CITY OF BLANCO, TEXAS

US 281 NORTH SEWER EXTENSION

CITY OF BLANCO TEXAS

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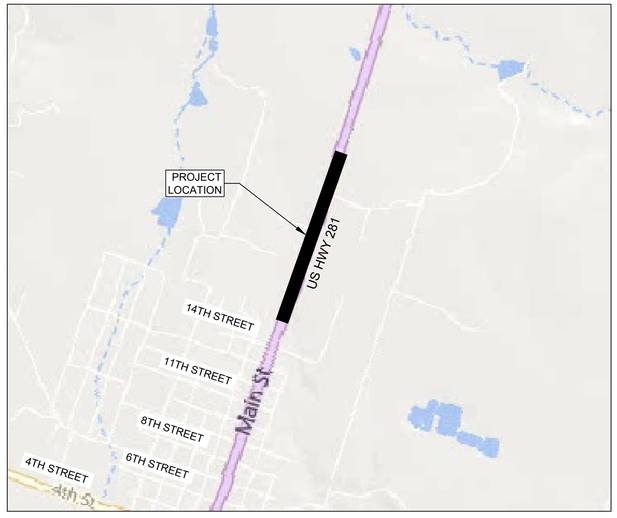
LOCATION MAP:



CITY OF BLANCO, BLANCO COUNTY, TEXAS
(N.T.S.)

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10/21/2025

COVER SHEET
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

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PROJECT NO:
6112502

SHEET NO:
1

FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\COVER SHEET.DWG PLOT DATE: 10/21/2025 9:17 AM

TCEQ ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) - GENERAL CONSTRUCTION NOTES

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES 30 TEXAS ADMINISTRATIVE CODE (TAC) §§213.5(C) AND 217.51 - 217.70 AND 30 TAC CHAPTER 217, SUBCHAPTER D, AND THE CITY OF BLANCO STANDARD SPECIFICATIONS.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SEWAGE COLLECTION SYSTEM PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.

3. NO LATER THAN 48 HOURS PRIOR TO COMMENCING ANY REGULATED ACTIVITY, THE APPLICANT OR HIS AGENT MUST NOTIFY THE REGIONAL OFFICE, IN WRITING, OF THE DATE ON WHICH THE REGULATED ACTIVITY WILL BEGIN.

4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.

5. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION, MUST BE MAINTAINED DURING CONSTRUCTION, AND MUST BE REMOVED WHEN SUFFICIENT VEGETATION IS ESTABLISHED TO CONTROL THE EROSION AND SEDIMENTATION AND THE CONSTRUCTION AREA IS STABILIZED.

6. THE SEWER LINE TRENCH DETAILS SHOWING THE CROSS SECTION WITH THE DIMENSIONS, PIPE PLACEMENT, AND BACKFILL INSTRUCTIONS ARE INCLUDED ON THE TYPICAL DETAILS SHEETS OF THESE PLANS. ALL SEWER PIPES JOINTS MUST MEET THE REQUIREMENTS IN 30 TAC §§217.53(C) AND 217.65.

   GRAVITY LINES MUST HAVE A SDR 35 OR LESS. PRESSURIZED SEWER SYSTEMS MUST HAVE PIPE WITH A MINIMUM WORKING PRESSURE RATING OF 150 PSI.

   THE ASTM, ANSI, OR AWWA SPECIFICATION NUMBERS FOR THE PIPE(S) AND JOINTS ARE D3034 OR F679.

   THE PIPE MATERIAL, THE PRESSURE CLASSES, AND THE SDR AND/OR DR DESIGNATIONS ARE SDR-26 PVC.

7. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING WITHIN TWO WORKING DAYS. THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.

8. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES.

9. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.

10. 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. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

    THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED ON THE TYPICAL DETAILS SHEET OF THESE PLANS, IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.

11. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).

12. SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.

13. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

14. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.

15. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).

16. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:

    (a) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

    (1) LOW PRESSURE AIR TEST.
    (A) A LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.

    (B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.
    (i) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.
    (ii) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM

    THE FOLLOWING EQUATION:

    EQUATION C.3

    WHERE:
    T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
    K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
    D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
    L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
    Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

    (C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Length for Minimum (feet)	Time for Longer Length (seconds)
6	340	398	.855(L)
8	454	298	1.520(L)
10	567	239	2.374(L)
12	680	199	3.419(L)
15	850	159	5.342(L)
18	1020	133	7.693(L)
21	1190	114	10.471(L)
24	1360	100	13.676(L)
27	1530	88	17.309(L)
30	1700	80	21.369(L)
33	1870	72	25.856(L)

    (D) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.
    (E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.
    (F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.
    (G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

    (2) INFILTRATION/EXFILTRATION TEST
    (A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.
    (B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.
    (C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.
    (D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARGRAPH (C) OF THIS PARAGRAPH.
    (E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.
    (b) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:
    (1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.
    (A) MANDREL SIZING.
    (i) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.
    (ii) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.
    (iii) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.
    (B) MANDREL DESIGN.
    (i) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
    (ii)A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.
    (iii) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.
    (iv) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.
    (C) METHOD OPTIONS.
    (i) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.
    (ii) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.
    (iii) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.
    (2)FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.
    (3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.
    (4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.
    (5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).
    (6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

17. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.
    (a) ALL MANHOLES MUST PASS A LEAKAGE TEST.
    (b) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.
    (1)HYDROSTATIC TESTING.
    (a)THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.
    (b) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.
    (c) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.
    (2) VACUUM TESTING.
    (a) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.
    (b) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.
    (c) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.
    (d) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.
    (e) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
    (f) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.
    (g) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.
    (h) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.

18. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

GENERAL NOTES:

1. DRAWINGS SHOW INFORMATION OBTAINED FROM FIELD OBSERVATION, TOPOGRAPHIC SURVEY, CITY OF BLANCO MAPPING, INFORMATION PROVIDED BY THE UTILITY COMPANIES, AND EXISTING CONSTRUCTION DRAWINGS. HOWEVER, ACCURACY OF OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY ELEVATIONS, DEPTHS, MATERIALS, SIZES, DIMENSIONS, AND CONDITIONS IN THE FIELD BEFORE COMMENCING ANY WORK. UTILITY LOCATIONS SHALL BE COORDINATED WITH THE CITY OF BLANCO, AND TEXAS 811. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. A PAYMENT ITEM HAS BEEN ESTABLISHED TO PROVIDE FOR THE CONTRACTOR TO LOCATE UTILITIES. THIS MAY AFFECT PROPOSED ALIGNMENTS, IN ADVANCE OF CONSTRUCTION. CONTRACTOR SHALL MEET WITH ENGINEER/OWNER PRIOR TO PRE-CONSTRUCTION LOCATIONS, TO REVIEW THE LOCATIONS AND NUMBER OF CONFIRMATION SITES. CHANGES IN HORIZONTAL AND VERTICAL ALIGNMENTS MAY BE NECESSARY DUE TO CONFLICTS FOUND DURING CONFIRMATION PROCEDURES. THESE CONFLICTS AND DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER IN A TIMELY MANNER. ALL REVISED ALIGNMENTS MUST STAY WITHIN RIGHT-OF-WAYS AND UTILITY EASEMENTS, AND MUST BE APPROVED BY ENGINEER/OWNER, PRIOR TO CONSTRUCTION.

2. TRACER MARKING TAPE SHALL BE INSTALLED OVER PVC MAINS. UNDERGROUND MARKING TAPE SHALL BE INSTALLED 6"-12" ABOVE THE TOP OF ALL PVC PIPE. MARKING TAPE SHALL CONSIST OF A 0.5 INCH WIDE LAYER OF ALUMINUM FOIL BONDED BETWEEN TWO PIECES OF POLYETHYLENE FILM. THE DIMENSIONS OF THE MARKING TAPE SHALL BE NOT LESS THAN 5.5 MILS THICK NOR LESS THAN 2" INCHES WIDE. SANITARY SEWER LINE MARKING TAPE SHALL BE GREEN IN COLOR FOR WASTEWATER PIPE AND SHALL HAVE THE WORDING "CAUTION SEWER LINE BURIED BELOW" DISPLAYED PROMINENTLY AND CONTINUOUSLY ALONG THE TAPE. THE ENDS OF THE MARKING TAPE SHALL BE BROUGHT UP INSIDE EACH CLEANOUT OR MANHOLE. WATER LINE MARKING TAPE SHALL BE BLUE IN COLOR FOR WATER PIPE AND SHALL HAVE THE WORDING "CAUTION WATER LINE BURIED BELOW" DISPLAYED PROMINENTLY AND CONTINUOUSLY ALONG THE TAPE. THE ENDS OF THE MARKING TAPE SHALL BE BROUGHT UP INSIDE EACH MAIN LINE VALVE BOX. THIS WORK WILL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICE BID FOR PIPE, AND NO SEPARATE PAYMENT WILL BE MADE.

3. RESTRAINED JOINT PIPE SHALL BE USED FOR ALL BORES, WHETHER CASED OR UNCASED.

4. MEASUREMENT AND PAYMENT: ONLY THOSE ITEMS IN THE PROPOSAL WILL BE MEASURED AND PAID FOR. ALL OTHER ITEMS OF WORK REQUIRED TO COMPLETE THE PROJECT SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEMS IN THE PROPOSAL AND NO CLAIMS WHATSOEVER FOR EXTRA WORK FOR SUCH SUBSIDIARY ITEMS WILL BE CONSIDERED.

