REVISED 07/31/2026

CITY OF AUSTIN, TEXAS
AUSTIN WATER

10/9/2026

NOTES:

1. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION OR CLEARING OPERATIONS.

2. CONTRACTOR SHALL CALL "ONE CALL" AT 811 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET RIGHT OF WAYS.

3. NO PORTION OF THIS SITE IS LOCATED WITHIN PARKLAND OR LAND USED FOR PARK PURPOSES. (IF SUCH LAND IS INCLUDED, DOCUMENTATION OF PARKS AND RECREATION DEPT APPROVAL IS REQUIRED AT THE TIME OF SUBMITTAL FOR GENERAL PERMIT PROGRAM APPROVAL.)

4. THIS PROJECT IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS DEFINED BY THE CITY OF AUSTIN. THIS PROJECT IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).

5. THERE ARE NO CRITICAL ENVIRONMENTAL FEATURES WITHIN 150' OF ANY PORTION OF THIS PROJECT.

6. ADDITIONAL TRENCH E/S CONTROL: TRIANGULAR SEDIMENT FILTER DIKE WILL BE INSTALLED ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA, PERPENDICULAR TO CURB. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.

7. PROJECT SCHEDULE MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM (GPP) COORDINATOR. INSTALLATION AND REMOVAL OF TEMPORARY AND PERMANENT EROSION/SEDIMENTATION CONTROLS MUST BE REFLECTED IN THE SCHEDULE, BY STATION NUMBER. GPP INSPECTOR MUST BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF TRANSITION BETWEEN PHASES.

8. APPROPRIATE EASEMENTS/APPROVALS MUST BE SECURED AND DOCUMENTED FOR PROJECT AREAS LOCATED OUTSIDE OF RIGHT OF WAYS. NO WORK SHALL BE PERFORMED WITHIN THESE AREAS UNTIL ASSOCIATED RIGHT OF ENTRY HAS BEEN SECURED. ADDITIONALLY, THIS PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL ALL RECORDED EASEMENT DOCUMENT NUMBERS HAVE BEEN OBTAINED AND SHOWN ON PLANS.

9. CONTRACTOR SHALL STAKE ALL PROPOSED SERVICE CONNECTIONS LOCATED WITHIN THE CRITICAL ROOT ZONE OF TREES 8" IN CALIPER AND LARGER AT LEAST 21 CALENDAR DAYS PRIOR TO CONSTRUCTION OF SUCH SERVICES. STAKING SHALL CONSIST OF A LATH WITH NAIL AND PAINT MARKINGS. IN CASES WHERE A STAKE CANNOT BE PLACED WITHOUT DAMAGING PROPERTY, CONTRACTOR MAY USE PAINT ONLY. ONCE STAKING IS COMPLETED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE CITY OF AUSTIN'S CONSTRUCTION INSPECTOR WITHIN TWENTY-FOUR HOURS. THE CITY OF AUSTIN'S CONSTRUCTION INSPECTOR WILL THEN COORDINATE A FIELD REVIEW OF THE SERVICE LOCATIONS WITH THE GENERAL PERMIT PROGRAM COORDINATOR AND PROPERTY OWNERS. SERVICE LINE LOCATIONS MAY BE ADJUSTED BASED ON THE REVIEW AND WILL BE RESTAKED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL SERVICE LINE STAKING SHALL BE MAINTAINED UNTIL THE SERVICE IS INSTALLED.

10. THIS PROJECT HAS RECEIVED A SITE PLAN EXEMPTION (2025-149629 DA).

NOTES:
GENERAL PERMIT PROGRAM SELF-CERTIFICATION DOES NOT CONSTITUTE UTILITY ALIGNMENT/ASSIGNMENT APPROVAL.

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAIN WITH THE ENGINEER WHO PREPARED THEM. IN SELF-CERTIFYING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

GENERAL PERMIT PROGRAM CORRECTIONS RECORD

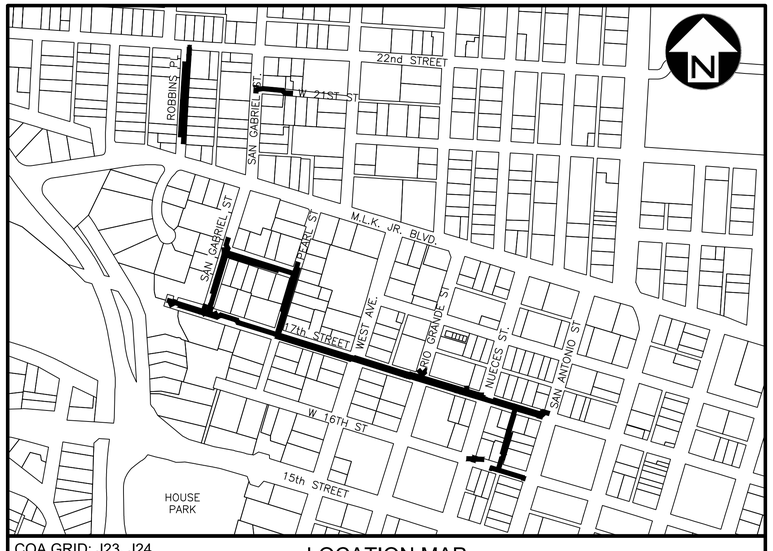
FOR USE BY GENERAL PERMIT OFFICE ONLY

NO	DESCRIPTION	BY	CORRECT (C) ADD (D) VOID (V) SHEET NO.'s	TOTAL # SHEETS IN CORRECTION PLAN SET	GENERAL PERMIT PROGRAM APPROVAL	APPROVAL DATE

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

CIP ID: 2231.308
WATER ID NO. W-2026-0033
WASTEWATER ID NO. S-2026-0033

100% SUBMITTAL



COA GRID: J23, J24

MAPSCO: MAP 585 E, 585J, 585N

LOCATION MAP
N.T.S.

WATER PRESSURE ZONE: LOCATION			
LOCATION	MIN.	TYP.	MAX.
CENTRAL NORTH	690	710	720
PSI	36		83

UCC-200806-02-01
AULCC NUMBER

PROJECT INFORMATION:

STREET ADDRESS:
W. 17TH ST - FROM SAN GABRIEL ST TO SAN ANTONIO ST
SAN GABRIEL ST - FROM W. 17TH ST TO W. 18TH ST
W. 18TH ST - FROM SAN GABRIEL ST TO PEARL ST
PEARL ST - FROM W. 17TH ST TO W. 18TH ST
20 FT ALLEY - FROM W. 16TH ST TO W. 17TH ST
ROBBINS PL - FROM MLK BLVD TO W. 22ND ST
W. 21ST ST - FROM SAN GABRIEL ST TO PEARL ST
W. 16TH ST - FROM NUECES ST TO SAN ANTONIO ST

OWNER:
AUSTIN WATER
AUSTIN WATERSHED PROTECTION
CITY OF AUSTIN, TEXAS
P.O. BOX 1088
AUSTIN, TEXAS 78767

CONTACT:
SHIVANI KESAR, PE, PMP
CITY OF AUSTIN - PROJECT MANAGER
6800 BURLESON ROAD, BLDG 312, SUITE 200
AUSTIN, TEXAS 78744
PHONE: (512) 974-2913
EMAIL: Shivani.Kesar@austintexas.gov

AUSTIN WATERSHED PROJECT SPONSOR
GLEN TAFFINDER, PE CFM, PMP, ENV-SP
AUSTIN WATERSHED PROTECTION DEPARTMENT
PROJECT SPONSOR
505 BARTON SPRINGS ROAD
AUSTIN, TX 78704
PHONE: 512-974-3381
EMAIL: Glen.Taffinder@austintexas.gov

AUSTIN WATER PROJECT SPONSOR
TRACY HO EIT
AUSTIN WATER - PROJECT SPONSOR
625 E. 10TH STREET, SUITE 400
AUSTIN, TEXAS 78701
PHONE: (512) 972-0013
EMAIL: Tracy.Ho2@austintexas.gov

SUBMITTAL PREPARED BY:



10/20/2026

BGE, Inc.
1701 Directors Blvd. Suite 1000
Austin, TX 78744
Tel: 512-879-0400 ● www.bgeinc.com
TBPE Registration No. F-1046

CONTACT:
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PHONE: (512) 795-1416
EMAIL: AWoffenden@bgeinc.com

APPROVED BY GENERAL PERMIT HOLDER:

GENERAL PERMIT SELF CERTIFICATION

DEPARTMENT: AUSTIN WATER

THE EXECUTIVE OF RECORD, CERTIFIES THAT DEPARTMENT COMPONENTS OF THIS PROJECT COMPLY WITH THE CONDITIONS REQUIRED TO BE ELIGIBLE FOR GENERAL PERMIT SELF CERTIFICATION.

Charles Celauro — 10-30-2026

EXECUTIVE OF RECORD: CHARLES CELAURO, P.E., ASSISTANT DIRECTOR — DATE

GPSC-2026-017.AW
GENERAL PERMIT SELF CERTIFICATION NUMBER

DEPARTMENT: AUSTIN WATERSHED PROTECTION

EXECUTIVE OF RECORD, CERTIFIES THAT DEPARTMENT COMPONENTS OF THIS PROJECT MEET THE CONDITIONS NECESSARY TO BE ELIGIBLE FOR GENERAL PERMIT.

EXECUTIVE PRINTED NAME: JANAE SPENCE

10/26/26
SIGNED — DATE

REVIEWED BY:

Jason Hargrove — **FO/OM** — 10/22/2026
AUSTIN WATER — DATE

GENERAL PERMIT PROGRAM
WEST 17TH STREET
WATER & WASTEWATER PIPELINE RENEWAL

100% SUBMITTAL REV

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DRAINAGE CRITERIA MANUAL WAIVER REQUESTS

WAIVER NO.	SHEET NO.	LINE	STATION	DCM REF.	DESCRIPTION/JUSTIFICATION	APPROVED
1	45	STRM–A2	1+00.00 – 1+14.89	DCM 3.1.0	100–YR HGL NOT CONTAINED WITHIN EASEMENT OR ROW / EXISTING SYSTEM UNDERSIZED	03/02/26
2	46	STRM–A4	1+40.05	DCM 5.7.1.F	STRM–A4 INLET A4 < 5' FROM EX WW LINE (4.22' H) / CURB INLET PLACED CLOSE TO INTERSECTION AND OPTIMIZING DISTANCE FROM EXISTING WW LINE	01/28/26
3	46	STRM–A5	1+38.85	DCM 4.1.0.D	CURB INLET TRANSITION LENGTH < 7'–6" / AVOID IMPACT TO TREE AND CLOSE PROXIMITY TO INTERSECTION CURB RETURN	01/28/26
4	47	STRM–B1	1+00.00 – 1+35.69	DCM 5.7.0	DEPTH OF COVER < 2.5' (1.52' – 2.39' V) / CROSSING OVER EX 30" WW LINE WITH LIMITED COVER	01/28/26
5	47	STRM–B1	1+09.51	DCM 5.7.1.G	STORM–B1 < 18" FROM EX WWL (0.76' V) / CROSSING OVER EX 30" WW LINE WITH LIMITED COVER	03/02/26
6	47	STRM–B1	1+35.69 – 1+38.49	DCM 5.7.0	DEPTH OF COVER < 2.5' (2.39' – 2.49' V) / SHALLOW DOWNSTREAM CONNECTION	01/28/26
7	47	STRM–B1	1+80.66	DCM 5.7.1.F	STRM–B1 < 5' FROM WWMH (3.02' H) / CONGESTED UTILITY CORRIDOR	01/28/26
8	47	STRM–B1	1+30.36	DCM 5.7.1.F	STRM–B1 < 5' FROM WWMH (2.91' H) / CONGESTED UTILITY CORRIDOR	03/02/26
9	48	STRM–B2	1+00.00 – 1+15.57	DCM 5.7.0	DEPTH OF COVER < 2.5' (1.38' – 2.42' V) / SHALLOW DOWNSTREAM CONNECTION	01/28/26
10	48	STRM–B2	1+15.57	DCM 4.1.0.D	CURB INLET TRANSITION LENGTH < 7'–6" / LIMITED SPACE BETWEEN CURB RAMP AND DRIVEWAY	01/28/26
11	48	STRM–B2	1+15.57	DCM 5.2.0.L	25–YR HGL > 6" BELOW THEORETICAL GUTTER FLOW LINE OF INLETS / EX DOWNSTREAM SYSTEM IS UNDERSIZED	03/02/26
12	48	STRM–B3	1+31.16	DCM 5.2.0.L	25–YR HGL > 6" BELOW THEORETICAL GUTTER FLOW LINE OF INLETS / EX DOWNSTREAM SYSTEM IS UNDERSIZED	03/02/26
13	50	STRM–B7	1+02.50 – 1+12.81	DCM 5.3.2	STRM–B7 25–YR FLOW VELOCITY > 20 FPS (35.4 FPS) / EXISTING SYSTEM UNDERSIZED	03/02/26
14	50	STRM–B7	1+12.81 – 1+17.51	DCM 5.3.2	STRM–B7 25–YR FLOW VELOCITY > 20 FPS (22.4 FPS) / EXISTING SYSTEM UNDERSIZED	03/02/26
15	51	STRM–C1	1+04.70	DCM 5.2.0.F	SOFFIT OF LATERAL NOT EQUAL TO SOFFIT OF TRUNK LINE (1.29' V) / RECONNECTING LATERAL TO EX STORM ARCH PIPE MATCHING EX CONNECTION LOCATION	01/28/26
16	51	STRM–C1	1+32.77	DCM 5.7.1.F	STRM–C1 INLET < 5' FROM EX W METER (3.62' H) / CURB INLET SHIFTED FOR WW LINE AND CLOSE TO W METER	03/02/26
17	48	STRM–B2	1+04.98	DCM 5.6.1	MORE THAN 1 BEND BETWEEN ACCESS POINTS / ADDITIONAL BEND TO AVOID CONFLICT WITH WW MH AND INCREASING HGL	03/02/26
18	44	STRM–A1	7+65.66	DCM 3.1.4	INLET A1 25–YR BYPASS FLOW EXCEEDS 3 CFS (8.24 CFS)	09/22/26
19	46	STRM–A5	1+38.85	DCM 3.1.4	INLET A5 25–YR BYPASS FLOW EXCEEDS 3 CFS (15.74 CFS)	09/22/26
20	49	STRM–B5	1+33.69	DCM 3.1.4	INLET B5 25–YR BYPASS FLOW EXCEEDS 3 CFS (7.13 CFS)	09/22/26
21	35	WL–H	1+42.50	DCM 5.7.1.F	EXISTING CURB INLET < 5' FROM PR W LINE (1.67' H)	09/29/26
22	35	WL–H	1+42.50	DCM 5.7.1.F	EXISTING 24" SD LINE < 5' FROM PR W LINE (1.80' H)	09/29/26

BGE JOB NO. 4766–03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

NO.	REVISION	BY	DATE

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

SHEET INDEX

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

10/20/2026

SHEET
2 OF 93

100% SUBMITTAL REV

GENERAL CONSTRUCTION NOTES

1. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF AUSTIN, CONSULTING ENGINEER, CONTRACTOR, COUNTY ENGINEER (IF APPROPRIATE), AND ANY OTHER AFFECTED PARTIES. NOTIFY CONSTRUCTION INSPECTION DIVISION OF THE CITY'S ONE STOP SHOP (OSS), 512-974-6360 OR 512-974-7034 AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
2. THE CONTRACTOR SHALL GIVE THE CITY A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION, CALL CONSTRUCTION INSPECTION DIVISION, 512-974-6360 OR 512-974-7034.
3. BARRICADES, BUILT TO CITY OF AUSTIN STANDARD SPECIFICATIONS, SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.
4. BLASTING WITHIN THE PROJECT AREA WILL NOT BE ALLOWED.
5. ANY EXISTING PAVEMENT, CURBS, AND/ OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE PROJECT.
6. THE ESTIMATED QUANTITIES PUBLISHED WITH THE CONSTRUCTION DOCUMENTS ARE FURNISHED AS AN AID IN THE BIDDING PROCESS AND ARE NOT TO BE SUBSTITUTED FOR THE CONTRACTOR'S QUANTITY TAKEOFFS.
7. THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER OF ANY OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THE PROJECT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH UTILITIES IN THE VICINITY OF THE PROJECT, THIS INCLUDES, BUT IS NOT LIMITED TO, GAS, WATER, WASTEWATER, ELECTRICAL, TELEPHONE, COMMUNICATIONS NETWORKS, CABLE TELEVISION, AND STREET AND DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CONSTRUCTION INSPECTOR WITHIN 24 HOURS.
9. EACH LOT IS SERVED BY AT LEAST ONE (1) GAS SERVICE LINE. THE EXACT LOCATIONS OF THE GAS SERVICE LINES ARE NOT SHOWN ON THE CONSTRUCTION PLANS. THE GAS COMPANY WILL LOCATE THEIR SERVICE LINES DURING THE "ONE CALL" PROCESS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE GAS SERVICE LINES DURING CONSTRUCTION.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE AND RECONNECT ALL WATER SERVICES DISRUPTED BY CONSTRUCTION OF THIS PROJECT WITH NEW PIPE FROM THE MAIN TO THE METER OR HOUSE CONNECTION.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE AND RECONNECT ALL WASTEWATER SERVICES DISRUPTED BY CONSTRUCTION OF THIS PROJECT WITH NEW PIPE FROM THE COLLECTION LINE TO THE CLEANOUT.
12. FIELD LOCATIONS, BOTH HORIZONTAL AND VERTICAL, SHALL BE PERFORMED AT LEAST 300 FEET IN ADVANCE OF THE PROPOSED CONSTRUCTION.
13. WHERE PI'S ARE SHOWN ON THE PLAN AND A FITTING IS NOT INDICATED TO BE INSTALLED, THIS TRANSITION SHALL BE ACHIEVED BY DEFLECTING THE PIPE JOINT. THE LAYING SCHEDULE PROVIDED BY THE PIPE MANUFACTURER SHALL PROVIDE REVISED FLOW LINE ELEVATIONS TO MAKE THIS TRANSITION BASED ON ACTUAL JOINT LOCATIONS. THE ALLOWED DEFLECTION ANGLE SHALL BE A MAXIMUM OF 80% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION ANGLE.
14. FITTINGS SHALL HAVE THE SAME RESTRAINED JOINT SYSTEM AS PIPE OR SHALL HAVE COMPATIBLE INTEGRAL SYSTEM.
15. EXISTING UNDERGROUND UTILITIES AND DIMENSIONS SHOWN ON PLANS ARE APPROXIMATE AND BASED ON AVAILABLE RECORD DRAWINGS, SUE, INTERSECTIONS, AND PROFILES. CONTRACTOR MUST FIELD VERIFY THE EXACT DEPTHS, DISTANCES, PIPE SIZES, LOCATIONS, AND GRADE OF EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO FAILURE TO LOCATE EXISTING UNDERGROUND UTILITIES AND MUST RESTORE ANY DAMAGED EXISTING UTILITIES TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST TO THE CITY.
16. UTILITIES SHOWN REFLECT THE BEST INFORMATION AVAILABLE AT THE TIME THE PROJECT WAS DESIGNED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES THAT ARE TO BE EXTENDED, TIED TO, CROSSED, ALTERED, OR SUBJECT TO DAMAGE / INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. TRANSITION FITTINGS REQUIRED TO CONNECT DISSIMILAR PIPES ARE SUBSIDIARY TO THE TIE-IN.
17. NO MORE THAN 140 LINEAR FEET OF CONSTRUCTION ZONE SHALL BE OPEN AT ANY ONE TIME WITH CLEAN UP AND FINAL GRADING OCCURRING BEFORE PROCEEDING TO THE NEXT SECTION. THE CONTRACTOR IS REQUIRED TO RESTORE ALL DISTURBED AREAS AS WORK PROGRESSES.
18. CONSTRUCTION IS LIMITED TO WITHIN THE ROAD RIGHT-OF-WAY. ANY STAGING AND STORAGE AREAS OUTSIDE APPROVED LIMITS OF CONSTRUCTION REQUIRE AN APPROVED REQUEST PRIOR TO USE.
19. CONTRACTOR WILL BE RESPONSIBLE FOR THE COSTS INCURRED AS A RESULT OF UTILITY RELOCATIONS PERFORMED FOR THE CONTRACTOR'S CONVENIENCE.
20. EXISTING UTILITIES SHALL BE SUPPORTED, PROTECTED AND MAINTAINED DURING CONSTRUCTION, ANY ASSOCIATED COST IS SUBSIDIARY TO ITEM 510, PIPE.
21. ALL WATER LINES WILL BE INSTALLED WITH AT LEAST 48" OF COVER BELOW FINISHED GRADE.
22. ALL WASTEWATER LINES WILL BE INSTALLED WITH AT LEAST 60" OF COVER BELOW FINISHED GRADE.
23. FIRE HYDRANT LOCATIONS MAY BE FIELD ADJUSTED, IF NECESSARY TO AVOID CONFLICTS WITH DRIVEWAYS, POWER POLES, AND OTHER UTILITIES.
24. ALL OPERATION OF VALVES REQUIRED FOR SHUTDOWN SHALL BE PERFORMED BY AUSTIN WATER STAFF ONLY.
25. ALL VALVES SHALL BE IN THE CLOSED POSITION AT THE TIME OF INSTALLATION.
26. LENGTH OF PIPE FROM THE MAIN TO THE METER OR CLEAN OUT IS INDICATED ON THE PLAN SHEETS. THIS INFORMATION IS PROVIDED TO THE CONTRACTOR FOR REFERENCE. PAYMENT FOR THE REQUIRED SERVICE LINE PIPING IS SUBSIDIARY TO THE SERVICES.

SANITARY SEWER / WATERLINE SEPARATION NOTES

THE FOLLOWING RULES APPLY TO SEPARATION DISTANCES BETWEEN POTABLE WATER AND WASTEWATER TREATMENT PLANTS, AND WATERLINES AND SANITARY SEWERS:

1. WATERLINE/NEW SEWER LINE SEPARATION. WHEN NEW SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO WATERLINES THAN NINE FEET IN ALL DIRECTIONS. SEWERS THAT PARALLEL WATERLINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES WILL APPLY:

   A. WHERE A SANITARY SEWER PARALLELS A WATERLINE, AND THE SEWER PIPE IS ABOVE THE WATERLINE EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATERLINE THE SEWER PIPE MUST BE ENCASED. THE CASING PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PER SQUARE INCH (PSI) PRESSURE CLASS PIPE THAT IT ENCASES THE ENTIRE LENGTH OF COLLECTION SYSTEM PIPE THAT IS WITHIN NINE FEET OF THE WATER SUPPLY PIPE; IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASING PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.

WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED ABOVE THE WATERLINE. A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES ABOVE A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASING PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.

   C. WHERE A SANITARY SEWER PARALLELS A WATERLINE, AND THE SEWER PIPE IS BELOW THE WATERLINE EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATERLINE THE SEWER PIPE MUST BE ENCASED. THE CASING PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PER SQUARE INCH (PSI) PRESSURE CLASS PIPE THAT IT ENCASES THE ENTIRE LENGTH OF COLLECTION SYSTEM PIPE THAT IS WITHIN NINE FEET OF THE WATER SUPPLY PIPE; IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASING PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.

   D. WHERE A SEWER CROSSES BELOW A WATERLINE, ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE ENCASED THE CASING PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PER SQUARE INCH (PSI) PRESSURE CLASS PIPE THAT IT ENCASES THE ENTIRE LENGTH OF COLLECTION SYSTEM PIPE THAT IS WITHIN NINE FEET OF THE WATER SUPPLY PIPE; IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASING PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.

2. WATERLINE MANHOLE SEPARATION. UNLESS SANITARY SEWER MANHOLES AND THE CONNECTING SEWER CAN BE MADE WATERTIGHT AND TESTED FOR NO LEAKAGE, THEY MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE FROM AN EXISTING OR PROPOSED WATERLINE. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, HAVE ALL PORTIONS OF THE MANHOLE WITHIN NINE FEET OF A WATER SUPPLY PIPE ENCASED IN AT LEAST ONE FOOT OF CEMENT STABILIZED SAND WITH AT LEAST 160 POUNDS OF CEMENT FOR EVERY CUBIC YARD OF SAND AND BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE .

SEQUENCE OF CONSTRUCTION

1. INITIAL CONSTRUCTION WORK SHALL COMMENCE FROM DOWNSTREAM TO UPSTREAM.
2. IN GENERAL, WATER IMPROVEMENTS TO BE CONSTRUCTED PRIOR TO WASTEWATER IMPROVEMENTS (SEE PROJECT SPECIFIC SEQUENCING BELOW). FINAL MILL AND OVERLAY WILL OCCUR AFTER ALL THE WATER, AND WASTEWATER IMPROVEMENTS ARE INSTALLED.
   - WL A SHOULD BE CONSTRUCTED PRIOR TO WWL B FROM WWL B STA 8+13.61 TO STA 12+14.29.
   - WWL B SHOULD BE CONSTRUCTED PRIOR TO WL C FROM WWL B STA 12+14.29 TO STA 15+96.81.
3. THE FOLLOWING WASTEWATER LINES ARE TO BE REPLACED IN PLACE.
   - WWL B FROM STA 0+78.38 TO STA 4+82.06
4. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS AS INDICATED ON APPROVED EROSION AND SEDIMENTATION CONTROL PLAN (ESCP) AND IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND BEGIN P-6 TREATMENT FOR TREES NOTED IN PLANS.
5. CONTACT WATERSHED PROTECTION DEPARTMENT AT (512) 974-2278 A MINIMUM OF 72 HOURS PRIOR TO SITE DISTURBANCE TO SCHEDULE A PRE-CONSTRUCTION VISIT WITH THE ENVIRONMENTAL INSPECTOR.
6. EVALUATE TEMPORARY EROSION CONTROL INSTALLATION AND MAKE CHANGES, IF ANY, PER INSPECTOR'S REQUEST. THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE SWPPP POSTED AT THE SITE.
7. SET UP TRAFFIC CONTROLS.
8. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
9. INSPECT AND MAINTAIN TEMPORARY EROSION AND SEDIMENTATION CONTROLS PER THE FREQUENCY OUTLINED IN THE SWPPP.
10. ENVIRONMENTAL PROJECT MANAGER WILL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE EFFECTIVENESS OF THE ESCP AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, ENVIRONMENTAL PROJECT MANAGER, AND GENERAL CONTRACTOR. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.
11. THE SEQUENCE AND PROGRESS OF WORK SHALL MINIMIZE THE LENGTH OF TIME ANY EXCAVATION IS LEFT OPEN. CONSTRUCTION SHALL TAKE PLACE IN ACCORDANCE WITH THE TRAFFIC CONTROL PHASING PLANS. ALL WORK WITHIN A PHASE MUST BE COMPLETED PRIOR TO BEGINNING WORK IN ANOTHER PHASE.
12. INSTALL WATER AND WASTEWATER AND STORM SEWER IMPROVEMENTS AND RE-VEGETATE PER PLANS.
13. PROJECT ENGINEER CONDUCTS WALK THROUGH AND SUBMITS CONCURRENCE LETTER TO THE CITY.
14. CONTACT ENVIRONMENTAL INSPECTOR TO SCHEDULE A FINAL INSPECTION.
15. REMOVE EROSION CONTROLS, ONLY AFTER INSPECTOR APPROVAL.

PAVEMENT RESTORATION NOTES

1. ALL OF THE PROJECT STREETS WATER, WASTEWATER, AND STORM DRAIN LINES WILL HAVE TRENCH REPAIR PER CITY OF AUSTIN STANDARD DETAIL 1100S-2. BASED ON THE BORINGS, THE BASE THICKNESS IN ALL EXISTING PAVEMENT SECTIONS IS SUCH THAT THE REPAIR WILL REQUIRE 12" BASE AND A MINIMUM OF 3" MILL AND OVERLAY WITH TYPE 'D' HMAC REGARDLESS OF ROAD CLASSIFICATION:
2. FINAL MILL AND OVERLAY WILL OCCUR AFTER ALL THE WATER, WASTEWATER AND STORM DRAIN IMPROVEMENTS ARE INSTALLED.

NO.	REVISION	BY	DATE

BGE JOB NO. 4766--03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

GENERAL NOTES

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED PROFESSIONAL ENGINEER

9/10/2026

SHEET
3 OF 93

100% SUBMITTAL REV

GENERAL NOTES

ALL RESPONSIBILITY FOR THE ADEQUECY OF THESE PLANS REMAINS WITH THE ENGINEER. APPROVAL OF THESE PLANS BY THE CITY OF AUSTIN DOES NOT REMOVE THESE RESPONSIBILITIES.

"REVIEWED BY AUSTIN WATER" APPLIES ONLY TO AW PUBLIC INFRASTRUCTURE, ALL OTHER WATER AND WASTEWATER INFRASTRUCTURE INSIDE PRIVATE PROPERTY ARE UNDER THE JURISDICATION OF BUILDING INSPECTIONS.

USE OF ELECTRONIC FILES GENERAL DISCLAIMER: USE OF THE ATTACHED FILES IN ANY MANNER INDICATES YOUR ACCEPTANCE OF TERMS AND CONDITIONS AS SET FORTH BELOW. IF YOU DO NOT AGREE TO ALL OF THE TERMS AND CONDITIONS, PLEASE CONTACT AUSTIN WATER PIPELINE ENGINEERING, PROJECT COORDINATOR PRIOR TO USE OF THE REFERENCED INFORMATION. PLEASE BE ADVISED THAT THE ATTACHED FILES ARE IN A FORMAT THAT CAN BE ALTERED BY THE USER. DUE TO THIS FACT, ANY REUSE OF THE DATA WILL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE CITY OF AUSTIN AND USER SHALL INDEMNIFY AND HOLD HARMLESS THE CITY OF AUSTIN FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING FROM USING THE DIGITAL FILE. IN ADDITION, IT IS THE RESPONSIBILITY OF THE USER TO COMPARE ALL DATA WITH THE PDF VERSION OF THIS DRAWING. IN THE EVENT THERE IS A CONFLICT BETWEEN THE PDF VERSION DRAWING AND THE ELECTRONIC FILE, THE PDF VERSION DRAWING SHALL PREVAIL.

AW INFRASTRUCTURE INFORMATION

PROPOSED PRODUCT TYPE (TO BE INSTALLED)	LENGTH OF PIPE (L.F.)	SIZE OF PIPE (INCH)	NO. OF METERED SERVICES
WATER MAIN	4,101/529/130	8"/6"/4"	
WASTEWATER MAIN	526/2666	12"/8"	
RECLAIMED WATER MAIN			
WATER SERVICE	NA	NA	
WASTEWATER SERVICE	NA	NA	
RECLAIMED WATER SERVICE	NA	NA	

EXPAND OR REDUCE TABLE AS NEEDED*
THE INFORMATION INCLUDED IN THIS TABLE ARE APPROXIMATE VALUES ESTIMATED BASED ON GENERAL ENGINEERING GUIDELINES

AUTOMATED METERING INFRASTRUCTURE: EFFECTIVE MARCH 2022, NEW WATER METERS INSTALLED SHALL BE IN CONFORMANCE WITH AW'S AUTOMATED METERING INFRASTRUCTURE TECHNOLOGY, AND WITH THE APPLICABLE STANDARD PRODUCT LIST. APPLICANTS FILING A SITE PLAN OR SUBDIVISION PLAN WILL BE REQUIRED TO COORDINATE WITH THE AUSTIN WATER PLAN REVIEWER FOR DETAILS ON APPROVAL AND INSTALLATION.

PRIOR TO THE HANDLING AND DISPOSAL OF ASBESTOS PIPE, THE CONTRACTOR'S WORK PLAN WILL BE REVIEWED AND COORDINATED THROUGH COA BUILDING SERVICES DEPARTMENT - ASBESTOS, LEAD AND MOLD MANAGEMENT GROUP MANAGER WHO CAN BE REACHED AT 512-974-7137. IT IS THE CONTRACTOR'S RESPONSIBILITY TO USE A TRAINED, CERTIFIED AND LICENSED ASBESTOS ABATEMENT CONTRACTOR IN ACCORDANCE WITH THE FEDERAL, STATE AND LOCAL REGULATIONS.

MODIFICATIONS TO AUSTIN WATER SIGNED AND STAMPED SHEETS ARE NOT PERMITTED. ALL DESIGN MODIFICATIONS SHALL BE SUBMITTED VIA THE ABC PORTAL FOR A PLAN CORRECTION OR REVISION. ALL UNETHICAL ENGINEERING PRACTICES, INCLUDING MODIFYING CITY STAMPED PLAN SHEETS, SHALL BE REPORTED TO THE TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS (TBPELS).
REFERENCE: TEXAS ENGINEERING PRACTICE ACT AND RULES, SUBCHAPTER C: PROFESSIONAL CONDUCT AND ETHICS

STANDARD CONSTRUCTION NOTES REVISED FEBRUARY 7, 2025

1. **THE CITY STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL COVER MATERIALS AND METHODS USED TO DO THIS WORK.**
2. **CONTRACTOR MUST OBTAIN A ROW PERMIT FROM AUSTIN TRANSPORTATION AND PUBLIC WORKS DEPARTMENT, RIGHT OF WAY MANAGEMENT DIVISION BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY. ACTIVITY WITHIN RIGHT-OF-WAY SHALL COMPLY WITH APPROVED TRAFFIC CONTROL PLAN (TCP).**
3. **AT LEAST 48 HOURS PRIOR TO BEGINNING ANY UTILITY CONSTRUCTION ACTIVITY IN PUBLIC ROW OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY THE APPLICABLE CITY OF AUSTIN INSPECTION GROUP (AUSTIN TRANSPORTATION AND PUBLIC WORKS DEPARTMENT (TPW), OR DEVELOPMENT SERVICES). SEE CURRENT NOTIFICATION REQUIREMENTS AT WWW.AUSTINTEXAS.GOV.**
4. **THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. THE CITY OF AUSTIN WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINES.**
5. **NO OTHER UTILITY SERVICE/APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND WASTEWATER SERVICES.**
6. **MINIMUM TRENCH SAFETY MEASURES SHALL BE PROVIDED, AS REQUIRED BY OSHA, CITY SPECIFICATION 509S, AND CITY/COUNTY CONSTRUCTION INSPECTORS.**
7. **PRESSURE TAPS WILL ONLY BE ALLOWED ON A CASE BY CASE BASIS, AS DETERMINED BY THE DIRECTOR'S DESIGNEE. NORMALLY PRESSURE TAPS 4 INCHES AND LARGER SHALL BE ALLOWED IN THE FOLLOWING CASES: A) A TEST SHUT OUT INDICATES AN ADEQUATE SHUT OUT TO PERFORM THE WORK IS NOT FEASIBLE B) MORE THAN 30 CUSTOMERS OR A SINGLE CRITICAL CUSTOMER (AS DEFINED BY AUSTIN WATER) WOULD BE IMPACTED BY THE SHUT OUT OR C) THE EXISTING WATER LINE WARRANTS IT.**
8. **WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEMS 510.3 (27)-(29). FORCE MAIN PRESSURE TESTING SHALL BE CONDUCTED AND FALL UNDER THE SPECIFICATIONS AS WATER LINES (PRESSURE PIPE) OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.**
9. **ALL MATERIAL USED ON THIS PROJECT MUST BE LISTED ON THE STANDARD PRODUCTS LISTING. ANY MATERIAL NOT LISTED HAS TO GO THROUGH THE REVIEW OF THE STANDARDS COMMITTEE FOR REVIEW AND APPROVAL PRIOR TO START OF PROJECT. TESTING AND EVALUATION OF PRODUCTS ARE REQUIRED BEFORE APPROVAL WILL BE GIVEN ANY CONSIDERATION.**
10. **WHEN WATER SERVICES ARE DAMAGED AND THE SERVICE MATERIAL IS POLYETHYLENE (PE), THE LINE SHALL BE REPAIRED ONLY BY HEAT FUSION WELD, AT BRASS FITTINGS, OR THE FULL LENGTH SHALL BE REPLACED PER CURRENT STANDARD DETAIL(S). WHEN POLYBUTYLENE (PB) TUBING IS DAMAGED OR TAMPERED WITH IN ANY WAY, THE FULL LENGTH OF SERVICE LINE SHALL BE REPLACED. (NOTE: FULL LENGTH IS FROM THE CORPORATION STOP TO THE METER.) REPAIR COUPLINGS ARE NOT ALLOWED FOR ANY WATER OR WASTEWATER SERVICE LINE REPAIR, RECONNECT, OR REPLACEMENT.**
11. **WHEN AN EXISTING WATERLINE SHUT OUT IS NECESSARY AND POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR WHO WILL THEN NOTIFY AUSTIN WATER DISPATCH AND THE AFFECTED CUSTOMERS A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE.**
12. **THE INSPECTOR SHALL NOTIFY AUSTIN WATER AT 972-1000 AT A MINIMUM OF 72 HOURS PRIOR TO RELOCATING ANY DOMESTIC OR FIRE DEMAND WATER METERS.**
13. **PROJECT-SPECIFIC SHOP DRAWINGS SHALL BE SUBMITTED FOR AW APPROVAL FOR PRE-CAST CIRCULAR VERTICAL MANHOLE SECTIONS LARGER THAN 48" DIAMETER. THE SHOP DRAWINGS SHALL INCLUDE THE FLOWLINE ELEVATION OF ALL CONNECTING PIPES; ELEVATIONS OF TRANSITIONS FROM LARGE DIAMETER SECTIONS TO 48" DIAMETER SECTIONS; TOP OF MANHOLE AND SURROUNDING GROUND ELEVATIONS; AND DETAILS OF SPECIAL CONSTRUCTION CONSIDERATIONS SPECIFIED IN THE CONTRACT DOCUMENTS.**
14. **WHEN CONCRETE MANHOLES LARGER THAN 48 INCH DIAMETER ARE USED, DRAWINGS THAT ARE SEALED BY A PROFESSIONAL ENGINEER SHALL BE SUBMITTED FOR BASE SLABS, FLAT TOP LIDS (IF USED), AND FLAT TYPE CONCRETE PIECES USED TO TRANSITION FROM LARGER TO SMALLER DIAMETER MANHOLE SECTIONS.**
15. **ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED AND RETURNED TO AUSTIN WATER. NOTICE SHOULD BE GIVEN 48 HOURS PRIOR, TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM -VALVES AND HYDRANT SERVICES SUPERVISOR AT AWDSM-ASSET-RECOVERY@CITYOFAUSTIN.ONMICROSOFT.COM.**
16. **ALL EXISTING WATER METERS IDENTIFIED TO BE RELOCATED OR ABANDONED AT THE DEVELOPMENT SHALL BE REMOVED FROM THE METER BOX PRIOR TO CONSTRUCTION AND GIVEN IMMEDIATELY TO THE CITY OF AUSTIN INSPECTOR.**
17. **THE ENGINEER SHALL CALL OUT THE SIZE, TYPE AND USE (DOMESTIC, IRRIGATION OR RECLAIM) OF ALL EXISTING WATER METERS TO BE RELOCATED OR REPURPOSED. WATER METER NUMBERS WILL NOT BE REQUIRED TO BE PLACED ON THE PLAN SHEET. A SEPARATE UTILITY PERMITTING OFFICE FORM CAN BE USED TO PROVIDE RELEVANT DATA FOR THE EXISTING INFORMATION ON EXISTING METERS TO RECEIVE APPROPRIATE CREDITS. THIS FORM SHALL BE DIRECTLY SUBMITTED TO UTILITY PERMITTING OFFICE FOR REVIEW AND PROCESSING.**
18. **NO CONNECTION MAY BE MADE BETWEEN THE PRIVATE PLUMBING AND AUSTIN WATER INFRASTRUCTURE UNTIL A CITY APPROVED WATER METER HAS BEEN INSTALLED.**
19. **METER BOXES AND CLEAN OUTS SHALL NOT BE LOCATED WITHIN PAVED AREAS SUCH AS DRIVEWAYS AND SIDEWALKS.**
20. **NO SOIL COMPACTION EQUIPMENT SHALL COME WITHIN 24-INCHES FROM THE TOP OF THE WATER OR WASTEWATER PIPE. BETWEEN 24-36 INCHES FROM TOP OF THE PIPE, ONLY LIGHT SOIL COMPACTION EQUIPMENT (E.G., RAMMERS OR "WHACKER PACKERS", VIBRATING PLATE COMPACTORS, WALK-BEHIND HAND-GUIDED ROLLERS) OR SMOOTH ROLLER COMPACTION EQUIPMENT WEIGHING LESS THAN 5,000 LBS. WILL BE ALLOWED. WHERE SOIL COMPACTION EQUIPMENT WILL BE 36-INCHES OR GREATER FROM THE TOP OF THE PIPE, HS20 LOADS SHALL NOT BE EXCEEDED. PIPE DEPTHS SHALL BE VERIFIED THROUGH POTHOLING, LEVEL A SUE OR BY MH INVERT DATA.**
21. **THE DESIGN AND CONSTRUCTION OF RETAINING WALLS, BRIDGES, CULVERTS, HEADWALLS, JUNCTION STRUCTURES, SCREENING WALLS, AND STORMWATER DRAINAGE PIPE WITHIN THE VICINITY OF AW UTILITIES SHALL BE IN COMPLIANCE WITH SECTION 13 OF THE COA'S TRANSPORTATION CRITERIA MANUAL.**
22. **THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3(22) AND SPL WW-27A, WW-27A-01, WW-27A-02 AND WW-27F.**
23. **ALL WATERLINE BRANCH CONNECTIONS SHALL HAVE AN MJ GATE VALVE POSITIVELY RESTRAINED TO THE MJ TEE BY USING A SWIVEL TEE, FOSTER ADAPTOR, OR SWIVEL X SOLID HYDRANT ADAPTOR (WITH SWIVEL GLAND).**

*** ON CITY SPONSORED PROJECTS, WHERE CONFLICTS ARE IDENTIFIED BETWEEN THESE CONSTRUCTION NOTES AND THE PROJECT CONTRACT DOCUMENTS, THE CONTRACT DOCUMENTS WILL TAKE PRECEDENCE.**

HORIZONTAL AND VERTICAL SEPARATION DISTANCE

1. MAIN ASSIGNMENTS IN CITY STREETS MUST BE COORDINATED WITH AULCC. ASSIGNMENTS FOR THESE MAINS IN COUNTY ROADS MUST ALSO BE APPROVED THE THE COUNTY ENGINEER. THE SEPARATION BETWEEN THESE MAINS MUST COMPLY WITH THE TCEQ RULES. ASSIGNMENTS FOR THESE MAINS TO BE LOCATED WITHIN STATE OR FEDERAL HIGHWAY RIGHT-OF-WAY SHALL ALSO BE APPROVED AND PERMITTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT). ALL SEPARATION DISTANCES SHALL BE FROM OUTSIDE DIAMETER OF THE PIPE TO OUTSIDE DIAMETER OF THE PIPE (OD TO OD).
2. A MINIMUM HORIZONTAL SEPARATION OF 5' SHALL BE MAINTAINED BETWEEN EXISTING OR PROPOSED AW INFRASTRUCTURE AND ALL OTHER NON-AW INFRASTRUCTURE IN ORDER TO MAINTAIN TRENCH INTEGRITY. A MINIMUM HORIZONTAL SEPARATION BETWEEN WATER, RECLAIMED WATER, AND WASTEWATER SERVICE LINES AND DRY UTILITY SERVICES SHALL BE 3'.
3. A MINIMUM VERTICAL SEPARATION OF 12" (OR 6", ONLY IF APPROVED BY AW DUE TO AND UNAVOIDABLE UTILITY CONFLICT SHALL BE MAINTAINED WHEN WATER, RECLAIMED WATER AND WASTEWATER MAINS ARE LOCATED ABOVE NON-AW INFRASTRUCTURE. REGARDLESS OF THE VERTICAL SEPARATION, THE BEDDING OF AN EXISTING WATER, RECLAIMED WATER AND WASTEWATER MAIN, IF DISTURBED, SHALL BE REESTABLISHED USING CONTROLLED LOW STRENGTH MATERIAL (SEE STANDARD SPECIFICATION ITEM 402S) THAT COMPLETELY FILL THE EXCAVATION BENEATH THE MAIN AND EXTENDS VERTICALLY TO THE SPRING LINE OF THE MAIN.

   A MINIMUM VERTICAL SEPARATION OF 18" (OR 12", ONLY IF APPROVED BY AW DUE TO AN UNAVOIDABLE UTILITY CONFLICT) SHALL BE MAINTAINED WHEN WATER, RECLAIMED WATER AND WASTEWATER MAINS ARE LOCATED BELOW NON-AW INFRASTRUCTURE. WHEN A NEW WATER OR RECLAIMED WATER MAIN CROSSES UNDER AN EXISTING WASTEWATER MAIN OR LATERAL, THE WATER OR RECLAIMED WATER MAIN SHALL BE ENCASED IN STEEL ENCASEMENT AT LEAST 18' IN LENGTH CENTERED ON THE WASTEWATER MAIN AND THE ENCASEMENT SHALL CONTAIN FULL-CIRCUMFERENTIAL WELDED JOINTS. NO OTHER FORM OF ENCASEMENT, INCLUDING CEMENT STABILIZED SAND, WILL BE ALLOWED, A MINIMUM VERTICAL SEPARATION OF 12" SHALL BE MAINTAINED BETWEEN THE EXISTING WASTEWATER MAIN AND STEEL ENCASEMENT. WHEN A WATER, RECLAIMED WATER OR WASTEWATER MAIN IS BELOW A 42" OR LARGER STORM DRAIN, THE MAIN SHALL BE STEEL ENCASED WITH A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE STEEL ENCASEMENT AND STORM DRAIN. THE ENCASEMENT SHALL EXTEND HORIZONTALLY A MINIMUM OF 5' BEYOND THE OD OR EDGE OF THE STORM DRAIN. A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED FOR UTILITY CROSSINGS BY TRENCHLESS METHODS WHEN CROSSING ABOVE WATER, RECLAIMED WATER AND WASTEWATER MAINS. SEE UCM 2.9.2.B.17 FOR INSTRUCTIONS ON TRENCHLESS METHODS WHEN CROSSING UNDER WATER MAINS. REGARDLESS OF THE VERTICAL SEPARATION, ANY BEDDING MATERIAL FOR AN EXISTING WATER, RECLAIMED WATER AND WASTEWATER MAIN ABOVE OR BESIDE THE MAIN THAT HAS BEEN REMOVED OR DISTURBED SHALL BE REPLACED WITH BEDDING MATERIAL MEETING STANDARD SPECIFICATION ITEM 510 TO A DEPTH OF AT LEAST 12" ABOVE THE TOP OF THE MAIN.

AUSTIN WATER WAIVER REQUESTS

AW Waiver Number	Page Number	Criteria Manual Code Reference	From STA	To STA	W/WW/Red.	Waiver Description	Separation (H/V)	Status	Proposed Structure	Year of WL/WWL Construction	Age
4	8, 47	UCM 2.9.1.B.2	1+00.00 (WWL-B) 1+30.66 (STRM-B1)	1+00.00 (WWL-B) 1+30.66 (STRM-B1)	WW	PR. 4' DIA WWMH WWL-B <5' FROM PR. 18" RCP STRM-B1	2.91' H	Approved	WW	N/A	N/A
5	8, 47	UCM 2.9.1.B.2	2+50.00 (WWL-B) 2+80.68 (STRM-B1)	2+50.00 (WWL-B) 2+80.68 (STRM-B1)	WW	PR. 4' DIA WWMH WWL-B <5' FROM PR. 18" RCP STRM-B1	3.04' H	Approved	WW	N/A	N/A
6	8, 47	UCM 2.9.1.B.2	4+55.16 (WWL-B) 4+85.82 (STRM-B1)	4+55.16 (WWL-B) 4+85.82 (STRM-B1)	WW	PR. 8" PVC WWL-B <5' FROM PR. 5' DIA STRM-B1 - MANHOLE	3.04' H	Approved	WW	N/A	N/A
7	8	UCM 2.9.1.B.3	0+84.17 (WWL-B)	0+84.17 (WWL-B)	WW	PR. 8" PVC WWL-B <18" FROM EX. 20" WL	1.01' V	Approved	WW	N/A	N/A
8	8, 47	UCM 2.9.1.B.2	4+20.63 (WWL-B) 4+51.30 (STRM-B1)	4+20.63 (WWL-B) 4+51.30 (STRM-B1)	WW	PR. 8" PVC WWL-B <5' FROM PR. 5' DIA STRM-B1 MANHOLE	3.54' H	Approved	WW	N/A	N/A
9	19	UCM 2.9.1.B.3	1+11.32 (WWL LATERAL - G)	1+11.32 (WWL LATERAL - G)	WW	PR. 6" PVC WWL <18" FROM EX. UE	0.33' V	Approved	WW	N/A	N/A
35	17	UCM 2.9.1.B.2	1+00.00 (WWL-F)	1+00.00 (WWL-F)	WW	PR. 5' DIA MH WWL-F < 5' FROM EX. 4" DIA STL GAS	4.2' H	Approved	WW	N/A	N/A
36	17	UCM 2.9.1.D.1	1+28.48 (WWL-F)	1+28.48 (WWL-F)	WW	PR. 5' DIA MH WWL-F <3' FROM PR. 24" STEEL ENCASEMENT	2.5' H	Approved	WW	N/A	N/A
19	18	UCM 2.9.1.B.2	4+31.92 (WWL-F)	5+25.18 (WWL-F)	WW	PR. 8" PVC WWL-F <5' FROM EX. OE POLE	3.48' H, 3.77' H, & 3.04' H	Approved	WW	N/A	N/A
21	35	UCM 2.9.1.B.2	2+36.58 (WL-H)	2+36.58 (WL-H)	W	PR. 8" DIP WL <5' FROM EX. ELECTRIC MANHOLE	3.62' H	Approved	W	N/A	N/A
22	19	UCM 2.9.1.B.3	1+06.19 (WWL LATERAL - G)	1+06.19 (WWL LATERAL - G)	WW	PR. 6" PVC WWL <18" FROM EX. 60" STORM	0.50' V	Approved	WW	N/A	N/A
25	17	UCM 2.9.1.D.1	1+05.42 (WWL-F)	1+05.42 (WWL-F)	WW	PR. 5' DIA MH WWL-F <3' FROM PR. 24" STEEL ENCASEMENT	2.52' H	Approved	WW	N/A	N/A
25	17	UCM 2.9.1.B.2	1+00.00 (WWL-F)	1+00.00 (WWL-F)	WW	PR. 5' DIA MH WWL-F < 5' FROM EX. UG FIBER OPTIC	2.55' H	Approved	WW	N/A	N/A
26	17	UCM 2.9.2.B.17	1+13.18 (WWL-F)	1+21.18 (WWL-F)	WW	PR. 15" PVC WWL-F < 18" FROM EX. 84" STORM PIPE	1.14' V	Approved	WW	N/A	N/A
26	17	UCM 2.9.1.B.2	3+61.90 (WWL-F)	3+61.90 (WWL-F)	WW	PR. 8" PVC WWL-F <5' FROM EX. ELECTRICAL POLE	2.47' H	Approved	WW	N/A	N/A
27	17	UCM 2.9.4.D.5	1+33.90 (WWL-F)	1+33.90 (WWL-F)	WW	PR. 8" PVC WWL-F NOT MATCHING CROWN-TO-CROWN WITH PR. 15" PVC WWL-F	N/A	Approved	WW	N/A	N/A
29	17	UCM 2.9.1.B.2	3+80.40 (WWL-F)	3+80.40 (WWL-F)	WW	PR. 8" PVC WWL-F <5' FROM EX. ELECTRICAL MANHOLE	2.93' H	Approved	WW	N/A	N/A
29	17	UCM 2.9.4.C.5	4+62.31 (WWL-F)	5+38.74 (WWL-F)	WW	PR. 8" PVC WWL-F <42" DEPTH OF COVER	2.16' V	Approved	WW	N/A	N/A
35	44	UCM 2.9.1.B.2	5+23.18 (WL-G)	5+36.10 (WL-G)	W	PR. 8" DIP WL <5' FROM EX. 4" DIA GAS	4.5' H	Approved	W	N/A	N/A
41	35	UCM 2.9.1.B.2	1+09.43 (WL-H)	1+09.43 (WL-H)	W	PR. 8" DI WL-H & 18" STEEL CASING <5' FROM EX. 4' DIA STORM MANHOLE	3.47' H	Approved	WW	N/A	N/A
32	35	UCM 2.9.1.B.2	1+38.44 (WL-H)	1+38.44 (WL-H)	W	PR. 8" DI WL-H <5' FROM EX. 4' DIA STORM MANHOLE	1.83' H	Approved	WW	N/A	N/A
33	35	UCM 2.9.1.B.2	2+55.95 (WL-H)	2+96.51 (WL-H)	W	PR. 8" DIP WL-H <18" FROM EX. UG ELEC	3.71' H TO 4.99' H	Approved	W	N/A	N/A
33	35	UCM 2.9.1.B.3	1+09.43 (WL-H)	1+09.43 (WL-H)	W	PR. 8" DIP WL-H <18" FROM EX. 24" RCP STORM	0.6' V	Approved	W	N/A	N/A
35	44	UCM 2.9.1.B.2	6+84.57 (STRM-A1)	6+84.57 (STRM-A1)	W	PR. 8" DIP WL-A <5' FROM PROP. 5' DIA STORM MANHOLE	3.97' H	Approved	W	N/A	N/A
36	44	UCM 2.9.1.B.2	7+19.07 (STRM-A1)	7+19.07 (STRM-A1)	W	PR. 8" DIP WL-A <5' FROM PROP. 5' DIA STORM MANHOLE	4.65' H	Approved	W	N/A	N/A
37	44	UCM 2.9.1.B.2	1+40.05 (STRM-A4)	1+40.05 (STRM-A4)	WW	PR. 10' STRM-A4 CURB INLET <5' FROM EX. 8" PVC WWL	4.22' H	Approved	WW	N/A	N/A
35	50	UCM 2.9.1.B.2	1+05.94 (STRM-B7)	1+05.94 (STRM-B7)	W	PR. 8" PVC WL-A <5' FROM PR. 8'X4' STORM JUNCTION BOX	4.79' H	Approved	W	N/A	N/A
40	47	UCM 2.9.1.B.3	1+09.57 (STRM-B1)	1+09.57 (STRM-B1)	WW	PR. 18" RCP STRM-B1 <18" FROM EX. 30" PVC WWL	0.76' V	Approved	WW	N/A	N/A
41	47	UCM 2.9.1.B.2	1+00.04 (STRM-B1)	1+00.04 (STRM-B1)	W	PR. 8'X4' MH BOX B1 <5' FROM PR. 8" DIP WL	4.79' H	Approved	W	N/A	N/A
42	8, 47	UCM 2.9.1.B.2	1+50.00 (WWL-B) 1+80.66 (STRM-B1)	1+50.00 (WWL-B) 1+80.66 (STRM-B1)	WW	PR. 4' DIA WWMH WWL-B <5' FROM PR. 18" RCP STRM-B1	3.02 H	Approved	WW	N/A	N/A
33	48,49	UCM 2.9.1.B.2	1+33.69 (STRM-B5)	1+33.69 (STRM-B5)	W	PR. 10' STRM-A5 CURB INLET <5' FROM EX. 2" CI WL	2.29' H	Approved	W	N/A	N/A
44	48,49	UCM 2.9.1.B.2	1+00.00 (STRM-B4)	1+00.00 (STRM-B4)	WW	PR. STRM MH B2 <5' FROM PR. 8" PVC WWL	4.06' H	Approved	WW	N/A	N/A
35	47	UCM 2.9.1.B.2	4+82.88 (STRM-B1)	4+82.88 (STRM-B1)	W	PR. STRM MH B3 <5' FROM EX. 4" CI WL	3.25' H	Approved	W	N/A	N/A
36	44	UCM 2.9.1.B.2	1+00.00 (STRM-B6)	1+00.00 (STRM-B6)	WW	PR. STRM MH B3 < 5' FROM PR. 8" PVC WWL	3.36' H	Approved	WW	N/A	N/A
48	26, 47	UCM 2.9.1.B.2	22+87.45 (WL-A) 4+85.82 (STRM-B1)	22+87.45 (WL-A) 4+85.82 (STRM-B1)	W	PR. 8" DIP WL <5' FROM PR. 5' DIA STORM MANHOLE	3.17' H	Approved	W	N/A	N/A
35	27	UCM 2.9.1.B.2	29+77.13 (WL-A)	29+97.65 (WL-A)	W	PR. 8" DIP WL <5' FROM EX. GAS	4.27' H	Approved	W	N/A	N/A
50	26	UCM 2.9.1.B.2	22+90.37 (WL-A)	24+00.81 (WL-A)	W	PR. 8" DIP WL <5' FROM PR. 18" SD	4.63' H TO 4.99' H	Approved	W	N/A	N/A
51	26, 47	UCM 2.9.1.B.2	23+22.33 (WL-A) 4+51.28 (STRM-B1)	23+22.33 (WL-A) 4+51.28 (STRM-B1)	W	PR. 8" DIP WL <5' FROM PR. 4' DIA STORM MANHOLE	3.29' H	Approved	W	N/A	N/A
52	26	UCM 2.9.1.B.2	25+03.72 (WL-A)	25+03.72 (WL-A)	W	PR. 8" DIP WL <5' FROM PR. 4' DIA STORM MANHOLE	3.76' H	Approved	W	N/A	N/A
53	27	UCM 2.9.1.B.2	26+73.26 (WL-A)	26+73.26 (WL-A)	W	PR. 8" DIP WL <5' FROM PR. SDJB	4.12' H	Approved	W	N/A	N/A
53	27	UCM 2.9.1.B.2	28+09.68 (WL-A)	28+91.87 (WL-A)	W	PR. 8" DIP WL <5' FROM EX. UGE	4.22' H TO 4.99' H	Approved	W	N/A	N/A
55	31	UCM 2.9.1.B.2	1+00.00 (WL-D)	1+12.04 (WL-D)	W	PR. 8" DIP WL <5' FROM EX. UGE	4.34' H	Approved	W	N/A	N/A
56	31	UCM 2.9.1.B.2	1+38.85 (WL-D)	1+50.76 (WL-D)	W	PR. 8" DIP WL <5' EX. 12'X6' AE VAULT	4.34' H	Approved	W	N/A	N/A
57	31	UCM 2.9.1.B.2	2+69.89 (WL-D)	2+69.89 (WL-D)	W	PR. 8" DIP WL <5' FROM EX. 4' DIA. AE MH	4.29' H	Approved	W	N/A	N/A
58	32	UCM 2.9.1.B.2	2+66.35 (WL-E)	2+76.61 (WL-E)	W	PR. 8" DIP WL <5' FROM EX 18" RCP ELECTRIC MANHOLE	1.97' H TO 4.99' H	Approved	W	N/A	N/A
59	26	UCM 2.9.1.B.2	22+73.18 (WL-A)	22+73.18 (WL-A)	W	PR. 8" DIP WL <5' FROM PR. PROP SD INLET	4.28' H	Approved	W	N/A	N/A
60	26	UCM 2.9.1.B.2	22+77.59 (WL-A)	22+77.59 (WL-A)	W	PR. 8" DIP WL <5' FROM PR. 4' DIA STORM MANHOLE	4.28' H	Approved	W	N/A	N/A
64	24	UCM 2.9.1.B.2	1+19.11 (WL-A-LAT-1)	1+19.11 WL-A-LAT-1)	W	PR. 8" DIP WL-A-LAT-1 <5' FROM EX.OE POLE	4.33' H	Approved	W	N/A	N/A
64	24	UCM 2.9.1.B.2	0+89.99 (WL-A-LAT-1)	1+09.99 (WL-A-LAT-1)	W	PR. 8" DIP WL-A-LAT-1 <5' FROM EX.4" DIA GAS	1.00' H	Approved	W	N/A	N/A
68	25	UCM 2.9.1.B.2	1+01.08 (WL-A-LAT-2)	1+40.05 (WL-A-LAT-2)	W	PR. 8" DI WL-A-LAT-2 <5' FROM EX.4" DIA GAS	3.25 ' H	Approved	W	N/A	N/A
68	47	UCM 2.9.1.B.2	5+06.02 (STRM-B)	5+06.02 (STRM-B)	W	PR. 10' STORM INLET B-1 < 5' FROM WL A	4.62' H	Approved	W	N/A	N/A
70	35	UCM 2.9.1.B.2	1+42.50 (WL-H)	1+42.50 (WL-H)	W	PR. 8" DIP WL-H <18" FROM EX. 24" RCP STORM	1.67' H	Approved	W	N/A	N/A
71	35	UCM 2.9.1.B.2	1+42.50 (WL-H)	1+42.50 (WL-H)	W	PR. 8" DIP WL-H <18" FROM EX. 24" RCP STORM	1.80' H	Approved	W	N/A	N/A
72	35	UCM 2.9.1.B.2	1+95.81 (WL-H)	1+95.81 (WL-H)	W	PR. 8" DIP WL-H <18" FROM EX. 4' DIA STORM MANHOLE	1.54' H	Approved	W	N/A	N/A
73	35	UCM 2.9.1.B.2	2+39.89 (WL-H)	2+39.89 (WL-H)	W	PR. 8" DIP WL-H <18" FROM EX. ELECTRICAL MANHOLE	2.28' H	Approved	W	N/A	N/A

DOES THIS PROJECT NEED AULCC REVIEW?
☑ YES
☐ NO
IF YES, PLEASE PROVIDE UCC # 200806-02-07
NOTE: IF THE PROJECT IS LOCATED WITHIN FULL PURPOSE JURISDICTION, A RIGHT-OF-WAY REVIEW, THROUGH THE AULCC PERMIT WILL BE REQUIRED.

REVIEWED BY:
AUSTIN WATER — DATE 10/23/2026

AW EXPIRATION STAMP
THREE YEARS FROM THE DATE OF SIGN-OFF

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NOTE:DO NOT REMOVE THE TITLE BLOCK

AUSTIN WATER GENERAL INFORMATION AND CONSTRUCTION NOTES FOR CAPITAL IMPROVEMENT PROJECTS

CITY OF AUSTIN
AUSTIN WATER
FEBRUARY 7, 2025

VERSION 2.0
STANDARD NO.
1 OF 1

AUSTIN WATER GEN INFO & CON NOTES FOR CIP

LEGEND

- CENTERLINE
- RIGHT OF WAY LINE
- PROPERTY LINE
- EASEMENT LINE
- 25Y — FLOOD HAZARD ZONE 25 YEAR
- 100YR — FLOOD HAZARD ZONE 100 YEAR
- 600 — MAJOR PROPOSED CONTOURS
- 599 — MINOR PROPOSED CONTOURS
- 600 — MAJOR EXISTING CONTOURS
- 599 — MINOR EXISTING CONTOURS
- PAVED ROAD EDGE
- PAVED PARKING / DRIVEWAY EDGE
- BUILDING LINE
- GUARDRAIL
- OH — OVERHEAD UTILITY
- FO UG — FIBER OPTIC
- TV — TELEVISION
- E — ELECTRIC LINE
- G — GAS LINE
- G-TBA — GAS ABANDONED
- G-TBR — GAS REMOVED
- G-AB — EXISTING GAS ABANDONED
- SD — STORM DRAIN LINE
- SD-TBA — STORM DRAIN ABANDONED
- SD-TBR — STORM DRAIN REMOVED
- W — WATER LINE
- W-TBA — WATER LINE ABANDONED
- W-TBR — WATER LINE REMOVED
- WW — WASTEWATER LINE
- WW-TBA — WASTEWATER LINE ABANDONED
- WW-TBR — WASTEWATER LINE REMOVED
- WW-AB — EXISTING WASTEWATER LINE REMOVED
- FM — FORCE MAIN
- FM-AB — FORCE MAIN ABANDONED
- LOC — LIMITS OF CONSTRUCTION
- ATT — AT&T LINE
- OE — OVERHEAD ELECTRIC LINE
- E UG — UNDERGROUND ELECTRIC
- OMF — ORANGE MESH FENCE
- CATCHMENT ZONE
- RETAINING WALL MOW STRIP

- BRASS DISK FOUND
- BRASS DISK SET
- BOLT FOUND
- BOLT SET
- BM — BENCHMARK FOUND
- BM — BENCHMARK SET
- CALCULATED POINT
- CONTROL POINT FOUND
- CONTROL POINT SET
- COTTON SPINDLE FOUND
- COTTON SPINDLE SET
- DRILL HOLE FOUND
- DRILL HOLE SET
- HUB & TACK FOUND
- HUB & TACK SET
- IRON PIPE FOUND
- IRON PIPE SET
- IRON ROD FOUND
- IRON ROD SET
- MONUMENT FOUND
- MONUMENT SET
- MAGNAIL FOUND
- MAGNAIL SET
- PROPERTY PIN FOUND
- PROPERTY PIN SET
- TBM — TEMP. BENCHMARK FOUND
- TBM — TEMP. BENCHMARK SET
- CROSS FOUND
- CROSS SET
- BOLLARD
- GUARDRAIL POST

- STORM DRAIN AREA INLET
- DRAINAGE ARROW
- STORM DRAIN CURB INLET
- SDCO — STORM DRAIN CLEANOUT
- STORM DRAIN GRATE INLET
- STORM DRAIN HEADWALL
- STORM DRAIN WINGWALL
- WM — WASTEWATER METER
- WASTEWATER CAP
- AF — WATER AIR FLUSH VALVE
- AR — WATER AIR RELEASE VALVE
- WATER CAP
- D — WATER DRAINAGE VALVE
- F — WATER FIRE CONNECTION
- WATER FIRE HYDRANT
- WATER MANHOLE
- WM — WATER METER
- WATER REDUCER
- WSO — WATER SHUTOFF VALVE
- WATER VALVE
- W — WATER WELL
- RAMP
- SHRUB
- INL — STORM INLET
- T — TELEPHONE CABINET
- W — W VALVE
- GUY WIRE
- LP — LIGHT POLE
- WW MANHOLE
- LMP — LAMP POST
- POWER POLE
- TBR — TO BE REMOVED
- TBA — TO BE ABANDONED

- C — COMMUNICATION PEDESTAL
- C — COMM. JUNCTION BOX
- C — COMMUNICATION MANHOLE
- COMMUNICATION POLE
- C — COMMUNICATION VAULT
- FO — FIBER OPTIC MANHOLE
- FO — FIBER OPTIC JUNCTION BOX
- ELECTRIC ANCHOR
- E — ELECTRIC JUNCTION BOX
- ELECTRIC POLE
- E — ELECTRIC VAULT
- ELECTRIC TOWER
- G — NATURAL GAS LIGHT
- G — NATURAL GAS MANHOLE
- G — NATURAL GAS METER
- G — NATURAL GAS VALVE
- NATURAL GAS VENT
- SIGN
- U — MANHOLE UNKNOWN
- TP — TEST PIT
- BORE HOLE
- T — TRAFFIC SIGNAL MANHOLE
- TC — TRAF. SIGNAL CONTROL BOX
- TP — TRAFFIC SIGNAL PULL BOX
- TRAF. SIGNAL / PED SIGNAL
- TRAF. SIGNAL LIGHT & SIGN.
- TRAF. SIGNAL SIGN. EXTEND.
- EMH — ELECTRIC MANHOLE
- GM — GAS METER
- POWER POLE RISER
- FIRE HYDRANT
- CURB & GUTTER TRANSITION

TREE WITH ½ CRITICAL ROOT & ¼ CRITICAL ROOT ZONES

- CONTROL POINT SET (SIZE/TYPE NOTED)
- IRON ROD FOUND (SIZE/TYPE NOTED)
- IRCF — IRON ROD WITH CAP FOUND
- IRON PIPE FOUND
- MAG — MAGNETIC NAIL
- Mon — SQUARE BOLT
- LANDHOOK
- BENCHMARK
- TC — TRASH CAN
- MB — MAILBOX
- SIGN POST
- SDIN — STORM DRAIN INLET
- SDMH — STORM DRAIN MANHOLE
- FIRE HYDRANT
- WATER VALVE
- WM — WATER METER
- IC — IRRIGATION CONTROL BOX
- IV — IRRIGATION CONTROL VALVE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- EMH — ELECTRIC MANHOLE
- EM — ELECTRIC METER
- EPB — ELECTRIC PULL BOX
- POWER POLE
- GUY WIRE
- LP — LIGHT POLE
- P — POLE
- LMP — LAMP
- CMH — COMMUNICATION MANHOLE
- TB — TELEPHONE JUNCTION BOX
- TREE
- TELE — TELEPHONE MARKER
- GMK — GASLINE MARKER
- GM — GASLINE METER
- GV — GAS VALVE
- PARKING METER
- EDGE OF ASPHALT
- CURB AND GUTTER
- OE — OVERHEAD ELECTRIC LINE
- SD — UNDERGROUND STORM LINE
- WW — UNDERGROUND WASTEWATER LINE
- CHAIN LINK FENCE
- IRON FENCE
- WOOD FENCE
- BUILDING
- CONCRETE
- PAVERS

- PRTCT — PLAT RECORDS TRAVIS CO. TX
- DRTCT — DEED RECORDS TRAVIS CO. TX
- RPRTCT — REAL PROPERTY RECORDS TRAVIS CO. TX
- OPRTCT — OFFICIAL PUBLIC RECORDS TRAVIS CO. TX
- TELEPHONE PEDESTAL
- FLOW ARROW

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

LEGEND

CITY OF AUSTIN
AUSTIN WATER

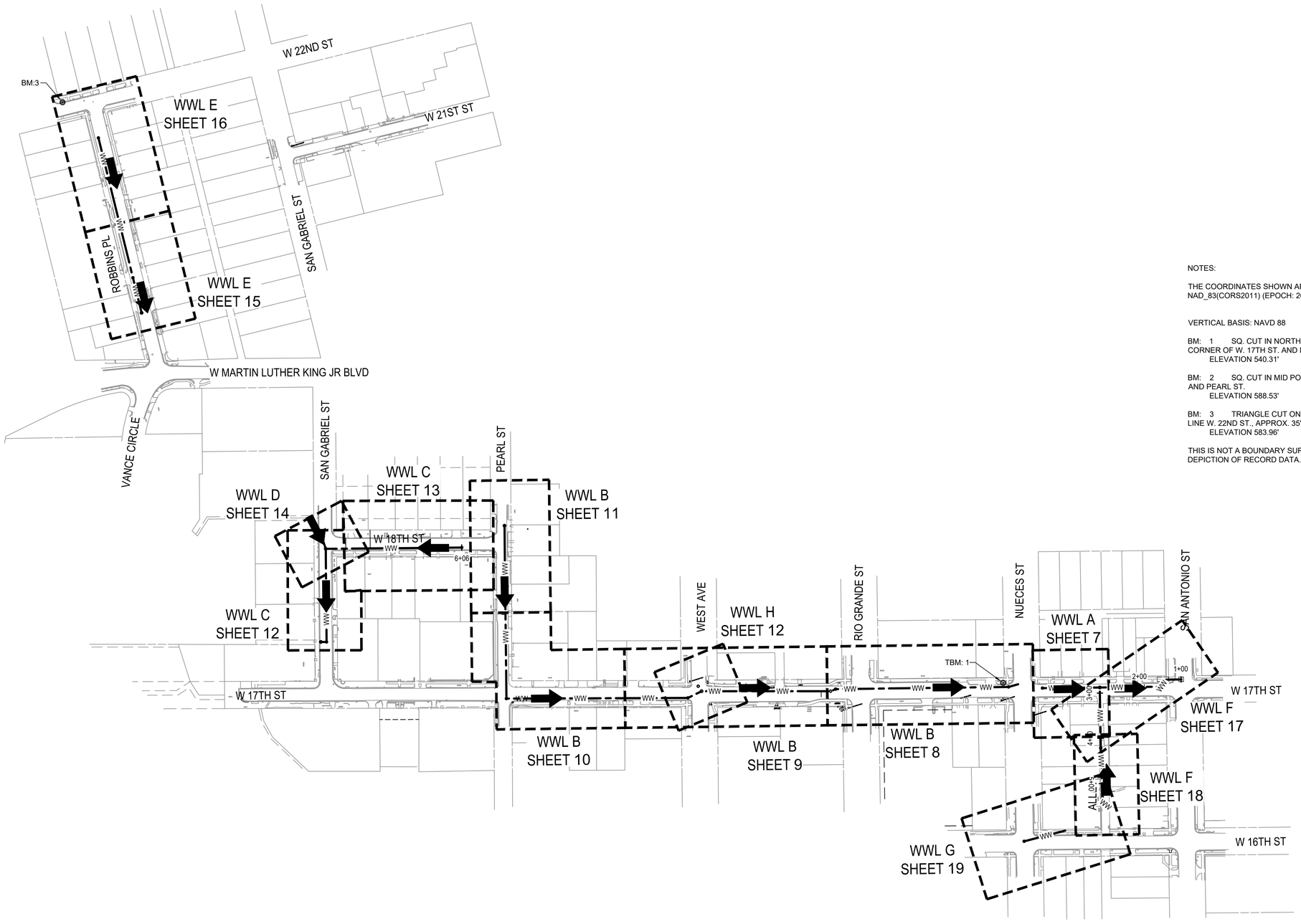
BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
5 OF 93

100% SUBMITTAL REV



Point Table		
DESCRIPTION	Northing	Easting
BM: 2 SQRCUT	10075514.9221	3112601.3217
BM:3	10077077.5755	3112049.9040
TBM: 1	10075231.8685	3113647.8209

NOTES:

THE COORDINATES SHOWN ARE BASED ON THE TEXAS COORDINATE, CENTRAL ZONE, NAD_83(CORS2011) (EPOCH: 2010.0000).

VERTICAL BASIS: NAVD 88

BM: 1 SQ. CUT IN NORTHWEST CORNER OF STORM DRAIN INLET, NORTHWEST CORNER OF W. 17TH ST. AND NUECES ST.
ELEVATION 540.31'

BM: 2 SQ. CUT IN MID POINT TOP OF CURB, SOUTHEAST CORNER OF W. 17TH ST. AND PEARL ST.
ELEVATION 588.53'

BM: 3 TRIANGLE CUT ON CENTERLINE OF STORM DRAIN INLET ON NORTH CURB LINE W. 22ND ST., APPROX. 35' EAST OF CENTERLINE LEON ST.
ELEVATION 583.96'

THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES SHOWN ARE AN APPROXIMATE DEPICTION OF RECORD DATA.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

NO.	REVISION	BY	DATE

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER KEY MAP

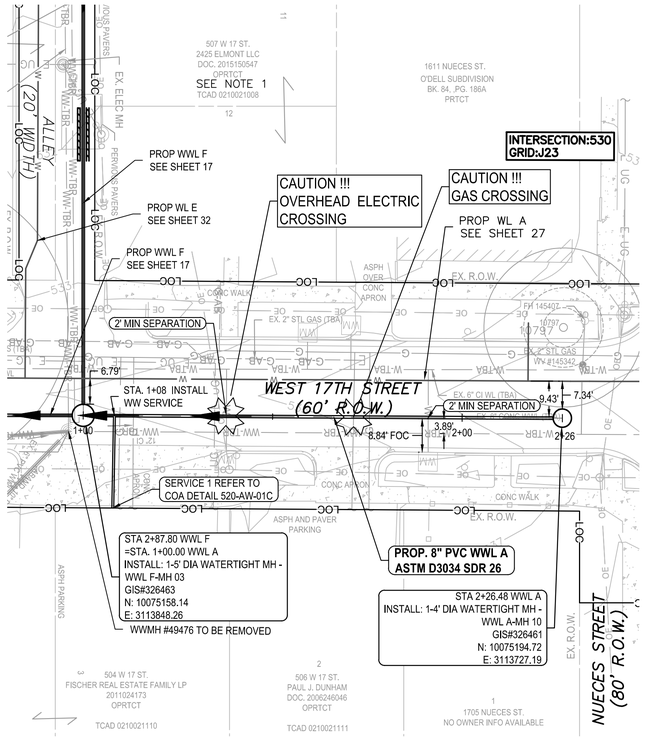
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

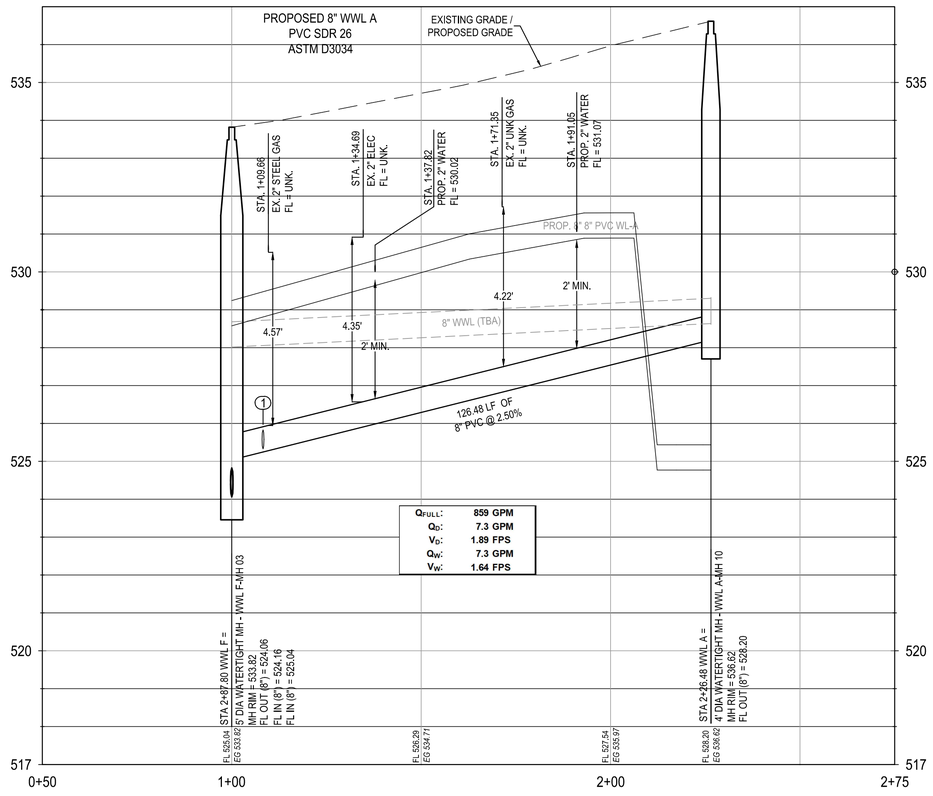
STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED
PROFESSIONAL ENGINEER
9/10/2026

SHEET
6 OF 93

100% SUBMITTAL REV



WWL A



NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

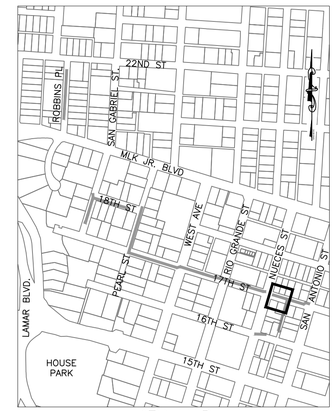
0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO FIELD LOCATE UNKNOWN SERVICE CONNECTION. IF SERVICE IS ON THE WWL TO BE REPLACED, CONTRACTOR SHALL CONNECT THE SERVICE TO THE PROPOSED WWL. UNKNOWN SERVICE LOCATIONS ARE IDENTIFIED ON EACH SHEET AND INCLUDED IN THE QUANTITIES OF SERVICES AS A SINGLE SERVICE.
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR TO POTHOLE ATT FIBER OPTIC AT PROPOSED CROSSING PRIOR TO CONSTRUCTION OF WWL A. PROFILE WILL BE ADJUSTED AS NECESSARY TO MAINTAIN 6 INCH OF VERTICAL CLEARANCE. AUSTIN WATER IS AWARE THIS MODIFICATION WILL LIKELY MEAN A NON CROWN MATCH CONNECTION TO EXISTING MH 49446.
4. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
5. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.

SHEET 7/WWL A					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
1	1-07.92	SINGLE	6"	24	No



KEY MAP

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
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WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER PLAN AND PROFILE WWL A 1+00 - END

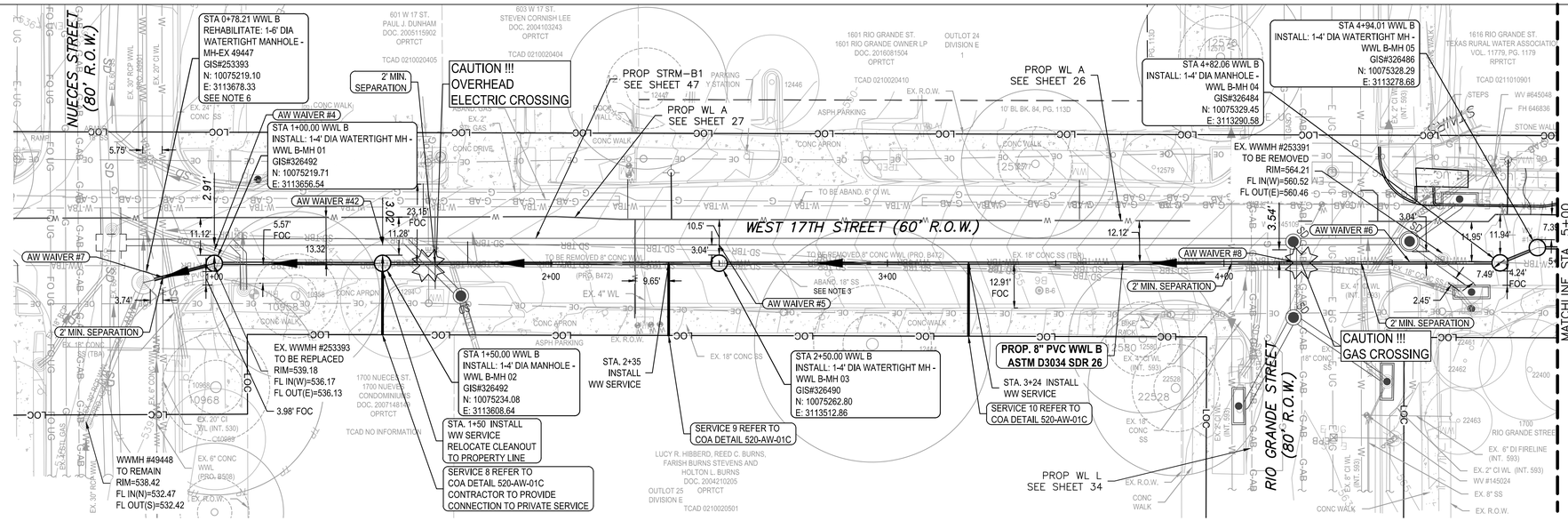
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
9/10/2026

SHEET
7 OF 93

100% SUBMITTAL REV



NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 2' 4' 8'
SCALE: 1" = 4' (FULL SIZE)

NOTES:

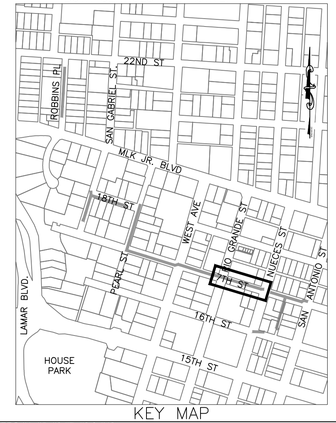
1. CONTRACTOR TO FIELD LOCATE UNKNOWN SERVICE CONNECTION. IF SERVICE IS ON THE WWL TO BE REPLACED, CONTRACTOR SHALL CONNECT THE SERVICE TO THE PROPOSED WWL. UNKNOWN SERVICE LOCATIONS ARE IDENTIFIED ON EACH SHEET AND INCLUDED IN THE QUANTITIES OF SERVICES AS A SINGLE SERVICE.
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING ABANDONED STORM SEWER AS REQUIRED FOR INSTALLATION OF WWL B.
4. CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES
5. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
6. CONTRACTOR SHALL REHABILITATE EXISTING MANHOLE #49447. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING MH CONE, RING, AND COVER. MH COVER SHALL BE UPSIZED TO 32–INCH RING AND COVER.

SHEET 8/WWL B

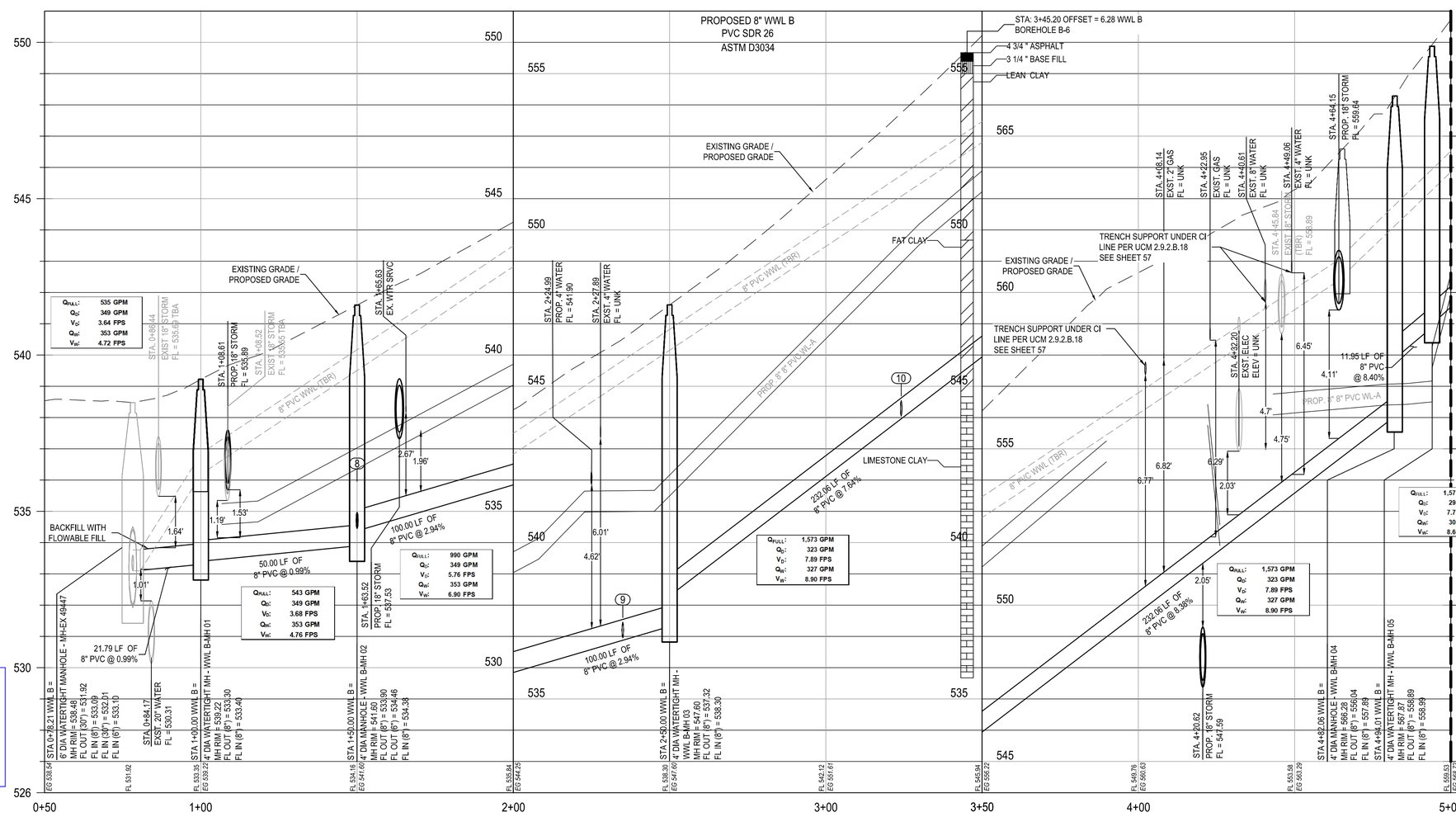
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
8	1+61.38	SINGLE	6"	21	No
9 *	2+35.01	SINGLE	6"	21	No
10 *	3+24.11	SINGLE	6"	20	No

*SEE DETAIL 520–AW–01A ON SHEET 61 FOR MINIMUM SEPARATION

* SERVICE LOCATIONS ARE BASED ON PROFILE DRAWINGS. TWO PROPERTIES WERE COMBINED, CONTRACTOR TO DETERMINE IF BOTH SERVICES ARE ACTIVE.



KEY MAP



AW WAIVERS #4, #5, #6 #7, #8 & #42:

LOCATION:
- WAIVER #4: 1+00.00 (WWL-B)
- WAIVER #5: 2+50.00 (WWL-B)
- WAIVER #6: 4+55.16 (WWL-B)
- WAIVER #7: 0+84.17 (WWL-B)
- WAIVER #8: 4+20.63 (WWL-B)
- WAIVER #42: 1+50.00 (WWL-B)

UTILITY:
- WAIVER #4: PROPOSED 18" RCP STRM-B1
- WAIVER #5: PROPOSED 18" RCP STRM-B1
- WAIVER #6: PROPOSED 5' DIA STRM-B1 MANHOLE
- WAIVER #7: EXISTING 20" WATERLINE
- WAIVER #8: PROPOSED 5' DIA STRM-B1 MANHOLE
- WAIVER #42: PROPOSED 18" RCP STRM-B1

DISTANCE:
- WAIVER #4: 2.91' H FROM PROPOSED 4' DIA WWMH WWL-B
- WAIVER #5: 3.04' H FROM PROPOSED 4' DIA WWMH WWL-B
- WAIVER #6: 3.14' H FROM PROPOSED 8" PVC WWL-B
- WAIVER #7: 1.01' V FROM PROPOSED 8" PVC WWL-B
- WAIVER #8: 3.54' H FROM PROPOSED 8" PVC WWL-B
- WAIVER #42: 3.02' H FROM PROPOSED 4' DIA WWMH WWL-B

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 , 2.9.4.D.8, AND UCM 2.9.1.B.3 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES AND UCM 2.9.1.B.3 REQUIRES EIGHTEEN (18) INCHES CLEARANCE BELOW PROPOSED STRUCTURES AND TWELVE (12) INCHES ABOVE PROPOSED STRUCTURES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE. 2.9.4.D.8 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM) REQUIRES A SEPARATION OF 9 FEET BETWEEN AN EXISTING WATER MAIN AND A NEW MANHOLE CANNOT BE ACHIEVED DURING CONSTRUCTION OF A NEW WASTEWATER MAIN THE JOINTS IN THE WASTEWATER MANHOLE SHALL BE MADE WATERTIGHT USING EXTERNALLY APPLIED JOINT WRAPS.

