C.CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.

D.CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.

E.CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.

F.MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISIONS THE AFFECTED SEWER MAINS (AT CITY OF LYTLE DIRECTION) WITHIN 24 HOURS.

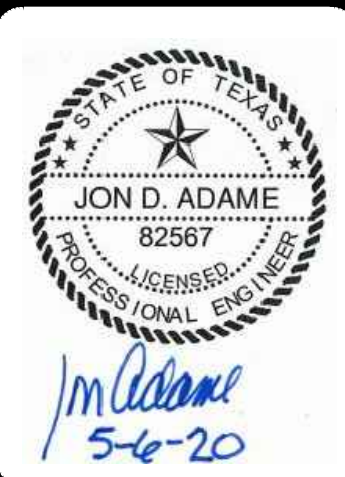
SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO CITY OF LYTLE SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY CITY OF LYTLE, INCLUDING ANY FINES FROM EPA, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.

NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.
- IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".
- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE CITY OF LYTLE PUBLIC WORKS DEPARTMENT AT 830.709.3692 AT LEAST ONE WEEK 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 THE CITY OF LYTLE OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44(E)(4)(B). CONTRACTOR SHALL CENTER A 20" JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.
- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)
- SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE CITY OF LYTLE INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE REGARDLESS OF SIZE.
- MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY THE CITY OF LYTLE PUBLIC WORKS DEPARTMENT. AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
- ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

PROJECT SEWER NOTES

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO 10' PAST THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2" X 4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. NO SEPARATE PAY ITEM.
- CONTRACTOR TO INSTALL PERMANENT MARKERS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9' FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
- CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE RING ENCASEMENT.
- ALL SEWER PIPES SHALL BE 8" AND 12" PVC (SDR 26), UNLESS OTHERWISE NOTED.
- CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
- CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- CONCRETE RING ENCASEMENT TO BE INSTALLED ON ALL MANHOLES AND, WITHIN LIMITS OF PAVEMENT, BE INSTALLED TO THE TOP OF THE BASE LAYER WITH A MINIMUM OF 2" OF ASPHALT ON TOP OF THE RING ENCASEMENT.
- MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
- ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
- IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE ON ACTUAL GROUND SURFACE OR FINISH PAVEMENT, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 0.5' ABOVE EXISTING GROUND, OR FLUSH TO FINISH ASPHALT PAVEMENT.
- ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

NO.	REVISION	DATE
1	1ST ROUND COMMENTS	5-6-2020



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TBP# FIRM REGISTRATION #470 | TBP#S FIRM REGISTRATION #10028800

SADDLE RIDGE ESTATES - PHASE 1
 LYTLE, TEXAS
 SANITARY SEWER GENERAL NOTES

PLAT NO.	-
JOB NO.	11100-17
DATE	MAY 2020
DESIGNER	LM
CHECKED	JA DRAWN LM
SHEET	C5.21