5. TESTING: OWNER SHALL PAY FOR AND CONDUCT BACKFILL AND COMPACTION TESTING. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH TESTING LABORATORY AND SHALL PAY FOR RE-TESTING DUE TO FAILED TESTS. CONTRACTOR SHALL PAY FOR AND CONDUCTED PIPE AND ASSEMBLY TESTING REQUIRED BY SPECIFICATIONS SUCH AS PRESSURE TESTING AND TV-ING.

6. SEWER SERVICES SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY. CONTRACTOR MAY ADJUST LOCATION OF SERVICE AS NECESSARY TO PROVIDE THE MOST DIRECT ROUTE TO THE PRIVATE SIDE SERVICE CONNECTION. DUE TO EXACT LOCATIONS OF WATER AND SEWER SERVICES BEING UNKNOWN, D2241 PRESSURE PIPE SHALL BE USED FOR ALL NEW SERVICES IN ORDER TO MEET TCEQ REQUIREMENTS. CONTRACTOR SHALL EXTEND SERVICE LINE FROM PROPOSED MAIN TO PROPERTY LINE, AND A SINGLE CLEANOUT SHALL BE INSTALLED AT THE PROPERTY LINE. SERVICE LINES SHALL BE INSTALLED AT THE MINIMUM GRADE OF 2.00% FOR 4" DIA. PIPE, AND 0.50% FOR 6" DIA. PIPE.

7. SANITARY SEWER SERVICE SHALL NOT BE DISRUPTED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND/OR BYPASS PUMPING AS REQUIRED TO PROVIDE UNINTERRUPTED SERVICE. THIS WORK SHALL BE PAID FOR UNDER THE BID FOR BYPASS PUMPING, AND NO SEPARATE PAYMENT WILL BE MADE.

8. ALL SURFACE RESTORATION OF NON-PAVED AREA IS SUBSIDIARY TO THE LINEAR FOOT PRICE BID FOR PIPE AND SHALL INCLUDE RETURNING ALL AREAS DISTURBED BY CONSTRUCTION TO AS GOOD OR BETTER THAN EXISTING CONDITION AND SHALL BE SEEDED IN ACCORDANCE WITH TXDOT ITEM 164 AND WATERED UNTIL VEGETATION HAS BEEN ESTABLISHED AS DETERMINED BY THE DIRECTOR OF PUBLIC WORKS OR AUTHORIZED REPRESENTATIVE.

9. ALL FENCE CROSSING SHALL BE REPAIRED TO EXISTING OR BETTER CONDITION, AND SHALL BE SUBSIDIARY TO OTHER UNIT PRICE BIDS.

10. ALL CONSTRUCTION SHALL BE PER CITY OF ENNIS STANDARDS. IF THERE IS A CONFLICT BETWEEN PLANS AND SPECIFICATION THE MORE STRINGENT REQUIREMENT SHALL APPLY.

11. CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION STAKING.

12. TOPOGRAPHIC SURVEY PERFORMED BY: 4WARD LAND SURVEYING
    P.O. BOX 90876
    AUSTIN, TEXAS 78709
    737-787-6567

WASTEWATER FLOW CALCULATIONS

Pipe	LUEs	Population	Area	ADWF	Peaking Factor	I/I	Flow			Velocity			Depth		65% of FULL	85% of FULL
							PDWF	PWWF	FULL	PDWF	PWWF	FULL	PDWF	PWWF		
	[ ]	[people]	[acres]	[gpm]	[ ]	[gpm]	[cfs]	[cfs]	[cfs]	[ft/s]	[ft/s]	[ft/s]	[in]	[in]	[cfs]	[cfs]
A1	494	1729	132.34	84.0	3.63	69	0.680	0.834	1.049	3.19	3.33	3.01	4.7	5.4	0.682	0.892
A2	494	1729	132.34	84.0	3.63	69	0.680	0.834	1.212	3.56	3.73	3.47	4.3	4.9	0.788	1.030
A3	427	1495	114.35	72.6	3.68	60	0.596	0.730	1.838	4.69	4.95	5.26	3.1	3.5	1.195	1.562
A4	398	1393	106.63	67.7	3.70	56	0.558	0.683	1.756	4.46	4.71	5.03	3.1	3.4	1.141	1.493
A5	373	1306	99.91	63.5	3.72	52	0.526	0.642	1.67	4.23	4.46	4.78	3.1	3.4	1.086	1.420
A6	336	1176	89.90	57.2	3.75	47	0.478	0.583	2.513	5.54	5.84	7.20	2.4	2.6	1.633	2.136
A7	312	1092	83.44	53.1	3.77	43	0.446	0.542	2.513	5.44	5.73	7.20	2.3	2.5	1.633	2.136
A8	288	1008	77.04	49.0	3.80	40	0.415	0.504	2.423	5.16	5.46	6.94	2.2	2.5	1.575	2.060
A9	264	924	70.64	44.9	3.82	37	0.382	0.464	2.57	5.26	5.56	7.36	2.1	2.3	1.671	2.185
A10	240	840	64.20	40.8	3.85	33	0.350	0.424	2.57	5.14	5.42	7.36	2	2.2	1.671	2.185

SCHAUMBURG&POLK, INC.
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512.262.0440
Firm Registration No. F-520

STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED
PROFESSIONAL ENGINEER
10/21/2025

GENERAL NOTES
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

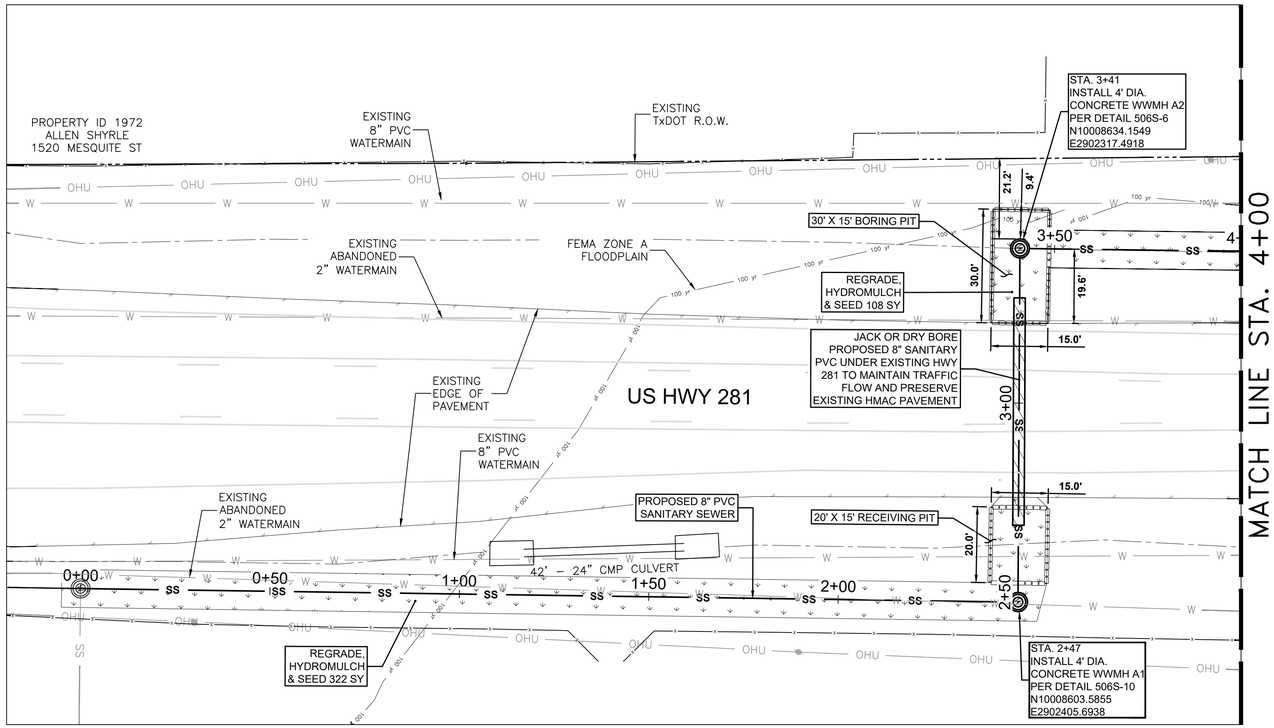
DRAWN BY: JEREMIAH S.