NO.	REVISION	BY	DATE

BGE JOB NO. 4766–03
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WASTEWATER PLAN AND PROFILE WWL B 1+00 - 5+00

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SHEET 8 OF 93

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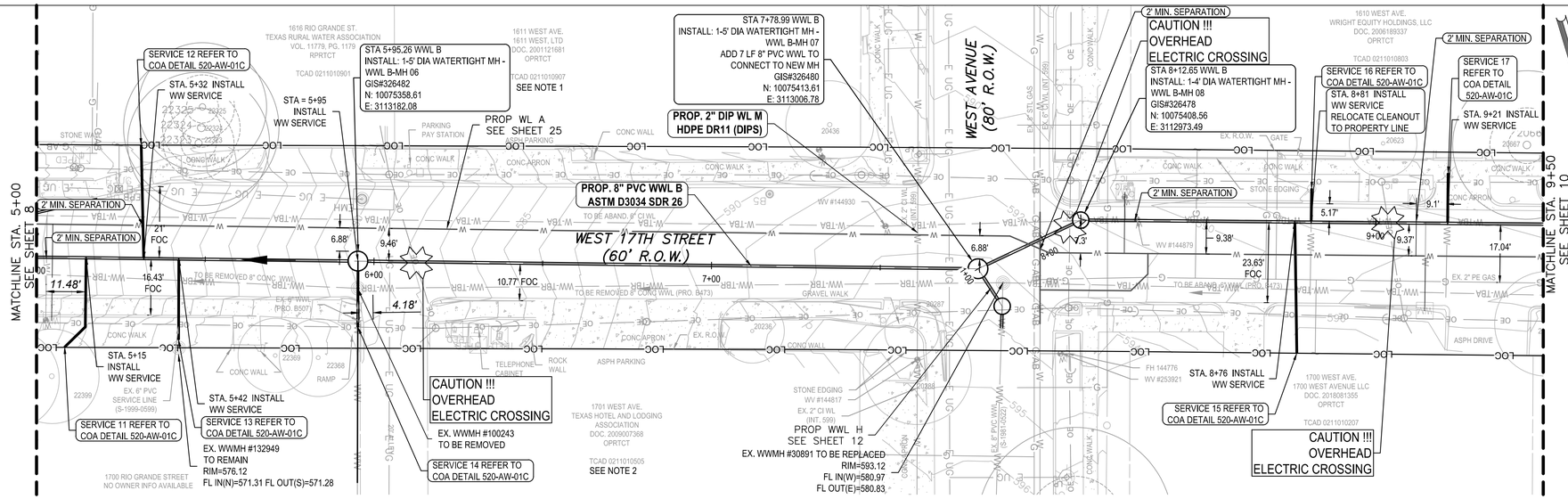


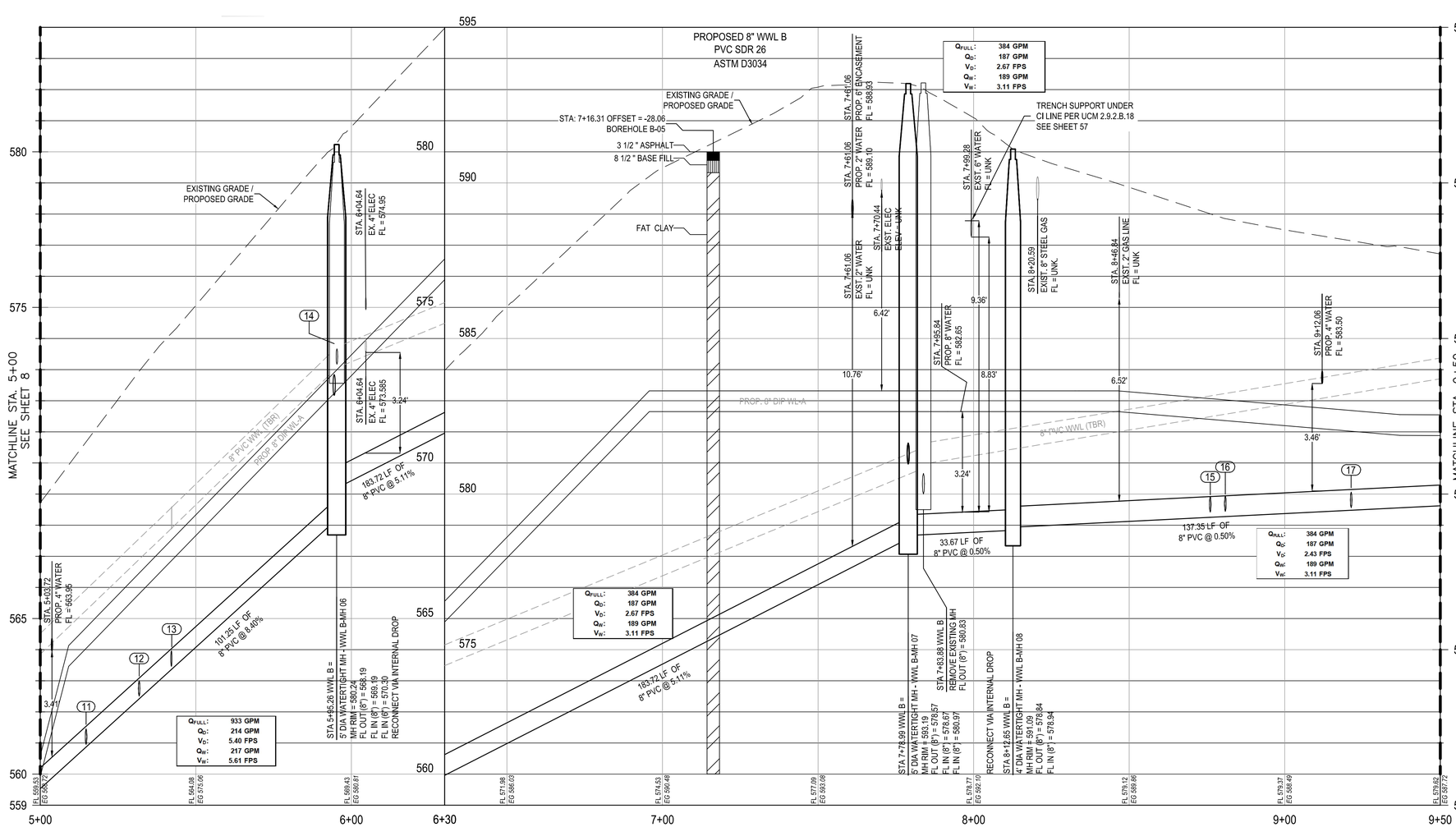
NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

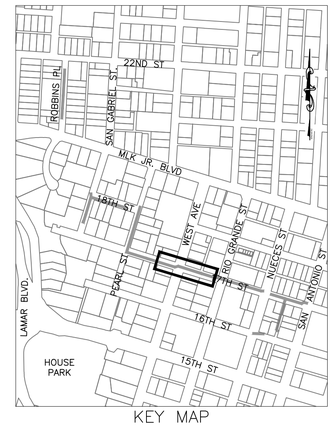
NOTES:

1. CONTRACTOR TO FIELD LOCATE UNKNOWN SERVICE CONNECTION. IF SERVICE IS ON THE WWL TO BE REPLACED, CONTRACTOR SHALL CONNECT THE SERVICE TO THE PROPOSED WWL. UNKNOWN SERVICE LOCATIONS ARE IDENTIFIED ON EACH SHEET AND INCLUDED IN THE QUANTITIES OF SERVICES AS A SINGLE SERVICE.
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR SHALL PROTECT UNDER GROUND ELECTRICAL FACILITIES.
4. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
5. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.



SHEET 9/WWL B					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
11	5+08.94	SINGLE	6"	18	No
12	5+31.86	SINGLE	6"	42	No
13	5+42.24	SINGLE	6"	16	No
14	5+95.34	SINGLE	6"	11	No
15	8+76.05	SINGLE	6"	39	No
16	8+80.88	SINGLE	6"	10	No
17	9+15.94	SINGLE	6"	15	No

*SEE DETAIL 520-AW-01A ON SHEET 61 FOR MINIMUM SEPARATION



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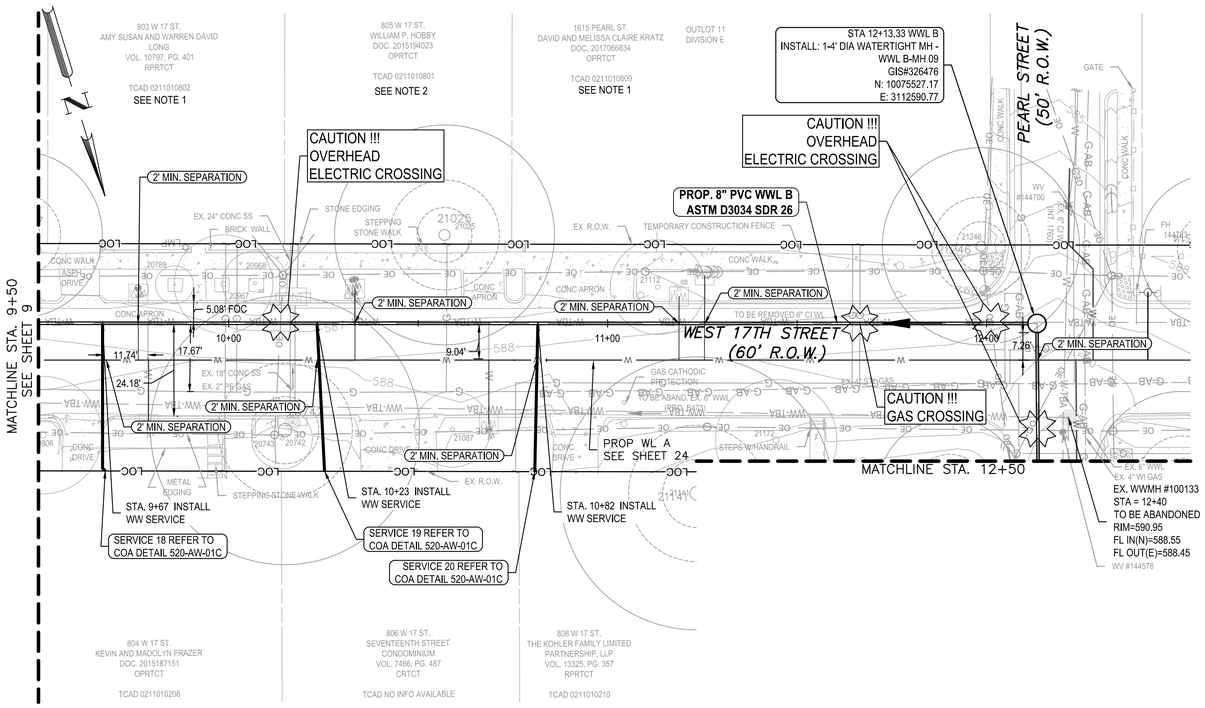

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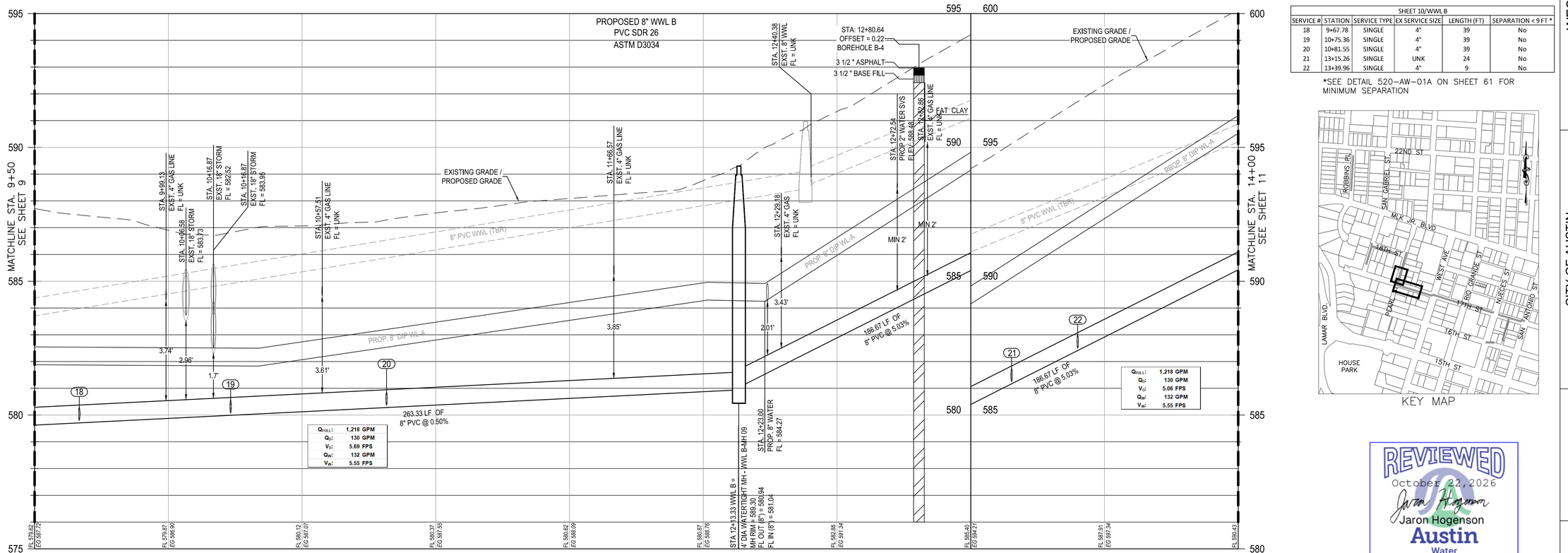
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR TO TEMPORARILY SUPPORT ELECTRIC POLE WHILE WORKING ADJACENT TO IT.
4. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
5. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
6. CONTRACTOR TO MAINTAIN 3–FT HORIZONTAL SEPARATION FROM UTILITY POLES AS MUCH AS POSSIBLE. UTILITY LINES MAY NOT CROSS UNDER UTILITY POLES.



SHEET 10/WWL B					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
18	9+67.78	SINGLE	4"	39	No
19	10+75.36	SINGLE	4"	39	No
20	10+81.55	SINGLE	4"	39	No
21	13+15.26	SINGLE	UNK	24	No
22	13+39.96	SINGLE	4"	9	No

*SEE DETAIL 520–AW–01A ON SHEET 61 FOR MINIMUM SEPARATION

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WEST 17TH STREET
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PIPELINE RENEWAL

WASTEWATER PLAN AND
PROFILE WWL B 9+50 - 14+00

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SHEET
10 OF 93

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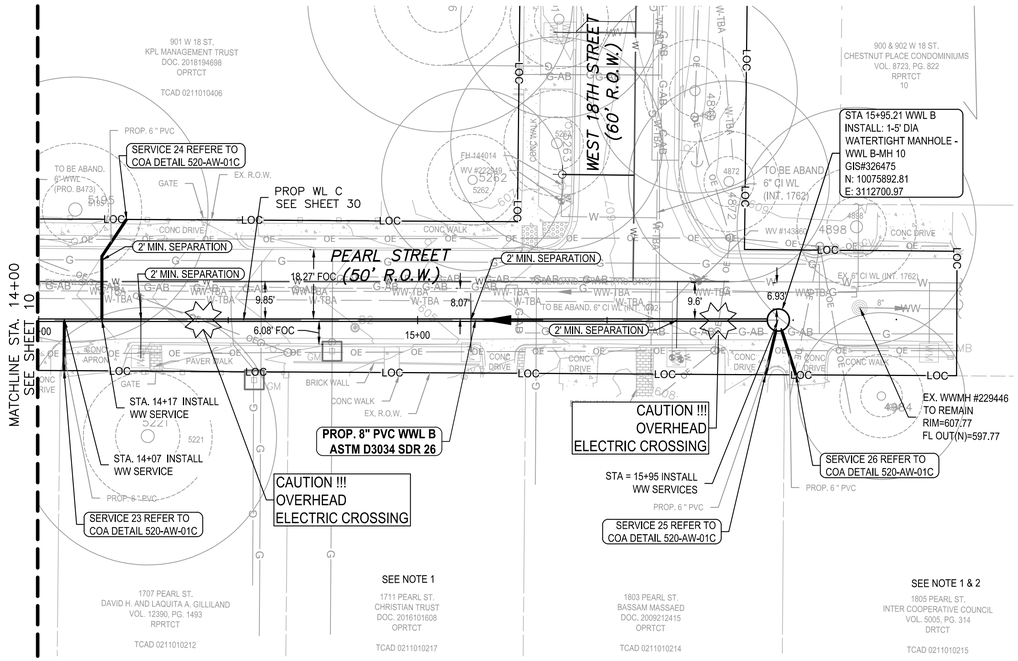
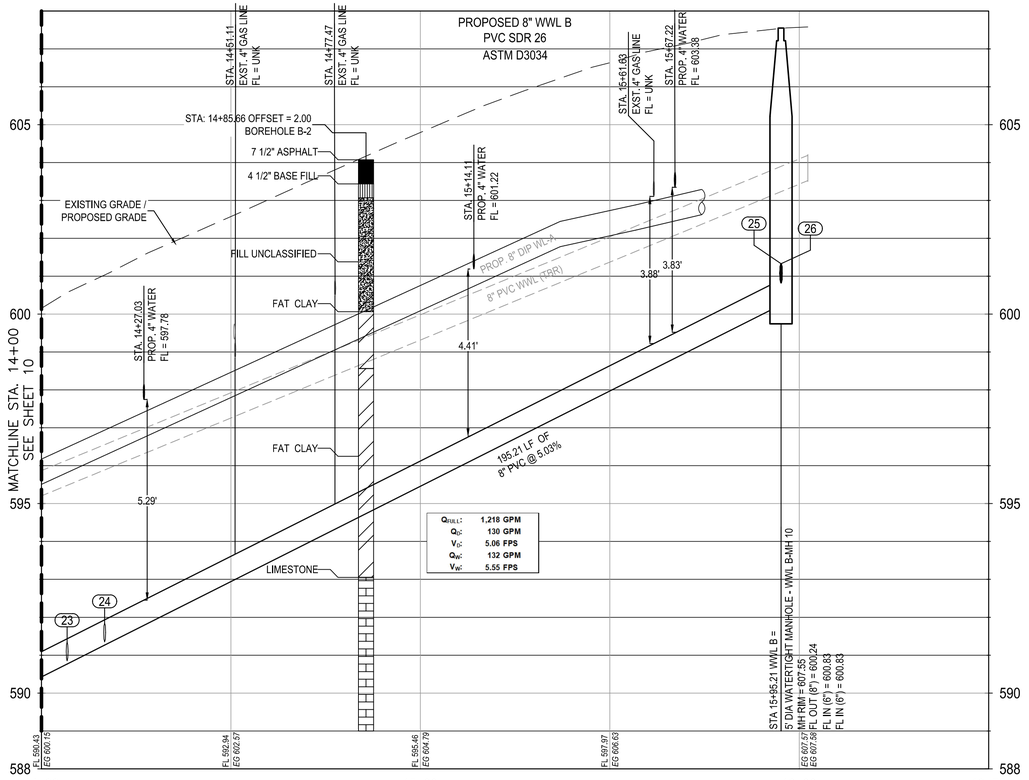
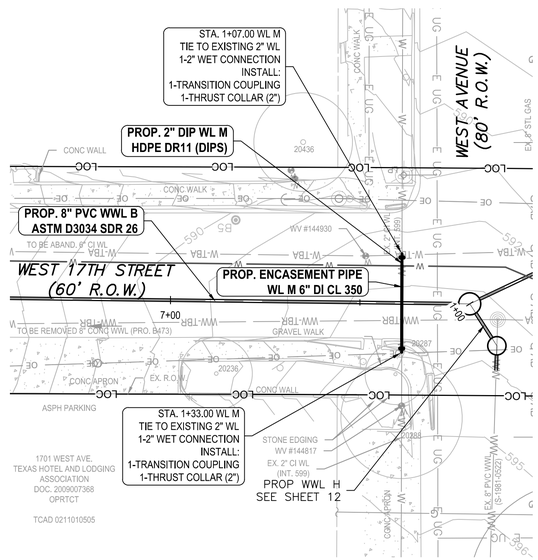


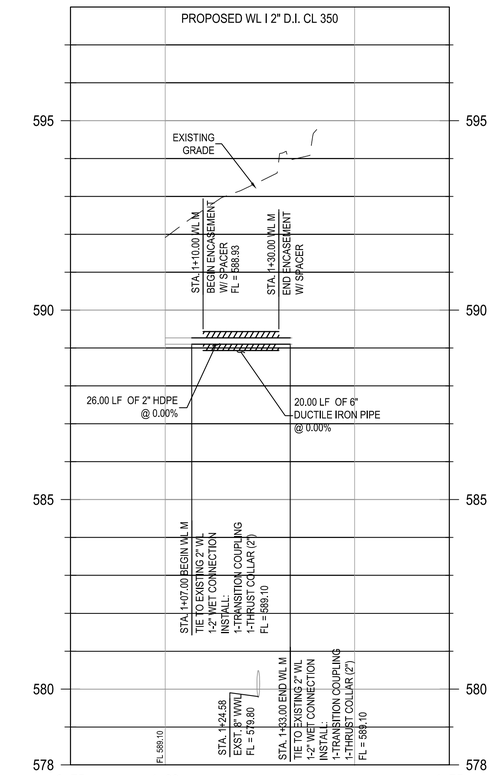
WWL B



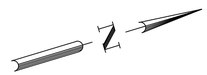
WL M



WL M



NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION



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NOTES:

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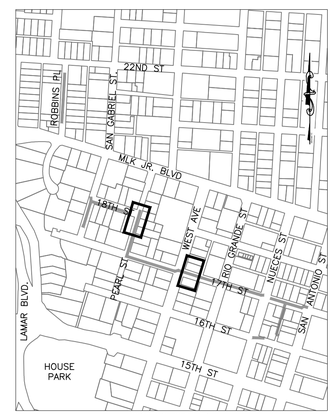
2. WWL PROFILE DRAWING INDICATES THE SERVICE FOR 1805 PEARL STREET IS LOCATED ON THE SOUTH SIDE OF THE PROPERTY, NO DIMENSIONS ARE AVAILABLE. CONTRACTOR TO TIE SERVICE TO MANHOLE.
3. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
4. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
5. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER

SHEET 11/WWL B					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
23	14+06.72	SINGLE	6"	13	No
24	14+23.31	SINGLE	6"	27	No
25	15+95.18	SINGLE	6"	14	No
26	15+95.18	SINGLE	6"	15	No

*SEE DETAIL 520-AW-01A ON SHEET 61 FOR MINIMUM SEPARATION



KEY MAP

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WEST 17TH STREET
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PIPELINE RENEWAL

WASTEWATER PLAN AND
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WL M 1+00 - END

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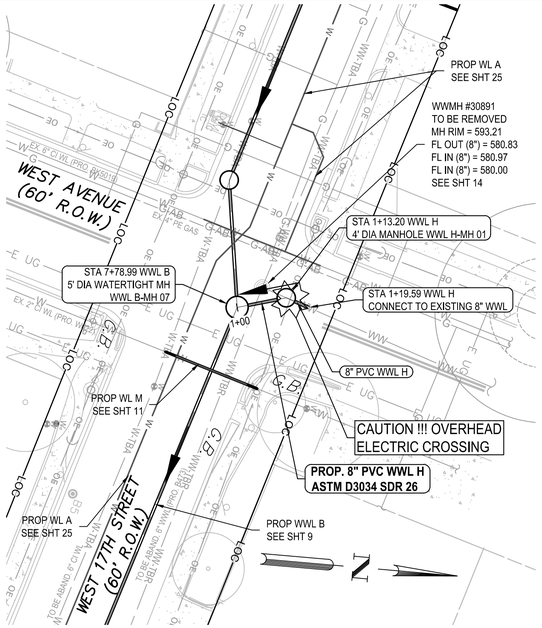

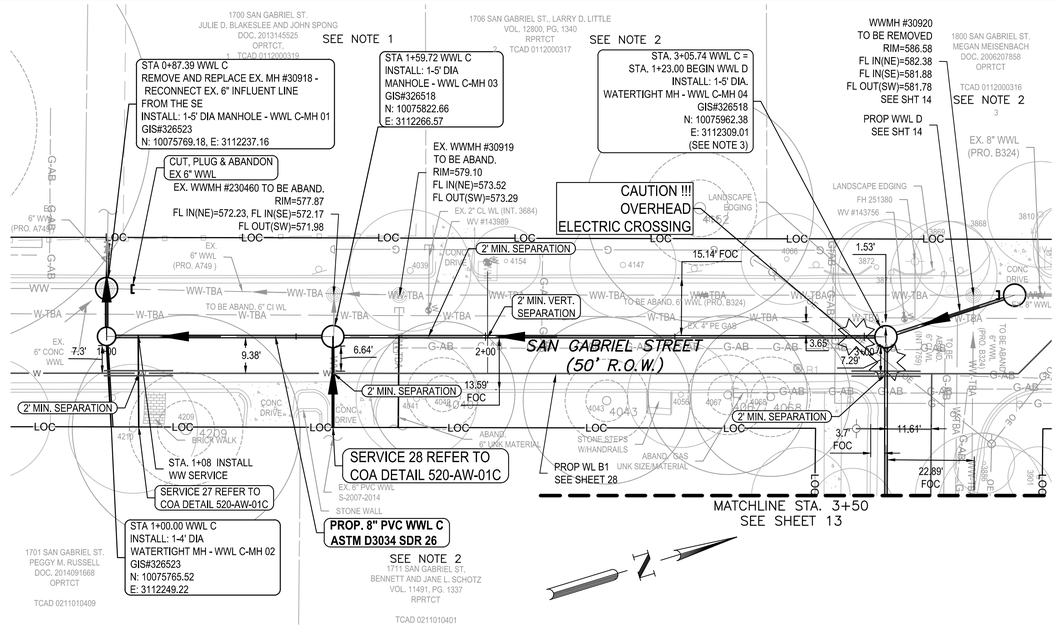

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2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. THE EXISTING GAS LINE IS ADJACENT TO THE PROPOSED MANHOLE. CONTRACTOR TO PROTECT AND MAINTAIN SERVICE TO EXIST GAS LINE DURING CONSTRUCTION.
4. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
5. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.

SHEET 12/WWL C					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
27	1+08.33	SINGLE	6"	24	No
28	1+59.72	SINGLE	6"	24	No

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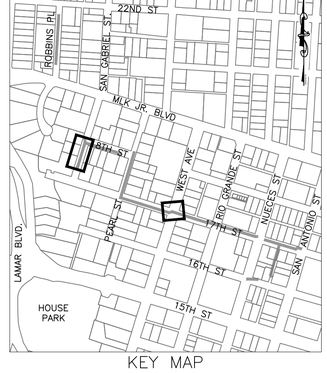

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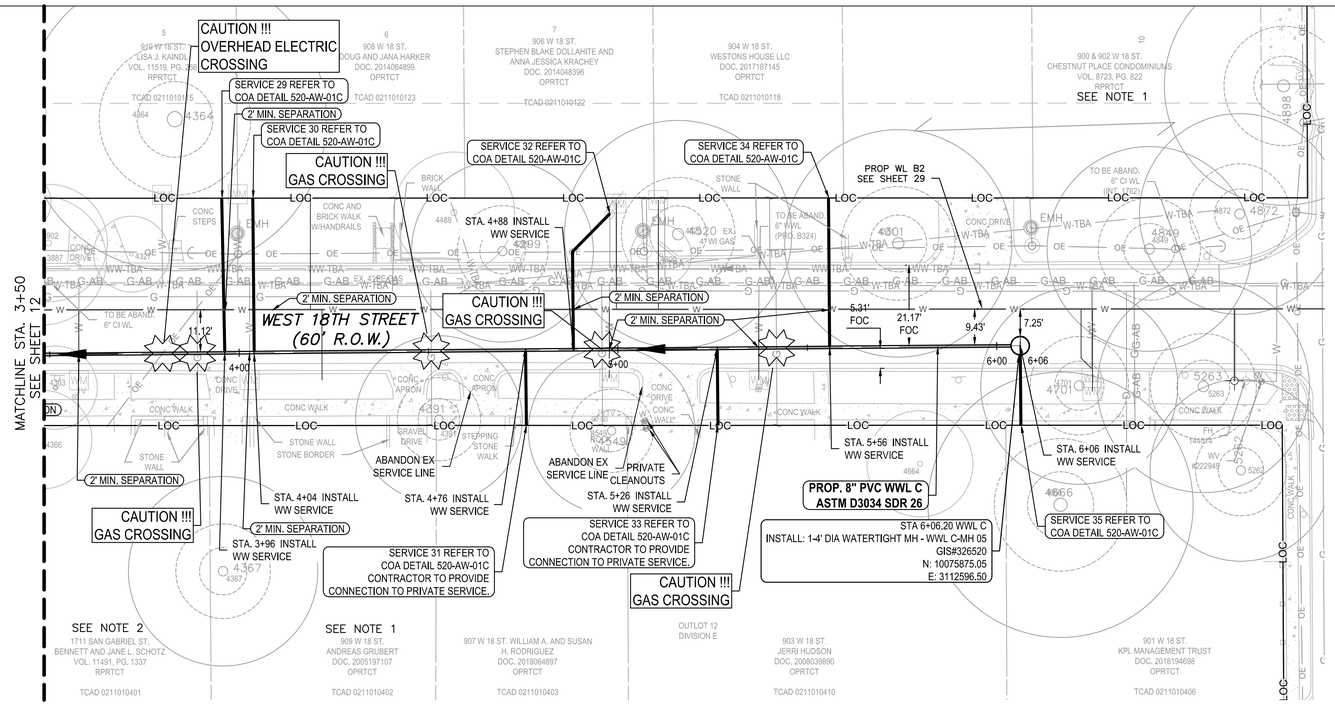

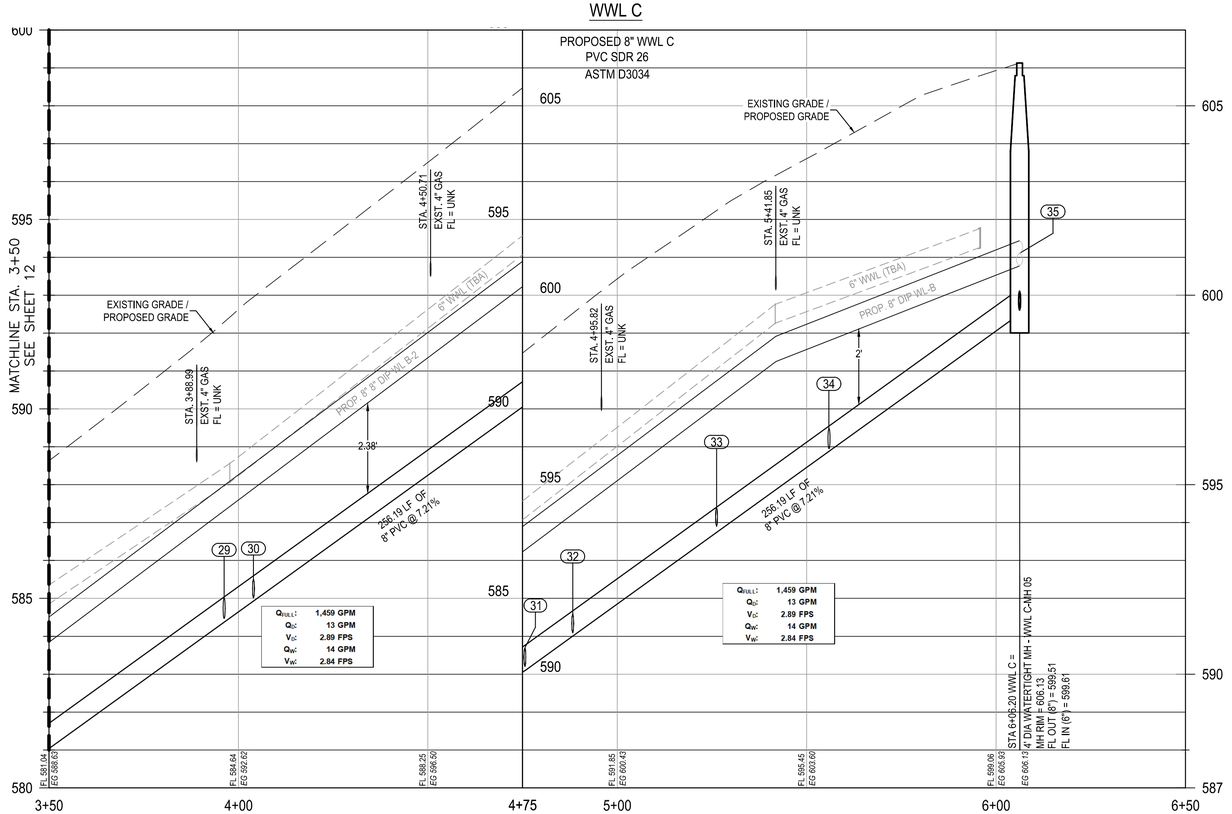

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2. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
3. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.

SHEET 13/WWL C					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
29	3+96.23	SINGLE	6"	41	Yes
30	4+03.97	SINGLE	6"	41	Yes
31	4+75.62	SINGLE	6"	20	No
32	4+88.25	SINGLE	6"	40	Yes
33	5+26.22	SINGLE	6"	20	No
34	5+55.90	SINGLE	6"	39	No
35	6+06.20	SINGLE	6"	21	No

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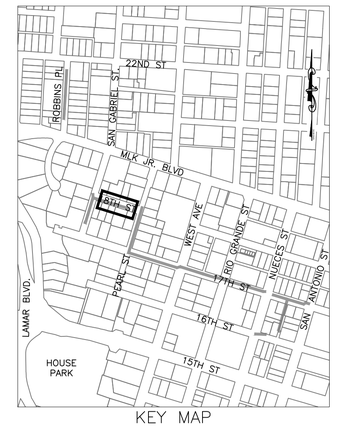

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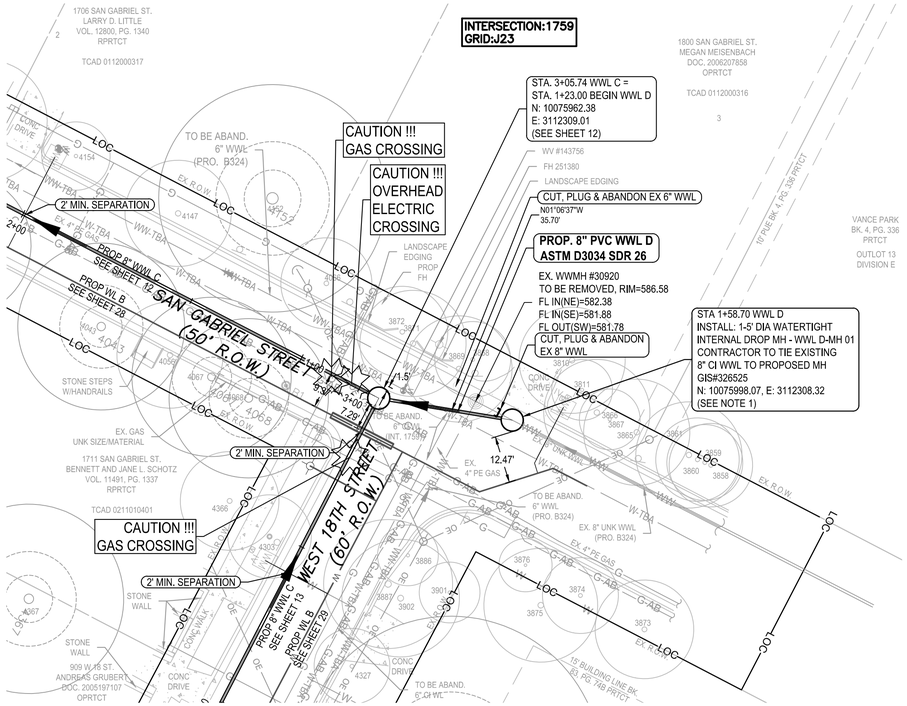
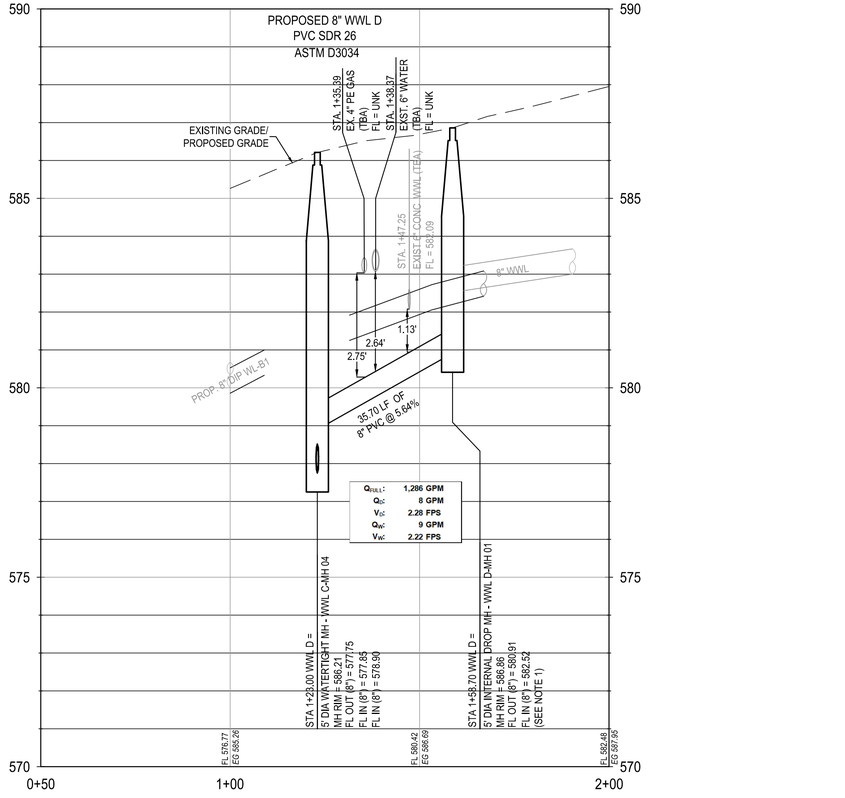
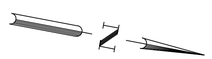
13 OF 93

100% SUBMITTAL REV





NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

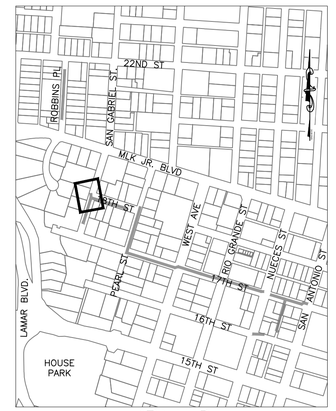


0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTE:

1. CONTRACTOR TO VERIFY ELEVATION OF EXIST 8" WWL PRIOR TO ORDERING PROPOSED MANHOLE. ELEVATION SHOWS IN BASED ON PROFILE FROM AUSTIN WATER RECORDS ACCESS APPLICATION.
2. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
3. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.



KEY MAP

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER PLAN AND PROFILE WWL D 1+00 - END

CITY OF AUSTIN
AUSTIN WATER

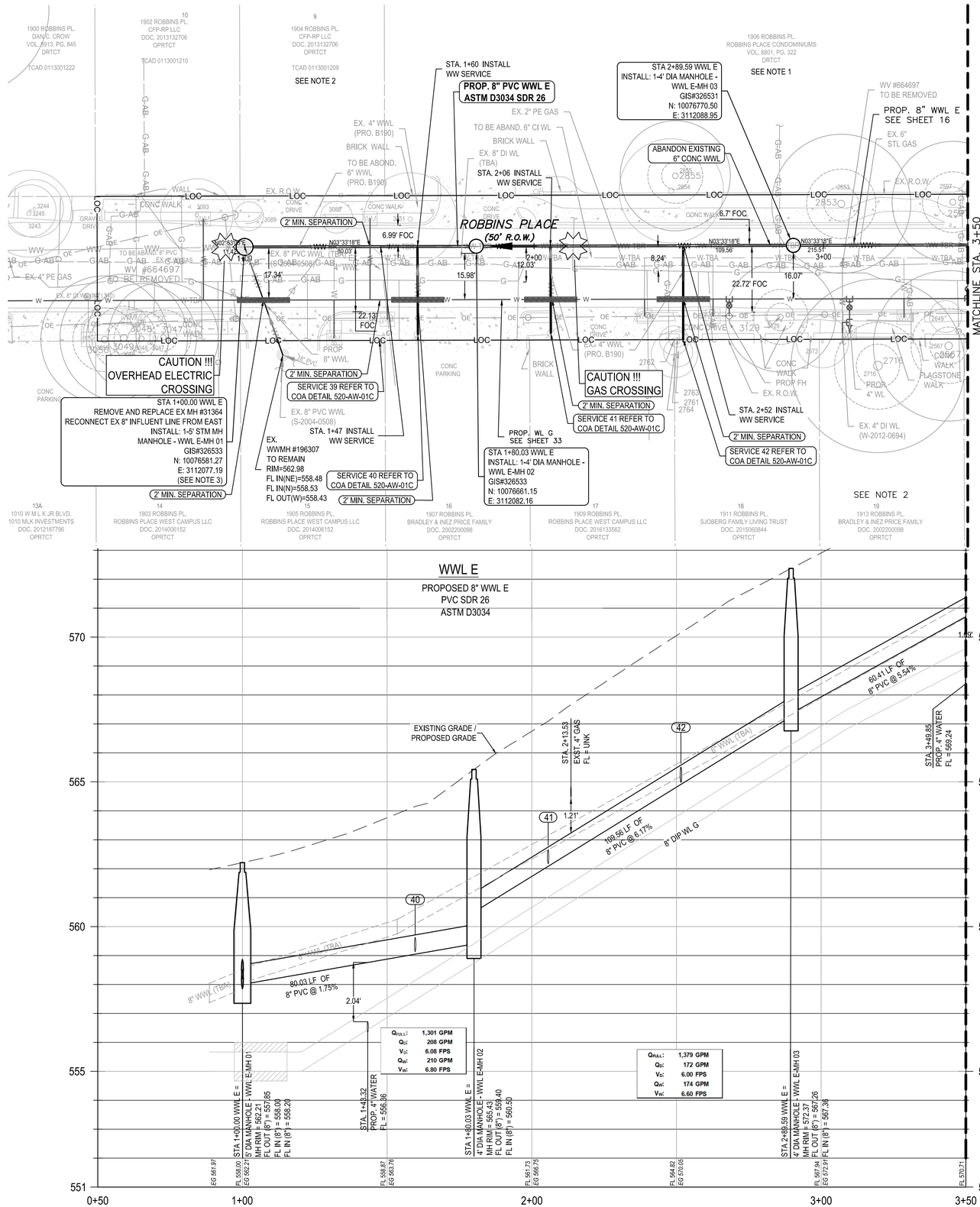
BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
14 OF 93

100% SUBMITTAL REV



NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION



0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

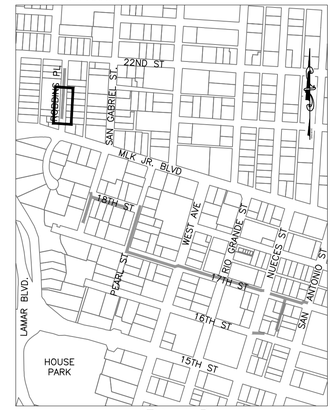
0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO FIELD LOCATE UNKNOWN SERVICE CONNECTION. IF SERVICE IS ON THE WWL TO BE REPLACED, CONTRACTOR SHALL CONNECT THE SERVICE TO THE PROPOSED WWL. UNKNOWN SERVICE LOCATIONS ARE IDENTIFIED ON EACH SHEET AND INCLUDED IN THE QUANTITIES OF SERVICES AS A SINGLE SERVICE.
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR TO FIELD VERIFY FL ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

SHEET 15/WWL E					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
40	1+60.61	SINGLE	6"	18	No
41	2+06.56	SINGLE	6"	18	No
42	2+52.44	SINGLE	6"	20	No

*SEE DETAIL 520-AW-01A ON SHEET 61 FOR MINIMUM SEPARATION



KEY MAP

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October 22, 2026
Jaron Hogenson
Austin
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NO.	REVISION	BY	DATE

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WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

WASTEWATER PLAN AND
PROFILE WWL E 1+00 - 3+50

CITY OF AUSTIN
AUSTIN WATER

BGE INC.
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AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
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PROFESSIONAL ENGINEER
9/10/2026

SHEET
15 OF 93

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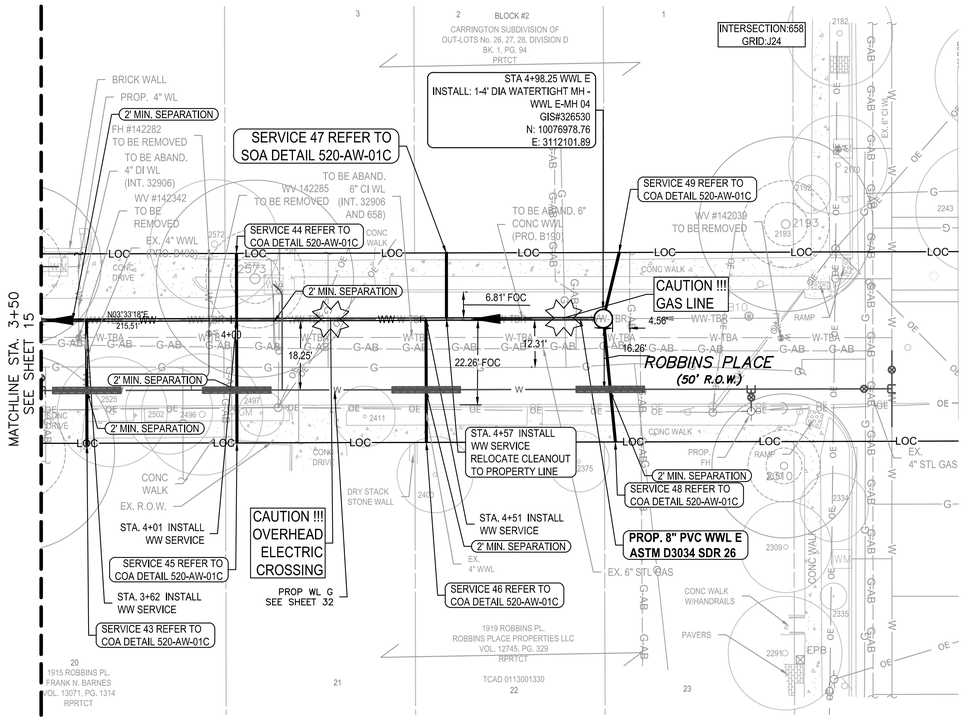
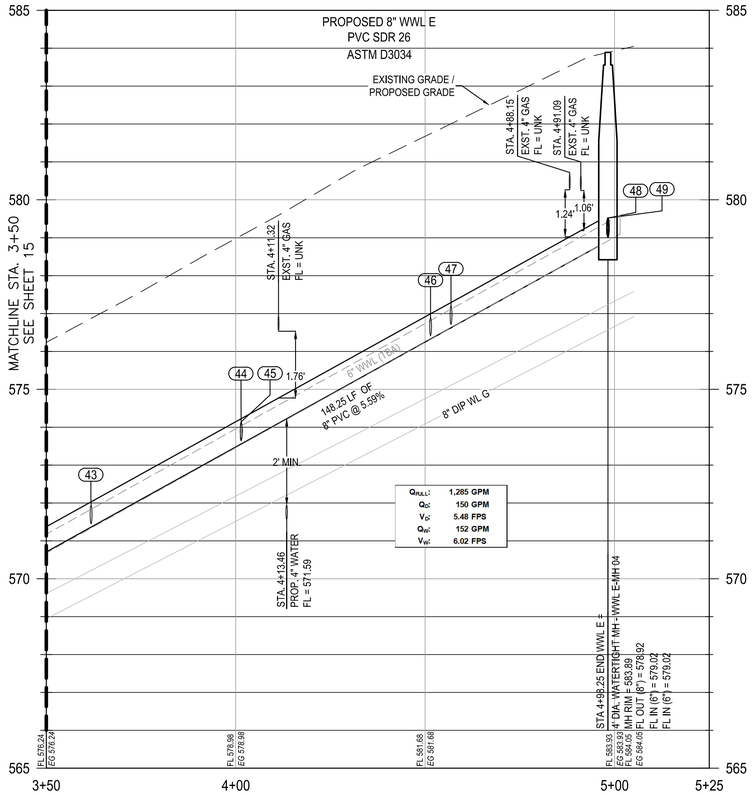


WWL E



NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION



0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

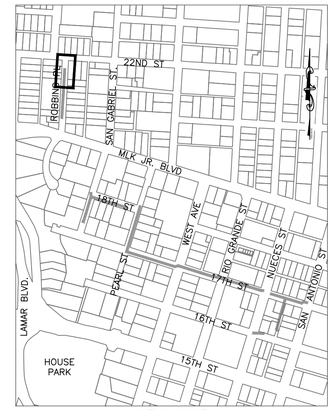
0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO FIELD LOCATE UNKNOWN SERVICE CONNECTION. IF SERVICE IS ON THE WWL TO BE REPLACED, CONTRACTOR SHALL CONNECT THE SERVICE TO THE PROPOSED WWL. UNKNOWN SERVICE LOCATIONS ARE IDENTIFIED ON EACH SHEET AND INCLUDED IN THE QUANTITIES OF SERVICES AS A SINGLE SERVICE.
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WASTEWATER LINE.
4. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.

SHEET 16/WWL E					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
43	4+56.74	SINGLE	6"	20	Yes
44	4+96.35	SINGLE	6"	30	No
45	4+96.35	SINGLE	6"	20	No
46	5+46.33	SINGLE	6"	20	No
47	5+51.74	SINGLE	6"	30	No
48	5+93.15	SINGLE	6"	20	No
49	5+93.15	SINGLE	6"	31	No

*SEE DETAIL 520-AW-01A ON SHEET 61 FOR MINIMUM SEPARATION



KEY MAP

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Jaron Hogenson
Austin
Water
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CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER PLAN AND PROFILE WWL E 3+50 - END

CITY OF AUSTIN
AUSTIN WATER

BGE INC.
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AUSTIN, TX 78744
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TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
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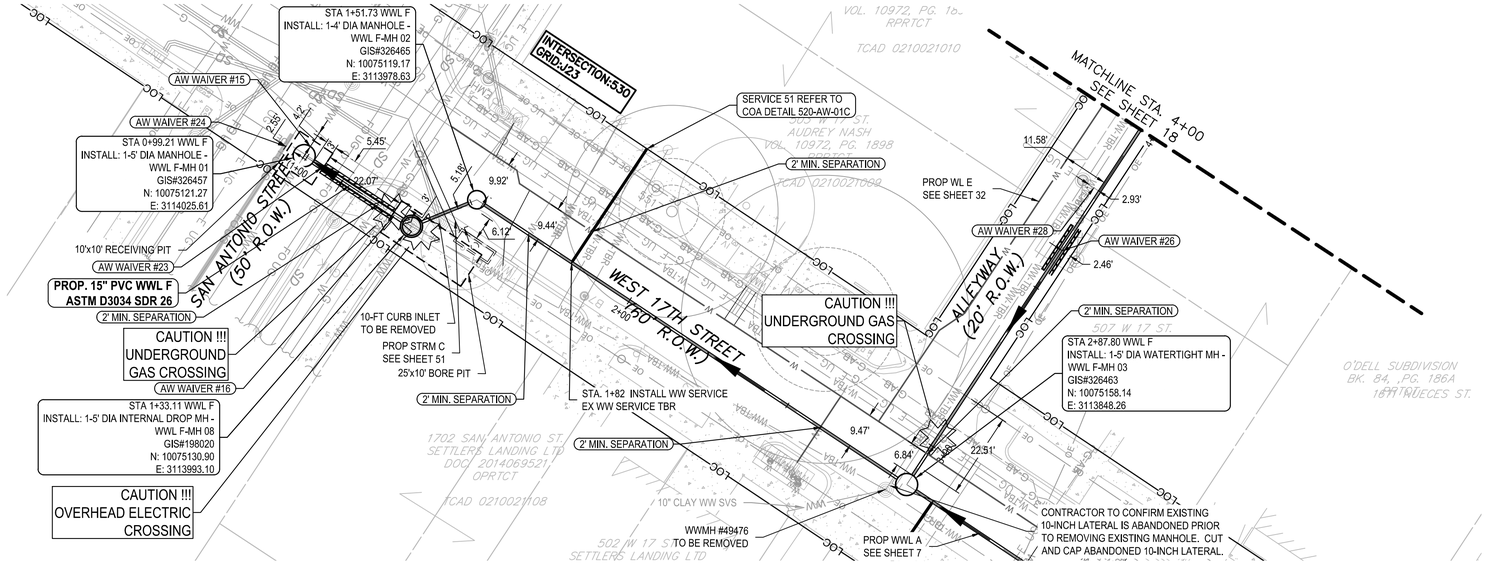
PROFESSIONAL ENGINEER

9/10/2026

SHEET
16 OF 93

100% SUBMITTAL REV

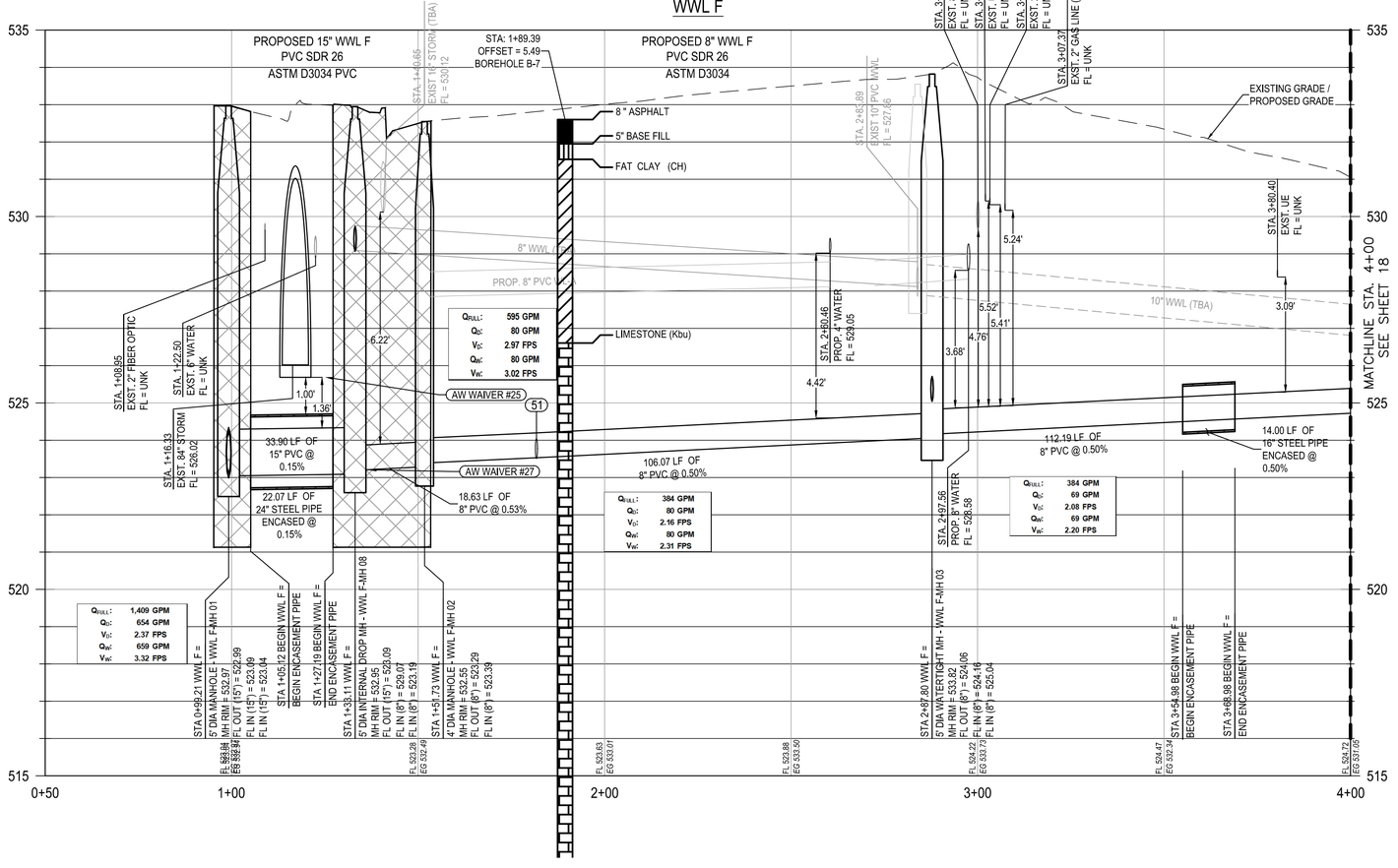


NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

N

0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'



AW WAIVERS #15, #16, #18, #23, #24, #25, #26, #27 & #28:

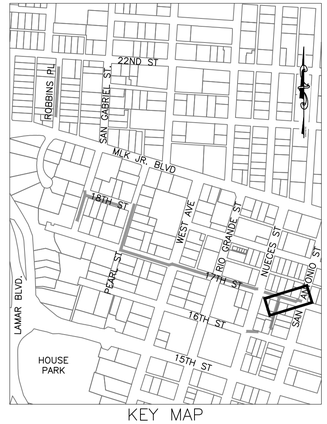
LOCATION:
- WAIVER #15: 1+00.00 (WWL-F)
- WAIVER #16: 1+28.48 (WWL-F)
- WAIVER #23: 1+05.42 (WWL-F)
- WAIVER #24: 1+00.00 (WWL-F)
- WAIVER #25: 1+13.18 - 1+21.18 (WWL-F)
- WAIVER #26: 3+61.90 (WWL-F)
- WAIVER #27: 1+33.90 - 1+53.57 (WWL-F)
- WAIVER #28: 3+80.40 (WWL-F)

UTILITY:
- WAIVER #15: EXISTING 4" STL GAS
- WAIVER #16: PROPOSED 24" STEEL ENCASEMENT
- WAIVER #23" PROPOSED 24" STEEL ENCASEMENT
- WAIVER #24: EXISTING UG FIBER OPTIC
- WAIVER #25: EXISTING 84" STORM DRAIN MAIN
- WAIVER #26: EXISTING ELECTRICAL POLE
- WAIVER #27: CROWN-TO-CROWN DO NOT MATCH
- WAIVER #28: EXISTING ELECTRICAL MANHOLE

DISTANCE:
- WAIVER #15: 4.2' H FROM PROPOSED 5' DIA MH WWL-F
- WAIVER #16: 3.0' H FROM PROPOSED 5' DIA MH WWL-F
- WAIVER #23: 2.3' H FROM PROPOSED 5' DIA MH WWL-F
- WAIVER #24: 2.55' H FROM PROPOSED 5' DIA MH WWL-F
- WAIVER #25: 1.14' V FROM PROPOSED 15" PVC WWL-F
- WAIVER #26: 2.46' H FROM PROPOSED 8"PVC WWL-F
- WAIVER #27: N/A
- WAIVER #28: 2.93' H FROM PROPOSED 8" PVC WWL-F

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2, UCM , UCM 2.9.1.B.3, UCM 2.9.2.B.17, UCM 2.9.1.D.1 AND UCM 2.9.4.D.5 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM) WHICH REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES, REQUIRES ALL LINES INTO MANHOLES SHALL MATCH CROWN-TO-CROWN, AND REQUIRES ENCASEMENT PIPING 24 INCHES DIAMETER AND LARGER SHALL BEGIN AND END NO CLOSER THAN 5 FEET TO AN ADJACENT APPURTENANCE OR CONNECTION. PROPOSED SEPARATION AND DESIGN AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

SHEET 17/WWL E					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
51	1+81.73	SINGLE	6"	36	No



KEY MAP

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
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WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER PLAN AND PROFILE WWL F 1+00 - 4+00

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
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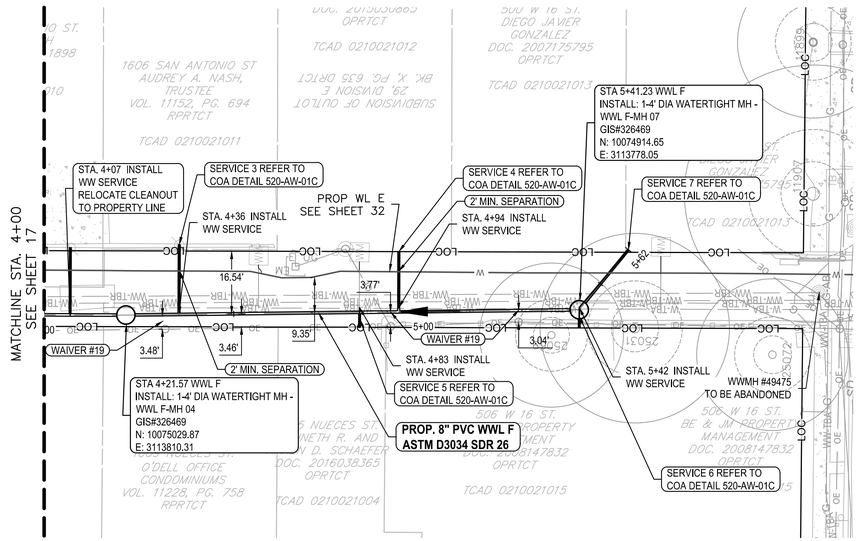
STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

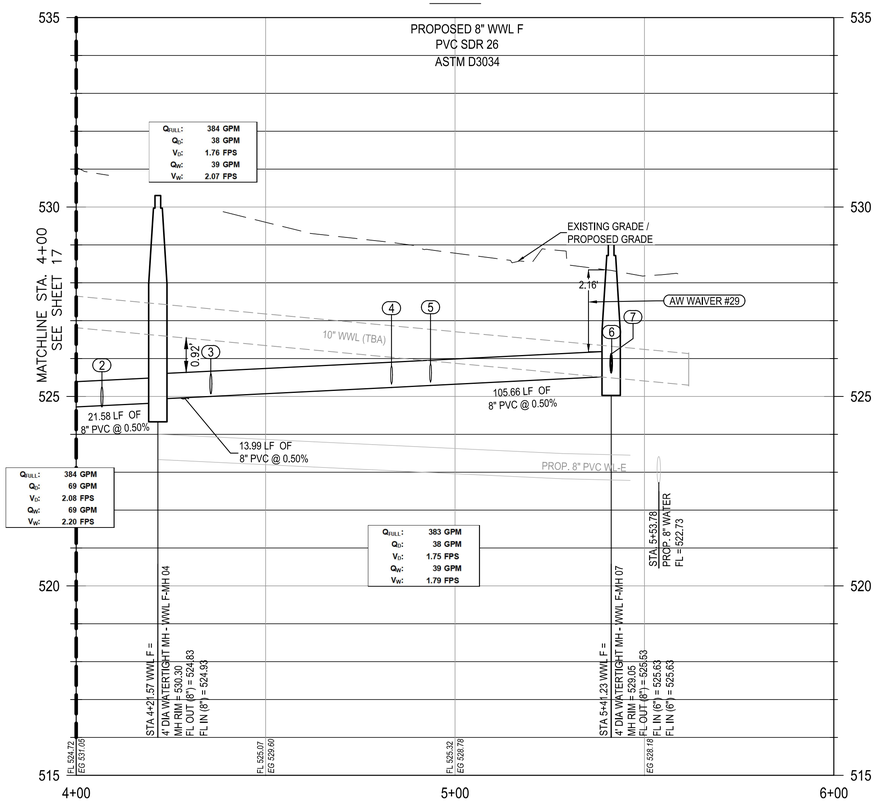
10/20/2026

SHEET
17 OF 93

100% SUBMITTAL REV

NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION





0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

AW WAIVERS #19 & #29:

LOCATION:
WAIVER #19: 4+31.92, 4+91.38, & 5+25.18 (WWL-F)
WAIVER #29: 4+62.31 - 5+38.74 (WWL-F)

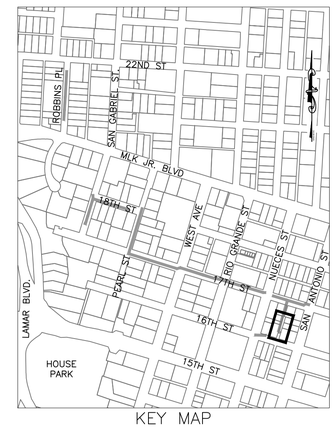
UTILITY:
WAIVER #19: EXISTING OE POLE
WAIVER #29: LESS THAN 42" DEPTH OF COVER

DISTANCE:
WAIVER #19: 3.48' H, 3.77' H & 3.04' H FROM PROPOSED 8" PVC WWL-F
WAIVER #29: 2.16' V MINIMUM DEPTH OF COVER

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 & UCM 2.9.4.C.5 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM) WHICH REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES AND REQUIRES A MINIMUM OF 42 INCHES OF COVER FROM SURFACE TO TOP OF WASTEWATER MAIN. A CONCRETE CAP PROVIDED FOR DEPTH LESS THAN 33 INCHES OF COVER.

SHEET 18/WWL F					
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)	SEPARATION < 9 FT *
2	4+06.94	SINGLE	6"	18	Yes
3	4+40.01	SINGLE	6"	7	No
4	4+78.60	SINGLE	6"	5	No
5	4+87.76	SINGLE	6"	15	No
6	5+45.70	SINGLE	6"	15	No
7	5+67.73	SINGLE	6"	14	No

*SEE DETAIL 520-AW-01A ON SHEET 61 FOR MINIMUM SEPARATION



KEY MAP

NOTES:

1. CONTRACTOR TO MAINTAIN 3-FT HORIZONTAL SEPARATION FROM UTILITY POLES AS MUCH AS POSSIBLE. UTILITY LINES MAY NOT CROSS UNDER UTILITY POLES.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
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BGE JOB NO. 4766-03
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NO.	REVISION	BY	DATE

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER PLAN AND PROFILE WWL F 4+00 - END

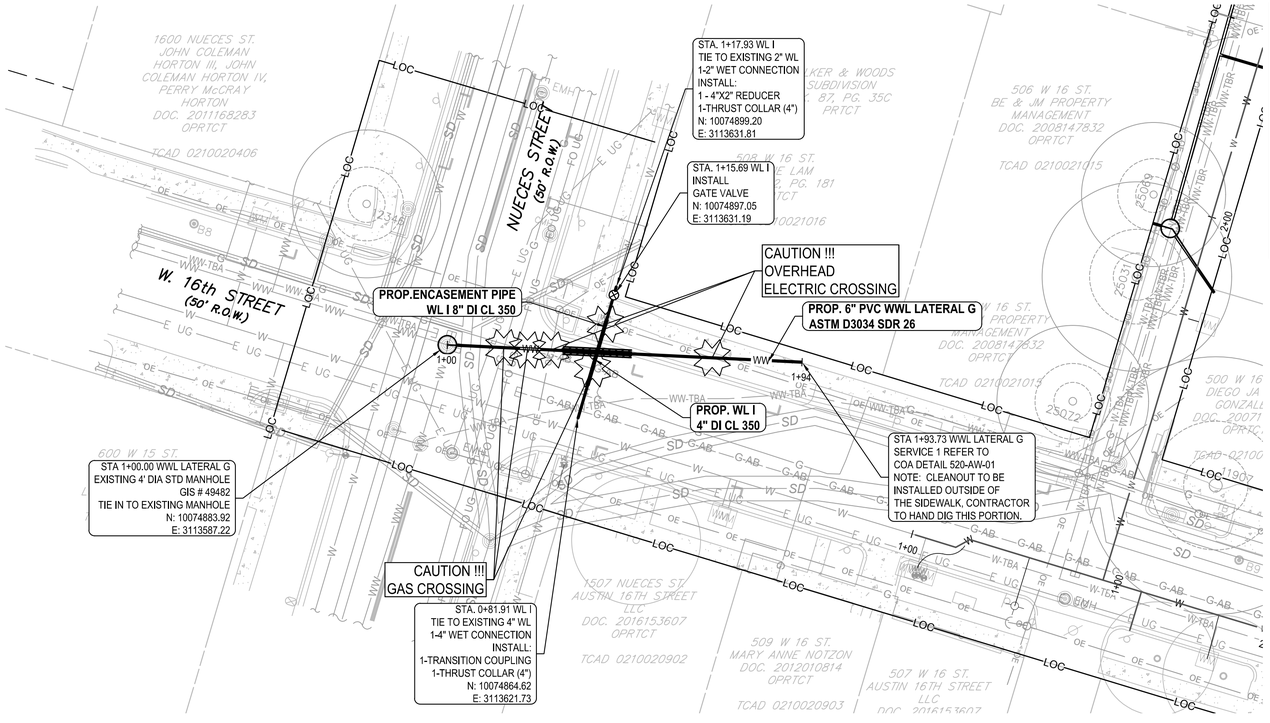
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED
PROFESSIONAL ENGINEER
9/10/2026

SHEET
18 OF 93

100% SUBMITTAL REV



AW WAIVERS #22:

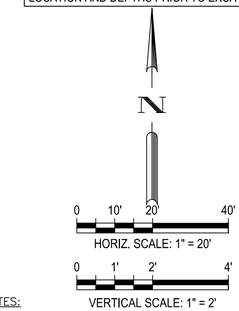
LOCATION:
- WAIVER #9: 1+11.32 (WWL LATERAL G)
- WAIVER #22: 1+06.19 (WWL-G)

UTILITY:
- WAIVER #9: EXISTING UNK UNDERGROUND ELECTRIC
- WAIVER #22: EXISTING 60" RCP STORM

DISTANCE:
- WAIVER #9: 0.33' V FROM PROPOSED 6" PVC WWL LATERAL
- WAIVER #22: 0.50' V FROM PROPOSED 6" PVC WWL LATERAL

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.3 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM).UCM 2.9.1.B.3 REQUIRES EIGHTEEN (18) INCHES CLEARANCE BELOW PROPOSED STRUCTURES AND TWELVE (12) INCHES ABOVE PROPOSED STRUCTURES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION



NOTES:

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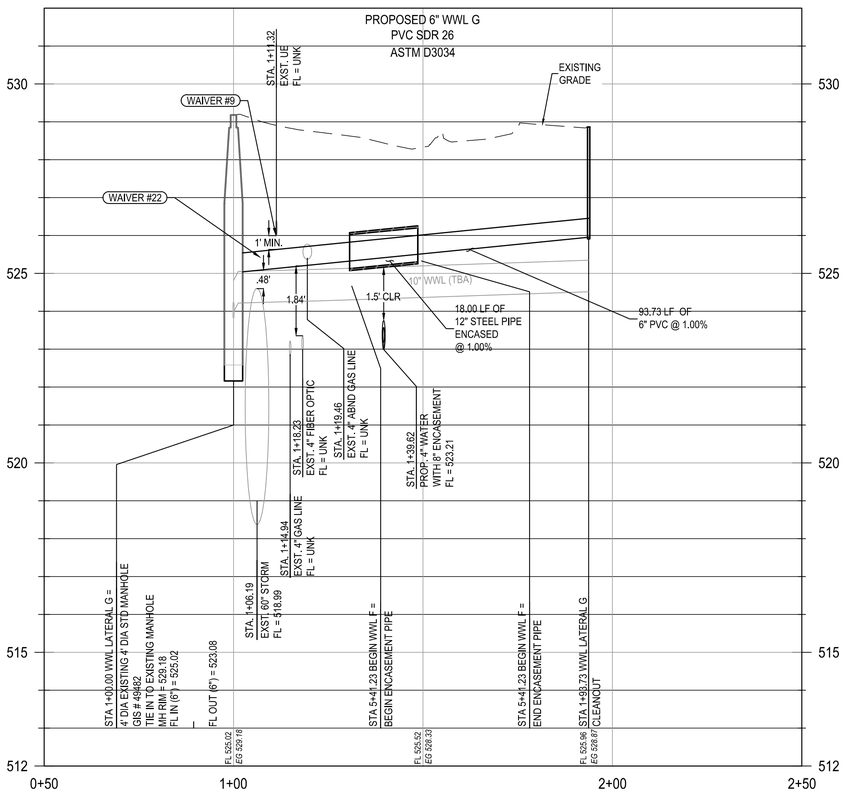
2. WASTEWATER SERVICE FOR PROPERTY IS NOT CONNECTED TO THE WWL BEING REPLACED BASED ON AVAILABLE RECORD DRAWINGS AND TAP CARDS.
3. CONTRACTOR TO FIELD VERIFY FL ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER

WWL LATERAL G



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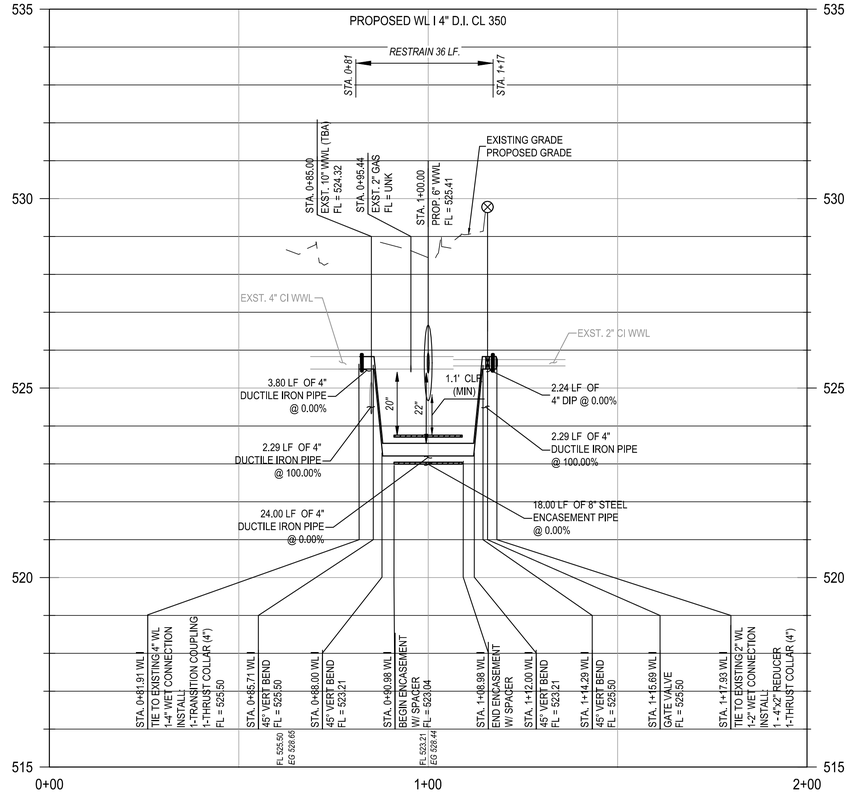
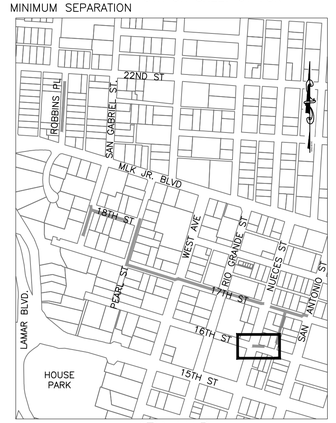


*SEE DETAIL 520-AW-01A ON SHEET 61 FOR MINIMUM SEPARATION



KEY MAP

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October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

WASTEWATER PLAN 508 W.
16TH ST. SERVICE

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
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STATE OF TEXAS
ALEXIS WOFFENDEN
117862
LICENSED
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9/10/2026

SHEET
19 OF 93

100% SUBMITTAL REV

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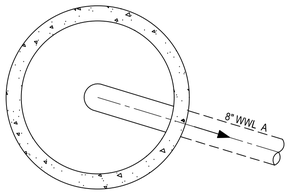
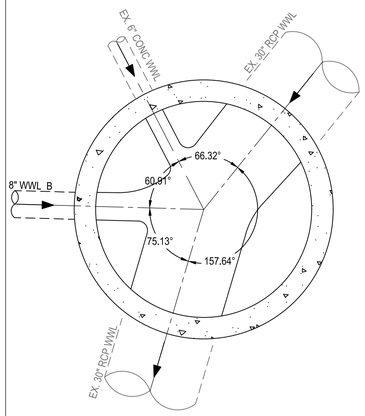
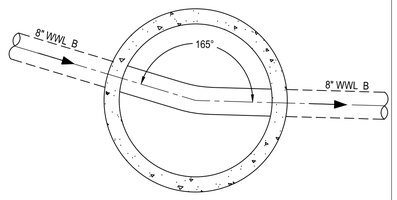


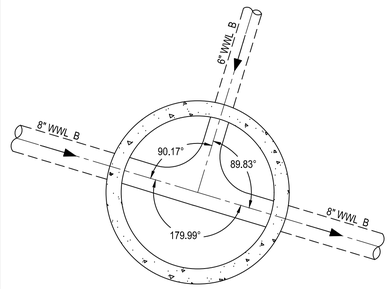
STA. 2+26.48 WWL A
STANDARD 4' DIA MANHOLE "WWL A-MH 10"
SEE SHEET 7



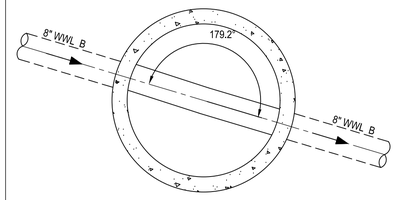
STA. 0+78.21 WWL B
EXISTING 6' DIA MANHOLE "MH-EX 49447"
SEE SHEET 8



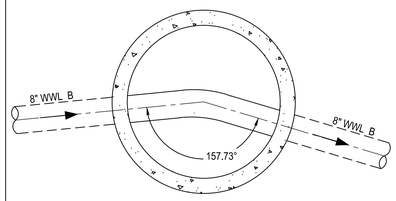
STA. 1+00.00 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 01"
SEE SHEET 8



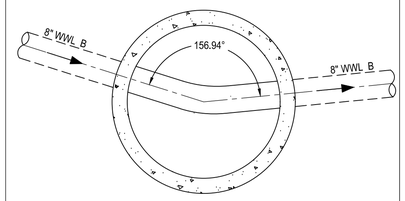
STA. 1+50.00 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 02"
SEE SHEET 8



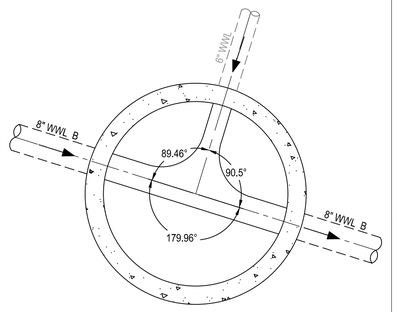
STA. 2+50.00 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 03"
SEE SHEET 8



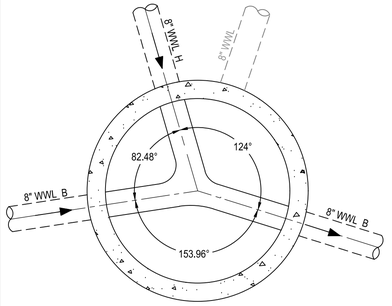
STA. 4+82.06 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 04"
SEE SHEET 8



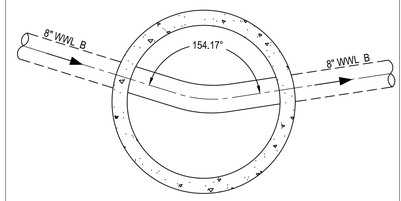
STA. 4+94.01 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 05"
SEE SHEET 8



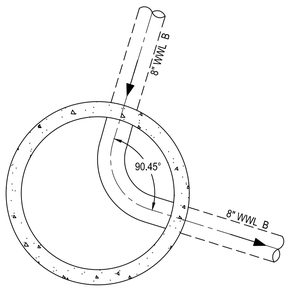
STA. 5+95.26 WWL B
STANDARD 5' DIA MANHOLE "WWL B-MH 06"
SEE SHEET 9



STA. 7+78.99 WWL B
STANDARD 5' DIA MANHOLE "WWL B-MH 07"
SEE SHEET 9

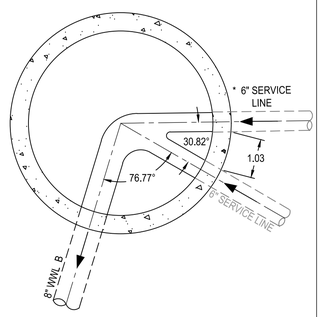


STA. 8+12.65 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 08"
SEE SHEET 9

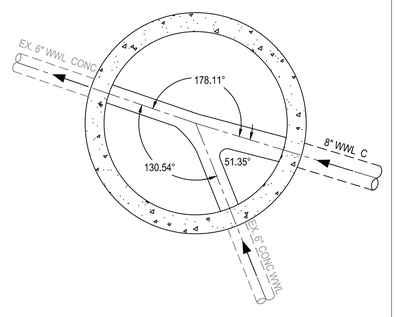


STA. 12+13.33 WWL B
STANDARD 4' DIA MANHOLE "WWL B-MH 09"
SEE SHEET 10

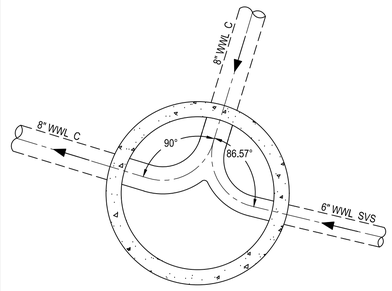
* FIELD VERIFY PRESENCE OF
1805 PEARL ST. SERVICE
BEFORE MH FABRICATION



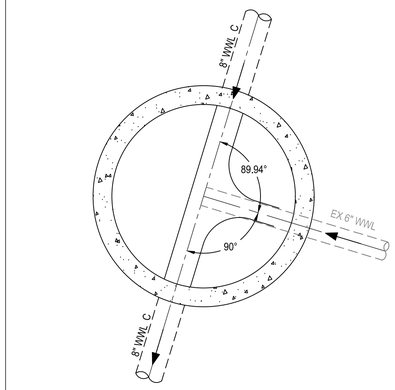
STA. 15+95.21 WWL B
STANDARD 5' DIA MANHOLE "WWL B-MH 10"
SEE SHEET 11



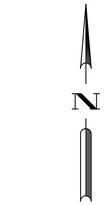
STA. 0+87.39 WWL C
STANDARD 5' DIA MANHOLE "WWL C-MH 01"
SEE SHEET 12



STA. 1+00.00 WWL C
STANDARD 4' DIA MANHOLE "WWL C-MH 02"
SEE SHEET 12



STA. 1+59.72 WWL C
STANDARD 5' DIA MANHOLE "WWL C-MH 03"
SEE SHEET 12



NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER MANHOLE DETAILS (1 OF 2)

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

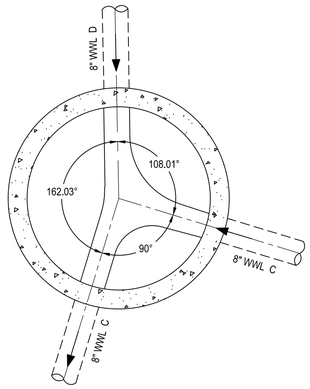
REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

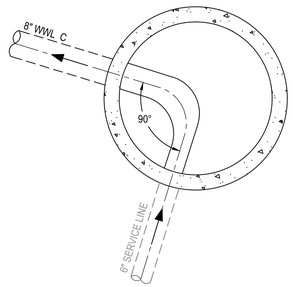
9/10/2026

SHEET
20 OF 93

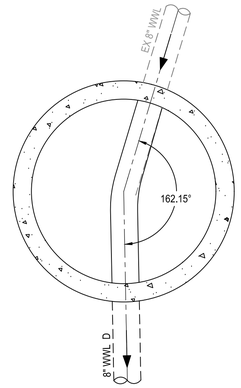
100% SUBMITTAL REV



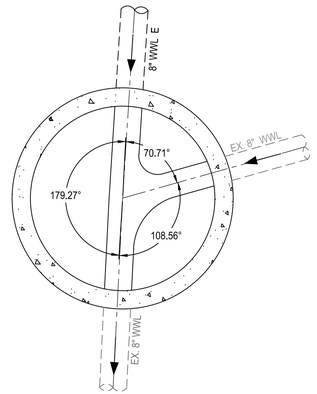
STA. 3+05.74 WWL C
(= STA. 1+00 WWL A)
STANDARD 5' DIA MANHOLE "WWL C-MH 04"
SEE SHEET 12



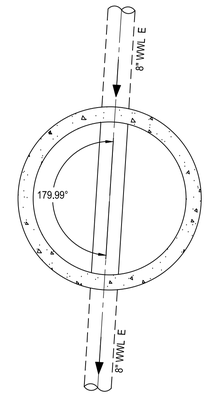
STA. 6+06.20 WWL C
STANDARD 4' DIA MANHOLE "WWL C-MH 05"
SEE SHEET 13



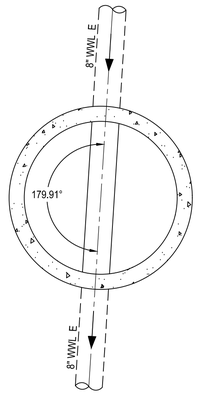
STA. 1+58.70 WWL D
STANDARD 5' DIA MANHOLE "WWL D-MH 01"
SEE SHEET 14



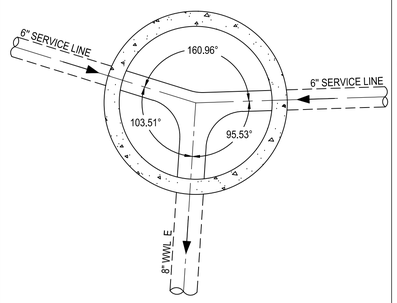
STA. 1+00.00 WWL E
STANDARD 5' DIA MANHOLE "WWL E-MH 01"
SEE SHEET 15



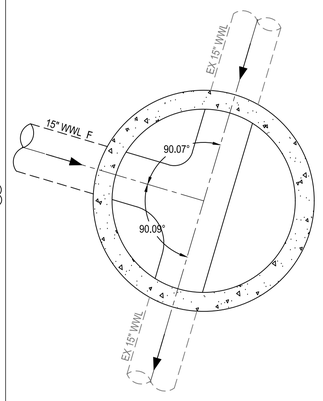
STA. 1+80.03 WWL E
STANDARD 4' DIA MANHOLE "WWL E-MH 02"
SEE SHEET 15



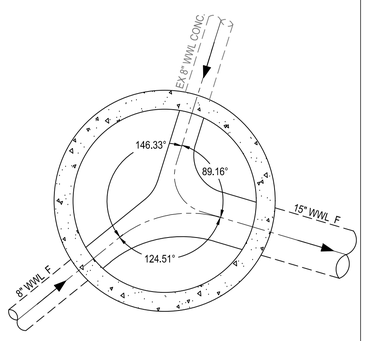
STA. 2+89.59 WWL E
STANDARD 4' DIA MANHOLE "WWL E-MH 03"
SEE SHEET 15



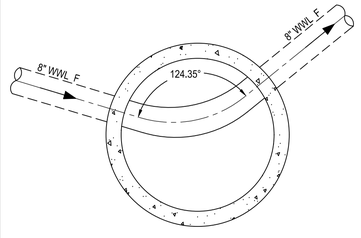
STA. 4+98.25 WWL E
STANDARD 4' DIA MANHOLE "WWL E-MH 04"
SEE SHEET 16



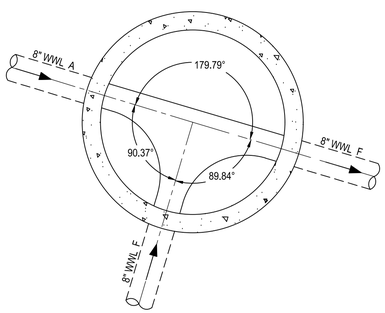
STA. 0+99.21 WWL F
STANDARD 5' DIA MANHOLE "WWL F-MH 01"
SEE SHEET 17



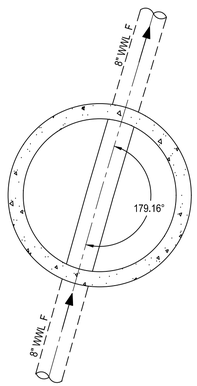
STA. 1+33.11 WWL F
INTERNAL DROP 5' DIA MANHOLE "WWL F-MH 08"
SEE SHEET 17



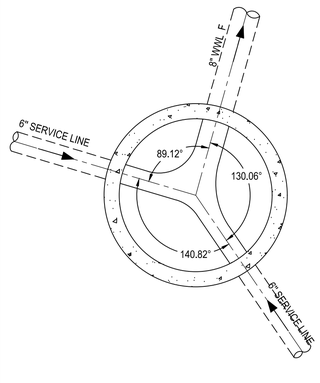
STA. 1+51.73 WWL F
STANDARD 4' DIA MANHOLE "WWL F-MH 02"
SEE SHEET 17



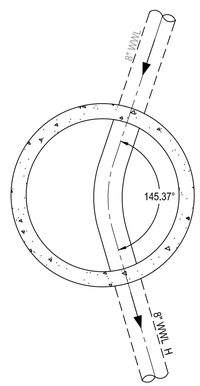
STA. 2+87.80 WWL F
(= STA 1+00 WWL A)
STANDARD 5' DIA MANHOLE "WWL F-MH 03"
SEE SHEET 17



STA. 4+21.57 WWL F
STANDARD 4' DIA MANHOLE "WWL F-MH 04"
SEE SHEET 18



STA. 5+41.23 WWL F
STANDARD 4' DIA MANHOLE "WWL F-MH 07"
SEE SHEET 18



STA. 1+13.20 WWL H
STANDARD 4' DIA MANHOLE "WWL H-MH 01"
SEE SHEET 9



NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER MANHOLE DETAILS (2 OF 2)

CITY OF AUSTIN
AUSTIN WATER

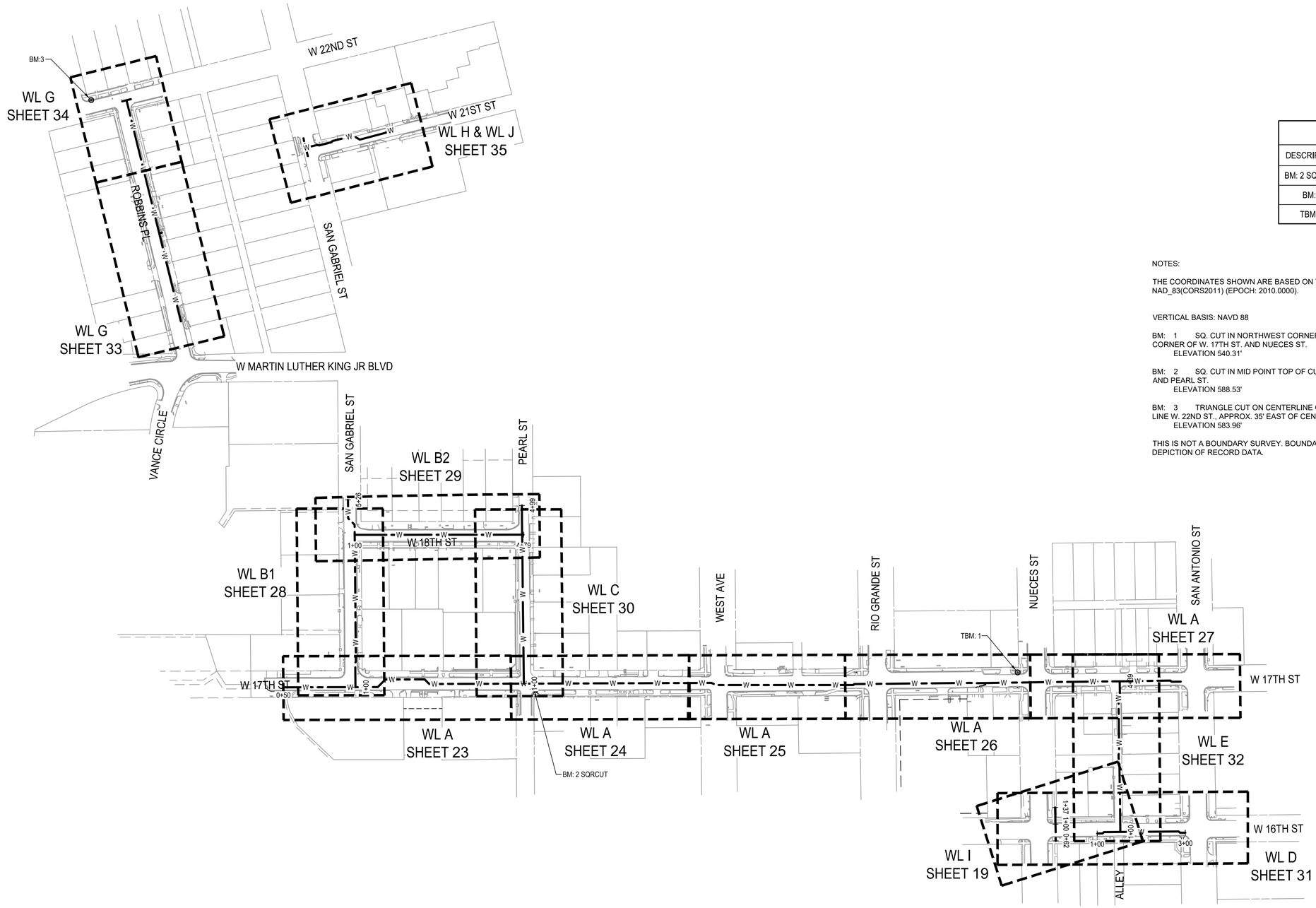
REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

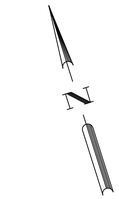
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
9/10/2026

SHEET
21 OF 93

100% SUBMITTAL REV





0 60' 120' 240'

SCALE: 1" = 120'

Point Table		
DESCRIPTION	Northing	Easting
BM: 2 SQRCUT	10075514.9221	3112601.3217
BM:3	10077077.5755	3112049.9040
TBM: 1	10075231.8685	3113647.8209

NOTES:

THE COORDINATES SHOWN ARE BASED ON THE TEXAS COORDINATE, CENTRAL ZONE, NAD_83(CORS2011) (EPOCH: 2010.0000).

VERTICAL BASIS: NAVD 88

BM: 1 SQ. CUT IN NORTHWEST CORNER OF STORM DRAIN INLET, NORTHWEST CORNER OF W. 17TH ST. AND NUECES ST.
ELEVATION 540.31'

BM: 2 SQ. CUT IN MID POINT TOP OF CURB, SOUTHEAST CORNER OF W. 17TH ST. AND PEARL ST.
ELEVATION 588.53'

BM: 3 TRIANGLE CUT ON CENTERLINE OF STORM DRAIN INLET ON NORTH CURB LINE W. 22ND ST., APPROX. 35' EAST OF CENTERLINE LEON ST.
ELEVATION 583.96'

THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES SHOWN ARE AN APPROXIMATE DEPICTION OF RECORD DATA.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WATER KEY MAP

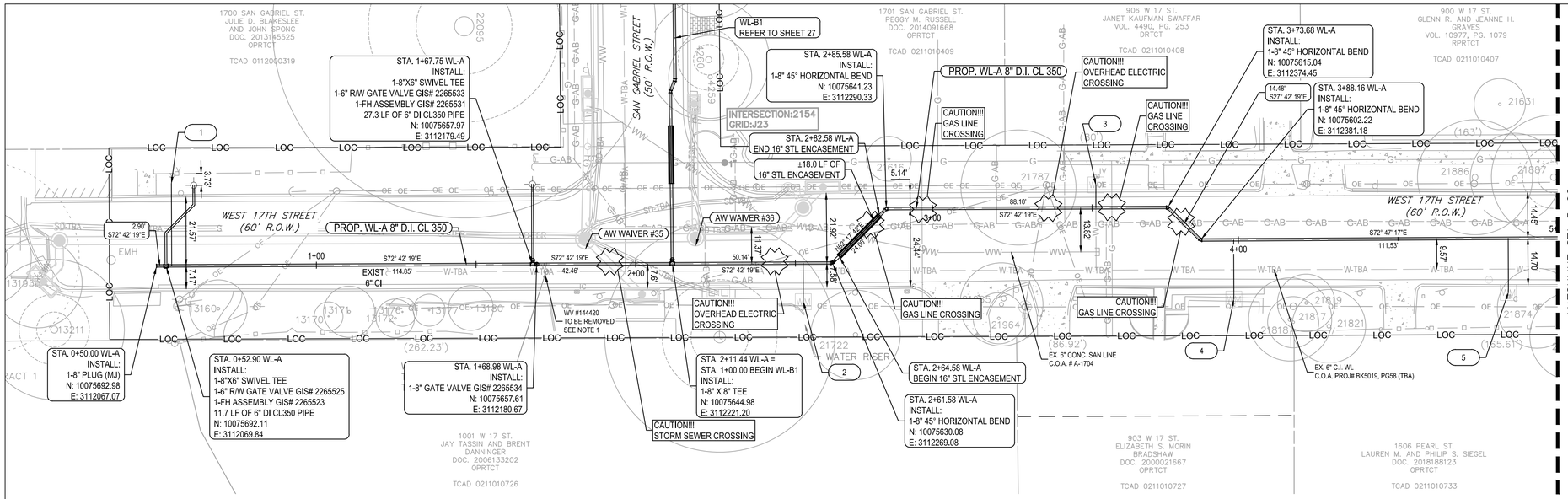
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117862
LICENSED
PROFESSIONAL ENGINEER
10/20/2026

SHEET
22 OF 93

100% SUBMITTAL REV

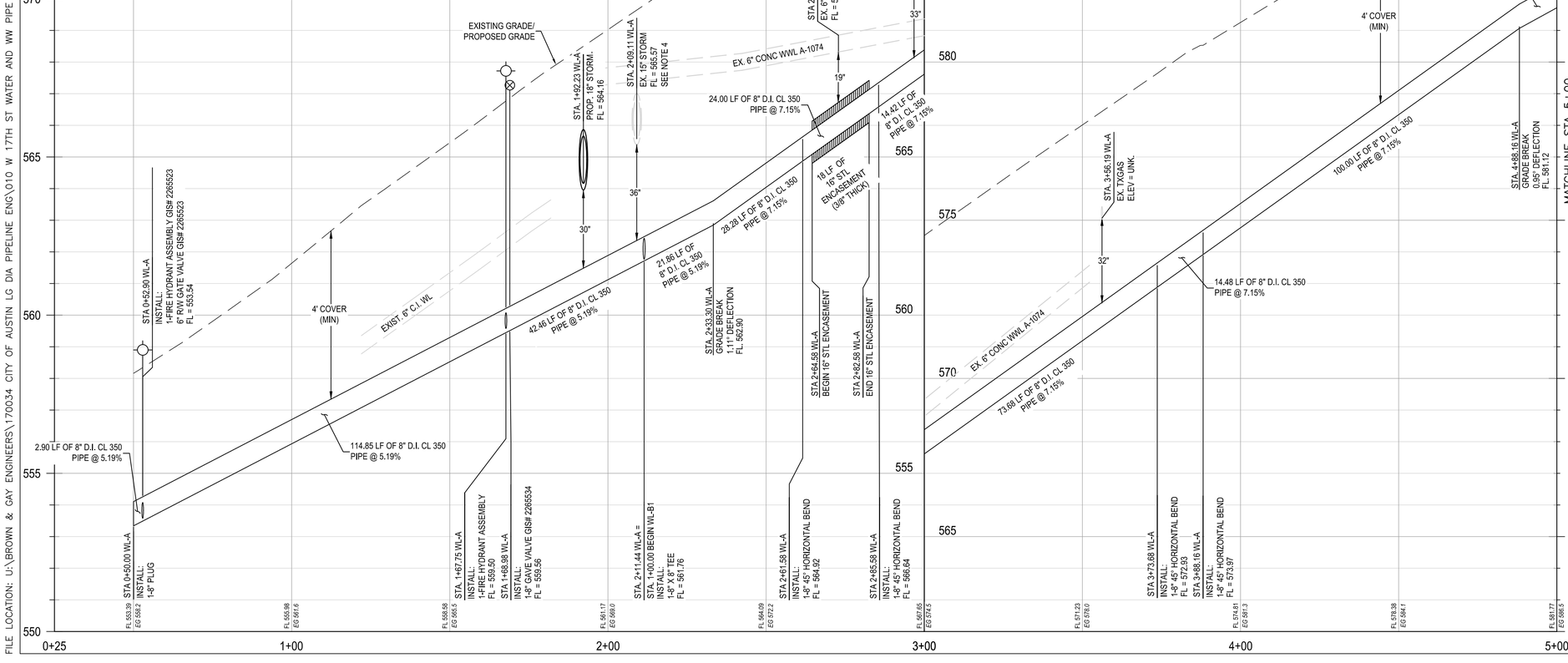


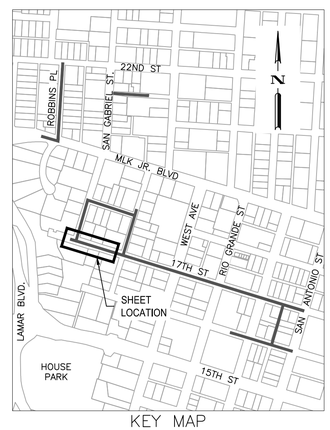
SHEET 23/WL-A				
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	SERVICE LF
1	0+54.69	SINGLE	3/4"	26'
2	2+52.41	SINGLE	3/4"	13'
3	3+51.21	SINGLE	3/4"	8'
4	3+98.47	SINGLE	3/4"	19'
5	4+84.46	SINGLE	3/4"	17'

REFERENCE DETAILS 520-AW-01A & 520-AW-01B
FOR APPLICABLE INSTALLATION INSTRUCTIONS
FOR TABLE OF METER DETAIL ABOVE

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM - VALVE AND HYDRANT SERVICES SUPERVISOR AT 512-972-1280.
2. CONTRACTOR IS RESPONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. SEE SPL DETAIL SHEET WW-506 FOR APPROPRIATE TRANSITION COUPLING. FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
3. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT ON EXISTING 6" WL PRIOR TO THE TIE-IN POINT. IF THE EXISTING LINE IS CAST IRON AND CANNOT BE RESTRAINED: THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE EXISTING CAST IRON PIPE TO PROVIDE THE REQUIRED RESTRAINT.
4. CONTRACTOR TO PROTECT, SUPPORT & MAINTAIN EXISTING STORM PIPE DURING CONSTRUCTION. IF DAMAGED CONTRACTOR SHALL REPAIR AND/OR REPLACE TO ORIGINAL OR BETTER CONDITION.
5. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.





KEY MAP

NO.	REVISION	BY	DATE

BOE JOB NO. 4766-03
FILE
DATE 2016-06-02
DESIGNED MJN
DRAWN JRF
REVISED
CHECKED JB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION
WATER PLAN & PROFILE WL-A 0+50.00 - 5+00

CITY OF AUSTIN
AUSTIN WATER UTILITY

ARDURRA
7500 Rialto Blvd., Building 2, Suite 240
Austin, Texas 78735
Phone: (512) 383-4313
www.ardurra.com
Engineering License #F-10693
Austin | Corpus Christi | Dallas
San Antonio | Houston | Rio Grande Valley
CELEBRATE. INNOVATE. CREATE.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JAMES K. BRONIKOWSKI P.E. NO. 115524 ON 07/17/26. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

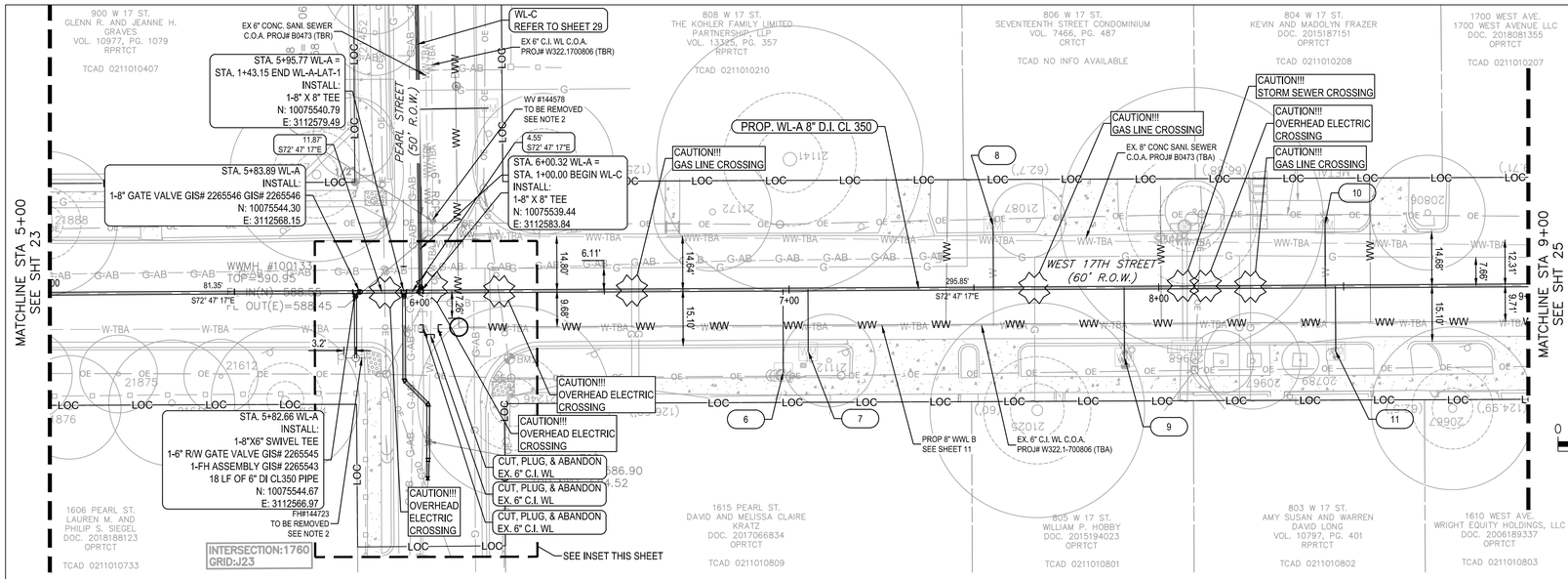
STATE OF TEXAS
JAMES K BRONIKOWSKI
115524
LICENSED PROFESSIONAL ENGINEER
07/08/26

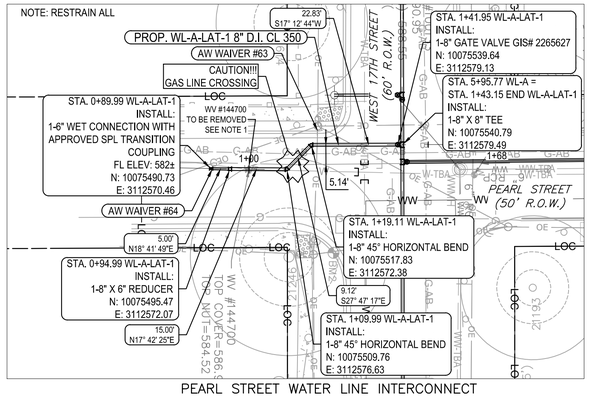
SHEET 23 OF 89

REVIEWED
October 22, 2026
Jaron Hogenson
Austin Water
Expires: October 22, 2029

90% SUBMITTAL

FILE LOCATION: U:\BROWN & GAY ENGINEERS\170034 CITY OF AUSTIN LG DIA PIPELINE ENG\010 W 17TH ST WATER AND WW PIPE REHAB\20-DRAWINGS\PLANS\CIVIL\4766-C-WATR-PP-01.DWG DATE SAVED: 7/17/2026





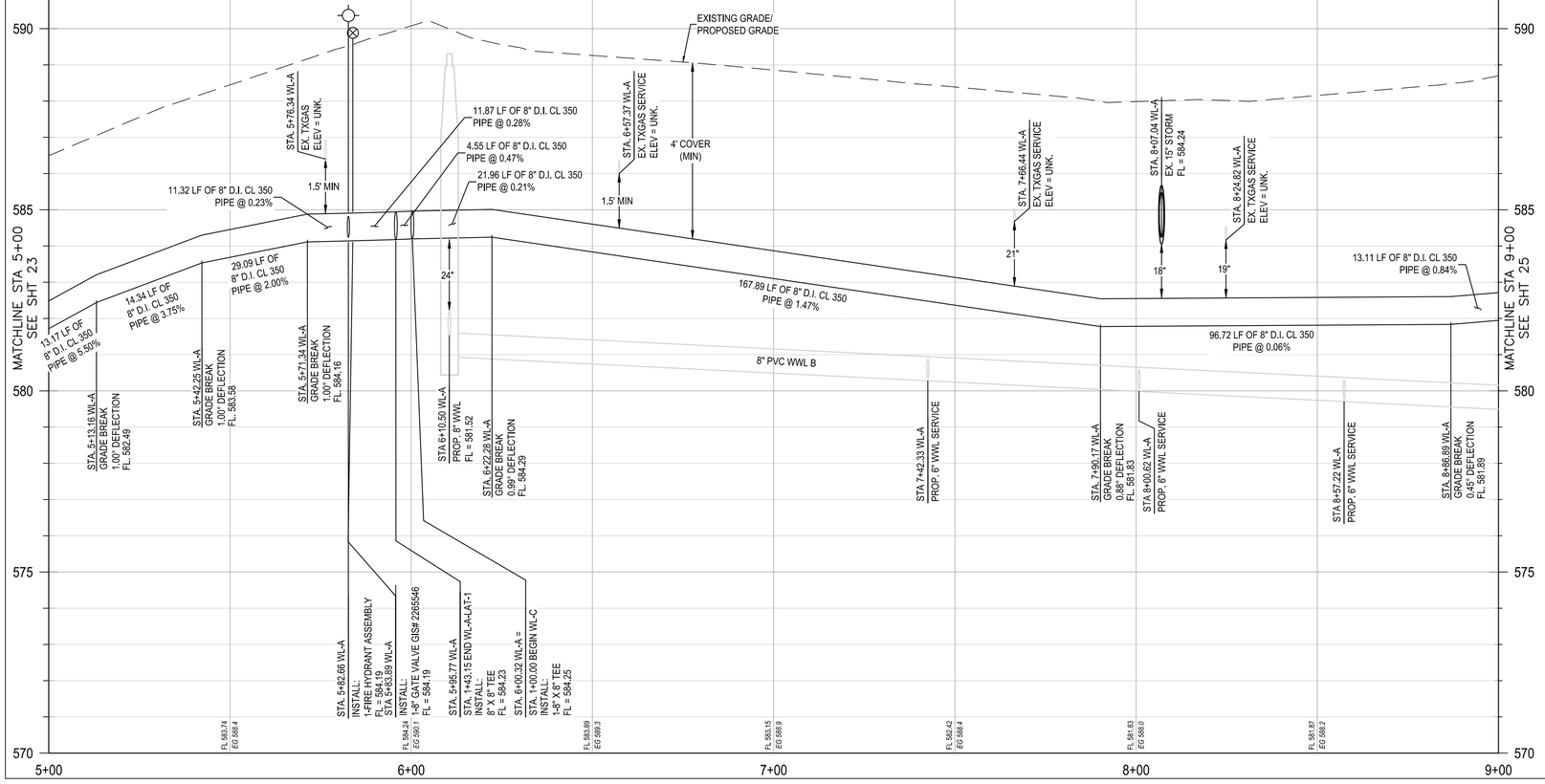
PEARL STREET WATER LINE INTERCONNECT

0 10' 20' 40'

SCALE: 1" = 20'

SHEET 24/WL-A				
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	SERVICE LF
6	6+98.30	SINGLE	3/4"	23'
7	7+05.06	SINGLE	3/4"	17'
8	7+55.28	SINGLE	3/4"	17'
9	7+90.58	SINGLE	3/4"	19'
10	8+45.05	SINGLE	3/4"	17'
11	8+47.75	SINGLE	3/4"	18'

REFERENCE DETAILS 520-AW-01A & 520-AW-01B
FOR APPLICABLE INSTALLATION INSTRUCTIONS
FOR TABLE OF METER DETAIL ABOVE



AW WAIVERS

LOCATION:
WAIVER #63: 1+19.11 (WL-A-LAT-1)
WAIVER #64: 0+89.99 TO 1+09.99 (WL-A-LAT-1)

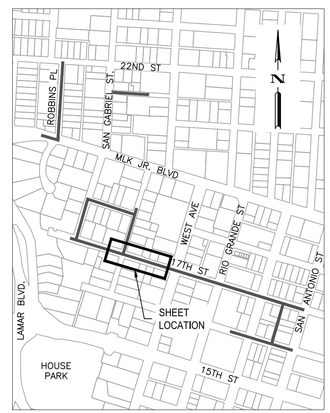
UTILITY:
WAIVER #63: PR. 8" DIP WL-A-LAT-1
WAIVER #64: PR. 8" DIP WL-A-LAT-1

DISTANCE:
WAIVER #63: 4.33' H TO EX. OE POLE
WAIVER #64: 1.00' H TO EX. 4" DIA GAS

THIS PROJECT REQUESTS A WAIVER FROM SECTION UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM - VALVE AND HYDRANT SERVICES SUPERVISOR AT 512-972-1280.
2. CONTRACTOR IS RESPONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. SEE SPL DETAIL SHEET WW-506 FOR APPROPRIATE TRANSITION COUPLING. FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
3. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT ON EXISTING 6" WL PRIOR TO THE TIE-IN POINT. IF THE EXISTING LINE IS CAST IRON AND CANNOT BE RESTRAINED: THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE EXISTING CAST IRON PIPE TO PROVIDE THE REQUIRED RESTRAINT.
4. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.



KEY MAP

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE 2016-06-02
DESIGNED MJN
DRAWN JRF
REVISED
CHECKED JB

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

WATER PLAN & PROFILE
WL-A 5+00 - 9+00

CITY OF AUSTIN
AUSTIN WATER UTILITY

7500 Rialto Blvd., Building 1, Suite 240
Austin, Texas 78735
Phone: 512.564.2533
www.ardurra.com
Engineering License #F-10053
Ardurra Group, Inc.
Surveying Firm 10194688

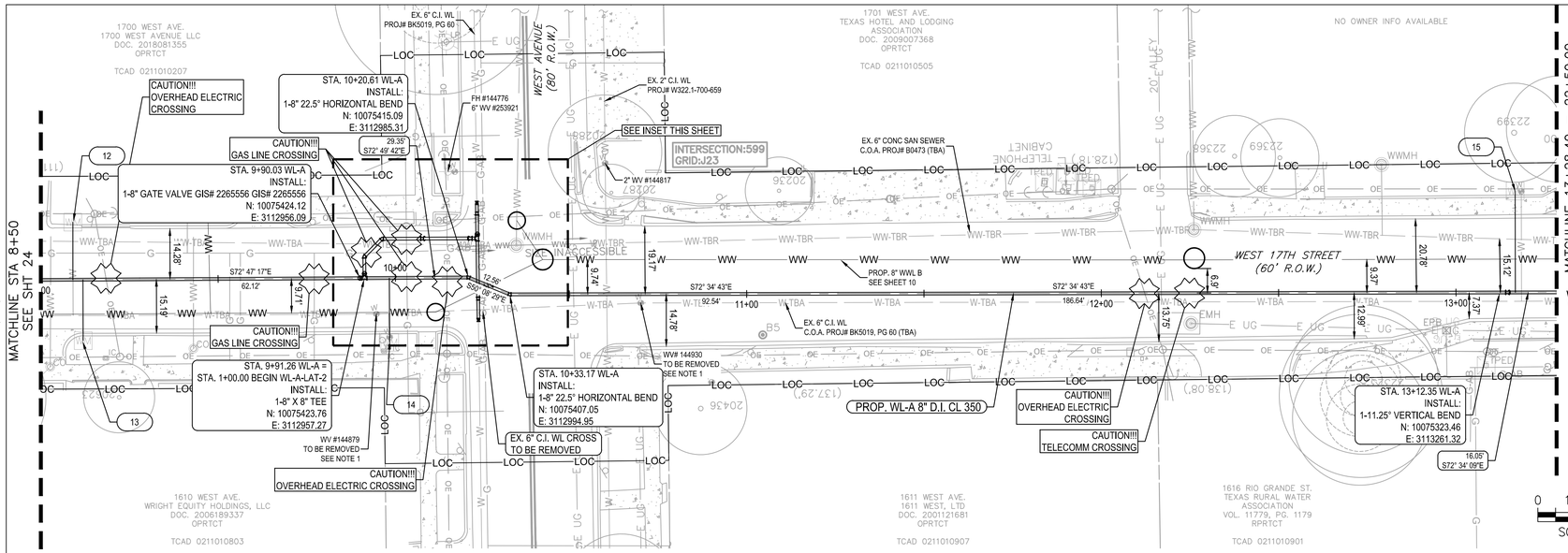
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JAMES K. BRONIKOWSKI P.E. NO. 115524 ON 07/17/26. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

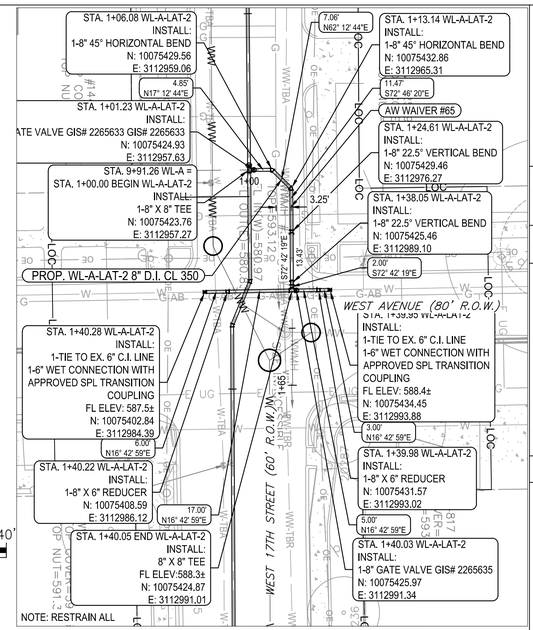
STATE OF TEXAS
JAMES K BRONIKOWSKI
115524
LICENSED PROFESSIONAL ENGINEER
08/26

SHEET
24 OF 89

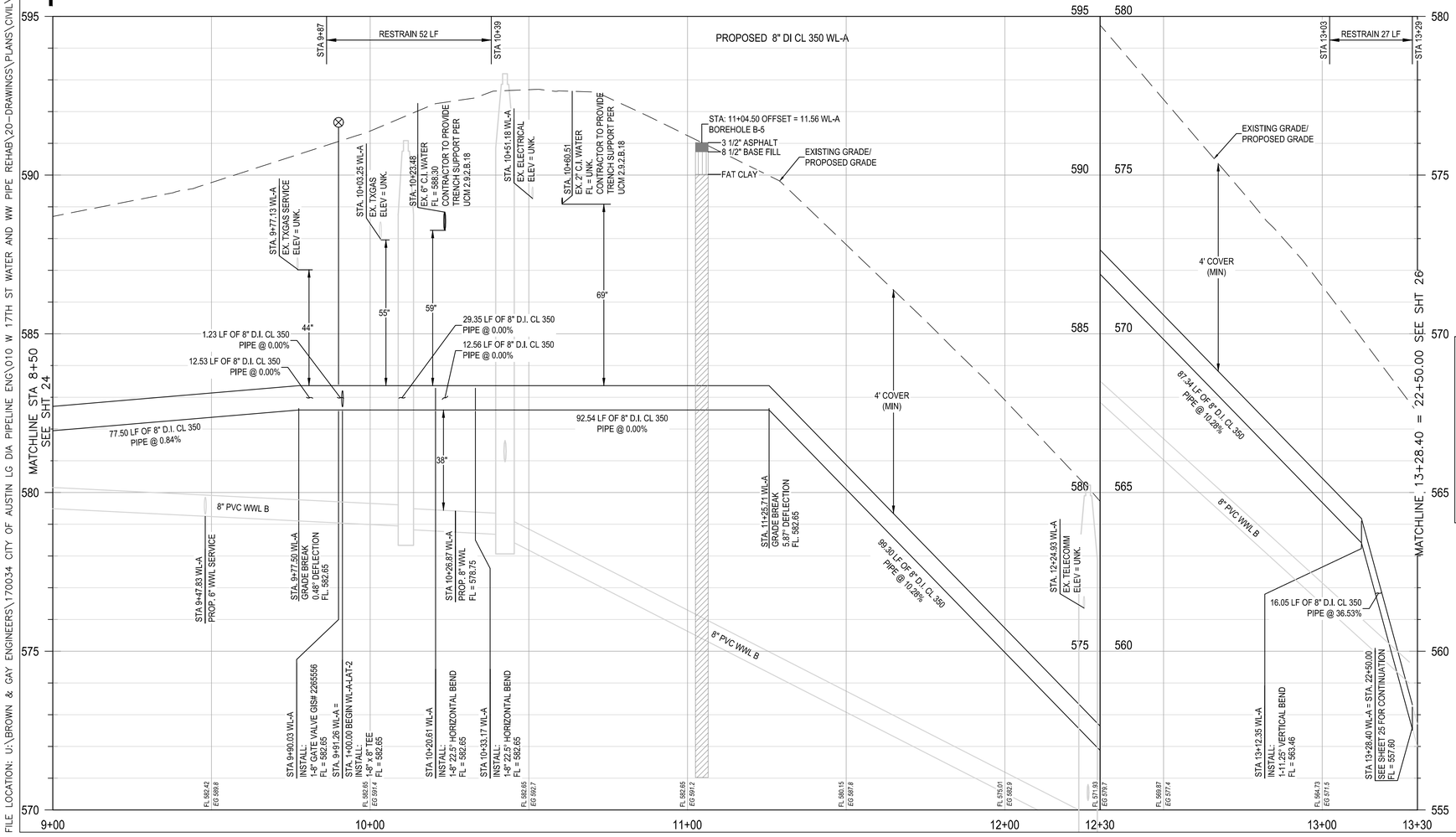
90% SUBMITTAL

FILE LOCATION: U:\BROWN & GAY ENGINEERS\170034 CITY OF AUSTIN LG DIA PIPELINE ENG\010 W 17TH ST WATER AND WW PIPE REHAB\20-DRAWINGS\PLANS\CIVIL\4766-C-WATR-PP-01.DWG DATE SAVED: 7/17/2026





WEST AVENUE WATER LINE INTERCONNECT



SHEET 25/WL-A				
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	SERVICE LF
12	9+09.14	SINGLE	3/4"	17'
13	9+11.83	SINGLE	3/4"	18'
14	9+98.27	SINGLE	3/4"	21"
15	13+16.75	SINGLE	3/4"	29'

REFERENCE DETAILS 520-AW-01A & 520-AW-01B
FOR APPLICABLE INSTALLATION INSTRUCTIONS
FOR TABLE OF METER DETAIL ABOVE

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM - VALVE AND HYDRANT SERVICES SUPERVISOR AT 512-972-1280.
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3. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT ON EXISTING 6" WL PRIOR TO THE TIE-IN POINT. IF THE EXISTING LINE IS CAST IRON AND CANNOT BE RESTRAINED: THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE EXISTING CAST IRON PIPE TO PROVIDE THE REQUIRED RESTRAINT.
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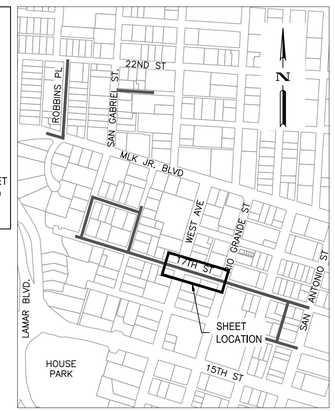
AW WAIVERS

LOCATION:
WAIVER #65: 1+01.08 TO 1+40.05 (WL-A-LAT-2)

UTILITY:
WAIVER #65: PR. 8" DIP WL-A-LAT-2

DISTANCE:
WAIVER #65: 3.25' H TO EX. 4" DIA GAS

THIS PROJECT REQUESTS A WAIVER FROM SECTION UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.



KEY MAP

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Jaron Hogenson
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BGE JOB NO. 4766-03
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DESIGNED MJN
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WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

WATER PLAN & PROFILE WL-A 9+00 - 13+28.39

CITY OF AUSTIN
AUSTIN WATER UTILITY

7500 Rialto Blvd., Building 1, Suite 240
Austin, Texas 78735
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Servicing Firm 10198688

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STATE OF TEXAS
JAMES K BRONIKOWSKI
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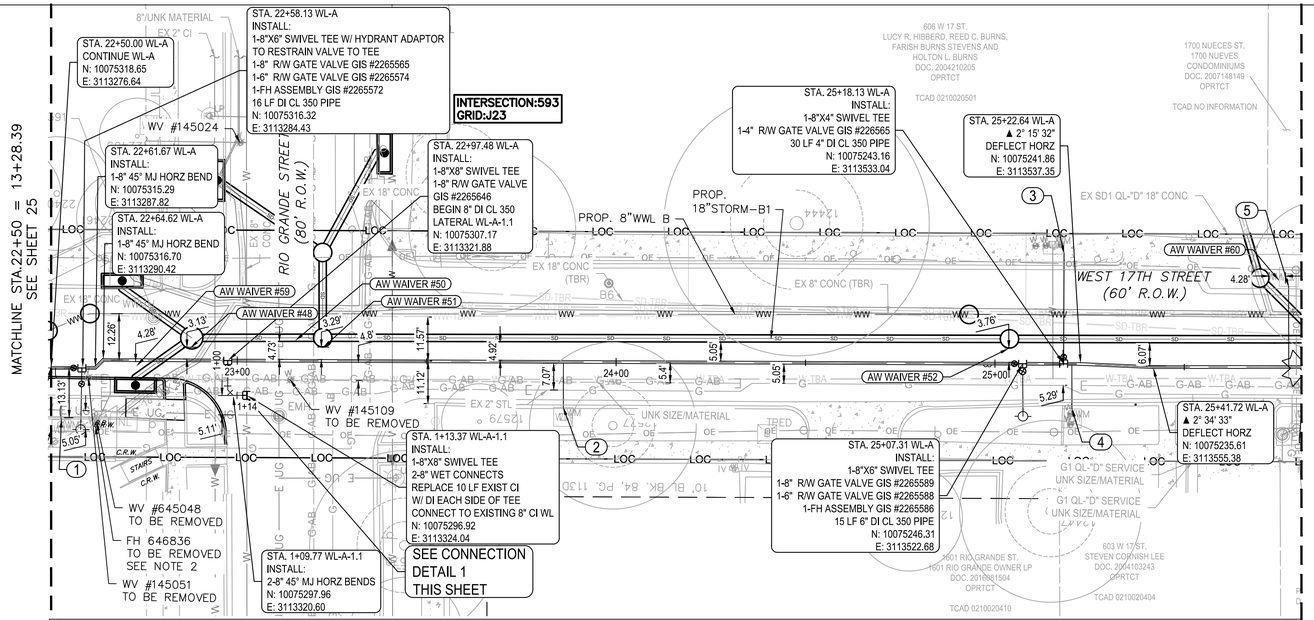
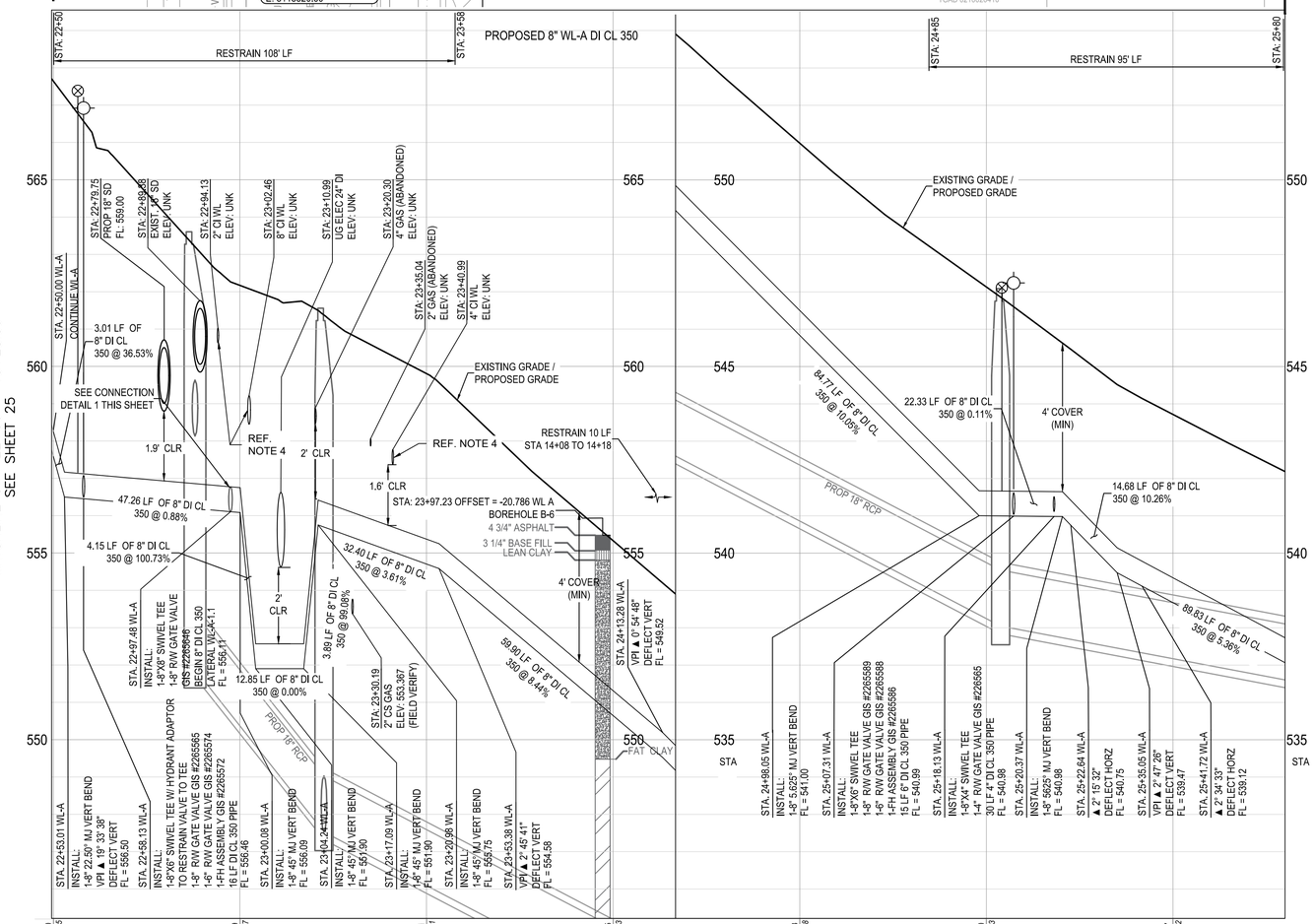
07/08/26

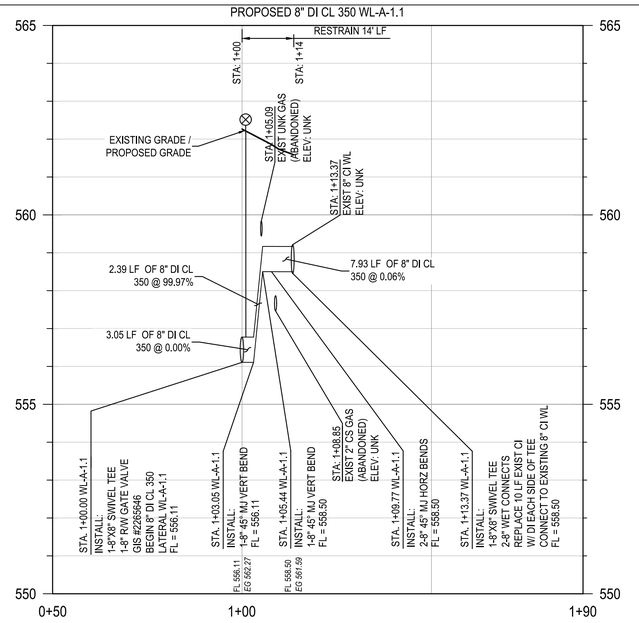
SHEET
25 OF 89

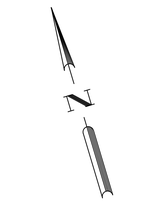
90% SUBMITTAL

FILE LOCATION: U:\BROWN & GAY ENGINEERS\170034 CITY OF AUSTIN LG DIA PIPELINE ENG\010 W 17TH ST WATER AND WW PIPE REHAB\20-DRAWINGS\PLANS\CIVIL\4766-C-WATR-PP-01.DWG DATE SAVED: 7/17/2026

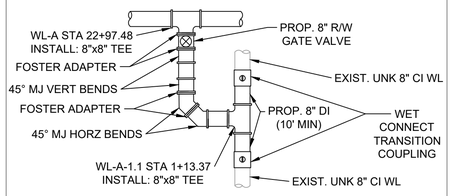






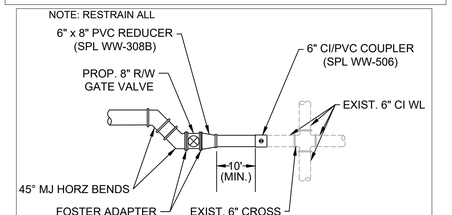


NOTE: RESTRAIN ALL



PROP. WL-A-1.1 TIE-IN DETAIL 1
N.T.S.

NOTE: RESTRAIN ALL



PROP. WL-A TIE-IN DETAIL 2
(NEXT SHEET)
STA 29+97.65
N.T.S.

AW WAIVERS #47 - #52 & #59 & #60:

LOCATION:
- WAIVER #47: REMOVED
- WAIVER #48: 22+87.45 (WL-A)
- WAIVER #49: SHOWN ON NEXT SHEET
- WAIVER #50: 22+90.37 TO 24+00.81 (WL-A)
- WAIVER #51: 23+22.33 (WL-A)
- WAIVER #52: 25+03.72 (WL-A)
- WAIVER #59: 22+73.18 (WL-A)
- WAIVER #60 22+77.59 (WL-A)

UTILITY:
- WAIVER #47: REMOVED
- WAIVERS #48, 50, 51, 52 & 59: PROPOSED 8" DIP WL-A
- WAIVER #49: SHOWN ON NEXT SHEET
- WAIVER #60: WL SERVICE METER BOX

DISTANCE:
- WAIVER #47: REMOVED
- WAIVER #48: 3.13' H TO PROP. 4' DIA SDMH
- WAIVER #49: SHOWN ON NEXT SHEET
- WAIVER #50: 4.63' H TO 4.99' TO PROP. 18" SD
- WAIVER #51: 3.29' H TO PROP. 4' DIA. SDMH
- WAIVER #52: 3.76' H TO PROP. 4' DIA SDMH
- WAIVER #59: 4.28' H TO PROP SD INLET
- WAIVER #60: 4.28' H TO PROP 4' DIA SDMH

THIS PROJECT REQUESTS A WAIVER FROM SECTION UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

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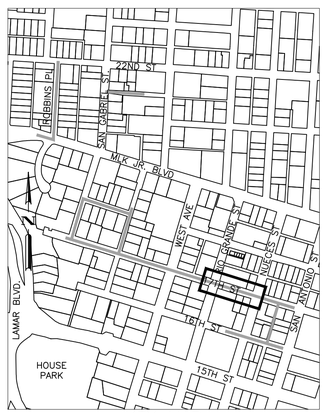
4. REFERENCE DETAIL ON 'STANDARD DETAILS II' SHEET 55 FOR TEMPORARY UTILITY LINE SUPPORT DETAIL PER U.C.M. 2.9.2.B.18
5. PROPOSED SERVICE LINES WILL BE 2" FROM MAIN TO METER PER COA STANDARD DETAIL 520-AW-01B.
6. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT PRIOR TO CONNECTING TO EXISTING CAST IRON WATER MAIN.
7. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.

SHEET 26/ WL A				
SERVICE #	STATION	SERVICE TYPE	EX. SERVICE SIZE	LENGTH*
1	22+51.23	SINGLE	3/4"	13.66'
2	23+86.11	SINGLE	3/4"	10.08'
3	25+18.13	MULTIPLE	4"	30.06'
4	25+20.30	SINGLE	3/4"	10.44'
5	25+77.59	SINGLE	3/4"	21.09'

LENGTH* = LENGTH TO EXISTING WATER METER. REFERENCE NOTE 7.

REFERENCE DETAILS 520-AW-01A & 520-AW-01B FOR APPLICABLE INSTALLATION INSTRUCTIONS FOR TABLE OF METER DETAILS ABOVE



KEY MAP

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE 2026-06-10
DESIGNED RB
DRAWN RM
REVISED
CHECKED RB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

WATER PLAN AND PROFILE WL-A 22+50 TO 25+80

CITY OF AUSTIN
AUSTIN WATER UTILITY

DAVCAR ENGINEERING
1010 Land Creek Cove
Austin, Texas
(512) 335-3338
TBPE FIRM No. F-3837

STATE OF TEXAS
10/21/2026
RAFAEL BECKMANN
108488
LICENSED PROFESSIONAL ENGINEER

SHEET
26 OF 93

100% SUBMITTAL

PLOTTED: 10/21/2026 10:23:12 AM BY: RAFAEL BECKMANN
FILE LOCATION: K:\BGE LARGE DIAMETER RL-17TH STREET WL\EAST 17TH STREET WL\DWGS\SHEETS\PROPOSED WL-A_P&P_REVISED_2023-12-05.DWG DATE SAVED: 10/21/2026

MATCHLINE STA.25+80 SEE SHEET 26

EXISTING 20" CI WL

NUECES STREET (80' R.O.W.)

STA. 1+22.82 WL-A-1.2 CONNECT TO EX. 4" WL N: 10075208.27 E: 3113714.06

STA. 1+04.44 WL-A-1.2 INSTALL: 1-4" 45° MJ HORZ BEND N: 10075191.69 E: 3113718.82

30'X10' LAUNCH PIT

EX. WATER MAIN TO BE REMOVED PRIOR TO BORE. CONTRACTOR TO PROVIDE TEMPORARY WATER MAIN

SEE "SPECIAL NOTE EX. 4in WL STATUS"

PROP. 8"WL B

10'X10' RECEIVING PIT

STA. 1+17.42 WL-A-1.2 INSTALL: 1-4" 45° MJ HORZ BEND N: 10075203.07 E: 3113712.59

55.58 LF 16" STEEL ENCASEMENT (⅜" THICK)

PROP. 48" WATERTIGHT WWMH

PROP. 8"WWL A

WEST 17TH STREET (60' R.O.W.)

PROP. 48" WWMH

STA. 28+59.91 WL-A =WL-E STA 4+38.57 INSTALL: 1-8"X8" TEE 1-8" R/W GATE VALVE GIS # CONNECT TO 8" DI WL-E VPI ▲ 1° 29' 16" DEFLECT VERT N: 10075144.34 E: 3113860.20

STA. 28+71.86 WL-A INSTALL: 1-8"X4" SWIVEL TEE 1-4" R/W GATE VALVE GIS #2265661 21' LF 4" DI CL 350 PIPE N: 10075140.88 E: 3113871.64

STA. 29+73.55 WL-A INSTALL: 1-8" 45° MJ HORZ BEND N: 10075111.83 E: 3113969.09

PROP. 8" WWL F

PROP. 10' 48" WWMH

32.93 LF 16" STEEL ENCASEMENT (⅜" THICK)

AW WAIVER #49

SEE CONNECTION DETAIL 2 PREVIOUS SHEET

AW WAIVERS #49, #53 & #54:

LOCATION:
WAIVER #49: 29+77.13 TO 29+97.65 (WL-A)
WAIVER #53: 26+73.26 (WL-A)
WAIVER #54: 28+09.68 to 28+91.87 (WL-A)

UTILITY:
WAIVERS #49, #53 & #54: PROP 8" DIP WL-A

DISTANCE:
WAIVER #49: 4.27' H TO EX. 2" CS GAS
WAIVER #53: 4.12' H PROP. 8'x4' SDJB
WAIVER #54: 4.22' H TO 4.99' H FROM EX.

UGE

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SHEET 27/ WL A				
SERVICE #	STATION	SERVICE TYPE	EX. SERVICE SIZE	LENGTH*
6	25+81.04	SINGLE	3/4"	9.42'
7	27+10.90	SINGLE	4"	22.82'
8	27+53.55	SINGLE	3/4"	19.29'
9	27+73.95	SINGLE	3/4"	11.65'
10	27+85.25	SINGLE	3/4"	9.70'
11	28+06.86	SINGLE	3/4"	18.94'
12	28+71.86	MULTIPLE	4"	20.51'
13	29+05.68	SINGLE	3/4"	10.39'
14	29+08.59	SINGLE	3/4"	10.41'
15	29+69.00	SINGLE	3/4"	20.79'
16	29+84.50	SINGLE	3/4"	10.84'

LENGTH* = LENGTH TO EXISTING WATER METER. REFERENCE NOTE 7.

REFERENCE DETAILS 520-AW-01A & 520-AW-01B FOR APPLICABLE INSTALLATION INSTRUCTIONS FOR TABLE OF METER DETAILS ABOVE

NOTES:
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8. SERVICE TAPS TO BE A MINIMUM 3 FEET SEPARATION FROM STEEL CASING AND FITTINGS.

SCALE: 1" = 20'
V: 1" = 02'

CAUTION !!! OVERHEAD ELECTRIC CROSSING

AW WAIVER #53

AW WAIVER #54

SEE CONNECTION DETAIL 2 ON SHEET 32

CAUTION !!! OVERHEAD ELECTRIC CROSSING

STA. 26+30.99 WL-A INSTALL: 1-8" R/W GATE VALVE GIS #2265593 N: 10075210.19 E: 3113640.95

STA. 27+10.90 WL-A INSTALL: 1-8"X4" SWIVEL TEE 1-8" R/W GATE VALVE GIS #2265595 BEGIN 4" DI CL 350 WL-A-1.2 N: 10075187.43 E: 3113717.56

WV #145279 TO BE REMOVED

FH 145407 TO BE REMOVED SEE NOTE 1&2

3' MIN CASING TO VALVE

STA. 27+43.85 WL-A INSTALL: 1-2" CAV (TY 1) PER COA DETAIL 511-AW-04A GIS #2265614 N: 10075177.91 E: 3113749.10

STA. 27+27.14 WL-A INSTALL: 1-8"X6" SWIVEL TEE W/ HYDRANT ADAPTOR TO RESTRAIN VALVE TO TEE 1-6" R/W GATE VALVE GIS #2265606 1-FH ASSEMBLY GIS #2265604 15 LF 6" DI CL 350 PIPE N: 10075182.74 E: 3113733.11

NUECES ALLEY (20' WIDTH)

18.00 LF 16" STEEL ENCASEMENT (⅜" THICK)

PROP. 8" DI WL-E SEE SHEET 32

CAUTION !!! OVERHEAD ELECTRIC CROSSING

STA. 27+77.13 WL-A INSTALL: 1-8" 45° MJ HORZ BEND 1-8" R/W GATE VALVE GIS #2265619 N: 10075108.66 E: 3113970.77

STA. 29+80.39 WL-A INSTALL: 1-8"X6" REDUCER N: 10075107.72 E: 3113973.89

STA. 29+97.65 WL-A TIE TO EXISTING 6" CI WL 1-6" WET CONNECTION N: 10075102.69 E: 3113990.40

WV #145526

SAN ANTONIO STREET (80' R.O.W.)

INTERSECTION:530 GRID:J23

INTERSECTION:521 GRID:J23

1700 NUECES ST. 1700 NUECES CONDOMINIUMS DOC. 2007148149 OPRTCT — TCAD NO INFORMATION

1705 NUECES ST. NO OWNER INFO AVAILABLE

506 W 17 ST. PAUL J. DUNHAM DOC. 2006246046 OPRTCT — TCAD 0210021111

504 W 17 ST. FISCHER REAL ESTATE FAMILY LP DOC. 2014069521 OPRTCT — TCAD 0210021109

502 W 17 ST. SETTLERS LANDING LTD DOC. 2014069521 OPRTCT — TCAD 0210021109

1702 SAN ANTONIO ST. SETTLERS LANDING LTD DOC. 2014069521 OPRTCT — TCAD 0210021108

601 W 17 ST. PAUL J. DUNHAM DOC. 2005115902 OPRTCT — TCAD 0210020405

507 W 17 ST. 2425 ELMONT LLC DOC. 2015159547 OPRTCT — TCAD 0210021008

O'DELL SUBDIVISION BK. 84, PG. 198A PRTCT

TCAD 0210021009

SPECIAL NOTE EX. 4in WL STATUS:
EX. 4in WL STATUS UNKNOWN. CONTRACTOR, IN COORDINATION WITH CONSTRUCTION INSPECTOR, TO FIELD VERIFY WHETHER 4-INCH WATER LINE IS IN SERVICE OR NOT, PRIOR TO INSTALLATION OF 8-INCH WATERLINE-A AT STA 27+10.90. ABANDONMENT OF 4-INCH WATER LINE SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE AND THE ENGINEER.

PROPOSED 8" WL-A DI CL 350

RESTRAIN 238' LF

RESTRAIN 44' LF

RESTRAIN 78' LF

PROP 18" RCP

EXISTING GRADE / PROPOSED GRADE

ARV

11.60 LF OF 8" DI CL 350 @ 0.73%

30' X 10' LAUNCH PIT

10' X 10' RECEIVING PIT

3' CLR (MIN)

9.84 LF OF 8" DI CL 350 @ 99.74%

13.17 LF OF 8" DI CL 350 @ 0.02%

6.15 LF OF 8" DI CL 350 @ 99.55%

30.20 LF OF 8" DI CL 350 @ 1.82%

78.20 LF OF 8" DI CL 350 @ 2.81%

85.87 LF OF 8" DI CL 350 @ 0.00%

95.58 LF OF 16" STEEL ENCASEMENT (⅜" THICK)

SEE "SPECIAL NOTE EX. 4in WL STATUS"

1.5' CLR

1.6' CLR

4' COVER (MIN)

3.3' CLR

18.00 LF OF 16" STEEL ENCASEMENT (⅜" THICK)

120.48 LF OF 8" DI CL 350 @ 0.24%

54.76 LF OF 8" DI CL 350 @ 0.28%

32.93 LF OF 16" STEEL ENCASEMENT (⅜" THICK)

2.2' CLR

LIMESTONE

9' MIN

10.23 LF OF 6" DI CL 350 @ 0.01%

SEE CONNECTION DETAIL 2 PREVIOUS SHEET

EXIST. 6" CI WL

1.65 LF OF 6" DI CL 350 @ 99.65%

5.38 LF OF 6" DI CL 350 @ 0.00%

STA: 29+46.93 OFFSET = -15.281 WL A BOREHOLE B-7

8" ASPHALT

5" BASE FILL

FAT CLAY

STA. 26+58.56 24" CI WL ELEV: UNK

STA. 26+63.43 30" CONC WWL FL: 531.31

STA. 26+70.00 18" RCP SD FL: 533.46

STA. 26+74.12 60" SD ELEV: UNK

STA. 26+73.77 8'x8' JBOX ELEV: UNK

STA. 26+83.62 UNK GAS (ABAND) ELEV: UNK

STA. 26+87.44 4" GAS ELEV: UNK

STA. 26+91.18 UNK FIBER OPTIC ELEV: UNK

STA. 27+00.97 EXIST. 4" CI WL ELEV: UNK

STA. 27+69.11 0.75" PE TXGAS SERVICE ELEV: UNK

STA. 27+72.17 UNK TXGAS SERVICE (ABANDONED) ELEV: UNK

STA. 28+08.99 UNK UG ELECTRIC ELEV: UNK

STA. 28+31.42 1.25" PE TXGAS SERVICE ELEV: UNK

STA. 28+24.92 UNK TXGAS SERVICE (ABANDONED) ELEV: UNK

STA. 29+34.56 WL-A BEGIN 16" STEEL ENCASEMENT OPEN TRENCH FL = 527.96

STA. 29+67.49 WL-A END 16" STEEL ENCASEMENT FL = 527.88

STA. 30+00.08 EXIST. 2" GAS ELEV: UNK

STA. 30+01.02 EXIST. 6" CI CROSS ELEV: UNK

STA. 26+24.89 WL-A VPI ▲ 2° 36' 54" DEFLECT VERT FL = 534.66 — FL 536.00; EG 541.19

STA. 26+30.99 WL-A INSTALL: 1-8" R/W GATE VALVE GIS #2265593 FL = 534.82

STA. 26+36.49 WL-A INSTALL: 1-8" 45° MJ VERT BEND FL = 534.58

STA. 26+46.32 WL-A INSTALL: 1-8" 45° MJ VERT BEND FL = 524.77 — FL 524.77; EG 538.76

STA. 26+50.36 WL-A END 16" STEEL ENCASEMENT VIA JACK AND BORE INSTALL: 1-8" MJ SLEEVE FL = 524.77

STA. 27+05.95 WL-A BEGIN 16" STEEL ENCASEMENT VIA JACK AND BORE FL = 524.77 — FL 524.77; EG 537.13

STA. 27+10.90 WL-A INSTALL: 1-8"X4" SWIVEL TEE 1-8" R/W GATE VALVE GIS #2265595 BEGIN 4" DI CL 350 WL-A-1.2 FL = 524.77 — FL 524.77; EG 538.00

STA. 27+27.14 WL-A INSTALL: 1-8"X6" SWIVEL TEE W/ HYDRANT ADAPTOR TO RESTRAIN VALVE TO TEE 1-6" R/W GATE VALVE GIS #2265606 1-FH ASSEMBLY GIS #2265604 15 LF 6" DI CL 350 PIPE FL = 524.77 — FL 524.77; EG 535.79

STA. 27+32.19 WL-A INSTALL: 1-8" 45° MJ VERT BEND FL = 524.77

STA. 27+38.34 WL-A INSTALL: 1-8" 45° MJ VERT BEND FL = 530.89

STA. 27+43.85 WL-A INSTALL: 1-2" CAV (TY 1) PER COA DETAIL 511-AW-04A GIS #2265614 FL = 530.89 — FL 529.93; EG 534.67

STA. 27+51.50 WL-A VPI ▲ 1° 01' 59" DEFLECT VERT FL = 530.89

STA. 27+81.71 WL-A VPI ▲ 0° 33' 53" DEFLECT VERT FL = 530.34

STA. 28+44.55 PROP 8" WWL-F FL: 524.19 — FL 528.42; EG 533.86

STA. 28+48.60 EX. 10" CONC WWL TBR FL: 527.75

STA. 28+59.91 WL-A =WL-E STA 4+38.57 INSTALL: 1-8"X8" TEE 1-8" R/W GATE VALVE GIS # CONNECT TO 8" DI WL-E VPI ▲ 1° 29' 16" DEFLECT VERT FL = 528.12 — FL 528.05; EG 533.57

STA. 28+71.86 WL-A INSTALL: 1-8"X4" SWIVEL TEE 1-4" R/W GATE VALVE GIS #2265661 21' LF 4" DI CL 350 PIPE FL = 528.14 — FL 527.53; EG 532.97

STA. 29+43.60 UNK WW SERVICE ELEV: UNK

STA. 29+48.59 UNK WW SERVICE ELEV: UNK

STA. 29+58.50 UNK WW SERVICE ELEV: UNK

STA. 29+73.55 WL-A INSTALL: 1-8" 45° MJ HORZ BEND FL = 527.87

STA. 29+77.13 WL-A INSTALL: 1-8"X4" SWIVEL TEE 1-8" R/W GATE VALVE GIS #2265619 FL = 527.86 — EG 532.37

STA. 29+80.39 WL-A INSTALL: 1-8"X6" REDUCER FL = 527.85

STA. 29+85.77 WL-A INSTALL: 1-6" 45° MJ VERT BEND FL = 527.94

STA. 29+87.42 WL-A INSTALL: 1-6" 45° MJ VERT BEND FL = 529.56

STA. 29+97.65 WL-A TIE TO EXISTING 6" CI WL 1-6" WET CONNECTION FL = 528.56 — EG 532.62

PROPOSED 4" DI CL 350 WL-A-1.2

STA. 1+00 RESTRAIN 23' LF

STA. 1+23

EXISTING GRADE / PROPOSED GRADE

6.84 LF OF 4" DI CL 350 @ 0.59%

9.99 LF OF 4" DI CL 350 @ 100.40%

5.99 LF OF 4" DI CL 350 @ 0.00%

STA. 1+00.00 WL-A-1.2 CONNECT TO WL-A VIA 1-8"X4" SWIVEL TEE INSTALL: 1-4" R/W GATE VALVE GIS #2265656 — FL 524.93; EG 536.85

STA. 1+04.44 WL-A-1.2 INSTALL: 1-4" 45° MJ HORZ BEND FL = 524.93

STA. 1+05.99 WL-A-1.2 INSTALL: 1-4" 45° MJ VERT BEND FL = 524.93

STA. 1+15.88 WL-A-1.2 INSTALL: 1-4" 45° MJ VERT BEND FL = 534.96 — EG 536.87

STA. 1+17.83 EXIST UNK WWL (T.B.A.) ELEV: UNK

STA. 1+17.42 WL-A-1.2 INSTALL: 1-4" 45° MJ HORZ BEND FL = 534.97

STA. 1+22.82 WL-A-1.2 CONNECT TO EX. 4" WL FL = 535.00

0+75 1+00 1+65

535 530 525 520

KEY MAP

22ND ST, ROBBINS PL, SAN JACINTO BLVD, MLK JR BLVD, WEST AVE, NUECES ST, LAMAR BLVD, 8TH ST, SAN ANTONIO ST, 15TH ST, HOUSE PARK

REVIEWED
October 22, 2026
Jaron Hogenson
Austin Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE 2026-06-10
DESIGNED RB
DRAWN RM
REVISED
CHECKED RB

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

WATER PLAN AND PROFILE
WL-A 25+80 TO END

CITY OF AUSTIN
AUSTIN WATER UTILITY

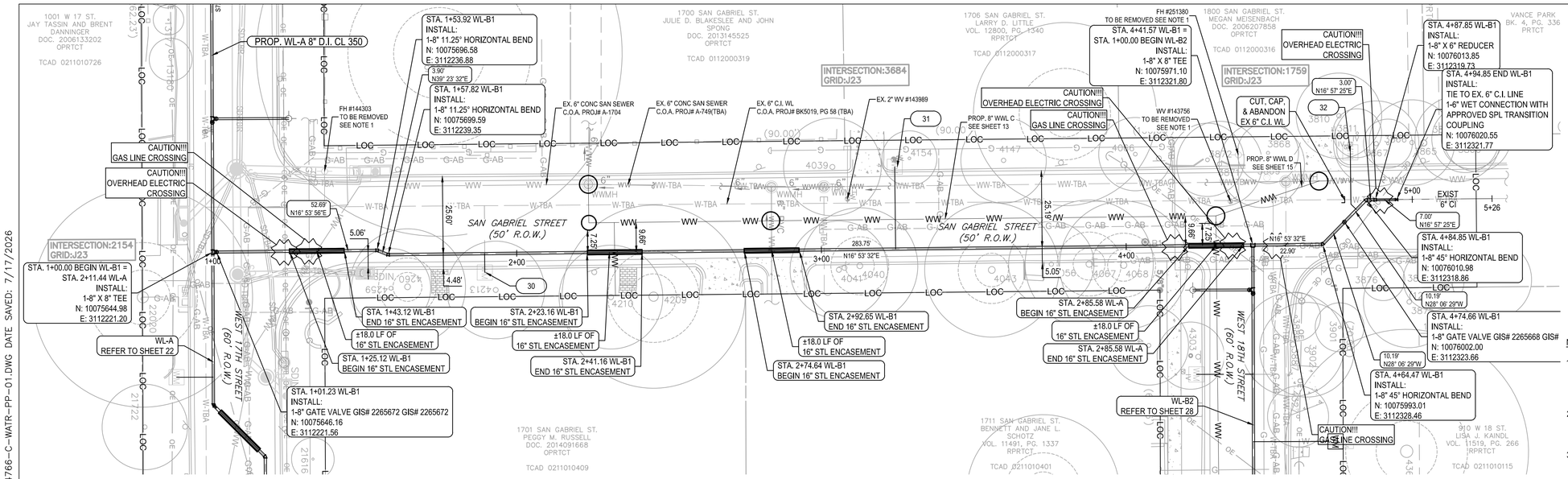
DAVCAR ENGINEERING
1010 Land Creek Cove
Austin, Texas
(512) 617-3300
TBPE FIRM No. F-3837

STATE OF TEXAS
2026 10/21
RAFAEL BECKMANN
108488
LICENSED PROFESSIONAL ENGINEER

SHEET 27 OF 93

100% SUBMITTAL

PLOT DATE: 10/21/2026 LOCATION: K:\BGE LARGE DIAMETER RL-17TH STREET WL\EAST 17TH STREET WL\DWGS\SHEETS\PROPOSED WL-A_P&P_REVISED_2023-12-05.DWG



0 10' 20' 40'

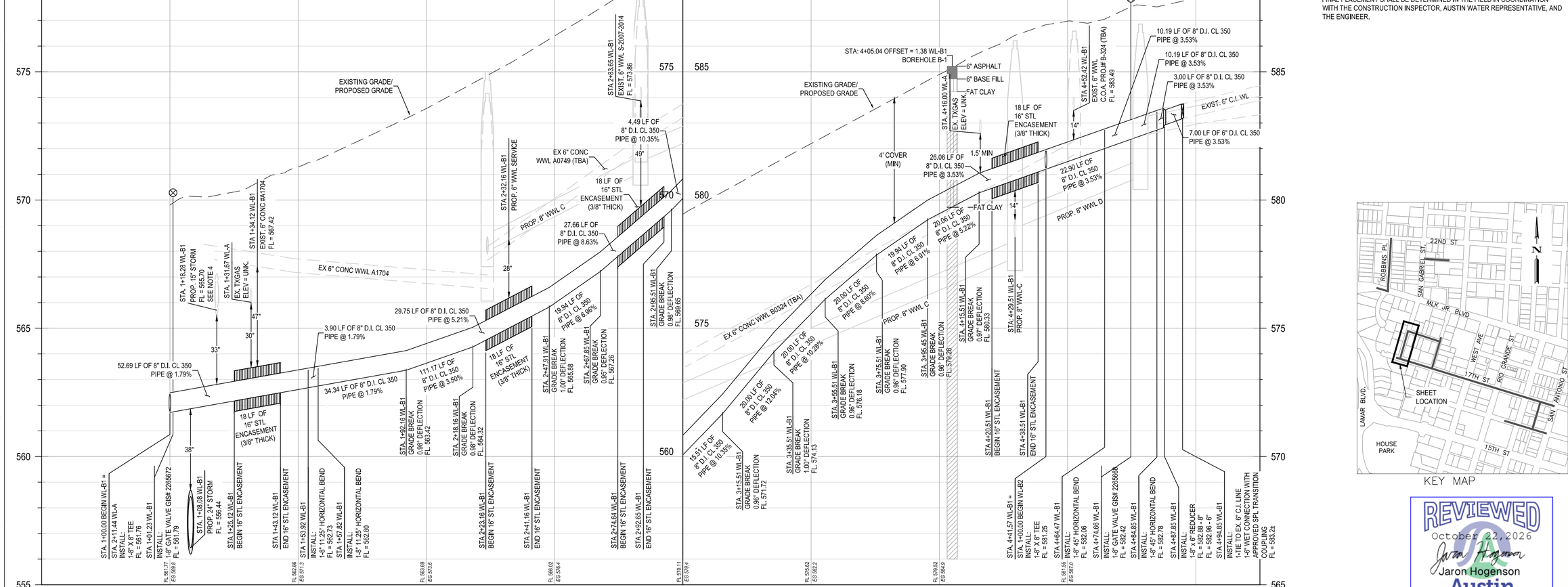
SCALE: 1" = 20'

SHEET 28/WL-B1				
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	SERVICE LF
30	1+89.48	SINGLE	3/4"	7'
31	3+24.33	SINGLE	3/4"	27'
32	4+80.35	SINGLE	3/4"	19'

REFERENCE DETAILS 520-AW-01A & 520-AW-01B
FOR APPLICABLE INSTALLATION INSTRUCTIONS
FOR TABLE OF METER DETAIL ABOVE

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM - VALVE AND HYDRANT SERVICES SUPERVISOR AT 512-972-1280.
2. CONTRACTOR IS RESPONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. SEE SPL DETAIL SHEET WW-506 FOR APPROPRIATE TRANSITION COUPLING. FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
3. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT ON EXISTING 6" WL PRIOR TO THE TIE-IN POINT. IF THE EXISTING LINE IS CAST IRON AND CANNOT BE RESTRAINED: THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE EXISTING CAST IRON PIPE TO PROVIDE THE REQUIRED RESTRAINT.
4. CONTRACTOR TO PROTECT, SUPPORT & MAINTAIN EXISTING STORM PIPE DURING CONSTRUCTION. IF DAMAGED CONTRACTOR SHALL REPAIR AND/OR REPLACE TO ORIGINAL OR BETTER CONDITION.
5. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.



KEY MAP

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE 2016-06-02
DESIGNED MJN
DRAWN JRF
REVISED
CHECKED JB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

WATER PLAN AND PROFILE WL-B1 1+00 - END

CITY OF AUSTIN
AUSTIN WATER UTILITY

7500 Rialto Blvd., Building 1, Suite 240
Austin, Texas 78735
Phone: 512.326.5123
www.ardurra.com
Engineering License #F-10053
ARDURRA
Ardurra Group, Inc.
Surveying Firm 10194688

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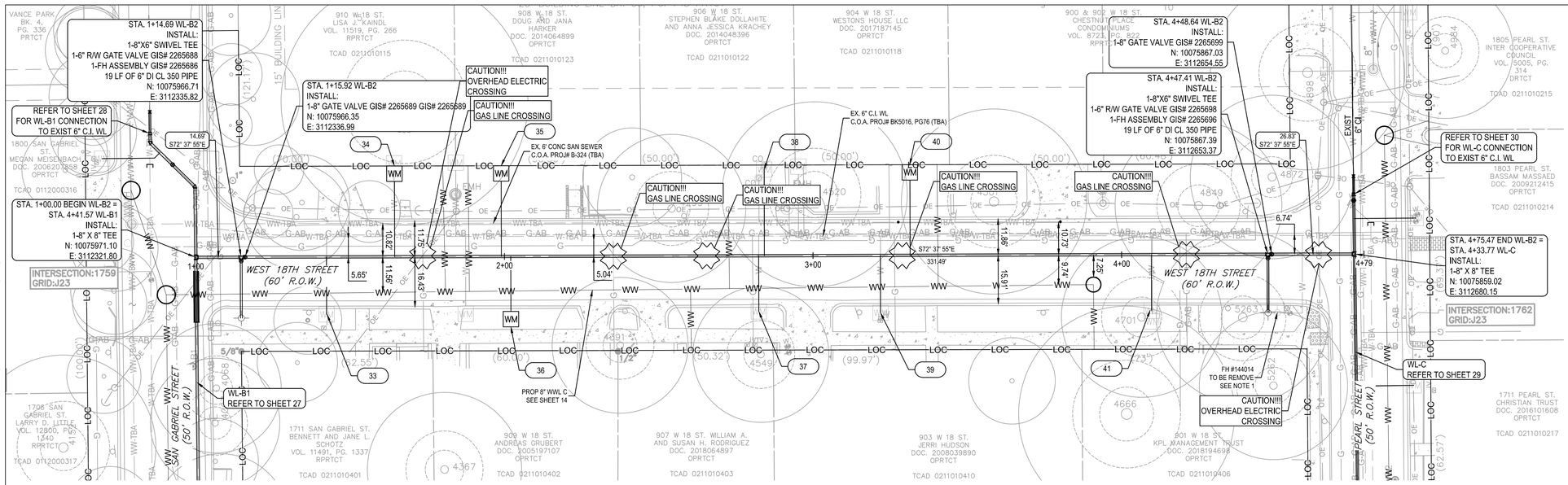
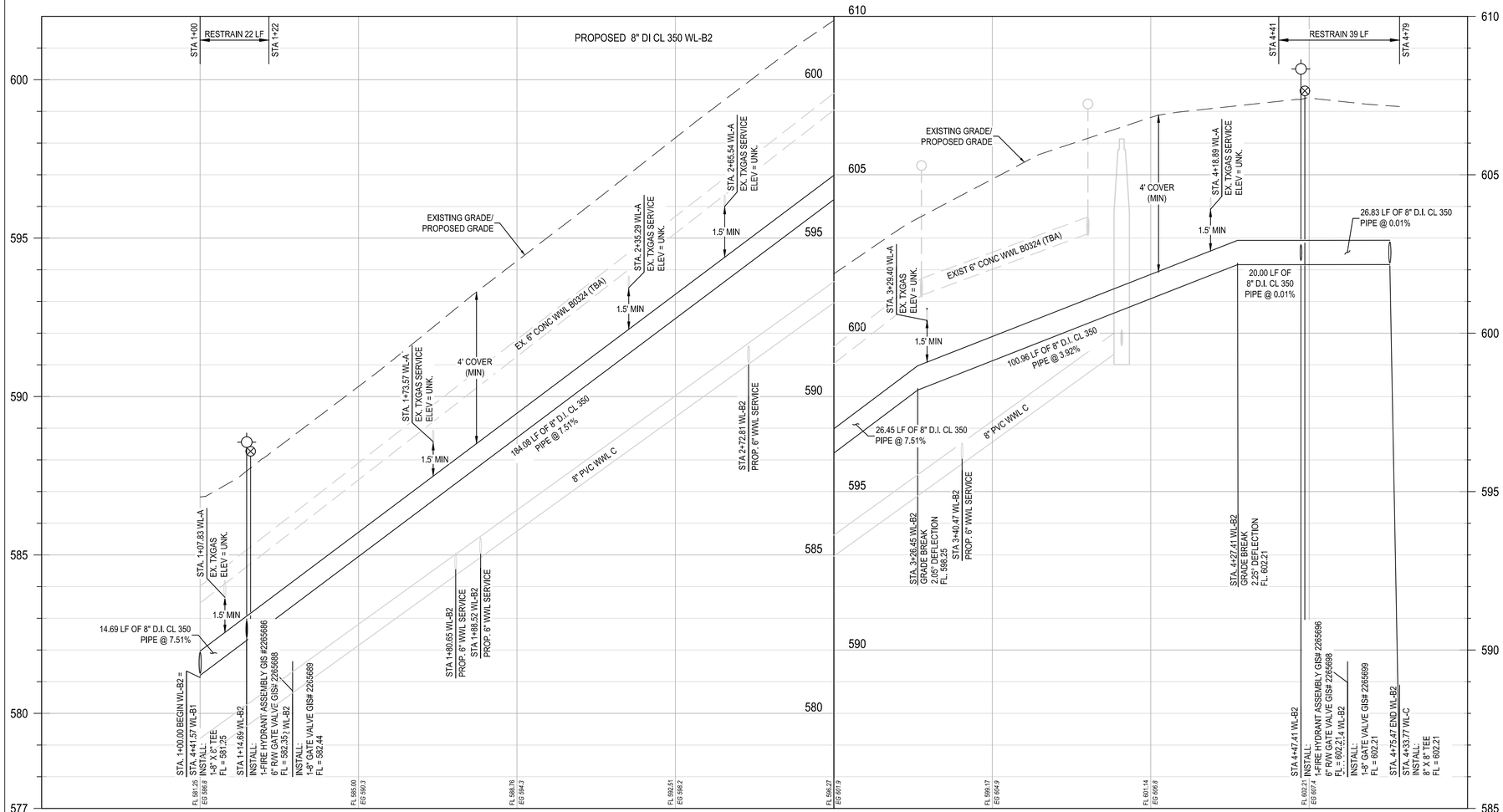
STATE OF TEXAS
JAMES K BRONIKOWSKI
115524
LICENSED
PROFESSIONAL ENGINEER
07/08/26

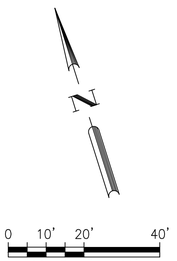
SHEET
28 OF 89

90% SUBMITTAL

FILE LOCATION: U:\BROWN & GAY ENGINEERS\170034 CITY OF AUSTIN LG DIA PIPELINE ENG\010 W 17TH ST WATER AND WW PIPE REHAB\20-DRAWINGS\PLANS\CIVIL\4766-C-WATR-PP-01.DWG DATE SAVED: 7/17/2026





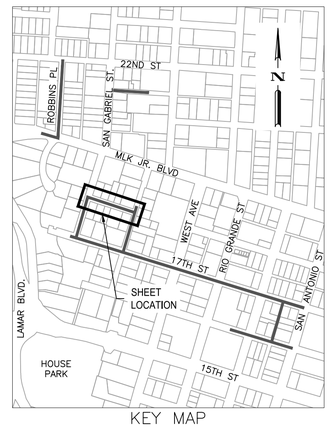


SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	SERVICE LF
33	1+42.33	SINGLE	3/4"	19'
34	1+64.43	SINGLE	3/4"	30'
35	1+99.01	SINGLE	3/4"	30'
36	2+02.06	SINGLE	3/4"	18'
37	2+82.38	SINGLE	3/4"	19'
38	2+84.25	SINGLE	3/4"	28'
39	3+31.48	SINGLE	3/4"	30'
40	3+21.83	SINGLE	3/4"	19'
41	4+09.64	SINGLE	3/4"	19'

REFERENCE DETAILS 520-AW-01A & 520-AW-01B
FOR APPLICABLE INSTALLATION INSTRUCTIONS
FOR TABLE OF METER DETAIL ABOVE

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM - VALVE AND HYDRANT SERVICES SUPERVISOR AT 512-972-1280.
2. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.



KEY MAP

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE 2016-06-02
DESIGNED MJN
DRAWN JRF
REVISED
CHECKED JB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

WATER PLAN & PROFILE WL-B2 1+00 - END

CITY OF AUSTIN
AUSTIN WATER UTILITY

ARDURRA
GOLDBERG, MORTARA, GRAY &
7500 Rialto Blvd., Building 1, Suite 240
Austin, Texas 78735
Phone: 512.327.1353
www.Ardurra.com
Engineering License #F-10953
Ardurra Group, Inc.
Surveying Firm 10194688

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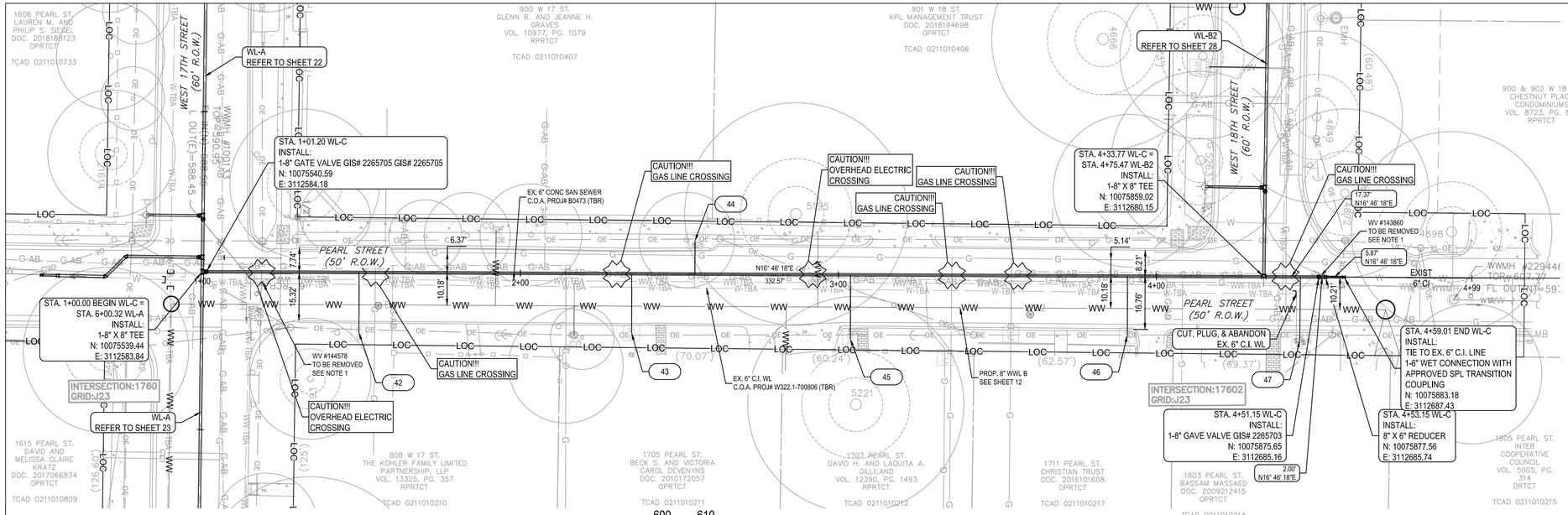
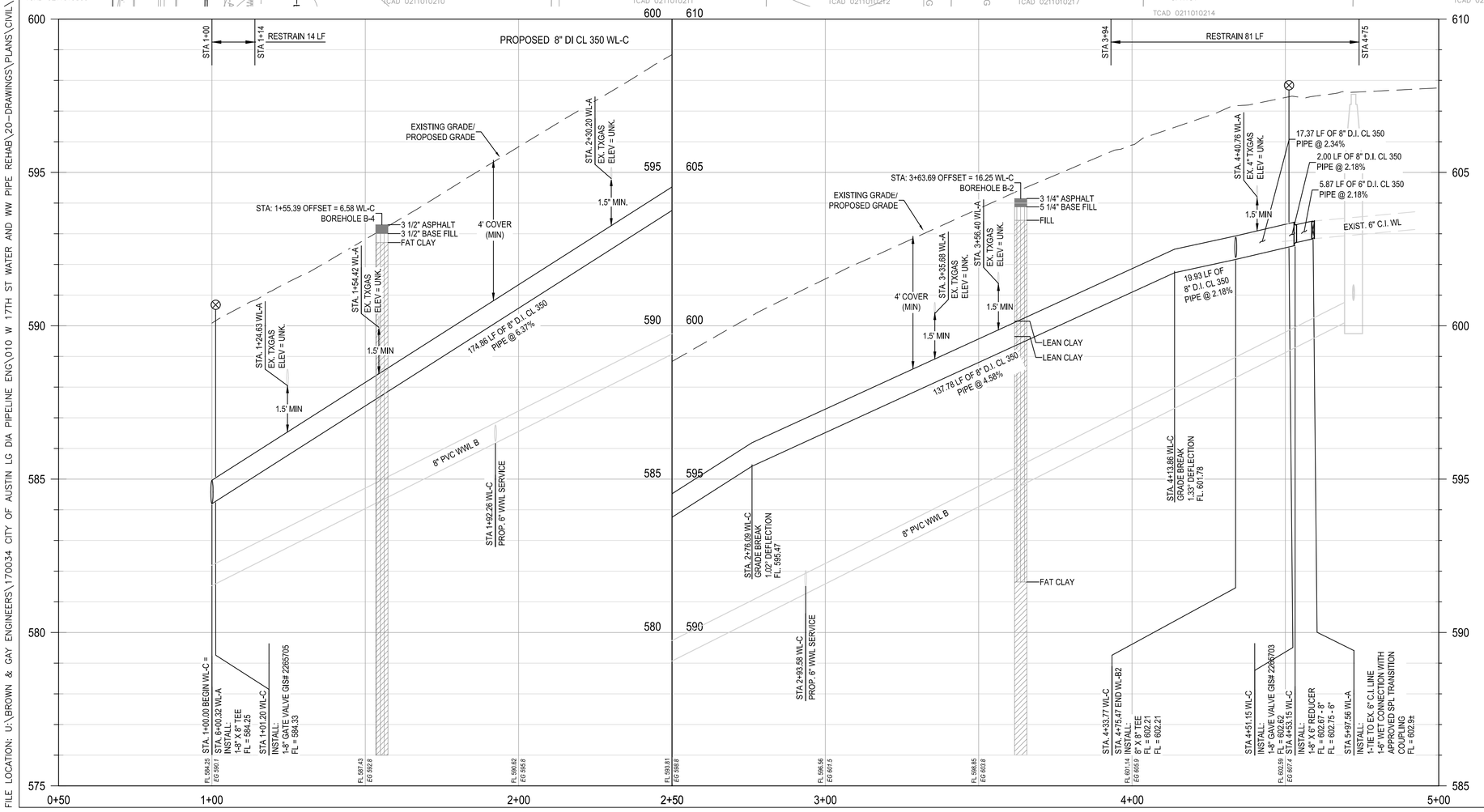
STATE OF TEXAS
JAMES K BRONIKOWSKI
115524
LICENSED
PROFESSIONAL ENGINEER
07/08/26

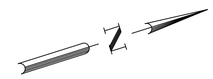
SHEET
29 OF 89

90% SUBMITTAL

FILE LOCATION: U:\BROWN & GAY ENGINEERS\170034 CITY OF AUSTIN LG DIA PIPELINE ENG\010 W 17TH ST WATER AND WW PIPE REHAB\20-DRAWINGS\PLANS\CIVIL\4766-C-WATR-PP-01.DWG DATE SAVED: 7/17/2026







0 10' 20' 40'

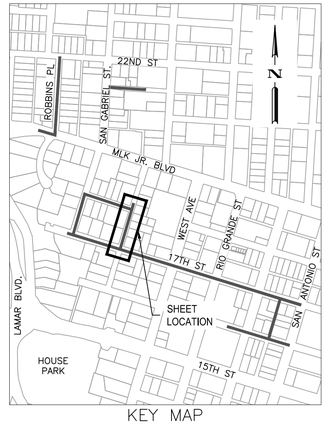
SCALE: 1" = 20'

SHEET 30/WL-C				
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	SERVICE LF
42	1+49.33	SINGLE	3/4"	19'
43	2+35.08	SINGLE	3/4"	19'
44	2+54.88	SINGLE	3/4"	11'
45	3+03.87	SINGLE	3/4"	21'
46	3+90.96	SINGLE	3/4"	19'
47	4+42.75	SINGLE	3/4"	24'

REFERENCE DETAILS 520-AW-01A & 520-AW-01B
FOR APPLICABLE INSTALLATION INSTRUCTIONS
FOR TABLE OF METER DETAIL ABOVE

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM - VALVE AND HYDRANT SERVICES SUPERVISOR AT 512-972-1280.
2. CONTRACTOR IS RESPONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. SEE SPL DETAIL SHEET WW-506 FOR APPROPRIATE TRANSITION COUPLING. FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
3. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT ON EXISTING 6" WL PRIOR TO THE TIE-IN POINT. IF THE EXISTING LINE IS CAST IRON AND CANNOT BE RESTRAINED: THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE THE EXISTING CAST IRON PIPE TO PROVIDE THE REQUIRED RESTRAINT.
4. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.



KEY MAP

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Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO.	4766-03
FILE	
DATE	2016-06-02
DESIGNED	MJN
DRAWN	JRF
REVISED	
CHECKED	JB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

WATER PLAN & PROFILE WL-C 1+00 - END

CITY OF AUSTIN
AUSTIN WATER UTILITY

ARDURRA
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Engineering License #F-10953
Surveying License #LS-100653
Ardurra Group, Inc.
Surveying Firm 10194606

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07/17/26

SHEET
30 OF 89

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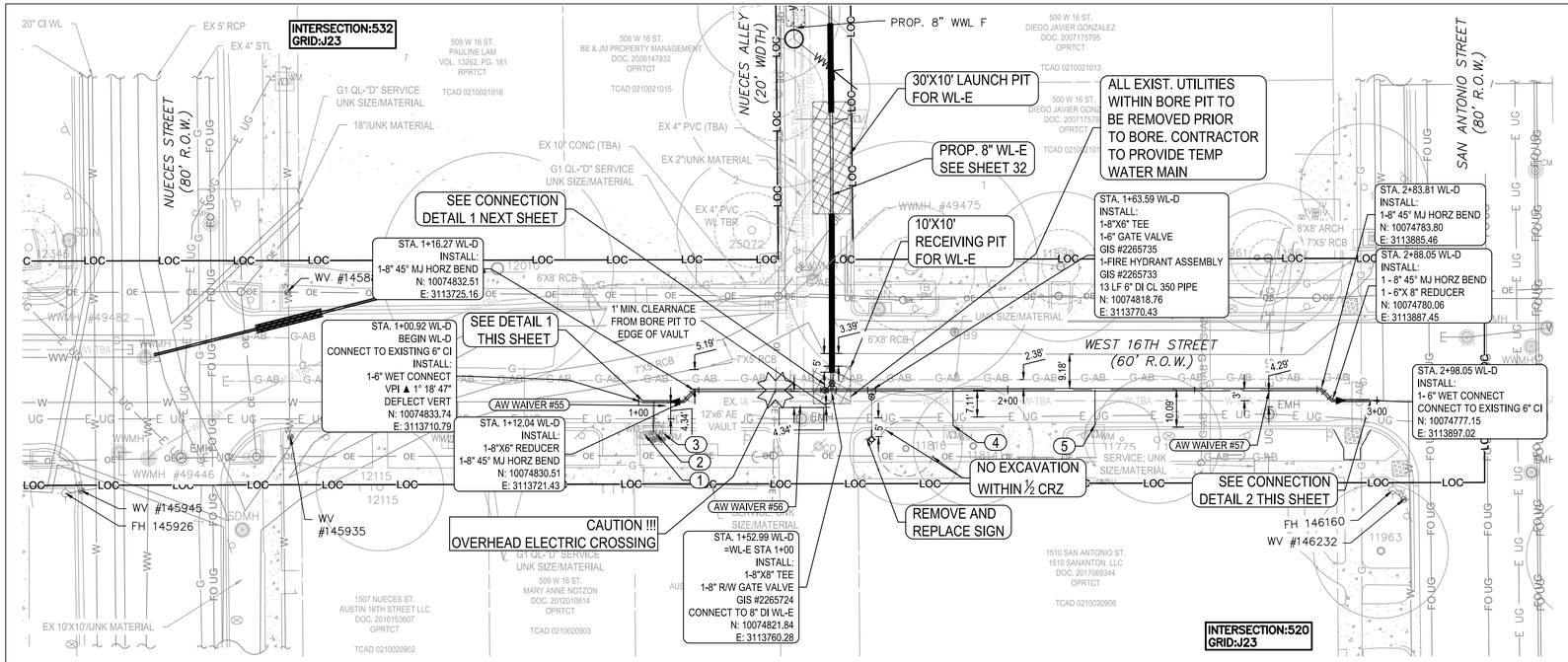
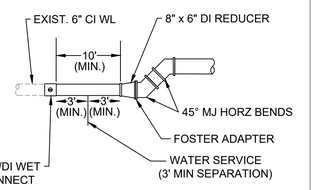
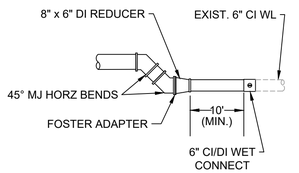


NOTE: RESTRAIN ALL

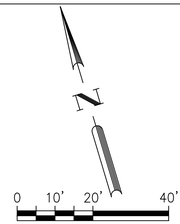


PROP. WL-D CONNECTION DETAIL 1
STA 1+00.92
N.T.S.