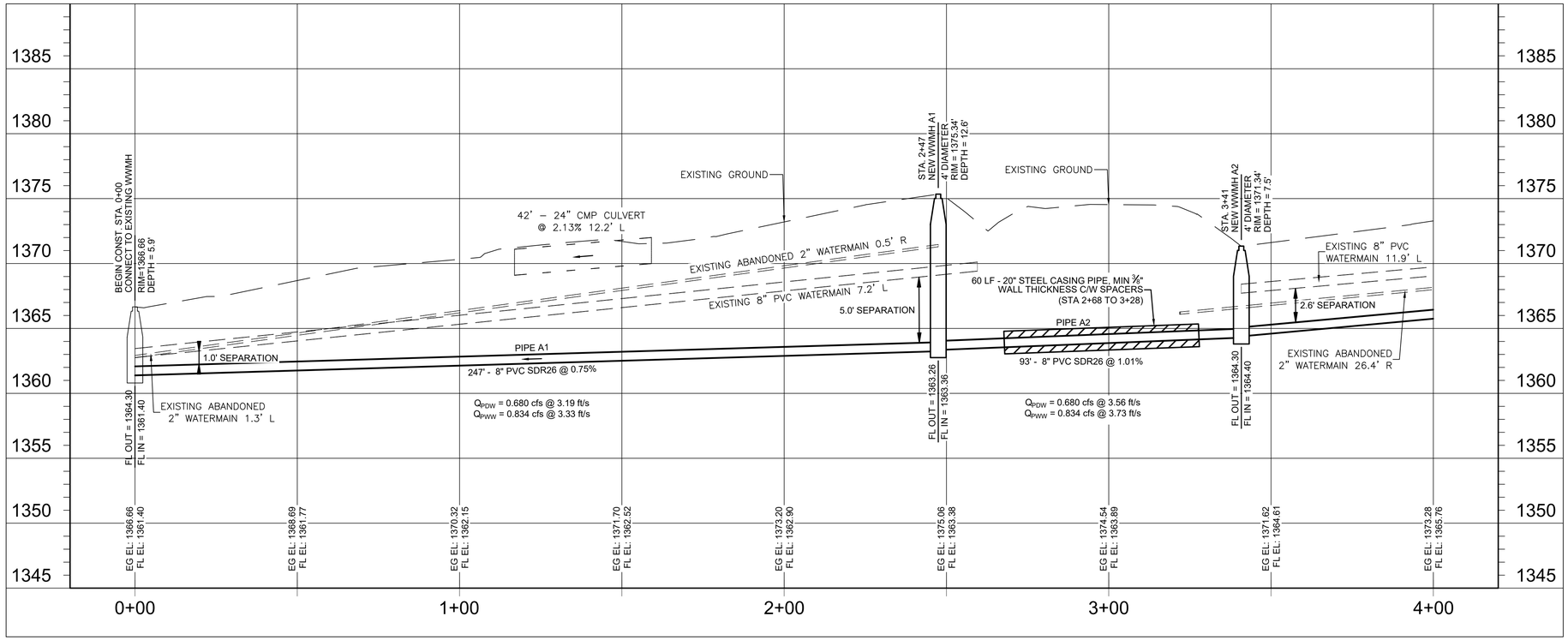
REVIEWED BY: J. SCHMELING

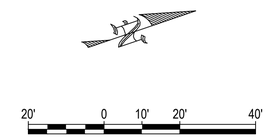
PROJECT NO: 6112502

SHEET NO: 2

FILE NAME: A:\0002_PROJECTS\00221_PROJECT FOLDERS\BLANCO-CITY OF-6111\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\COVER SHEET.DWG PLOT DATE: 10/21/2025 9:17 AM

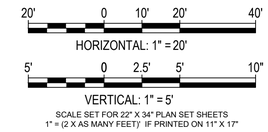






EXISTING LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
WATERMAIN	W
FEMA FLOODPLAIN	100 yr
OVERHEAD UTILITY	OHU
BARBED WIRE FENCE	
STEEL FENCE	
WOOD/VINYL FENCE	
DITCH BOTTOM	
RIGHT OF WAY	
PROPERTY LINE	
HYDRANT	
GATE VALVE	
WATER METER	

PROPOSED LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
ASPHALT	
ROCK/ GRAVEL	
MULCH AND SEED	



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STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED PROFESSIONAL ENGINEER
10/21/2025

SANITARY SEWER PLAN AND PROFILE A - STA. 0+00 TO 4+00
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

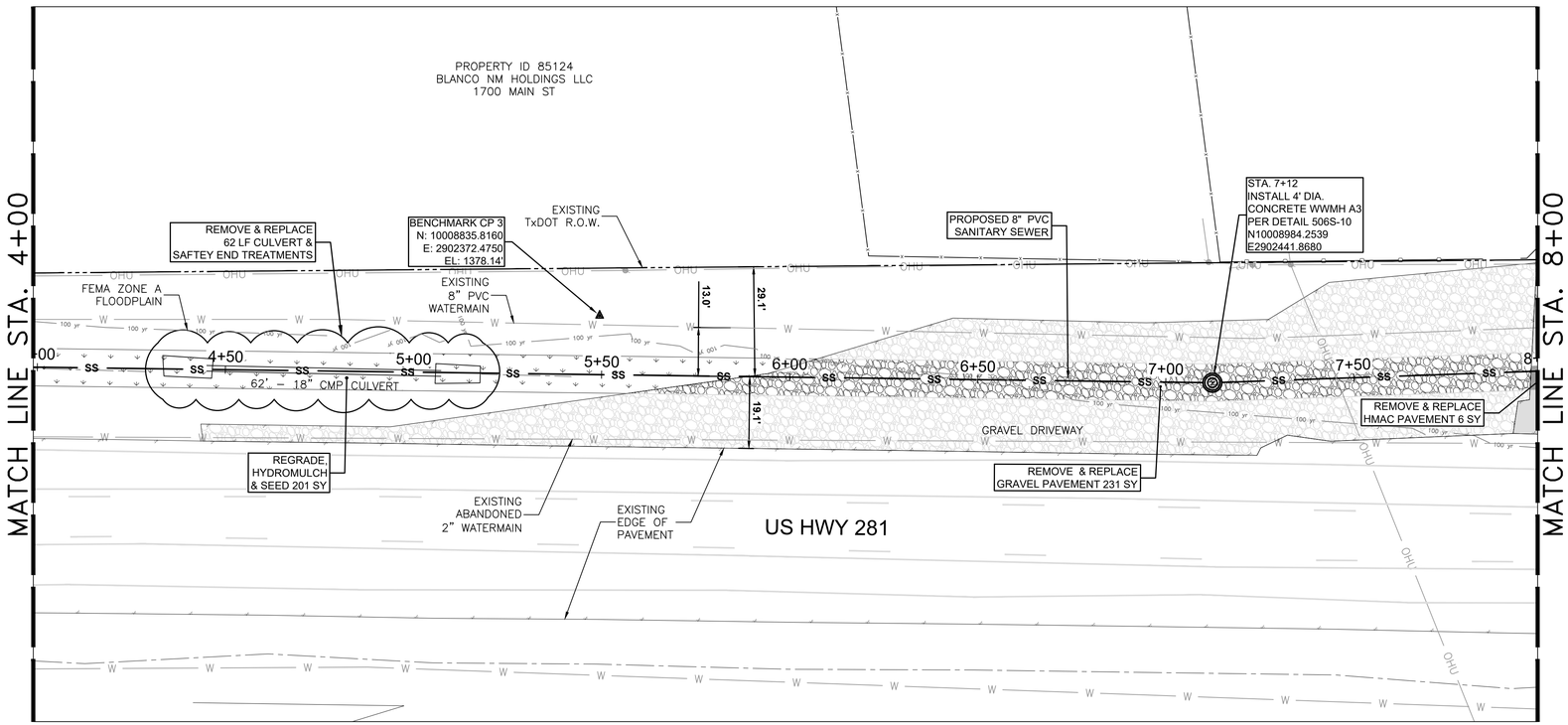
DRAWN BY:
JEREMIAH S.

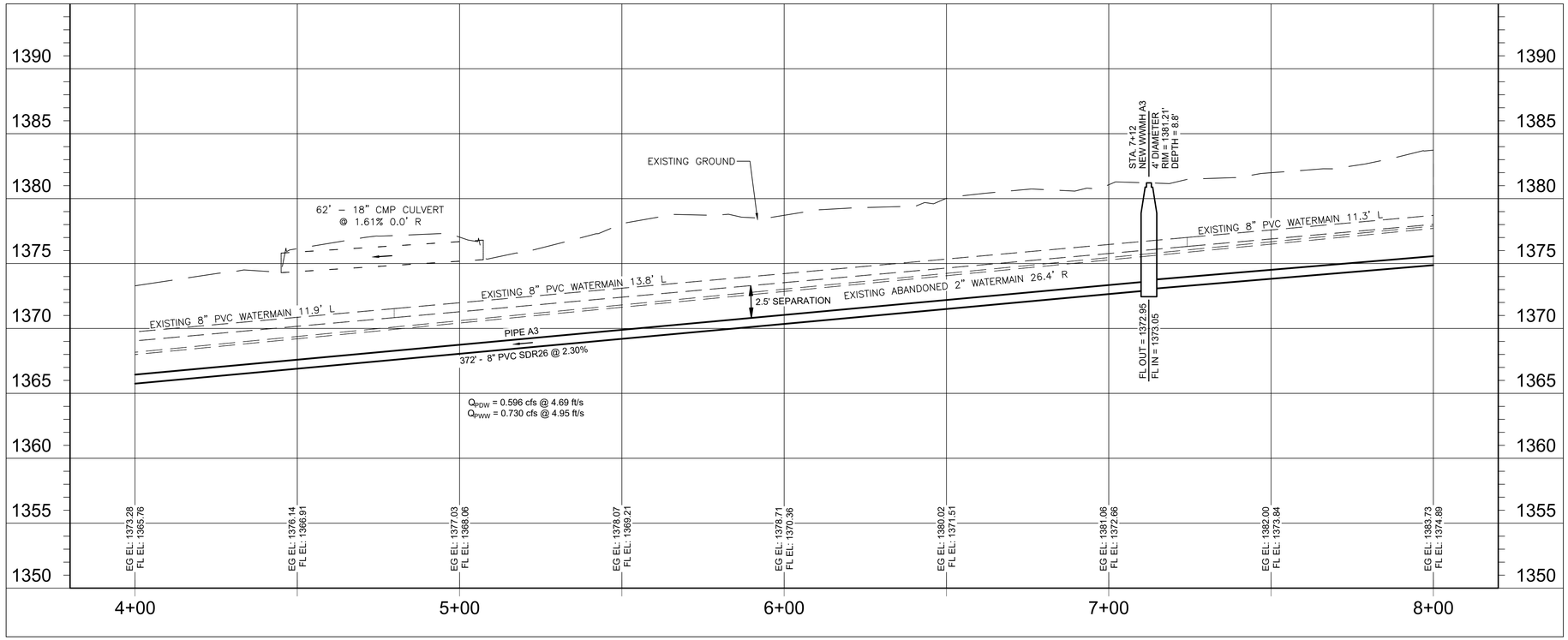
REVIEWED BY:
J. SCHMELING

PROJECT NO:
6112502

SHEET NO:
3

FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\SSMR PLAN AND PROFILE OPTION A.DWG PLOT DATE: 10/21/2025 9:18 AM





20' 0 10' 20' 40'