NOTE: RESTRAIN ALL



PROP. WL-D CONNECTION DETAIL 2
STA 2+98.05
N.T.S.



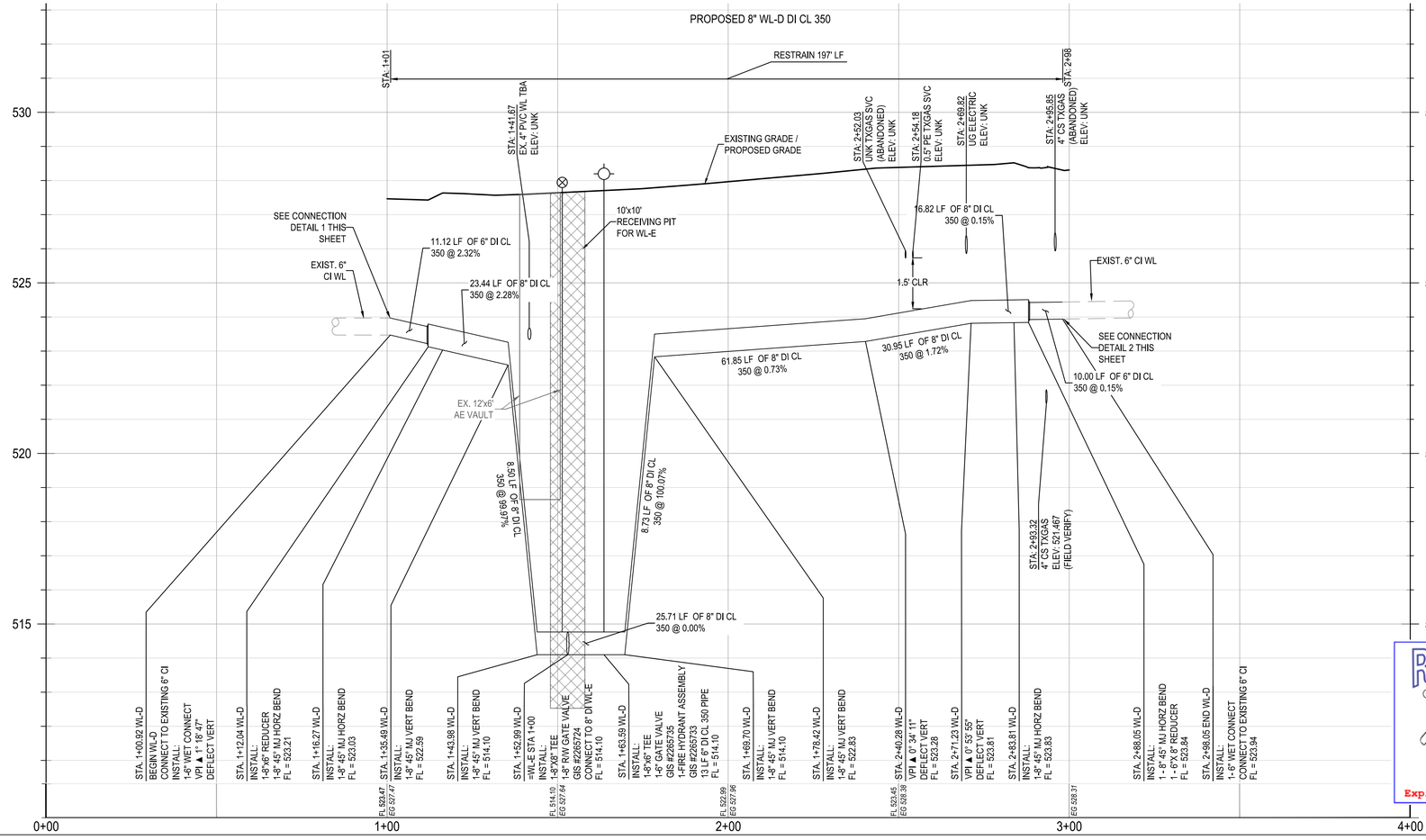
AW WAIVERS #55, #56 & #57:

LOCATION:
WAIVER #55: 1+00.00 TO 1+12.04 (WL-D)
WAIVER #56: 1+38.85 TO 1+50.76 (WL-D)
WAIVER #57: 2+69.89 (WL-D)

UTILITY:
WAIVERS #55-57: PROPOSED 8" DIP WL-D

DISTANCE:
WAIVER #55: 4.34' H FROM EX. EUG
WAIVER #56: 4.34' H FROM EX. 12'x6' AE VAULT
WAIVER #57: 4.29' H FROM EX. 4' DIA. AE MH

THIS PROJECT REQUESTS A WAIVER FROM SECTION UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

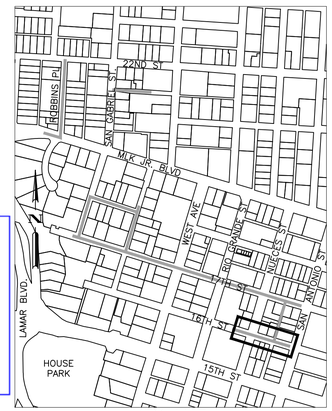


SHEET 31/ WL D				
SERVICE #	STATION	SERVICE TYPE	EX. SERVICE SIZE	LENGTH*
1	1+04.00	SINGLE	3/4"	9.56'
2	1+06.00	SINGLE	3/4"	9.44'
3	1+08.00	SINGLE	3/4"	9.60'
4	1+85.34	SINGLE	3/4"	9.53'
5	2+23.34	SINGLE	3/4"	9.33'
LENGTH* = LENGTH TO EXISTING WATER METER. REFERENCE NOTE 7.				

REFERENCE DETAILS 520-AW-01A & 520-AW-01B FOR APPLICABLE INSTALLATION INSTRUCTIONS FOR TABLE OF METER DETAILS ABOVE

NOTES:

1. CONTRACTOR IS REPSONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. CONNECTION FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
2. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER (AW). NOTICE MUST BE 48 HOURS PRIOR TO RETURN TO: PIPELINE OPERATIONS DISTRIBUTION SYSTEM MAINTENANCE - VALVES AND HYDRANT SERVICES AT 512-972-1280.
3. FIRE HYDRANTS ARE TO REMAIN ACTIVE THROUGHOUT CONSTRUCTION THROUGH SUPPORT OF EXISTING WATER LINES THROUGH TRENCHES AND BORE PITS OR ESTABLISHING A TEMPORARY CONNECTION.
4. REFERENCE DETAIL ON 'STANDARD DETAILS II' SHEET 55 FOR TEMPORARY UTILITY LINE SUPPORT DETAIL PER U.C.M. 2.9.2.B.18
5. PROPOSED SERVICE LINES WILL BE 2" FROM MAIN TO METER PER COA STANDARD DETAIL 520-AW-01B.
6. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT PRIOR TO CONNECTING TO EXISTING CAST IRON WATER MAIN.
7. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.
8. SERVICE TAPS TO BE A MINIMUM 3 FEET SEPARATION FROM STEEL CASING AND FITTINGS.



REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

STATE OF TEXAS
2026 10/21
RAFAEL BECKMANN
108488
LICENSED PROFESSIONAL ENGINEER

BGE JOB NO. 4766-03
FILE
DATE 2026-06-10
DESIGNED RB
DRAWN RM
REVISED
CHECKED RB

NO.	REVISION	BY	DATE

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

WATER PLAN AND PROFILE
WL-D 1+00 TO END

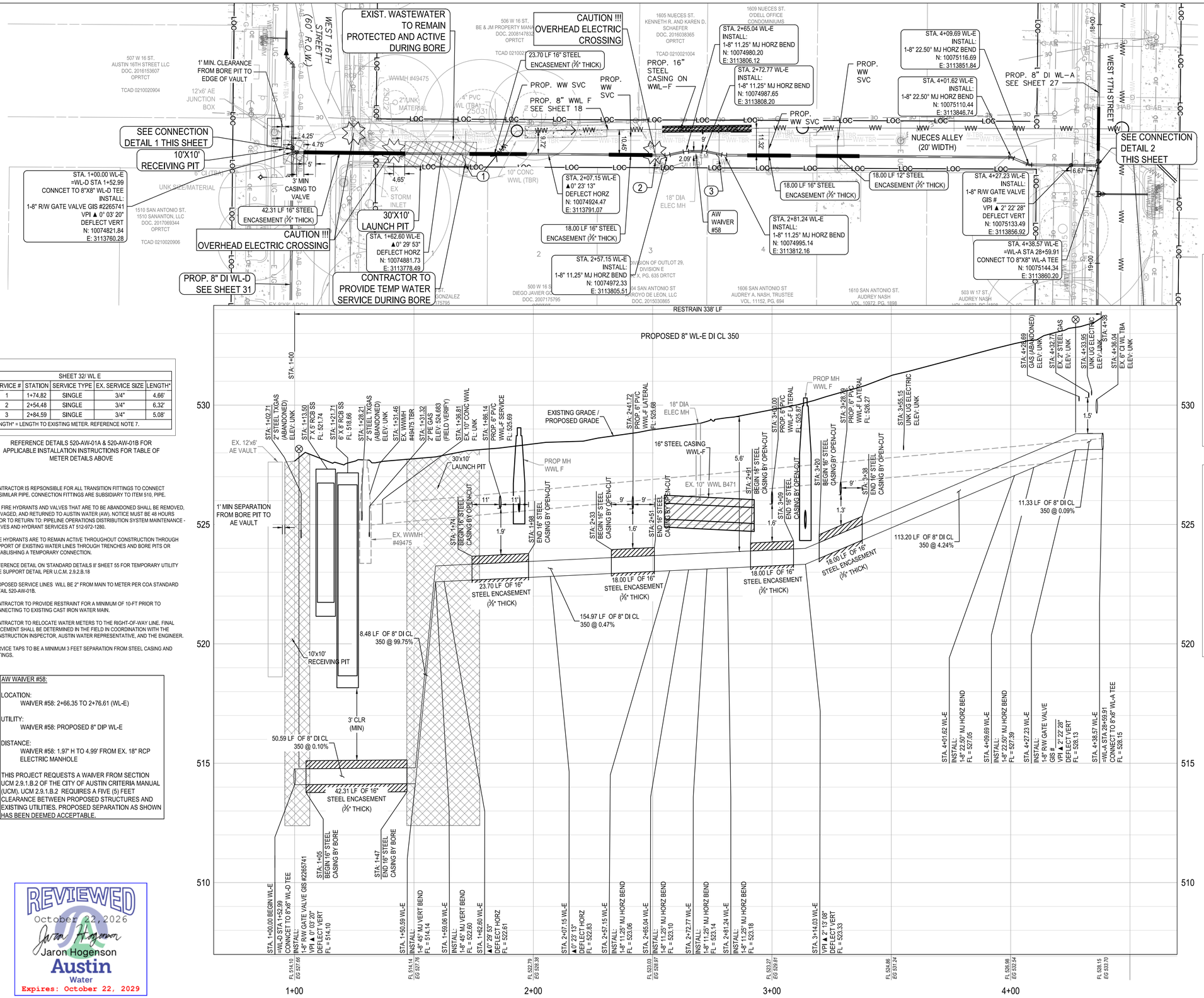
CITY OF AUSTIN
AUSTIN WATER UTILITY

DAVCAR ENGINEERING
1010 Land Creek Cove
Austin, Texas
P: (512) 617-3185
TBPE FIRM No.: F-3327

SHEET
31 OF 93

100% SUBMITTAL

FILE LOCATION: K:\BGE LARGE DIAMETER RL-17TH STREET WL\EAST 17TH STREET WL\DWGS\SHEETS\PROPOSED WL-D_P&P_REVISED_ALT2A.DWG DATE SAVED: 7/1/2026



SHEET 32/ WL E				
SERVICE #	STATION	SERVICE TYPE	EX. SERVICE SIZE	LENGTH*
1	1+74.82	SINGLE	3/4"	4.66'
2	2+54.48	SINGLE	3/4"	6.32'
3	2+84.59	SINGLE	3/4"	5.08'

LENGTH* = LENGTH TO EXISTING METER. REFERENCE NOTE 7.

REFERENCE DETAILS 520-AW-01A & 520-AW-01B FOR APPLICABLE INSTALLATION INSTRUCTIONS FOR TABLE OF METER DETAILS ABOVE

NOTES:

1. CONTRACTOR IS REPSONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. CONNECTION FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
2. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER (AW). NOTICE MUST BE 48 HOURS PRIOR TO RETURN TO: PIPELINE OPERATIONS DISTRIBUTION SYSTEM MAINTENANCE - VALVES AND HYDRANT SERVICES AT 512-972-1280.
3. FIRE HYDRANTS ARE TO REMAIN ACTIVE THROUGHOUT CONSTRUCTION THROUGH SUPPORT OF EXISTING WATER LINES THROUGH TRENCHES AND BORE PITS OR ESTABLISHING A TEMPORARY CONNECTION.
4. REFERENCE DETAIL ON 'STANDARD DETAILS II' SHEET 55 FOR TEMPORARY UTILITY LINE SUPPORT DETAIL PER U.C.M. 2.9.2.B.18
5. PROPOSED SERVICE LINES WILL BE 2" FROM MAIN TO METER PER COA STANDARD DETAIL 520-AW-01B.
6. CONTRACTOR TO PROVIDE RESTRAINT FOR A MINIMUM OF 10-FT PRIOR TO CONNECTING TO EXISTING CAST IRON WATER MAIN.
7. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT-OF-WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER.
8. SERVICE TAPS TO BE A MINIMUM 3 FEET SEPARATION FROM STEEL CASING AND FITTINGS.

AW WAIVER #58:

LOCATION:
WAIVER #58: 2+66.35 TO 2+76.61 (WL-E)

UTILITY:
WAIVER #58: PROPOSED 8" DIP WL-E

DISTANCE:
WAIVER #58: 1.97' H TO 4.99' FROM EX. 18" RCP ELECTRIC MANHOLE

THIS PROJECT REQUESTS A WAIVER FROM SECTION UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

REVIEWED
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Jaron Hogenson
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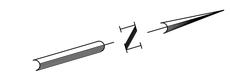
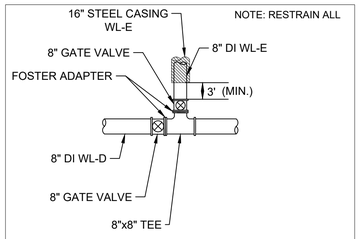
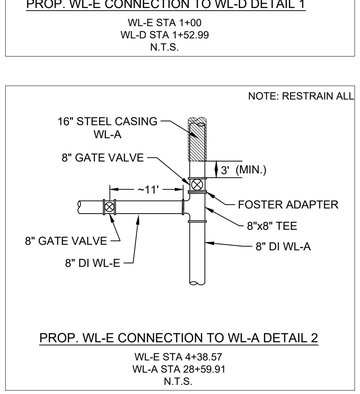
Expires: October 22, 2029





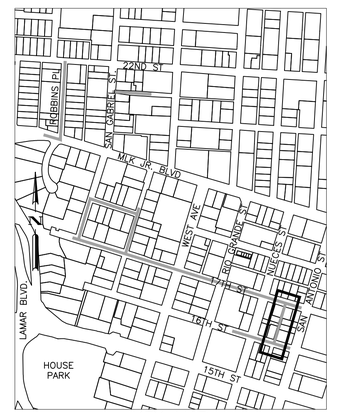
PROP. WL-E CONNECTION TO WL-D DETAIL 1

WL-E STA 1+00
WL-D STA 1+52.99
N.T.S.



PROP. WL-E CONNECTION TO WL-A DETAIL 2

WL-E STA 4+38.57
WL-A STA 28+59.91
N.T.S.



KEY MAP

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE 2026-06-10
DESIGNED RB
DRAWN RM
REVISED
CHECKED RB

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

WATER PLAN AND PROFILE
WL-E 1+00 TO END

CITY OF AUSTIN
AUSTIN WATER UTILITY

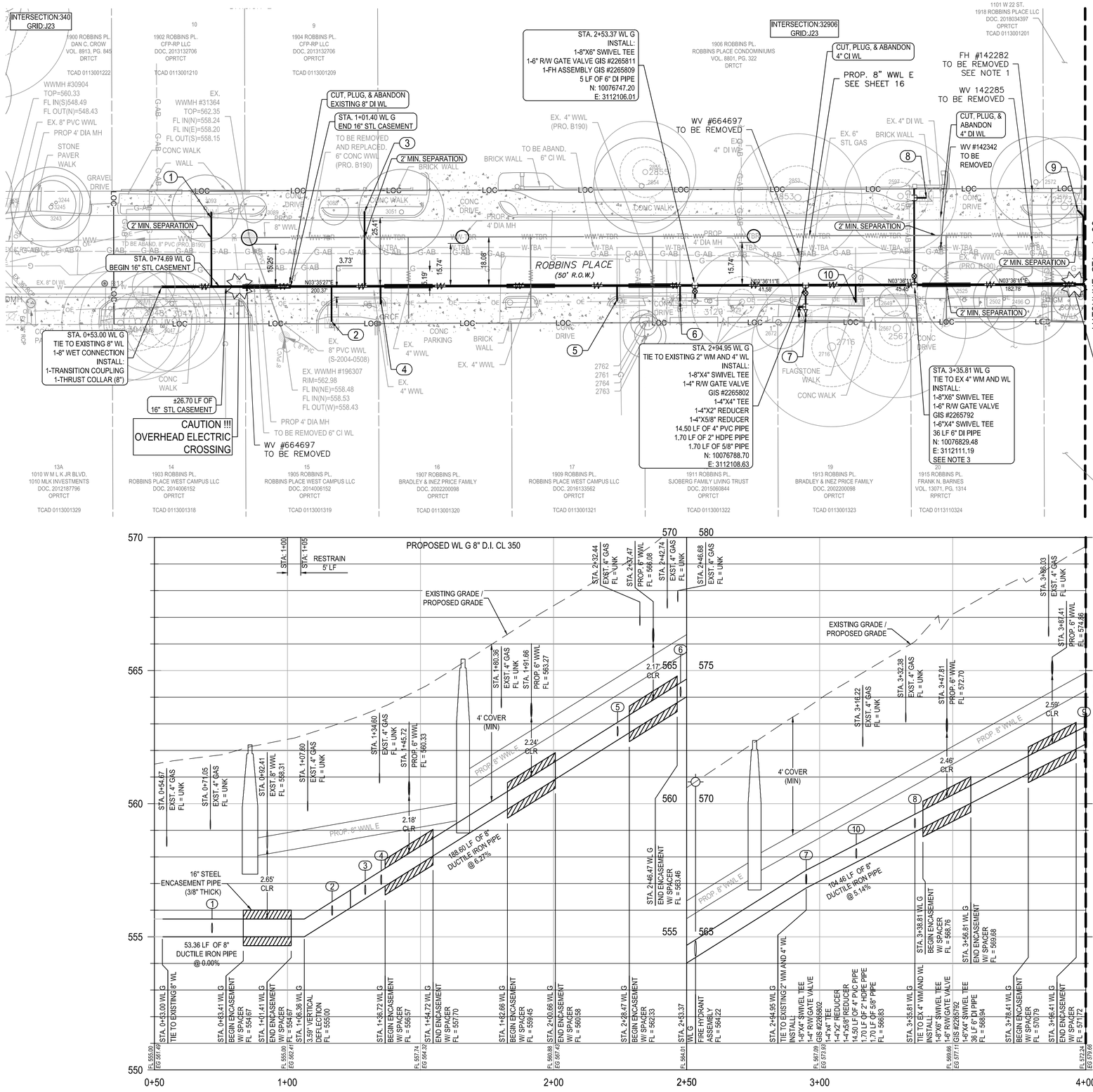
DAVCAR ENGINEERING
10101 Land Creek Cove
Austin, Texas
P: (512) 335-3338
TBPE FIRM No. F-3327

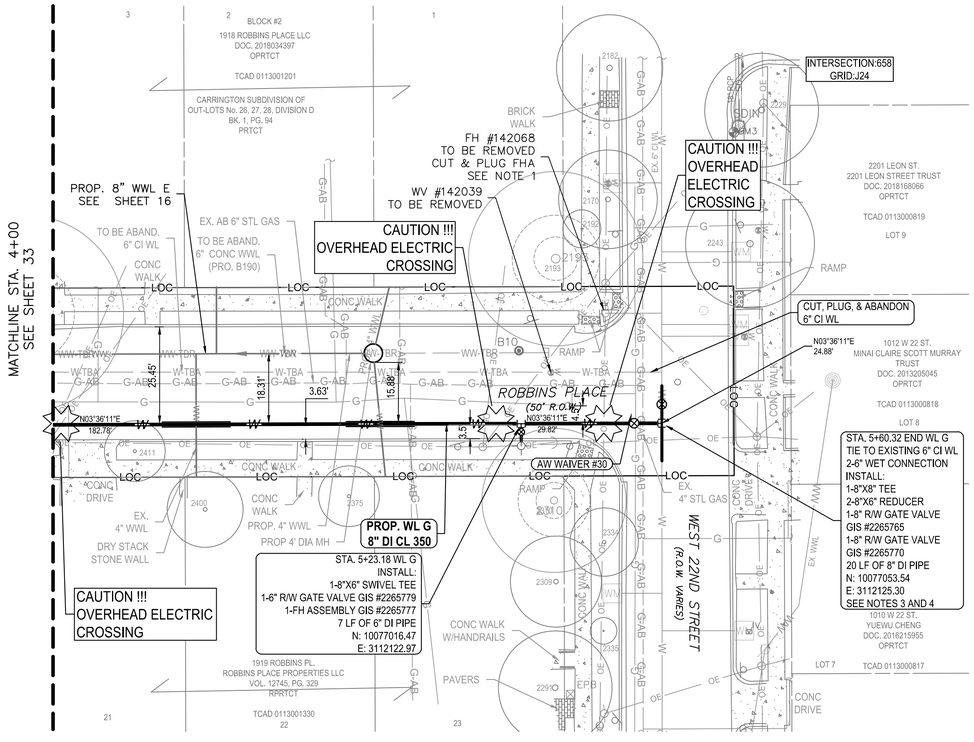
STATE OF TEXAS
2026 10/21
RAFAEL BECKMANN
108488
LICENSED PROFESSIONAL ENGINEER

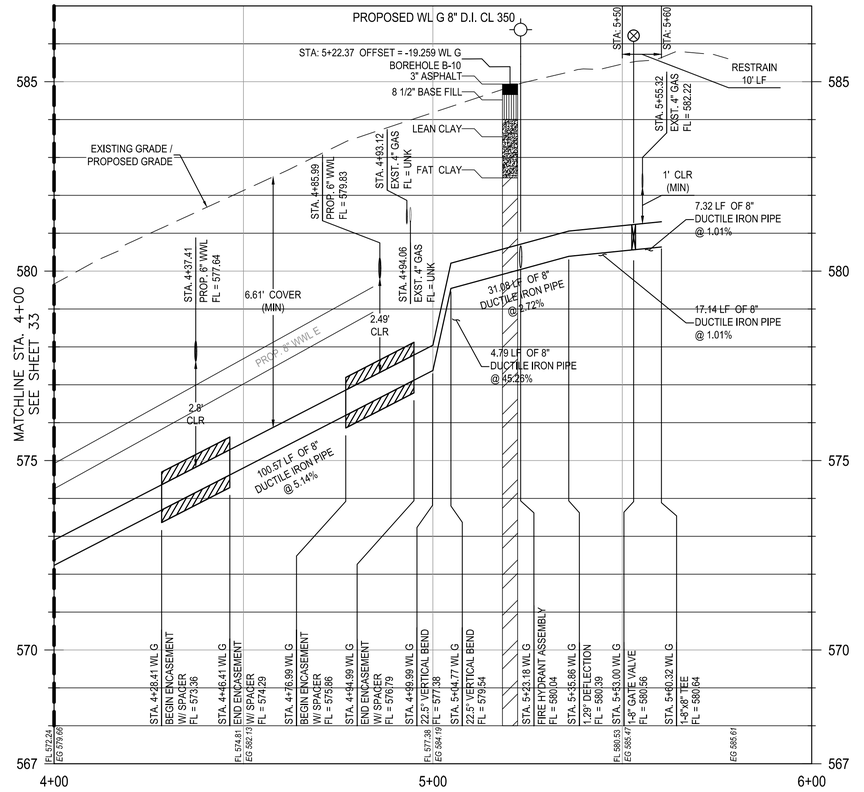
SHEET
32 OF 93

100% SUBMITTAL

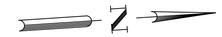
FILE LOCATION: K:\BGE LARGE DIAMETER RL-17TH STREET WL\EAST 17TH STREET WL\DWGS\SHEETS\PROPOSED WL-E_P&P_REVISED_ALT2.DWG DATE SAVED: 9/3/2026


INTERSECTION:340
GRID:J23
INTERSECTION:32906
GRID:J23
ROBBINS PLACE
(50' R.O.W.)
STA. 0+74.69 WL G
BEGIN 16" STL CASEMENT
STA. 0+53.00 WL G
TIE TO EXISTING 8" WL
1-8" WET CONNECTION
INSTALL:
1-TRANSITION COUPLING
1-THRUST COLLAR (8")
±26.70 LF OF
16" STL CASEMENT
CAUTION !!!
OVERHEAD ELECTRIC
CROSSING
WV #664697
TO BE REMOVED
STA. 1+01.40 WL G
END 16" STL CASEMENT
CUT, PLUG, & ABANDON
EXISTING 8" DI WL
TO BE REMOVED
AND REPLACED
6" CONC WWL
(PRO. B190)
2' MIN. SEPARATION
STA. 2+53.37 WL G
INSTALL:
1-8"X6" SWIVEL TEE
1-6" R/W GATE VALVE GIS #2265811
1-FH ASSEMBLY GIS #2265809
5 LF OF 6" DI PIPE
N: 10076747.20
E: 3112106.01
WV #664697
TO BE REMOVED
PROP. 8" WWL E
SEE SHEET 16
CUT, PLUG, & ABANDON
4" CI WL
FH #142282
TO BE REMOVED
SEE NOTE 1
WV 142285
TO BE REMOVED
CUT, PLUG, & ABANDON
4" DI WL
WV #142342
TO BE
REMOVED
STA. 2+94.95 WL G
TIE TO EXISTING 2" WM AND 4" WL
INSTALL:
1-8"X4" SWIVEL TEE
1-4" R/W GATE VALVE
GIS #2265802
1-4"X4" TEE
1-4"X2" REDUCER
1-4"X5/8" REDUCER
14.50 LF OF 4" PVC PIPE
1.70 LF OF 2" HDPE PIPE
1.70 LF OF 5/8" PIPE
N: 10076788.70
E: 3112108.63
SEE NOTE 3
STA. 3+35.81 WL G
TIE TO EX 4" WM AND WL
INSTALL:
1-8"X6" SWIVEL TEE
1-6" R/W GATE VALVE
GIS #2265792
1-6"X4" SWIVEL TEE
36 LF 6" DI PIPE
N: 10076829.48
E: 3112111.19
SEE NOTE 3
MATCHLINE STA. 4+00
SEE SHEET 34
CAUTION !!!
OVERHEAD ELECTRIC
CROSSING
1900 ROBBINS PL.
DAN C. CROW
VOL. 8913, PG. 845
DRTCT
TCAD 0113001222
1902 ROBBINS PL.
CFP-RP LLC
DOC. 2013132706
OPRTCT
TCAD 0113001210
1904 ROBBINS PL.
CFP-RP LLC
DOC. 2013132706
OPRTCT
TCAD 0113001209
1906 ROBBINS PL.
ROBBINS PLACE CONDOMINIUMS
VOL. 8801, PG. 322
DRTCT
1101 W 22 ST.
1918 ROBBINS PLACE LLC
DOC. 2018034397
OPRTCT
TCAD 0113001201
1919 ROBBINS PL.
ROBBINS PLACE PROPERTIES LLC
VOL 12745, PG. 329
RPRTCT
TCAD 0113001330
13A
1010 W M L K JR BLVD.
1010 MLK INVESTMENTS
DOC. 2012187796
OPRTCT
TCAD 0113001329
14
1903 ROBBINS PL.
ROBBINS PLACE WEST CAMPUS LLC
DOC. 2014006152
OPRTCT
TCAD 0113001318
15
1905 ROBBINS PL.
ROBBINS PLACE WEST CAMPUS LLC
DOC. 2014006152
OPRTCT
TCAD 0113001319
16
1907 ROBBINS PL.
BRADLEY & INEZ PRICE FAMILY
DOC. 2002200098
OPRTCT
TCAD 0113001320
17
1909 ROBBINS PL.
ROBBINS PLACE WEST CAMPUS LLC
DOC. 2016133562
OPRTCT
TCAD 0113001321
18
1911 ROBBINS PL.
SJOBERG FAMILY LIVING TRUST
DOC. 2015060844
OPRTCT
TCAD 0113001322
19
1913 ROBBINS PL.
BRADLEY & INEZ PRICE FAMILY
DOC. 2002200098
OPRTCT
TCAD 0113001323
20
1915 ROBBINS PL.
FRANK N. BARNES
VOL. 13071, PG. 1314
RPRTCT
TCAD 0113110324
EX. WWMH #31364
TOP=562.35
FL IN(N)=558.24
FL IN(E)=558.20
FL OUT(S)=558.15
WWMH #30904
TOP=560.33
FL IN(S)548.49
FL OUT(N)=548.43
EX. 8" PVC WWL
PROP 4' DIA MH
STONE
PAVER
WALK
GRAVEL
DRIVE
CONC WALK
WALL
BRICK WALL
CONC DRIVE
EX. 4" WWL
(PRO. B190)
TO BE ABAND. 6" CI WL
EX. 4" DI WL
EX. 6" STL GAS
BRICK WALL
CONC DRIVE
EX. 8" DI WL
EX. WWMH #196307
RIM=562.98
FL IN(NE)=558.48
FL IN(N)=558.53
FL OUT(W)=558.43
EX. 8" PVC WWL
(S-2004-0508)
EX. 4" WWL
CONC PARKING
BRICK WALL
PROP 4' DIA MH
TO BE REMOVED 6" CI WL
FLAGSTONE
WALK
CONC WALK
CONC DRIVE
CONC WALK
CONC DRIVE
CONC DRIVE
CONC DRIVE
CONC WALK
CONC DRIVE
CONC DRIVE
CONC DRIVE





NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

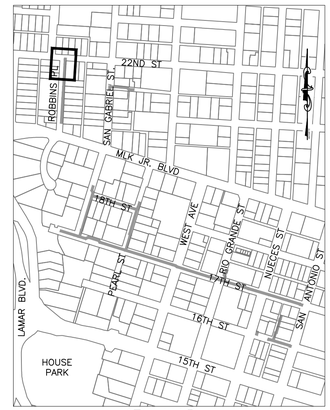


0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED, AND RETURNED TO AUSTIN WATER. NOTICE MUST BE GIVEN 48 HOURS PRIOR, TO PIPELINE OPERATIONS DISTRIBUTION SYSTEM – VALVE AND HYDRANT SERVICES SUPERVISOR AT 512–972–1280
2. NO WATER SERVICES WERE IDENTIFIED ON THIS SHEET.
3. CONTRACTOR IS RESPONSIBLE FOR ALL TRANSITION FITTINGS TO CONNECT DISSIMILAR PIPE. FITTINGS ARE SUBSIDIARY TO ITEM 510, PIPE.
4. FOR BRANCH CONNECTIONS TO EXISTING CAST IRON PIPES, THE CONTRACTOR SHALL PROVIDE 10 FT OF DUCTILE IRON PIPE REPLACEMENT ON BOTH SIDES OF THE TEE.
5. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WATER LINE.
6. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
7. ALL DEFLECTIONS ARE TO BE ACHIEVED OVER MULTIPLE JOINTS WITH A MAX OF 1°
8. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT–OF–WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER



KEY MAP

AW WAIVERS #30:

LOCATION:
WAIVER #30: 5+23.18 - 5+36.10 (WL-G)

UTILITY:
WAIVER #30: EXISTING 4" DIA. GAS MAIN (WL-G)

DISTANCE:
WAIVER #30: 4.50' PR. 8" DIP WL (WL-G)

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM) WHICH REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AND DESIGN AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

WATER PLAN AND PROFILE WL G 4+00

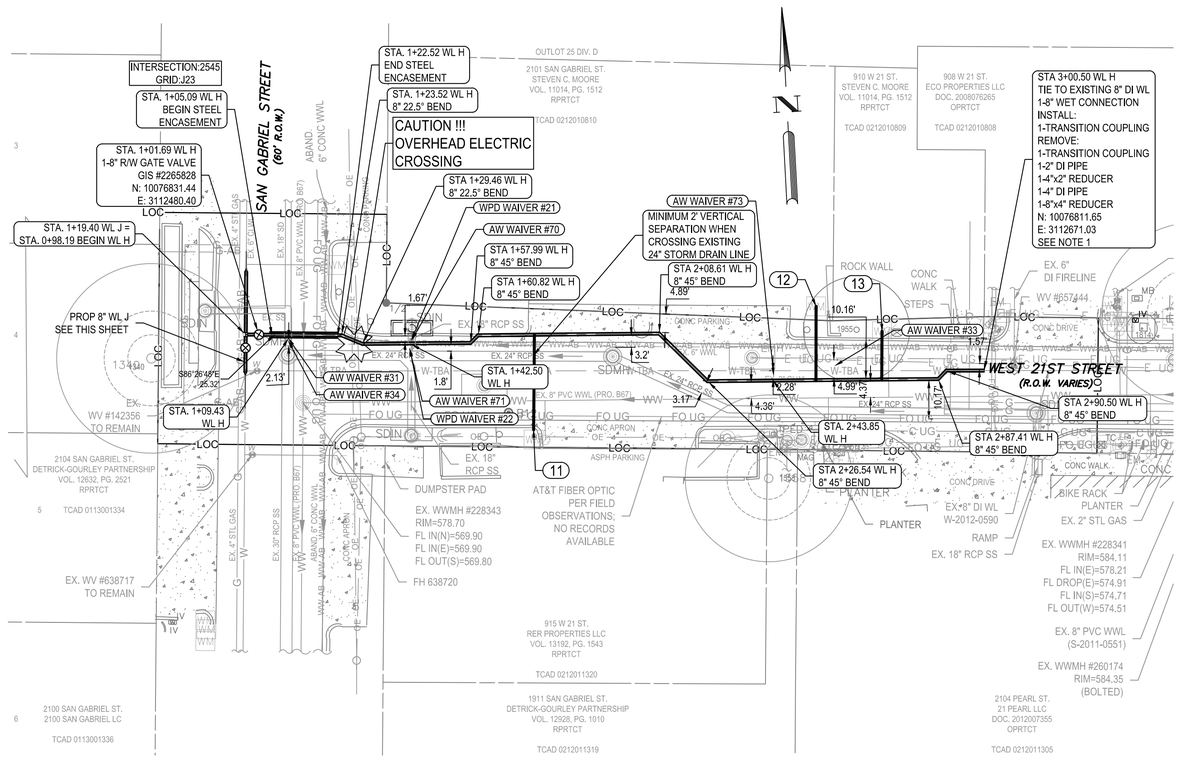
CITY OF AUSTIN
AUSTIN WATER

BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
10/20/2026

SHEET
34 OF 93

1005 SUBMITTAL REV

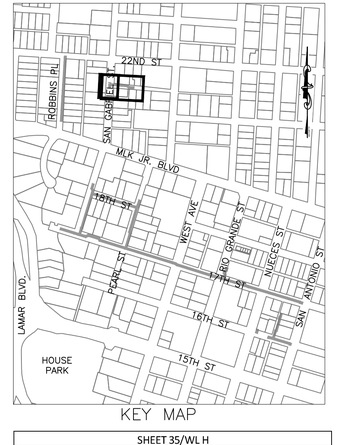


WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
21	WL-H	1+42.50	DCM 5.7.1.F	EXISTING CURB INLET < 5' FROM PR W LINE (1.67' H)
22	WL-H	1+42.50	DCM 5.7.1.F	EXISTING 24" SD LINE < 5' FROM PR W LINE (1.80' H)

NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL CONNECTION ELEVATIONS.
2. FOR BRANCH CONNECTIONS TO EXISTING CAST IRON PIPES, THE CONTRACTOR SHALL PROVIDE 10 FT OF DUCTILE IRON PIPE REPLACEMENT ON BOTH SIDES OF THE TEE.
3. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED WATER LINE.
4. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
5. CONTRACTOR TO RELOCATE WATER METERS TO THE RIGHT–OF–WAY LINE. FINAL PLACEMENT SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE CONSTRUCTION INSPECTOR, AUSTIN WATER REPRESENTATIVE, AND THE ENGINEER

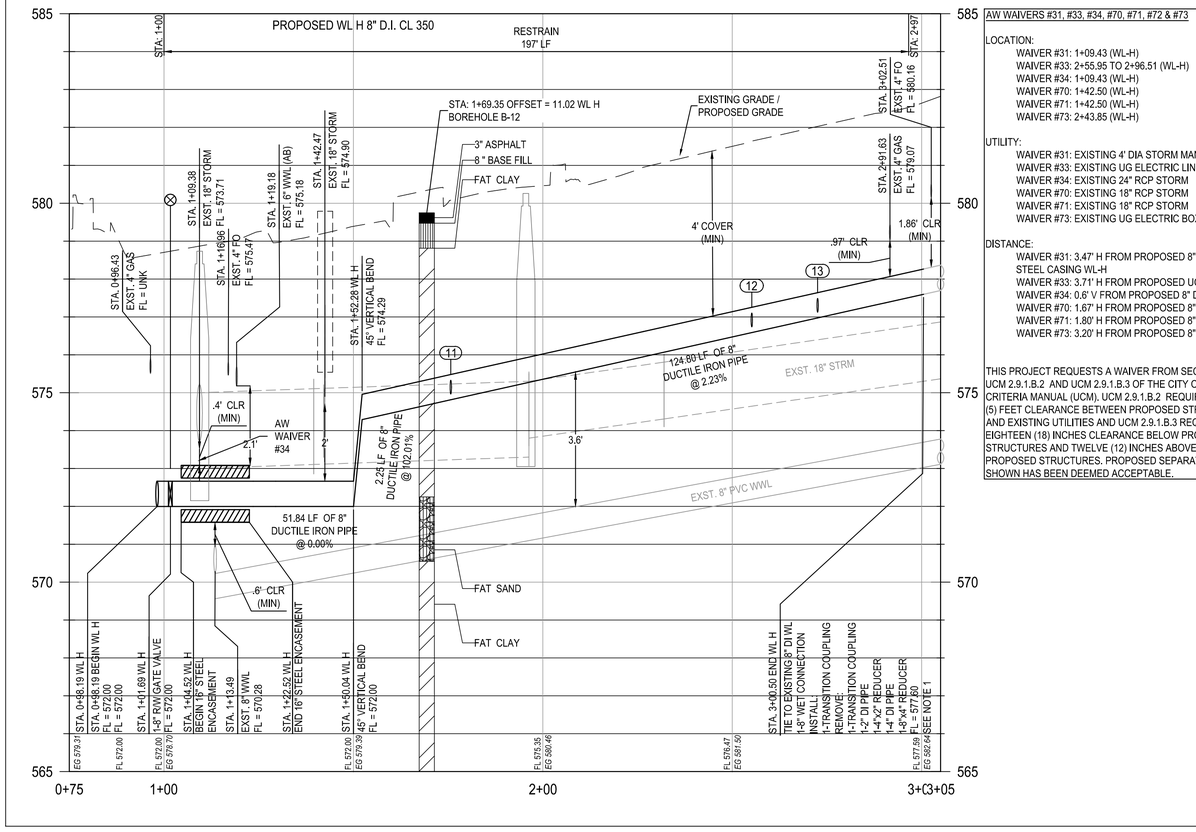
SEE SHEET 61 FOR TABLE OF APPLICABLE METER DETAILS TO BE UTILIZED BY THE CONTRACTOR FOR EACH METER.



KEY MAP

SHEET 35/WL H				
SERVICE #	STATION	SERVICE TYPE	EX SERVICE SIZE	LENGTH (FT)
11	1+75.70	SINGLE	UNK	30
12	2+55.15	SINGLE	1"	21
13	2+72.53	SINGLE	UNK	10

REFERENCE DETAILS 520–AW–01A & 520–AW–01B FOR APPLICABLE INSTALLATION INSTRUCTIONS FOR TABLE OF METER DETAILS ABOVE



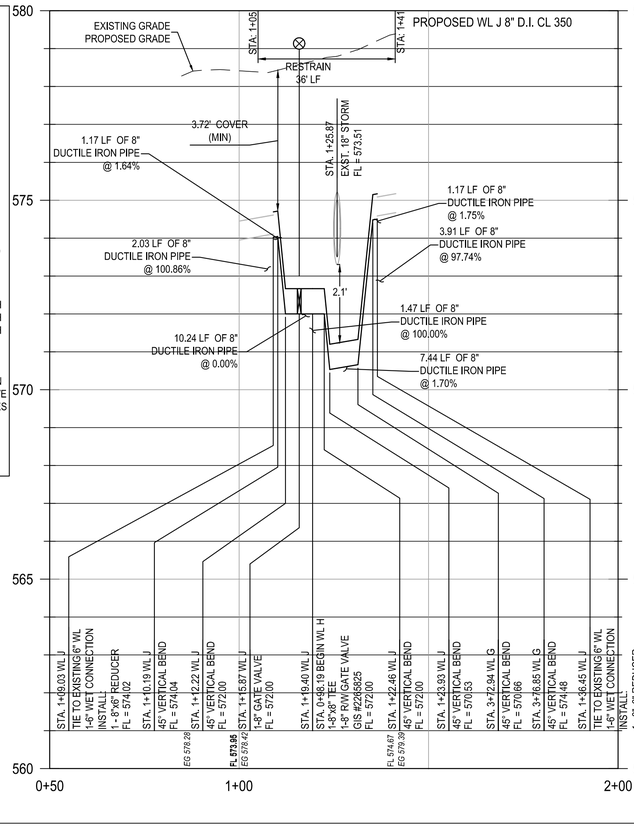
AW WAIVERS #31, #33, #34, #70, #71, #72 & #73

LOCATION:
WAIVER #31: 1+09.43 (WL-H)
WAIVER #33: 2+55.95 TO 2+96.51 (WL-H)
WAIVER #34: 1+09.43 (WL-H)
WAIVER #70: 1+42.50 (WL-H)
WAIVER #71: 1+42.50 (WL-H)
WAIVER #73: 2+43.85 (WL-H)

UTILITY:
WAIVER #31: EXISTING 4' DIA STORM MANHOLE
WAIVER #33: EXISTING UG ELECTRIC LINE
WAIVER #34: EXISTING 24" RCP STORM
WAIVER #70: EXISTING 18" RCP STORM
WAIVER #71: EXISTING 18" RCP STORM
WAIVER #73: EXISTING UG ELECTRIC BOX

DISTANCE:
WAIVER #31: 3.47' H FROM PROPOSED 8" DIP & 18" STEEL CASING WL-H
WAIVER #33: 3.71' H FROM PROPOSED UG ELEC
WAIVER #34: 0.6' V FROM PROPOSED 8" DIP WL-H
WAIVER #70: 1.67' H FROM PROPOSED 8" DIP WL-H
WAIVER #71: 1.80' H FROM PROPOSED 8" DIP WL-H
WAIVER #73: 3.20' H FROM PROPOSED 8" DIP WL-H

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 AND UCM 2.9.1.B.3 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES AND UCM 2.9.1.B.3 REQUIRES EIGHTEEN (18) INCHES CLEARANCE BELOW PROPOSED STRUCTURES AND TWELVE (12) INCHES ABOVE PROPOSED STRUCTURES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.



BY	DATE	NO.	REVISION

BGE JOB NO.	4766–03
FILE	
DATE	
DESIGNED	JTM
DRAWN	JTM
REVISED	
CHECKED	

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

WATER PLAN AND PROFILE
WL H 0+70 - END & J 1+00 - END

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

10/20/2026

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

SHEET
35 OF 93

100% SUBMITTAL REV

Joint Restraint Length Values Based on EBAA IRON Calculations

Water Line	Begin	End Station	Pipe Material	Soil Type	Safety	Trench Type	Depth of	Test	Fitting Type	Nominal	Bend Angle	Low Side	Branch Size	Length Along	Reduced	Minimum Required Restrained Joint Length (ft)
A	0+50.00	0+50.00	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Dead End	8						192
A	1+68.12	1+68.12	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			6	6		8
A	2+11.81	2+11.81	Poly Wrapped Ductile	GW	1.5 to 1	5	7	350	Tee	8			8	9		8
A	2+62.85	2+62.85	Poly Wrapped Ductile	GW	1.5 to 1	5	7	350	Horizontal Bend	8	45			10		20
A	2+85.58	2+85.58	Poly Wrapped Ductile	GW	1.5 to 1	5	7	350	Horizontal Bend	8	45			10		20
A	3+73.68	3+73.68	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Horizontal Bend	8	45			11		22
A	3+88.17	3+88.17	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Horizontal Bend	4	45			11		22
A	5+81.35	5+81.35	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Tee	8			6	7		11
A	5+95.77	5+95.77	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Tee	8			8	9		50
A	6+04.15	6+04.15	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Tee	8			8	12		14
A	9+91.26	9+91.26	Poly Wrapped Ductile	GW	1.5 to 1	5	8	350	Tee	8			6	5		1
A	10+16.82	10+16.82	Poly Wrapped Ductile	GW	1.5 to 1	5	8	350	Horizontal Bend	8	22.5			5		10
A	10+29.36	10+29.36	Poly Wrapped Ductile	GW	1.5 to 1	5	8	350	Horizontal Bend	8	22.5			5		10
A	13+12.34	13+28.39	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Vertical Offset	8	11.25	10				10 (upper bend) 2 (lower bend)
A	22+53.01	22+53.01	Poly Wrapped Ductile	GW	1.5 to 1	5	10	350	Vertical Offset	8	22.5	9				16 (upper bend) 4 (lower bend)
A	22+58.13	22+58.13	Poly Wrapped Ductile	GW	1.5 to 1	5	10	350	Tee	8			6	16		1
A	22+58.13	22+58.13	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Dead End	6						118
A	22+97.48	22+97.48	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Tee	8	90		8	13		3
A1.1	1+03.05	1+05.44	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Vertical Offset	8	45	5		3		65 (upper bend) 14 (lower bend)
A	24+95.44	24+95.44	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Vertical Offset	8	11.25	5				16 (upper bend) 4 (lower bend)
A	25+07.31	25+07.31	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Tee	8			6	15		1
A	25+07.31	25+07.31	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Dead End	6						118
A	25+15.31	25+15.31	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Tee	8			4	20		1
A	25+18.06	25+18.06	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	11.25	4				19 (upper bend) 4 (lower bend)
A	26+36.49	26+46.32	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	45	13				80 (upper bend) 6 (lower bend)
A	27+32.19	27+38.34	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	45	10				80 (upper bend) 7 (lower bend)
A	29+71.23	29+71.43	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Horizontal Bend	8	45					17
A	29+78.41	29+78.41	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Reducer	8			6			81
A	29+83.46	29+87.42	Poly Wrapped Ductile	GW	1.5 to 1	5	2	350	Vertical Offset	8	22.5	4				72 (upper bend) 8 (lower bend)
A1.2	1+05.99	1+15.98	Poly Wrapped Ductile	GW	1.5 to 1	5	2	350	Vertical Offset	4	45	11				82 (upper bend) 4 (lower bend)
B1	1+53.02	1+53.02	Poly Wrapped Ductile	GW	1.5 to 1	5	8	350	Horizontal Bend	8	11.25			2		4
B1	1+56.92	1+56.92	Poly Wrapped Ductile	GW	1.5 to 1	5	8	350	Horizontal Bend	8	11.25			2		4
B1	4+40.67	4+40.67	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			8	10		14
B1	4+63.57	4+63.57	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45			14		28
B1	4+83.95	4+83.95	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45			14		28
B1	4+86.95	4+86.95	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Reducer	8					6	65
B2	1+14.69	1+14.69	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			6	7		1
B2	4+47.41	4+47.41	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			6	7		1
C	2+23.88	2+23.88	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45			14		28
C	2+35.05	2+35.05	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45			14		28
C	4+37.12	4+37.12	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Tee	8			8	12		14
C	4+41.72	4+41.72	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45			14		28
C	4+47.48	4+47.48	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45			14		28
C	4+58.13	4+58.13	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Reducer	8					6	65
D	1+07.12	1+07.12	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Reducer	8			6			81
D	1+18.63	1+27.49	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	45	13				80 (upper bend) 6 (lower bend)
D	1+52.38	1+72.80	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	22.5	13				39 (upper bend) 3 (lower bend)
D	2+88.05	2+88.05	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Reducer	8			6			81
E	1+47.75	1+56.21	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	45	13				80 (upper bend) 6 (lower bend)
E	2+81.07	2+81.07	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45					17
E	3+16.84	3+16.84	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Dead End	8						192
G	2+53.37	2+53.37	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			6	6		29
G	2+53.37	2+53.37	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Dead End	6						99
G	2+94.95	2+94.95	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			4	3		3
G	2+94.95	2+94.95	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Dead End	4						60
G	2+94.95	2+94.95	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	4			4	3		36
G	2+94.95	2+94.95	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Reducer	4					3	23
G	2+94.95	2+94.95	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Horizontal Bend	4	90					15
G	3+35.81	3+35.81	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			6	3		64
G	3+35.81	3+35.81	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Dead End	6						99
G	3+35.81	3+35.81	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Reducer	6					4	51
G	4+49.99	5+04.77	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset	8	22.5	6				39 (upper bend) 6 (lower bend)
G	5+23.18	5+23.18	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Tee	8	90		6	2		115
G	5+23.18	5+23.18	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Dead End	6						146
G	5+53.00	5+53.00	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Dead End	8						192
G	5+60.32	5+60.32	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Tee	8	90		6	7		64
G	5+60.32	5+60.32	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Dead End	6						146
H	0+93.80	0+93.80	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Tee	8			6	7		1
H	1+23.00	1+23.00	Poly Wrapped Ductile	GW	1.5 to 1	5	7	350	Dead End	8						113
H	1+28.00	1+29.92	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Vertical Offset	8	45	7				55 (upper bend) 10 (lower bend)
H	2+34.18	2+34.18	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	8	45					14
H	2+51.37	2+51.37	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Horizontal Bend	8	45					17
J	1+09.02	1+09.02	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Reducer	8					6	81
J	1+10.19	1+24.64	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset Sym Ret	8	45	6				80 (upper bend) 11 (lower bend)
J	1+15.87	1+15.87	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Dead End	8						131
J	1+27.89	1+27.89	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Reducer	8					6	81
L	1+40.00	1+87.01	Poly Wrapped Ductile	GW	1.5 to 1	5	4	350	Vertical Offset Sym Ret	8	45	7				80 (upper bend) 10 (lower bend)
L	1+41.48	1+41.48	Poly Wrapped Ductile	GW	1.5 to 1	5	5	350	Horizontal Bend	4	45					8
L	1+55.58	1+55.58	Poly Wrapped Ductile	GW	1.5 to 1	5	7	350	Horizontal Bend	4	45					6
L	1+71.55	1+71.55	Poly Wrapped Ductile	GW	1.5 to 1	5	7	350	Horizontal Bend	4	45					6
L	1+85.73	1+85.73	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Horizontal Bend	4	45					6
L	1+88.23	1+88.23	Poly Wrapped Ductile	GW	1.5 to 1	5	6	350	Reducer	4					3	23

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO. | REVISION | BY | DATE
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WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

JOINT RESTRAINT LENGTH
SHEET

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

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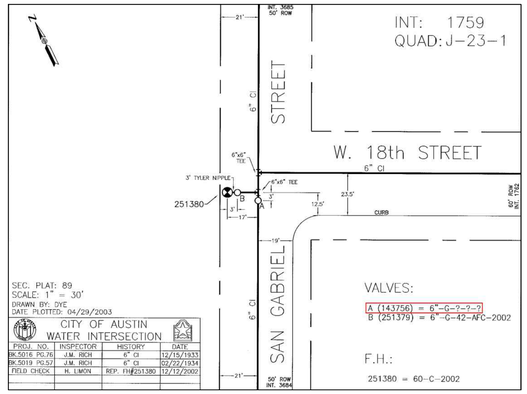
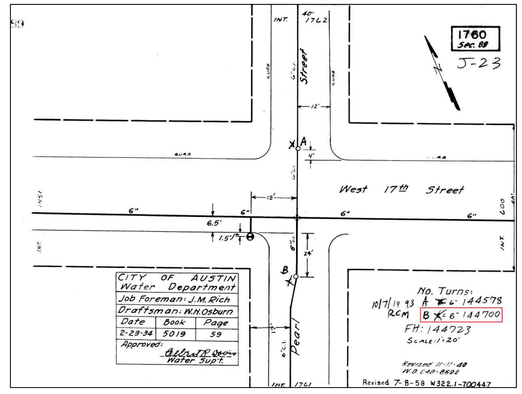
WET CONNECTION	STATION	INTERSECTIONS	QUAD MAP	VALVES
WL A	1+00 5+30	2154	J-23-1	144420 (6")
WL B	END	1760	J-23-1	144700 (6")
WL C	END	1759	J-23-1	143756 (6")
WL D		1762		143860 (6")
WL E				
WL F				
WL G	1+00	INTERSECTION 340 ON THE AW GIS SITE IS INCORRECT - REFERENCE MLK PLAN SHEET 20 658	J-23-1 J-24-4	535736 (8") 142039 (6")
WL G*	END	655 656 658 661	H-24-3 J-24-4	141429 (6") 142016 (6") 141971 (6") 142039 (6") 142033 (6")
WL H	END	640 661 INTERSECTION 2288 ON THE AW GIS SITE IS INCORRECT - REFERENCE MLK PLAN SHEET 30	J-23-1 J-24-4	657442 (8") 142073 (6") 535766 (8")
WL J	BEGIN AND END	640 661 INTERSECTION 2288 ON THE AW GIS SITE IS INCORRECT - REFERENCE MLK PLAN SHEET 30	J-23-1 J-24-4	657442 (8") 142073 (6") 535766 (8")

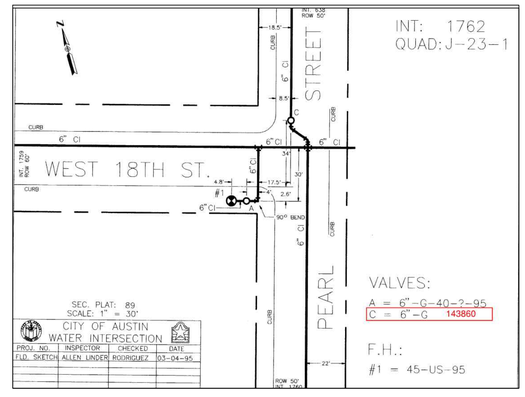
*VALVES INDICATED ASSUME THE END CONNECTION FOR WL G IS MADE BEFORE THE BEGINNING CONNECTION

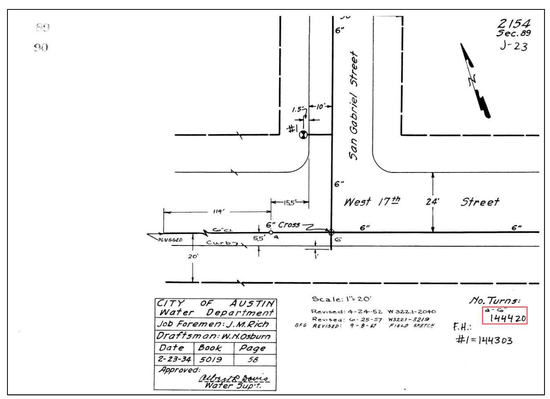
NOTES:

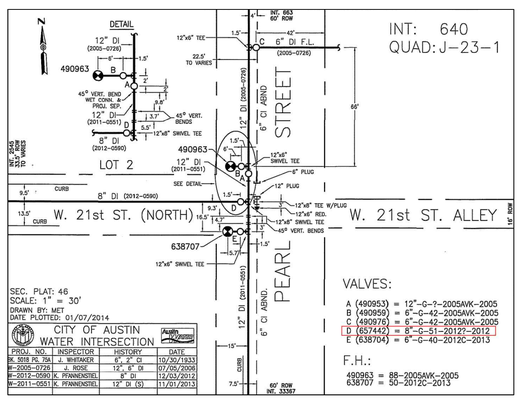
1. CONTRACTOR IS NOTIFIED THE CITY OF AUSTIN CONCURRENCE PROCESS FOR SHUTDOWNS IS A SIX WEEK PROCESS.
2. ALL OPERATION OF VALVES REQUIRED OF SHUTDOWN SHALL BE PERFORMED BY CITY OF AUSTIN STAFF ONLY.
3. ALL VALVES SHALL BE IN THE CLOSED POSITION AT THE TIME OF INSTALLATION.
4. CONNECTION TO EXISTING WATER TRANSMISSION MAINS WILL ONLY BE ALLOWED FROM NOVEMBER TO MARCH.
5. ALL WATER LINE TIE-INS SHALL BE COMPLETED AT NIGHT.
6. SHUTOUT PROCESS TO BE COORDINATED WITH CITY INSPECTOR.

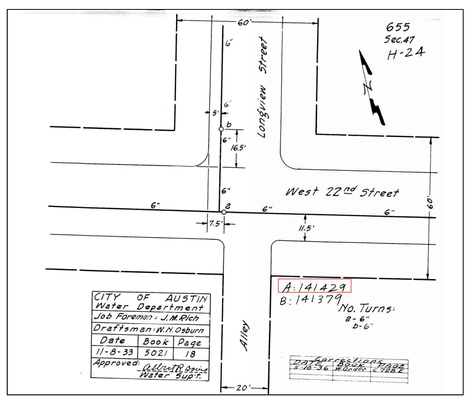


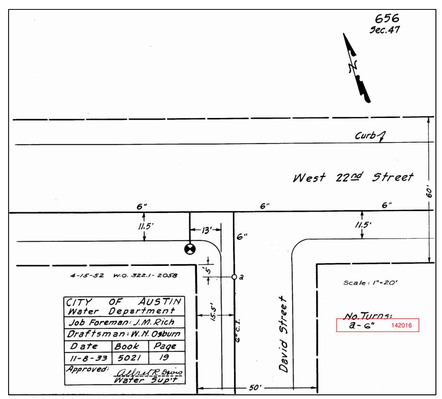












NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
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DESIGNED JTM
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WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

VALVE CLOSURE PLAN SHEET 1 OF 2

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
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ALEXIS WOFFENDEN
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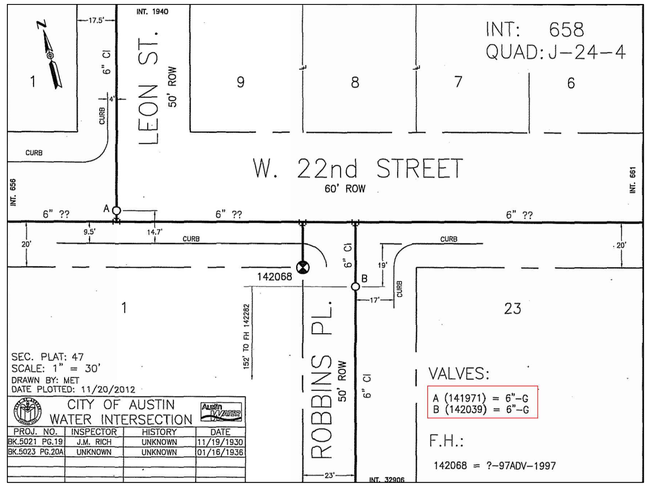

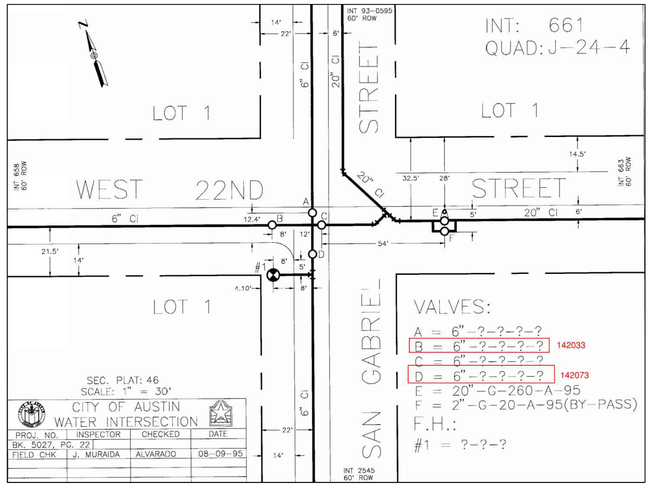

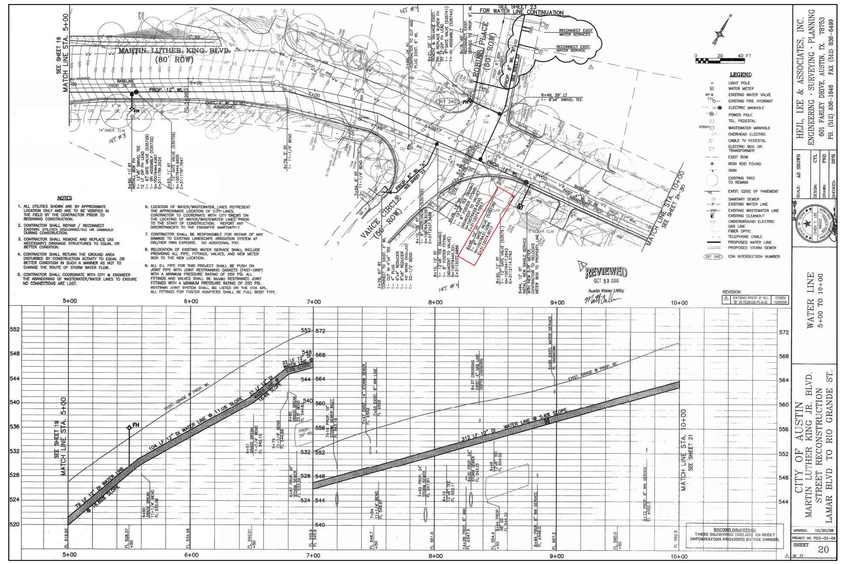

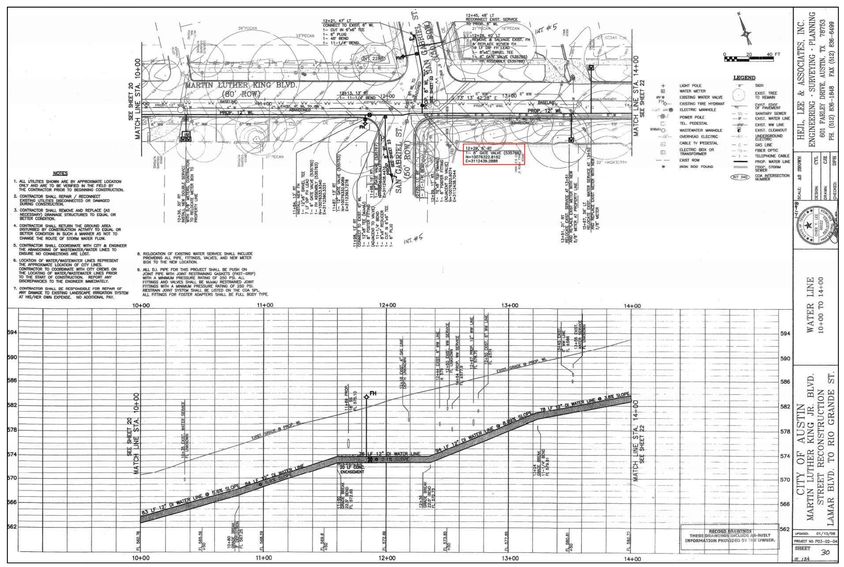

HEIL, LEE & ASSOCIATES, INC.
ENGINEERING - SURVEYING - PLANNING
605 FARLEY DRIVE, AUSTIN, TX 78703
PH. (512) 836-1848 FAX (512) 836-1849

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VALVE CLOSURE PLAN SHEET 2 OF 2

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HYDROLOGIC SUMMARY (EXISTING CONDITIONS)

DRAINAGE AREA ID	INLET ID	DRAINAGE AREA	T_c	RUNOFF COEFFECIENT (C)				Intensity (I) (in/hr)				Flow (Q) (cfs)			
		(acres)	(min)	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr
DA-A1	EX-I-A1	1.64	5.66	0.58	0.65	0.69	0.78	6.07	9.11	11.22	14.78	5.82	9.80	12.81	19.07
DA-A2	EX-I-A2	0.60	5.46	0.62	0.69	0.73	0.82	6.13	9.21	11.34	14.94	2.30	3.85	5.02	7.42
DA-A3	EX-I-A3	0.17	5.00	0.71	0.79	0.84	0.93	6.27	9.43	11.62	15.32	0.76	1.27	1.66	2.42
DA-A4	EX-I-A4	0.18	5.00	0.71	0.79	0.84	0.93	6.27	9.43	11.62	15.32	0.79	1.32	1.73	2.53
DA-A5	EX-I-A5	2.50	7.50	0.60	0.67	0.72	0.80	5.57	8.34	10.25	13.49	8.42	14.08	18.61	27.22

HYDROLOGIC SUMMARY (PROPOSED CONDITIONS)

DRAINAGE AREA ID	INLET ID	DRAINAGE AREA	T_c	RUNOFF COEFFECIENT (C)				Intensity (I) (in/hr)				Flow (Q) (cfs)			
		(acres)	(min)	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr
DA-A1	I-A1	1.64	5.66	0.58	5.66	0.69	0.78	6.07	9.11	11.22	14.78	5.82	9.80	12.81	19.07
DA-A2	I-A2	0.60	5.46	0.62	5.46	0.73	0.82	6.13	9.21	11.34	14.94	2.30	3.85	5.02	7.42
DA-A3	I-A3	0.17	5.00	0.71	5.00	0.84	0.93	6.27	9.43	11.62	15.32	0.76	1.27	1.66	2.42
DA-A4	I-A4	0.18	5.00	0.71	5.00	0.84	0.93	6.27	9.43	11.62	15.32	0.79	1.32	1.73	2.53
DA-A5	I-A5	2.50	7.50	0.60	7.50	0.72	0.80	5.57	8.34	10.25	13.49	8.42	14.08	18.61	27.22

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WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

DRAINAGE AREA MAP - SYSTEM A

CITY OF AUSTIN
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HYDROLOGIC SUMMARY (EXISTING CONDITIONS)

DRAINAGE AREA ID	INLET ID	DRAINAGE AREA	T_C	RUNOFF COEFFECIENT (C)				Intensity (I) (in/hr)				Flow (Q) (cfs)			
		(acres)	(min)	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr
B-1	I-B1	0.372	5	0.624	0.698	0.741	0.825	6.271	9.433	11.623	15.318	1.47	2.47	3.23	4.74
B-2	I-B2	0.512	5	0.667	0.743	0.788	0.874	6.271	9.433	11.623	15.318	2.16	3.62	4.73	6.91
B-3	I-B3	0.436	5	0.725	0.804	0.853	0.942	6.271	9.433	11.623	15.318	2	3.34	4.36	6.34
B-4	I-B4	0.179	5	0.617	0.69	0.733	0.816	6.271	9.433	11.623	15.318	0.7	1.17	1.53	2.25
B-5	I-B5	1.958	5	0.649	0.724	0.769	0.854	6.271	9.433	11.623	15.318	8.04	13.48	17.64	25.81
B-6	I-B6	0.754	5	0.637	0.711	0.755	0.839	6.271	9.433	11.623	15.318	3.04	5.1	6.67	9.77

HYDROLOGIC SUMMARY (PROPOSED CONDITIONS)

DRAINAGE AREA ID	INLET ID	DRAINAGE AREA	T_C	RUNOFF COEFFECIENT (C)				Intensity (I) (in/hr)				Flow (Q) (cfs)			
		(acres)	(min)	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr	2 yr	10 yr	25 yr	100 yr
B-1	I-B1	0.372	5	0.624	0.698	0.741	0.825	6.271	9.433	11.623	15.318	1.47	2.47	3.23	4.74
B-2	I-B2	0.512	5	0.667	0.743	0.788	0.874	6.271	9.433	11.623	15.318	2.16	3.62	4.73	6.91
B-3	I-B3	0.436	5	0.725	0.804	0.853	0.942	6.271	9.433	11.623	15.318	2	3.34	4.36	6.34
B-4	I-B4	0.179	5	0.617	0.69	0.733	0.816	6.271	9.433	11.623	15.318	0.7	1.17	1.53	2.25
B-5	I-B5	1.958	5	0.649	0.724	0.769	0.854	6.271	9.433	11.623	15.318	8.04	13.48	17.64	25.81
B-6	I-B6	0.754	5	0.637	0.711	0.755	0.839	6.271	9.433	11.623	15.318	3.04	5.1	6.67	9.77

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

DRAINAGE AREA MAP - SYSTEM B

CITY OF AUSTIN
AUSTIN WATER

BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
40 OF 93

100% SUBMITTAL REV

STORMCAD CONDUIT CALCULATION -EXISTING 25 YR CONDITIONS - SYSTEM A										
LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
EX-P-A1-01	2.4	14.7	568.57	569.5	569.29	570.12	569.45	570.36	30.21	7.9
EX-P-A1-02	2.4	9.14	567.45	568.57	567.81	569.19	568.87	569.43	15.44	15.5
EX-P-A1-03	2.39	23.81	565.98	567.45	567.09	568.07	567.16	568.31	59.96	4
EX-P-A1-04	5.05	6.93	565.77	565.98	566.83	566.89	567.15	567.32	8.05	62.8
EX-P-A1-05	5.04	12.19	564.8	565.77	566.18	566.68	566.45	567.11	17.22	29.3
EX-P-A1-06	5.04	4.11	564.63	564.8	566.17	566.18	566.43	566.44	16.66	30.3
EX-P-A1-07	5.83	18.81	563.87	564.63	564.85	565.56	565.2	565.96	49.6	11.7
EX-P-A1-08	6.6	17.87	562.03	563.87	563.01	564.83	563.39	565.23	59.01	11.2
EX-P-A1-09	6.6	9.31	561.71	562.03	562.68	562.99	563.07	563.39	23.74	27.8
EX-P-A1-10	6.59	13.66	559.69	561.71	560.2	562.67	562.28	563.07	40.48	16.3
EX-P-A1-11	6.58	14.9	557.29	559.69	557.78	560.65	560.17	561.04	45.76	14.4
EX-P-A1-12	6.57	10.8	556.84	557.29	557.81	558.25	558.2	558.65	29.18	22.5
EX-P-A1-13	6.56	9.87	556.2	556.84	557.92	557.8	558.06	558.2	25.75	25.5
EX-P-A1-14	6.55	3	554.27	556.2	557.86	557.92	558	558.06	39.57	16.6
EX-P-A1-15	6.51	2.98	550.27	554.27	557.81	557.86	557.94	558	54.12	12
EX-P-A1-16	36.84	16.89	549.9	550.27	551.56	553.36	555.99	557.79	16.74	220.1
EX-P-A2	34.52	28.13	550.52	554.43	557.81	562.67	570.1	574.97	30.94	111.6
EX-P-A3-1	0.88	10.99	566.95	567.52	567.33	567.89	567.45	568.02	30.55	2.9
EX-P-A3-2	0.88	3.16	566.9	566.95	567.27	567.32	567.4	567.45	5.22	16.9
EX-P-A3-3	0.88	7.44	566.4	566.9	566.78	567.27	566.9	567.4	17.49	5
EX-P-A3-4	0.88	6.07	566.05	566.4	566.43	566.77	566.55	566.9	13.09	6.7
EX-P-A3-5	0.88	8.67	564.4	566.05	564.85	566.42	564.92	566.55	21.79	4
EX-P-A4-1	0.9	8.07	567.76	567.99	568.25	568.36	568.31	568.5	19.45	4.6
EX-P-A4-2	0.9	8.35	566.48	567.76	566.86	568.13	566.99	568.26	20.44	4.4
EX-P-A4-3	0.9	7.84	565.2	566.48	566.42	566.85	566.43	566.98	18.66	4.8
EX-P-A4-4	0.9	11.03	564.63	565.2	566.42	566.42	566.43	566.43	30.46	2.9
EX-P-A5-1	2.87	12.01	568.59	568.86	569.29	569.54	569.54	569.82	21.06	13.6
EX-P-A5-2	2.87	10.06	567.93	568.59	568.62	569.27	568.88	569.54	16.41	17.5
EX-P-A5-3	2.87	15.46	566.45	567.93	567.24	568.61	567.43	568.88	30.1	9.5
EX-P-A5-4	2.87	11.38	565.98	566.45	567.09	567.13	567.19	567.4	19.55	14.7

STORMCAD CONDUIT CALCULATION -EXISTING 100 YR CONDITIONS - SYSTEM A										
LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
EX-P-A1-01	2.91	15.56	568.57	569.5	569.36	570.19	569.56	570.46	30.21	9.6
EX-P-A1-02	2.9	9.65	567.45	568.57	567.85	569.25	568.99	569.53	15.44	18.8
EX-P-A1-03	2.9	25.21	565.98	567.45	567.99	568.13	568.07	568.41	59.96	4.8
EX-P-A1-04	6.08	4.96	565.77	565.98	567.55	567.67	567.93	568.05	8.05	75.6
EX-P-A1-05	6.07	4.94	564.8	565.77	567.39	567.51	567.77	567.89	17.22	35.2
EX-P-A1-06	6.05	4.93	564.63	564.8	567.37	567.39	567.75	567.77	16.66	36.3
EX-P-A1-07	7	3.96	563.87	564.63	567.2	567.21	567.44	567.46	49.6	14.1
EX-P-A1-08	7.93	3.64	562.03	563.87	567.12	567.16	567.33	567.36	59.01	13.4
EX-P-A1-09	7.91	3.63	561.71	562.03	567.09	567.12	567.29	567.33	23.74	33.3
EX-P-A1-10	7.89	3.62	559.69	561.71	567.01	567.09	567.21	567.29	40.48	19.5
EX-P-A1-11	7.84	3.6	557.29	559.69	566.94	567.01	567.14	567.21	45.76	17.1
EX-P-A1-12	7.8	3.58	556.84	557.29	566.91	566.94	567.11	567.14	29.18	26.7
EX-P-A1-13	7.78	3.57	556.2	556.84	566.85	566.91	567.05	567.11	25.75	30.2
EX-P-A1-14	7.75	3.55	554.27	556.2	566.78	566.85	566.97	567.05	39.57	19.6
EX-P-A1-15	7.7	3.53	550.27	554.27	566.7	566.78	566.89	566.97	54.12	14.2
EX-P-A1-16	53.26	24.41	549.9	550.27	551.56	555.31	560.83	564.58	16.74	318.2
EX-P-A2	52.8	43.03	550.52	554.43	566.7	578.08	595.47	606.85	30.94	170.7
EX-P-A3-1	1.07	11.67	566.95	567.52	567.37	567.93	567.5	568.07	30.55	3.5
EX-P-A3-2	1.07	3.34	566.9	566.95	567.31	567.35	567.45	567.5	5.22	20.5
EX-P-A3-3	1.07	7.88	566.4	566.9	567.19	567.3	567.22	567.45	17.49	6.1
EX-P-A3-4	1.06	6.42	566.05	566.4	567.2	567.19	567.21	567.22	13.09	8.1
EX-P-A3-5	1.06	9.18	564.4	566.05	567.2	567.2	567.21	567.21	21.79	4.9
EX-P-A4-1	1.09	8.55	567.76	567.99	568.3	568.4	568.37	568.55	19.45	5.6
EX-P-A4-2	1.09	8.85	566.48	567.76	567.74	568.17	567.75	568.32	20.44	5.3
EX-P-A4-3	1.09	0.89	565.2	566.48	567.74	567.74	567.75	567.75	18.66	5.8
EX-P-A4-4	1.07	0.87	564.63	565.2	567.73	567.74	567.75	567.75	30.46	3.5
EX-P-A5-1	3.45	12.66	568.59	568.86	569.36	569.61	569.65	569.92	21.06	16.4
EX-P-A5-2	3.45	10.59	567.93	568.59	568.69	569.34	568.99	569.65	16.41	21
EX-P-A5-3	3.45	16.31	566.45	567.93	568.01	568.68	568.14	568.99	30.1	11.4
EX-P-A5-4	3.44	2.81	565.98	566.45	567.99	568	568.11	568.12	19.55	17.6

STORMCAD CONDUIT CALCULATION -PROPOSED 25 YR CONDITIONS - SYSTEM A										
LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
P-A1-1	4.57	18.56	567.21	569.22	567.6	570.04	570.01	570.37	53.78	8.5
P-A1-2	4.57	7.8	564.39	564.65	565.43	565.47	565.62	565.8	15.97	28.6
P-A1-3	4.57	7.81	563.9	564.39	564.49	565.21	565.26	565.55	16	28.5
P-A1-4	7.04	11.6	555.19	556.78	556.9	557.72	556.99	558.09	52.28	13.5
P-A1-5	9.61	12.78	547.56	555.19	553.29	556.3	553.43	556.74	52.85	18.2
P-A1-6	37.31	18.33	545.91	547.56	547.39	549.5	550.87	551.73	53.21	70.1
P-A2-1	31.18	9.93	551.75	552.01	554.31	554.42	555.84	555.95	47.32	65.9
P-A2-2	31.16	15.01	551.5	551.75	553.15	553.63	554.99	555.24	43.32	71.9
P-A3	1.45	4.18	564.05	564.3	564.43	564.75	564.7	564.91	10.5	13.8
P-A4	1.5	11.54	560.3	566.99	560.47	567.41	562.54	567.56	100.22	1.5
P-A5	2.87	13.38	561.9	566.98	562.17	567.62	564.92	567.87	41.07	7

STORMCAD CONDUIT CALCULATION -PROPOSED 100 YR CONDITIONS - SYSTEM A										
LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
P-A1-1	5.59	19.69	567.21	569.22	567.65	570.13	570.18	570.52	53.78	10.4
P-A1-2	5.59	8.24	564.39	564.65	565.55	565.56	565.78	565.95	15.97	35
P-A1-3	5.58	8.24	563.9	564.39	564.57	565.31	565.41	565.69	16	34.9
P-A1-4	8.54	2.72	555.19	556.78	564.18	564.22	564.29	564.34	52.28	16.3
P-A1-5	11.72	3.73	547.56	555.19	563.58	563.95	563.8	564.17	52.85	22.2
P-A1-6	53.28	19.31	545.91	547.56	547.75	549.54	552.57	554.03	53.21	100.1
P-A2-1	48.53	15.45	551.75	552.01	563.19	563.46	566.89	567.17	47.32	102.6
P-A2-2	48.51	15.44	551.5	551.75	561.49	561.8	565.19	565.5	43.32	112
P-A3	1.85	4.48	564.05	564.3	564.48	564.81	564.79	565	10.5	17.6
P-A4	1.9	12.43	560.3	566.99	564.25	567.47	564.25	567.64	100.22	1.9
P-A5	3.45	14.12	561.9	566.98	564.38	567.69	564.44	567.96	41.07	8.4

EXISTING 25 YR INLET CALCULATIONS - SYSTEM A												
Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System A													
EX-I-A1	Curb	On Grade	6	572	0.02	0.02	0.67	5.66	12.81	2.40	10.41	15.20	0.3
EX-I-A2	Curb	In Sag	6	556.68	0	0.02	2.25	5.46	34.52	34.52	0.00	287.90	6.2
EX-I-A3	Curb	On Grade	6	570.72	0.02	0.02	0.39	5.00	1.66	0.88	0.78	7.10	0.1
EX-I-A4	Curb	On Grade	6	570.99	0.02	0.02	0.4	5.00	1.73	0.90	0.83	7.20	0.1
EX-I-A5	Curb	On Grade	6	572.1	0.02	0.02	0.75	7.50	18.61	2.87	15.74	287.90	0.4

EXISTING 100 YR INLET CALCULATIONS - SYSTEM A												
Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System A													
EX-I-A1	Curb	On Grade	5	572	0.02	0.02	0.76	5.66	19.07	2.91	16.16	17.7	0.4
EX-I-A2	Curb	In Sag	5	556.68	0	0.02	2.25	5.46	52.8	52.8	0.00	688.9	14.3
EX-I-A3	Curb	On Grade	5	570.72	0.02	0.02	0.44	5.00	2.42	1.07	1.35	8.2	0.2
EX-I-A4	Curb	On Grade	5	570.99	0.02	0.02	0.44	5.00	2.53	1.09	1.44	8.3	0.2
EX-I-A5	Curb	On Grade	5	572.1	0.02	0.02	0.85	7.50	27.22	3.45	23.77	20.2	0.4

PROPOSED 25 YR INLET CALCULATIONS - SYSTEM A												
Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System A													
I-A1	Curb	On Grade	10	572	0.02	0.02	0.91	5.66	12.81	4.57	8.24	15.20	0.3
I-A2	Curb	In Sag	10	556.68	0	0.02	2.2	5.46	31.18	31.18	0.00	52.20	1.5
I-A3	Curb	On Grade	10	569	0.02	0.02	0.45	5.00	1.66	1.45	0.21	7.10	0.1
I-A4	Curb	On Grade	10	570.99	0.02	0.02	0.45	5.00	1.73	1.50	0.23	7.20	0.1
I-A5	Curb	On Grade	5	572.1	0.02	0.02	0.69	7.50	18.61	2.87	15.74	17.50	0.4

PROPOSED 100 YR INLET CALCULATIONS - SYSTEM A												
Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System A													
I-A1	Curb	On Grade	10	572	0.02	0.02	1.03	5.66	19.07	5.59	13.48	17.7	0.4
I-A2	Curb	In Sag	10	556.68	0	0.02	4.67	5.46	48.53	48.53	0.00	136.5	3.2
I-A3	Curb	On Grade	10	569	0.02	0.02	0.5	5.00	2.42	1.85	0.57	8.2	0.2
I-A4	Curb	On Grade	10	570.99	0.02	0.02	0.51	5.00	2.53	1.9	0.63	8.3	0.2
I-A5	Curb	On Grade	5	572.1	0.02	0.02	0.76	7.50	27.22	3.45	23.77	20.2	0.4

NOTE:

1. THE PROJECT PROPOSED A COMBINATION OF STORMWATER CONVEYANCE AND TREATMENT IMPROVEMENTS. THE STORMWATER CONVEYANCE IMPROVEMENTS WERE DESIGNED UNDER THE FOLLOWING OBJECTION PRIORITIZATION:

   A. DESIGN THE DRAINAGE SYSTEM TO FULL, POST ATLAS 14 DCM COMPLIANCE.

   B. IF OBJECTIVE PRIORITY NUMBER 1 CANNOT BE MET DUE TO ENGINEERING FEASIBILITY OR CLIENT PREFERENCE, THEN DESIGN THE DRAINAGE SYSTEM TO MEET A NO ADVERSE CONDITION VERSUS EXISTING CONDITIONS, USING ATLAS 14 RAINFALL PRECIPITATION VALUES.