SCALE: 1" = 20'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

EXISTING LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
WATERMAIN	W
FEMA FLOODPLAIN	100 yr
OVERHEAD UTILITY	OHU
BARBED WIRE FENCE	
STEEL FENCE	
WOOD/VINYL FENCE	
DITCH BOTTOM	
RIGHT OF WAY	
PROPERTY LINE	
HYDRANT	
GATE VALVE	
WATER METER	

PROPOSED LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
ASPHALT	
ROCK/ GRAVEL	
MULCH AND SEED	

20' 0 10' 20' 40'

HORIZONTAL: 1" = 20'

5' 0 2.5' 5' 10"

VERTICAL: 1" = 5'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

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512.262.0440
Firm Registration No. F-520

STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED
PROFESSIONAL ENGINEER
10/21/2025

SANITARY SEWER PLAN AND PROFILE A - STA. 4+00 TO 8+00
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

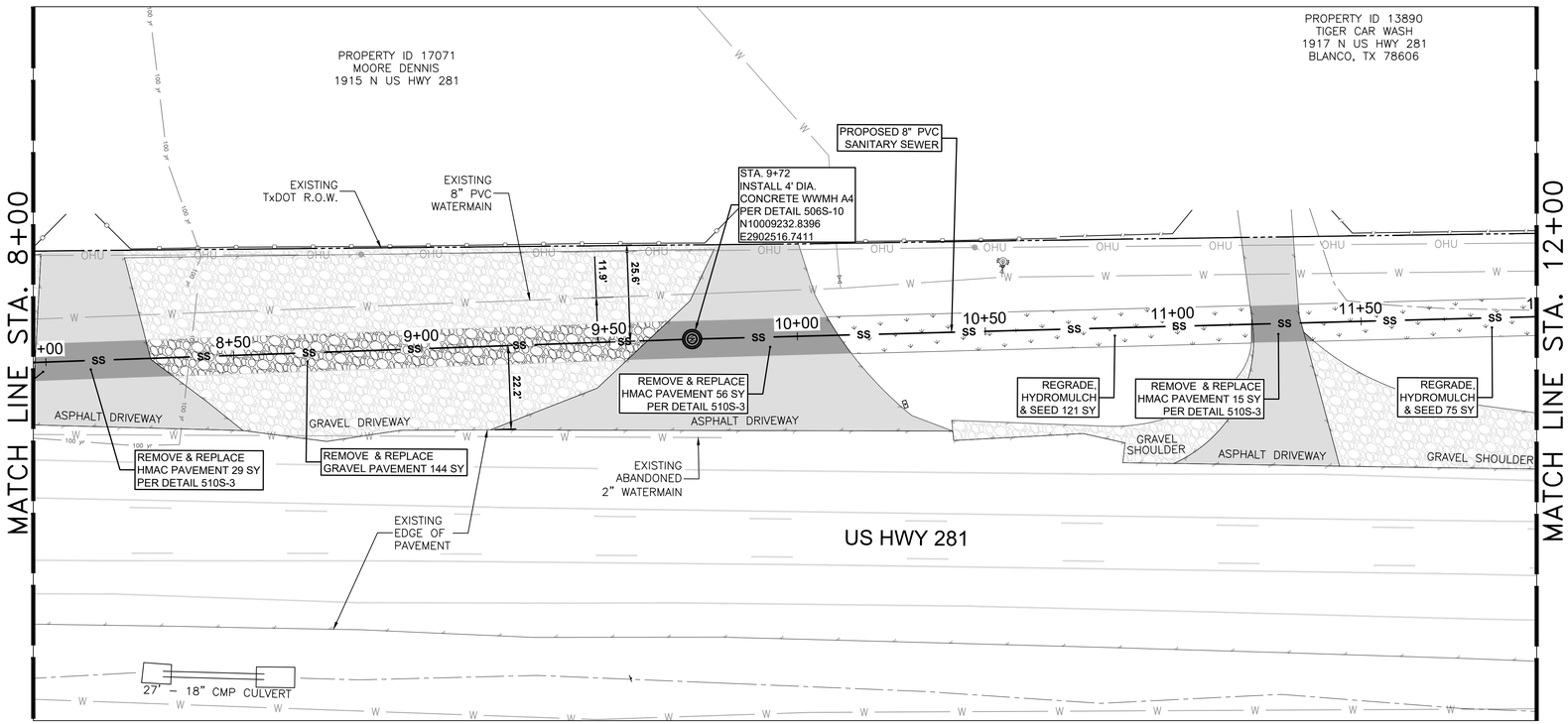
DRAWN BY:
JEREMIAH S.

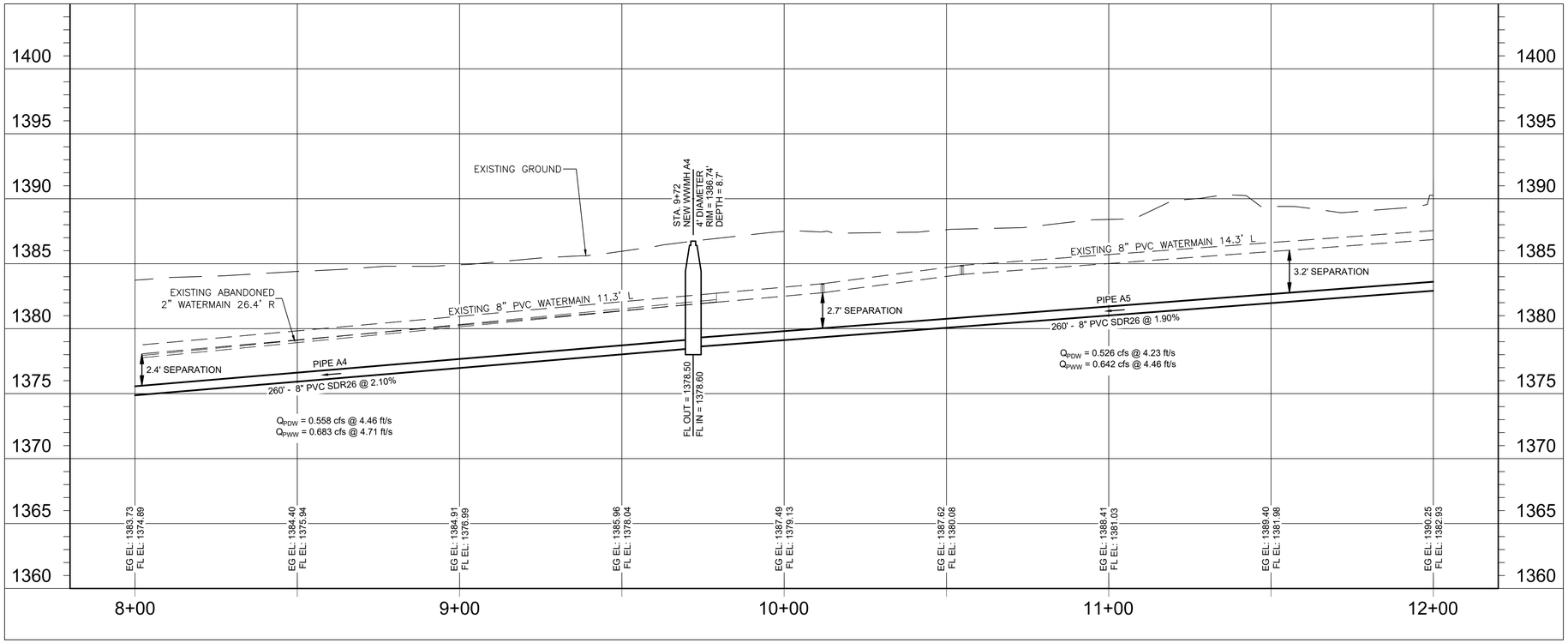
REVIEWED BY:
J. SCHMELING

PROJECT NO:
6112502

SHEET NO:
4

FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\SSMR PLAN AND PROFILE OPTION A.DWG PLOT DATE: 10/21/2025 9:18 AM





20' 0 10' 20' 40'

SCALE: 1" = 20'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

EXISTING LEGEND

- SANITARY SEWER — SS
- SANITARY MANHOLE — (S)
- WATERMAIN — W
- FEMA FLOODPLAIN — 100 yr
- OVERHEAD UTILITY — OHU
- BARBED WIRE FENCE
- STEEL FENCE
- WOOD/VINYL FENCE
- DITCH BOTTOM
- RIGHT OF WAY
- PROPERTY LINE
- HYDRANT
- GATE VALVE
- WATER METER — WM

PROPOSED LEGEND

- SANITARY SEWER — SS
- SANITARY MANHOLE — (S)
- ASPHALT
- ROCK/ GRAVEL
- MULCH AND SEED

20' 0 10' 20' 40'

HORIZONTAL: 1" = 20'

5' 0 2.5' 5' 10"

VERTICAL: 1" = 5'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

SCHAUMBURG&POLK, INC.
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Firm Registration No. F-520

STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED PROFESSIONAL ENGINEER
10/21/2025

SANITARY SEWER PLAN AND PROFILE A - STA. 8+00 TO 12+00
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