2. A HYDROLOGIC IMPACT ANALYSIS IS INCLUDED IN THE WEST 17TH STREET WATER AND WASTEWATER PIPELINE RENEWAL - ADDITIONAL SERVICES - HYDROLOGIC AND HYDRAULIC MODELING: - SYSTEMS A, B, C, D, AND E TECHNICAL MEMORANDUM

NO.	REVISION	BY	DATE

BGE JOB NO. 4766--03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

DRAINAGE CALCS - SYSTEM A

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

100% SUBMITTAL REV

STORMCAD CONDUIT CALCULATION -EXISTING 25 YR CONDITIONS - SYSTEM B

LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
P-B1-01	2.41	16.24	558.91	562.3	559.52	562.89	559.72	563.11	58.21	4.1
P-B1-02	2.41	4.2	558.84	558.91	559.52	559.5	559.67	559.72	8.66	27.9
P-B1-03	2.41	11.36	557.1	558.84	558.92	559.43	558.95	559.65	35.03	6.9
P-B1-05	5.98	11.14	557	557.1	558.83	558.83	559.01	559.01	23.6	25.3
P-B1-06	16.44	15.75	556.31	557	557.43	558.43	559.54	559.82	26.4	62.3
P-B1-07	16.44	17.44	555	556.31	556.62	557.74	557.97	559.13	30.18	54.5
P-B1-08	17.49	16.8	554.57	555	556.16	556.45	557.68	558	28.18	62.1
P-B1-09	17.48	22.35	552.67	554.57	555.82	556.16	557.34	557.68	41.2	42.4
P-B1-10	17.47	9.89	552.29	552.67	555.36	555.82	556.87	557.34	15.79	110.6
P-B1-11	17.45	17.37	539	552.29	550.69	555.36	552.21	556.87	29.44	59.3
P-B1-12	21.59	17.12	535.43	539	547.71	549.94	550.03	552.26	27.29	79.1
P-B1-13	24.61	23.87	534.08	535.43	546.55	547.05	549.56	550.07	40.16	61.3
P-B1-14	24.6	16.99	533.31	534.08	545.88	546.55	548.89	549.56	26.43	93.1
P-B1-15	36.47	22.23	531.93	533.31	540.75	542.27	547.37	548.89	34.69	105.1
P-B1-16	36.45	63.3	529.27	531.93	540.55	540.76	547.16	547.37	130.49	27.9
P-B2-1	3.13	21.48	535.89	537.41	547.71	547.72	547.76	547.76	77.61	4
P-B2-2	3.13	12.05	535.43	535.89	547.71	547.71	547.76	547.76	34.16	9.2
P-B3	4.36	12.2	539	541.1	550.69	550.73	550.79	550.83	30.35	14.4
P-B4-1	1.12	0.63	559.75	557.43	560.27	560.33	560.34	560.34	73.15	1.5
P-B4-2	1.11	9.56	558.24	559.75	558.65	560.15	558.78	560.29	38.14	2.9
P-B4-3	1.11	12.24	555	558.24	556.62	558.63	556.63	558.77	54.28	2
P-B5-1	10.51	5.95	559.52	559.29	562.19	562.25	562.74	562.8	20.4	51.5
P-B5-2	10.5	5.94	559.65	559.52	561.87	561.98	562.42	562.53	11.15	94.1
P-B5-3	10.48	5.93	560.37	559.65	561.61	561.87	562.31	562.42	26.68	39.3
P-B5-4	10.47	57.99	557	560.37	558.83	561.61	559.37	562.31	191.53	5.5
P-B6-1	3.59	16.54	561.18	562.29	562.01	563.01	562.21	563.29	50.52	7.1
P-B6-2	3.59	15.47	557.62	561.18	558.93	561.9	559	562.19	45.89	7.8
P-B6-3	3.58	12.88	557.1	557.62	558.92	558.92	558.99	558.99	35.48	10.1
P-B7	147.62	25.42	529.91	530.42	541.13	541.16	542	542.03	604.32	24.4
P-B7-1	147.58	33.86	529.27	529.91	540.55	540.56	541.43	541.44	901.25	16.4
P-B8	12.14	18.33	533.31	537	548.16	548.58	548.89	549.31	35.86	33.9

STORMCAD CONDUIT CALCULATION -EXISTING 100 YR CONDITIONS - SYSTEM B

LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
P-B1-01	3	17.31	558.91	562.3	583.55	583.56	583.6	583.61	58.21	5.1
P-B1-02	2.99	4.45	558.84	558.91	583.54	583.55	583.59	583.6	8.66	34.6
P-B1-03	2.99	12.1	557.1	558.84	583.53	583.54	583.57	583.58	35.03	8.5
P-B1-05	7.32	11.77	557	557.1	583.38	583.39	583.65	583.66	23.6	31
P-B1-06	20.09	16.44	556.31	557	582.39	582.79	584.4	584.8	26.4	76.1
P-B1-07	20.08	18.27	555	556.31	581.81	582.39	583.82	584.4	30.18	66.5
P-B1-08	21.53	17.56	554.57	555	581.26	581.51	583.57	583.82	28.18	76.4
P-B1-09	21.53	23.57	552.67	554.57	580.74	581.26	583.05	583.57	41.2	52.3
P-B1-10	21.52	12.18	552.29	552.67	580.04	580.74	582.34	583.05	15.79	136.2
P-B1-11	21.49	18.19	539	552.29	572.96	580.04	575.26	582.34	29.44	73
P-B1-12	27.57	17.6	535.43	539	567.95	571.59	571.73	575.38	27.29	101
P-B1-13	31.29	25.13	534.08	535.43	566.1	566.92	570.97	571.79	40.16	77.9
P-B1-14	31.28	17.7	533.31	534.08	565.02	566.1	569.89	570.97	26.43	118.3
P-B1-15	48.69	27.55	531.93	533.31	555.38	558.09	567.18	569.89	34.69	140.4
P-B1-16	48.67	68.46	529.27	531.93	555.02	555.39	566.8	567.18	130.49	37.3
P-B2-1	3.85	22.83	535.89	537.41	567.96	567.96	568.03	568.03	77.61	5
P-B2-2	3.85	12.8	535.43	535.89	567.95	567.95	568.02	568.03	34.16	11.3
P-B3	6.34	13.58	539	541.1	572.96	573.05	573.16	573.25	30.35	20.9
P-B4-1	1.5	0.85	559.75	557.43	581.82	581.82	581.83	581.84	73.15	2.1
P-B4-2	1.5	10.47	558.24	559.75	581.82	581.82	581.83	581.83	38.14	3.9
P-B4-3	1.5	13.39	555	558.24	581.81	581.81	581.82	581.83	54.28	2.8
P-B5-1	12.82	7.26	559.52	559.29	584.04	584.13	584.86	584.95	20.4	62.8
P-B5-2	12.81	7.25	559.65	559.52	583.56	583.73	584.38	584.55	11.15	114.9
P-B5-3	12.8	7.24	560.37	559.65	583.4	583.56	584.21	584.38	26.68	48
P-B5-4	12.78	61.55	557	560.37	583.38	583.4	584.2	584.21	191.53	6.7
P-B6-1	4.35	17.49	561.18	562.29	583.58	583.59	583.68	583.69	50.52	8.6
P-B6-2	4.35	16.34	557.62	561.18	583.54	583.58	583.64	583.67	45.89	9.5
P-B6-3	4.34	13.63	557.1	557.62	583.53	583.53	583.62	583.63	35.48	12.2
P-B7	206.38	27.87	529.91	530.42	556.15	556.21	557.86	557.92	604.32	34.2
P-B7-1	206.34	37.23	529.27	529.91	555.02	555.05	556.73	556.77	901.25	22.9
P-B8	17.76	20.25	533.31	537	568.32	569.23	569.89	570.8	35.86	49.5

STORMCAD CONDUIT CALCULATION -PROPOSED 25 YR CONDITIONS - SYSTEM B

LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
P-B1	3.23	8.09	558.25	559.2	570.19	570.22	570.25	570.27	19.26	16.8
P-B1-2	9.09	18.49	553.62	558.13	569.38	569.61	569.79	570.02	40.5	22.4
P-B1-3A	21.05	19.96	538.05	553.62	560.35	566.55	562.55	568.75	33.36	63.1
P-B1-3B	20.88	11.82	537.34	538.05	556.68	559.07	558.85	561.24	11.35	183.9
P-B1-4	25.04	14.17	536.58	537.34	551.03	553.93	554.15	557.05	12.82	195.4
P-B1-5	27.88	17.79	535.54	536.58	546.93	547.99	550.8	551.86	27.59	101
P-B1-6	39.71	22.47	534.59	535.54	537.41	540.01	545.25	547.86	23.99	165.5
P-B2	2.99	9.79	536.58	537.41	552.88	552.89	552.92	552.93	25.93	11.5
P-B3	4.36	12.63	537.34	539.64	557.93	557.97	558.02	558.06	31.86	13.7
P-B4	1.53	8.19	556.03	557.74	570.54	570.55	570.55	570.56	26.61	5.8
P-B4-2	12	18.72	553.62	556.03	569.2	569.45	569.91	570.16	37.07	32.4
P-B5	10.51	8.36	556.03	556.49	570.22	570.5	570.77	571.05	13.34	78.8
P-B6	5.9	14.92	558.13	561.22	570.12	570.21	570.29	570.38	35.65	16.5
P-B7	146.41	20.25	529.94	530.19	541.6	541.62	542.46	542.49	442.96	33.1
P-B7-1	176.59	21.24	529.69	529.94	540.36	540.4	541.62	541.66	441.59	40
P-B8-1	12.14	13.05	535.54	537	550.06	550.48	550.8	551.22	22.68	53.5

STORMCAD CONDUIT CALCULATION -PROPOSED 100 YR CONDITIONS - SYSTEM B

LABEL	FLOW	VELOCITY	INVERT (STOP)	INVERT (START)	HYDRAULIC GRADE LINE (OUT)	HYDRAULIC GRADE LINE (IN)	ENERGY GRADE LINE (OUT)	ENERGY GRADE LINE (IN)	CAPACITY (FULL FLOW)	FLOW CAPACITY
	(ft^3/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft3/s)	(%)
P-B1	4.59	8.95	558.25	559.2	606.16	606.22	606.27	606.32	19.26	23.8
P-B1-2	12.07	20	553.62	558.13	604.73	605.14	605.46	605.86	40.5	29.8
P-B1-3A	27.04	21.03	538.05	553.62	589.88	600.11	593.52	603.75	33.36	81.1
P-B1-3B	26.83	15.18	537.34	538.05	583.82	587.77	587.41	591.35	11.35	236.3
P-B1-4	32.95	18.65	536.58	537.34	573.89	578.91	579.29	584.31	12.82	257.1
P-B1-5	36.44	20.62	535.54	536.58	566.95	568.77	573.56	575.37	27.59	132
P-B1-6	53.8	30.45	534.59	535.54	548.97	553.75	563.38	568.16	23.99	224.3
P-B2	3.66	10.37	536.58	537.41	577.09	577.1	577.15	577.17	25.93	14.1
P-B3	6.34	14.06	537.34	539.64	585.85	585.94	586.05	586.14	31.86	19.9
P-B4	2.25	9.17	556.03	557.74	606.6	606.61	606.63	606.64	26.61	8.5
P-B4-2	15.02	19.87	553.62	556.03	604.5	604.89	605.62	606.01	37.07	40.5
P-B5	12.82	8.6	556.03	556.49	606.12	606.55	606.94	607.37	13.34	96.1
P-B6	7.52	15.99	558.13	561.22	606.06	606.19	606.34	606.48	35.65	21.1
P-B7	204.79	22.12	529.94	530.19	556.6	556.66	558.29	558.35	442.96	46.2
P-B7-1	245.84	23.09	529.69	529.94	554.23	554.31	556.67	556.74	441.59	55.7
P-B8-1	17.76	14.21	535.54	537	571.99	572.89	573.56	574.46	22.68	78.3

EXISTING 25 YR INLET CALCULATIONS - SYSTEM B

Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System B													
I-B1	Curb	On Grade	5	562.3	0.03	0.032	0.63	5	3.23	2.41	3.2	7.2	0.3
I-B2	Curb	On Grade	5	537.41	0.03	0.032	2.75	5	5.15	3.13	2.02	8.6	0.3
I-B3*	Curb	In Sag	0	541.1	0	0.032	3.07	5	4.36	4.36	0	12.1	0.4
I-B4	Curb	On Grade	5	557.43	0.03	0.032	2.9	5	1.53	1.12	0.42	5.6	0.2
I-B5	Curb	On Grade	10	559.29	0.03	0.032	3.07	5	17.64	10.51	7.13	13.9	0.5
I-B6	Curb	On Grade	5	562.29	0.03	0.032	0.78	5	6.67	3.59	3.08	9.6	0.3

EXISTING 100 YR INLET CALCULATIONS - SYSTEM B

Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System B													
I-B1	Curb	On Grade	5	562.3	0.03	0.032	1.7	5	4.74	3	1.74	8.4	0.3
I-B2	Curb	On Grade	5	537.41	0.03	0.032	2.75	5	7.66	3.85	3.81	10.1	0.4
I-B3*	Curb	In Sag	0	541.1	0	0.032	3.07	5	6.34	6.34	0	15.1	0.5
I-B4	Curb	On Grade	5	557.43	0.03	0.032	4.7	5	2.25	1.5	0.75	6.4	0.2
I-B5	Curb	On Grade	10	559.29	0.03	0.032	4	5	25.81	12.82	12.99	16	0.6
I-B6	Curb	On Grade	5	562.29	0.03	0.032	3.7	5	9.77	4.35	5.42	11.1	0.4

PROPOSED 25 YR INLET CALCULATIONS - SYSTEM B

Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System B													
I-B1	Curb	On Grade	10	559.43	0.03	0.032	4.57	5	3.23	3.23	0	7.2	0.3
I-B2	Curb	On Grade	5	537.41	0.03	0.032	2.75	5	4.73	2.99	1.74	8.4	0.3
I-B3*	Curb	In Sag	0	539.64	0	0.032	4.53	5	4.36	4.36	0	12.1	0.4
I-B4	Curb	On Grade	10	558.54	0.03	0.032	3.6	5	1.53	1.53	0	5.6	0.2
I-B5	Curb	On Grade	10	556.49	0.03	0.032	6.8	5	17.64	10.51	7.13	13.9	0.5
I-B6	Curb	On Grade	10	561.22	0.03	0.032	4.77	5	6.67	5.9	0.77	9.6	0.3

PROPOSED 100 YR INLET CALCULATIONS - SYSTEM B

Label	Inlet Type	Profile Type	Inlet Length (ft)	Top of Inlet Elevation	Longitudinal Slope (ft/ft)	Cross Slope (ft/ft)	Depth Depression (in)	Time of Concentration	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Bypassed (cfs)	Spread / Top Width (ft)	Computed Ponding Depth (ft)
System B													
I-B1	Curb	On Grade	10	559.43	0.03	0.032	4.57	5	4.74	4.59	0.15	8.4	0.3
I-B2	Curb	On Grade	5	537.41	0.03	0.032	2.75	5	6.91	3.66	3.26	9.7	0.4
I-B3*	Curb	In Sag	0	539.64	0	0.032	4.53	5	6.34	6.34	0	15.1	0.5
I-B4	Curb	On Grade	10	558.54	0.03	0.032	3.6	5	2.25	2.25	0	6.4	0.2
I-B5	Curb	On Grade	10	556.49	0.03	0.032	6.8	5	25.81	12.82	12.99	16	0.6
I-B6	Curb	On Grade	10	561.22	0.03	0.032	4.77	5	9.77	7.52	2.25	11.1	0.4

**Note: Inlet I-B3 is an existing grate inlet located on private property within a parking lot.*

NOTE:

1. THE PROJECT PROPOSED A COMBINATION OF STORMWATER CONVEYANCE AND TREATMENT IMPROVEMENTS. THE STORMWATER CONVEYANCE IMPROVEMENTS WERE DESIGNED UNDER THE FOLLOWING OBJECTION PRIORITIZATION:

   A. DESIGN THE DRAINAGE SYSTEM TO FULL, POST ATLAS 14 DCM COMPLIANCE.

   B. IF OBJECTIVE PRIORITY NUMBER 1 CANNOT BE MET DUE TO ENGINEERING FEASIBILITY OR CLIENT PREFERENCE, THEN DESIGN THE DRAINAGE SYSTEM TO MEET A NO ADVERSE CONDITION VERSUS EXISTING CONDITIONS, USING ATLAS 14 RAINFALL PRECIPITATION VALUES.

2. A HYDROLOGIC IMPACT ANALYSIS IS INCLUDED IN THE WEST 17TH STREET WATER AND WASTEWATER PIPELINE RENEWAL - ADDITIONAL SERVICES - HYDROLOGIC AND HYDRAULIC MODELING: - SYSTEMS A, B, C, D, AND E TECHNICAL MEMORANDUM

NO. | REVISION | BY | DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

DRAINAGE CALCS - SYSTEM B

CITY OF AUSTIN
AUSTIN WATER

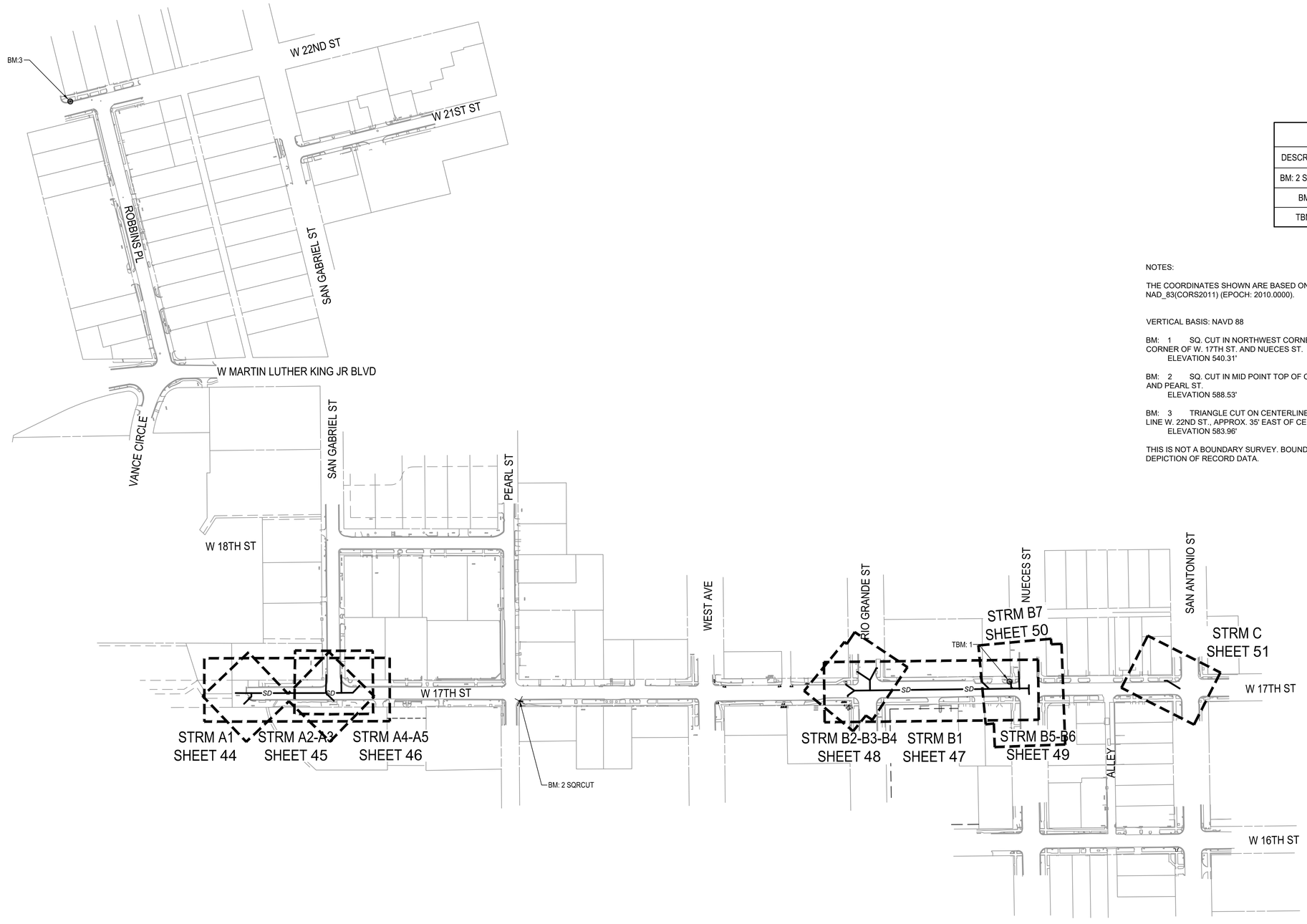
BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

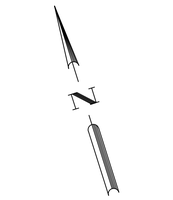
STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
42 OF 93

1001 SUBMITTAL REV





0 60' 120' 240'

SCALE: 1" = 120'

Point Table		
DESCRIPTION	Northing	Easting
BM: 2 SQRCUT	10075514.9221	3112601.3217
BM:3	10077077.5755	3112049.9040
TBM: 1	10075231.8685	3113647.8209

NOTES:

THE COORDINATES SHOWN ARE BASED ON THE TEXAS COORDINATE, CENTRAL ZONE, NAD_83(CORS2011) (EPOCH: 2010.0000).

VERTICAL BASIS: NAVD 88

BM: 1 SQ. CUT IN NORTHWEST CORNER OF STORM DRAIN INLET, NORTHWEST CORNER OF W. 17TH ST. AND NUECES ST.
ELEVATION 540.31'

BM: 2 SQ. CUT IN MID POINT TOP OF CURB, SOUTHEAST CORNER OF W. 17TH ST. AND PEARL ST.
ELEVATION 588.53'

BM: 3 TRIANGLE CUT ON CENTERLINE OF STORM DRAIN INLET ON NORTH CURB LINE W. 22ND ST., APPROX. 35' EAST OF CENTERLINE LEON ST.
ELEVATION 583.96'

THIS IS NOT A BOUNDARY SURVEY. BOUNDARY LINES SHOWN ARE AN APPROXIMATE DEPICTION OF RECORD DATA.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

NO.	REVISION	BY	DATE

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

STORM DRAIN KEY MAP

CITY OF AUSTIN
AUSTIN WATER

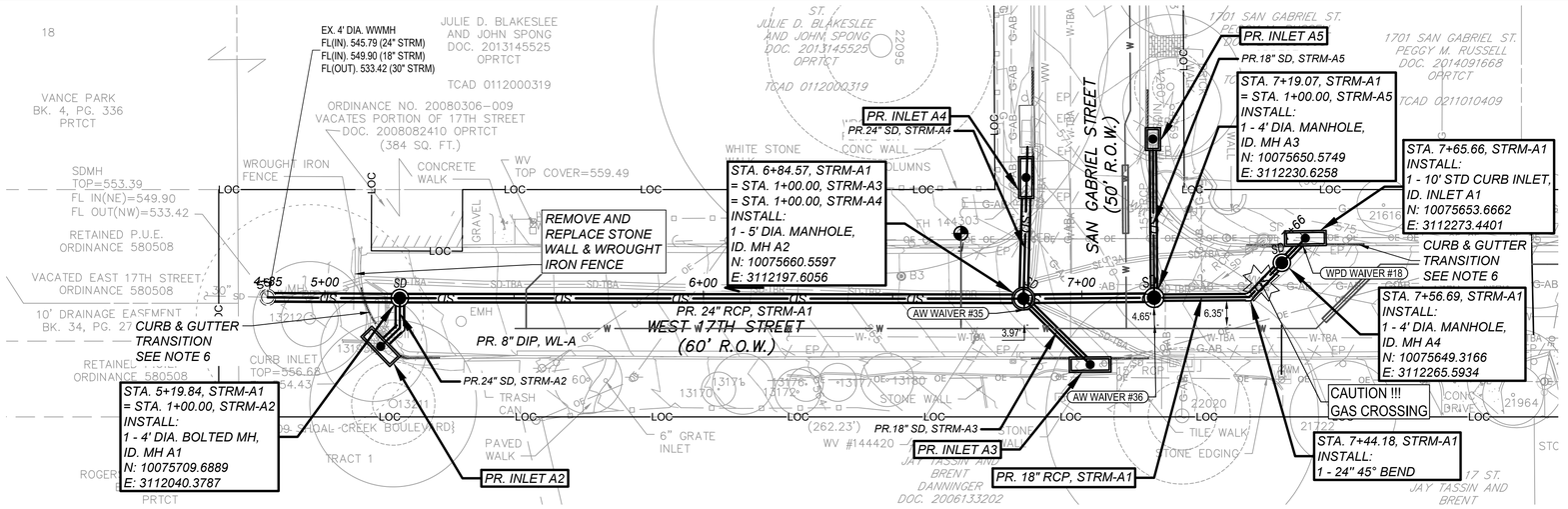
BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

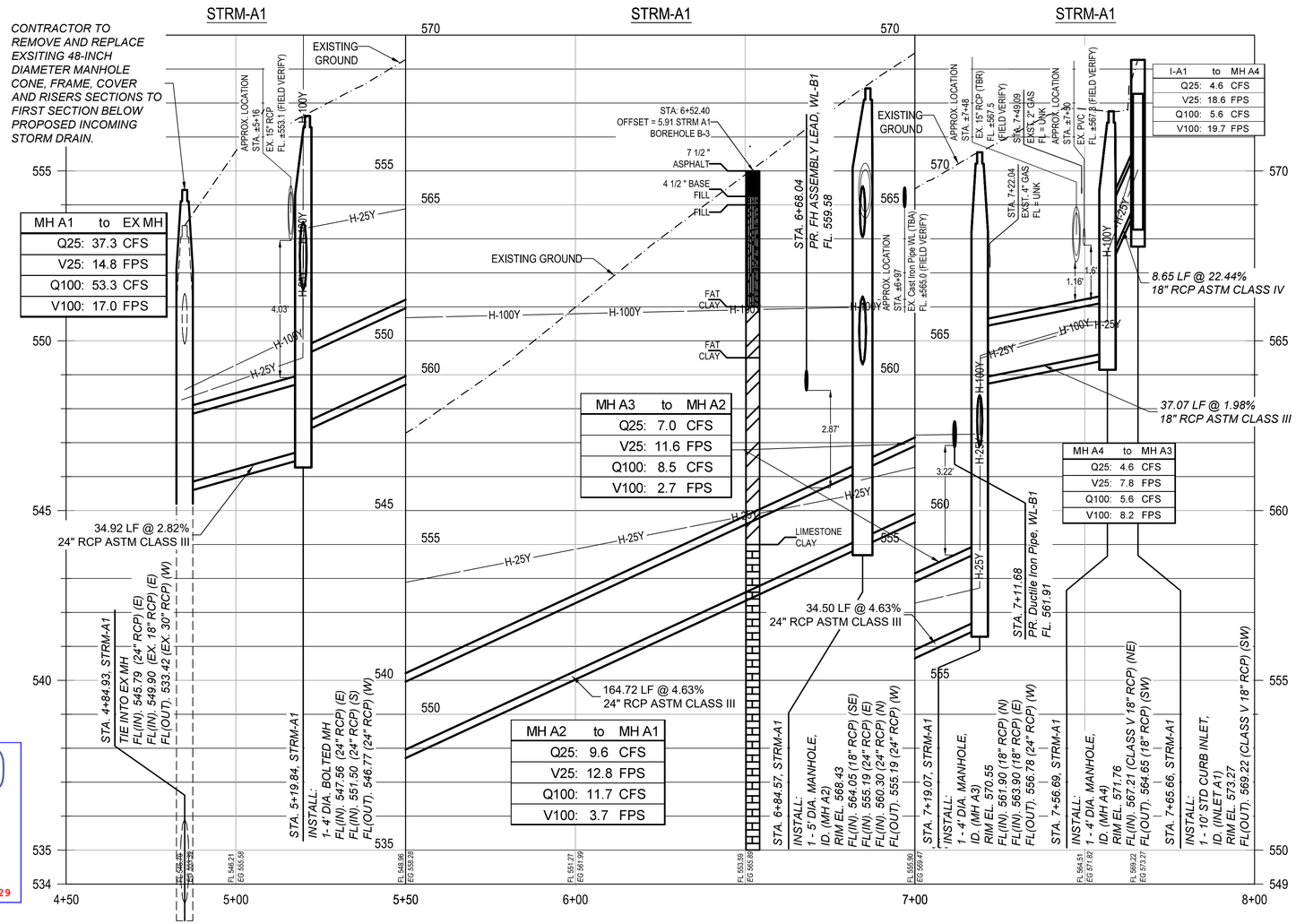
STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
43 OF 93

100% SUBMITTAL REV





NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCEDVATION

0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. CONTRACTOR TO COORDINATE WITH TEXAS GAS AS NECESSARY.
6. CURB AND GUTTER TO BE MODIFIED FOR GUTTER TRANSITION TO INLET, AS NEEDED. THIS ITEM IS SUBSIDIARY TO BID ITEM NO. 508S.

KEY MAP

AW WAIVERS #35 & #36:

LOCATION:
WAIVER #35: 6+84.57 (STRM-A1)
WAIVER #36: 7+19.07 (STRM-A1)

UTILITY:
WAIVER #35: PROPOSED 5' DIA STORM MANHOLE
WAIVER #36: PROPOSED 5' DIA STORM MANHOLE

DISTANCE:
WAIVER #35: 3.97' H FROM PROPOSED 8" DIP WL-A
WAIVER #36: 4.65' H FROM PROPOSED 8" DIP WL-A

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2, WHICH REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
18	STRM-A1	7+65.66	DCM 3.1.4	INLET A1 25-YR BYPASS FLOW EXCEEDS 3 CFS (8.24 CFS) / INLET WAIVER REQUESTED PER SECTION 3.1.4 – ALLOWABLE FLOW THROUGH INTERSECITIONS

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STORM DRAIN PLAN AND PROFILE
STRM A1 1+00 - END

CITY OF AUSTIN
AUSTIN WATER

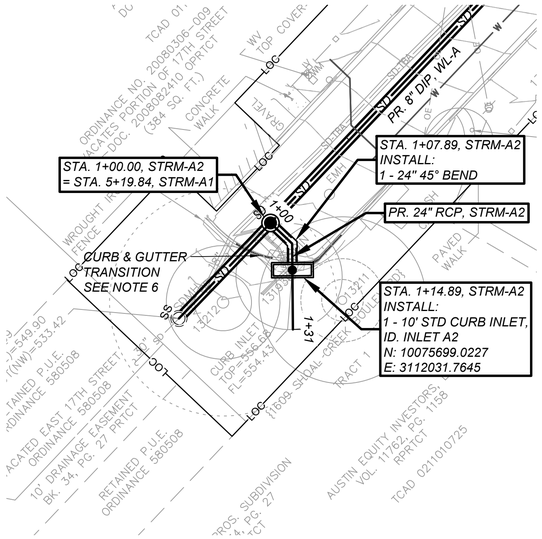
BGE

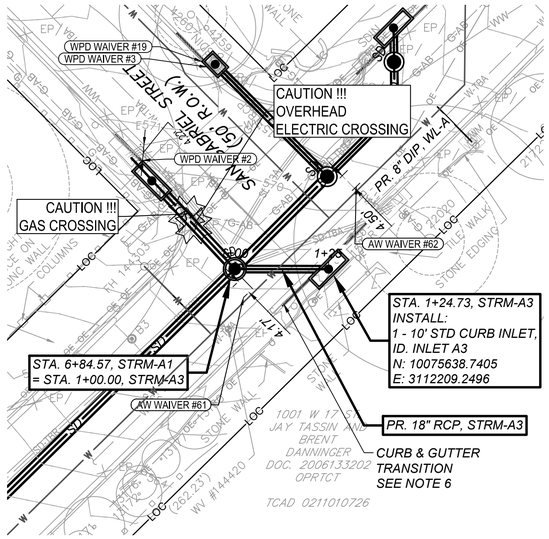
BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
10/20/2026

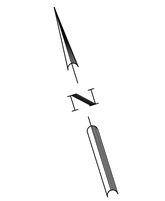
SHEET
44 OF 93

100% SUBMITTAL REV





NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION



0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. 25-YR AND 100-YR HGL EXCEED ELEVATIONS DISPLAYED IN PROFILE.
6. CURB AND GUTTER TO BE MODIFIED FOR GUTTER TRANSITION TO INLET, AS NEEDED. THIS ITEM IS SUBSIDIARY TO BID ITEM NO. 508S.

STRM-A2

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
1	STRM-A2	1+00.00 - 1+14.89	DCM 3.1.0	100-YR HGL NOT CONTAINED WITHIN EASEMENT OR ROW

AW WAIVERS #61, #62:

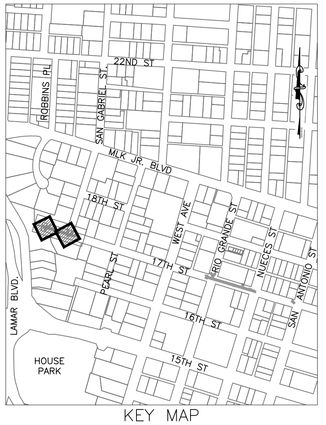
LOCATION:
WAIVER #61: 1+00.00 (STRM-A4)
WAIVER #62: 1+00.00 (STRM-A5)

UTILITY:
WAIVER #61: PR 8" DIP WL-A

DISTANCE:
WAIVER #61: 4.17' H FROM PROPOSED 5' DIA STORM MH
WAIVER #62: 4.50' H FROM PROPOSED 4' DIA STORM MH

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

STRM-A3



KEY MAP

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Jaron Hogenson
Austin
Water
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STATE OF TEXAS
ALEXIS WOFFENDEN
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NO.	REVISION	BY	DATE

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WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

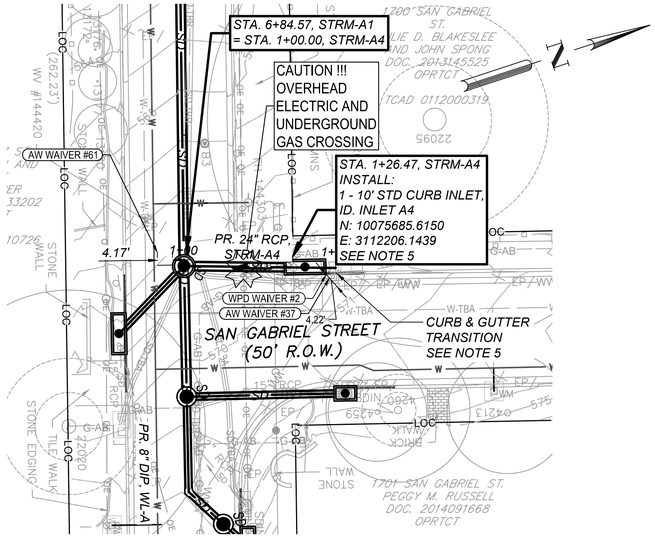
STORM DRAIN PLAN AND PROFILE
STRM A2 & A3 1+00 - END

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

SHEET
45 OF 93

100% SUBMITTAL REV



AW WAIVERS #3 & ,#61,#62:

LOCATION:
WAIVER #37: 1+40.05 (STRM-A4)
WAIVER #61: 1+00.00 (STRM-A4)
WAIVER #62: 1+00.00 (STRM-A5)

UTILITY:
WAIVER #37: EX 8" PVC WWL
WAIVER #61: PR 8" DIP WL-A
WAIVER #61: PR 8" DIP WL-A

DISTANCE:
WAIVER #37: 4.22' H FROM PROPOSED 10' STORM CURB INLET
WAIVER #61: 4.17' H FROM PROPOSED 5' DIA STORM MH
WAIVER #62: 4.50' H FROM PROPOSED 4' DIA STORM MH

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

WPD WAIVERS #2 & #3:

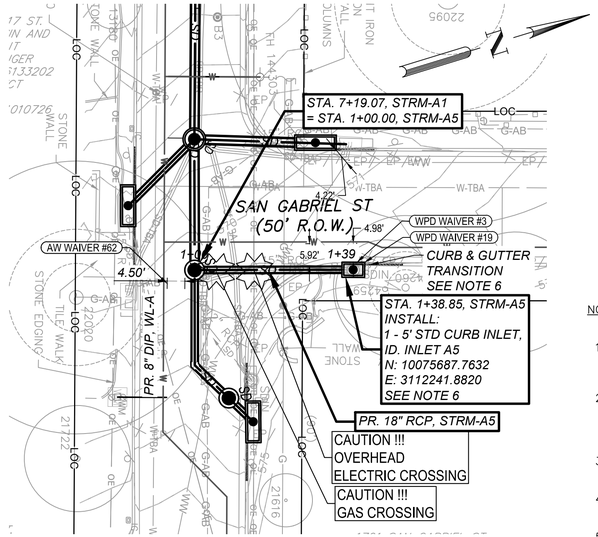
LOCATION:
WAIVER #2: 1+40.05 (STRM-A4)
WAIVER #3: 1+38.85 (STRM-A5)

UTILITY:
WAIVER #2: STORM INLET A4
WAIVER #3: STORM INLET A5

DISTANCE:
WAIVER #2: 4.22' H FROM EXISTING WW LINE
WAIVER #3: CURB INLET TRANSITION LENGTH < 7'6"

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS DCM 5.7.1.F AND DCM 4.1.0.D OF THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL (DCM). DCM 5.7.1.F REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. DCM 4.1.0.D REQUIRES GUTTER TRANSITION LENGTH OF 7'6" OR GREATER TO CURB INLET.

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
2	STRM-A4	1+40.05	DCM 5.7.1.F	STRM-A4 INLET A4 < 5' FROM EX WW LINE (4.22' H)
3	STRM-A5	1+38.85	DCM 4.1.0.D	CURB INLET TRANSITION LENGTH < 7'-6"
19	STRM-A5	1+38.85	DCM 3.1.4	INLET A5 25-YR BYPASS FLOW EXCEEDS 3 CFS (15.74 CFS)



NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

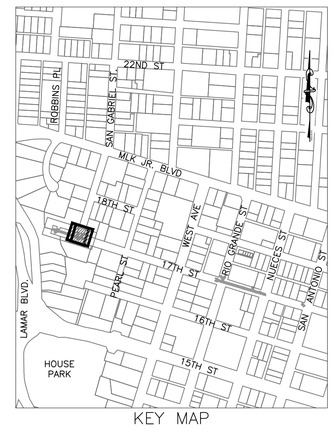
1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. FOR INLET STRM–A4, THERE WILL BE NO TRANSITION BETWEEN THE INLET AND THE CURB RETURN ON THE SOUTH SIDE OF THE INLET. CURB AND GUTTER TO BE MODIFIED FOR GUTTER TRANSITION TO INLET ON THE NORTH SIDE OF THE INLET, AS NEEDED. THIS ITEM IS SUBSIDIARY TO BID ITEM NO. 508S.
6. FOR INLET STRM–A5, THERE WILL BE NO TRANSITION BETWEEN THE INLET AND THE CURB RETURN ON THE SOUTH SIDE OF THE INLET. CURB AND GUTTER TO BE MODIFIED FOR GUTTER TRANSITION TO INLET ON THE NORTH SIDE OF THE INLET, AS NEEDED. THIS ITEM IS SUBSIDIARY TO BID ITEM NO. 508S.

STRM-A4

I-A4	to	MH A2
Q25:	1.5	CFS
V25:	11.5	FPS
Q100:	1.9	CFS
V100:	12.4	FPS

STRM-A5

I-A5	to	MH A3
Q25:	2.9	CFS
V25:	12.1	FPS
Q100:	3.5	CFS
V100:	12.7	FPS



KEY MAP

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Jaron Hogenson
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BGE JOB NO. 4766–03
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WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

STORM DRAIN PLAN AND PROFILE STRM A4 & A5 1+00 - END

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STATE OF TEXAS
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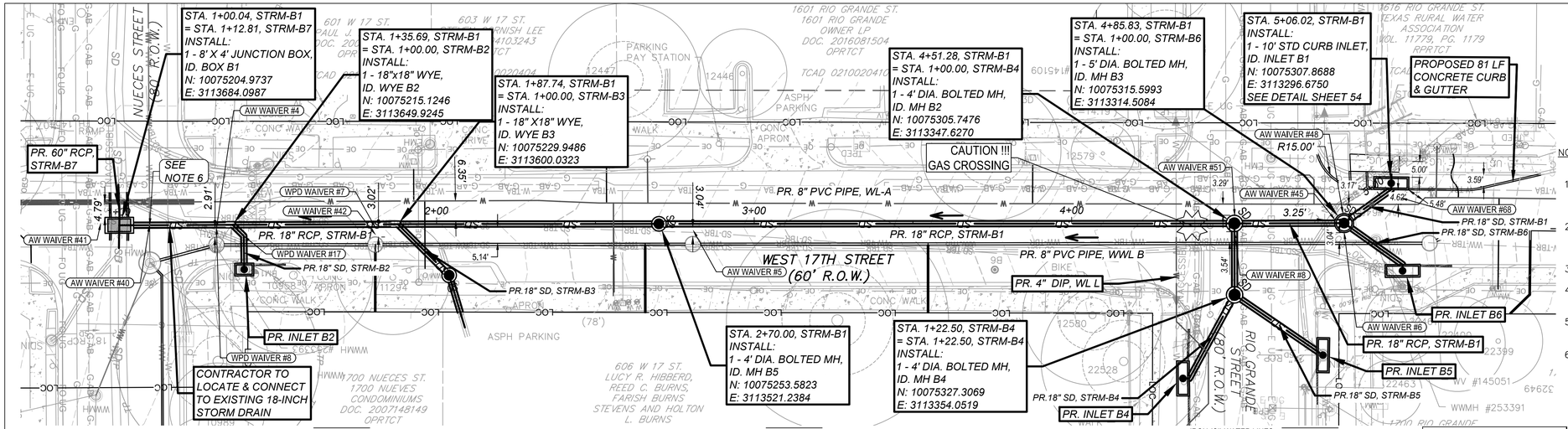
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
46 OF 93

1005 SUBMITTAL REV



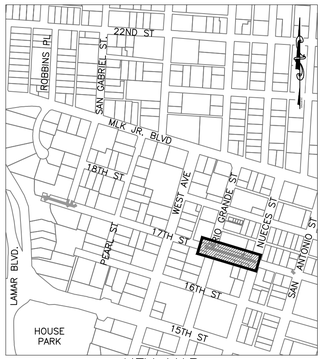
NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

HORIZ. SCALE: 1" = 20'

VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. 25–YR AND 100–YR HGL EXCEED ELEVATIONS DISPLAYED IN PROFILE.
6. EXTEND FLOWABLE FILL CAP BEYOND EDGE OF 30" PIPE BY 1 FOOT ON EACH SIDE.



KEY MAP

I-B1	to	MH B3
Q25:	2.4	CFS
V25:	8.1	FPS
Q100:	3.0	CFS
V100:	8.7	FPS

WYE B2	to	BOX B1
Q25:	24.7	CFS
V25:	14.0	FPS
Q100:	31.6	CFS
V100:	17.9	FPS

WYE B3	to	WYE B2
Q25:	21.9	CFS
V25:	12.4	FPS
Q100:	28.2	CFS
V100:	15.9	FPS

MH B5	to	WYE B3
Q25:	17.7	CFS
V25:	10.0	FPS
Q100:	22.1	CFS
V100:	12.5	FPS

MH B2	to	MH B5
Q25:	17.9	CFS
V25:	15.9	FPS
Q100:	22.3	CFS
V100:	16.6	FPS

MH B3	to	MH B2
Q25:	6.0	CFS
V25:	16.4	FPS
Q100:	7.3	CFS
V100:	17.4	FPS

AW WAIVERS #4, #5, #6, #8 #40, #42, #45, #48, #51 & #68

LOCATION:
- WAIVER #4: 1+31.20 (STRM-B1)
- WAIVER #5: 2+80.67 (STRM-B1)
- WAIVER #6: 4+85.83 (STRM-B1)
- WAIVER #8: 4+51.28 (STRM-B1)
- WAIVER #40: 1+09.51 (STRM-B1)
- WAIVER #41: 1+00.04 (STRM-B1)
- WAIVER #42: 1+80.66 (STRM-B1)
- WAIVER #45: 4+85.83 (STRM-B1)
- WAIVER #48: 4+85.83 (STRM-B1)
- WAIVER #51: 4+51.28 (STRM-B1)
- WAIVER #68: 5+06.02 (STRM-B1)

UTILITY:
- WAIVER #4: PROPOSED 4' DIA WASTEWATER MANHOLE WWL-B
- WAIVER #5: PROPOSED 4' DIA WASTEWATER MANHOLE WWL-B
- WAIVER #6: PROPOSED 8" PVC WWL-B
- WAIVER #8: PROPOSED 8" PVC WWL-B
- WAIVER #40: PROPOSED 30" PVC WWL-B
- WAIVER #41: PROPOSED 8" DIP WL-A
- WAIVER #42: PROPOSED 4' DIA WASTEWATER MANHOLE WWL-B
- WAIVER #45: EXISTING 4" DIA CI WATER LINE
- WAIVER #48: PROPOSED 8" DIP WL-A
- WAIVER #51: PROPOSED 8" DIP WL-A
- WAIVER #68: PROPOSED 8" DIP WL-A

DISTANCE:
- WAIVER #4: 2.91' H FROM PROPOSED 18" RCP STRM-B1
- WAIVER #5: 3.04' H FROM PROPOSED 18" RCP STRM-B1
- WAIVER #6: 3.14' H FROM PROPOSED 5' DIA MH B3
- WAIVER #8: 3.54' H FROM PROPOSED 4' DIA MH B2
- WAIVER #40: 0.76' V FROM PROPOSED 18" RCP STRM-B1
- WAIVER #41: 4.79' H FROM PROPOSED 8'X4' MH BOX B1
- WAIVER #42: 3.13' H FROM PROPOSED 18" RCP STRM-B1
- WAIVER #45: 3.25' H FROM PROPOSED 5' DIA MH B3
- WAIVER #48: 3.17' H FROM PROPOSED 5' DIA MH B3
- WAIVER #51: 3.29' H FROM PROPOSED 4' DIA MH B2
- WAIVER #68: 4.62' H FROM PROPOSED 10' STD CURB INLET B1

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 AND UCM 2.9.1.B.3 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM). UCM 2.9.1.B.2 REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES AND UCM 2.9.1.B.3 REQUIRES EIGHTEEN (18) INCHES CLEARANCE BELOW PROPOSED STRUCTURES AND TWELVE (12) INCHES ABOVE PROPOSED STRUCTURES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
4	STRM-B1	1+00.00 - 1+35.69	DCM 5.7.0	DEPTH OF COVER < 2.5' (1.52' - 2.39' V)
5	STRM-B1	1+09.51	DCM 5.7.1.G	STORM-B1 < 18" FROM EX WWL (0.76' V)
6	STRM-B1	1+35.69 - 1+38.49	DCM 5.7.0	DEPTH OF COVER < 2.5' (2.39' - 2.49' V)
7	STRM-B1	1+80.66	DCM 5.7.1.F	STRM-B1 < 5' FROM WWMH (3.02' H)
8	STRM-B1	1+30.36	DCM 5.7.1.F	STRM-B1 < 5' FROM WWMH (2.91' H)

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STORM DRAIN PLAN AND PROFILE STRM B1 11+00 - END

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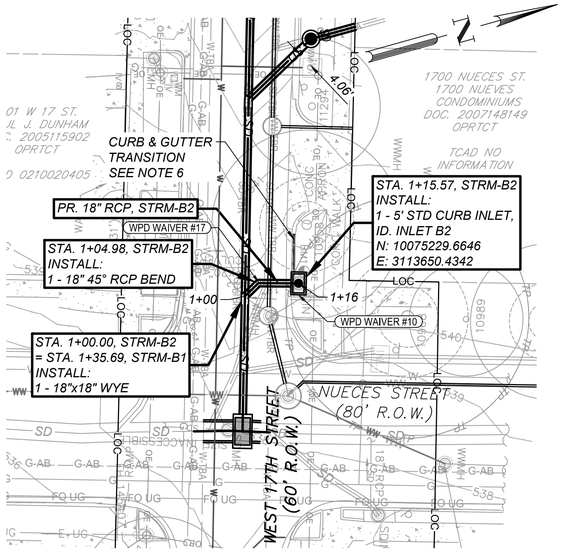
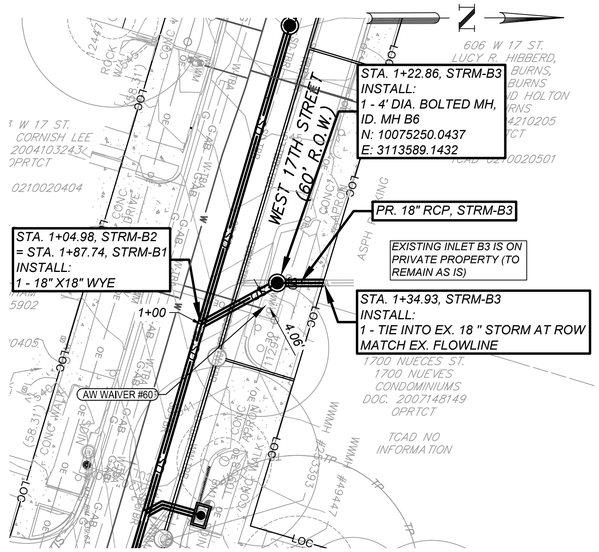
SHEET
47 OF 93

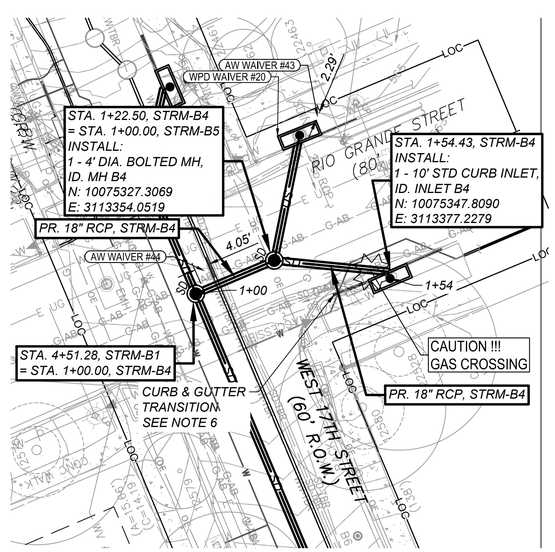
100% SUBMITTAL REV1



STRM-B2



STRM-B3



STRM-B4

NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
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NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
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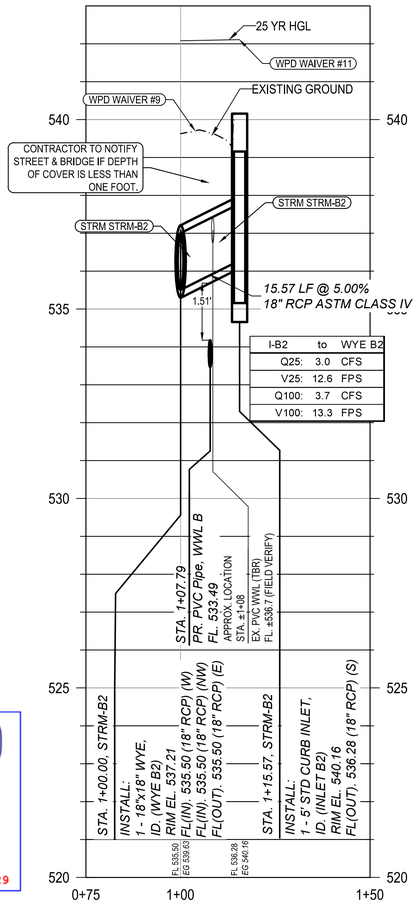
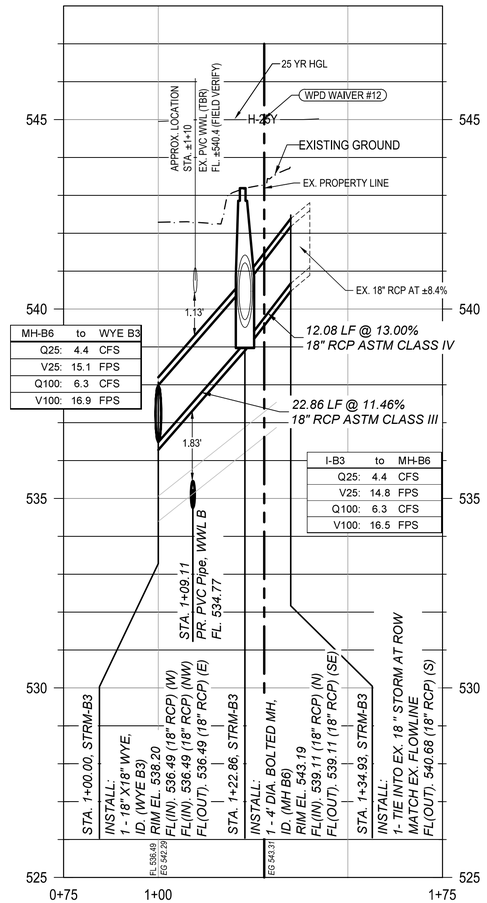
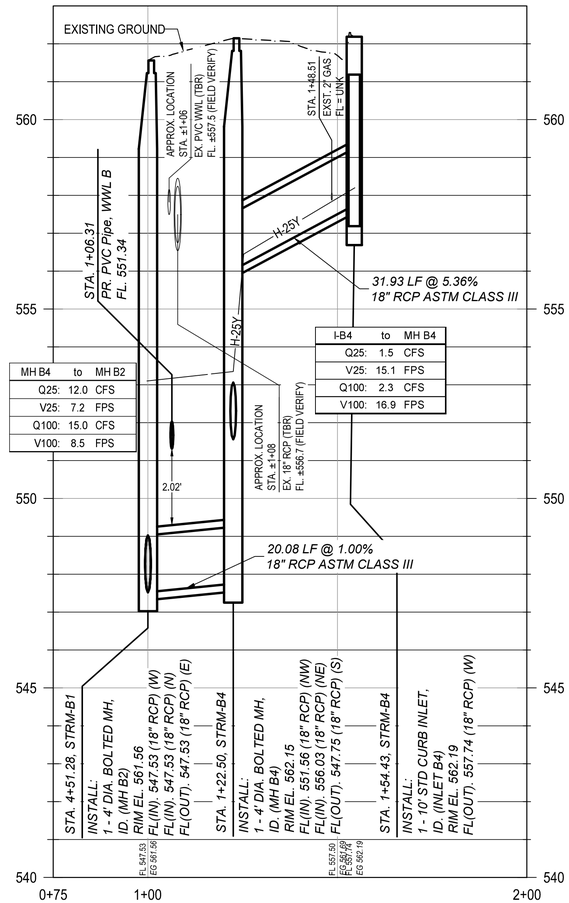
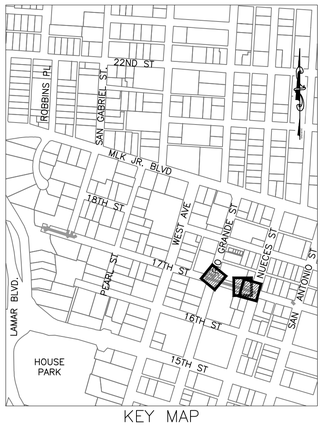








KEY MAP

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
9	STRM-B2	1+00.00 - 1+15.57	DCM 5.7.0	DEPTH OF COVER < 2.5' (1.38' - 2.42' V)
10	STRM-B2	1+15.57	DCM 4.1.0.D	CURB INLET TRANSITION LENGTH < 7'-6"
11	STRM-B2	1+15.57	DCM 5.2.0.L	25-YR HGL > 6" BELOW THEORETICAL GUTTER FLOW LINE OF INLETS
12	STRM-B3	1+31.16	DCM 5.2.0.L	25-YR HGL > 6" BELOW THEORETICAL GUTTER FLOW LINE OF INLETS
17	STRM-B2	1+04.98	DCM 5.6.1	MORE THAN 1 HORIZONTAL BEND BETWEEN ACCESS POINTS

AW WAIVERS #43 & #46 & #60:

LOCATION:
WAIVER #43: 1+33.69 (STRM-B5)
WAIVER #44: 1+00.00 (STRM-B4)
WAIVER #60: 1+17.93 (STRM-B3)

UTILITY:
WAIVER #43: PROPOSED 10' CURB INLET B5
WAIVER #44: PROPOSED 4' DIA. MH B2
WAIVER #60: PROPOSED 18" STORM LINE

DESCRIPTION:
WAIVER #43: 2.29' H FROM EX. 2" WL
WAIVER #44: 4.06' H FROM PR. 8" PCV WWL
WAIVER #60: 4.28' H FROM W METER BOX

THIS PROJECT REQUESTS A WAIVER FROM SECTION 2.9.1.B.2 OF THE CITY OF AUSTIN UTILITY CRITERIA MANUAL (UCM), WHICH REQUIRES A MINIMUM FIVE (5) FOOT SEPARATION BETWEEN CURB INLETS AND EXISTING WATER UTILITIES, AND A MINIMUM FIVE (5) FOOT SEPARATION BETWEEN PRESSURE-RATED (PR) UTILITIES AND NON-AW INFRASTRUCTURE.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

STORM DRAIN PLAN AND PROFILE STRM B2, B3 & B4 1+00 - END

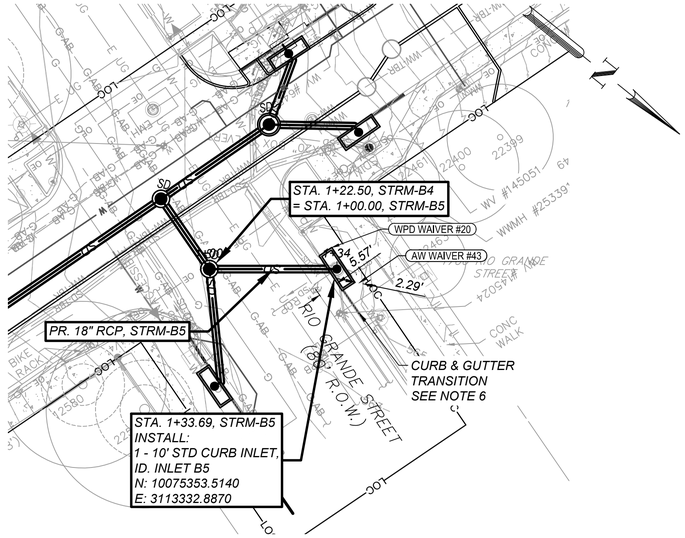
CITY OF AUSTIN
AUSTIN WATER

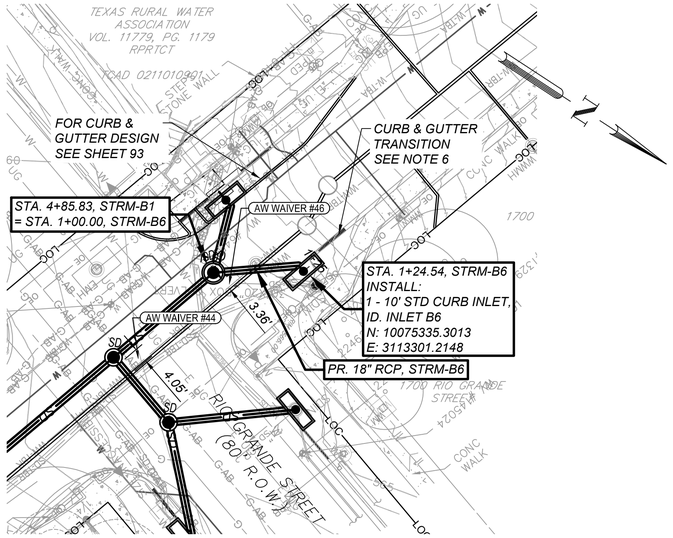
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED PROFESSIONAL ENGINEER
10/20/2026

SHEET
48 OF 93

100% SUBMITTAL REV





NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAPVATION

HORIZ. SCALE: 1" = 20'

VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. 25–YR AND 100–YR HGL EXCEED ELEVATIONS DISPLAYED IN PROFILE.
6. CURB AND GUTTER TO BE MODIFIED FOR GUTTER TRANSITION TO INLET, AS NEEDED. THIS ITEM IS SUBSIDIARY TO BID ITEM NO. 508S.

AW WAIVERS #43 & #46:

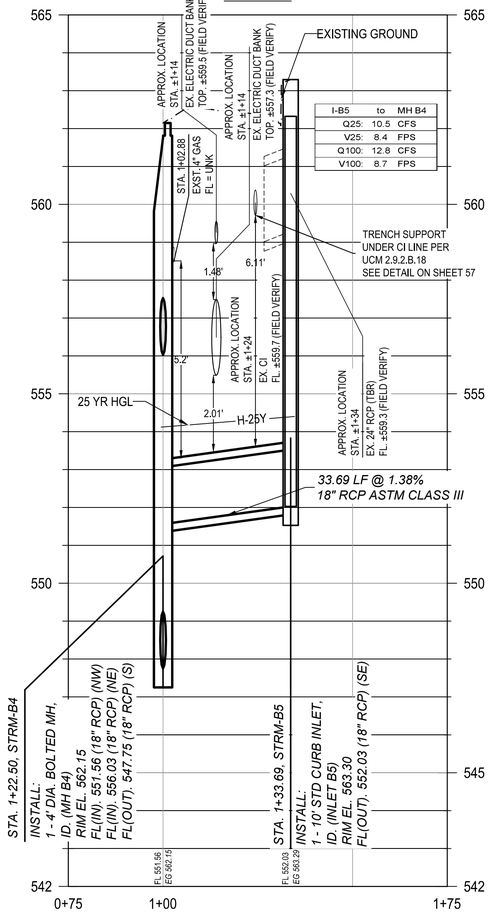
LOCATION:
WAIVER #43: 1+33.69 (STRM-B5)
WAIVER #44: 1+00.00 (STRM-B4)
WAIVER #46: 1+00.00 (STRM-B6)

UTILITY:
WAIVER #43: PROPOSED 10' CURB INLET B5
WAIVER #44: PROPOSED 4' DIA. MH B2
WAIVER #46: PROPOSED 5' DIA STORM MH

DESCRIPTION:
WAIVER #43: 2.29' H FROM EX. 2" WL
WAIVER #44: 4.06' H FROM PR. 8" PVC WWL
WAIVER #46: 3.36' H FROM PR. 8" PVC WWL

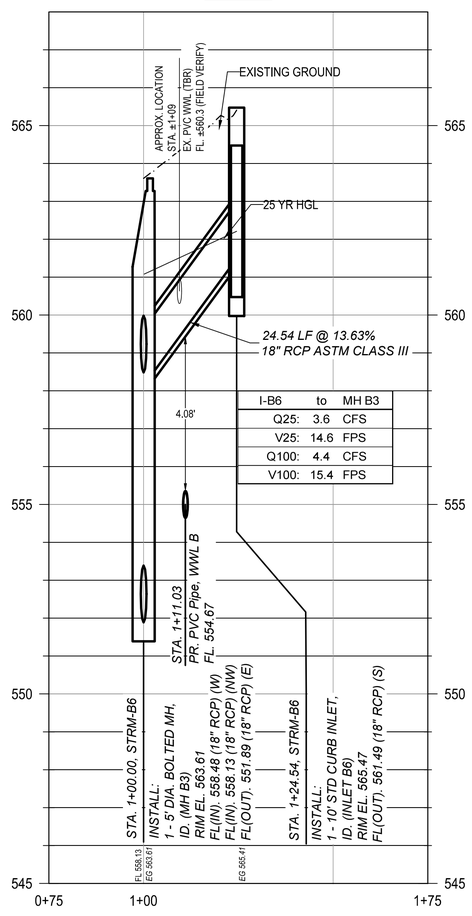
THIS PROJECT REQUESTS A WAIVER FROM SECTION 2.9.1.B.2 OF THE CITY OF AUSTIN UTILITY CRITERIA MANUAL (UCM), WHICH REQUIRES A MINIMUM FIVE (5) FOOT SEPARATION BETWEEN CURB INLETS AND EXISTING WATER UTILITIES, AND A MINIMUM FIVE (5) FOOT SEPARATION BETWEEN PRESSURE-RATED (PR) UTILITIES AND NON-AW INFRASTRUCTURE.

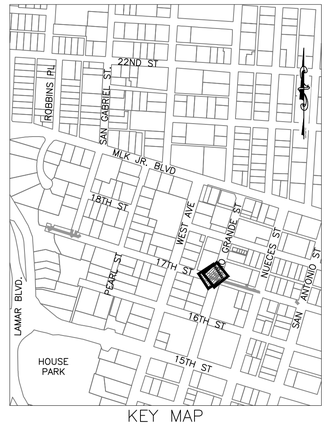
STRM-B5



WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
20	STRM-B5	1+33.69	DCM 3.1.4	INLET B5 25-YR BYPASS FLOW EXCEEDS 3 CFS (7.13 CFS)

STRM-B6





KEY MAP



NO.	REVISION	BY	DATE

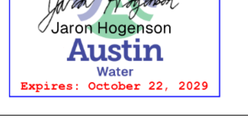
BGE JOB NO. 4766–03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

STORM DRAIN PLAN AND PROFILE STRM B5 & B6 1+00 - END

CITY OF AUSTIN
AUSTIN WATER

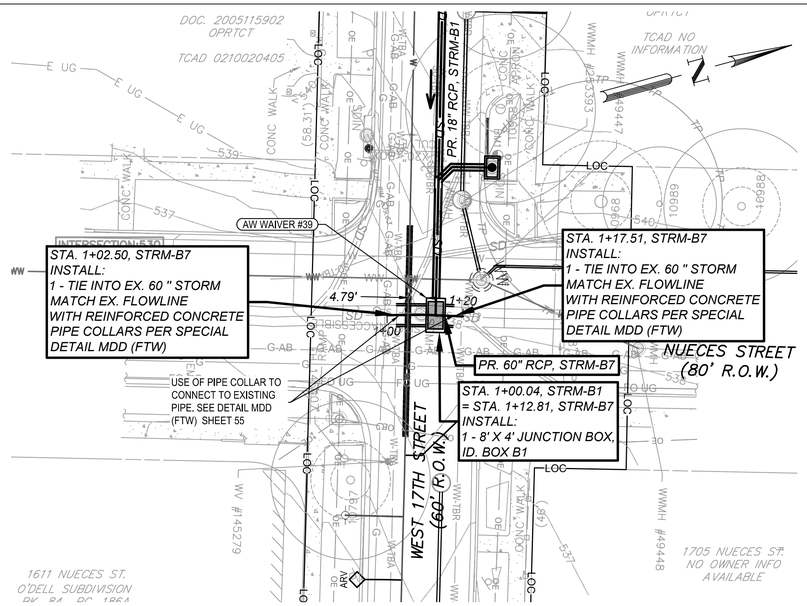
BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

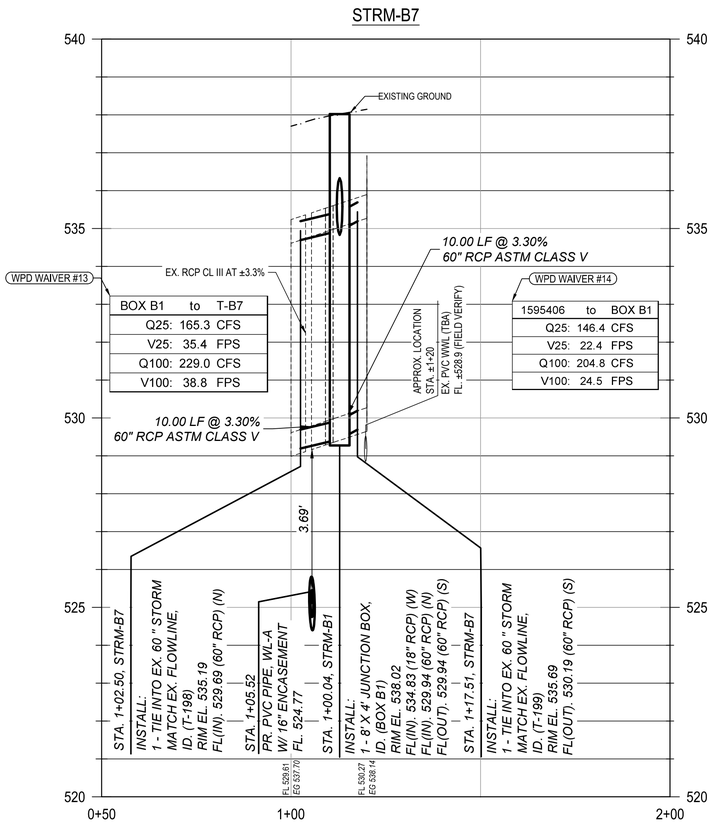


10/20/2026

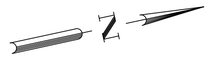
SHEET
49 OF 93

100S SUBMITTAL REV





NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION

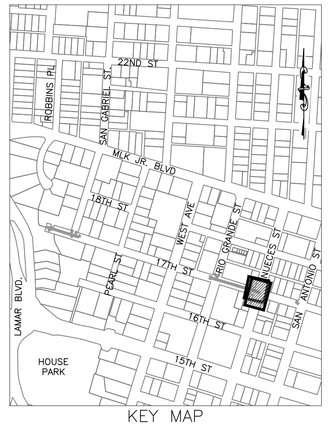


0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. 25-YR AND 100-YR HGL EXCEED ELEVATIONS DISPLAYED IN PROFILE.



KEY MAP

AW WAIVER #39:

LOCATION: WAIVER #39: 1+05.94 (STRM-B7)

UTILITY: WAIVER #39: PROPOSED 8" PVC WL-A

DISTANCE: WAIVER #39: 4.79' H FROM PROPOSED 8' X 4' STORM JUNCTION BOX

THIS PROJECT REQUESTS A WAIVER FROM SECTIONS UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM) WHICH REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
13	STRM-B7	1+02.50 - 1+12.81	DCM 5.3.2	STRM-B7 25-YR FLOW VELOCITY > 20 FPS (35.4 FPS)
14	STRM-B7	1+12.81 - 1+17.51	DCM 5.3.2	STRM-B7 25-YR FLOW VELOCITY > 20 FPS (22.4 FPS)

REVIEWED
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Jaron Hogenson
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Water
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DRAWN JTM
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CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STORM DRAIN PLAN AND PROFILE
STRM B7 1+00 - END

CITY OF AUSTIN
AUSTIN WATER

BGE

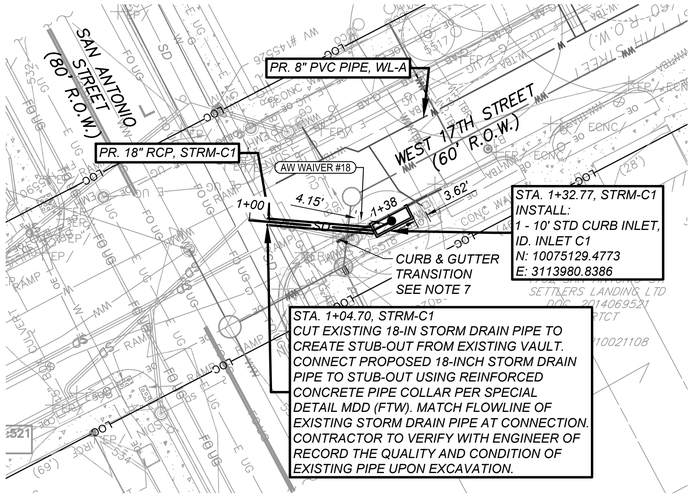
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

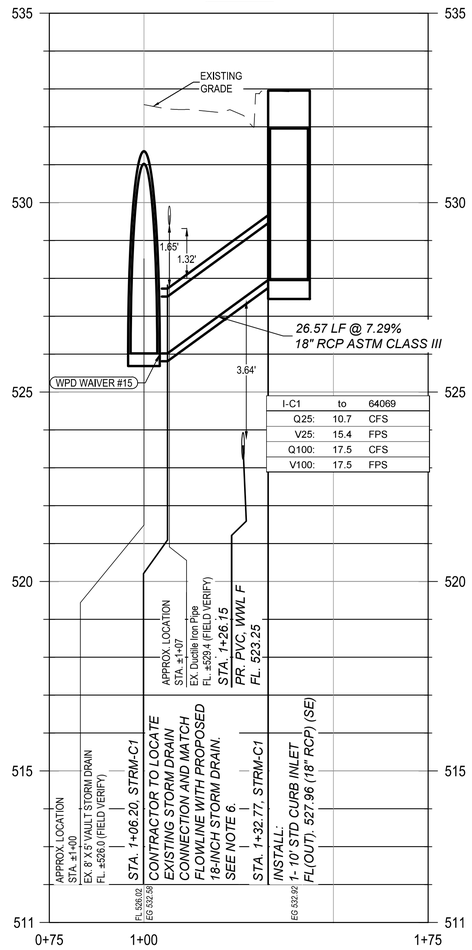
10/20/2026

SHEET
50 OF 93

100% SUBMITTAL REV

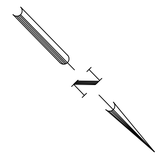


STRM-C1



I-C1	to	64069
Q25:	10.7	CFS
V25:	15.4	FPS
Q100:	17.5	CFS
V100:	17.5	FPS

NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION



0 10' 20' 40'
HORIZ. SCALE: 1" = 20'

0 1' 2' 4'
VERTICAL SCALE: 1" = 2'

NOTES:

1. CONTRACTOR TO PROVIDE A SUPPORT PLAN TO SUPPORT EXISTING UTILITIES DURING CONSTRUCTION OF PROPOSED STORM LINE.
2. IF BEDDING FOR EXISTING UTILITY LINE IS DISTURBED DURING CONSTRUCTION, CONTRACTOR TO BACKFILL WITH CLSM PRIOR TO TRENCH COMPLETION.
3. PIPES TO BE ABANDONED TO BE FILLED WITH GROUT.
4. PREFABRICATED FITTINGS ARE REQUIRED FOR ALL CONNECTIONS NOT AT A MANHOLE.
5. 25-YR AND 100-YR HGL EXCEEDS ELEVATIONS DISPLAYED IN PROFILE.
6. CUT EXISTING 18IN SD PIPE THAT PENETRATES INTO VAULT STRUCTURE TO CREATE A 3FT TO 4FT LENGTH STUB-OUT SO NOT HAVE TO "TOUCH" EXISTING VAULT STRUCTURE. CONNECT NEW 18IN SD PIPE TO THE EXISTING 18IN STUB-OUT USING TXDOT "MISCELLANEOUS DRAINAGE DETAILS MDD (FTW)" FOR A PIPE COLLAR CONNECTION.
7. CURB AND GUTTER TO BE MODIFIED FOR GUTTER TRANSITION TO INLET, AS NEEDED. THIS ITEM IS SUBSIDIARY TO BID ITEM NO. 508S.

KEY MAP

WPD WAIVER NO.	LINE	STATION	DCM REF.	DESCRIPTION
15	STRM-C1	1+04.70	DCM 5.2.0.F	SOFFIT OF LATERAL NOT EQUAL TO SOFFIT OF TRUNK LINE (1.29' V)
16	STRM-C1	1+32.77	DCM 5.7.1.F	STRM-C1 INLET < 5' FROM EX W METER (3.6' H)

AW WAIVER #18:

LOCATION: WAIVER #18: CURB INLET C1

UTILITY: WAIVER #18: PROPOSED CURB INLET C1

DISTANCE: WAIVER #18: 4.15' H FROM WWL F

THIS PROJECT REQUESTS A WAIVER FROM SECTION UCM 2.9.1.B.2 OF THE CITY OF AUSTIN CRITERIA MANUAL (UCM) WHICH REQUIRES A FIVE (5) FEET CLEARANCE BETWEEN PROPOSED STRUCTURES AND EXISTING UTILITIES. PROPOSED SEPARATION AS SHOWN HAS BEEN DEEMED ACCEPTABLE.

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

STORM DRAIN PLAN AND PROFILE STRM C1 1+00 - END

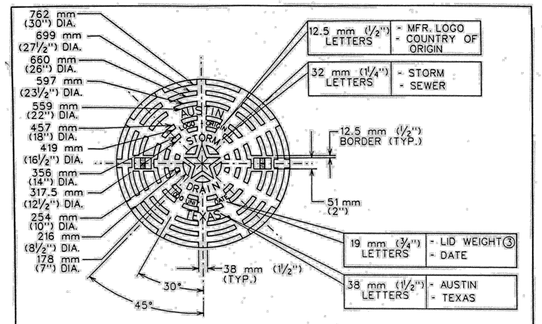
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL. 512-879-0400 www.bgeinc.com

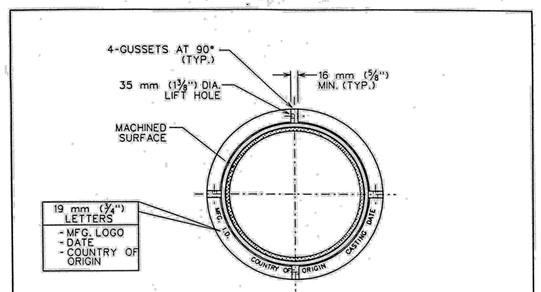
STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED PROFESSIONAL ENGINEER
9/10/2026

SHEET
51 OF 93

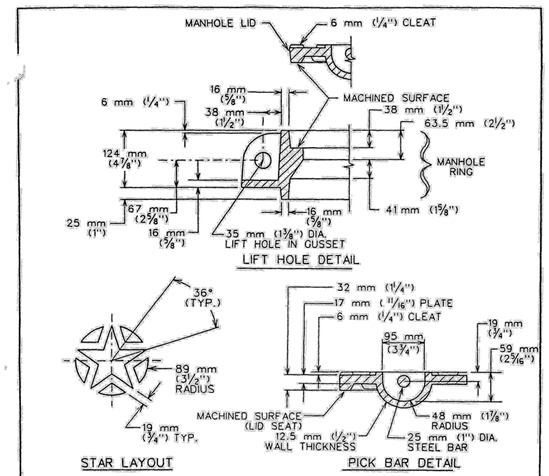
100% SUBMITTAL REV



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE RING AND 813 mm (32") COVER
George E. Ruwald 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 503S-4S 1 OF 3

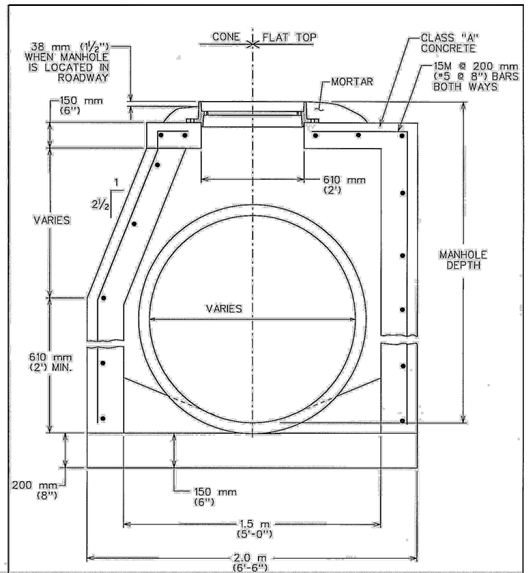


CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE RING AND 813 mm (32") COVER
George E. Ruwald 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 503S-4S 2 OF 3

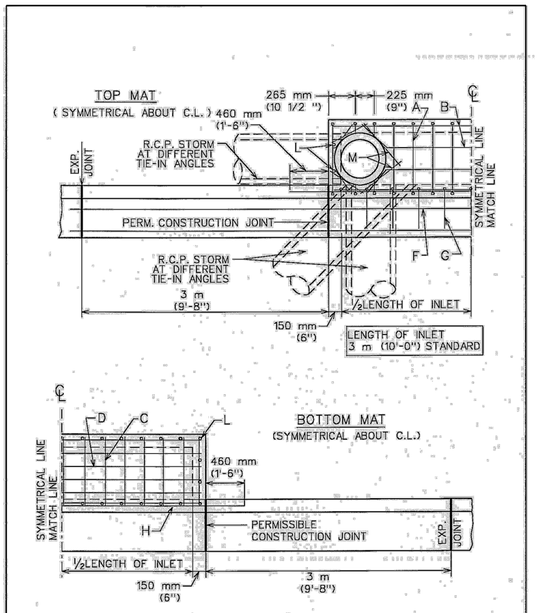


NOTES:
① ALL CORNERS AND EDGES SHALL HAVE A 1.5 mm (1/16") MINIMUM RADIUS.
② LIDS SHALL BE CAST WITH TWO 25 mm (1") DIA. STEEL PICK BARS.
③ LID WEIGHTS SHALL BE 935 N (210 LBS.) FOR CAST IRON OR 779 N (175 LBS.) FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF LID.
④ MANUFACTURER SHALL PROVIDE INDEPENDENT TESTING LABORATORY REPORT ON 25,000 POUND PROOF LOAD TEST CONDUCTED ACCORDING TO AASHTO M-306.
⑤ FILLETS SHALL BE 6 mm (¼") RADIUS UNLESS OTHERWISE SPECIFIED.
⑥ MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.

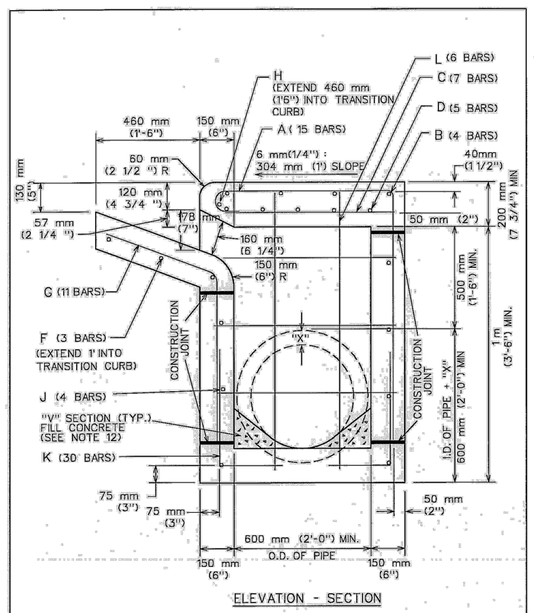
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE RING AND 813 mm (32") COVER
George E. Ruwald 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 503S-4S 3 OF 3



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE DETAIL
George E. Ruwald 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 506S-11



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET
Bill Gardner 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 508S-3 1 OF 4

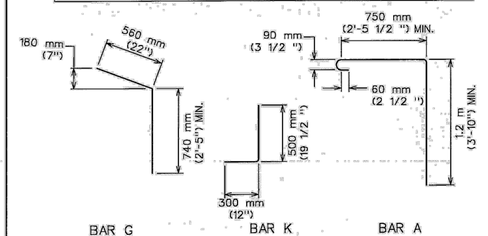


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET
Bill Gardner 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 508S-3 2 OF 4

TABLE OF QUANTITIES
FOR 18" OUTLET PIPE
REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	230mm (9")×	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	29
C	4	460 mm (18")	7	760 mm (2'-6")	12
D	6	150 mm (6")	5	3.25 m (10'-8")	80
E	4	300 mm (12")	6	760 mm (2'-6")	10
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	11	1.25 m (4'-3")	31
H	6	-	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	3.25 m (10'-8")	50
K	4	230 mm (9")×	30	800 mm (2'-7 1/2")	52
L	4	300 mm (12")×	6	1.3 m (4'-4")	17
M	4	-	4	500 mm (1'-8") AVG	4
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06

× EXCEPT AS SHOWN ON PLAN



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET
Bill Gardner 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 508S-3 3 OF 4

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A"
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (380 mm or 15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND OVER.
7. CHAMFER ALL EXPOSED EDGES 20 mm (3/4 ").
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.

REFERENCES:
FOR EXPANSION JOINT DOWEL AND DOWEL LOCATION DETAILS SEE STD. 430S-3, "CURB EXPANSION JOINT DOWEL DETAIL".
FOR 18" MANHOLE FRAME AND COVER DETAILS SEE STD. 503S-1, "18" COVER AND FRAME".

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET
Bill Gardner 12/9/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 508S-3 4 OF 4

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL
STORM DETAILS I

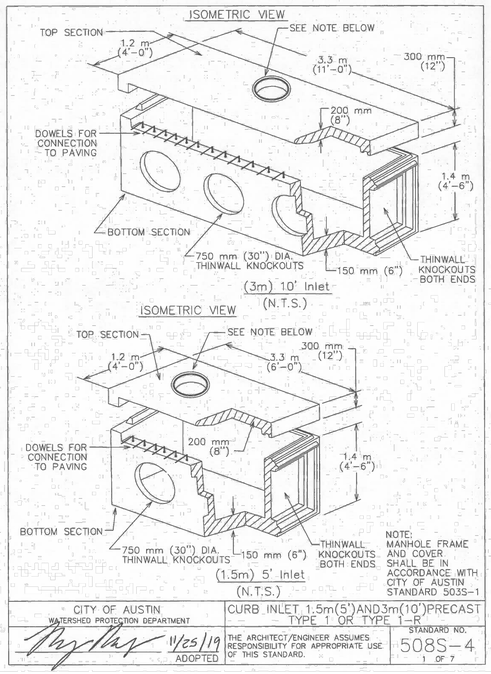
CITY OF AUSTIN
AUSTIN WATER

BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

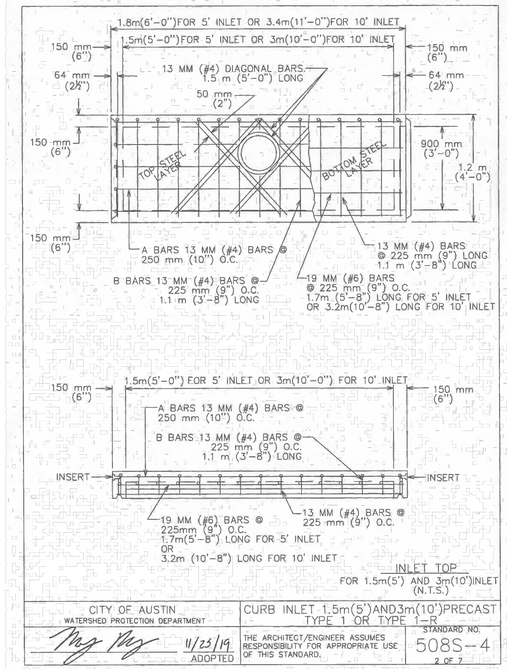
STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED PROFESSIONAL ENGINEER
9/10/2026

SHEET
52 OF 93

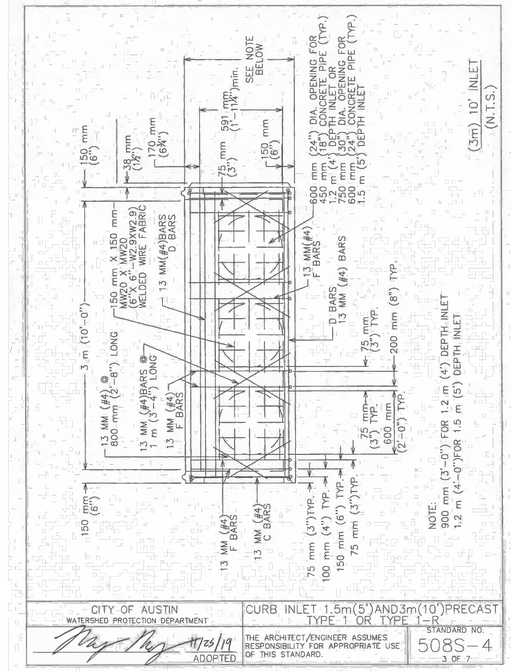
100% SUBMITTAL REV



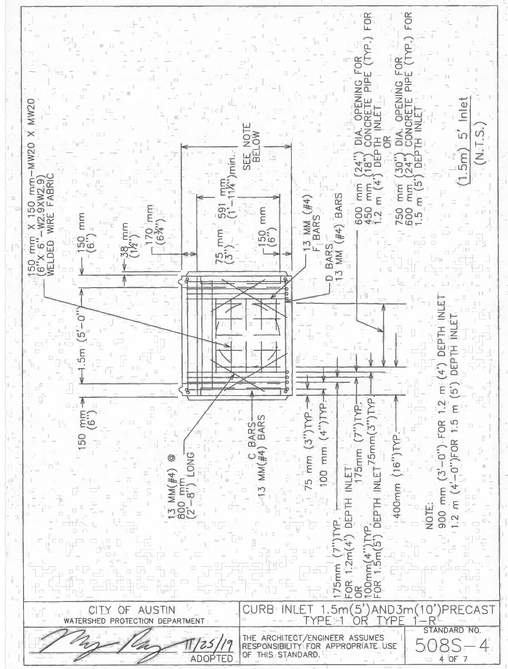
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 1 OF 7



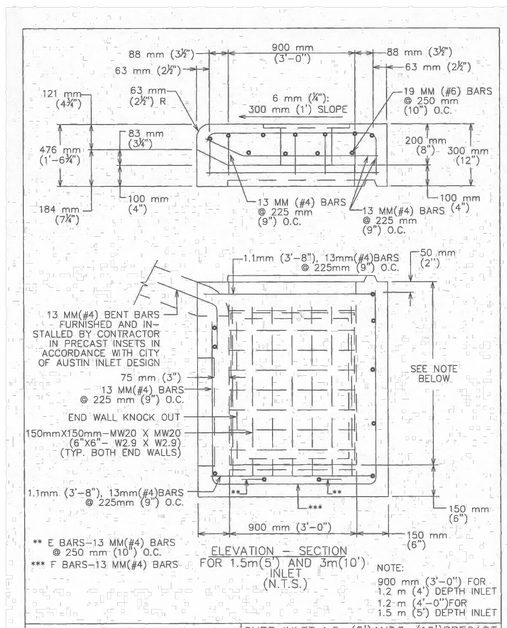
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 2 OF 7



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 3 OF 7



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 4 OF 7



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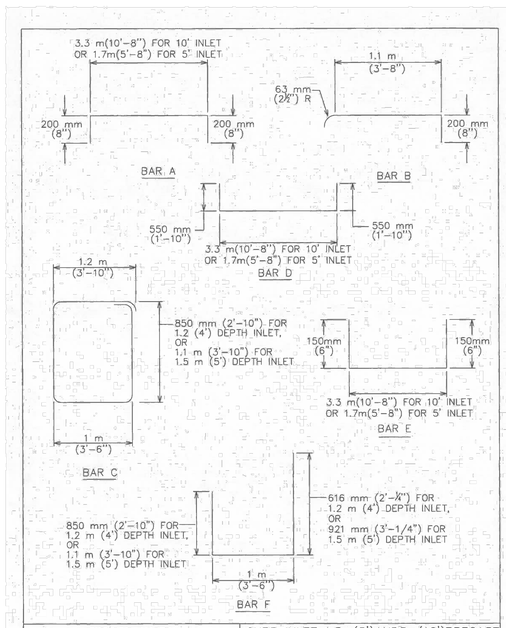
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 5 OF 7

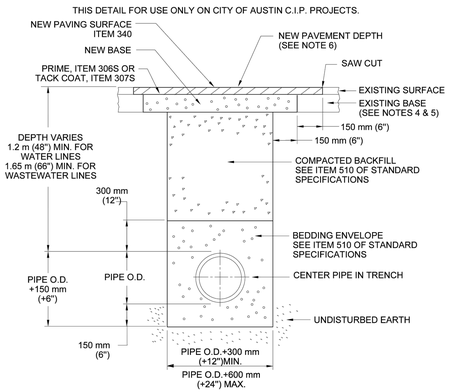


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 6 OF 7

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" AS PER ITEM 403S.
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
5. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB, IN ACCORDANCE WITH CITY OF AUSTIN STANDARD INLET DESIGN.
6. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE BY CONTRACTOR, SHAPED AS "V" SECTION
7. THIS STANDARD COMPLIES WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM NO. 508S.
8. WHEN PLACING PRECAST INLETS IN SERIES TO CREATE A 15'-0" OR 20'-0" CURB INLET, THE CONNECTION BETWEEN INLET BOXES SHALL BE SOIL TIGHT AND FULLY CONVEY THE PEAK DESIGN FLOW FROM THE UPSTREAM INLET(S). THE 1:20 INVERT SLOPE DESCRIBED IN NOTE 6 OF THIS DETAIL SHALL EXTEND FROM THE MOST DOWNSTREAM POINT TO THE MOST UPSTREAM OF THE CONNECTED INLET BOXES. AT NO TIME CAN MORE THAN 20-LF OF CURB OPENING BE CONNECTED TO A MAIN STORM DRAIN LINE WITH ONE LATERAL STORM DRAIN CONNECTION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
11/25/19 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 7 OF 7

THIS DETAIL FOR USE ONLY ON CITY OF AUSTIN C.I.P. PROJECTS.



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

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STORM DETAILS II

CITY OF AUSTIN
AUSTIN WATER

BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
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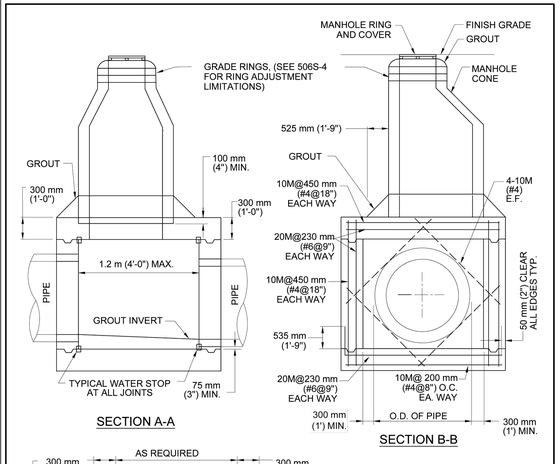
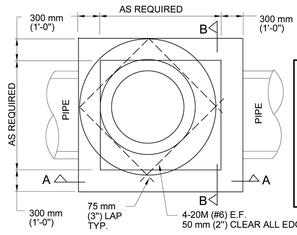
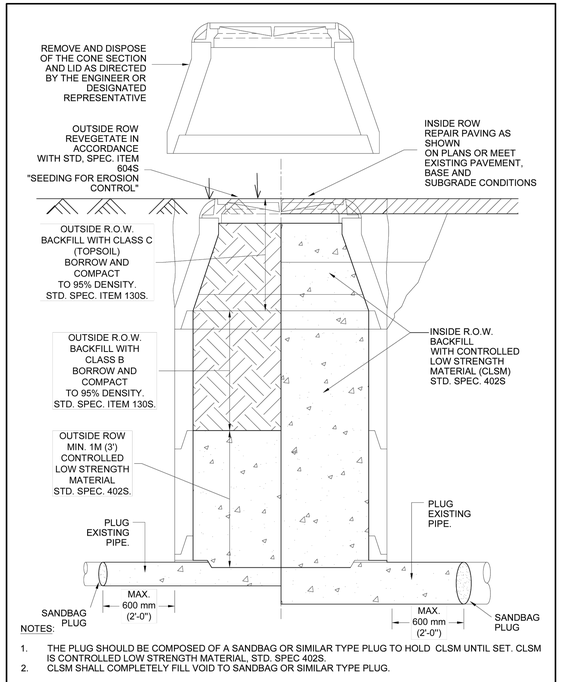




1. BOX WALLS MUST BE FORMED INSIDE AND OUTSIDE WITH APPROVED MATERIALS.
2. USE CLASS "A" CONCRETE.
3. TYPICAL CAST IN PLACE BOX FOR 760 mm (30") OR LARGER PIPE.
4. REINFORCING STEEL SHALL MEET ITEM 406, REINFORCING STEEL.

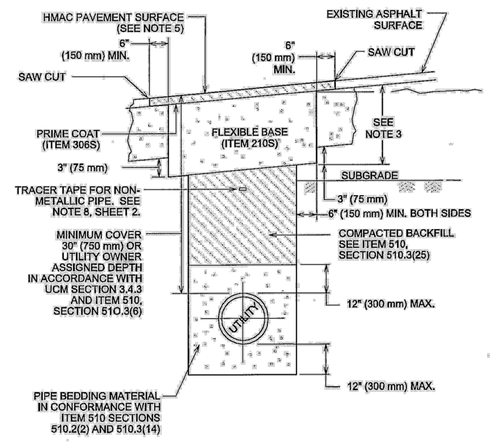
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL BOX MANHOLE 760 mm (30") & LARGER PIPE	
RECORD COPY SIGNED BY KATHI F. PAYNE 2/17/00 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-5 1 OF 1



NOTES:
1. THE PLUG SHOULD BE COMPOSED OF A SANDBAG OR SIMILAR TYPE PLUG TO HOLD CLSM UNTIL SET. CLSM IS CONTROLLED LOW STRENGTH MATERIAL, STD. SPEC 402S.
2. CLSM SHALL COMPLETELY FILL VOID TO SANDBAG OR SIMILAR TYPE PLUG.

CITY OF AUSTIN AUSTIN WATER UTILITY	MANHOLE ABANDONMENT	
RECORD COPY SIGNED BY KATHI L FLOWERS 06/01/10 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-15 1 OF 1

TRENCH REPAIR IN ASPHALTIC SURFACE OVER FLEXIBLE BASE (UCM SECTION 5.8.0)



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT	
Kris Bunchard-Shaw 4/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-2 1 OF 2

NOTES:
1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" (300 mm) WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3" (75 mm), BUT IN NO CASE LESS THAN 12" (300 mm).
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" (250 mm) OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" (50 mm) HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" (75 mm) HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S).
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE, OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT	
Kris Bunchard-Shaw 4/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-2 2 OF 2

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

STORM DETAILS III

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

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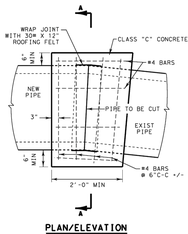
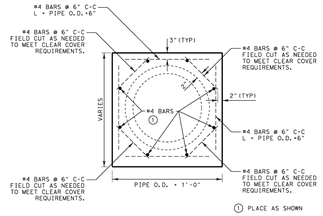
100% SUBMITTAL REV



PLAN/ELEVATION



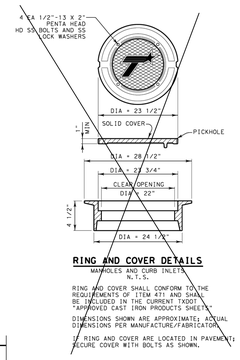
SECTION A-A

PIPE COLLAR DETAIL
FOR HORIZONTAL OR VERTICAL PLACEMENT
N.T.S.