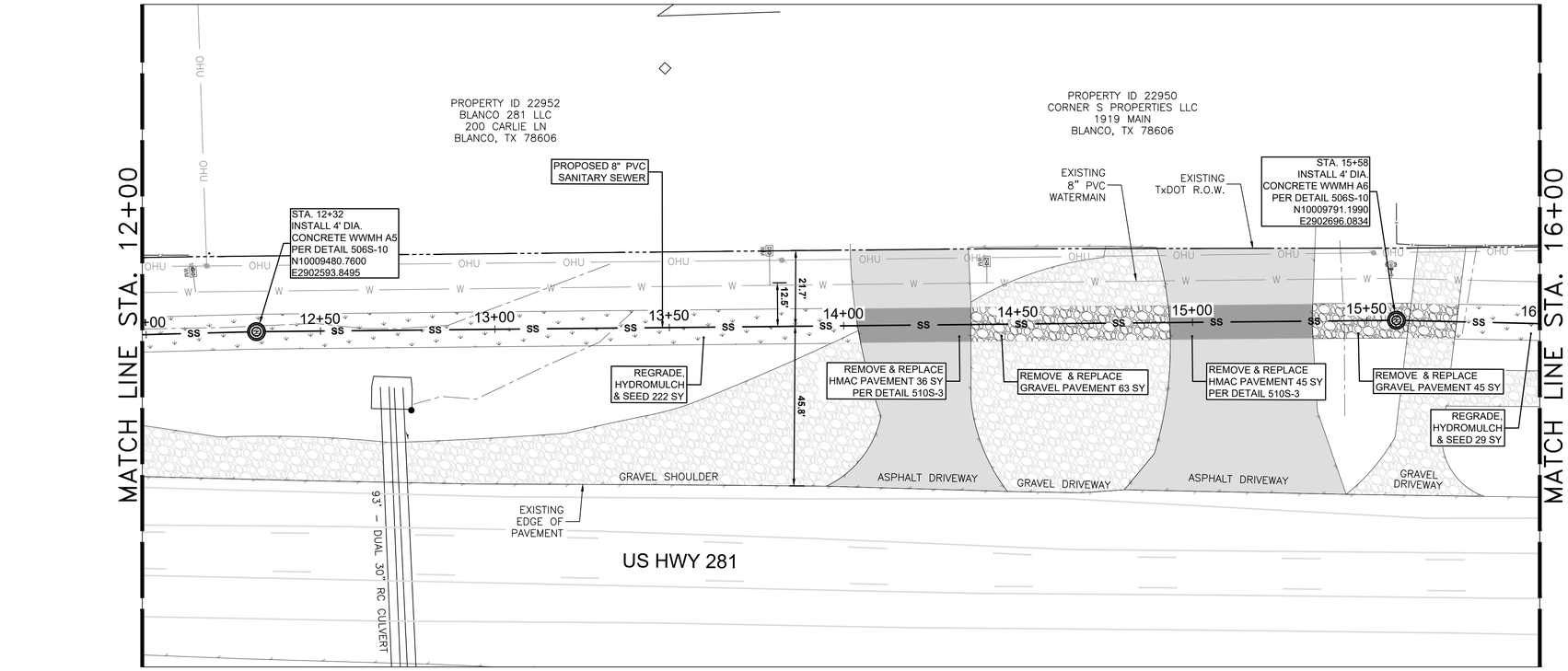
DRAWN BY: JEREMIAH S.

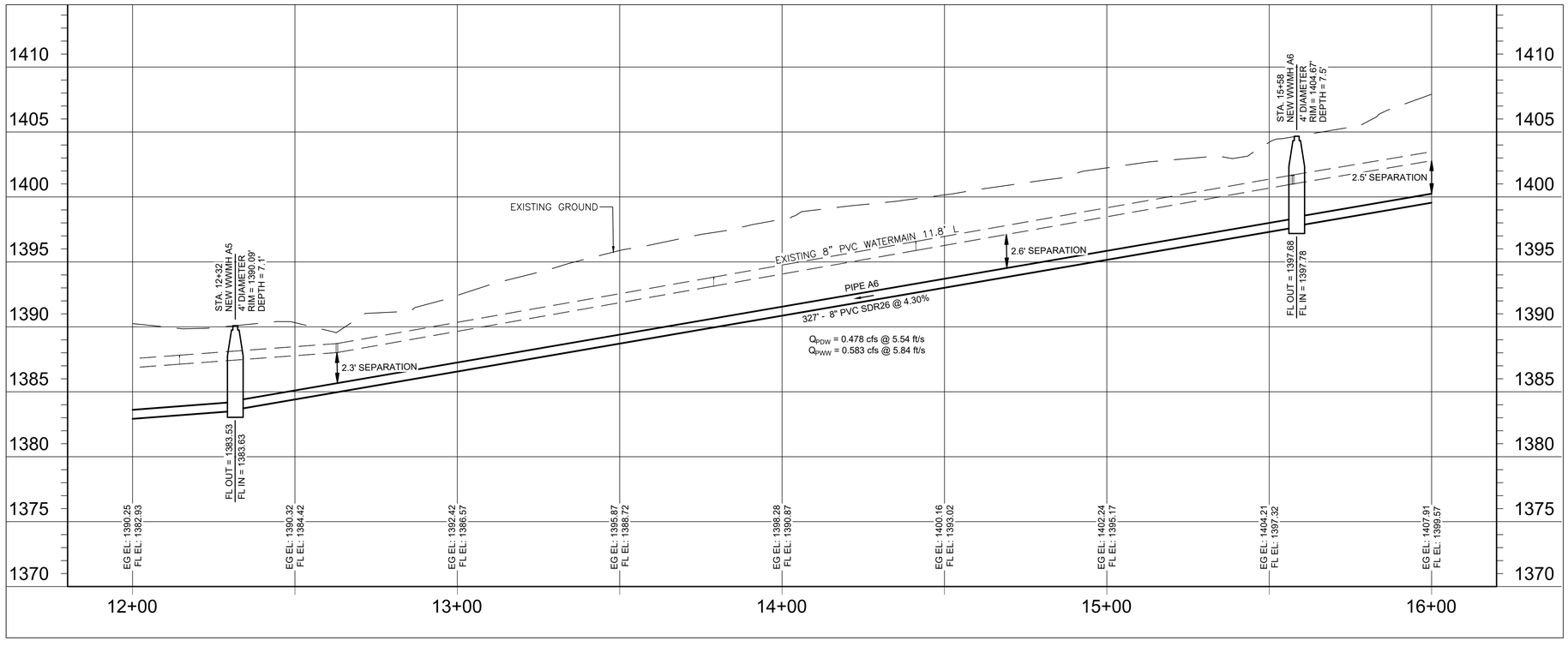
REVIEWED BY: J. SCHMELING

PROJECT NO: 6112502

SHEET NO: 5

FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\SSMR PLAN AND PROFILE OPTION A.DWG PLOT DATE: 10/21/2025 9:18 AM





20' 0 10' 20' 40'

SCALE: 1" = 20'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

EXISTING LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
WATERMAIN	W
FEMA FLOODPLAIN	100 yr
OVERHEAD UTILITY	OHU
BARBED WIRE FENCE	
STEEL FENCE	
WOOD/VINYL FENCE	
DITCH BOTTOM	
RIGHT OF WAY	
PROPERTY LINE	
HYDRANT	
GATE VALVE	
WATER METER	

PROPOSED LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
ASPHALT	
ROCK/ GRAVEL	
MULCH AND SEED	

20' 0 10' 20' 40'

HORIZONTAL: 1" = 20'

5' 0 2.5' 5' 10"

VERTICAL: 1" = 5'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

SCHAUMBURG&POLK, INC.
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Firm Registration No. F-520

STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED PROFESSIONAL ENGINEER
10/21/2025

SANITARY SEWER PLAN AND PROFILE A - STA. 12+00 TO 16+00
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG TEXAS811.com