PIPE COLLAR GENERAL NOTES

1. THE CONTRACTOR SHALL TAKE STEPS TO ENSURE A SMOOTH JOINT ALONG THE INSIDE WALL OF PIPE. ANY UNUSUAL CONCRETE PROTRUSIONS AT JOINTS SHALL BE REMOVED AND THE INSIDE PIPE SURFACES SMOOTHED AS DIRECTED BY THE ENGINEER.
2. PIPE COLLARS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY

① PLACE AS SHOWN

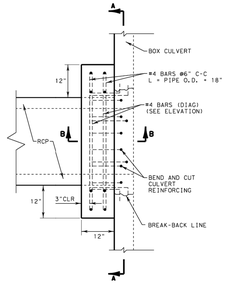


RING AND COVER DETAILS
MANHOLES AND CURB INLETS
N.T.S.

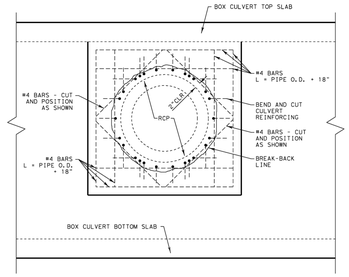
RING AND COVER SHALL CONFORM TO THE REQUIREMENTS OF ITEM 471 AND SHALL BE INCLUDED IN THE CURRENT TXDOT "APPROVED CAST IRON PRODUCTS SHEETS."

DIMENSIONS SHOWN ARE APPROXIMATE; ACTUAL DIMENSIONS PER MANUFACTURE/FABRICATION.

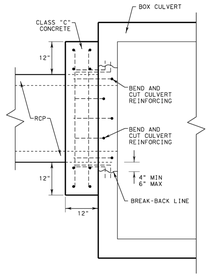
IF RING AND COVER ARE LOCATED IN PAVEMENT; SECURE COVER WITH BOLTS AS SHOWN.



PLAN VIEW



SECTION A-A



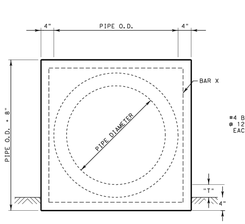
SECTION B-B

PIPE STUB-IN CONNECTION TO BOX CULVERT OR EXISTING DRAINAGE STRUCTURE
N.T.S.

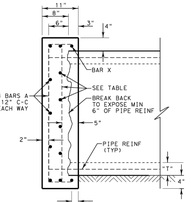
PIPE STUB-IN GENERAL NOTES

1. SAW CUT A MAXIMUM 1/2" DEPTH AT BREAK-BACK LINE. USE REMOVAL METHODS THAT WILL NOT DAMAGE REMAINING CONCRETE OR CULVERT REINFORCING.
2. EXPOSE AND CLEAN BOX CULVERT REINFORCING. BEND BARS INTO PROPOSED CONNECTION AND TIE TO CONNECTION REINFORCING.
3. ROUGHEN AND CLEAN EXISTING CONCRETE SURFACES THAT ARE IN CONTACT WITH NEW CONCRETE BEFORE PLACING FORMS.
4. MATERIAL & LABOR FOR PIPE/BOX CONNECTIONS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE SUBSIDIARY

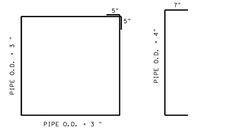
SPECIAL DETAIL
MISCELLANEOUS DRAINAGE DETAILS
MDD(FTW)
MODIFIED



FRONT ELEVATION



SIDE ELEVATION



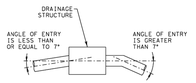
#4 BAR X #4 BAR A

INNER REINFORCING SIZE/SPACING		
PIPE DIA(IN)	MAXIMUM DEPTH	
	15'	30'
≤48	#4 @ 12" C-C	#4 @ 12" C-C
60	#4 @ 12" C-C	#4 @ 10" C-C
72	#4 @ 12" C-C	#5 @ 10" C-C
84	#4 @ 10" C-C	#5 @ 8" C-C

DRAINAGE PIPE END CAP OR PLUG DETAILS
N.T.S.

PIPE END CAP GENERAL NOTES

1. "T" = PIPE WALL THICKNESS.
2. ALL CONCRETE SHALL BE CLASS "C".
3. ALL REINFORCING STEEL SHALL BE GRADE 60.
4. OCTAGONAL PLUG MAY BE USED IN LIEU OF SQUARE. PROVIDE 4" MINIMUM COVER OVER OUTSIDE OF PIPE. DIMENSIONS OF PIPE PLUG AND REINFORCING TO BE AS APPROVED.

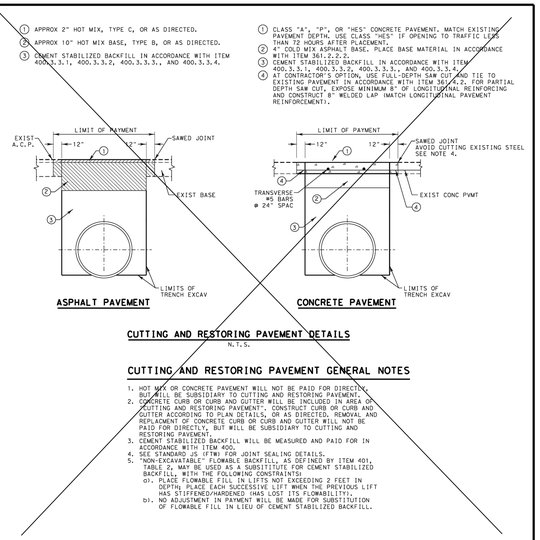


CONNECT PIPES WITHIN 7° OF NORMAL TO INLET OR MANHOLE. IF NECESSARY, USE PIPE ELBOW OR CURVED APPROACH ALIGNMENT TO STAY WITHIN THIS LIMIT.

PIPE CONNECTION
N.T.S.

① APPROX 2" HOT MIX, TYPE C, OR AS DIRECTED.
② APPROX 10" HOT MIX BASE, TYPE B, OR AS DIRECTED.
③ CEMENT STABILIZED BACKFILL IN ACCORDANCE WITH ITEM 400.3.3.1, 400.3.3.2, 400.3.3.3., AND 400.3.3.4.

① CLASS "A", "P", OR "HES" CONCRETE PAVEMENT. MATCH EXISTING PAVEMENT DEPTH. USE CLASS "HES" IF OPENING TO TRAFFIC LESS THAN 72 HOURS AFTER PLACEMENT.
② 4" COLD MIX ASPHALT BASE. PLACE BASE MATERIAL IN ACCORDANCE WITH ITEM 361.2.2.2.
③ CEMENT STABILIZED BACKFILL IN ACCORDANCE WITH ITEM 400.3.3.1, 400.3.3.2, 400.3.3.3., AND 400.3.3.4.
④ AT CONTRACTOR'S OPTION, USE FULL-DEPTH SAW CUT AND TIE TO EXISTING PAVEMENT IN ACCORDANCE WITH ITEM 361.2.2.2. FOR PARTIAL DEPTH SAW CUT, EXPOSE MINIMUM 8" OF LONGITUDINAL REINFORCING AND CONSTRUCT 8" WELDED LAP (MATCH LONGITUDINAL PAVEMENT REINFORCEMENT).



ASPHALT PAVEMENT CONCRETE PAVEMENT

CUTTING AND RESTORING PAVEMENT DETAILS
N.T.S.

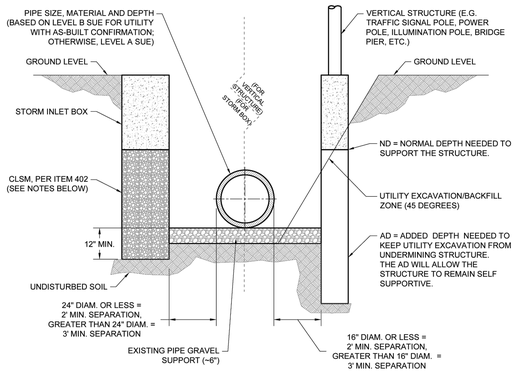
CUTTING AND RESTORING PAVEMENT GENERAL NOTES

1. HOT MIX OR CONCRETE PAVEMENT WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE SUBSIDIARY TO CUTTING AND RESTORING PAVEMENT.
2. CONCRETE CURB OR CURB AND GUTTER WILL BE INCLUDED IN AREA OF CUTTING AND RESTORING PAVEMENT. CONSTRUCT CURB OR CURB AND GUTTER ACCORDING TO PLAN DETAILS, OR AS DIRECTED. REMOVAL AND REPLACEMENT OF CONCRETE CURB OR CURB AND GUTTER WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE SUBSIDIARY TO CUTTING AND RESTORING PAVEMENT.
3. CEMENT STABILIZED BACKFILL WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 400.
4. SEE STANDARD JS (FTW) FOR JOINT SEALING DETAILS.
5. "NON-EXCAVATABLE" FLOWABLE BACKFILL, AS DEFINED BY ITEM 401, TABLE 2, MAY BE USED AS A SUBSTITUTE FOR CEMENT STABILIZED BACKFILL WITH THE FOLLOWING CONSTRAINTS:
   a). PLACE FLOWABLE FILL IN LIFTS NOT EXCEEDING 2 FEET IN HEIGHT AND ONLY AFTER THE LIFT BELOW THE PREVIOUS LIFT HAS STIFFENED/HARDENED (HAS LOST ITS FLOWABILITY).
   b). NO ADJUSTMENT IN PAYMENT WILL BE MADE FOR SUBSTITUTION OF FLOWABLE FILL IN LIEU OF CEMENT STABILIZED BACKFILL.

SPECIAL DETAIL
MISCELLANEOUS DRAINAGE DETAILS
MDD(FTW)
MODIFIED

FOR STORM BOX INSTALLATION: PROVIDE A SEALED WAIVER REQUEST OF A SPECIAL DETAIL SHOWING SECTION VIEW OF PIPE, STORM BOX, CLSM (OVER-EXCAVATED WITH 12" BELOW PIPE), AND HORIZONTAL/ VERTICAL SEPARATION BETWEEN PIPE AND STORM BOX/CLSM. CLSM SHALL BE DESIGNED FOR EACH SPECIFIC WAIVER LOCATION TO FULLY SUPPORT STORM INLET BOX FOLLOWING EXCAVATION AND EXPOSURE OF UTILITY.

FOR VERTICAL STRUCTURE INSTALLATION: PROVIDE A SEALED WAIVER REQUEST (BY STRUCTURAL ENGINEER) OF A SPECIAL DETAIL SHOWING SECTION VIEW OF PIPE, VERTICAL STRUCTURE (INCLUDING ND AND AD), THE EXCAVATION/ BACKFILL ZONE OF PIPE (PER TCM, SECTION 13) AND HORIZONTAL SEPARATION BETWEEN PIPE AND STRUCTURE. STRUCTURE SHALL BE DESIGNED TO REMAIN SELF SUPPORTIVE FOLLOWING EXCAVATION AND EXPOSURE OF UTILITY.



STORM INLET BOX NOTES (INCLUDE IN PLANS FOR CONTRACTOR):
1. TOP OF CLSM DIMENSIONS TO MATCH BOTTOM OF STORM DRAIN INLET BOX DIMENSIONS.
2. CONTRACTOR TO POTHOLE UTILITY TO CONFIRM UTILITY LOCATION AT EACH SPECIFIC WAIVER LOCATION. ONCE CONFIRMED, CONTRACTOR SHALL OVER-EXCAVATE TO 12" BELOW UTILITY FLOWLINE AND INSTALL CLSM AS SHOWN IN SPECIAL DETAIL. INSTALLATION OF INLET BOX IS PROHIBITED IF HORIZONTAL SEPARATION BETWEEN PIPE AND CLSM DOES NOT MEET THE FOLLOWING: 2' MIN. FOR 24" DIAMETER PIPE OR LESS; 3' MIN. FOR GREATER THAN 24" DIAMETER.
3. IF PIPE HAS BEEN EXPOSED DURING CONSTRUCTION, CITY INSPECTOR SHALL VISUALLY CONFIRM PIPE IS NOT LEAKING PRIOR TO BACKFILLING UTILITY. INSPECTOR SHALL CONTACT AW IMMEDIATELY AT 512-972-1000 TO REPORT ANY LEAKS.

VERTICAL STRUCTURE NOTES (INCLUDE IN PLANS FOR CONTRACTOR):
1. CONTRACTOR TO POTHOLE UTILITY TO CONFIRM UTILITY LOCATION. ONCE CONFIRMED, CONTRACTOR SHALL INSTALL VERTICAL STRUCTURE AS SHOWN IN SPECIAL DETAIL. INSTALLATION OF STRUCTURE IS PROHIBITED IF HORIZONTAL SEPARATION BETWEEN PIPE AND STRUCTURE DOES NOT MEET THE FOLLOWING: 2' MIN. FOR 16" DIAMETER PIPE OR LESS; 3' MIN. FOR GREATER THAN 16" DIAMETER.

GENERAL NOTE:
1. USE OF THESE GUIDELINES SHALL BE APPROVED ON A CASE-BY-CASE BASIS. ADDITIONAL ITEMS OR CONSIDERATIONS MAY BE REQUIRED. A PRE-APPROVED WAIVER IS REQUIRED BEFORE USAGE.

AW WAIVER REQUEST GUIDELINES
STORM INLET BOX OR VERTICAL STRUCTURE
SPECIAL DETAIL (08/21/2023)

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL
STORM DETAILS IV

CITY OF AUSTIN
AUSTIN WATER

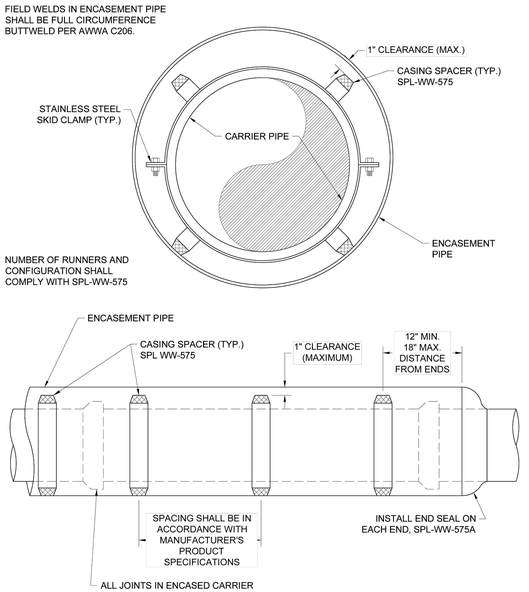
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED PROFESSIONAL ENGINEER

9/10/2026

SHEET
55 OF 93

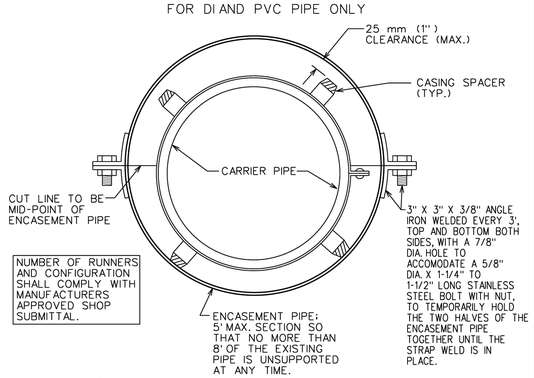
100% SUBMITTAL REV



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

FOR DI AND PVC PIPE ONLY



INSTALLATION SEQUENCE:

1) LOCATE AND EXPOSE THE PIPE BELLS, AND INSTALL THE BELL RESTRAINTS.
2) BACKFILL PIPE BELL EXCAVATION, AND EXCAVATE AN 8' MAXIMUM SECTION OF PIPE.
3) REMOVE BEDDING AS NEEDED AND INSTALL CASING SPACERS AND 5' SPLIT CASE SLEEVE, SECURED WITH BOLTS.
4) STRAP WELD THE ENCASEMENT AND BACKFILL.
5) BUTT STRAP WELD NEXT SECTION TO PREVIOUS SECTION.
6) MOVE ON TO THE NEXT SECTION AND REPEAT.

NOTES:
1) SEE STANDARD SPECIFICATION ITEM 505S FOR ENCASEMENT PIPE REQUIREMENTS.

2) THE TWO CONTINUOUS SEMI-CIRCULAR PIPE SECTIONS SHALL BE JOINED BY A CONTINUOUS STRAP WELD FROM END TO END WITHOUT ANY TRACEABLE VOIDS.

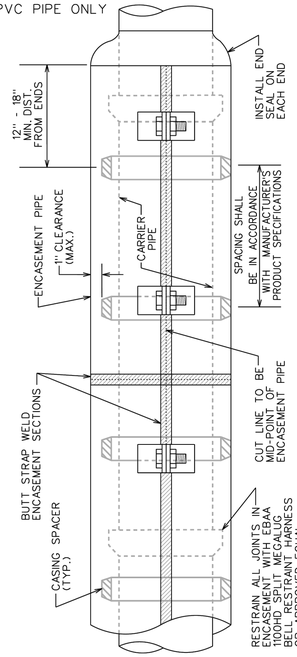
3) ALL SLAG SHALL BE REMOVED FROM CUT EDGES AND THE METAL BRUSHED CLEAN SO THAT THE CASING SPACERS DO NOT GET HUNG UP DURING REMOVAL.

4) CASING SPACERS SHALL BE POSITONED SO THAT THEY ARE NOT DAMAGED BY WELDING.

5) BACKFILL UNDER THE ENCASEMENT PIPE W/ CONTROLLED LOW STRENGTH MATERIAL PER STANDARD SPECIFICATION ITEM NO. 402S.

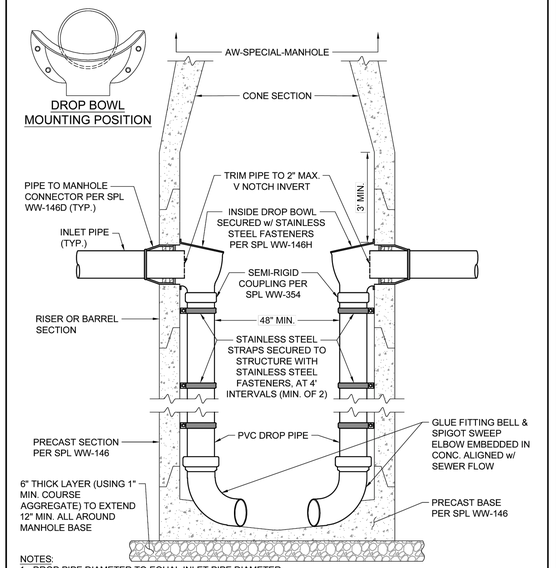
	SPLIT ENCASEMENT DETAIL W/ CASING SPACERS (1 OF 2)	
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. (MODIFIED) 501S-1

FOR DI AND PVC PIPE ONLY



APPLICABLE REFERENCES
STANDARD SPECIFICATION: ITEM 505.3 (19) W/WW STANDARD PRODUCTS LIST: SPLWW-575
FOR CASING SPACER AND SPLWW-575A FOR END SEAL.

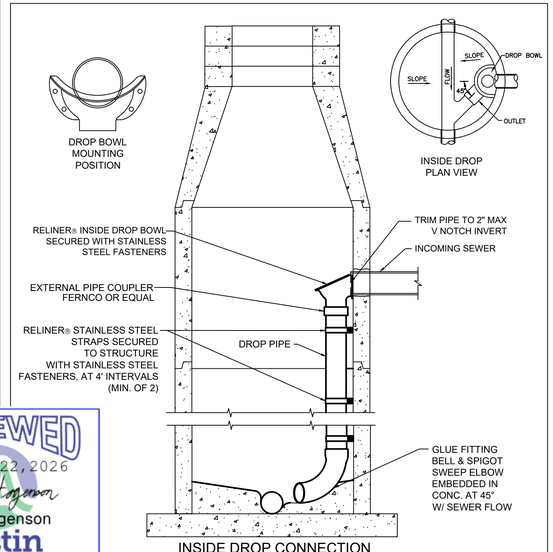
	SPLIT ENCASEMENT DETAIL W/ CASING SPACERS (2 OF 2)	
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. (MODIFIED) 501S-1



NOTES:
1. DROP PIPE DIAMETER TO EQUAL INLET PIPE DIAMETER
2. MANHOLE DIAMETER SHALL ALLOW 48" MIN. CLEARANCE AS SHOWN
3. DROP MANHOLES IN EXCESS OF 15' DEEP MUST BE DESIGNED WITH AN INTERNAL DROP AND MUST BE A MIN. SIZE OF 5' DIAMETER

SINGLE OR MULTIPLE INTERNAL DROP CONNECTIONS

AUSTIN WATER SPECIAL DETAIL (6/24/24) CONCRETE WASTEWATER MANHOLE INTERNAL DROP CONNECTIONS 1 OF 1	USE OF THIS SPECIAL DETAIL 1. THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS SPECIAL DETAIL. MODIFICATIONS TO THIS SPECIAL DETAIL ARE PROHIBITED. 2. THIS SPECIAL DETAIL IS TEMPORARY AND IS TO BE USED UNTIL A NEW STANDARD DETAIL IS ADOPTED TO REPLACE IT.



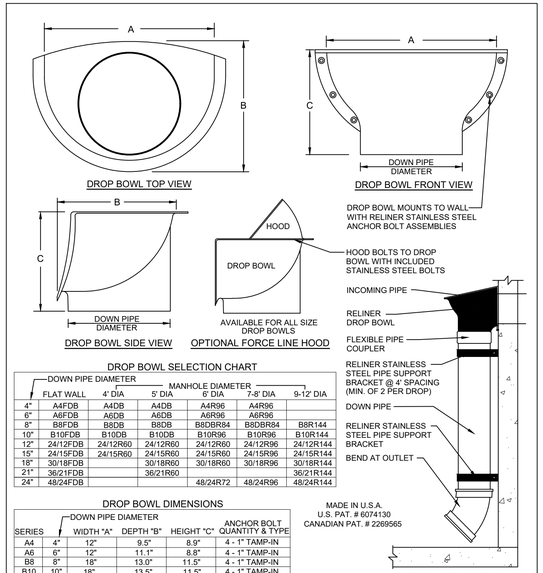
INSIDE DROP CONNECTION

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NOTES:
1. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS PRODUCED BY: RELINER-DURAN, INC. 53 MT. ARCHER RD., LYME, CT 06371 (860)434-0277 FAX: (877)434-3197
2. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.

RELINER / DURAN, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 508-6001 FAX: (877)434-3197
WWW.RELINER.COM

DESCRIPTION	DATE	SCALE
DROP CONNECTIONS	12/28/16	NONE
	DRAWING NUMBER	
	DC-1	



DROP BOWL SELECTION CHART

DOWN PIPE DIAMETER	MANHOLE DIAMETER					
FLAT WALL	4' DIA	5' DIA	6' DIA	7-8' DIA	9-12' DIA	
4"	A4FDB	A4DB	A4DB	A4R96	A6R96	
6"	A6FDB	A6DB	A6DB	A6R96	A6R96	
8"	B8FDB	B8DB	B8DB	B8DBR84	B8DBR84	B8R144
10"	B10FDB	B10DB	B10DB	B10R96	B10R96	B10R144
12"	24/12FDB	24/12R60	24/12R60	24/12R60	24/12R96	24/12R144
15"	24/15FDB	24/15R60	24/15R60	24/15R60	24/15R96	24/15R144
18"	30/18FDB		30/18R60	30/18R60	30/18R96	30/18R144
21"	36/21FDB		36/21R60			36/21R144
24"	48/24FDB			48/24R72	48/24R96	48/24R144

DROP BOWL DIMENSIONS

SERIES	DOWN PIPE DIAMETER	WIDTH "A"	DEPTH "B"	HEIGHT "C"	ANCHOR BOLT QUANTITY & TYPE
A4	4"	12"	9.5"	8.9"	4 - 1" TAMP-IN
A6	6"	12"	11.1"	8.8"	4 - 1" TAMP-IN
B8	8"	18"	13.0"	11.5"	4 - 1" TAMP-IN
B10	10"	18"	13.5"	11.5"	4 - 1" TAMP-IN
24/12	12"	24"	16.5"	15.0"	6 - 1" TAMP-IN
24/15	15"	24"	19.3"	15.8"	6 - 1" TAMP-IN
30/18	18"	30"	23.5"	18.5"	6 - 1" TAMP-IN
36/21	21"	36"	31.6"	23.0"	8 - 3" WEDGE
48/24	24"	48"	30.5"	30.0"	10 - 3" WEDGE

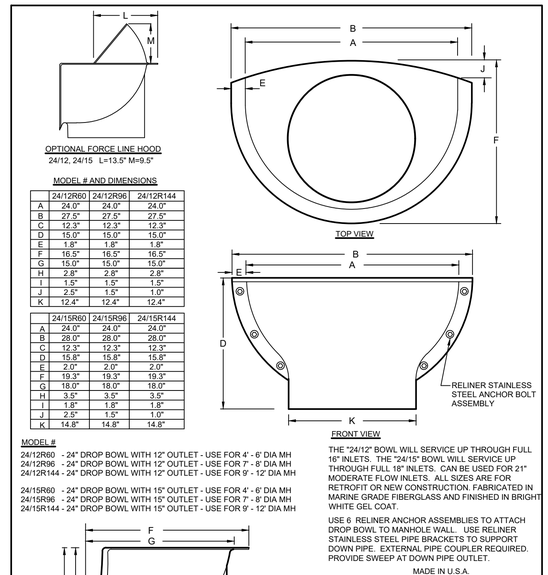
RELINER INSIDE DROP BOWLS ARE FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT.

USE RELINER STAINLESS STEEL PIPE BRACKETS TO SUPPORT DOWN PIPE. EXTERNAL PIPE COUPLER REQUIRED. PROVIDE SWEEP AT DOWN PIPE OUTLET.

MADE IN U.S.A.
U.S. PAT. # 6074130
CANADIAN PAT. # 2269565

RELINER / DURAN, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 508-6001 FAX: (877)434-3197
WWW.RELINER.COM

DESCRIPTION	DATE	SCALE
SANITARY MANHOLE INSIDE DROP BOWL	12/28/16	NONE
	DRAWING NUMBER	
	DB-1	



MODEL # AND DIMENSIONS

	24/12R60	24/12R96	24/12R144
A	24.0"	24.0"	24.0"
B	27.5"	27.5"	27.5"
C	12.3"	12.3"	12.3"
D	15.0"	15.0"	15.0"
E	1.8"	1.8"	1.8"
F	16.5"	16.5"	16.5"
G	15.0"	15.0"	15.0"
H	2.8"	2.8"	2.8"
I	1.5"	1.5"	1.5"
J	2.5"	1.5"	1.0"
K	12.4"	12.4"	12.4"

	24/15R60	24/15R96	24/15R144
A	24.0"	24.0"	24.0"
B	28.0"	28.0"	28.0"
C	12.3"	12.3"	12.3"
D	15.8"	15.8"	15.8"
E	2.0"	2.0"	2.0"
F	19.3"	19.3"	19.3"
G	18.0"	18.0"	18.0"
H	3.5"	3.5"	3.5"
I	1.8"	1.8"	1.8"
J	2.5"	1.5"	1.0"
K	14.8"	14.8"	14.8"

MODEL #
24/12R60 - 24" DROP BOWL WITH 12" OUTLET - USE FOR 4' - 6' DIA MH
24/12R96 - 24" DROP BOWL WITH 12" OUTLET - USE FOR 7' - 8' DIA MH
24/12R144 - 24" DROP BOWL WITH 12" OUTLET - USE FOR 9' - 12' DIA MH

24/15R60 - 24" DROP BOWL WITH 15" OUTLET - USE FOR 4' - 6' DIA MH
24/15R96 - 24" DROP BOWL WITH 15" OUTLET - USE FOR 7' - 8' DIA MH
24/15R144 - 24" DROP BOWL WITH 15" OUTLET - USE FOR 9' - 12' DIA MH

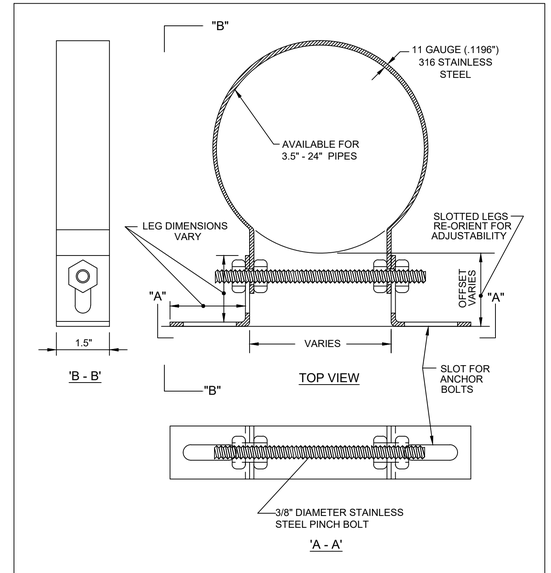
THE "24/12" BOWL WILL SERVICE UP THROUGH FULL 16" INLETS. THE "24/15" BOWL WILL SERVICE UP THROUGH FULL 18" INLETS. CAN BE USED FOR 21" MODERATE FLOW INLETS. ALL SIZES ARE FOR RETROFIT OR NEW CONSTRUCTION. FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT.

USE 6 RELINER ANCHOR ASSEMBLIES TO ATTACH DROP BOWL TO MANHOLE WALL. USE RELINER STAINLESS STEEL PIPE BRACKETS TO SUPPORT DOWN PIPE. EXTERNAL PIPE COUPLER REQUIRED. PROVIDE SWEEP AT DOWN PIPE OUTLET.

MADE IN U.S.A.
U.S. PAT. # 6074130
CANADIAN PAT. # 2269565

RELINER / DURAN, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 508-6001 FAX: (877)434-3197
WWW.RELINER.COM

DESCRIPTION	DATE	SCALE
24/12R DROP BOWLS 24/15R DROP BOWLS FOR ROUND WALLS	11/28/16	NONE
	DRAWING NUMBER	
	24/12R 24/15R	



SPECIFICATIONS:
1) ALL COMPONENTS INCLUDING NUTS AND BOLTS ARE MADE FROM TYPE 316 STAINLESS STEEL.
2) AVAILABLE FOR 3.5" - 24" PIPES

RELINER / DURAN, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 508-6001 FAX: (877)434-3197
WWW.RELINER.COM

DESCRIPTION	DATE	SCALE
316 STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS	5/22/19	NONE
	DRAWING NUMBER	
	316 BRACKET	

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS I

CITY OF AUSTIN
AUSTIN WATER

BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED PROFESSIONAL ENGINEER
9/10/2026

SHEET
56 OF 93

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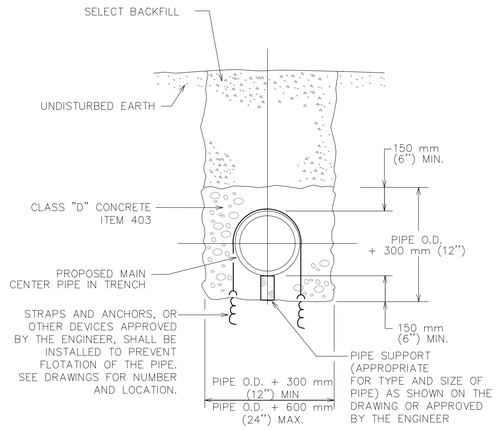
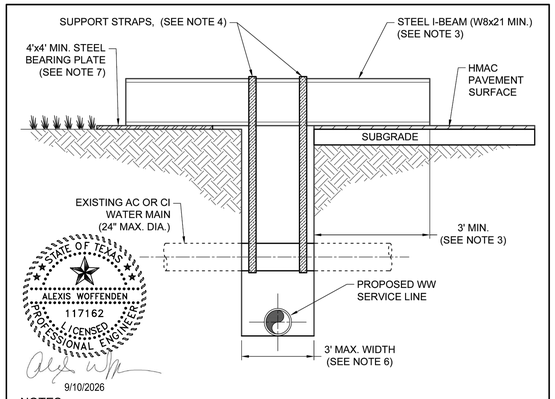


CITY OF AUSTIN WATER AND WASTEWATER UTILITY		CONCRETE ENCASEMENT	
RECORD COPY SIGNED BY LEON BARBA	8/18/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 505S–1



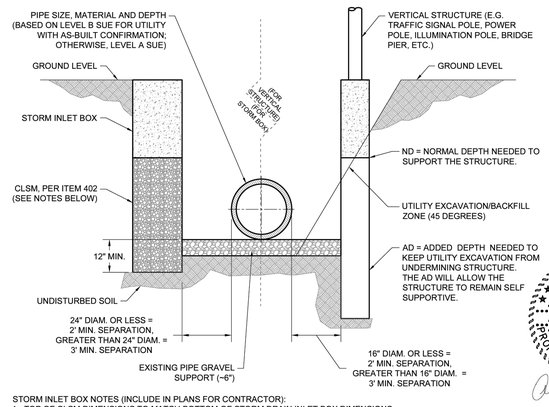
NOTES:

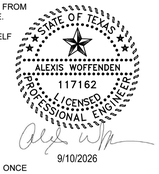
1. THIS DETAIL IS FOR TEMPORARY SUPPORT OF EXISTING ASBESTOS CEMENT AND LEAD-CAULK-JOINT CAST IRON WATER MAINS TO ACCOMMODATE CONSTRUCTION OF WASTEWATER SERVICES UNDERNEATH.
2. THE INDICATED SUPPORT IS FOR INSTALLATIONS WHERE THE TRENCH WALL MATERIALS ARE STABLE ENOUGH TO REMAIN NEARLY VERTICAL IN THE AS-EXCAVATED POSITION FOR THE DURATION OF THE REQUIRED CONSTRUCTION PERIOD. SPECIALLY DESIGNED TEMPORARY PIPE SUPPORT SYSTEMS ARE REQUIRED FOR INSTALLATIONS WHERE THE TRENCH WALL MATERIALS WOULD TEND TO FLOW, COLLAPSE, SLUMP OR OTHERWISE EXHIBIT INSTABILITY WHEN LEFT UNSUPPORTED. (EXCAVATION SAFETY EQUIPMENT INSTALLED AFTER COMPLETION OF THE EXCAVATION DOES NOT PROVIDE TRENCH WALL SUPPORT.)
3. CONTRACTOR IS REQUIRED TO SUBMIT SUPPORT PLAN TO ENGINEER / OWNER PRIOR TO CONSTRUCTION, UNLESS OTHERWISE NOTED IN THE APPROVED DRAWINGS.
4. INSTALL A MINIMUM OF TWO SUPPORT STRAPS (NO CHAINS) ONCE EXCAVATION REACHES 6" BELOW WATER MAIN. PROVIDE TURNBUCKLES TO TENSION STRAPS.
5. IF JOINT OR FITTING FOR EXISTING WATER MAIN IS PRESENT IN TRENCH, ADDITIONAL SUPPORT MEASURES MAY BE NEEDED.
6. IF TRENCH WIDTH EXCEEDS 3', THE EXISTING AC OR CI WATER MAIN SHALL BE REPLACED WITH FULL JOINTS OF NEW DI OR PVC PIPE.
7. USE STEEL PLATE IF PLACING I-BEAM ON GRASS OR SOILS.
8. CLSM BACKFILL SHALL BE USED FROM THE TOP OF THE WASTEWATER SERVICE LINE BEDDING TO THE BOTTOM OF THE WATER MAIN.

CITY OF AUSTIN AUSTIN WATER		TEMPORARY SUPPORT FOR ASBESTOS CEMENT AND CAST IRON WATER MAINS	
SPECIAL DETAIL	10/20/2021	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS SPECIAL DETAIL. MODIFICATIONS TO THIS DETAIL ARE PROHIBITED WITHOUT WRITTEN AUTHORIZATION BY AUSTIN WATER.	AW-SPECIAL-02 1 OF 1

FOR STORM BOX INSTALLATION: PROVIDE A SEALED WAIVER REQUEST OF A SPECIAL DETAIL SHOWING SECTION VIEW OF PIPE, STORM BOX, CLSM (OVER-EXCAVATED WITH 12" BELOW PIPE), AND HORIZONTAL/ VERTICAL SEPARATION BETWEEN PIPE AND STORM BOX/CLSM. CLSM SHALL BE DESIGNED FOR EACH SPECIFIC WAIVER LOCATION TO FULLY SUPPORT STORM INLET BOX FOLLOWING EXCAVATION AND EXPOSURE OF UTILITY.

FOR VERTICAL STRUCTURE INSTALLATION: PROVIDE A SEALED WAIVER REQUEST (BY STRUCTURAL ENGINEER) OF A SPECIAL DETAIL SHOWING SECTION VIEW OF PIPE, VERTICAL STRUCTURE (INCLUDING ND AND AD), THE EXCAVATION/ BACKFILL ZONE OF PIPE (PER TCM, SECTION 13) AND HORIZONTAL SEPARATION BETWEEN PIPE AND STRUCTURE. STRUCTURE SHALL BE DESIGNED TO REMAIN SELF SUPPORTIVE FOLLOWING EXCAVATION AND EXPOSURE OF UTILITY.





STORM INLET BOX NOTES (INCLUDE IN PLANS FOR CONTRACTOR):
1. TOP OF CLSM DIMENSIONS TO MATCH BOTTOM OF STORM DRAIN INLET BOX DIMENSIONS.
2. CONTRACTOR TO POTHOLE UTILITY TO CONFIRM UTILITY LOCATION AT EACH SPECIFIC WAIVER LOCATION. ONCE CONFIRMED, CONTRACTOR SHALL OVER-EXCAVATE TO 12" BELOW UTILITY FLOWLINE AND INSTALL CLSM AS SHOWN IN SPECIAL DETAIL. INSTALLATION OF INLET BOX IS PROHIBITED IF HORIZONTAL SEPARATION BETWEEN PIPE AND CLSM DOES NOT MEET THE FOLLOWING: 2' MIN. FOR 24" DIAMETER PIPE OR LESS; 3' MIN. FOR GREATER THAN 24" DIAMETER.
3. IF PIPE HAS BEEN EXPOSED DURING CONSTRUCTION, CITY INSPECTOR SHALL VISUALLY CONFIRM PIPE IS NOT LEAKING PRIOR TO BACKFILLING UTILITY. INSPECTOR SHALL CONTACT AW IMMEDIATELY AT 512-972-1000 TO REPORT ANY LEAKS.

VERTICAL STRUCTURE NOTES (INCLUDE IN PLANS FOR CONTRACTOR):
1. CONTRACTOR TO POTHOLE UTILITY TO CONFIRM UTILITY LOCATION. ONCE CONFIRMED, CONTRACTOR SHALL INSTALL VERTICAL STRUCTURE AS SHOWN IN SPECIAL DETAIL. INSTALLATION OF STRUCTURE IS PROHIBITED IF HORIZONTAL SEPARATION BETWEEN PIPE AND STRUCTURE DOES NOT MEET THE FOLLOWING: 2' MIN. FOR 16" DIAMETER PIPE OR LESS; 3' MIN. FOR GREATER THAN 16" DIAMETER.

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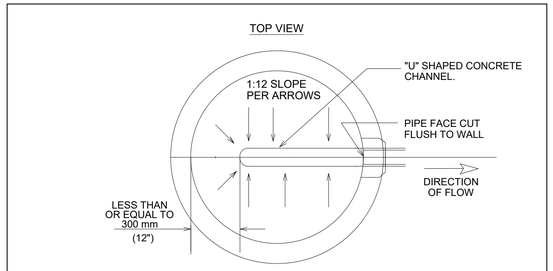
AW WAIVER REQUEST GUIDELINES
STORM INLET BOX OR VERTICAL STRUCTURE
SPECIAL DETAIL (08/21/2023)



NOTE 1: MANHOLE FOUNDATION TO MEET OR EXCEED STD. SPEC. 506.5B

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



NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

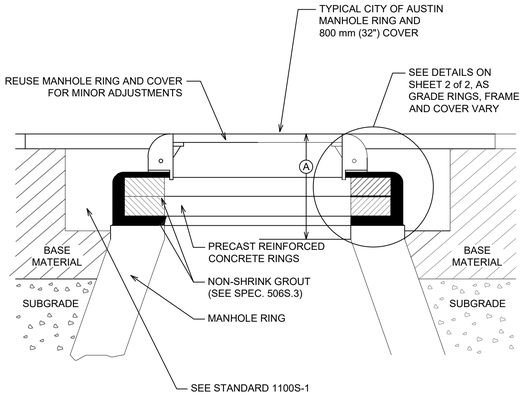
STANDARD DETAILS II

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

SHEET
57 OF 93

100% SUBMITTAL REV

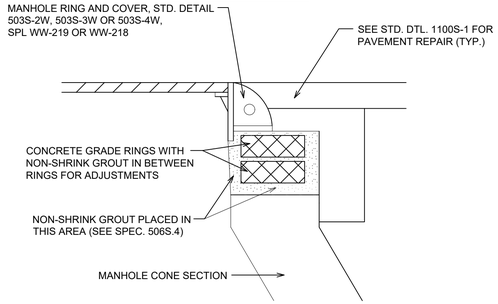


Ⓐ VERTICAL FACE = ALLOWABLE THROAT OR CHIMNEY HEIGHT
= NEW CONSTRUCTION = 525mm = (21") Max.
= EXISTING CONSTRUCTION = 675mm (27") Max.

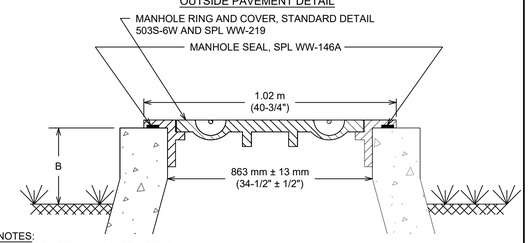
NOTES:
1. NON-SHRINK GROUT SHALL NOT EXCEED 25 mm (1") IN ANY DIMENSION.
2. SUB-GRADE AND BASE MATERIALS SHALL BE COMPACTED ACCORDING TO ITEMS 201S AND 210S, RESPECTIVELY, OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
3. REFER TO STANDARD 1100S-1 FOR REPAIRS AROUND MANHOLES.
4. SEE STANDARD 506S-4A FOR HDPE RING INSTALLATION (FOR USE IN PAVED AREAS ONLY).

CITY OF AUSTIN AUSTIN WATER UTILITY	MINOR MANHOLE ADJUSTMENT & NEW MANHOLE CONSTRUCTION	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-4 1 OF 2

INSIDE PAVEMENT DETAIL

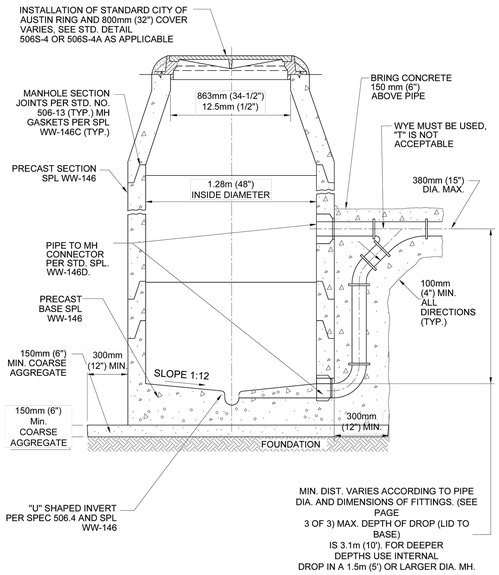


OUTSIDE PAVEMENT DETAIL



NOTES:
1. FOR USE IN UNPAVED AREAS ONLY
2. WHEN USED WITHIN 100-YEAR FLOODPLAIN, SEE DTL. 506S-6 FOR ADDITIONAL M.H. REQUIREMENTS.
3. DIMENSION B=150-300 mm (6"-12") FOR M.H. LOCATED IN 100-YR FLOOD PLAN.
=50-300 mm (2"-12") FOR M.H. OUTSIDE 100-YR FLOOD PLAN.

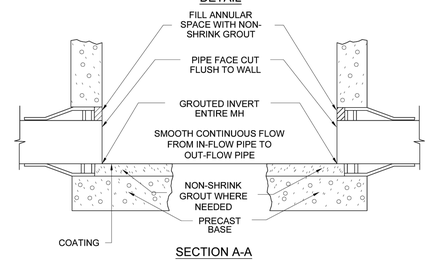
CITY OF AUSTIN AUSTIN WATER UTILITY	MINOR MANHOLE ADJUSTMENT & NEW MANHOLE CONSTRUCTION	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-4 2 OF 2



NOTES:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150mm (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 STD. SPEC 506.5B.

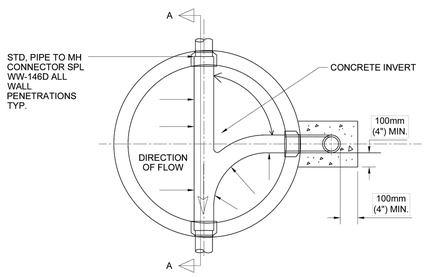
CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE WITH DROP INLET ON PRECAST BASE	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-8 1 OF 3

INVERT DETAIL



SECTION A-A

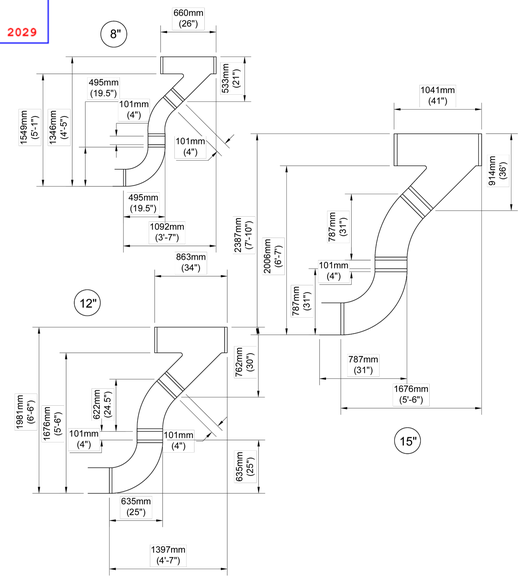
INVERT PLAN VIEW



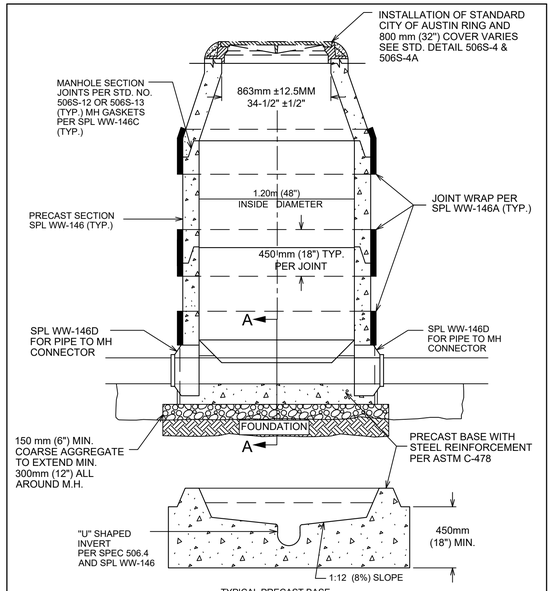
CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE WITH DROP INLET ON PRECAST BASE	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-8 2 OF 3

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

STANDARD DROP CONNECTIONS MINIMUM DIMENSIONS (FOR INFORMATION ONLY)



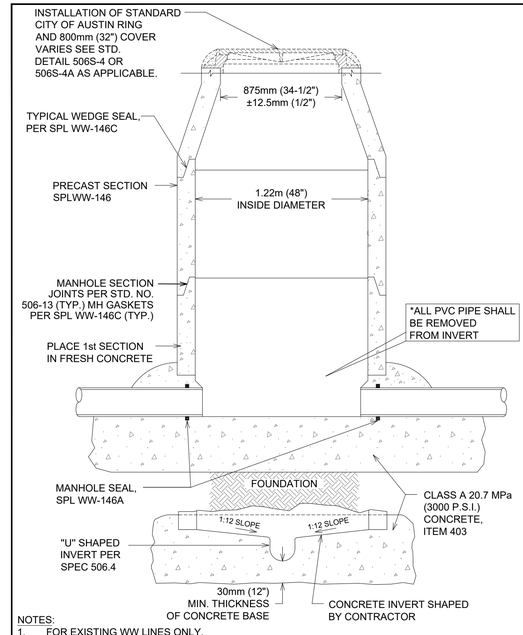
CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE WITH DROP INLET ON PRECAST BASE	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-8 3 OF 3



TYPICAL PRECAST BASE

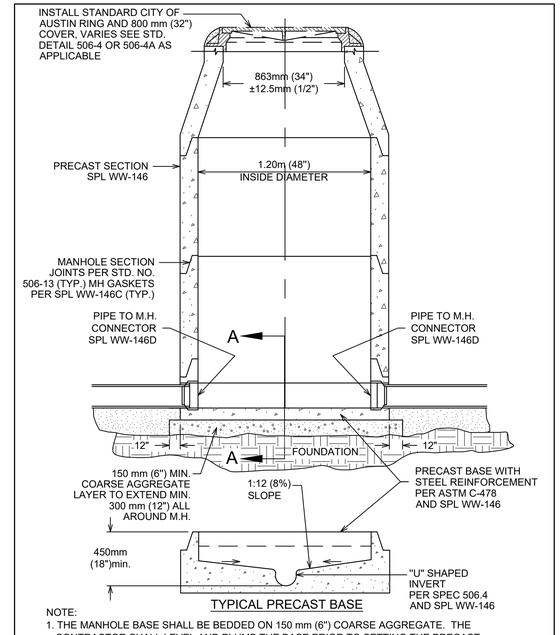
NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MANHOLE FOUNDATION SHALL MEET OR EXCEED SPEC. 506.5B.

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



NOTES:
1. FOR EXISTING WW LINES ONLY.
2. MANHOLE FOUNDATION SHALL MEET OR EXCEED STD. SPEC 506.5B
3. FIRST RISER SECTION SHALL BE PLACED PLUMB & LEVEL PRIOR TO SETTING ANY ADDITIONAL SECTIONS.

CITY OF AUSTIN AUSTIN WATER UTILITY	PRECAST MANHOLE ON. CAST IN PLACE BASE	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-9



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	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	STANDARD NO. 506S-10

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL
STANDARD DETAILS III

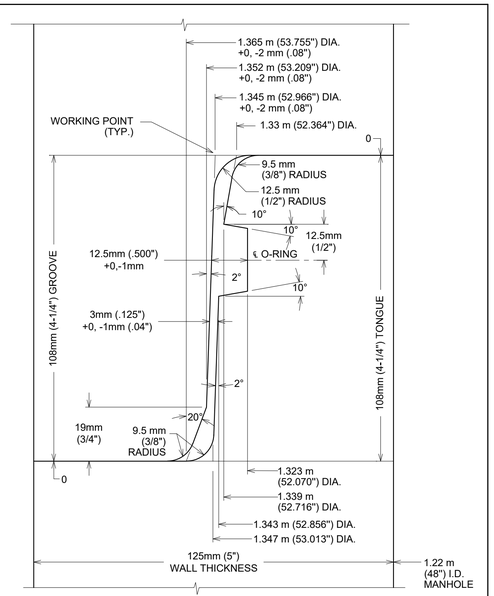
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED PROFESSIONAL ENGINEER
9/10/2026

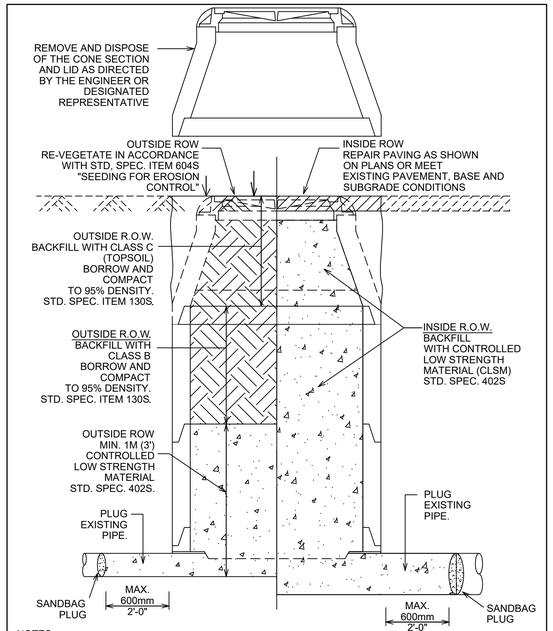
SHEET
58 OF 93

100% SUBMITTAL REV



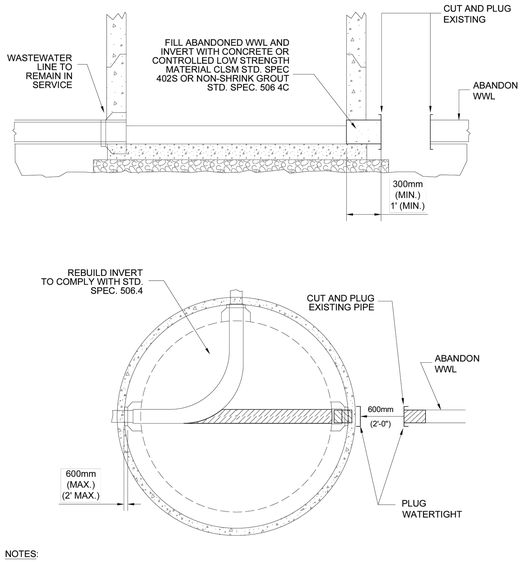
NOTES:
1. O-RING DIMENSION 20mm (25/32") DIA., 1013cc VOLUME.
2. DRAWING NOT TO SCALE FOR CLARIFICATION OF DIMENSIONS.
3. FOR EX. MANHOLES ONLY.

CITY OF AUSTIN AUSTIN WATER UTILITY		O-RING JOINT DETAIL PRECAST MANHOLE SECTION	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-12



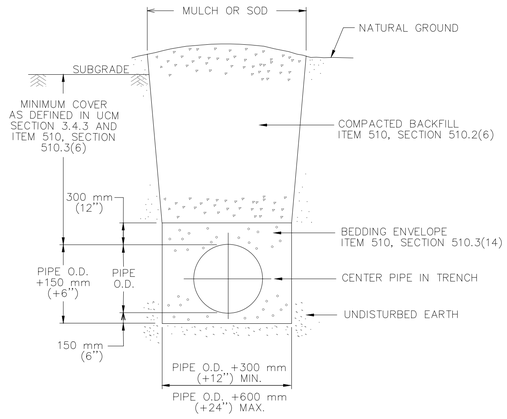
NOTES:
1. THE PLUG SHOULD BE COMPOSED OF A SANDBAG OR SIMILAR TYPE PLUG TO HOLD CLSM UNTIL SET. CLSM IS CONTROLLED LOW STRENGTH MATERIAL, STD. SPEC 402S.
2. CLSM SHALL COMPLETELY FILL VOID TO SANDBAG OR SIMILAR TYPE PLUG.

CITY OF AUSTIN AUSTIN WATER UTILITY		MANHOLE ABANDONMENT	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-15



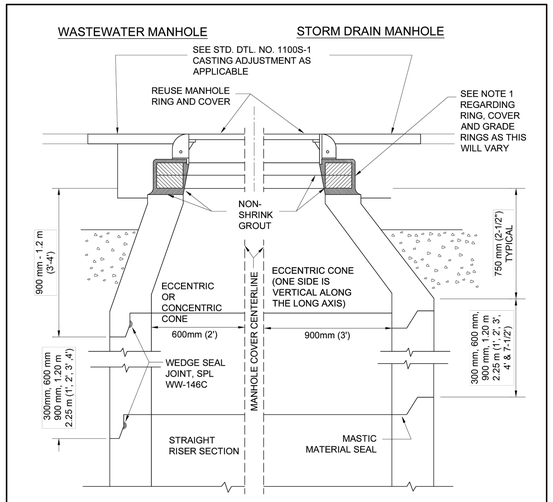
NOTES:
1. REPAIR DAMAGED ORGANIC LINING, SPL WW-511.
2. FINISH NON-SHRINK GROUT, CONCRETE AND/OR CLSM TO SMOOTH FINISH.
3. WATERTIGHT PLUG, SPL WW-227B OR FOR NON-PVC PIPE USE APPROPRIATE WATERTIGHT PLUG.

CITY OF AUSTIN AUSTIN WATER UTILITY		ABANDON LINE AT ACTIVE MANHOLE	
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-15A 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	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-5



1. SEE "MINOR MANHOLE HEIGHT ADJUSTMENT" STANDARDS 506S-4 AND 506S-4A FOR ADDITIONAL INFORMATION.
2. MANHOLE SECTIONS TEMPORARILY REMOVED FOR ROADWAY CONSTRUCTION MAY BE REUSED ONLY WITH WRITTEN APPROVAL OF THE INSPECTOR. WEDGE SEALS SHALL NOT BE REUSED.
3. ANY COMBINATION OF REMOVING THE GRADE RINGS, AND/OR THE MANHOLE CONE, AND/OR THE STRAIGHT RISER SECTION OF THE MANHOLE SHALL BE ACCEPTABLE TO TEMPORARILY LOWER THE MANHOLE GRADE FOR RECONSTRUCTION.
4. WHILE THE MANHOLE IS TEMPORARILY LOWERED, A SHEET OF STEEL SUITABLE TO SUPPORT ALL IMPOSED LOADS SHALL BE USED TO COVER THE OPENING. STEEL SHALL BE PLACED SO THE SHEET WILL NOT MOVE UNDER ANY & ALL TRAFFIC CONDITIONS.
5. SUB-GRADE AND BASE MATERIALS SHALL BE COMPACTED TO 95% AND 100% DENSITIES, RESPECTIVELY, COMPACTION SHALL BE BY MECHANICAL TAMPING TO THE DENSITIES SPECIFIED, SEE STD. DTL. NO .1100S-1.

CITY OF AUSTIN AUSTIN WATER UTILITY		MAJOR MANHOLE ADJUSTMENT	
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-2 1 OF 1

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS IV

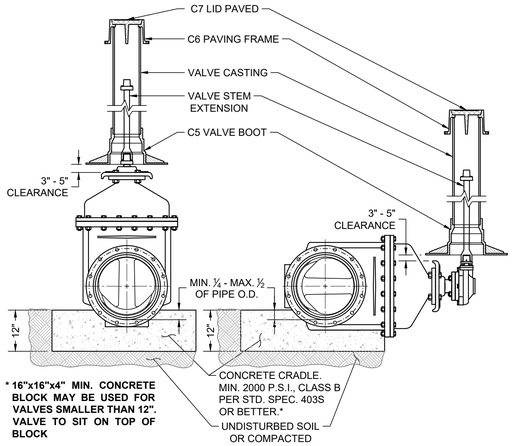
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
9/10/2026

SHEET
59 OF 93

100% SUBMITTAL REV



*** 16"x16"x4" MIN. CONCRETE BLOCK MAY BE USED FOR VALVES SMALLER THAN 12". VALVE TO SIT ON TOP OF BLOCK**

VERTICAL VALVE

HORIZONTAL VALVE

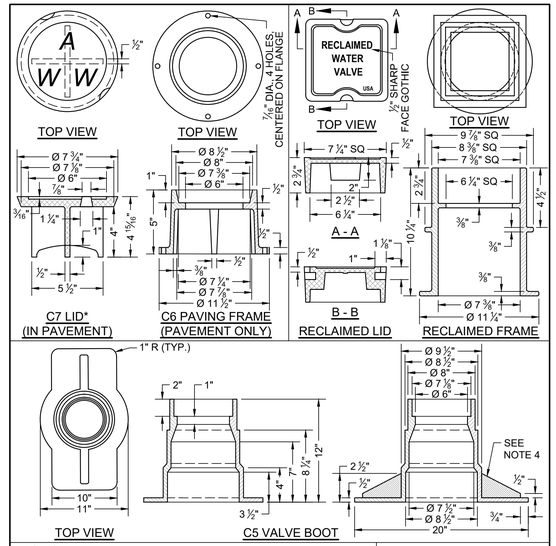
ONLY TO BE USED WHEN CALLED OUT ON THE DRAWINGS.

NOTES:

1. WELD SOCKET 2½" x 2" DEEP TO 1" SCH. 40 CARBON STEEL ROUND STEM EXTENSION, FITTED ON OPERATING NUT. [SCH. 80 FOR LENGTHS OVER 10.]
2. VALVE CASTING SHALL BE 6" DI PIPE WITH BELL OR COLLAR CENTERED OVER VALVE BOOT.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 12" AND 18" FROM FINISHED GRADE.

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE **"RECLAIMED WATER"** CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS *05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 1 OF 4



NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID, FRAME, COLLAR AND BASE.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. CASTING FINISH BY MANUFACTURER SHALL INCLUDE REMOVAL OF FINS AND FLASHING, AND PAINT WITH BLACK ASPHALT COATING.

WEIGHTS:

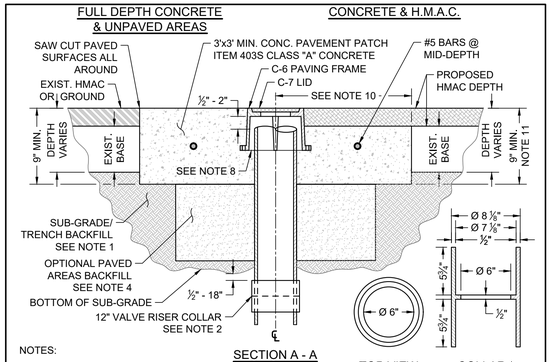
C7 LID: 13 LBS
RECLAIMED LID: 15 LBS
C6 FRAME: 23 LBS
RECLAIMED FRAME: 33 LBS
C5 BASE: 78 LBS

* LETTERING SHALL BE 1 ½" 2 PICK BAR SLOTS REQUIRED

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS *05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 2 OF 4

FULL DEPTH CONCRETE & UNPAVED AREAS

CONCRETE & H.M.A.C.



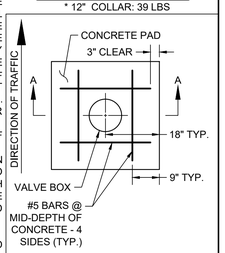
NOTES:

1. SUB-GRADE/TRENCH BACKFILL SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. TO ADJUST VALVE CASTINGS TO FINAL GRADE, REMOVE RISER PIPE BELOW SUB-GRADE AND INSTALL APPROPRIATE LENGTH OF NEW RISER PIPE TO ACHIEVE FINAL GRADE. CONNECT THE TWO PIECES OF RISER PIPE WITH A 6" COLLAR MIN. 12" LENGTH APPROXIMATELY CENTERED ON THE JOINT WITH THE TOP OF SLEEVE LOCATED ½" - 18" BELOW SUB-GRADE. THE INSIDE "LIP" OF COLLAR TO BE PAINTED WITH FLUORESCENT WHITE PAINT OR COVERED WITH FLUORESCENT WHITE TAPE. ALTERNATE: FOR OPTIONAL SINGLE PIECE RISER INSTALLATION SEE SHEET 4 OF 4.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE; NUT SHALL OPERATE WITH NO OBSTRUCTION.
4. WHERE CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL (SPEC. ITEM 402S) TO THE UNDERSIDE OF THE CONCRETE. PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
5. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.7.
6. NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
7. BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 18'.

SECTION A - A

12" VALVE RISER COLLAR

* 12" COLLAR: 39 LBS

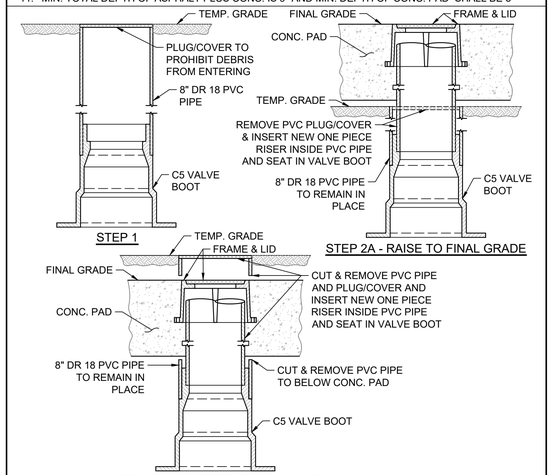


PLAN VIEW

CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS *05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 3 OF 4

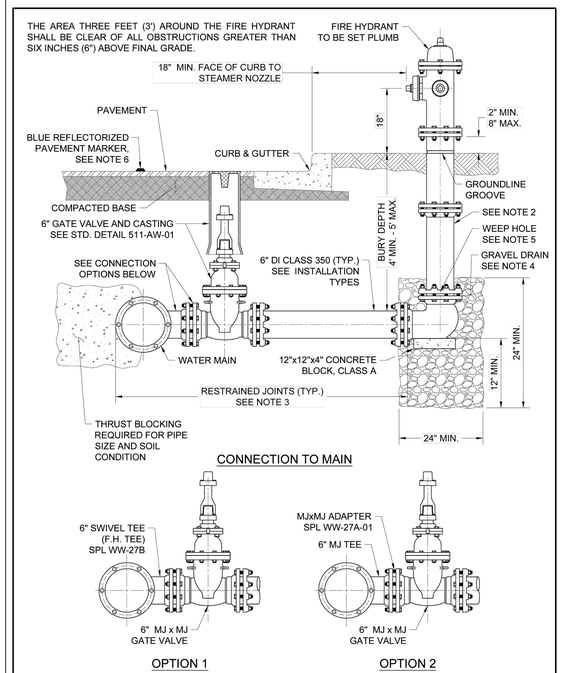
NOTES (CON'T):

8. PAVING FRAME SHALL BE FLUSH WITH THE CONC. PAD AND PLACED ½" - 2" ABOVE RISER PIPE (FRAME SHALL NOT REST ON RISER.)
9. IN UNPAVED AREAS, INSTALL ONE DELINEATOR STAKE IMMEDIATELY ADJACENT TO THE EDGE OF THE CONCRETE PAD. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES.
10. VALVE SHALL TYPICALLY BE CENTERED IN CONCRETE DIAMOND BUT MAY BE OFFSET WITH A MIN. OF 12" FROM CENTER OF VALVE LID TO EDGE OF CONCRETE IN ALL DIRECTIONS.
11. MIN. TOTAL DEPTH OF ASPHALT PLUS CONC. IS 9" AND MIN. DEPTH OF CONC. PAD SHALL BE 5"



OPTIONAL ONE PIECE VALVE CASTING INSTALLATION

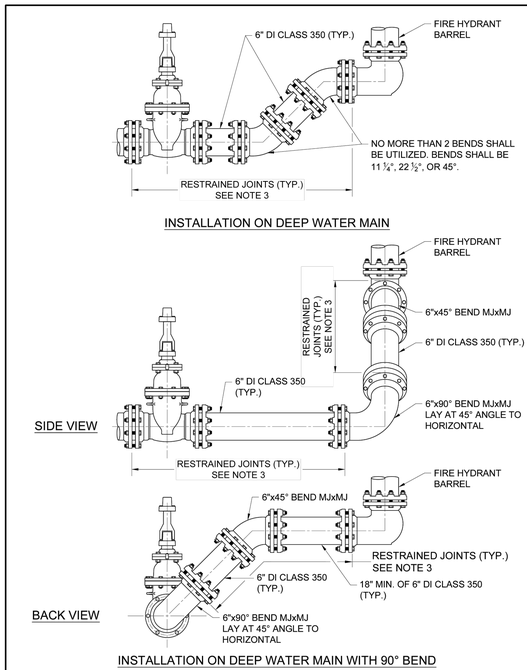
CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS *05/18/2016* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 4 OF 4



CONNECTION TO MAIN

OPTION 1 OPTION 2

CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT ASSEMBLY	
JEFF A. KYLE 11/06/2023 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-02 1 OF 3



INSTALLATION ON DEEP WATER MAIN

INSTALLATION ON DEEP WATER MAIN WITH 90° BEND

CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT ASSEMBLY	
JEFF A. KYLE 11/06/2023 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-02 2 OF 3

NOTES: APPLICABLE TO ALL INSTALLATION TYPES.

1. NO PART OF A HYDRANT OR ITS NOZZLE CAPS SHALL BE WITHIN 6" OF ANY SIDEWALK OR PEDESTRIAN RAMP. ANY FIRE HYDRANT PLACED NEAR A STREET CORNER SHALL BE LOCATED OUTSIDE THE CURVE RADIUS AND A MINIMUM OF 4' FROM RAMPS.
2. ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH MAY BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT IN ORDER TO MEET THE REQUIRED BURY DEPTH OF 4' - 5'. BREAK AWAY BOLTS (SHOE TYPES) SHALL BE PROPERLY SPACED AND PLACED.
3. FIRE LINE SHALL HAVE ALL JOINTS RESTRAINED FROM MAIN TO FIRE HYDRANT INCLUDING MJ RESTRAINT OF TEE AT THE MAIN. JOINTS SHOWN MAY VARY. SEE SPL WW-27A, WW-27A-01, AND WW-27B FOR RESTRAINT OPTIONS.
4. BELOW EACH HYDRANT, A DRAINAGE PIT 24" IN DIAMETER AND 12" DEEP SHALL BE EXCAVATED AND FILLED WITH COMPACTED COARSE GRAVEL OR BROKEN STONE MIXED WITH COARSE SAND UNDER AND AROUND THE BOWL OF THE HYDRANT, AND TO A LEVEL 12" ABOVE THE HYDRANT DRAIN OPENING (SEE STD. SPEC. 510). THE HYDRANT DRAINAGE PIT SHALL NOT BE CONNECTED TO A SANITARY SEWER. THE DRAIN GRAVEL SHALL BE COVERED WITH FILTER FABRIC PER STD. SPEC. 620.
5. WRAP 8 MIL. POLY-FILM WRAP ON ALL BURIED PIPE AND FITTINGS. CUT SLITS IN POLY-FILM WRAP AT BOOT TO ALLOW WATER TO ESCAPE FROM WEEP HOLES AND POLY-WRAP.
6. A BLUE TYPE II-B-B REFLECTORIZED PAVEMENT MARKER, CONFORMING TO STANDARD SPECIFICATION ITEM NO. 863S, SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS, ON THE SIDE OF AND IN LINE WITH ALL NEWLY INSTALLED FIRE HYDRANTS.

CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT ASSEMBLY	
JEFF A. KYLE 11/06/2023 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-02 3 OF 3

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS V

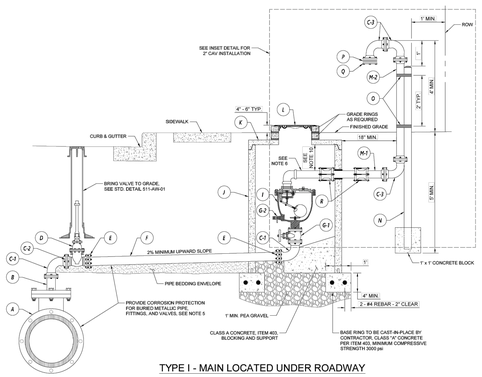
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

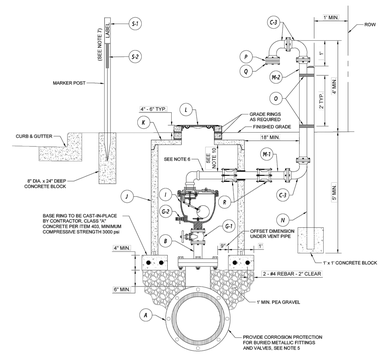
STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED PROFESSIONAL ENGINEER
9/10/2026

SHEET
60 OF 93

100% SUBMITTAL REV



TYPE I - MAIN LOCATED UNDER ROADWAY

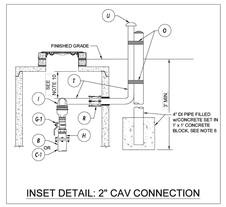


TYPE II - MAIN LOCATED OUTSIDE ROADWAY

TABLE 1 FOR ITEM A	
MAIN SIZE (IN)	FLANGED TEE BRANCH OR OUTLET (IN)
8	8
12	12
16	12
24	16
30	20
36	20

A. AIR ACCUMULATOR, DI TEE (MJ x MJ x FL), WW-27C, OR DI PIPE WITH FLANGED OUTLET, WW-27 (SEE TABLE 1 FOR SIZING)
B. FL x FL REDUCING SPOOL, WW-463, SEE NOTE 8
C-1. 90° BEND (4" or 6", FL x MJ), WW-27C, SEE NOTE 8
C-2. JOINT RESTRAINT DEVICE FOR MJ BELL CONNECTION (4" OR 6"), WW-27A-01
C-3. 90° BEND (4" OR 6", FL x FL), WW-27C
D. GATE VALVE (4" OR 6", MJ x MJ), WW-700
E. WEDGE-ACTION MJ RESTRAINT DEVICE, WW-27A, OR HDPE MJ ADAPTER, WW-706A (4" OR 6")
F. DI PIPE (PE x PE), WW-27A, OR HDPE PIPE W/ MJ ADAPTERS, WW-706 (4" OR 6"), SEE NOTE 9
G-1. ISOLATION VALVE (2", 4" OR 6"), SEE NOTE 4 AND INSET DETAIL
G-2. THREADED BALL VALVE (SUPPLIED AND INSTALLED BY AUSTIN WATER)
H. THREADED COMPANION FLANGE (4" x 2"), WW-463
I. COMBINATION AIR VALVE (CAV), WW-462A
J. 2" CAV: 48" DIA. PRECAST MANHOLE SECTION
4" CAV: 60" DIA. PRECAST MANHOLE SECTION
6" CAV: 72" DIA. PRECAST MANHOLE SECTION
WW-146
K. REINFORCED PRECAST CONCRETE FLAT TOP LID, AASHTO H-20 LOADING (w/34" DIA. OPENING CENTERED IN LID)
L. 32" MANHOLE COVER CASTING SETS (w/32" TOP FLANGE RING, CAST "POTABLE WATER" OR "RECLAIMED WATER" INTO COVER), WW-219
M-1. DI VENT PIPE (4" OR 6", FL x FL), SEE NOTE 6
M-2. DI VENT PIPE (4" OR 6", FL x FL), SEE NOTE 6
N. DI SUPPORT PIPE FILLED WITH CONCRETE (4" OR 6"), SEE NOTE 6
O. 1" x 1/4" GALVANIZED STRAPS
P. NO. 16 MESH 316 STAINLESS STEEL CLOTH
Q. RETAINER FLANGE (OPENING TO MATCH I.D. OF VENT PIPE)
R. TRANSITION COUPLING, WW-506
S-1. MARKER POST, WW-595, SEE NOTE 7
S-2. DOT-C2 REFLECTIVE TAPE, WHITE, 2" WIDE AND 12" LONG, SEE NOTE 7
T. 2" GALVANIZED IRON PIPE, SEE NOTE 6
U. SCREEN COVER VENT CAP (#401 CLAY AND BAILEY MFG. CO. OR EQUIVALENT)

NOTES:
1. ENTIRE CAV ASSEMBLY SHALL BE LOCATED IN EASEMENT OR R.O.W.
2. CAV SHALL BE INSTALLED IN A MANNER WHICH WILL ALLOW REMOVAL OF ASSEMBLY FROM VAULT WITHOUT REMOVAL OF PRECAST CONCRETE LID. VAULT SHALL NOT BE INSTALLED IN A TRAFFIC AREA.
3. CONCRETE PIPE PENETRATIONS SHALL BE CORE BIT DRILLED. VOID SHALL BE SEALED WITH LINKSEAL LS300 OR APPROVED EQUAL.
4. FOR 2" CAV, USE BALL VALVE (THREADED) WITH LEVER HANDLE PER WW-68; FOR 4" AND 6" CAV, USE GATE VALVE (FL x FL) WITH HAND WHEEL PER WW-700.
5. WRAP BURIED METALLIC PIPE, FITTINGS AND VALVES IN 8 MIL. POLYETHYLENE ENCASEMENT (PER WW-272).
6. CAV OUTLET SHALL BE CONNECTED DIRECTLY TO VENT PIPE. IN RESIDENTIAL AREAS, VENT PIPE SHALL BE LOCATED NOT TO CONFLICT WITH SIDEWALK, DRIVEWAY, OR OTHER PEDESTRIAN TRAFFIC. EXTERIOR OF VENT PIPE AND DI SUPPORT PIPE SHALL BE PAINTED BLUE FOR POTABLE OR PURPLE FOR RECLAIMED PER WW-3C. SURFACE PREPARATION SHALL BE PER PAINT MANUFACTURER'S REQUIREMENTS.
7. IN NON-RESIDENTIAL AND UNMANICURED AREAS, INSTALL ONE MARKER POST IN CONCRETE PAD FACING THE VEHICULAR ACCESS SIDE OR AS DIRECTED BY AW OR INSPECTOR. MARKER POST SHALL BE BLUE FOR POTABLE OR PURPLE FOR RECLAIMED AND EXTEND AT LEAST 48" ABOVE FINISHED GRADE. 2" WIDE AND 12" LONG, WHITE, DOT-C2 REFLECTIVE TAPE TO BE APPLIED BY CONTRACTOR TO FRONT OF MARKER POST AS SHOWN.
8. REDUCING SPOOL FOR ITEM B SHALL BE 4" DIAMETER FOR A 2" OR 4" CAV, OR 6" DIAMETER FOR A 6" CAV.
9. RECLAIMED WATER SERVICE: ALL BURIED RECLAIMED PIPE AND FITTINGS SHALL BE MANUFACTURED SOLID PURPLE. RECLAIMED TUBING SHALL BE PURPLE POLYETHYLENE PER WW-270. HDPE PIPE, IF USED, SHALL BE MANUFACTURED WITH PURPLE STRIPES PER WW-706. ALL NON-BURIED PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE OR PAINTED PURPLE PER WW-3C.
10. FOR 2" CAV, 6" MINIMUM AND 12" MAXIMUM. FOR 4" - 6" CAV, 12" MINIMUM AND 24" MAXIMUM. FLANGED SPOOLS LONGER THAN 12" ARE PROHIBITED BELOW CAV TO OBTAIN REQUIRED HEIGHT.
11. AT FLANGED CONNECTIONS, USE FULL FACE 1/8" THICK RED RUBBER GASKETS. NUTS AND BOLTS SHALL BE STAINLESS STEEL (SS304 OR SS316), OR HIGH-STRENGTH LOW-ALLOY STEEL WITH A BLUE FLUOROPOLYMER FINISH.



INSET DETAIL: 2" CAV CONNECTION

CITY OF AUSTIN AUSTIN WATER	COMBINATION AIR VALVE (CAV) ASSEMBLIES FOR POTABLE AND RECLAIMED SERVICE (2", 4" & 6" ONLY)
RECORD SIGNED COPY JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED. STANDARD NO. 511-AW-04A 1 OF 1

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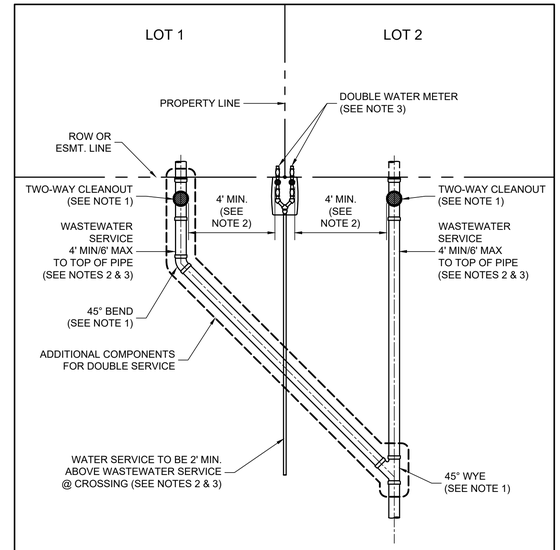
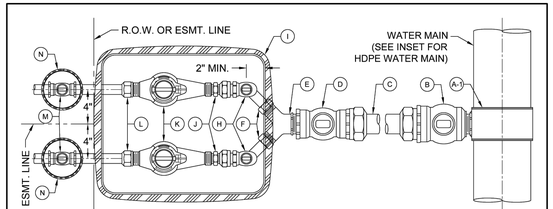
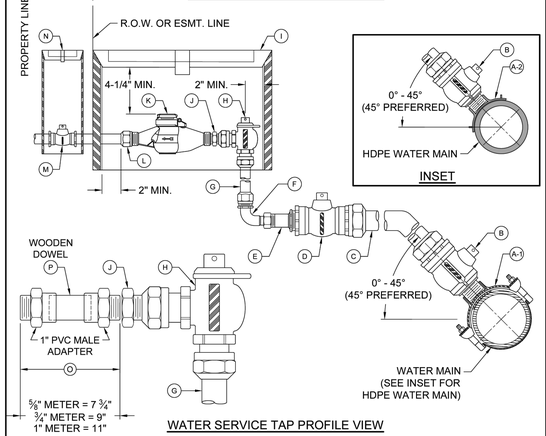


NOTES:
1. WASTEWATER SERVICE FITTINGS SHALL BE APPROVED FOR USE WITH THIS DETAIL AS LISTED ON SPL WW-227B-1.
2. UTILIZE EXISTING ALIGNMENT FOR REPAIR OR REPLACEMENT OF EXISTING WATER AND WASTEWATER SERVICES. WATER SERVICE SHALL BE INSTALLED AT A SHALLOWER GRADE THAN WASTEWATER SERVICE.
3. SEE STANDARD DETAIL 520-AW-01B FOR WATER SERVICE INSTALLATION AND 520-AW-01C FOR WASTEWATER SERVICE INSTALLATION.

CITY OF AUSTIN AUSTIN WATER	WATER / WASTEWATER SERVICE ON COMMON LOT LINE
RECORD COPY SIGNED JEFF A. KYLE 11/07/2018 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 520-AW-01A 1 OF 1



WATER SERVICE TAP PLAN VIEW



WATER SERVICE TAP PROFILE VIEW

MATERIALS LIST:
A-1. FOR NON-HDPE MAIN: 2" SERVICE SADDLE, SPL WW-264
A-2. FOR HDPE MAIN: 2" SERVICE SADDLE (APPROVED FOR USE ON HDPE PIPE), SPL WW-264, OR 2" ELECTROFUSION THREADED SERVICE SADDLE, SPL WW-706C
B. 2" CORPORATION STOP, SPL WW-68
C. 2" HDPE WATER SERVICE TUBING, SPL WW-65
D. 2" BALL VALVE, SPL WW-68
E. SINGLE SERVICE: 2" MIP X 1" COPPER FLARE FITTING, SPL WW-68 OR DOUBLE SERVICE: 2" MIP X 1" COPPER FLARE WYE, SPL WW-68
F. 1" SWIVEL NUT x 1" COMPRESSION 90° BEND, SPL WW-68
G. 1" HDPE WATER SERVICE TUBING, SPL WW-65
H. 1" ANGLE METER STOP, SPL WW-68
I. METER BOX AND LID, SPL WW-145A; FOR DUAL 1" METERS: USE TWO SINGLE METER BOXES

MATERIALS TO BE INSTALLED BY PLUMBER:
J. BRASS METER BUSHING - SIZE AS NEEDED TO CONNECT ANGLE METER STOP TO METER
K. WATER METER PURCHASED FROM AUSTIN WATER
L. BRASS WATER METER COUPLING MALE IPT x SWIVEL COUPLING NUT: ⅝" AND ¾" METERS: 8 ½" LONG x ¾" DIA. (NO BUSHING ALLOWED BETWEEN K & L) 1" METERS: 8 ½" LONG x 1" DIA.
M. PROPERTY OWNER'S CUT OFF VALVE, SPL WW-276
N. PROPERTY OWNER'S CUT OFF VALVE BOX AND LID
O. TEMPORARY METER SPACER (REQUIRED TO ASSURE METER WILL FIT APPROPRIATELY)
P. 1" WOODEN DOWEL (SHOW ADDRESS ON DOWEL USING WATERPROOF MARKER)

NOTES:
1. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM, SPL WW-27D.
2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
3. TOP OF METER BOXES SHOULD BE 4" ABOVE GROUND.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. METER BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
6. BALL VALVE "D" SHALL NOT BE LOCATED MORE THAN 36" BELOW FINAL GRADE.
7. METER SIZES TO BE SHOWN ON PLANS.
8. METER BOX CUT OUTS SHALL NOT EXCEED TWO TIMES THE PIPE DIAMETER. CUTTING A METER BOX WITHOUT AW APPROVAL IS PROHIBITED.
9. INSTALL TRACER TAPE, SPL WW-597, MINIMUM 1' ABOVE TUBING FROM SERVICE CLAMP "A" TO BALL VALVE "D".
10. TUBING SHALL BE PLACED IN A STRAIGHT ALIGNMENT AND ALLOWED TO RELAX AND "SNAKE" LOOSELY IN THE TRENCH. TUBING BEHIND CURB AND GUTTER SHALL BE INSTALLED WITH A MINIMUM 2' DEPTH OF COVER.
11. 1" TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN 3'. 2" TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN 5'. BRASS FITTINGS SHALL NOT BE CONNECTED TO A BENT SECTION OF TUBING.
12. SOLID, TUBULAR STAINLESS STEEL INSERT STIFFENERS FOR HDPE TUBING SHALL BE USED AT ALL COMPRESSION FITTINGS. INSERT STIFFENERS SHALL BE FROM THE SAME MANUFACTURER AS THE COMPRESSION FITTING USED.
13. FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED SOLID PURPLE, SPL WW-65A. ALL APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL METER BOX LIDS SHALL BE PURPLE AND HAVE **"RECLAIMED WATER"** CAST INTO THEM, SPL WW-145A.

CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS
JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED. STANDARD NO. 520-AW-01B 1 OF 2

CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS
JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED. STANDARD NO. 520-AW-01B 2 OF 2

Pipe Information		See Connection Detail			
SERVICE #	STATION	520-AW-01A	520-AW-01B	520-AW-04	See Plan Sheet for Detail
SHEET 23 WL A					
1	1+74.87		X		
2	2+73.29		X		
3	3+20.56		X		
4	4+06.54		X		
SHEET 24 WL A					
5	6+20.38		X		
6	6+27.15		X		
7	6+77.37		X		
8	7+12.67	X	X		
9	7+67.14		X		
10	7+69.83		X		
11	8+31.23		X		
12	8+33.92		X		
SHEET 25 WL A					
13	9+20.37		X		
14	12+38.34	X	X		
SHEET 26 WL A					
1	12+52.93		X		
2	13+85.21		X		
3	15+14.45	X			X
4	15+19.47		X		
5	15+76.67	X	X		
SHEET 27 WL A					
6	15+80.20		X		
7	17+00.67				X
8	17+52.59	X	X		
9	17+73.02		X		
10	17+84.48		X		
11	18+05.83		X		
12	18+70.99				X
13	19+05.57		X		
14	19+07.10		X		
15	19+69.49		X		
16	19+82.68		X		
SHEET 28 WL B1					
30	1+88.29		X		
31	3+23.15		X		
32	4+83.66		X		
SHEET 29 WL B2					
33	1+42.33		X		
34	1+84.33	X	X		

Pipe Information		See Connection Detail			
SERVICE #	STATION	520-AW-01A	520-AW-01B	520-AW-04	See Plan Sheet for Detail
SHEET 29 WL B2					
35	1+87.40	X	X		
36	2+82.38	X	X		
37	2+84.25	X	X		
38	2+95.34		X		
39	3+21.83		X		
40	4+09.64		X		
41	4+09.90		X		
SHEET 30 WL C					
42	1+49.36		X		
43	2+38.38		X		
44	2+58.18		X		
45	3+07.18	X	X		
46	3+94.27		X		
47	4+42.75		X		
SHEET 31 WL D					
1	2+29.64		X		
2	2+68.56		X		
3	2+71.56		X		
4	3+20.04		X		
5	3+23.04		X		
6	3+26.04		X		
7	4+02.79		X		
8	4+40.77		X		
SHEET 32 WL E					
1	1+72.42	X	X		
2	2+52.00	X	X		
3	2+54.00		X		
SHEET 34 WL G					
1	0+71.70	unknown			
2	1+16.82		X		
3	1+29.31	X	X		
4	1+35.22	X		X	
5	2+24.11		X		
6	2+47.76	unknown			
7	2+94.95				X
8	3+40.40	X			X
9	3+97.27	unknown			
SHEET 36 WL H					
10	1+76.06	unknown			
11	2+50.62		X		
12	2+68.03	unknown			

BGE JOB NO. 4766--03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

NO.	REVISION	BY	DATE

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL
STANDARD DETAILS VI

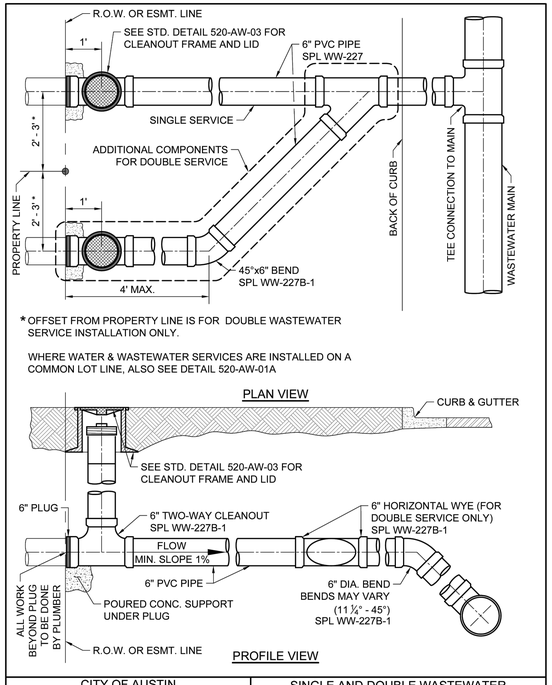
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED PROFESSIONAL ENGINEER
10/20/2026

SHEET
61 OF 93

100% SUBMITTAL REV



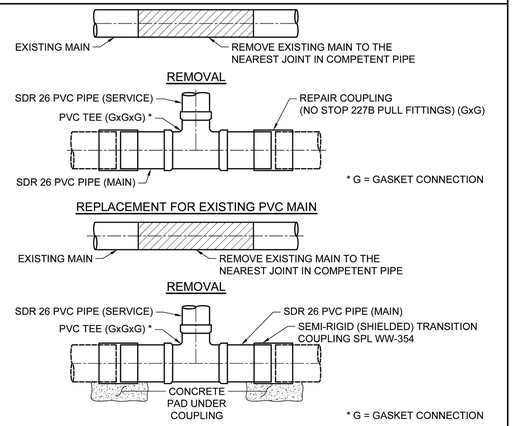
* OFFSET FROM PROPERTY LINE IS FOR DOUBLE WASTEWATER SERVICE INSTALLATION ONLY.

WHERE WATER & WASTEWATER SERVICES ARE INSTALLED ON A COMMON LOT LINE, ALSO SEE DETAIL 520-AW-01A

CITY OF AUSTIN AUSTIN WATER	SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION	
JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 520-AW-01C 1 OF 4

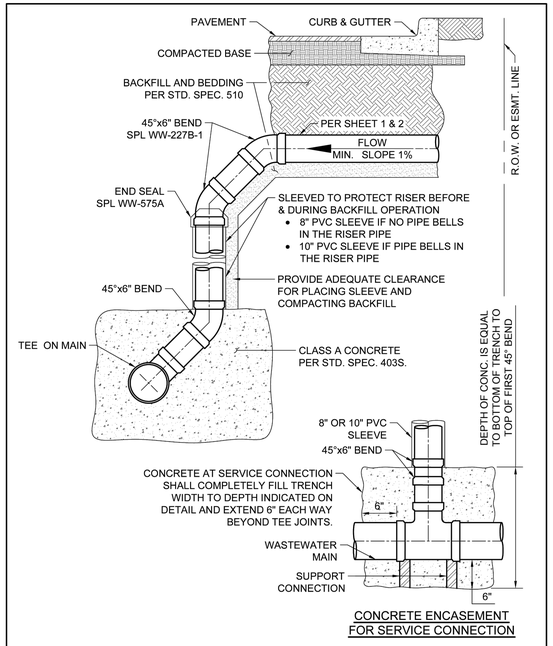
NOTES:

1. DURING SUBDIVISION CONSTRUCTION, UTILITY CONTRACTOR INSTALLS WASTEWATER TEE CONNECTION TO MAIN, 6" STUB, HORIZONTAL WYE FOR DOUBLE SERVICES, 6" SERVICE BRANCH WITH TWO-WAY CLEANOUT(S) AND RISER, FRAME, AND COVER. CLEANOUT(S) TO BE PLUGGED AT PROPERTY LINE OR EASEMENT LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MIN. TO 45° MAX. DEPTH OF SERVICE AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4', OTHERWISE THE INSTALLED DEPTH WILL BE 4' MIN. AND 6' MAX. AT PROPERTY LINE. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, SEE SHEET 3 OF 4.
2. PIPING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MIN. COVER BELOW FINAL STREET GRADE OF 42".
3. PLUMBER SHALL REMOVE PLUG AND CONNECT TO TWO-WAY CLEANOUT. NO CONNECTION TO CLEANOUT STACK IS ALLOWED.
4. INSTALL TRACER TAPE, SPL- WW-597, MINIMUM 1' ABOVE SERVICE LATERAL FROM MAIN TO CLEANOUT.



REPLACEMENT FOR EXISTING CONCRETE, CLAY, AND AC MAIN

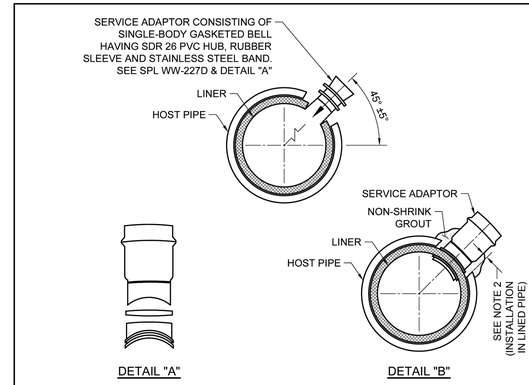
CITY OF AUSTIN AUSTIN WATER	SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION	
JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 520-AW-01C 2 OF 4



CONCRETE ENCASEMENT FOR SERVICE CONNECTION

DEEP SERVICE CONNECTION

CITY OF AUSTIN AUSTIN WATER	SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION	
JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 520-AW-01C 3 OF 4



INSTALLATION IN LINED PIPE:

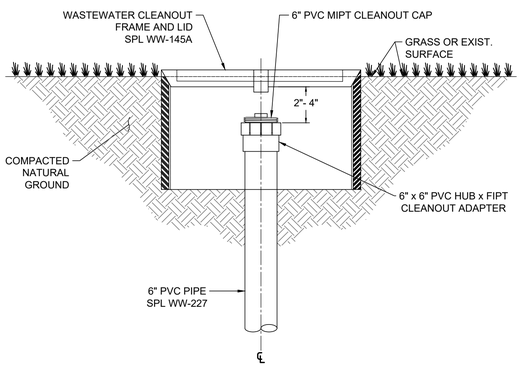
1. MARK LOCATION OF TAP.
2. BREAK & REMOVE HOST PIPE SO THAT OPENING IS AT LEAST 2" BUT NO MORE THAN 3" WIDER THAN DIAMETER OF THE SERVICE ADAPTOR.
3. DO NOT DAMAGE LINER.
4. CORE HOLE THROUGH LINER USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
5. INSTALL SERVICE ADAPTOR.
6. HOLES CUT IN HOST PIPE SHALL BE PACKED WITH NON-SHRINK GROUT (ASTM C1107 GRADE). SEE DETAIL "B"

NOTES:

1. USE ONLY TO TAP EXISTING LINED PIPE.
2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.
3. THE EDGE OF THE CORE HOLE MUST BE AT LEAST 3' FROM THE ENDS OF THE PIPE, ANY OTHER CORE SERVICE CONNECTIONS, AND ANY FITTINGS.
4. FOR DEEP SERVICE APPLICATIONS SEE SHEET 3 OF 4, EXCEPT SUBSTITUTE A CORED HOLE, AND SERVICE ADAPTOR FOR THE TEE OR WYE.
5. SERVICE CONNECTIONS TO MANHOLES MUST BE MADE USING A PIPE-TO-MANHOLE CONNECTOR WHICH LIMITS THE PIPE SLOPE INTO THE MANHOLE TO 12% MAX.

6" WASTEWATER CONNECTION TO EXISTING LINED MAIN

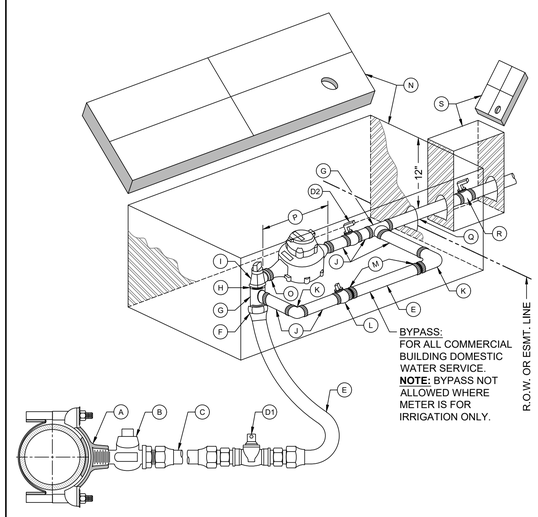
CITY OF AUSTIN AUSTIN WATER	SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION	
JEFF A. KYLE 10/01/2026 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 520-AW-01C 4 OF 4



NOTE:

1. WASTEWATER CLEANOUT FRAME AND LID SHALL NOT BE PLACED IN PAVED AREAS, INCLUDING SIDEWALKS, DRIVEWAYS, OR PARKING LOTS, AND MUST BE LOCATED A MINIMUM OF 6" FROM ALL PAVED AREAS.

CITY OF AUSTIN AUSTIN WATER	WASTEWATER CLEANOUT FRAME AND LID	
JEFF A. KYLE 08/16/2019 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-03 1 OF 1



CITY OF AUSTIN AUSTIN WATER	1 ½" - 2" METER INSTALLATION SHOWING OPTIONAL BYPASS	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-04 1 OF 2

MATERIALS LIST:

A. 2" SERVICE CLAMP
B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT
D1. 2" BALL VALVE, SPL WW-275
D2. 2" BALL VALVE, SPL WW-275
E. 2" COPPER SERVICE TUBING
F. 2" BRASS COUPLING - COMPRESSION TO MALE IPT
G. 2" BRASS TEE
H. 2" BRASS CLOSE-NIPPLE
I. 2" ANGLE METER STOP; SERVICE TUBING INLET x FLANGED OUTLET
J. 2" BRASS NIPPLE
K. 2" BRASS ELBOW
L. 2" LOCKABLE CURB STOP - FEMALE IPT INLET BY COMPRESSION OUTLET
M. 2" BRASS COUPLING - SERVICE TUBING TO MALE IPT
N. RECTANGULAR METER BOX AND COVER, SPL WW-145A
O. BRASS ADAPTER (2" x 1 ½") FOR 1 ½" METER ONLY
P. WATER METER. LENGTH 13", (PURCHASED FROM AUSTIN WATER)
Q. 2" COPPER SERVICE TUBING (PRIVATE PLUMBING PER CODE)
R. CUSTOMER CUT-OFF VALVE
S. CUSTOMER VALVE BOX AND LID

NOTES:

1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
6. BALL VALVE "D1" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.
7. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

RECLAIMED WATER:

FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE **"RECLAIMED WATER"** CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	1 ½" - 2" METER INSTALLATION SHOWING OPTIONAL BYPASS	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-04 2 OF 2

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
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CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS VII

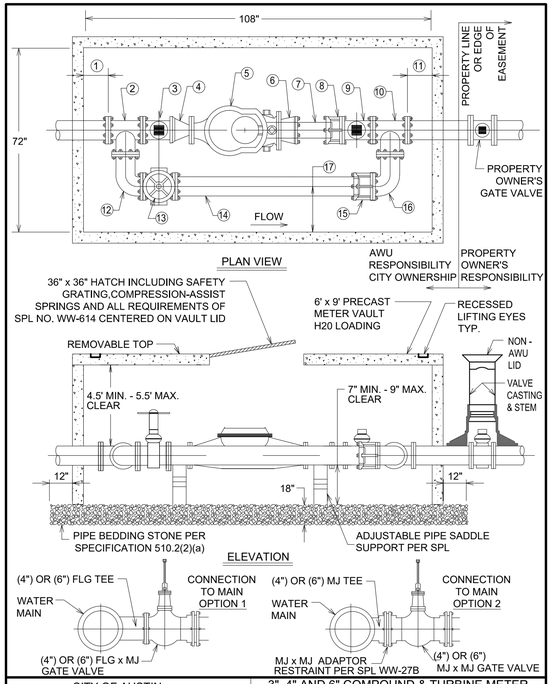
CITY OF AUSTIN
AUSTIN WATER

BGE
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
10/20/2026

SHEET
62 OF 93

1005 SUBMITTAL REV



CITY OF AUSTIN AUSTIN WATER UTILITY	3", 4" AND 6" COMPOUND & TURBINE METER INSTALLATIONS	
RECORD COPY SIGNED BY KATHI L FLOWERS 11/19/2015 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-06 1 OF 2

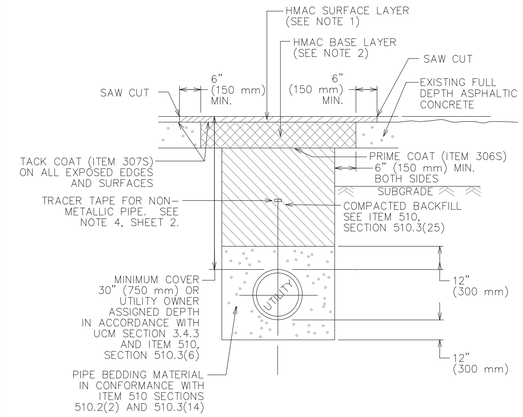
LARGE METER INSTALLATIONS

DIMENSIONS IN INCHES		3" TURBINE	3" COMPOUND	4" TURBINE	4" COMPOUND	6" TURBINE	6" COMPOUND
No.	METER LINE	4" BYPASS	4" BYPASS	4" BYPASS	4" BYPASS	6" BYPASS	6" BYPASS
1	CLEARANCE FROM VALVE WALL TO TEE	8"	8"	12"	12"	6"	6"
2	FLANGED TEE	13"	13"	13"	13"	16"	16"
3	COA GATE VALVE SQUARE NUT	9"	9"	9"	9"	10 1/2"	10 1/2"
4	3" X 4" FLANGED REDUCER (3" METER ONLY)	7"	7"	–	–	–	–
5	METER	17"	19"	20"	23"	24"	27"
6	3" X 4" FLANGED REDUCER (3" METER ONLY)	7"	7"	–	–	–	–
7+8	⑦FLANGED X PLAIN END DI PIPE + ⑧ RESTRAINED FLANGE COUPLING ADAPTER (RFCA) OR ⑦FLANGE X DI PIPE + ⑧ DISMANTLING JOINT (DJ)	17"	15"	20"	17"	19"	16"
9	COA GATE VALVE SQUARE NUT	9"	9"	9"	9"	10 1/2"	10 1/2"
10	FLANGED TEE	13"	13"	13"	13"	16"	16"
11	CLEARANCE FROM INSIDE WALL TO TEE	8"	8"	12"	12"	6"	6"
	TOTAL (INCHES)	108.0"	108.0"	108.0"	108.0"	108.0"	108.0"
	BYPASS LINE						
1	CLEARANCE FROM INSIDE WALL TO TEE	8"	8"	12"	12"	6"	6"
	1/2 TEE	6 1/2"	6 1/2"	6 1/2"	6 1/2"	8"	8"
12	FLANGED 90° ELBOW	6 1/2"	6 1/2"	6 1/2"	6 1/2"	8"	8"
13	BYPASS GATE VALVE WITH HAND WHEEL	9"	9"	9"	9"	10 1/2"	10 1/2"
14+15	⑭ FLANGED X PLAIN END DI PIPE + ⑮ RESTRAINED FLANGE COUPLING ADAPTOR (RFCA) OR ⑭ FLANGE X FLANGE DI PIPE + ⑮ DISMANTLING JOINT (DJ)	57"	57"	49"	49"	53 1/2"	53 1/2"
16	FLANGED 90° ELBOW	6 1/2"	6 1/2"	6 1/2"	6 1/2"	8"	8"
	1/2 TEE	6 1/2"	6 1/2"	6 1/2"	6 1/2"	8"	8"
11	CLEARANCE FROM VALVE WALL TO TEE	8"	8"	12"	12"	6"	6"
	TOTAL (INCHES)	108.0"	108.0"	108.0"	108.0"	108.0"	108.0"
17	CLEARANCE FROM INSIDE WALL TO CENTER OF BYPASS LINE	23"	23"	23"	23"	20"	20"

NOTES:
1. METER VAULT MUST BE PLACED AT THE PROPERTY LINE WITHIN PUBLIC RIGHT-OF-WAY OR WITHIN A DEDICATED WATER METER EASEMENT. METER SHALL NOT BE PLACED IN THE PATH OF VEHICULAR TRAFFIC INCLUDING ROADWAYS, DRIVEWAYS AND PARKING LOTS. METERS MAY NOT BE PLACED IN SIDEWALKS UNLESS SPECIFICALLY APPROVED BY AUSTIN WATER. METERS MUST BE ACCESSIBLE TO SERVICE VEHICLES AND SHALL NOT BE ENCLOSED WITHIN PROPERTY FENCES.
2. ALL PIPE AND FITTINGS FROM MAIN TO CUSTOMER VALVE SHALL BE RESTRAINED.
3. FACTORY NOTCHES WHERE PIPING GOES THROUGH VAULT WALL SHALL BE FILLED WITH NON-SHRINK GROUT PER SPL NO. WW-704A.

CITY OF AUSTIN AUSTIN WATER UTILITY	3", 4" AND 6" COMPOUND & TURBINE METER INSTALLATIONS	
RECORD COPY SIGNED BY KATHI L FLOWERS 11/19/2015 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-06 2 OF 2

REPAIR OF FULL DEPTH ASPHALTIC CONCRETE (UCM SECTION 5.5.13)



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FULL DEPTH ASPHALTIC CONCRETE PAVEMENT TRENCH REPAIR	
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-5 1 OF 2

NOTES:
1. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" (50 mm) HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" (75 mm) HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
2. THE COMBINED THICKNESS OF THE REPLACEMENT AC SURFACE AND BASE LAYERS SHALL MATCH THE THICKNESS OF EXISTING FULL DEPTH AC LAYER. HOWEVER, THE REPLACEMENT AC BASE LAYER SHALL BE A MINIMUM THICKNESS OF 6" (150 mm) OF TYPE A OR B HMA. A BASE LAYER TYPE THAT MATCHES THE NEW HMA SURFACE LAYER (SEE NOTE 1) MAY BE USED, IF THE TOTAL REPAIR AREA IS LESS THAN 300 SQUARE YARDS (250 SQUARE METERS).
3. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
4. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE, OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

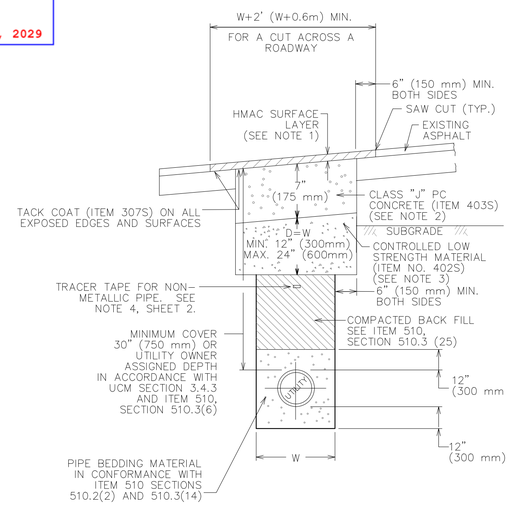
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FULL DEPTH ASPHALTIC CONCRETE PAVEMENT TRENCH REPAIR	
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-5 2 OF 2

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

REVIEWED
October 22, 2026
Jaron Hogenson
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

REPAIR OF TRANSVERSE EXCAVATIONS (UCM SECTIONS 5.5.7.1 and 5.5.7.2)

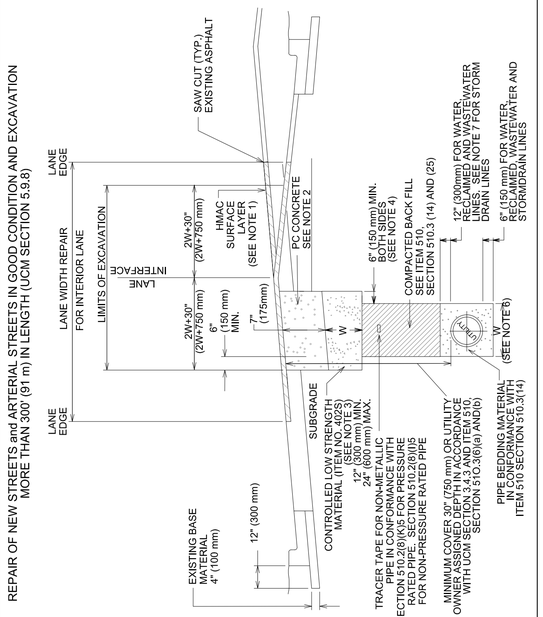


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRANSVERSE EXCAVATIONS	
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-6D 1 OF 2

NOTE:
1. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" (50 mm) HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" (75 mm) HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
2. BASE LAYER ALTERNATIVES:
   a) 7" (175 mm) CLASS "J" PC CONCRETE (ITEM 403s). (A PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.)
   b) 10" (250 mm) CONTROLLED LOW STRENGTH MATERIAL (ITEM 402S); OR
   c) FLEXIBLE BASE (ITEM 210S) THICKNESS TWICE THE EXISTING BASE THICKNESS BUT A MINIMUM OF 18" (450 mm).
3. CLASS "J" (2 SACK MIX) MAY BE SUBSTITUTED FOR CONTROLLED LOW STRENGTH MATERIAL, IF APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
4. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE, OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRANSVERSE EXCAVATIONS	
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-6D 2 OF 2

REPAIR OF NEW STREETS and ARTERIAL STREETS IN GOOD CONDITION AND EXCAVATION MORE THAN 300' (91 m) IN LENGTH (UCM SECTION 5.9.8)



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC LANE REPLACEMENT FOR INTERIOR LANE EXCAVATIONS	
RECORD COPY SIGNED BY CUONG TRAN 02/24/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-8B 1 OF 2

NOTES:
1. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" (50 mm) HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" (75 mm) HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS. SEE ITEM 340S, SECTION 340S.4.
2. CLASS "J" PC CONCRETE (ITEM 403S). PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
3. 12" (300 mm) MIN. 24" (600 mm) MAX. CONTROLLED LOW STRENGTH MATERIAL (ITEM 402S). CLASS "J" (2 SACK MIX) MAY BE SUBSTITUTED FOR CONTROLLED LOW STRENGTH MATERIAL, IF APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
4. FOR TRENCH WIDTHS 6" (150 mm) OR LESS, WIDENING OF THE BASE BEYOND THE TRENCH FACE MAY BE ELIMINATED IF THE EXISTING PAVEMENT STRUCTURE (INCLUDING THE BASE) REMAINS INTACT AND STABLE AFTER COMPLETION OF EXCAVATION.
5. TACK COAT (ITEM 307S) ALL EXPOSED EDGES AND SURFACES.
6. FOR WATER, RECLAIMED AND WASTEWATER LINE TRENCHES REFER TO 510.3(5) W=TRENCH WIDTH.
7. FOR STORM DRAINS, THE PIPE BEDDING ENVELOPE SHALL EXTEND THE FULL TRENCH WIDTH TO A DEPTH OF 6" (150 mm) BELOW THE PIPE, AND SHALL RISE AT LEAST TO THE SPRING LINE OF THE PIPE. THE DESIGN OF STORM DRAIN PIPES SUBJECTED TO VEHICULAR TRAFFIC OR OTHER LOADING SHALL BE SUPPORTED BY STRUCTURAL ENGINEERING CALCULATIONS OR REFERENCED TO ENGINEERING STANDARDS. IN ADDITION TO THE PIPE SELECTION, THE DESIGN INCLUDES THE PIPE BEDDING ENVELOPE, DEPTH OF COVER AND COMPACTION REQUIREMENTS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC LANE REPLACEMENT FOR INTERIOR LANE EXCAVATIONS	
RECORD COPY SIGNED BY CUONG TRAN 02/24/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-8B 2 OF 2

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS VIII

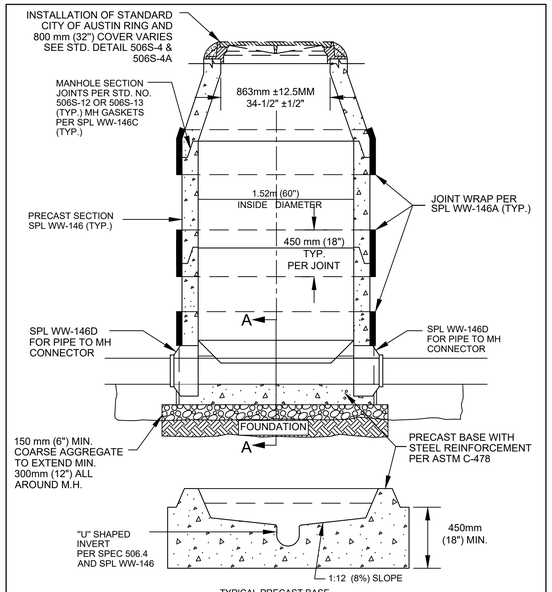
CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER
9/10/2026

SHEET
63 OF 93

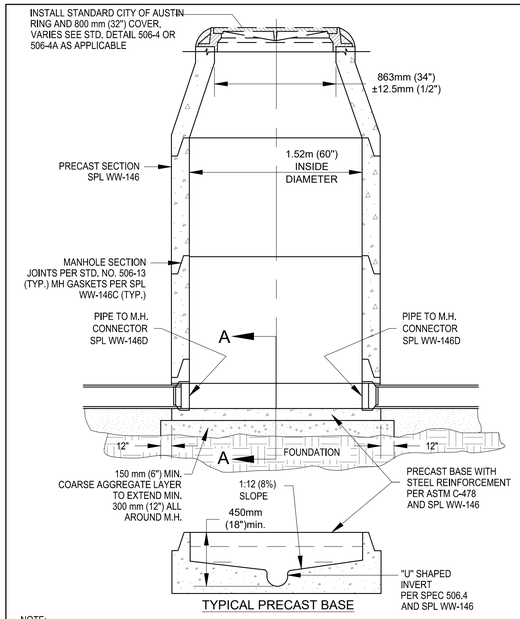
100% SUBMITTAL REV



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. IN THE EVENT A STRUCTURE IS UTILIZED INSIDE A MANHOLE, THE CLEAR SPACE BETWEEN THE STRUCTURE AND THE MANHOLE WALL SHALL BE A MINIMUM OF 48".
3. IN THE EVENT A STRUCTURE IS UTILIZED INSIDE A MANHOLE, THE CLEAR SPACE BETWEEN THE STRUCTURE AND THE MANHOLE WALL SHALL BE A MINIMUM OF 48".
4. THE VERTICAL DISTANCE BETWEEN THE HIGHEST POINT OF THE INVERT SHELF AND THE BOTTOM OF ANY HORIZONTAL OR NEAR-HORIZONTAL SURFACE PROTRUDING INTO A MANHOLE OR JUNCTION BOX, SHALL BE AT LEAST SIX (6) FEET, WHEN THE DEPTH OF THE MAIN IS SUFFICIENT.

	WATER TIGHT 5' WASTEWATER MANHOLE ON PRECAST BASE	
MODIFIED DETAIL	DETAIL IS N.T.S.	



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.
3. IN THE EVENT A STRUCTURE IS UTILIZED INSIDE A MANHOLE, THE CLEAR SPACE BETWEEN THE STRUCTURE AND THE MANHOLE WALL SHALL BE A MINIMUM OF 48".
4. THE VERTICAL DISTANCE BETWEEN THE HIGHEST POINT OF THE INVERT SHELF AND THE BOTTOM OF ANY HORIZONTAL OR NEAR-HORIZONTAL SURFACE PROTRUDING INTO A MANHOLE OR JUNCTION BOX, SHALL BE AT LEAST SIX (6) FEET, WHEN THE DEPTH OF THE MAIN IS SUFFICIENT.

	5' WASTEWATER MANHOLE ON PRECAST BASE	
MODIFIED DETAIL	DETAIL IS N.T.S.	

REVIEWED
October 22, 2026
Jaron Hogenson
Austin
Water
Expires: October 22, 2029

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BGE JOB NO. 4766-03
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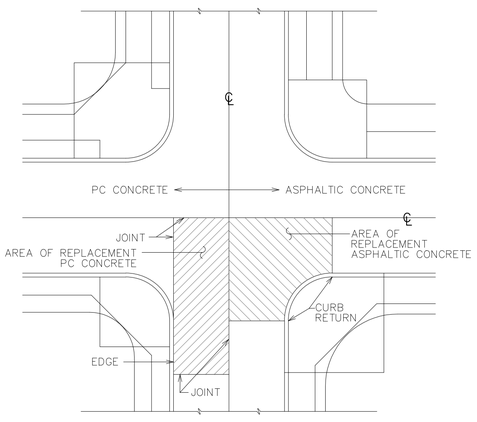
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS IX

REPAIR OF NEW STREETS and ARTERIAL STREETS in GOOD CONDITION (UCM SECTION 5.3.3 and 5.3.4)

TYPICAL RESTORATION FOR EXCAVATION IN INTERSECTIONS



TYPICAL PLAN

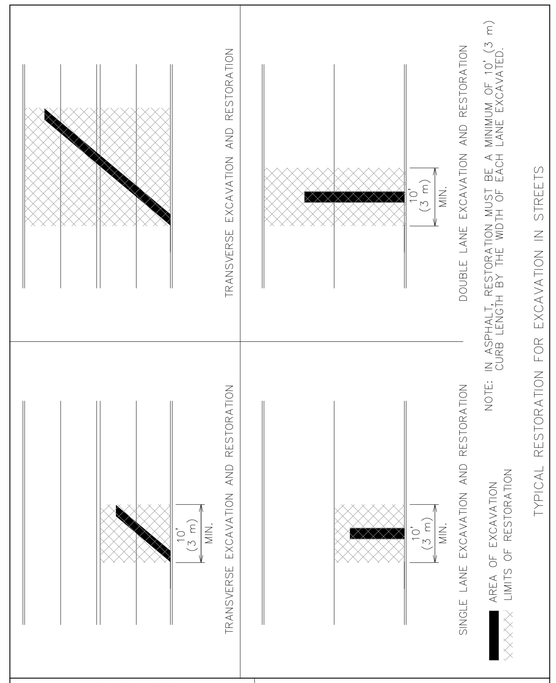
TRENCH REPAIRS WITHIN PORTLAND CEMENT CONCRETE PAVEMENTS NOTE:

IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, THEN THE ENTIRE CONCRETE SLAB FROM JOINT TO JOINT AND JOINT TO EDGE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE DIRECTOR.

TRENCH REPAIRS WITHIN ASPHALTIC CONCRETE PAVEMENTS NOTES:

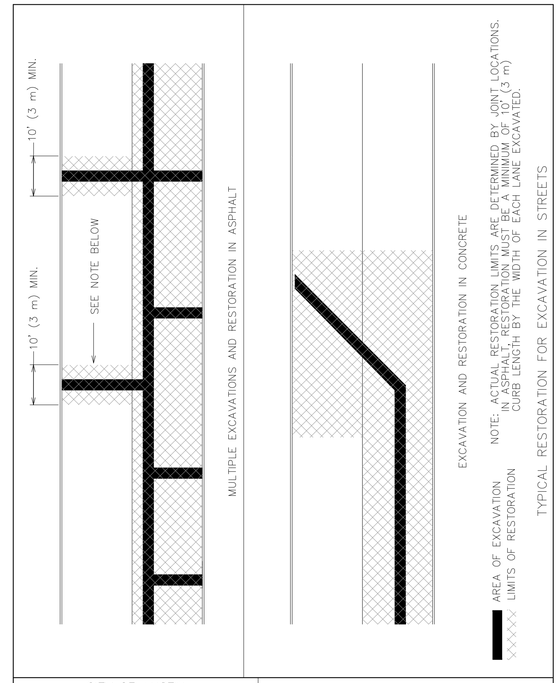
1. IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, DEFINED FROM CURB RETURN TO CURB RETURN, THE ENTIRE QUADRANT OF THE EXISTING SURFACE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. A QUADRANT IS DEFINED AS THE CROSS-HATCHED AREA IN THE ABOVE DETAIL.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		STREET REPAIR REQUIREMENTS	
RECORD COPY SIGNED BY BILL GARDNER	9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-7 1 OF 3



TYPICAL RESTORATION FOR EXCAVATION IN STREETS

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		STREET REPAIR REQUIREMENTS	
RECORD COPY SIGNED BY BILL GARDNER	9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-7 2 OF 3



TYPICAL RESTORATION FOR EXCAVATION IN STREETS

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		STREET REPAIR REQUIREMENTS	
RECORD COPY SIGNED BY BILL GARDNER	9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-7 3 OF 3

CITY OF AUSTIN
AUSTIN WATER

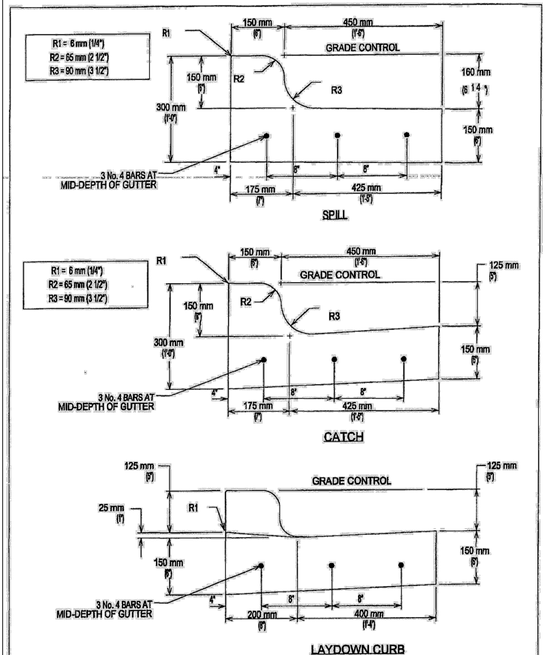
BGE

BGE, INC.
1701 DIRECTORS BLVD, STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL. 512-879-0400 www.bgeinc.com

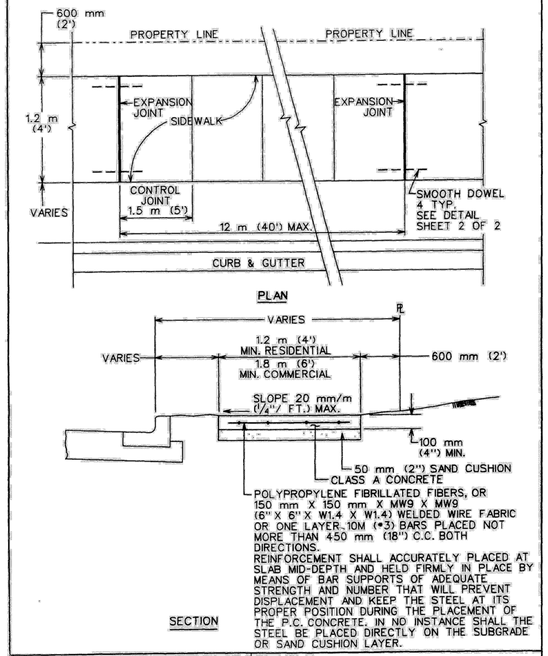
STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED PROFESSIONAL ENGINEER
9/10/2026

SHEET
64 OF 93

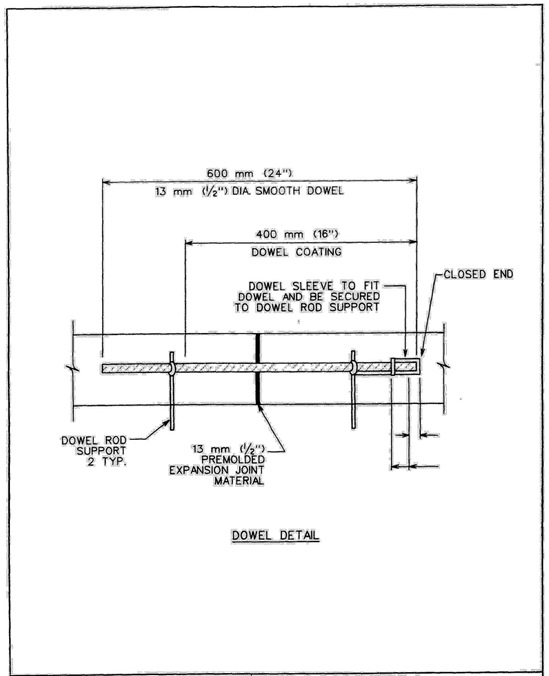
100% SUBMITTAL REV



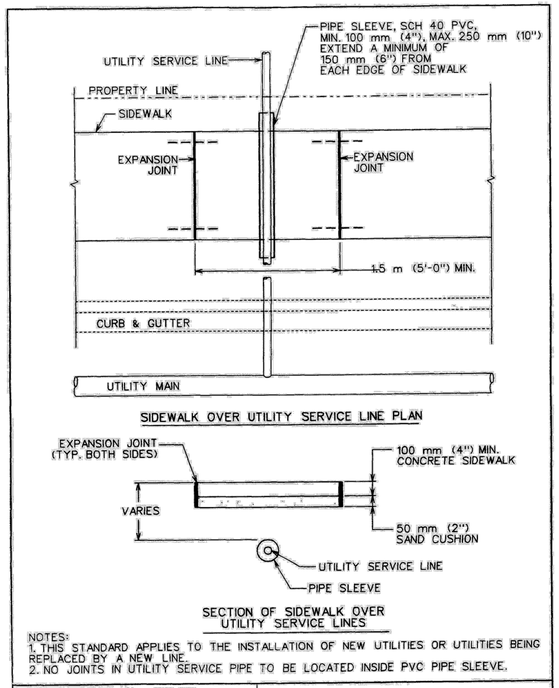
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	REINFORCED CURB AND GUTTER SECTION	
1/4/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
3/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3

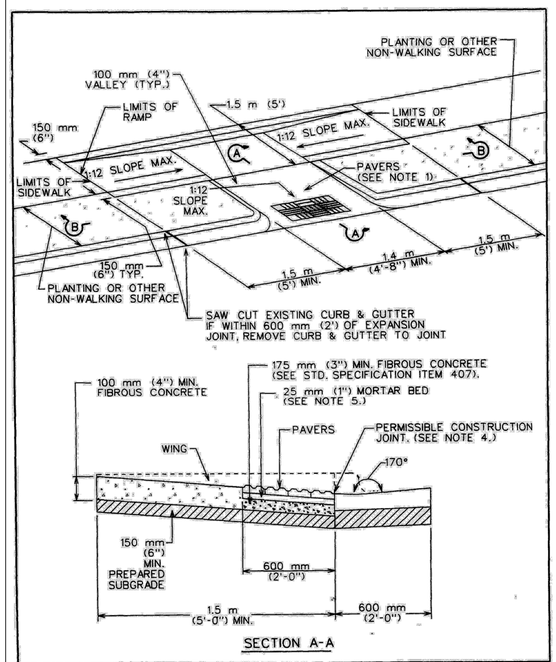


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
3/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3

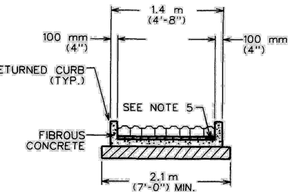


NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
3/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3

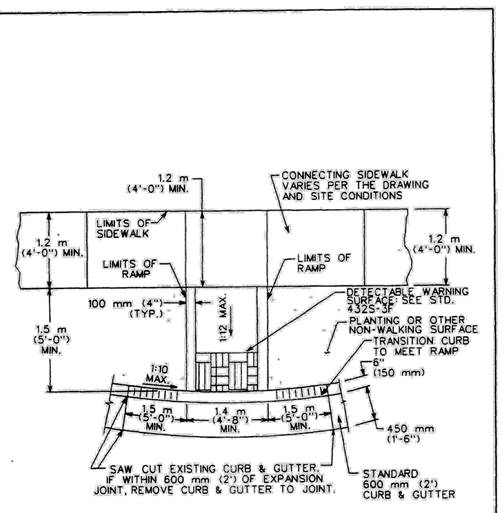


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	COMBINED SIDEWALK CURB RAMP WITH PAVERS	
3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3F 1 OF 2



GENERAL NOTES:
1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
2. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 23 mm (0.9"), A NOMINAL HEIGHT OF 5 mm (0.2") AND A NOMINAL CENTER TO CENTER SPACING OF 60 mm (2.35") AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (Re: ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. A BASKET WEAVE PAVER PATTERN SHALL BE USED UNLESS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. PAVER PATTERN VARIES PER MANUFACTURER'S RECOMMENDATIONS. REFER TO STANDARD DETAIL 432S-5 FOR PAVER BASE PREPARATION DETAILS.
3. THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONFIGURED TO MAINTAIN ALL RUNOFF FROM A 25 YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B).
4. TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIC REQUIREMENTS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO 6 mm (1/4") JOINT SIZE. GAPS LARGER THAN 6 mm (1/4") MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM SECTION 403S.3.5. MORTAR AND GROUT. ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 403S, CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
7. CURB RAMPS WITH 100 mm (4") CONCRETE VALLEY MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	COMBINED SIDEWALK CURB RAMP WITH PAVERS	
3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3F 2 OF 2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1B SIDEWALK CURB RAMP	
3/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-5B

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE RENEWAL

STANDARD DETAILS X

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
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STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
9/10/2026

SHEET
65 OF 93

100% SUBMITTAL REV

FILE LOCATION: 17TH STREET ESC KEY.DWG DATE SAVED: 3/4/2026

NO.	REVISION	BY	DATE

BGE JOB NO.	4766-03
FILE	17TH STREET ESC KEY.DWG
DATE	MAR 2026
DESIGNED	SS
DRAWN	SS
REVISED	MB
CHECKED	TB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

EROSION AND SEDIMENTATION CONTROL PLAN KEY MAP

CITY OF AUSTIN
AUSTIN WATER

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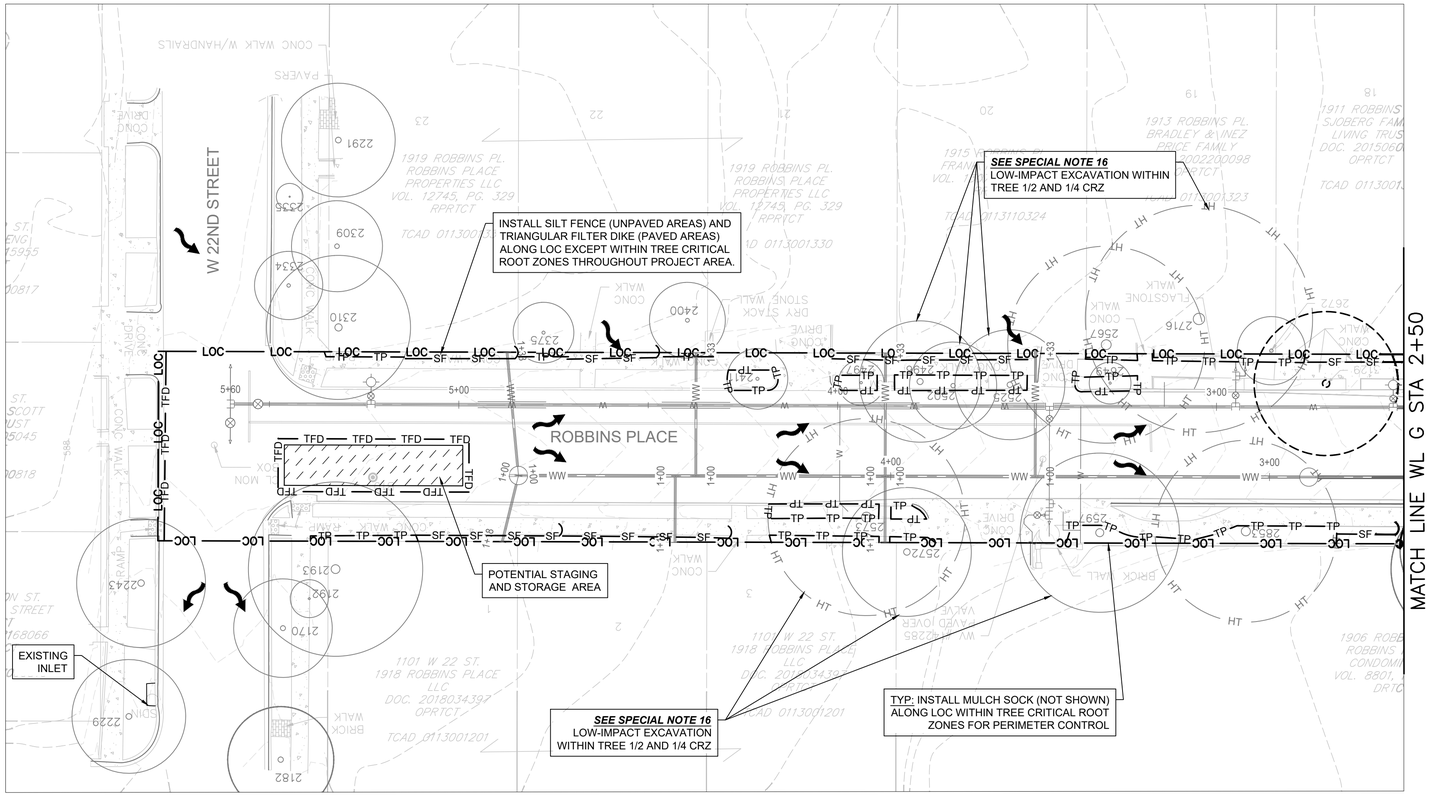
T.B.P.E. Firm Registration No. F-3181

STATE OF TEXAS
T. M. BAER
64040
REGISTERED PROFESSIONAL ENGINEER
3/4/26

ENV-01
SHEET
66 OF 93

90% SUBMITTAL



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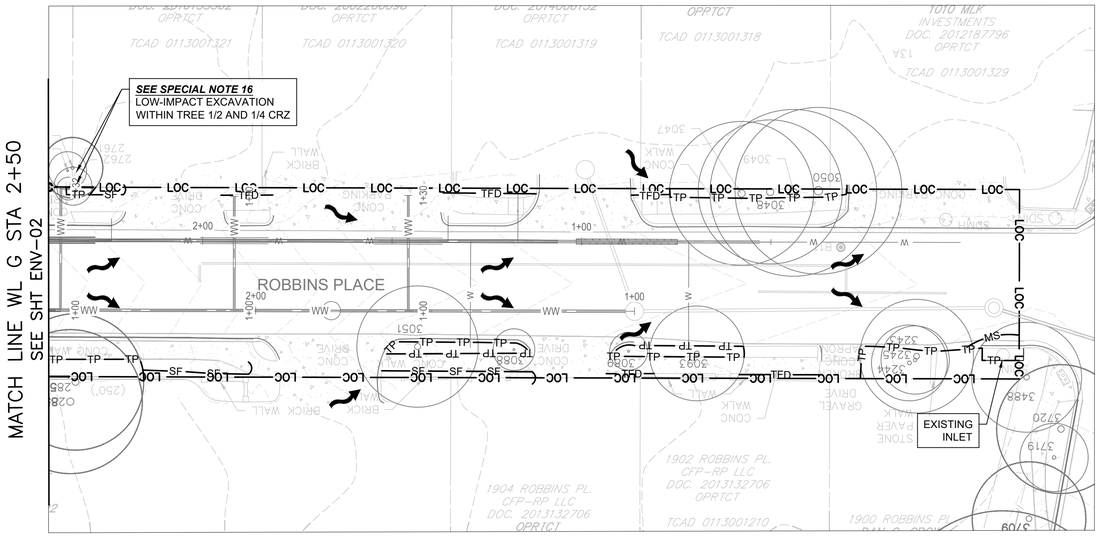
SCALE: 1"=20'



0 10 20 30 40
SCALE: 1"=20'

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TREES TO REMAIN
- TREES TO BE REMOVED
- HERITAGE TREES
- FLOW DIRECTION
- SF — SILT FENCE (SEE SHEET ENV-01, DETAIL 642S-1)
- MS — MULCH SOCK (SEE SHEET ENV-01, DETAIL 648S-1)
- TFD — TRIANGULAR FILTER DIKE (SEE SHEET ENV-01, DETAIL 628S)
- TP — TREE PROTECTION (SEE SHEET ENV-02, DETAIL 610S)
- POTENTIAL TEMPORARY SPOILS LOCATION

SPECIAL EROSION CONTROL NOTES

1. CONTRACTOR MAY STORE SPOILS IN TEMPORARY SPOILS STORAGE AREA ONLY DURING PERIODS OF TIME WHEN RAINFALL IS NOT FORECASTED WITHIN 24 HOURS. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO DIRECT REMOVAL OF SPOILS FROM SITE.
2. CONTRACTOR SHALL INSTALL TRIANGULAR SEDIMENT FILTER DIKE ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA, PERPENDICULAR TO CURB AND PLACED TO EFFECTIVELY CATCH AND CONTAIN SEDIMENT-LADEN RUNOFF FROM THE EXCAVATED AREA AND TEMPORARY SPOILS. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.
3. AFTER TEMPORARY SPOILS ARE REMOVED FROM THE STREET, ALL REMAINING DEBRIS SHALL BE SWEPT.
4. IF DISTURBED AREAS ARE NOT WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREAS NEED TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR MATTING AS PER ECM 1.4.4.
5. NO FUEL STORAGE ALLOWED ON SITE.
6. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION AND SEDIMENTATION CONTROLS ONSITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
7. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING CONSTRUCTION SUCH AS MULCHING, VEGETATIVE COVER, SPRAY-ON ADHESIVES, TILLAGE, IRRIGATION, OR BARRIERS AS PER CITY OF AUSTIN ECM 1.4.8(C).
8. IF FENCING CANNOT BE INSTALLED AROUND THE FULL CRITICAL ROOT ZONE (CRZ), PLACE THE FENCING AT THE ½ CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE ½ CRZ TO THE FULL CRZ, IF POSSIBLE. IF FENCING CANNOT BE INSTALLED AROUND THE ½ CRZ, 2X4X6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE.
9. STAGING AND SPOILS AREA LOCATIONS TO BE DETERMINED BY CONTRACTOR.
10. LOCATION OF CONCRETE WASHOUT BOX TO BE DETERMINED BY CONTRACTOR.
11. CONTRACTOR SHALL PROTECT ALL TREES CROSSING INTO THE PROJECT AREA.
12. CONTRACTOR SHALL TAKE CAUTION IN AREAS WITH OVERHANGING TREE LIMBS AND TAKE CARE TO AVOID DAMAGING TREE LIMBS.
13. THE TEMPORARY STAGING AND SPOILS AREA SHALL MOVE WITH THE PROGRESSION OF CONSTRUCTION.
14. DISTURBED AREAS THAT ARE NOT PAVED SHALL BE SODDED FOR EROSION CONTROL.
15. INSTALL SILT FENCE (UNPAVED AREAS) AND TRIANGULAR FILTER DIKE (PAVED AREAS) ALONG PERIMETER OF LOC FOR ENTIRE PROJECT AREA, EXCEPT WITHIN ENVIRONMENTALLY SENSITIVE AREAS. FOR UNPAVED ENVIRONMENTALLY SENSITIVE AREAS, INCLUDING TREE CRITICAL ROOT ZONES, FLOODPLAINS, AND THE COA-DESIGNATED CRITICAL WATER QUALITY ZONE, MULCH SOCK SHALL BE USED AS PERIMETER CONTROL.
16. ALL EFFORTS MUST BE MADE TO AVOID UTILITY CONSTRUCTION WITHIN THE ½ CRZ OF ANY PRESERVED TREE. IF WORK IS UNAVOIDABLE, IT MUST BE INSTALLED USING LOW-IMPACT EXCAVATION METHODS, SUCH AS HAND DIGGING, COMPRESSED AIR AND/OR BORING TECHNIQUES TO PREVENT DAMAGE TO SIGNIFICANT ROOTS THAT ARE 1 ½ INCHES IN DIAMETER OR GREATER. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL STAKE THE LOCATION OF EACH W/WW SERVICE LOCATED WITHIN THE ½ CRZ OF PRESERVED TREES AND COORDINATE A SITE MEETING WITH THE CITY INSPECTOR, ENVIRONMENTAL INSPECTOR AND CITY ARBORIST TO REVIEW EACH LOCATION AND DETERMINE REPLACEMENT REQUIREMENTS, WHICH MAY INCLUDE RELOCATION. WORK REQUIRED TO RELOCATE SERVICES ON PRIVATE PROPERTY SHALL BE COMPLETED BY A LICENSED PLUMBER AND MEET THE CITY OF AUSTIN PLUMBING CODE.



NO.	REVISION	BY	DATE

BGE JOB NO.	4766-03
FILE	17TH STREET ESC PLANS.DWG
DATE	MAR 2026
DESIGNED	SS
DRAWN	SS
REVISED	MB
CHECKED	TB

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

ESCP - WL G STA 0+50 - 5+60

CITY OF AUSTIN
AUSTIN WATER

Baer Engineering
and Environmental Consulting, Inc.
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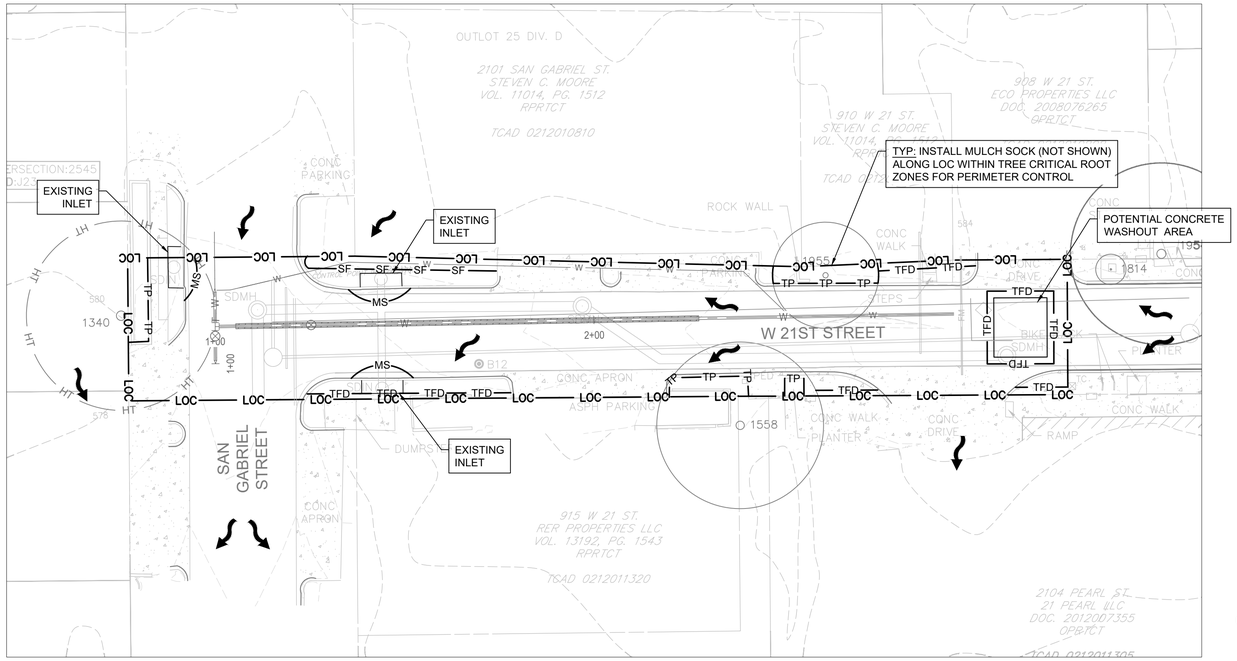
STATE OF TEXAS
T. M. BAER
64040
REGISTERED PROFESSIONAL ENGINEER
3/4/26

ENV-02
SHEET
67 OF 93

90% SUBMITTAL

FILE LOCATION: 17TH STREET ESC PLANS.DWG DATE SAVED: 3/4/2026



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3. AFTER TEMPORARY SPOILS ARE REMOVED FROM THE STREET, ALL REMAINING DEBRIS SHALL BE SWEPT.
4. IF DISTURBED AREAS ARE NOT WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREAS NEED TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR MATTING AS PER ECM 1.4.4.
5. NO FUEL STORAGE ALLOWED ON SITE.
6. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION AND SEDIMENTATION CONTROLS ONSITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
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NO.	REVISION	BY	DATE

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

ESCP - WL H STA 1+00 - 2+95

CITY OF AUSTIN
AUSTIN WATER

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www.baereng.com info@baereng.com
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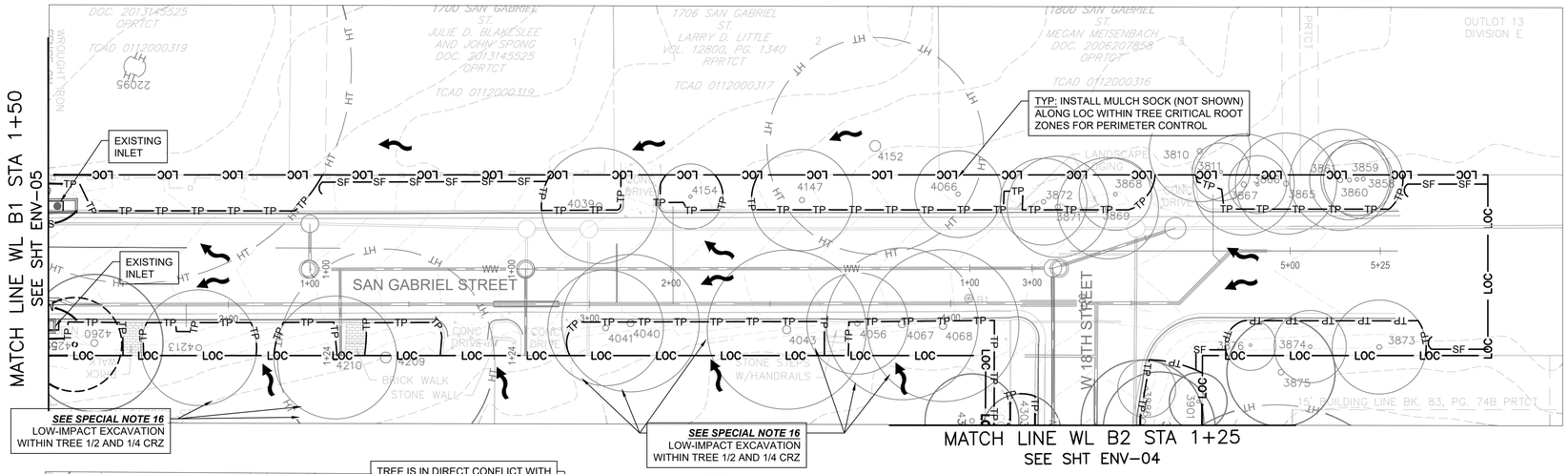
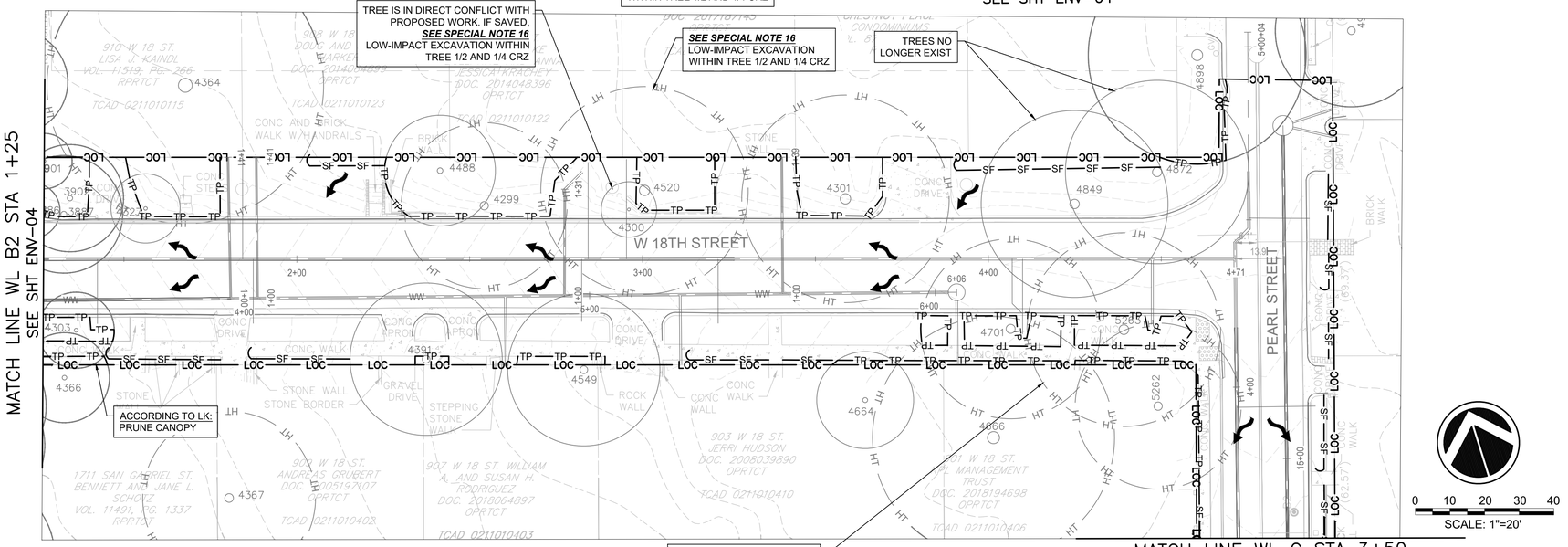
3/4/26
Thomas M. Baer, P.E.

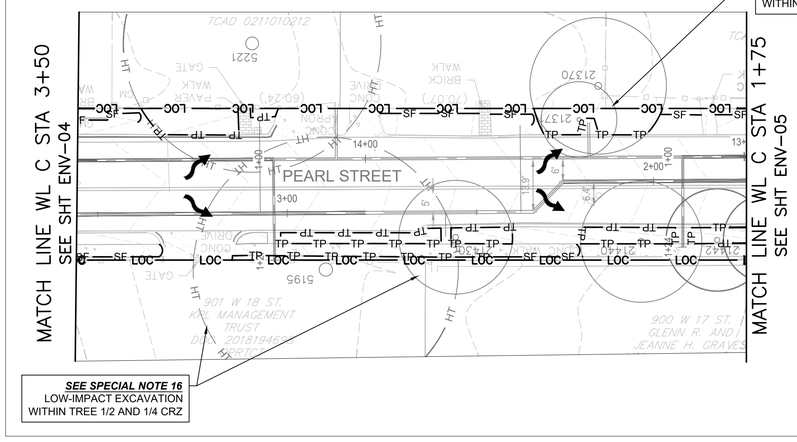
ENV-03
SHEET
68 OF 93

90% SUBMITTAL

FILE LOCATION: 17TH STREET ESC PLANS.DWG DATE SAVED: 3/4/2026











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3. AFTER TEMPORARY SPOILS ARE REMOVED FROM THE STREET, ALL REMAINING DEBRIS SHALL BE SWEPT.
4. IF DISTURBED AREAS ARE NOT WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREAS NEED TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR MATTING AS PER ECM 1.4.4.
5. NO FUEL STORAGE ALLOWED ON SITE.
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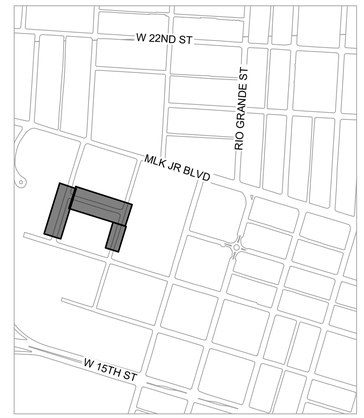

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WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

ESCP - WL B1, WL B2, & WL C

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STATE OF TEXAS
T. M. BAER
64040
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3/4/26

ENV-04
SHEET
69 OF 93

90% SUBMITTAL

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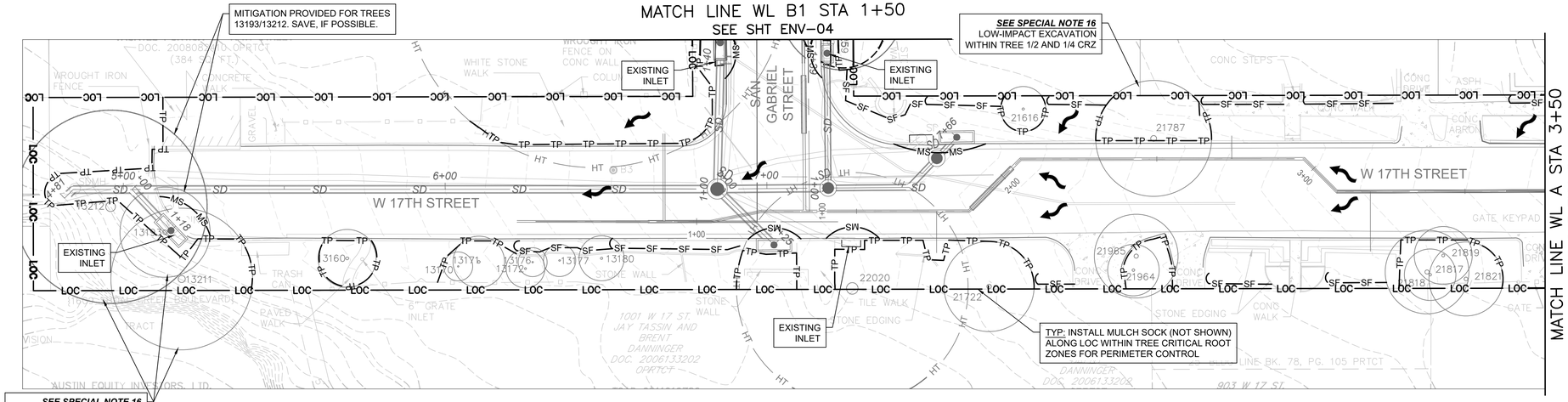

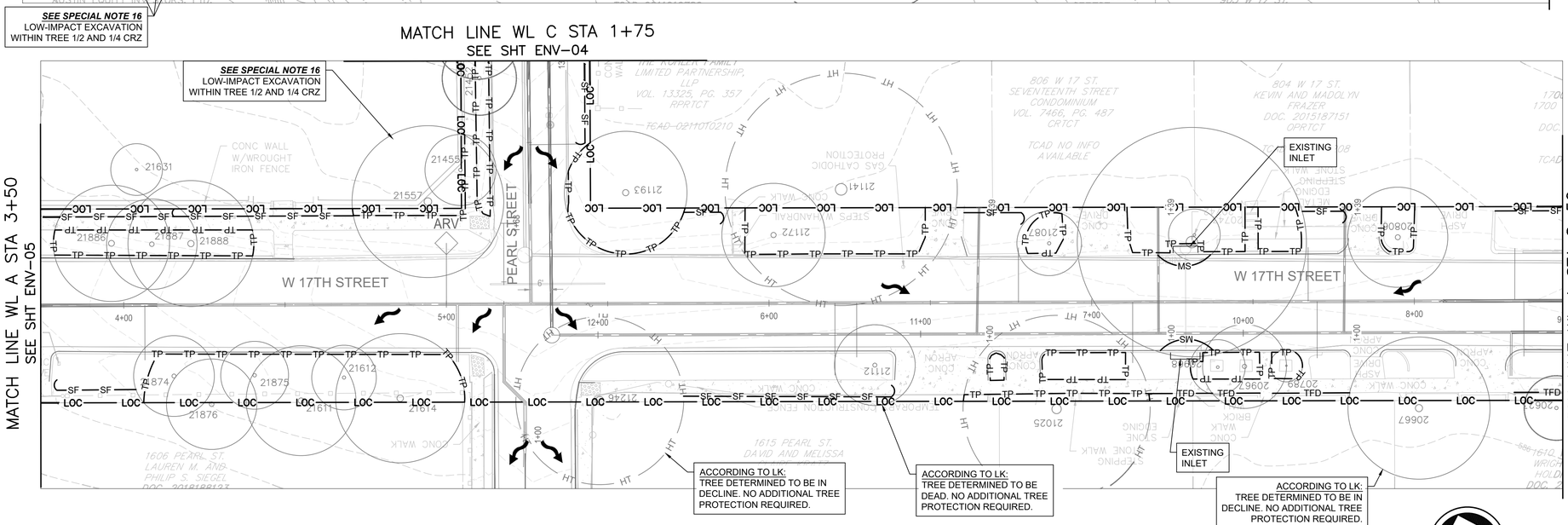

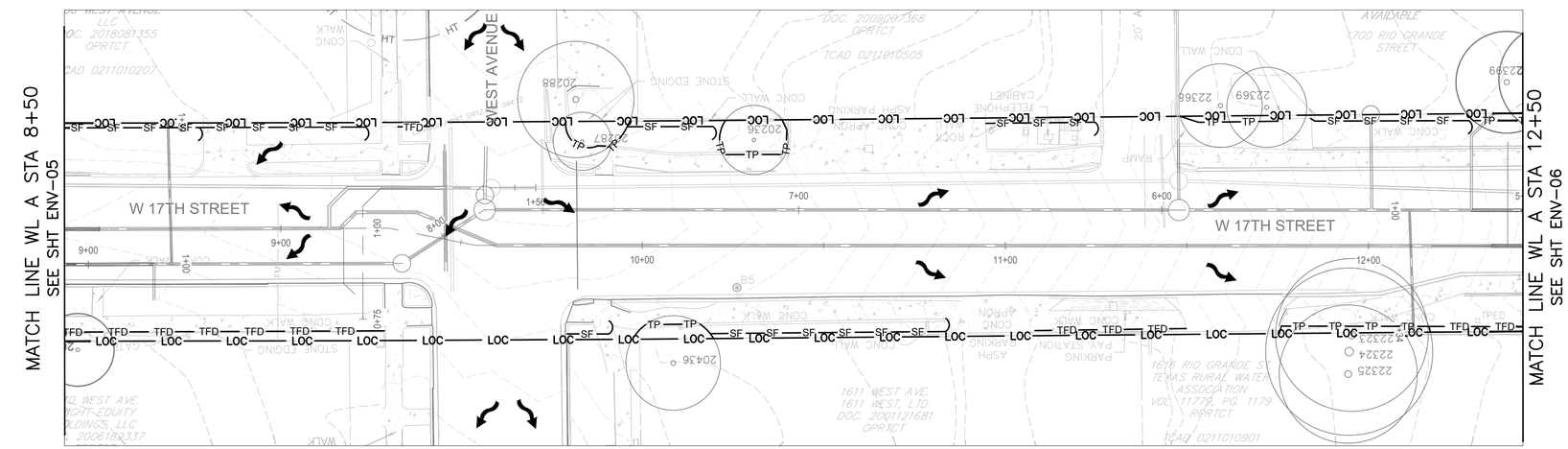

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0 10 20 30 40
SCALE: 1"=20'



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WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

ESCP - WL A STA 0+50 - 12+50

CITY OF AUSTIN
AUSTIN WATER

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STATE OF TEXAS
T. M. BAER
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ENV-05
SHEET
70 OF 93

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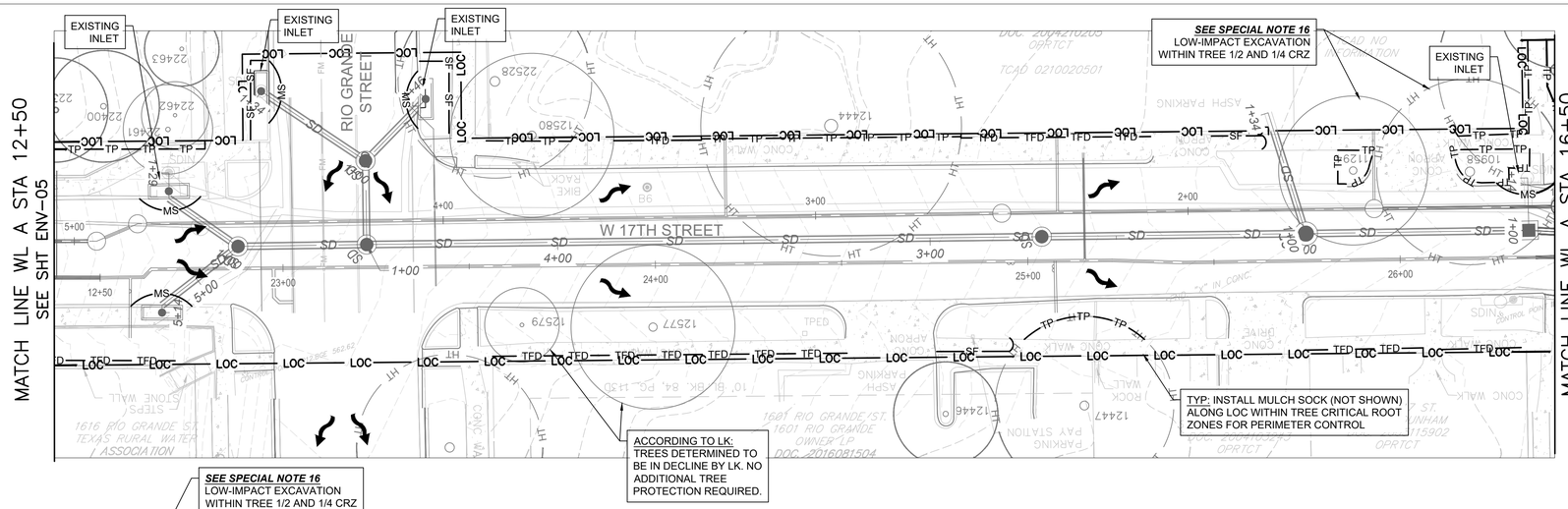

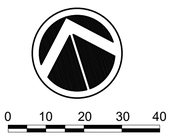

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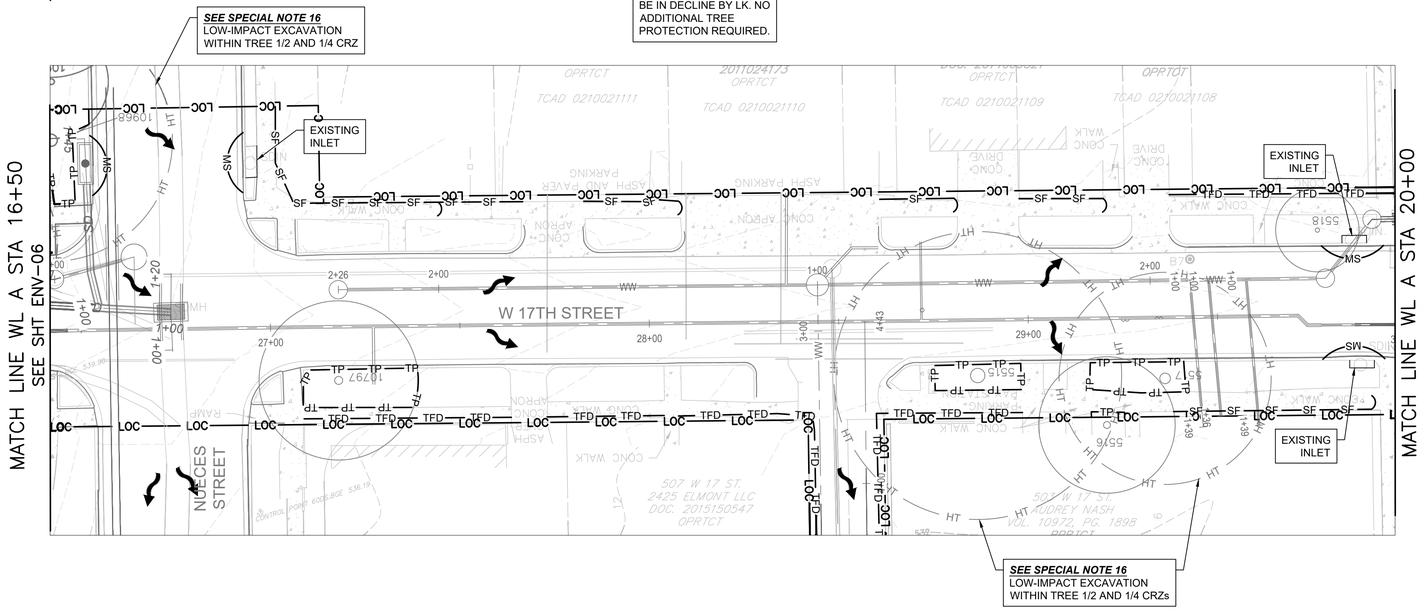



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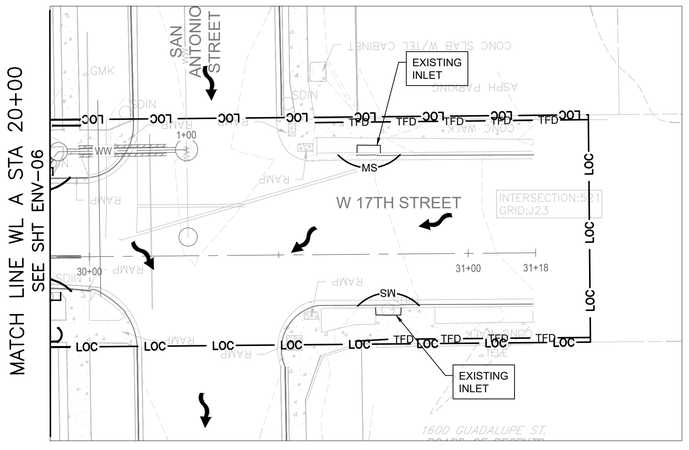



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WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

ESCP - WL A STA 12+50 - 21+15.12

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STATE OF TEXAS
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3/4/26

ENV-06
SHEET
71 OF 93

90% SUBMITTAL

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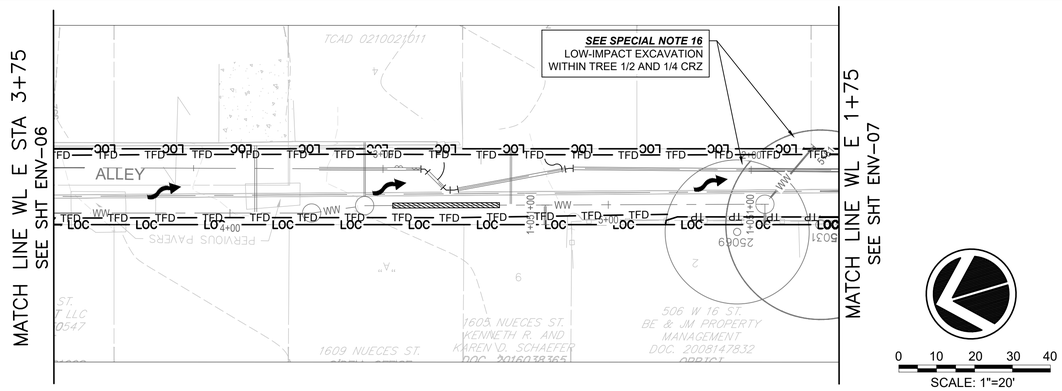

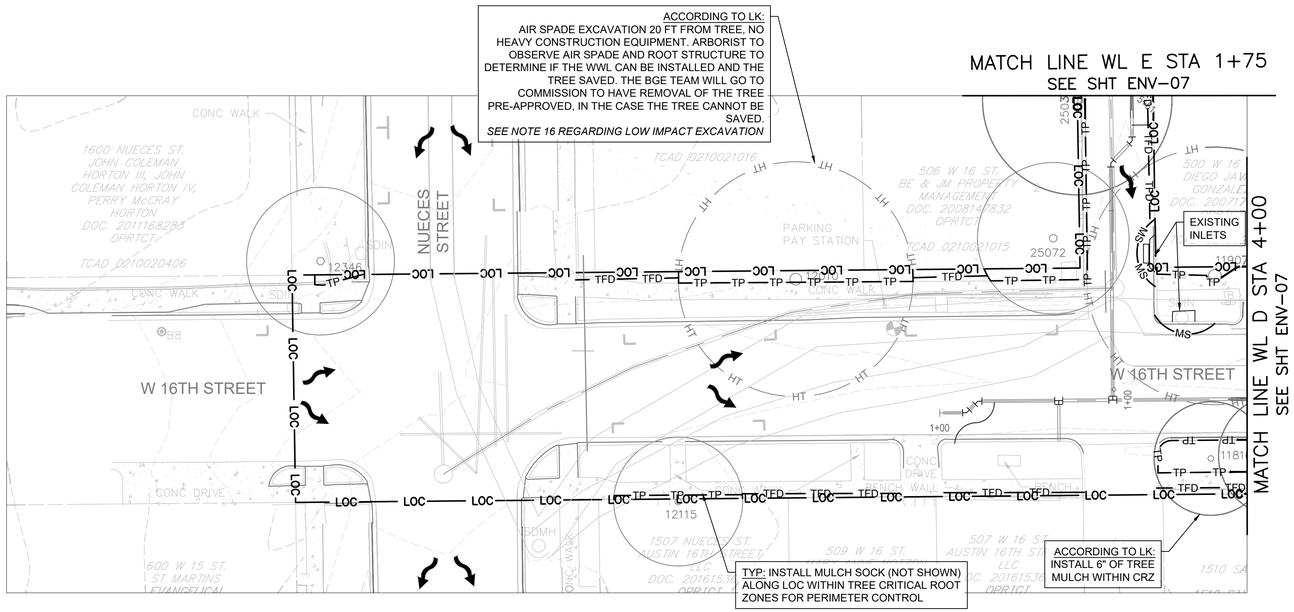

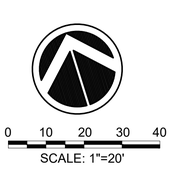

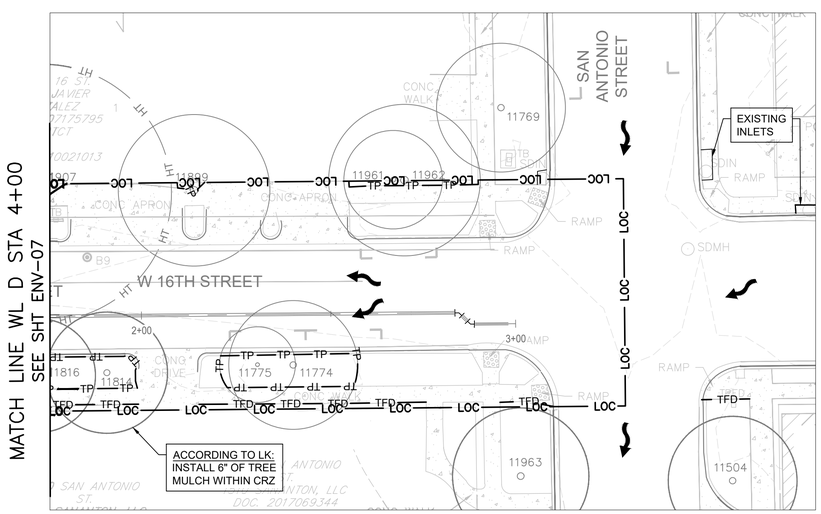

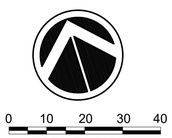

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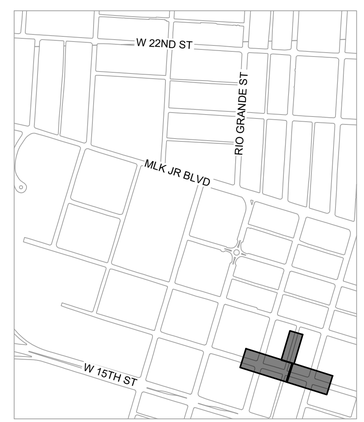

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ENV-07
SHEET
72 OF 93

905 SUBMITTAL

FILE LOCATION: 17TH STREET ESC PLANS.DWG DATE SAVED: 3/4/2026

CITY OF AUSTIN - STANDARD NOTES
EROSION AND SEDIMENTATION CONTROL
(MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR EXCAVATION).

2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.

3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.

4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER, PERMIT APPLICANT, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND THE TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE GENERAL PERMIT PROGRAM OFFICE AT 512/974-6330, AT LEAST 3 DAYS PRIOR TO THE MEETING DATE.

5. ANY SIGNIFICANT VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE REVIEWING ENGINEER AND THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT DAILY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES. SILT ACCUMULATION AT INLET DEVICES SHOULD BE REMOVED WHEN THE DEPTH REACHES TWO (2) INCHES.

7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.

8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS ONE SQUARE FOOT OR LARGER IN TOTAL AREA, BLOWS AIR FROM WITHIN THE SUBSTRATE, AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME, IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT THE GENERAL PERMIT PROGRAM REPRESENTATIVE FOR FURTHER INVESTIGATION.

9. FIELD REVISIONS TO THE EROSION/SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES. ANY REVISIONS TO THE PERMITTED PLAN MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.

10. PERMANENT EROSION/SEDIMENTATION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE THE CRITERIA MANUAL AND CONTRACT DOCUMENTS DIFFER THE MOST ENVIRONMENTALLY BENEFICIAL MATERIALS/METHOD SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

11. DEVELOPER INFORMATION:

OWNER: AUSTIN WATER
COMPANY: CITY OF AUSTIN
CONTACT: HOUMAN AZARI, P.E.
ADDRESS: 625 E. 10TH STREET, SUITE 400, AUSTIN , TX 78701
PHONE: 512-972-2049
E-MAIL: houman.azari@austintexas.gov

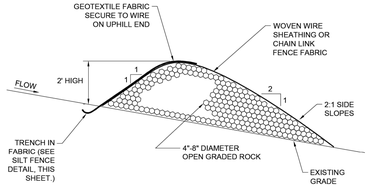
OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
COMPANY: BGE, INC.
CONTACT: ALEXIS WOFFENDEN, P.E.
ADDRESS: 1701 DIRECTORS BLVD., SUITE 100, AUSTIN, TX 78744
PHONE: 512-795-1416
E-MAIL: awoffenden@bgeinc.com

PARTY RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
COMPANY: CONTRACTOR

PARTY RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
COMPANY: CONTRACTOR

12. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE GENERAL PERMIT PROGRAM REPRESENTATIVE, AT 974-6330, AT LEAST 48 HOURS PRIOR TO THE SPOILS REMOVAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

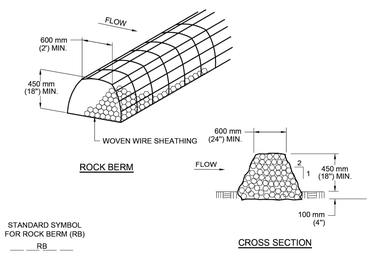
13. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY PRIOR TO STREET WORK, AND WILL BE REMOVED AS SOON AS THE GENERAL PERMIT PROGRAM REPRESENTATIVE AGREES THAT THERE IS NO POTENTIAL FOR SEDIMENTATION.

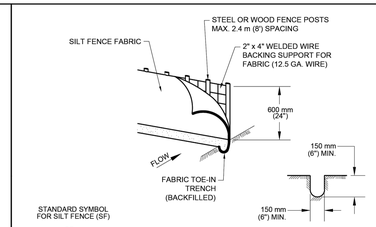


NOTES:

1. USE ONLY OPEN GRADED ROCK, 4-8 INCH DIAMETER, FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK, 3-5 INCH DIAMETER, FOR OTHER CONDITIONS.
2. ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
6. WHEN SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

	FABRIC COVERED (SEVERE SERVICE) ROCK BERM	
GENERAL PERMIT PROGRAM — N / A — APPROVED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. N / A 1 OF 1

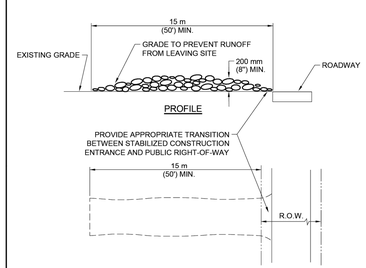




NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

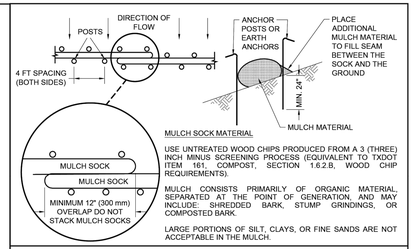
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		SILT FENCE	
RECORD COPY SIGNED BY MORGAN BYARS — *09/01/2011* — ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1 1 OF 1	



NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY — *5/23/00* — ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1 1 OF 1	



USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

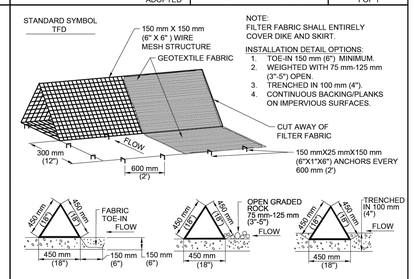
MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE. UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

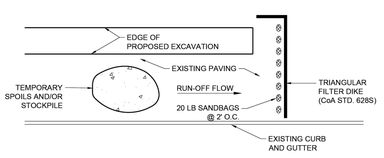
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		MULCH SOCK	
RECORD COPY SIGNED BY MORGAN BYARS — *08/24/2010* — ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1 1 OF 1	



GENERAL NOTES

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES ON 600 mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (⅜") DIAMETER RE-BAR WITH TEE ENDS.
5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
6. THE DIKE STRUCTURE SHALL BE MW40-150 mmX150 mm (6 GA. 6"X6") WIRE MESH, 450 mm (18") ON A SIDE.
7. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
9. AFTER THE DEVELOPMENT SITE IS COMPLETLY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		ROCK BERM	
RECORD COPY SIGNED BY MORGAN BYARS — *8/24/2010* — ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1 1 OF 1	



NOTES:

1. THE TEMPORARY SPOILS/STOCKPILE STORAGE AREA AND STAGING AREA MAY BE LOCATED DIRECTLY ADJACENT TO THE EXCAVATION AND ON THE PAVEMENT.
2. ANY SPOIL NOT INTENDED TO BE REUSED WILL BE HAULED TO AN APPROVED OR PERMITTED DISPOSAL SITE DAILY.
3. INSTALL TRIANGULAR SEDIMENT FILTER DIKE (DETAIL 628S) ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA, PERPENDICULAR TO CURB AND PLACED TO EFFECTIVELY CATCH AND CONTAIN SEDIMENT LADEN RUNOFF FROM THE EXCAVATED AREA. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TRIANGULAR SEDIMENT FILTER DIKE	
RECORD COPY SIGNED BY J. PATRICK MURPHY — *3/27/00* — ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 628S 1 OF 1	

ADDITIONAL EROSION/SEDIMENTATION CONTROL FOR WORK IN PAVED AREAS FOR GENERAL PERMIT PROGRAM PROJECTS

T. M. BAER 64040 LICENSED PROFESSIONAL ENGINEER
3/4/26
Thomas M. Baer, P.E.

CITY OF AUSTIN

GENERAL PERMIT OFFICE
EROSION AND SEDIMENTATION CONTROL
CITY OF AUSTIN STANDARD NOTES AND DETAILS

REVISIONS

NO.	BY	DATE	REMARKS

GENERAL PERMIT PROGRAM

ENGINEERING SERVICES DIVISION

#

ENV-08 | 73 OF 93

D:\ONEDRIVE - BAER ENGINEERING & ENVIRONMENTAL CONSULTING, INC_ CADSHARE_ CAD\PROJECTS\BROWN & GAY\180278.00 2016 LARGE DIAMETER PIPELINE RU1\180278.01 17TH STREET WWW REPORT\STD NOTES DETAILS.DWG, — 2000 17TH STREET CPTB

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GENERAL PERMIT PROGRAM (GPP)
STANDARD ENVIRONMENTAL NOTES:

ADDITIONAL AREAS:

1. ANY ADDITIONAL AREAS REQUIRED FOR CONSTRUCTION OF THIS PROJECT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED ADDITIONAL AREAS PRIOR TO USE. APPROVAL OF "CORRECTION REQUEST" MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
2. ALL ASSOCIATED PERMITS AND FEES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. IN ORDER TO SECURE APPROVAL FOR USE OF ADDITIONAL AREAS, CONTRACTOR MUST PROVIDE COMPLETE "CORRECTION REQUEST" SUBMITTAL TO GENERAL PERMIT PROGRAM OFFICE AND ALLOW A ONE WEEK COMMENT PERIOD FOR EACH REVIEW. CONTRACTOR SHOULD REQUEST INFORMATION ON THE ELEMENTS REQUIRED TO BE INCLUDED IN THE SUBMITTAL FROM THE OWNER'S REPRESENTATIVE OR THE GENERAL PERMIT PROGRAM OFFICE.
4. CONTRACTOR MUST INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION FOR ALL SUCH AREAS IN ACCORDANCE WITH THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL AND AS INCLUDED IN THE APPROVED SUBMITTAL OR DIRECTED IN THE FIELD BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
5. A SIGNED COPY OF THE PLANS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM MUST BE KEPT ON SITE AND ACCESSIBLE AT ALL TIMES DURING PROJECT CONSTRUCTION.