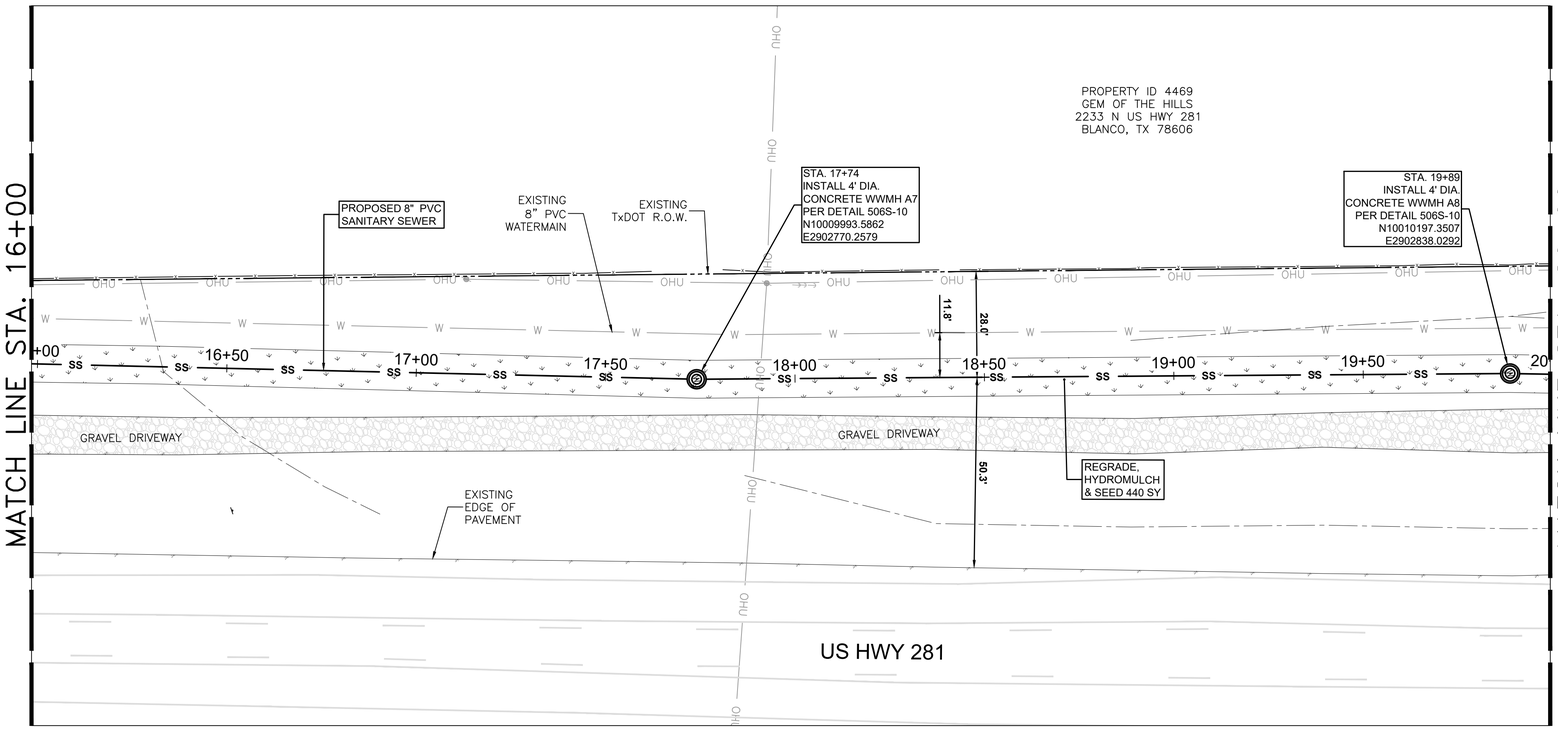
DRAWN BY:
JEREMIAH S.

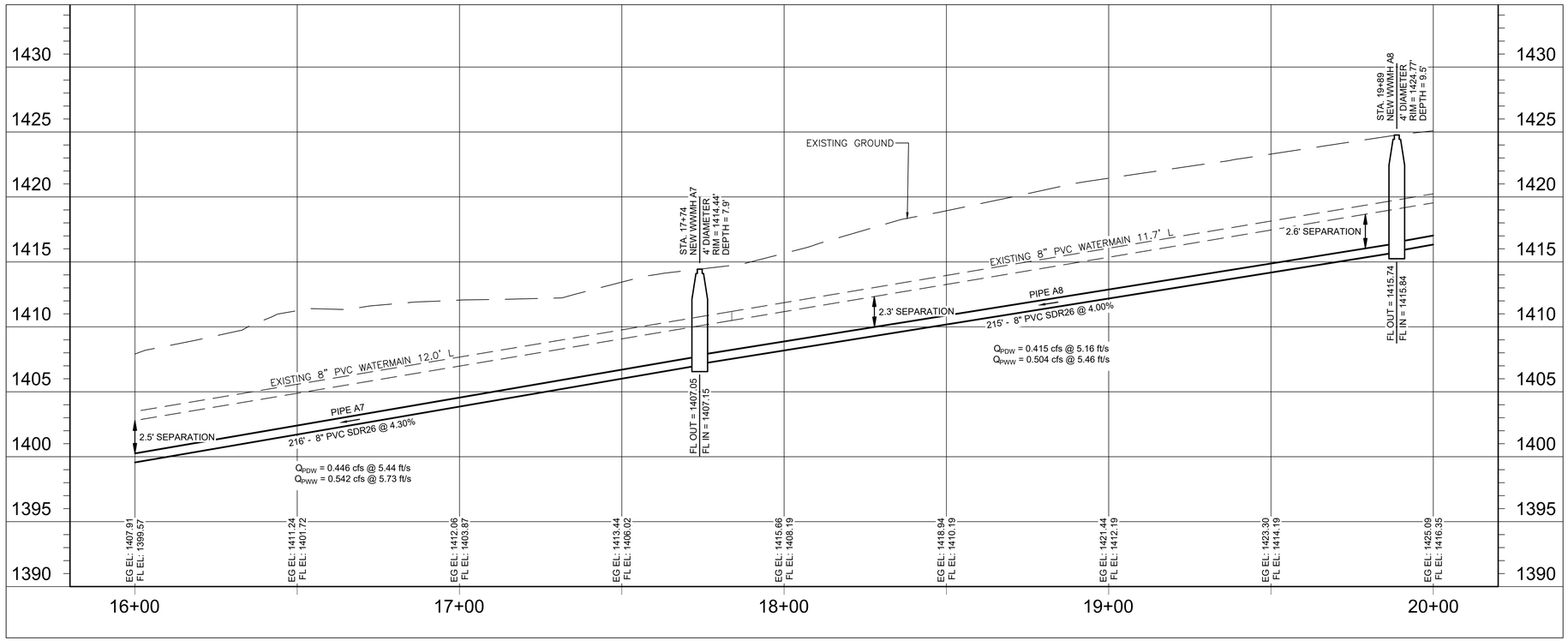
REVIEWED BY:
J. SCHMELING

PROJECT NO:
6112502

SHEET NO:
6

FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\SSMR PLAN AND PROFILE OPTION A.DWG PLOT DATE: 10/21/2025 9:18 AM





20' 0 10' 20' 40'

SCALE: 1" = 20'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET) IF PRINTED ON 11" X 17"

EXISTING LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	Ⓢ
WATERMAIN	W
FEMA FLOODPLAIN	100 yr
OVERHEAD UTILITY	OHU
BARBED WIRE FENCE	
STEEL FENCE	
WOOD/VINYL FENCE	
DITCH BOTTOM	
RIGHT OF WAY	
PROPERTY LINE	
HYDRANT	
GATE VALVE	
WATER METER	

PROPOSED LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	Ⓢ
ASPHALT	
ROCK/ GRAVEL	
MULCH AND SEED	

20' 0 10' 20' 40'

HORIZONTAL: 1" = 20'

5' 0 2.5' 5' 10"

VERTICAL: 1" = 5'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
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SCHAUMBURG&POLK, INC.
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Firm Registration No. F-520

STATE OF TEXAS
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10/21/2025

SANITARY SEWER PLAN AND PROFILE A - STA.16+00 TO 20+00
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

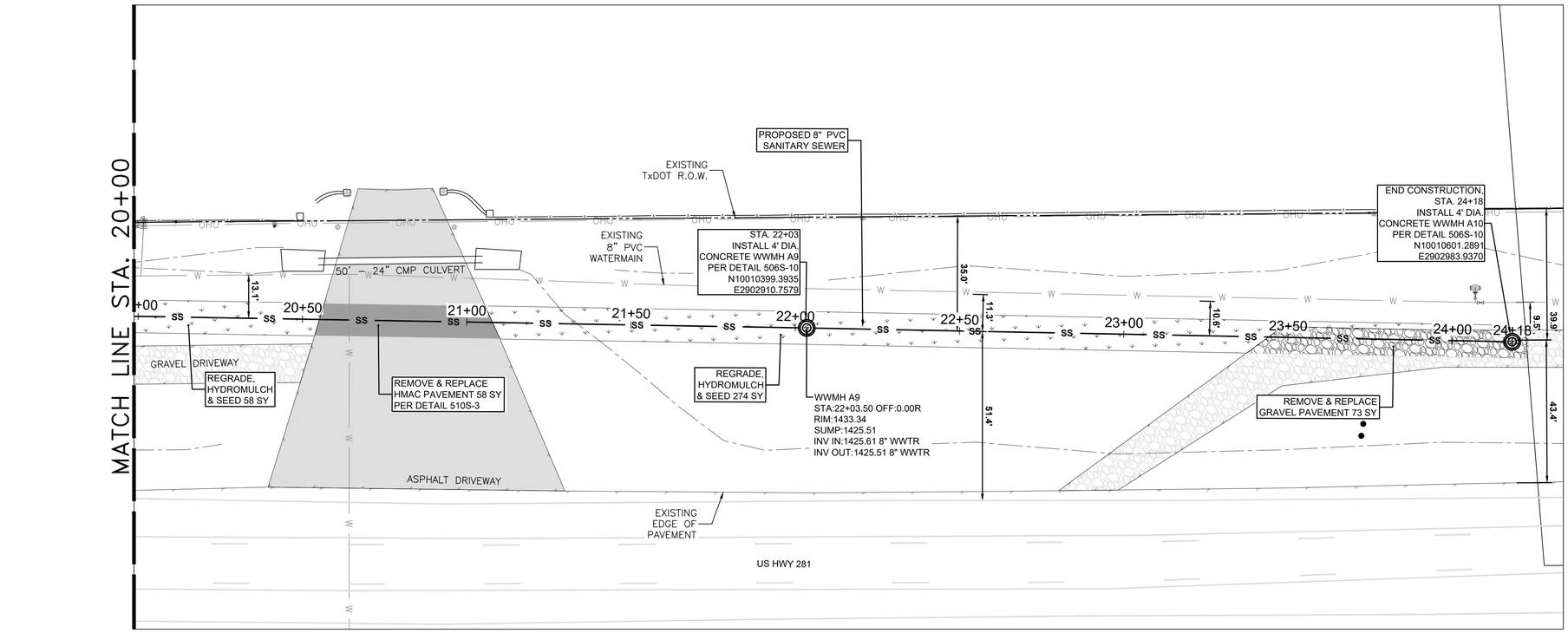
DRAWN BY:
JEREMIAH S.

REVIEWED BY:
J. SCHMELING

PROJECT NO:
6112502

SHEET NO:
7

FILE NAME: A:\0002_PROJECTS\00221_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\SSMR PLAN AND PROFILE OPTION A.DWG PLOT DATE: 10/21/2025 9:18 AM



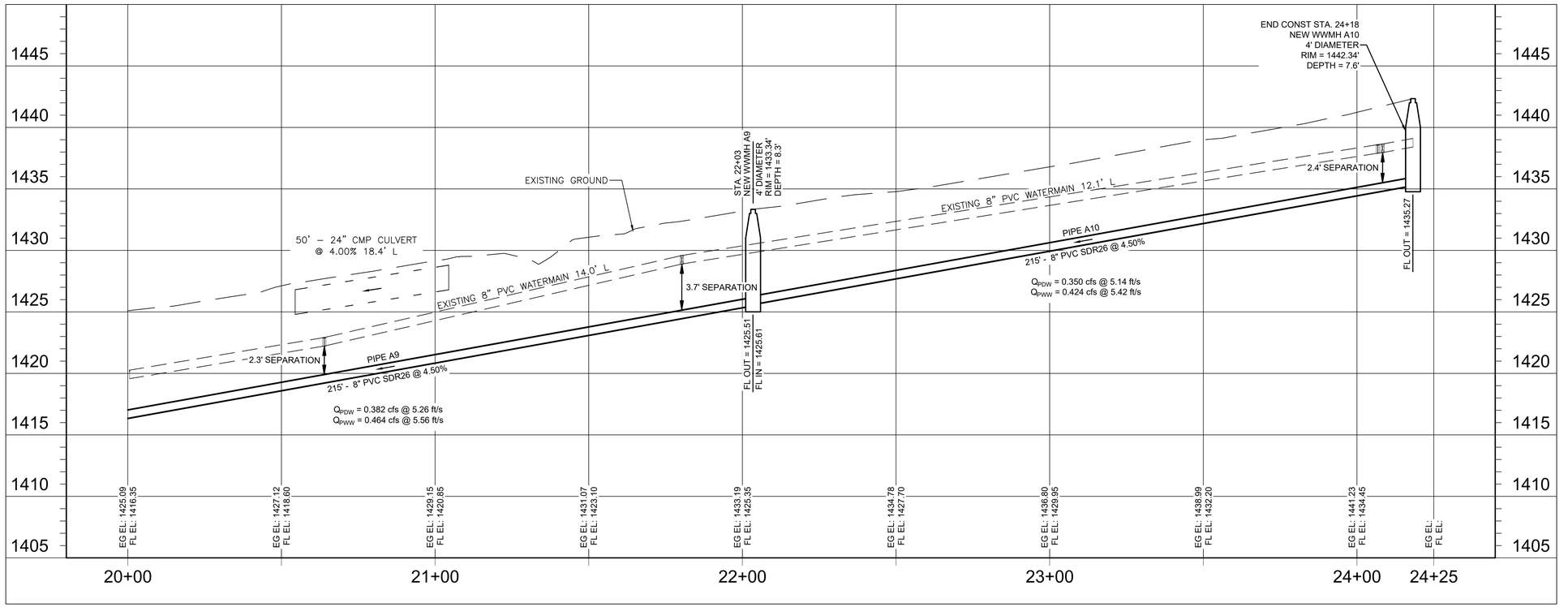
20' 0 10' 20' 40'

SCALE: 1" = 20'

SCALE SET FOR 22" X 34" PLAN SET SHEETS
1" = (2 X AS MANY FEET)' IF PRINTED ON 11" X 17"

EXISTING LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
WATERMAIN	W
FEMA FLOODPLAIN	100 yr
OVERHEAD UTILITY	OHU
BARBED WIRE FENCE	
STEEL FENCE	
WOOD/VINYL FENCE	
DITCH BOTTOM	
RIGHT OF WAY	
PROPERTY LINE	
HYDRANT	
GATE VALVE	
WATER METER	

PROPOSED LEGEND	
SANITARY SEWER	SS
SANITARY MANHOLE	
ASPHALT	
ROCK/ GRAVEL	
MULCH AND SEED	



20' 0 10' 20' 40'

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SCALE SET FOR 22" X 34" PLAN SET SHEETS
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STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED
PROFESSIONAL ENGINEER
10/21/2025

SANITARY SEWER PLAN AND PROFILE A - STA. 20+00 TO END CITY OF BLANCO, TEXAS US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

DRAWN BY:
JEREMIAH S.

REVIEWED BY:
J. SCHMELING

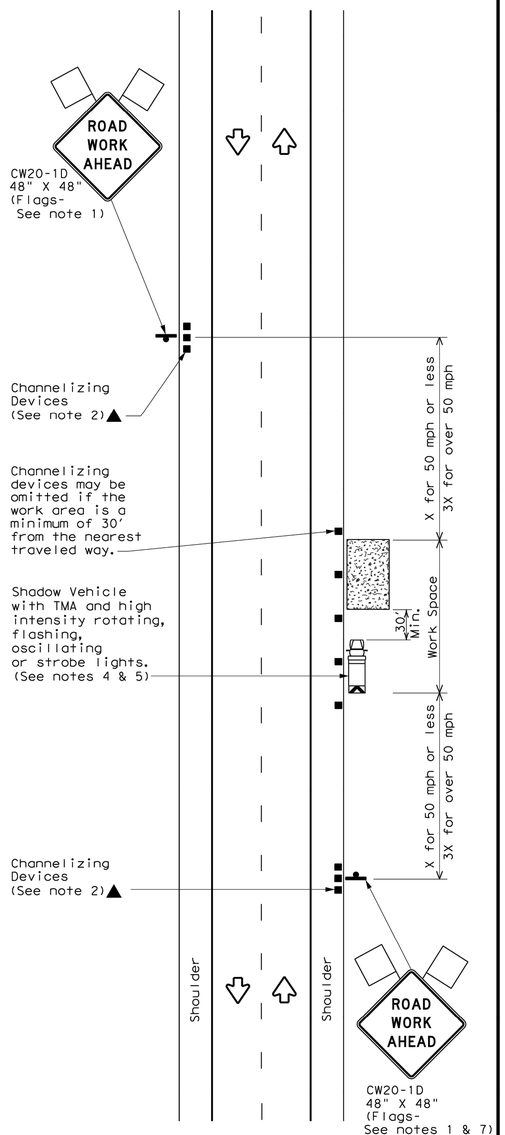
PROJECT NO:
6112502

SHEET NO:
8

PLOT DATE: 10/21/2025 9:17 AM

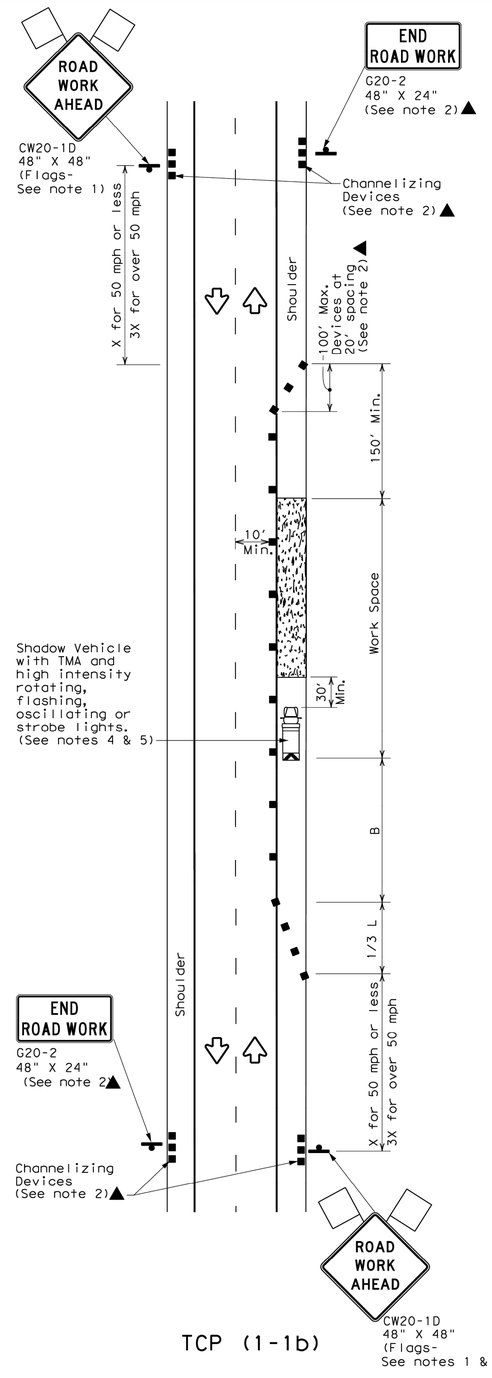
FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DWGS\SSMR PLAN AND PROFILE OPTION A.DWG

DATE:
FILE:



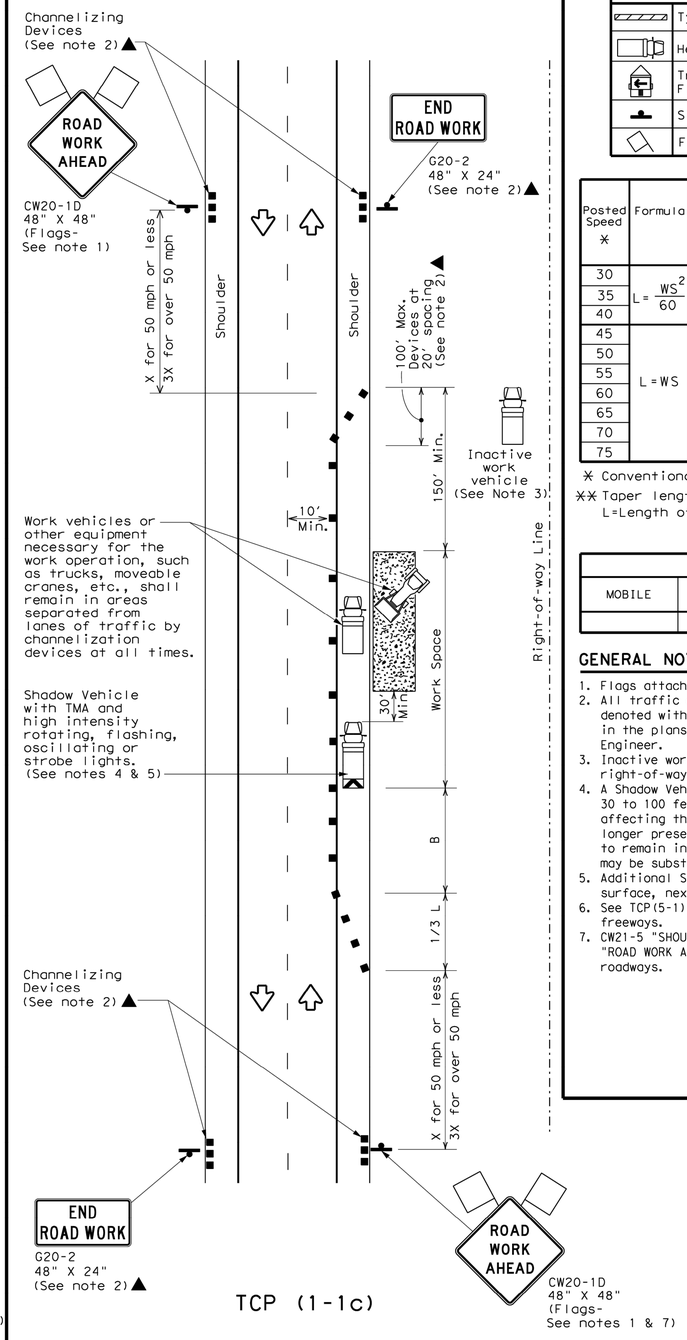
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST	COUNTY		SHEET NO.
151				

SCHAUMBURG&POLK, INC.
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STATE OF TEXAS
JOHN D. SCHMELING
143141
LICENSED PROFESSIONAL ENGINEER
10/21/2025

TRAFFIC MANAGEMENT PLAN
CITY OF BLANCO, TEXAS
US 281 NORTH SEWER EXTENSION

REVISIONS:

BEFORE YOU DIG Texas811.com

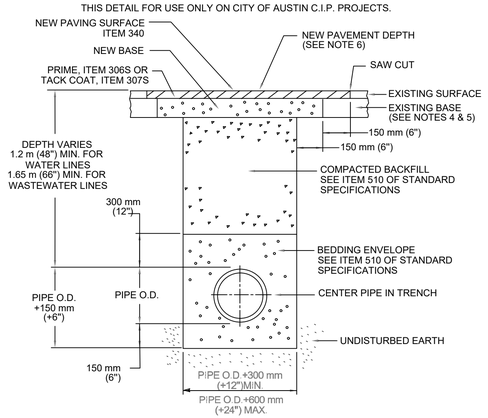
DRAWN BY:
JEREMIAH S.

REVIEWED BY:
J. SCHMELING

PROJECT NO:
6112502

SHEET NO:
9

FILE NAME: A:\0002_PROJECTS\00021_PROJECT FOLDERS\BLANCO-CITY OF-611\6112502-BLANCO NORTH SEWER EXTENSION TASK ORDER 2\03_CAD_L3_PLAN N PROD DMGS\SSMR PLAN AND PROFILE OPTION A.DWG PLOT DATE: 10/21/2025 9:18 AM

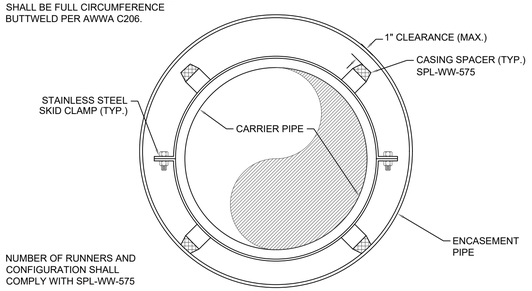


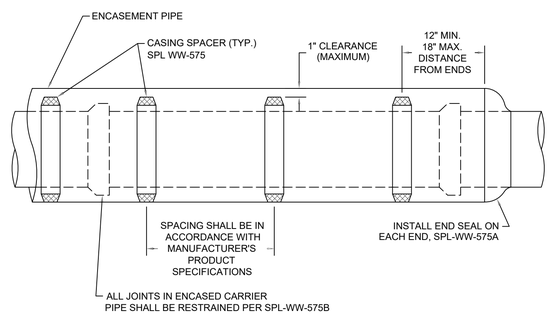
NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY		TYPICAL TRENCH WITH PAVED SURFACE	
RECORD COPY SIGNED BY LEON BARBA	8/19/02 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 510S-3 1 OF 1

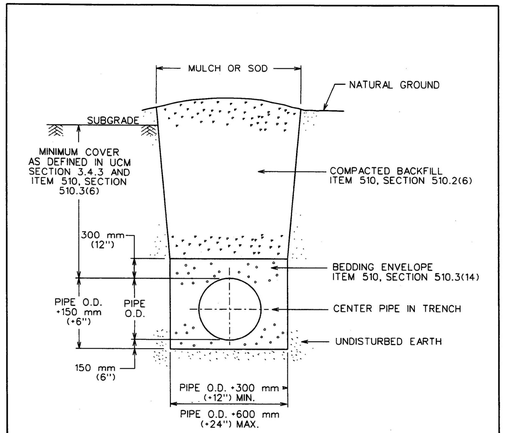
FIELD WELDS IN ENCASEMENT PIPE SHALL BE FULL CIRCUMFERENCE BUTTWELD PER AWWA C206.





APPLICABLE REFERENCES:
STANDARD SPECIFICATION: ITEM 505.4 & 510.3 (19)

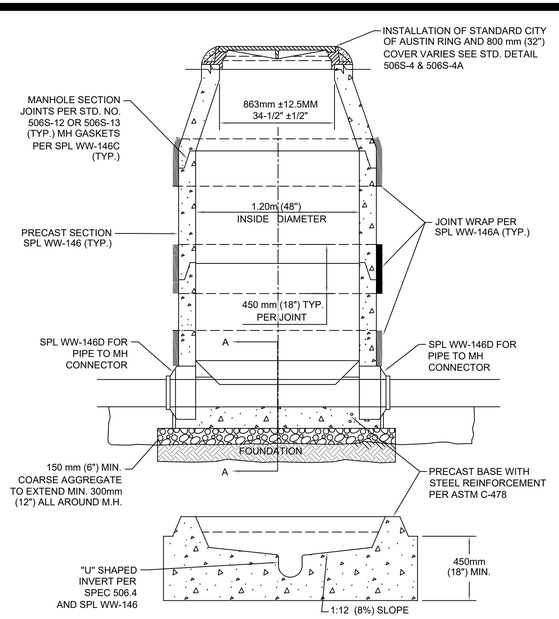
CITY OF AUSTIN AUSTIN WATER		ENCASEMENT PIPE DETAIL WITH CASING SPACERS	
JEFF A. KYLE	02/22/2021 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 501-AW-01 1 OF 1



REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

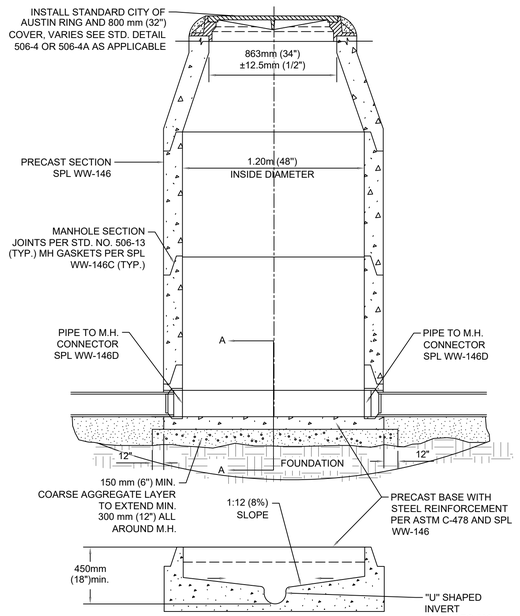
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	
3/13/06 ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-5



TYPICAL PRECAST BASE

NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.2. MANHOLE FOUNDATION SHALL MEET OR EXCEED SPEC. 506.5B.

CITY OF AUSTIN AUSTIN WATER UTILITY		WATER TIGHT WASTEWATER MANHOLE ON PRECAST BASE	
RECORD COPY SIGNED KATHI L FLOWERS	08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-6 1 OF 1



TYPICAL PRECAST BASE

NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MH FOUNDATION SHALL MEET OR EXCEED STD. SPEC. 506.5B.

CITY OF AUSTIN AUSTIN WATER UTILITY		WASTEWATER MANHOLE ON PRECAST BASE	
RECORD COPY SIGNED BY KATHI L FLOWERS	08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-10 1 OF 1

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