DEWATERING:

CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREA. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED DEWATERING PROCEDURES PRIOR TO INSTALLATION OR USE. APPROVAL MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM (GPP) OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT. CONTRACTOR MUST PROVIDE COMPLETE SUBMITTAL TO GPP OFFICE AND ALLOW AN ONE WEEK (MIN.) COMMENT PERIOD FOR EACH REVIEW. CONTACT THE GPP OFFICE FOR SUBMITTAL REQUIREMENTS.

FUEL STORAGE:

FUEL STORAGE IS PROHIBITED ON THIS PROJECT. ADDITIONALLY, THE CONTRACTOR IS REQUIRED TO NOTIFY THE GENERAL PERMIT PROGRAM OFFICE IMMEDIATELY FOLLOWING ANY SPILL OF FUEL OR OTHER TOXIC MATERIAL. CONTRACTOR IS REQUIRED TO FOLLOW-UP WITH WRITTEN DOCUMENTATION, INCLUDING A COMPLETE DESCRIPTION OF THE INCIDENT, MATERIAL SPILLED, AND ACTIONS TAKEN TO CONTAIN AND CLEAN-UP MATERIAL.

FUGITIVE DUST CONTROL:

ALL PROJECTS APPROVED THROUGH THE GENERAL PERMIT PROGRAM (GPP) MUST COMPLY WITH THE CODE OF THE CITY OF AUSTIN AND THE ENVIRONMENTAL CRITERIA MANUAL REQUIREMENTS TO CONTROL AIRBORNE DUST. COMPLIANCE IS REQUIRED FOR ENTIRE PROJECT SITE AS WELL AS ASSOCIATED OPERATIONS. CONTACT THE GPP OFFICE FOR RECOMMENDED CONTROL METHODS.

SPOILS STORAGE:

NO SPOILS STORAGE IS ALLOWED WITHIN A CRITICAL WATER QUALITY ZONE, A 100-YEAR FLOODPLAIN, OR ON A SLOPE WITH A GRADIENT OF MORE THAN 15 PERCENT.

E/S CONTROLS FOR BORE / RECEIVING PIT LOCATIONS:

TEMPORARY E/S CONTROLS MUST SURROUND THE ENTIRETY OF BORING OPERATIONS, INCLUDING PIT, EQUIPMENT, ETC. FOR LOCATIONS WITHIN IMPERVIOUS AREAS, TEMPORARY CONTROL WILL BE TRIANGULAR FILTER DIKE (COA STANDARD DETAIL #628S). DIKE FLAP WILL BE CONTINUOUSLY WEIGHTED DOWN THROUGH THE USE OF 1" BY 4" WOOD STRIPS NAILED TO THE PAVEMENT, EXCEPT FOR THE ACCESS POINT. PLACEMENT OF TEMPORARY E/S CONTROLS ACROSS ACCESS POINT WILL BE REQUIRED WHENEVER THE SITE IS NOT ACTIVELY USED. FOR LOCATIONS WITHIN PERVIOUS AREAS, TEMPORARY CONTROL WILL BE SILT FENCE (COA STANDARD DETAIL #642S-1) OR MULCH SOCKS (COA STANDARD DETAIL #648S-1), AS INDICATED ON APPROVED PLANS.

SOIL RETENTION BLANKET:

UNLESS OTHERWISE INDICATED IN THE PROJECT DOCUMENTS, INSTALLATION OF SOIL RETENTION BLANKET WILL BE REQUIRED FOR ALL IMPACTED SLOPES GREATER THAN 3:1 AND ALL IMPACTED AREAS WITHIN DRAINAGE CONVEYANCES. (CITY OF AUSTIN STANDARD SPECIFICATION ITEM 605S) SOIL RETENTION BLANKET SUBMITTAL MUST BE APPROVED BY PROJECT ENGINEER AND GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO USE AND MUST INCLUDE PRODUCT AND INSTALLATION DETAILS PROVIDED BY MANUFACTURER. FINISH GRADING MUST BE INSPECTED AND APPROVED BY GPP INSPECTOR PRIOR TO BLANKET INSTALLATION. INSTALLATION MUST BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND MUST BE INSPECTED AND APPROVED BY GPP REPRESENTATIVE PRIOR TO ACCEPTANCE.

SOD INSTALLATION:

REVEGETATION WITHIN MANAGED TURF AREAS MUST BE ACCOMPLISHED THROUGH THE INSTALLATION OF SOLID BLOCK GRASS SOD. SOD TYPE MUST MATCH ADJACENT GRASS TYPE. QUESTIONS REGARDING SOD TYPE WILL BE RESOLVED BY THE GENERAL PROGRAM PERMIT REPRESENTATIVE. REFER TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 602S: SODDING FOR EROSION CONTROL, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.

TxDOT RIGHTS-OF-WAY:

TOPSOIL (TxDOT ITEM NO. 160), SOIL RETENTION BLANKET (TxDOT ITEM NO. 169), AND REVEGETATION (TxDOT ITEM NO. 164) INSTALLED WITHIN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) RIGHT-OF-WAY SHALL COMPLY WITH "REQUIREMENTS FOR INSTALLATION OF UTILITIES WITHIN THE STATE RIGHT-OF-WAY, AUSTIN DISTRICT".

PROJECT SEQUENCE:
(REFER TO FULL PLAN SET FOR PROJECT-SPECIFIC ADDITIONS, IF APPLICABLE.)

PRIOR TO CONSTRUCTION:

1. SECURE APPLICABLE COA PERMITS, INCLUDING APPROVAL UNDER GENERAL PERMIT PROGRAM AND RIGHT-OF-WAY EXCAVATION PERMIT.
2. NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PLACEMENT OF E/S CONTROLS AND TREE PROTECTION FENCING. ALL PROPOSED PHASING OF CONTROLS MUST BE SUBMITTED TO AND APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO THE FIELD PRE-CONSTRUCTION CONFERENCE.
3. NOTIFY COA TEMPORARY TRAFFIC CONTROL REPRESENTATIVE PRIOR TO PLACEMENT OF TEMPORARY TRAFFIC CONTROLS. ALL PROPOSED PHASING OF CONTROLS MUST BE INDICATED ON APPROVED TEMPORARY TRAFFIC CONTROL PLAN AND SEALED BY PROFESSIONAL ENGINEER.
4. PLACE TEMPORARY E/S CONTROLS AND TREE PROTECTION FENCING PRIOR TO BEGINNING ANY EXCAVATION. INSTALL C.I.P. SIGN, IF APPLICABLE.
5. HOLD ENVIRONMENTAL PRE-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF E/S CONTROLS AND TREE PROTECTION FENCING AND PRIOR TO ANY TRENCHING OPERATIONS.
6. PLACE TEMPORARY TRAFFIC CONTROL DEVICES.

PROJECT CONSTRUCTION:

1. BEGIN CONSTRUCTION. NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE A MINIMUM OF 48 HOURS IN ADVANCE OF TRANSITION BETWEEN PHASES.
2. CONTACT GENERAL PERMIT OFFICE TO SCHEDULE FIELD INSPECTION PRIOR TO BEGINNING INSTALLATION OF PERMANENT E/S CONTROLS.
3. COMPLETE RESTORATION OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES FOR THIS PROJECT. (PERMANENT E/S CONTROLS)
4. REMOVE TEMPORARY TRAFFIC CONTROL DEVICES RELATED TO WORK AREAS OUTSIDE OF THE STREET.
5. HOLD ENVIRONMENTAL POST-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE. ALL PERMANENT E/S CONTROLS MUST BE ACCEPTED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE. PERMANENT CONTROLS SHALL CONSIST OF REVEGETATION PER DETAILS 602, 604S, AND 609S AS INDICATED ON APPROVED PLANS.
6. FOLLOWING FINAL ACCEPTANCE OF PERMANENT E/S CONTROLS BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE, REMOVE TEMPORARY E/S CONTROLS. CLEAN EXISTING STORM DRAINAGE SYSTEMS AS NECESSARY DUE TO CONSTRUCTION OPERATIONS.
7. DRESS-UP AND RESTORE ANY AREAS DISTURBED BY REMOVAL OF TEMPORARY E/S CONTROLS DESCRIBED ABOVE.

REQUIRED SUBMITTALS:

SUBMITTALS REQUIRED TO BE APPROVED BY GENERAL PERMIT PROGRAM REPRESENTATIVE INCLUDE: SUBMITTALS TRIGGERED BY CITY OF AUSTIN SERIES 600 SPECIFICATIONS AND RELATED SPECIAL PROVISIONS/SPECIFICATIONS, CONSTRUCTION SCHEDULE, TREE PROTECTION, P-6 AND OTHER ROOT ZONE PROTECTION/MITIGATION MEASURES, DEWATERING PLAN, WATERING SCHEDULE FOR REVEGETATION AREAS, AND ANY VEGETATIVE REPLACEMENT PROPOSALS, IF NOT ALREADY PART OF THE PERMITTED PLAN SET.

CITY OF AUSTIN - STANDARD NOTES
TREE AND NATURAL AREA PROTECTION
(MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY MEASURES.
2. PROTECTIVE MEASURES SHALL BE INSTALLED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. PROTECTIVE MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE PROJECT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP, COMPACTION OR CUTTING OF CRITICAL ROOT ZONE WITHIN TREE DRIP LINES.
5. TREE PROTECTION SHALL COMPLETELY SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE). FOR NATURAL AREAS, PROTECTIVE MEASURES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
6. EXCEPTIONS TO INSTALLING PROTECTIVE FENCES AT CRITICAL ROOT ZONES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 FEET BEYOND THE AREA DISTURBED;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA;
   C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING;
   D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE GENERAL PERMIT PROGRAM OFFICE AT 974-6330 TO DISCUSS ALTERNATIVES.

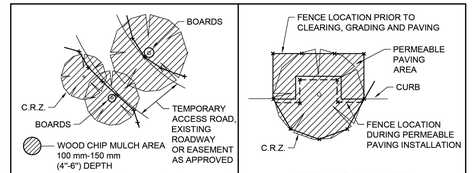
SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.

WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE 5 FEET OR CLOSER TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING.

7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES, THOSE AREAS SHOULD BE COVERED WITH 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION DURING CONSTRUCTION. FILTER FABRIC UNDERLAYMENT MAY BE REQUIRED AT DIRECTION OF GENERAL PERMIT PROGRAM REPRESENTATIVE BASED ON SITE CONDITIONS AND CONSTRUCTION ACTIVITIES. MAXIMUM FOUR (4) INCHES DEPTH MAY BE LEFT IN PLACE AFTER CONSTRUCTION WITH APPROVAL FROM THE GENERAL PERMIT PROGRAM REPRESENTATIVE.
8. ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCES TO 2 FEET BEHIND THE GRADE CHANGE AREA.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE DAMAGE TO REMAINING ROOTS.
11. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
12. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
13. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
14. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. SEE NOTE FOUR (4) OF SUPPLEMENTAL TREE PROTECTION NOTES FOR ADDITIONAL REQUIREMENTS.
15. ALL FINISHED PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE GENERAL PERMIT PROGRAM OFFICE).
16. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NONCOMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.
17. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.

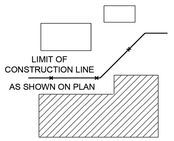
SUPPLEMENTAL TREE PROTECTION NOTES

1. ALL TREE PROTECTION MUST COMPLY WITH CITY OF AUSTIN REQUIREMENTS AS OUTLINED IN THE ENVIRONMENTAL CRITERIA MANUAL AND AS INDICATED BY STANDARD COA NOTES AND DETAILS INCLUDED WITHIN THIS DOCUMENT SET.CONTRACTOR SHALL INSTALL PROTECTION PRIOR TO PRE-CONSTRUCTION CONFERENCE, MAKE ADJUSTMENTS TO PROTECTION AS DIRECTED BY THE GPP REPRESENTATIVE, AND MAINTAIN PROTECTION UNTIL PROJECT IS COMPLETE.
2. TYPE AND LOCATION OF ALL TREE PROTECTION MUST BE APPROVED IN THE FIELD BY THE GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO CONSTRUCTION.
3. WALK-THROUGH: CONTRACTOR SHALL CONDUCT WALK-THROUGH MEETING WITH GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PERFORMING ANY PRUNING ACTIVITIES ON TREES IN PROJECT AREA. PURPOSE OF WALK-THROUGH WILL BE TWOFOLD. ONE PURPOSE WILL BE TO DETERMINE THE MINIMUM AMOUNT OF PRUNING NECESSARY TO ALLOW CONSTRUCTION WORK TO BE COMPLETED. SECOND PURPOSE WILL BE TO DETERMINE AREAS OF PROJECT IN WHICH EXHAUST DIVERTERS WILL BE REQUIRED ON CONSTRUCTION EQUIPMENT TO PREVENT SCORCHING OF EXISTING TREES.
4. ALL PRUNING MUST BE PERFORMED IN ACCORDANCE WITH ANSI A300 (PART 1) - 2001 AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS (PRUNING), OR LATEST APPROVED VERSION. THIS DOCUMENT MAY BE OBTAINED ONLINE FOR A FEE AT WWW.ANSI.ORG.
5. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. TO PREVENT BARK TEARS, THE WEIGHT OF THE BRANCH SHALL BE REMOVED BEFORE MAKING FINAL PRUNING CUT.
6. ALL PRUNING SHALL PRESERVE THE NATURAL CHARACTER OF THE TREE.
7. ONLY COLLAR CUTS ARE ACCEPTABLE. NO FLUSH CUTS OR STUB CUTS WILL BE ALLOWED.
8. ALL BRANCHES THAT ARE BROKEN OR DAMAGED DURING CONSTRUCTION SHALL BE REMOVED.
9. PRUNING CUTS OR DAMAGED AREAS ON AN OAK TREE SHALL BE PAINTED WITHIN FIVE MINUTES WITH A STANDARD TREE WOUND DRESSING. TREE WOUND DRESSING SHALL BE EITHER TREEKOTE AEROSOL OR TANGLEFOOT PRUNING SEALER (OR APPROVED EQUAL). THIS ALSO APPLIES TO WOUNDS CREATED BY CONSTRUCTION VEHICLES OR EQUIPMENT. ALL PRUNING MUST BE IN ACCORDANCE WITH COA OAK WILT PREVENTION POLICY.
10. ANY TREE ROOTS THAT ARE EXPOSED, CUT, OR TORN DURING CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SURROUNDING SOIL. (REFER ALSO TO NUMBER 9 OF THE TREE AND NATURAL AREA PROTECTION NOTES INCLUDED IN THIS PLAN SET.)
11. ALL TRENCHING WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED WILL BE SAW CUT OR EXCAVATED BY HAND, AS APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST.
12. REFER TO ENVIRONMENTAL CRITERIA MANUAL APPENDIX P-6 FOR FURTHER REMEDIAL TREE CARE REQUIREMENTS. P-6 REMEDIAL TREE CARE WILL BE COORDINATED WITH AND APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST FOR PROJECTS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM.

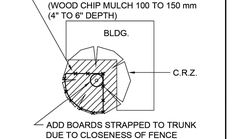


LINEAR CONSTRUCTION THROUGH TREES

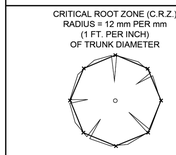
TREES IN PAVING AREA



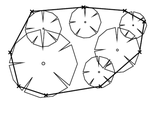
NATURAL AREAS



TREES NEAR CONSTRUCTION ACTIVITY

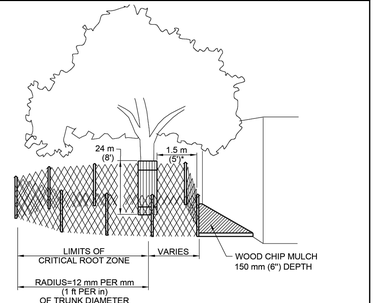


INDIVIDUAL TREE

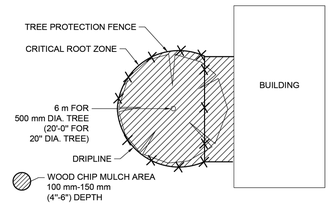


GROUP OF TREES

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE LOCATIONS	
RECORD COPY SIGNED BY J. PATRICK MURPHY	*11/15/99* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1 1 OF 1



*AS NEEDED TO PROVIDE MINIMUM NECESSARY WORK SPACE. IF LESS THAN 1.5 m (5'), THEN ADD BOARDS STRAPPED TO TRUNK.



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	*11/15/99* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-4 1 OF 1



3/4/26

CITY OF AUSTIN

GENERAL PERMIT OFFICE
TREE PROTECTION AND ENVIRONMENTAL NOTES
CITY OF AUSTIN STANDARD NOTES AND DETAILS

REVISIONS

NO.	BY	DATE	REMARKS

GENERAL PERMIT PROGRAM

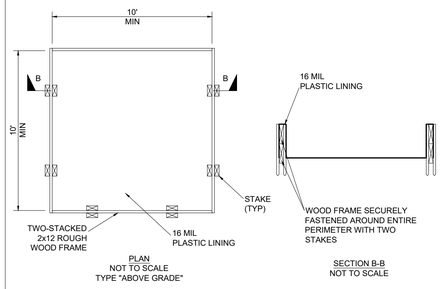
ENGINEERING SERVICES DIVISION

#

ENV-09 | 74 OF 93

D:\ONEDRIVE- BAER ENGINEERING & ENVIRONMENTAL CONSULTING, INC_ CADSHARE_ CADPROJECTS\BROWN & GAY\1920778.00 2016 LARGE DIAMETER PIPELINE RU\1192078.01 17TH STREET WWW REPORT\GENERAL\17TH STREET GPP NOTES DETAILS.DWG, — 2000 17TH STREET GTB

3/4/2026 10:51 AM



PLAN
NOT TO SCALE
TYPE "ABOVE GRADE"

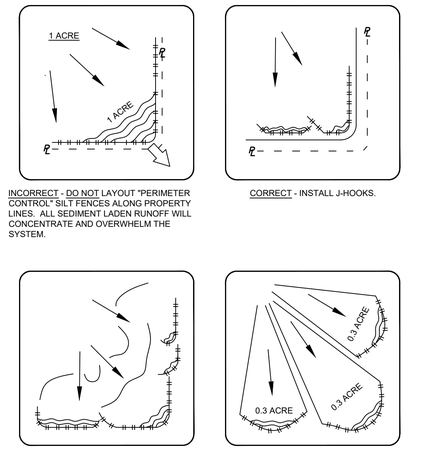
SECTION B-B
NOT TO SCALE

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. IN LIEU OF DESIGN SHOWN ABOVE, CONTRACTOR MAY SUBSTITUTE PREFABRICATED DESIGN OR OTHER FABRICATED ON-SITE DESIGN PROVIDED HE/SHE SUBMITS SKETCH TO ENVIRONMENTAL INSPECTOR FOR APPROVAL.
4. CONTRACTOR SHALL SUBMIT MAINTENANCE PLAN TO ENVIRONMENTAL INSPECTOR FOR APPROVAL. PLAN SHALL INCLUDE ANTICIPATED NUMBER OF CONCRETE TRUCKS PER DAY, CLEANING SCHEDULE, DISPOSAL PLAN FOR SOLIDS AND LIQUIDS, AND FREQUENCY OF INSPECTION.
5. CONTRACTOR SHALL IMMEDIATELY REPAIR LINER IF LEAKAGE IS OBSERVED.

SOURCE: CALIFORNIA STORMWATER BMP HANDBOOK, WM-8, JANUARY 2003.

CONCRETE WASHOUT



INCORRECT - DO NOT LAYOUT "PERIMETER CONTROL" SILT FENCES ALONG PROPERTY LINES. ALL SEDIMENT LADEN RUNOFF WILL CONCENTRATE AND OVERWHELM THE SYSTEM.

CORRECT - INSTALL J-HOOKS.

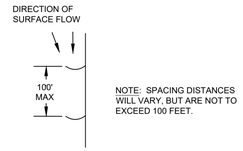
DISCREET SEGMENTS OF SILT FENCE, INSTALLED WITH J-HOOKS OR "SMILES" WILL BE MUCH MORE EFFECTIVE.

SOURCE: CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL FIGURE 1.4.5.G.3

SILT FENCE PLACEMENT FOR PERIMETER CONTROL

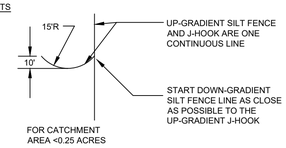
PLAN VIEW

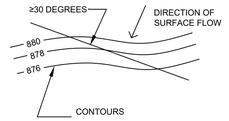
I. SPACING REQUIREMENTS



NOTE: SPACING DISTANCES WILL VARY, BUT ARE NOT TO EXCEED 100 FEET.

II. SIZING REQUIREMENTS





NOTE:
J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

SOURCE: CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL FIGURE 1.4.5.G.4

SILT FENCE J-HOOK DETAIL

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE 17TH STREET NOTES DETAILS.DWG
DATE MAR 2026
DESIGNED SS
DRAWN SS
REVISED MB
CHECKED TB

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

ADDITIONAL ESC DETAILS

CITY OF AUSTIN
AUSTIN WATER

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T.B.P.E. Firm Registration No. F-3181

STATE OF TEXAS
T. M. BAER
64040
REGISTERED
PROFESSIONAL
ENGINEER

3/4/26
Thomas M. Baer, P.E.

ENV-10
SHEET
75 OF 93

90% SUBMITTAL

FILE LOCATION: 17TH STREET NOTES DETAILS.DWG DATE SAVED: 3/4/2026

TREE LIST

TREE ID	DBH (IN)	SPECIES	NOTE	CONFLICT / RESOLUTION	APP F?
1041	13''	CHINABERRY	R		NO
1042	20''	AMERICAN ELM (13-13")			YES
1043	38''	CEDAR ELM (20-14-13-9")	H		YES
1049	24''	AMERICAN ELM	H		YES
1050	8''	HACKBERRY			YES
1051	12''	HACKBERRY (9-5")	R		YES
1052	8''	CEDAR ELM (6-4")			YES
1053	13''	GREEN ASH (9-7")			YES
1054	10''	HACKBERRY	R		YES
1094	14''	CHINABERRY	R		NO
1095	11''	HACKBERRY			YES
1096	9''	HACKBERRY			YES
1097	16''	CHINABERRY	R		NO
1098	8''	HACKBERRY			YES
1099	25''	LIVE OAK (18-14")	H		YES
1100	20''	LIVE OAK			YES
1101	8''	HACKBERRY			YES
1102	10''	AMERICAN ELM			YES
1103	17''	LIGUSTRUM (8-7-5-5")			NO
1104	8''	CHINABERRY			NO
1105	14''	HACKBERRY (10-7")			YES
1106	11''	HACKBERRY			YES
1107	14''	LIVE OAK			YES
1108	12''	HACKBERRY			YES
1109	8''	HACKBERRY			YES
1110	10''	CHINABERRY			NO
1111	15''	CEDAR ELM			YES
1116	15''	CEDAR ELM			YES
1117	14''	HACKBERRY			YES
1118	20''	CHINABERRY			NO
1119	15''	HACKBERRY			YES
1120	9''	LIGUSTRUM (6-6")			NO
1121	10''	HACKBERRY			YES
1122	18''	WHITE MULBERRY (13-9")			NO
1137	16''	WHITE MULBERRY (11-10")			NO
1138	19''	CEDAR ELM			YES
1139	27''	AMERICAN ELM	H		YES
1140	20''	HACKBERRY (15-10")			YES
1141	9''	HACKBERRY			YES
1142	18''	LIGUSTRUM (11-9-5")			NO
1143	17''	AMERICAN ELM			YES
1144	11''	HACKBERRY			YES
1145	12''	CEDAR ELM			YES
1146	19''	CEDAR ELM			YES
1147	8''	CEDAR ELM			YES
1148	10''	CEDAR ELM			YES
1149	10''	CEDAR ELM			YES
1150	15''	CEDAR ELM			YES
1151	11''	CEDAR ELM			YES
1152	12''	CEDAR ELM			YES
1153	19''	AMERICAN ELM			YES
1154	17''	CEDAR ELM			YES
1155	14''	BLACK WALNUT			YES
1156	11''	AMERICAN ELM			YES
1157	10''	AMERICAN ELM			YES
1158	19''	BLACKJACK OAK			YES
1159	16''	CEDAR ELM			YES
1160	20''	CEDAR ELM			YES
1161	16''	BLACKJACK OAK (14-4")			YES
1162	12''	HACKBERRY *HORIZONTAL OVER CREEK			YES
1163	11''	BOX ELDER			YES
1164	13''	BOX ELDER			YES
1167	23''	LIVE OAK			YES
1168	19''	LIVE OAK			YES
1340	25''	TEXAS RED OAK	H		YES
1558	22''	PECAN			YES
1814	4''	CHINQUAPIN OAK			YES
1909	18''	PECAN			YES
1954	24''	CHINESE TALLOW			NO
1955	14''	HACKBERRY			YES
2170	13''	PECAN			YES
2182	14''	PECAN			YES
2192	5''	HACKBERRY			YES
2193	23''	PECAN			YES
2229	15''	HACKBERRY			YES
2243	17''	PECAN			YES
2291	15''	LIVE OAK			YES

TREE ID	DBH (IN)	SPECIES	NOTE	CONFLICT / RESOLUTION	APP F?
2309	12''	LIVE OAK			YES
2310	19''	LIVE OAK			YES
2334	9''	CRAPE MYRTLE (2-4"/3-2")			NO
2335	4''	CRAPE MYRTLE (2-2"/1")			NO
2375	8''	LIVE OAK			YES
2400	10''	LIVE OAK			YES
2411	8''	CRAPE MYRTLE (4"/2-3"/2")			NO
2496	16''	CRAPE MYRTLE (10"/8"/4")		1/2 CRZ (W)	NO
2497	6''	LIVE OAK			YES
2502	12''	CRAPE MYRTLE (8"/7")		1/2 CRZ (W)	NO
2525	15''	CRAPE MYRTLE (2-7"/2-4")		1/2 CRZ (W, WW)	NO
2567	26''	PECAN	H		YES
2572	17''	CRAPE MYRTLE (9"/2-8")		1/2 CRZ (WW)	NO
2573	26''	PECAN	H	1/4 CRZ (WW)	YES
2597	21''	LIVE OAK		1/2 CRZ (W)	YES
2649	5.5''	LIGUSTRUM (4"/3")			NO
2672	9''	HACKBERRY			YES
2716	30''	PECAN	H	1/2 CRZ (W)	YES
2761	3''	PECAN		1/2 CRZ (WW)	YES
2762	5''	PECAN		1/2 CRZ (WW)	YES
2763	5''	HACKBERRY			YES
2764	8''	HACKBERRY			YES
2853	24''	LIVE OAK	H		YES
2854	18''	PECAN			YES
2855	19''	PECAN			YES
3047	19''	TEXAS SABLE PALM			NO
3048	19''	TEXAS SABLE PALM			NO
3049	22''	TEXAS SABLE PALM			NO
3050	22''	TEXAS SABLE PALM			NO
3051	16''	LIVE OAK			YES
3088	6''	CRAPE MYRTLE (3-2"/3-1")			NO
3089	5''	CRAPE MYRTLE (4-2")			NO
3093	13''	PECAN (9"/7")			YES
3129	19''	CHINESE TALLOW	R	1/2 CRZ (W)	NO
3243	15''	HACKBERRY			YES
3244	10''	HACKBERRY			YES
3245	9''	HACKBERRY			YES
3416	24''	TEXAS RED OAK	H		YES
3423	26''	TEXAS RED OAK	H		YES
3488	14.5''	LIGUSTRUM (2-6"/5"/4"/2")			NO
3591	12''	CEDAR ELM			YES
3592	11''	CEDAR ELM			YES
3593	11''	CEDAR ELM			YES
3594	10''	CEDAR ELM			YES
3610	9.5''	CRAPE MYRTLE (2-3"/5-2")			NO
3615	7''	LIVE OAK			YES
3646	19''	CEDAR ELM			YES
3690	13''	CEDAR ELM			YES
3705	30''	LIGUSTRUM (9"/8"/7"/7-3"/3-2")			NO
3709	15''	PECAN			YES
3719	9''	PECAN			YES
3720	17''	PECAN			YES
3768	8''	HACKBERRY			YES
3774	11''	CHINABERRY			NO
3778	11''	HACKBERRY (8"/4"/2")			YES
3810	14''	CEDAR ELM			YES
3811	8''	CRAPE MYRTLE (3-4")			NO
3858	11''	CEDAR ELM			YES
3859	10''	CEDAR ELM			YES
3860	11''	CEDAR ELM			YES
3861	14''	CEDAR ELM			YES
3865	14''	CEDAR ELM			YES
3866	8''	CEDAR ELM			YES
3867	14''	CEDAR ELM			YES
3868	10''	CEDAR ELM			YES
3869	14''	CEDAR ELM			YES
3871	14''	CEDAR ELM			YES
3872	12''	CEDAR ELM			YES
3873	13''	CRAPE MYRTLE (4-4"/2-3")			NO
3874	10''	CRAPE MYRTLE (5"/2-3"/2-2")			NO
3875	15''	CHINQUAPIN OAK			YES
3876	7''	CRAPE MYRTLE (4"/3-2")			NO
3886	8''	PECAN			YES
3887	17''	HACKBERRY			YES
3901	8''	LIVE OAK			YES
3902	15.5''	CRAPE MYRTLE (2-8"/7")			NO
4039	16''	CEDAR ELM T502			YES

TREE ID	DBH (IN)	SPECIES	NOTE	CONFLICT / RESOLUTION	APP F?
4040	19''	CEDAR ELM		1/2 CRZ (W)	YES
4041	16''	CEDAR ELM		1/2 CRZ (W)	YES
4043	22''	CEDAR ELM		1/2 CRZ (W)	YES
4056	14''	CEDAR ELM		1/2 CRZ (W)	YES
4066	12''	CEDAR ELM			YES
4067	21''	CEDAR ELM		1/2 CRZ (W)	YES
4068	21''	CEDAR ELM		1/2 CRZ (W)	YES
4147	14''	CEDAR ELM			YES
4152	30''	LIVE OAK	H		YES
4154	9''	CEDAR ELM			YES
4209	30''	LIVE OAK	H	1/2 CRZ (W, WW)	YES
4210	17''	LIVE OAK		1/4 CRZ (WW)	YES
4213	16''	LIVE OAK		1/2 CRZ (W)	YES
4259	13''	CEDAR ELM	G		N/A
4260	19''	CEDAR ELM			YES
4299	24''	AMERICAN ELM	H		YES
4300	8''	LIVE OAK		1/4 CRZ (W), DIRECT CONFLICT	YES
4301	30''	AMERICAN ELM	H		YES
4303	11''	HACKBERRY (9"/4")			YES
4327	10''	TEXAS REDBUD (3-5")			YES
4364	40''	PECAN	H		YES
4366	13''	TEXAS RED OAK			YES
4367	25''	AMERICAN ELM	H		YES
4391	22''	PECAN			YES
4488	16''	LIVE OAK			YES
4520	30''	AMERICAN ELM	H	1/4 CRZ (W)	YES
4549	22''	PECAN			YES
4664	14''	TEXAS RED OAK			YES
4666	35''	PECAN	H		YES
4701	26''	PECAN	H		YES
4849	27''	HACKBERRY	G		N/A
4872	26.5''	WHITE MULBERRY (2-15"/8")	G		N/A
4898	31.5''	YAUPON HOLLY (10-3"/10-2"/10-1")			YES
4984	22''	PECAN (15"/14")			YES
5195	35''	LIVE OAK	H	1/2 CRZ (W, WW)	YES
5221	34''	LIVE OAK (28"/12")	H		YES
5262	24''	LIVE OAK	H		YES
5263	28''	PECAN	H	1/2 CRZ (W)	YES
5515	38''	PECAN (T5010)	H	1/2 CRZ (W)	YES
5516	18''	PECAN			YES
5517	28''	PECAN	H	1/4 CRZ (WW)	YES
5518	11''	CRAPE MYRTLE (6"/2-4"/2")			NO
10797	21''	PECAN			YES
10958	25''	PECAN	H	1/2 CRZ (WW, SW)	YES
10968	32''	PECAN	H	1/2 CRZ (W), 1/4 CRZ (SW)	YES
10988	20.5''	CRAPE MYRTLE (8"/7"/2-6"/2-3")			NO
10989	15''	CRAPE MYRTLE			NO
11294	18''	PECAN		1/2 CRZ (WW)	YES
11504	17''	SPANISH OAK			NO
11533	9''	SPANISH OAK			NO
11769	17''	AMERICAN ELM			YES
11774	17''	PECAN			YES
11775	10''	PECAN			YES
11814	16''	LIVE OAK			YES
11816	15''	LIVE OAK			YES
11899	20''	PECAN			YES
11907	34''	PECAN	H		YES
11961	13''	PECAN			YES
11962	20''	PECAN			YES
11963	18''	LIVE OAK			YES
12010	31''	PECAN	H	1/2 CRZ (W)	YES
12115	17''	LIVE OAK (12"/10")			YES
12346	19.5''	PECAN (14"/11")			YES
12444	35''	AMERICAN ELM	H		YES
12446	14''	LIVE OAK			YES
12447	24''	PECAN	H		YES
12570	25''	PECAN	H		YES
12571	15''	PECAN			YES
12577	22''	PECAN			YES
12579	10''	PECAN			YES
12580	22''	TEXAS SABLE PALM			NO
12666	20''	PECAN			YES
13160	9''	CEDAR ELM			YES
13170	5''	CHERRY LAUREL			YES
13171	8''	CHERRY LAUREL			YES

TREE ID	DBH (IN)	SPECIES	NOTE	CONFLICT / RESOLUTION	APP F?
13172	6''	CHERRY LAUREL			YES
13176	5''	CHERRY LAUREL			YES
13177	5''	CHERRY LAUREL			YES
13180	7''	CHERRY LAUREL			YES
13193	14''	CEDAR ELM		1/4 CRZ (SW) - MITIGATION PROVIDED, SAVED IF POSSIBLE	YES
13211	22''	LIVE OAK		1/2 CRZ (SW)	YES
13212	30''	HACKBERRY		1/4 CRZ (SW) - MITIGATION PROVIDED, SAVED IF POSSIBLE	YES
20236	9.5''	CRAPE MYRTLE (3-3"/3-2"/1")			NO
20287	8''	MESQUITE HONEY			YES
20288	16''	MESQUITE HONEY (12"/8")			YES
20312	29''	LIVE OAK	H		YES
20436	13''	SOUTHERN MAGNOLIA			YES
20476	16''	PECAN			YES
20547	19''	RED OAK			YES
20623	10''	RED OAK			YES
20667	22''	RED OAK			YES
20742	35.5''	HACKBERRY (29"/13")			YES
20743	8''	HACKBERRY			YES
20789	5''	CRAPE MYRTLE (4"/2")			NO
20806	15.5''	CRAPE MYRTLE (5"/2-4"/4-3"/1")			NO
20967	13''	CRAPE MYRTLE (8"/6"/4")			NO
20968	8.5''	CRAPE MYRTLE (6"/5")			NO
21025	29''	LIVE OAK	H		YES
21087	10''	CRAPE MYRTLE (5"/4"/3-2")			NO
21112	13''	Lemon (7"/5"/4"/2")		1/2 CRZ (W)	NO
21141	36''	PECAN	H		YES
21172	16''	PECAN			YES
21193	19''	PECAN			YES
21246	26''	RED OAK	H		YES
21370	18''	PECAN			YES
21371	10''	AMERICAN ELM		1/4 CRZ (WW)	YES
21430	15''	CRAPE MYRTLE (8-3"/2"/1")		1/4 CRZ (W)	NO
21440	16''	CRAPE MYRTLE (6"/2-5"/4"/2-3")			NO
21442	13.5''	CRAPE MYRTLE (3-5"/4"/3")			NO
21452	11.5''	CRAPE MYRTLE (5"/4"/3-3")			NO
21455	11''	CRAPE MYRTLE (5"/3-4")			NO
21557	23.5''	CRAPE MYRTLE (9"/7"/2-6"/2-4"/2")		1/2 CRZ (W)	NO
21611	17''	PECAN			YES
21612	10''	CRAPE MYRTLE (3"/7-2")			NO
21614	20''	MESQUITE HONEY			YES
21616	7''	CRAPE MYRTLE (5"/4")			NO
21631	8''	LIVE OAK			YES
21722	14''	CEDAR ELM			YES
21787	18''	PECAN		1/2 CRZ (W)	YES
21817	13''	CHINABERRY (6"/2-5"/4")			NO
21818	8''	CHINABERRY (6"/4")			NO
21819	9''	HACKBERRY			YES
21821	11.5''	CHINABERRY (2-6"/5")			NO
21874	12.5''	CRAPE MYRTLE (2-4"/3-3"/2-2")			NO
21875	10.5''	CRAPE MYRTLE (2-3"/6-2")			NO
21876	14''	LIVE OAK			YES
21886	18''	CRAPE MYRTLE (7"/2-4"/3-3"/2-2"/1")			NO
21887	14''	CRAPE MYRTLE (5"/2-4"/3"/2-2"/ 3-1")			NO
21888	19.5''	CRAPE MYRTLE (6"/2-5"/4"/2-3"/2-2"/3-1")			NO
21964	8''	BUMELIA GUM			YES
21965	13''	BUMELIA GUM (10"/6")			YES
22020	36''	LIVE OAK	H		YES
22095	60''	LIVE OAK	H		YES
22323	21''	PECAN			YES
22324	23''	PECAN			YES
22325	19''	PECAN			YES
22368	11.5''	CRAPE MYRTLE (4"/4-3"/2"/1")			NO
22369	11''	CRAPE MYRTLE (4-3"/3-2"/1")			NO
22399	14''	LIVE OAK			YES
22400	15''	LIVE OAK			YES
22461	12''	SABLE PALM			NO
22462	9''	SABLE PALM			NO
22463	10''	SABLE PALM			NO
22528	26''	LIVE OAK	H		YES
25031	25''	CRAPE MYRTLE (3-8"/3-6")		1/4 CRZ (W)	NO
25069	19''	PECAN		1/2 CRZ (W, WW)	YES
25072	20''	SOUTHERN MAGNOLIA			YES

R = TREES TO BE REMOVED

G = GONE or ALREADY REMOVED

H = HERITAGE TREE

FILE LOCATION: 17TH STREET NOTES DETAILS.DWG DATE SAVED: 3/4/2026

BGE JOB NO. 4766-03
FILE 17TH STREET NOTES DETAILS.DWG
DATE MAR 2026
DESIGNED SS
DRAWN SS
REVISED MB
CHECKED TB

NO.	REVISION	BY	DATE

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TREE LIST

CITY OF AUSTIN
AUSTIN WATER

Baer Engineering
and Environmental Consulting, Inc.
7756 Northcross Drive, Suite 211
Austin, Texas 78757
Phone: (512) 453-3723 Fax: (512) 453-3316
www.baereng.com info@baereng.com
T.B.P.E. Firm Registration No. F-3181

STATE OF TEXAS
T. M. BAER
64040
REGISTERED
PROFESSIONAL ENGINEER
3/4/26

ENV-11
SHEET
76 OF 93

90% SUBMITTAL

TREE MITIGATION CALCULATIONS

TREE ID	TREE TYPE	<8" DIAMETER	8-18.9" DIAMETER	19-23" DIAMETER	24"+ DIAMETER	IS MITIGATION REQUIRED?	IS TREE IN APPENDIX F?	REQUIRED MITIGATION (%)	REQUIRED MITIGATION (INCHES)
1041	CHINABERRY		13			NO	NO	0%	0
1051	HACKBERRY		12			YES	YES	50%	6
1054	HACKBERRY		10			YES	YES	50%	5
1094	CHINABERRY		14			NO	NO	0%	0
1097	CHINABERRY		16			NO	NO	0%	0
3129	CHINESE TALLOW			19		NO	NO	0%	0
13193	CEDAR ELM		14			YES	YES	50%	7
13212	HACKBERRY				30	YES	YES	100%	30
								TOTAL	**48**

URBAN FORESTRY ACCOUNTING

TOTAL	COUNT	INCHES
TOTAL APPENDIX F TREES SURVEYED	227	3,839
TOTAL APPENDIX F TREES REMOVED	2	22
TOTAL NON-APPENDIX F AND INVASIVE TREES SURVEYED	71	960
TOTAL NON-APPENDIX F AND INVASIVE TREES REMOVED	4	62
TOTAL MITIGATION INCHES REQUIRED		48
TOTAL MITIGATION INCHES PLANTED ONSITE		
TOTAL MITIGATION INCHES PAID INTO THE TREE FUND		48

Mitigation Amounts:
Heritage trees = 300%
>19" and in Appendix F = 100%
8-18.9" and in Appendix F = 50%
>19" and not in Appendix F = 50%
8-18.9" and not in Appendix F = 25%
<8" and in Appendix F = 50%
<8" and not in Appendix F = 25%

48-in @ $200/in = $9600 TO BE PAID INTO THE URBAN FOREST REPLENISHMENT FUND

FILE LOCATION: 17TH STREET NOTES DETAILS.DWG DATE SAVED: 3/4/2026

BGE JOB NO. 4766-03
FILE 17TH STREET NOTES DETAILS.DWG
DATE MAR 2026
DESIGNED SS
DRAWN SS
REVISED MB
CHECKED TB

NO.	REVISION	BY	DATE

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TREE MITIGATION CALCULATIONS

CITY OF AUSTIN
AUSTIN WATER

Baer Engineering
and Environmental Consulting, Inc.
7756 Northcross Drive, Suite 211
Austin, Texas 78757
Phone: (512) 453-3733 Fax: (512) 453-3318
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T.B.P.E. Firm Registration No. F-3181

STATE OF TEXAS
T. M. BAER
64040
REGISTERED
PROFESSIONAL
ENGINEER
3/4/26
Thomas M. Baer, P.E.

ENV-12
SHEET
77 OF 93

90% SUBMITTAL

FILE LOCATION: G:\HVJ SHARED COMMON\CIVIL\PROJECTS\2016\AP-16-10159.3.2 W-WW PIPELINE REPLACEMENTS BGE\CAD\17TH_ST_TCP_00.DWG DATE SAVED: 9/16/2025

RIGHT OF WAY MANAGEMENT STANDARD NOTES FOR TRAFFIC CONTROL PLANS (REVISED 2/13/2025)

1. CONTRACTOR SHALL HAVE AN APPROVED RIGHT-OF-WAY (ROW) PERMIT AND TRAFFIC CONTROL PLAN (TCP) IN ELECTRONIC OR PAPER FORMAT ON SITE AT ALL TIMES WHEN WORKING IN THE ROW.

2. CONTRACTOR SHALL PROVIDE ADVANCED NOTIFICATION PER THE LATEST TRANSPORTATION CRITERIA MANUAL (TCM) SECTION 8.4.0 – WORK ZONES:
   a. 311 MUST BE NOTIFIED A MINIMUM OF THREE (3) DAYS PRIOR TO ANY PLANNED CLOSURES, INCLUDING ANY SIDEWALK, BIKE LANES, AND ALLEYS
   b. ANY PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) MUST BE SETUP AT LEAST TWO (2) WEEKS PRIOR TO THE CLOSURE
   c. CONSTRUCTION NOTICES, DOOR-HANGERS AND/OR MAILINGS MUST BE PROVIDED AT LEAST TWO (2) WEEKS PRIOR TO COMMENCEMENT OF WORK
   d. CLOSURES OF ANY EXISTING DRIVEWAYS MUST BE AVOIDED. WHEN ACCESS CANNOT BE MAINTAINED, A MINIMUM 7 DAYS OF ADVANCED NOTIFICATION TO THE PROPERTY OWNER IS REQUIRED, AND 14 DAYS ADVANCED NOTIFICATION FOR EMERGENCY SERVICE FACILITIES (SUCH AS FIRE STATIONS, HOSPITALS, AND POLICE STATIONS) ALONG WITH THE APPROVAL FROM THE ROW DIVISION OF TPW.
   e. IF EXISTING HOUSE OF WORSHIP IS WITHIN THE TEMPORARY TRAFFIC CONTROL OR DETOUR AREA, THE CONTRACTOR SHALL COORDINATE TO AVOID WORK DURING SERVICE HOURS.
   f. IF CLOSURE AND/OR DETOUR EXTENDS TO AN ADJACENT JURISDICTION OR PRIVATELY OWNED ROADWAY, THEN CONTRACTOR SHALL FOLLOW REQUIREMENTS OF THE MAINTENANCE AGENCY. (COA REVIEW STAMP IS VALID FOR COA FULL PURPOSE JURISDICTION ONLY.)
3. UNLESS OTHERWISE APPROVED BY THE ROW DIVISION OF TRANSPORTATION PUBLIC WORKS DEPARTMENT (TPW):
   a. ONLY ONE PHASE OF A TCP MAY BE SET AT ANY ONE TIME
   b. INITIAL SETUPS AND PHASE CHANGES SHOULD NOT EXTEND INTO HOURS WHERE WORK ACTIVITIES ARE PROHIBITED
   c. LONG-TERM SETUPS SHOULD OCCUR DURING LOW-VOLUME TRAFFIC HOURS, SUCH AS WEEKENDS
   d. DOUBLE LANE CLOSURES IN THE DAPCZ ARE PROHIBITED MONDAY THROUGH FRIDAY
   e. FULL CLOSURES ARE GENERALLY PROHIBITED MONDAY THROUGH FRIDAY
4. ONCE TRAFFIC CONTROL HAS BEEN SET, THE AUTHORIZED AND COMPETENT REPRESENTATIVE FROM THE PROJECT TEAM/BARRICADE COMPANY WILL COMPLETE AND UPLOAD THE "CONTRACTOR'S SELF-INSPECTION CHECKLIST" FORM. SEE FORM AND DETAILED INSTRUCTIONS HERE: HTTPS://WWW.AUSTINTEXAS.GOV/PAGE/RIGHT-WAY-TRAFFIC-CONTROL
5. IF POLICE OFFICERS EMPLOYED BY AGENCIES OTHER THAN THE CITY OF AUSTIN WILL BE USED TO ASSIST IN DIRECTING TRAFFIC, THE APPLICANT MUST NOTIFY APDSPECIALEVENTS@AUSTINTEXAS.GOV AT LEAST THREE (3) DAYS PRIOR TO WORK WITH THE NAME(S) AND AGENCY OF THE POLICE OFFICERS TO BE EMPLOYED, ALONG WITH THE DATE, TIME, AND LOCATION WHERE THE OFFICER(S) WILL BE WORKING.
6. EXCAVATIONS SHALL BE BACKFILLED OR PLATED WHEN REQUIRED TO OPEN TO TRAFFIC. TEMPORARY PAVING SHALL BE DONE ACCORDING TO CITY OF AUSTIN (COA) STANDARD DETAIL 1100S-4 (FOR HMAC OR PCC PAVEMENTS). FOR EXCAVATIONS EXCEEDING A TRANSVERSE WIDTH OF 5 FEET, THE CONTRACTOR SHALL PROVIDE AN ENGINEERED PLATING PLAN FOR REVIEW TO TRANSPORTATION AND PUBLIC WORKS DEPARTMENT OFFICE OF THE CITY ENGINEER AT THEIR EMAIL ADDRESS PWDOCEREVIEWDL@AUSTINTEXAS.GOV.
7. PEDESTRIAN ROUTES IN AND AROUND THE WORK ZONE, INCLUDING CONSTRUCTION ENTRANCES, TEMPORARY WALKING PATHS, BYPASSES, COVERED WALKWAYS, AND DETOURS THROUGHOUT THE PROJECT, MUST REMAIN ACCESSIBLE AND SHALL INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY. SIDEWALKS SHOULD NOT BE CLOSED FOR PERIODS OF MORE THAN 14 DAYS, UNLESS OTHERWISE APPROVED BY THE ROW DIVISION OF TPW.
8. ALL APPLICABLE SAFEGUARDS SHALL BE IN PLACE PER CHAPTER 33 OF THE INTERNATIONAL BUILDING CODE, WHICH INCLUDES PEDESTRIAN PROTECTIONS PER SECTION 3306.
9. "CONSTRUCTION ENTRANCE AHEAD" SIGNS MUST BE PLACED AT ALL APPROACHES TO CONSTRUCTION ENTRANCES, UNLESS OTHERWISE SHOWN ON THE REVIEWED TCP.
10. ALL TRAFFIC CONTROL DEVICES INCLUDING PROTECTIVE BARRIERS MUST BE CRASHWORTHY AND INSTALLED ACCORDING TO THE MANUFACTURER'S GUIDELINES. FOR A PRODUCT LIST OF CRASHWORTHY TRAFFIC CONTROL DEVICES, SEE TXDOT'S "COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICE" LIST. CRASHWORTHINESS SHALL BE DETERMINED PER AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIAL'S (AASHTO) MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) TESTING REQUIREMENTS.
11. OVERNIGHT PROTECTION OF WORK ZONES AND STORAGE OF MATERIAL/EQUIPMENT SHALL BE ACCORDING TO COA STANDARD DETAIL 804S-4.
12. THE NAME OF THE BARRICADE CONTRACTOR SHALL BE SHOWN ON THE NON-REFLECTIVE SURFACE OF ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH COA STANDARD DETAIL 804S-5.
13. THE CITY'S TRAFFIC ENGINEER OR INSPECTOR MAY MAKE OR REQUIRE FIELD ADJUSTMENTS TO ADDRESS ISSUES OF SAFETY AND MOBILITY. ADDITIONALLY, ANY TRAFFIC CONTROL DEFICIENCIES MUST ALSO BE ADDRESSED PER THE TIMELINE PROVIDED BY THE ROW DIVISION OF TPW. VIOLATIONS WILL BE SUBJECT TO PENALTIES AS PROVIDED BY LAW.
14. IF EXISTING CAPITAL METRO BUS STOPS ARE WITHIN THE TEMPORARY TRAFFIC CONTROL OR DETOUR AREA, THE CONTRACTOR SHALL CONTACT CAPITAL METRO AT HTTPS://WKF.MS/3XRNLXF, TWO (2) WEEKS PRIOR TO SETTING UP THE TRAFFIC CONTROL DEVICES IN ORDER TO COORDINATE POTENTIAL BUS-STOP RELOCATION OR ANY OTHER RELATED ISSUES.
15. IF EXISTING SIGNALIZED INTERSECTIONS ARE WITHIN THE TEMPORARY TRAFFIC CONTROL AREA, THE CONTRACTOR SHALL CONTACT TPW – MOBILITY MANAGEMENT CENTER (MMC) MMC@AUSTINTEXAS.GOV OR (512) 974-4075, TWO (2) WEEKS PRIOR TO SETTING UP ANY TRAFFIC CONTROL DEVICES. CONTRACTOR SHALL CONTRACT THE MMC ONE (1) DAY PRIOR TO TRAFFIC CONTROL DEPLOYMENT AND/OR FOR ANY ANY PHASE CHANGES.
16. THE RIGHT OF WAY SHALL BE RETURNED TO FULL USE AT THE END OF THE APPROVED WORK HOURS.
17. CONTRACTORS SHALL ADHERE TO ALL ROW SPECIAL EVENT ACTIVITY RESTRICTIONS, AS PER THE LATEST MOBILITY GUIDELINES (MG-08). PROJECTS THAT ARE ROUTED THROUGH THE DAPCZ PROCESS ARE REQUIRED TO COORDINATE WITH THE OFFICE OF SPECIAL EVENTS (512-974-1000 OR TRANSPORTATIONSPECIALEVENTS@AUSTINTEXAS.GOV), IN CONJUNCTION WITH THE ROW DIVISION OF TPW. VISIT CITY STAGE FOR SCHEDULED EVENTS FOR ALL OF AUSTIN.
18. PURSUANT TO CITY CODE 9-2-3, ROW WORK MUST NOT MAKE NOISE AUDIBLE TO AN ADJACENT BUSINESS OR RESIDENCE BETWEEN 10:30PM AND 7:00AM OR OPERATE A MACHINE THAT SEPARATES, GATHERS, GRADES, LOADS, OR UNLOADS SAND, ROCK, OR GRAVEL WITHIN 600 FEET OF A RESIDENCE, CHURCH, HOSPITAL, HOTEL, OR MOTEL BETWEEN 7:00PM AND 6:00AM, EXCEPT FOR INSTALLATION OF CONCRETE AUTHORIZED BY A SEPARATE NON-PEAK HOUR CONCRETE POUR PERMIT ISSUED UNDER CITY CODE SECTION 9-2-21.
19. ALL LONG-TERM WORK ZONES SHALL HAVE ALL CONFLICTING MARKINGS REMOVED OR OBLITERATED; AND, TEMPORARY MARKINGS INSTALLED PER 804S-3. BLACK PAINT OR SPRAYING WITH ASPHALT OVER PAVEMENT MARKINGS IS NOT CONSIDERED AN ACCEPTABLE METHOD OF REMOVAL OR OBLITERATION. REMOVAL TECHNIQUES THAT MINIMIZE AND AVOID ANY PAVEMENT SCARRING MUST BE CONSIDERED.
20. PRIOR TO THE TRAFFIC CONTROL ESTABLISHMENT FOR FULL ROAD CLOSURES, CONTRA-FLOW, AND/OR LONG-TERM STATIONARY PROJECTS, CONTRACTOR MUST CONTACT ROWINSPECTIONS@AUSTINTEXAS.GOV TWO (2) WEEKS PRIOR TO SETTING THE TRAFFIC CONTROL DEVICES.
21. BARRICADING AND TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE LATEST EDITION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES." THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF SUBMITTAL WHETHER OR NOT THE PLAN HAS BEEN REVIEWED FOR CODE COMPLIANCE BY CITY STAFF.

SUPPLEMENTAL TRAFFIC CONTROL NOTES

1. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUTCD), THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 800 AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL, OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IF A CONFLICT ARISES THEN THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL SHALL CONTROL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.

2. WHERE ACTIVITIES OCCUPY AN ARTERIAL ROADWAY FOR THREE OR MORE DAYS, ONE WEEK ADVANCE PUBLIC NOTIFICATION MUST BE PROVIDED IN THE FORMS DESCRIBED BELOW. CLOSURES THAT CHANGE IN SCOPE OR NATURE MUST ALLOW A FULL WEEK TO PROVIDE RE-NOTICE OF THE PLANNED ACTIVITY, PRIOR TO STARTING WORK.
   A. ELECTRONIC CHANGEABLE MESSAGE BOARDS.
   B. WRITTEN NOTICE TO AFFECTED PARTIES (RESIDENTS AND BUSINESSES) WITHIN THE CLOSURE
   C. NOTIFICATION SENT TO THE MEDIA DESCRIBING THE ACTIVITY AND ITS' DURATION, ALONG WITH A VISUAL MAP OF THE CLOSURE AREA. CONDUCT MEDIA AVAILABILITY AS NEEDED.
   D. NOTIFICATION SENT TO THE DOWNTOWN AUSTIN ALLIANCE TRANSPORTATION AND AUSTIN CHAMBER OF COMMERCE REPRESENTATIVES FOR CLOSURES IN THE DOWNTOWN AUSTIN PROJECT COORDINATION AREA.
   E. NOTIFICATION TO THE CITY'S CPIO OFFICE AND 311 SYSTEM (FRANCES HARGROVE) OF UP COMING CONSTRUCTION WORK IN PUBLIC RIGHT OF WAY.

3. CONTRACTOR SHALL ABIDE BY CITY OF AUSTIN NOISE ORDINANCE AT ALL TIMES.

4. THERE MAY BE CAPITAL METRO BUS STOPS WITHIN THE PROJECT AREA AND IF NECESSARY, CONTRACTOR SHALL COORDINATE WORK IMPACTING THESE BUS STOPS WITH CAPITAL METRO. THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO AS PER STANDARD NOTE #15.

5. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER DESIGNATED REPRESENTATIVE SHALL PROVIDE AT LEAST 24 HOUR WRITTEN NOTICE OF LIMITED ACCESS TO AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE BUSINESS ACCESS SIGNS AS NEEDED TO INFORM DRIVERS OF THE LOCATIONS OF ALL BUSINESS DRIVEWAYS.

6. WHERE REQUIRED, "NO PARKING, TOW AWAY" SIGNS SHALL BE PLACED 48 HOURS IN ADVANCE OF ASSOCIATED LANE OR ROAD CLOSURES.

7. PEDESTRIAN FENCING, AS PER COA STANDARD 804S-4 1 AND 2 OF 8, SHALL BE USED ALONG ALL WORK AREAS TO SEPARATE PEDESTRIANS FROM THE WORK AREAS.

8. WHERE SIDEWALKS OR WELL DEFINED PATHWAYS ARE PRESENT, ADA COMPLIANT SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS DEPENDING ON WORK DURATIONS SHALL BE PROVIDED ANYTIME THESE SIDEWALKS OR PATHWAYS ARE OBSTRUCTED BY WORK ACTIVITIES.

9. SIDEWALK AND CROSSWALK CLOSURES SHALL BE INSTALLED AS PER COA STANDARD 804S-1 4 OF 9 WHEN CONSTRUCTION ACTIVITIES AND TEMPORARY PEDESTRIAN FENCING BLOCK ACCESS, LIMITED TO ONE BLOCK AT A TIME.

10. THE FIVE CATEGORIES OF WORK DURATION AND THEIR TIME AT A LOCATION SHALL BE:
    A. LONG-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN 3 DAYS.
    B. INTERMEDIATE-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 DAYS OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
    C. SHORT-TERM STATIONARY IS DAYTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR, BUT LESS THAN 12 HOURS.
    D. SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.
    E. MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

STREETS

Street	Level	Speed Limit	Protection Status	From	To	Planned Improvements	TCP Sheet	TCP Type	Category	Allowed Barricading Hours	Duration
Robbins Pl	1	25	5 yr	W 22nd St	W Martin Luther King Blvd	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 21st St	1	25	N/A	San Gabriel St	Pearl St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 18th St	1	25	N/A	San Gabriel St	Pearl St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
San Gabriel St	1	25	N/A	W 18th St	W 17th St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
Pearl St	1	25	N/A	W 18th St	W 17th St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St	1	25	7 yr	San Gabriel St	Pearl St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St	1	25	7 yr	Pearl St	West Ave	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St	1	25	7 yr	West Ave	Rio Grande St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St	1	25	7 yr	Rio Grande St	Nueces St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St	1	25	7 yr	Nueces St	San Antonio St	Water and Waste Water Line Replacement	TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
Alley	N/A	N/A	N/A	W 17th St	W 16th St	Water and Waste Water Line Replacement	TC6	Alley Closure	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 16th St	1	25	7 yr	Nueces St	San Antonio St	Water and Waste Water Line Replacement	TC5 & TC9	One Direction Detour	Short Term Stationary	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	

STREETS

Street Intersection	Planned Improvements	TCP Sheet	Allowed Barricading Hours	Duration *
Robbins Pl / W 22nd St	Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 21st St / San Gabriel St	Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 18th St / San Gabriel St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 18th St / Pearl St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
Pearl St / W 17th St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St / West Ave	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St / Rio Grande St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St / Nueces St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 17th St / San Antonio St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 16th St / Nueces St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	
W 16th St / San Antonio St	Waste Water Line Replacement	TC6	Mon-Fri 9:00AM-4:00PM Sat-Sun 7:00AM-7:00PM	

NO.	REVISION	BY	DATE

BNG JOB NO. 4766-03
FILE
DATE 2025-10-10
DESIGNED RCJ
DRAWN RCJ
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
NOTES AND BARRICADING SUMMARY TABLES

CITY OF AUSTIN
AUSTIN WATER

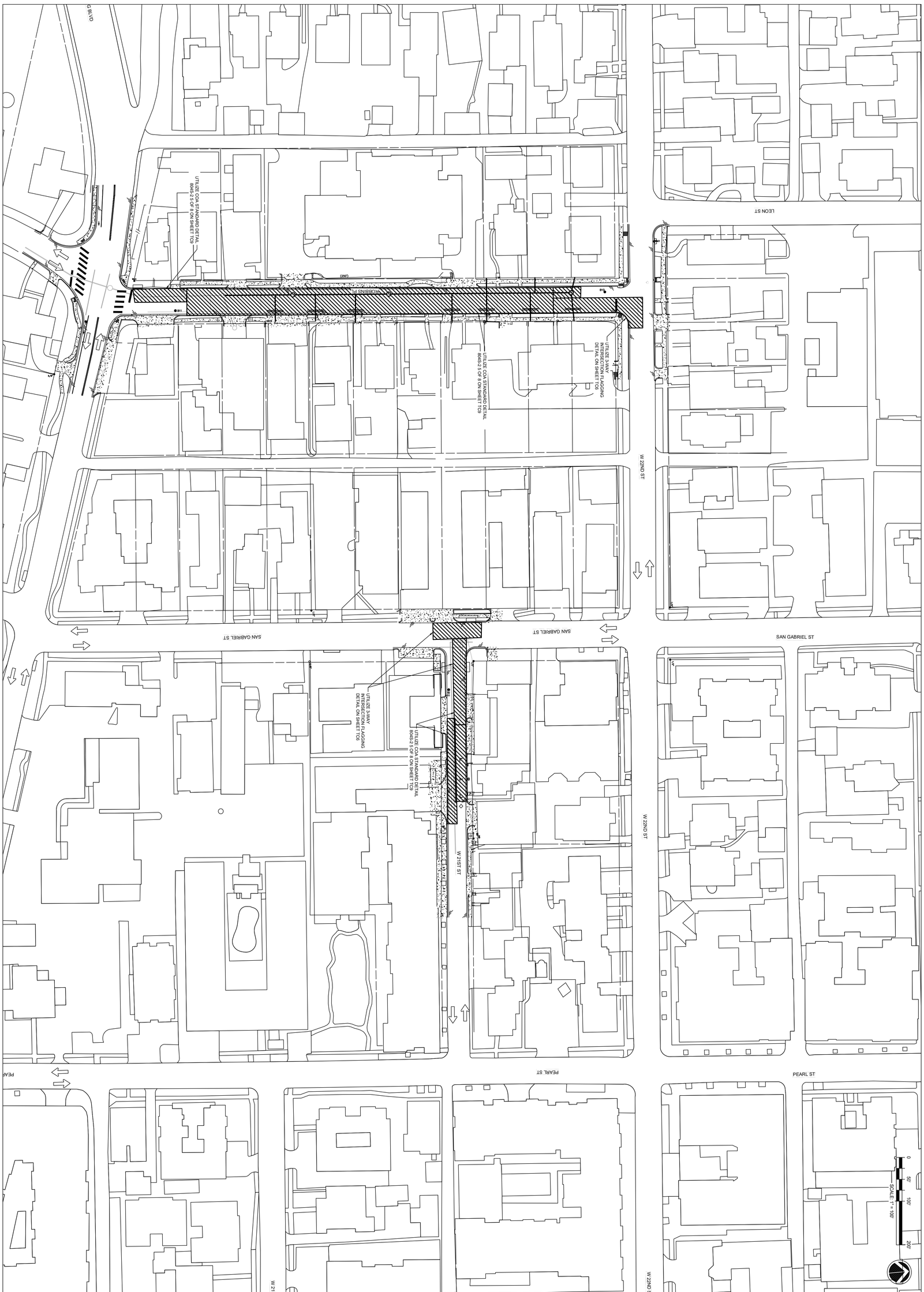
PREPARED BY:
HVJ ASSOCIATES
1701 DIRECTORS BLVD
STE. 910
AUSTIN, TX 78744
(737) 222-5151
TEXAS FIRM NO. F-18081

STATE OF TEXAS
REUBEN C. JAMES
107426
LICENSED
PROFESSIONAL ENGINEER
SEPTEMBER 16, 2025

SHEET
78 OF 93
TC1

100% SUBMITTAL

FILE LOCATION: G:\HVJ SHARED COMMON\CIVIL\PROJECTS\2016\AP-16-10159.3.2 W-WW PIPELINE REPLACEMENTS BGE\CAD\17TH_ST_TCP_01.DWG DATE SAVED: 9/16/2025



CITY OF AUSTIN
AUSTIN WATER

PREPARED BY:
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STE. 910
AUSTIN, TX 78744
(737) 222-5151
TEXAS FIRM NO. F-18091

STATE OF TEXAS
REUBEN C. JAMES
07426
LICENSED
PROFESSIONAL ENGINEER
SEPTEMBER 16, 2025

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
TRAFFIC CONTROL MAP - SHEET 1 OF 3

NO.	REVISION	BY	DATE

BNG JOB NO.	4766-03
FILE	
DATE	2025-10-10
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REVISED	
CHECKED	

SHEET TC2 79 OF 93

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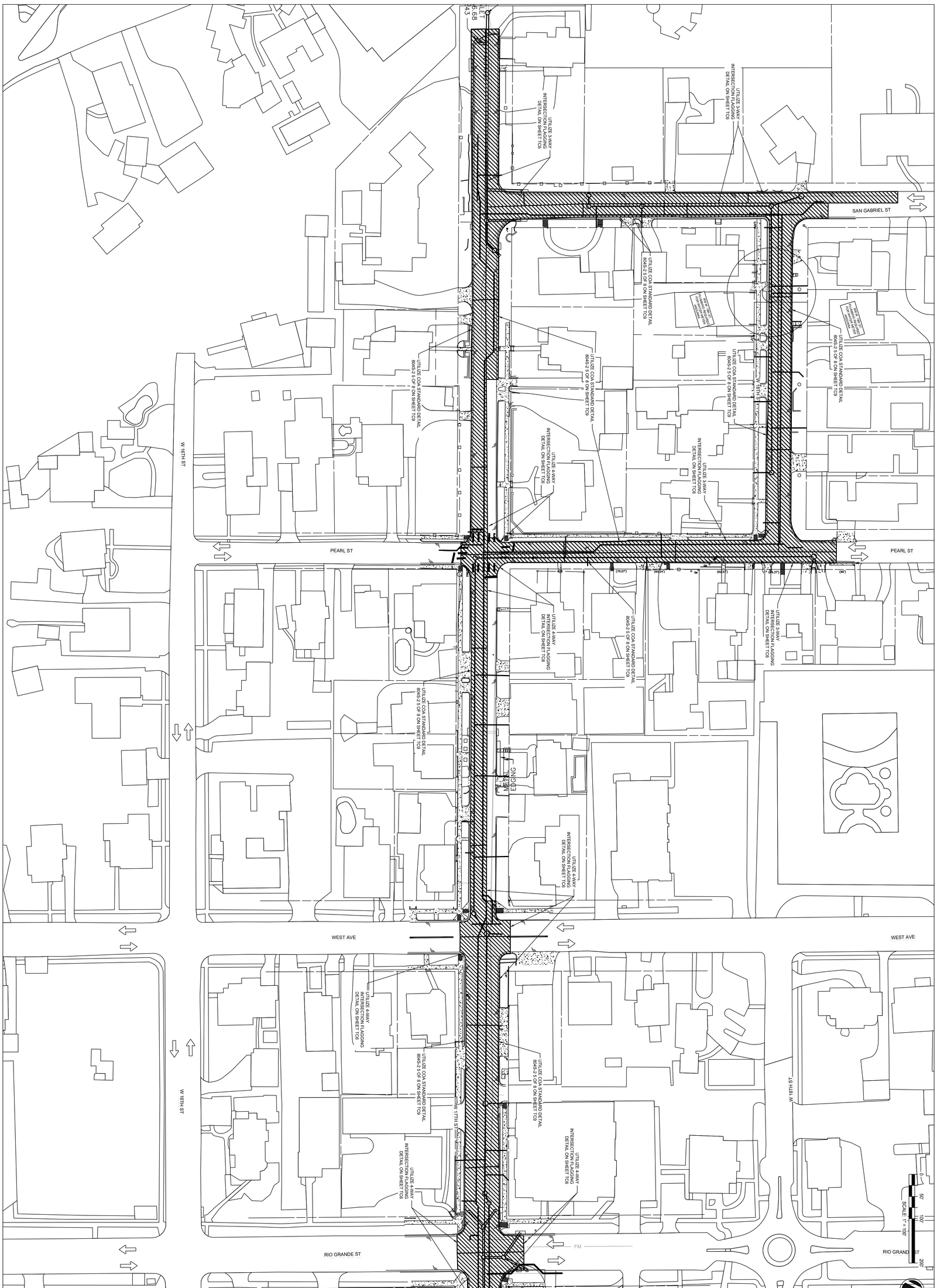

CITY OF AUSTIN
AUSTIN WATER

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(737) 222-5151
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REUBEN C. JAMES
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PROFESSIONAL ENGINEER
STATE OF TEXAS
SEPTEMBER 16, 2025

WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
TRAFFIC CONTROL MAP - SHEET 2 OF 3

NO.	REVISION	BY	DATE

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FILE
DATE 2025-10-10
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SHEET TC3 OF 93

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NUECES ST

SAN ANTONIO ST

GUADALUPE ST

LAVACA ST

W 18TH ST

W 17TH ST

W 16TH ST

0 50' 100' 200'

SCALE: 1" = 100'

MATCHLINE SEE SHEET TC3

UTILIZE COA STANDARD DETAIL 804S-2 5 OF 8 ON SHEET TC9

INS W 17th ST PLUMBING REQUIRED TO RELOCATE METER FOR SWCAC

UTILIZE 4-WAY INTERSECTION FLAGGING DETAIL ON SHEET TC6

THE SAN ANTONIO ST WATER SERVICE ADJUSTMENT INVOLVED

UTILIZE ALLEY CLOSURE DETAIL ON SHEET TC6

UTILIZE COA STANDARD DETAIL 804S-2 5 OF 8 ON SHEET TC9

SEE SHEET TC5

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WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL MAP - SHEET 3 OF 3

CITY OF AUSTIN
AUSTIN WATER

PREPARED BY: HVJ ASSOCIATES
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TEXAS FIRM NO. F-18081

STATE OF TEXAS
REUBEN C. JAMES
107426
LICENSED
PROFESSIONAL ENGINEER

SEPTEMBER 16, 2025

SHEET
81 OF 93
TC4

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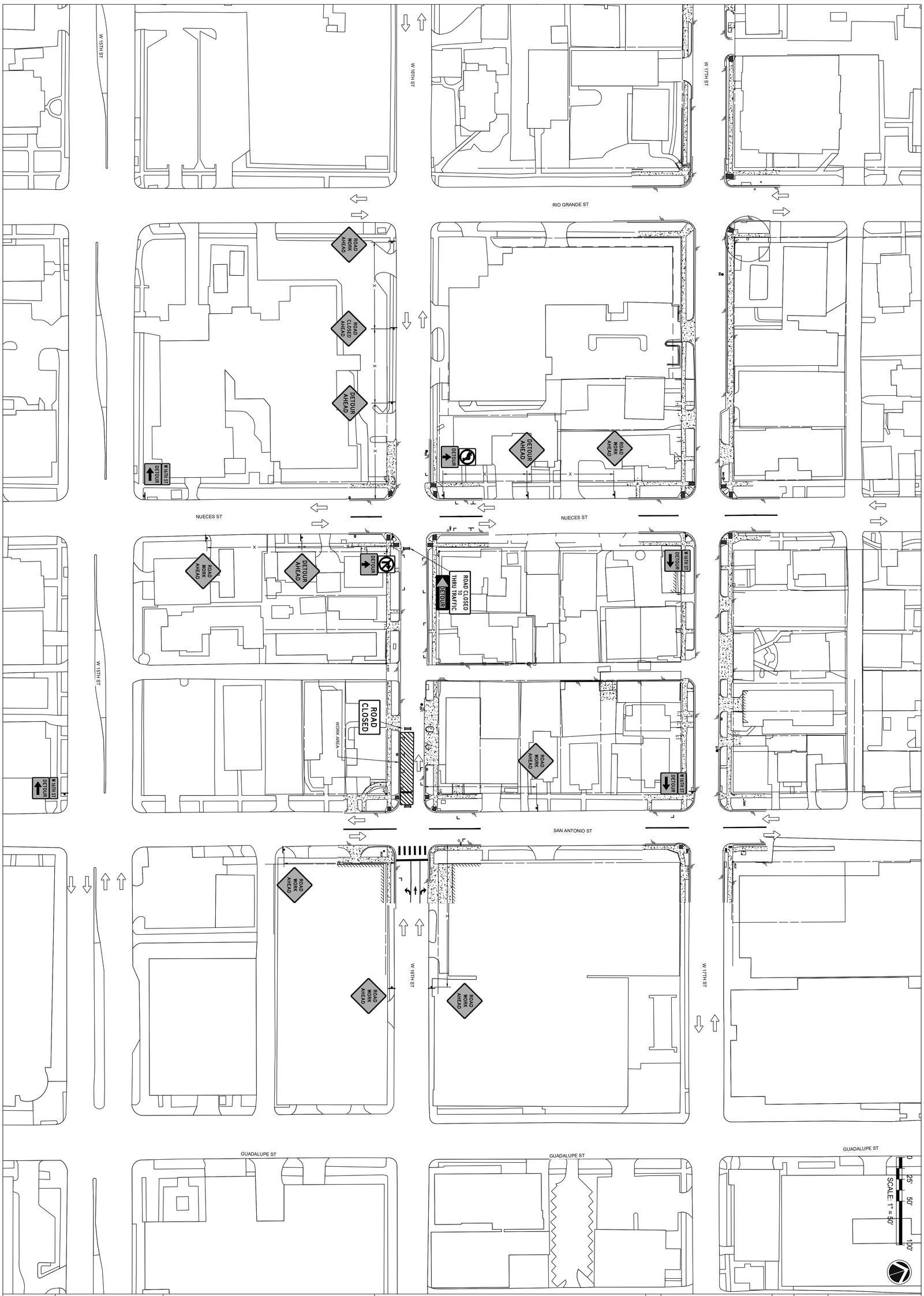

CITY OF AUSTIN
AUSTIN WATER

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STATE OF TEXAS
REUBEN C. JAMES
107426
LICENSED
PROFESSIONAL ENGINEER
SEPTEMBER 16, 2025

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
TRAFFIC CONTROL PLAN - W 16TH ST

NO.	REVISION	BY	DATE

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FILE
DATE 2025-10-10
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SHEET TC5 82 OF 93

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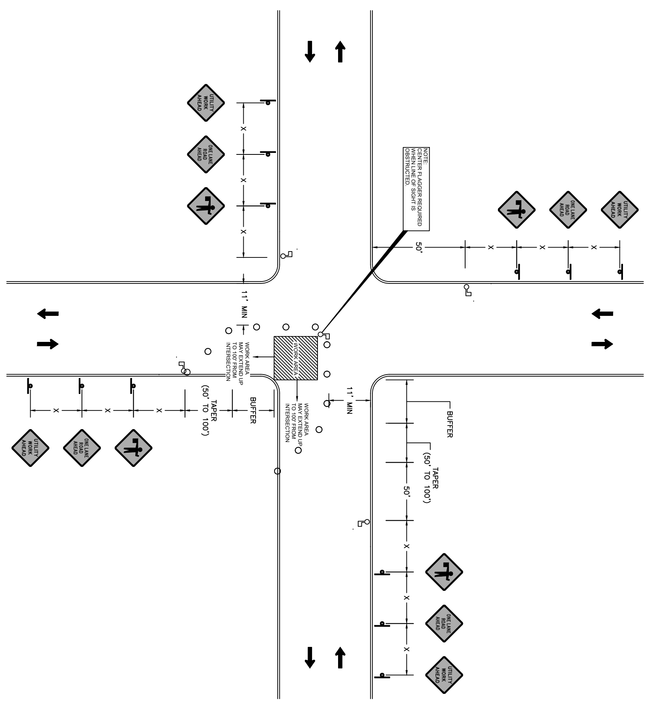
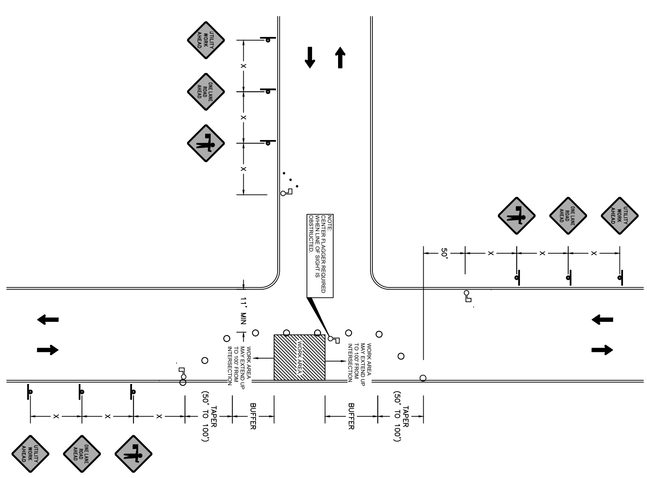
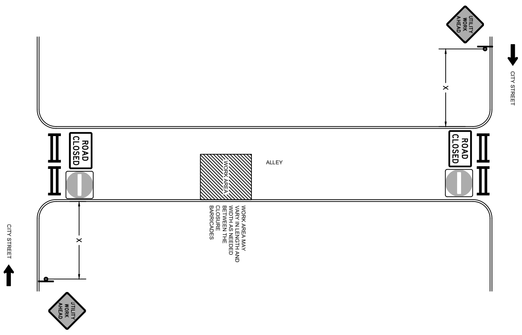
FOUR-WAY INTERSECTION FLAGGING



THREE-WAY INTERSECTION FLAGGING



ALLEY CLOSURE



SHEET TC6	83 OF 93	SEPTEMBER 16, 2025	REUBEN C. JAMES 107426 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS	CITY OF AUSTIN AUSTIN WATER

PREPARED BY:
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TEXAS FIRM NO. F-18091

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
TYPICAL DETAILS

NO.	REVISION	BY	DATE

BNG JOB NO. 4766-03
FILE
DATE 2025-10-10
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CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		ONE WAY ARTERIAL TWO-LANE CLOSURE	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 2 OF 9

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TWO WAY, DIVIDED ARTERIAL ONE LANE CLOSURE	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 3 OF 9

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BYPASS WALKWAY, SIDEWALK AND CROSSWALK CLOSURES	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 4 OF 9

NO.	REVISION	BY	DATE

BNG JOB NO. 4766-03
FILE
DATE 2025-10-10
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WEST 17TH STREET WATER & WASTEWATER PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN

CITY OF AUSTIN STANDARD DETAIL 804S-1 (1-4)

CITY OF AUSTIN
AUSTIN WATER

PREPARED BY:
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(737) 222-5151
TEXAS FIRM NO. F-18091

STATE OF TEXAS
REUBEN C. JAMES
107426
LICENSED
PROFESSIONAL ENGINEER
SEPTEMBER 16, 2025

SHEET
84 OF 93
TC7

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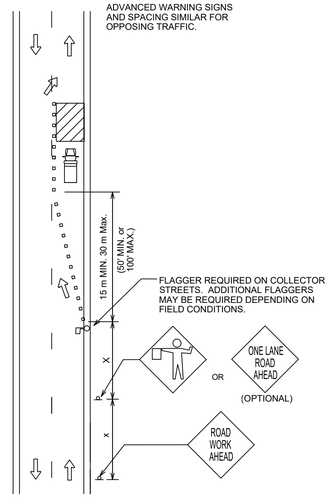
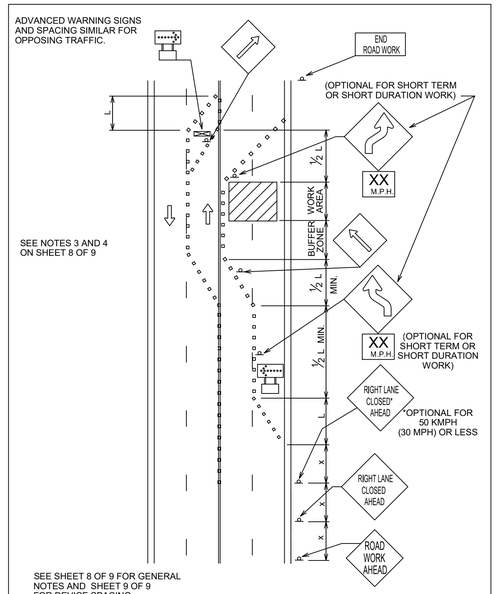


SEE SHEET 8 OF 9 FOR GENERAL NOTES AND SHEET 9 OF 9 FOR DEVICE SPACING.

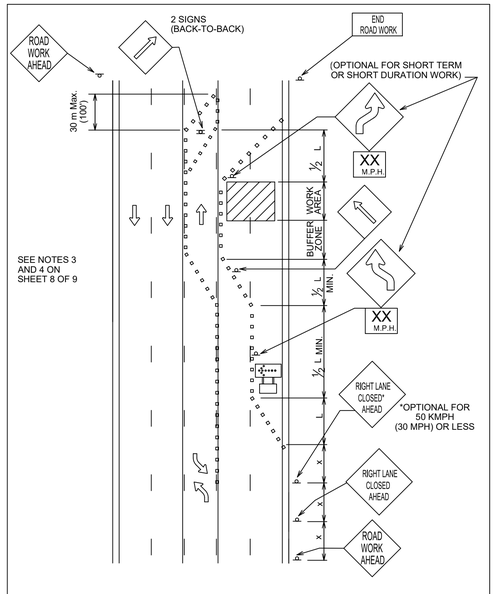
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		COLLECTOR/RESIDENTIAL LANE CLOSURES	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 5 OF 9



SEE NOTES 3 AND 4 ON SHEET 8 OF 9

SEE SHEET 8 OF 9 FOR GENERAL NOTES AND SHEET 9 OF 9 FOR DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL TRAFFIC CONTROL PLAN FOR SHIFTING TRAFFIC	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 6 OF 9



SEE NOTES 3 AND 4 ON SHEET 8 OF 9

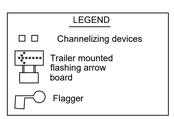
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL TRAFFIC CONTROL PLAN FOR SHIFTING TRAFFIC	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 7 OF 9

1. ALL SETUPS SHALL BE IN ACCORDANCE WITH THE CURRENT ADDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
2. TO DETERMINE APPROPRIATE DEVICES AND SIGN SIZES TO BE USED, REFER TO STANDARD 804S-5. SHEETS 5, 6 AND 7 OF 11.
3. FOR INTERMEDIATE-TERM SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, THE CHANNELIZATION MUST BE MADE DOMINANT BY USING A VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION, SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTERLINE. IN SUCH LOCATIONS, A MAXIMUM CHANNELIZING DEVICE SPACING OF 3 m (10') IS REQUIRED.
4. FOR LONG TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED AND CENTERLINE STRIPING PROVIDED WHERE TWO WAY TRAFFIC IS IN ADJACENT LANES.
5. FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS SEE STANDARD 804S-3.
6. FOR ONE-WAY AND MULTI-LANE ROADWAYS THE "LANE BLOCKED" SIGN MAY BE USED IN LIEU OF THE "LANE CLOSED AHEAD" SIGN. THE NUMBER OF DIGITS ON THE SIGN SHALL NOT BE GREATER THAN THE NUMBER OF LANES PRESENT ON THE ROADWAY. THE "X" SHALL BE PLACED UNDER THE NUMBER OF LANE(S) BLOCKED.
7. FOR FLAGGING OPERATION REQUIREMENTS SEE STANDARD 804S-2.
8. CONTRACTOR SHALL PROVIDE SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS WHEREVER PEDESTRIAN MOVEMENTS ARE AFFECTED BY CONSTRUCTION ACTIVITIES. ALL SIDEWALKS AND CROSSWALKS SHALL BE ACCESSIBLE WHEN CONTRACTOR IS NOT WORKING UNLESS APPROVED BY THE TRANSPORTATION DIVISION.
9. FOR EXCAVATION PROTECTION AND SAFETY FENCE REQUIREMENTS SEE STANDARD 804S-4.
10. THE USE OF ARROW DISPLAYS ARE REQUIRED ON ALL LANE CLOSURES. THE CONTRACTOR SHALL PROVIDE ONE (1) STAND-BY UNIT IN GOOD WORKING CONDITION AT THE JOB SITE, READY FOR USE IF THE OPERATION REQUIRES 24-HOUR A DAY LANE CLOSURE SET-UPS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GENERAL NOTES	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 8 OF 9

Typical Transition Lengths and
Suggested Maximum Spacing of Devices

Speed KMPH	Posted Speed MPH	Formula	Minimum Desirable Taper Lengths (L) Meters (Feet) 3.0(10) Offset Meters (feet)	3.3(11) Offset Meters (feet)	3.6(12) Offset Meters (feet)	Suggested Max. Device Spacing On a taper Meters (feet)	On a tangent Meters (feet)	Suggested Sign Spacing Meters (Feet) "X" Dimension
50	30	$L=\frac{WS^2}{60}$	45 (150)	50 (165)	55 (180)	9 (30)	15-20 (60-75)	40 (120)
55	35		65 (205)	70 (225)	75 (245)	10 (35)	25-25 (70-90)	50 (160)
65	40		80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70	45	L=WS	135 (450)	150 (495)	165 (540)	13 (45)	25-30 (90-110)	100 (320)
80	50		150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-125)	120 (400)
90	55		165 (550)	185 (605)	200 (660)	16 (55)	35-40 (110-140)	150 (500)
95	60		180 (600)	200 (660)	220 (720)	18 (60)	40-45 (120-150)	180 (600)
105	65		195 (650)	215 (715)	235 (780)	19 (65)	40-50 (130-165)	210 (700)
115	70		215 (700)	235 (770)	255 (840)	21 (70)	45-55 (140-175)	240 (800)



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		DEVICE SPACING	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-1 9 OF 9

NO.	REVISION	BY	DATE

BNG JOB NO. 4766-03
FILE
DATE 2025-10-10
DESIGNED RCJ
DRAWN RCJ
REVISED
CHECKED

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
CITY OF AUSTIN STANDARD DETAIL 804S-1 (5-9)

CITY OF AUSTIN
AUSTIN WATER

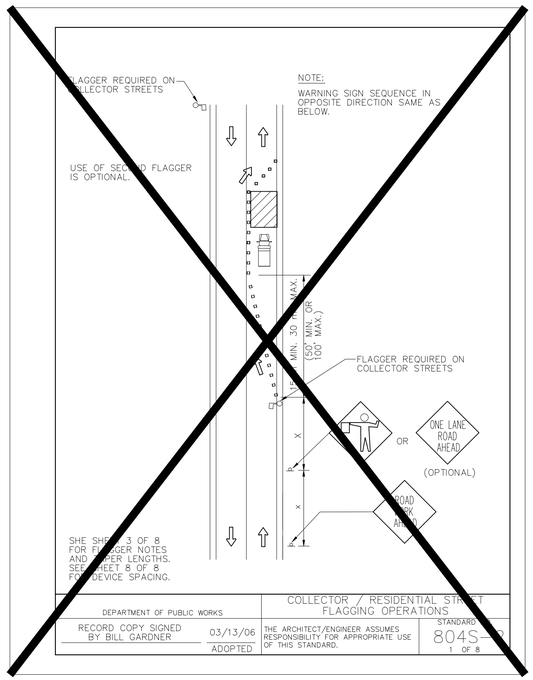
PREPARED BY:
HVJ ASSOCIATES
1701 DIRECTORS BLVD
STE. 910
AUSTIN, TX 78744
(737) 222-5151
TEXAS FIRM NO. F-18091

STATE OF TEXAS
REUBEN C. JAMES
107426
LICENSED
PROFESSIONAL ENGINEER
SEPTEMBER 16, 2025

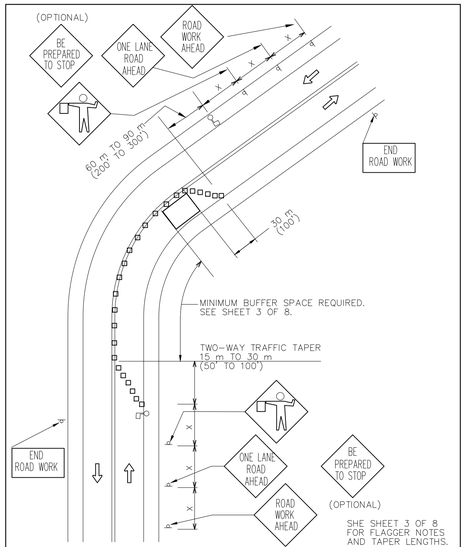
SHEET
85 OF 93
TC8

100% SUBMITTAL

FILE LOCATION: G:\HVJ SHARED COMMON\CIVIL\PROJECTS\2016\AP-16-10159.3.2 W-WW PIPELINE REPLACEMENTS BGE\CAD\17TH_ST_TCP_00.DWG DATE SAVED: 9/16/2025



DEPARTMENT OF PUBLIC WORKS		COLLECTOR / RESIDENTIAL STREET FLAGGING OPERATIONS	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–1
ADOPTED			1 OF 8



DEPARTMENT OF PUBLIC WORKS		FLAGGER SETUP FOR 2 LANE ROADWAY	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–2
ADOPTED			2 OF 8

1. FOR DAYTIME WORK, THE FLAGGER SHALL WEAR AN APPROVED BRIGHTLY COLORED VEST. FOR NIGHTTIME WORK, THE VEST SHALL BE RETROFLECTIVE. THE RETRO-REFLECTIVE MATERIAL SHALL BE ORANGE, YELLOW, WHITE, SILVER, STRONG YELLOW-GREEN OR A FLOURESCENT VERSION OF THESE COLORS AND SHALL BE VISIBLE AT A MINIMUM DISTANCE OF 305 m (1,000').
2. FOR LOW-VOLUME APPLICATIONS, A SINGLE FLAGGER MAY BE ADEQUATE. WHERE ONE FLAGGER CAN BE USED, SUCH AS FOR SHORT WORK AREAS ON STRAIGHT ROADWAYS, THE FLAGGER MUST BE VISIBLE TO APPROACHING TRAFFIC FROM BOTH DIRECTIONS.
3. FLAGGERS SHALL USE ONLY STOP/SLOW PADDLE TO DIRECT TRAFFIC UNLESS WORKING IN A SIGNALIZED INTERSECTION WHERE DRIVERS MAY BE CONFUSED BY THE SIGN PADDLE. HAND SIGNAL MAY BE USED IN THESE SITUATIONS.
4. FLAGGERS SHALL ENSURE THAT ALL REQUIRED SIGNING IS IN PLACE PRIOR TO BEGINNING FLAGGING OPERATIONS.
5. FLAGGERS SHALL NOT PERFORM WORK THAT IS NOT RELATED TO FLAGGING WHILE ON DUTY.
6. FLAGGERS MAY CARRY AIR HORNS OR WHISTLES TO WARN WORKERS OF AN EMERGENCY CONDITION.
7. FLAGGERS SHALL BE REQUIRED TO USE TWO-WAY RADIOS WHEN OUT OF CLEAR VIEW OF EACH OTHER.
8. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.

TAPER LENGTHS

SPEED (kmph)	SPEED* (mph)	LENGTH (meters)	LENGTH (feet)
30	20	11	35
40	25	17	55
50	30	26	85
55	35	36	120
65	40	51	170
70	45	66	220
80	50	84	280
90	55	101	335
95	60	125	415
105	65	146	485

*POSTED SPEED

DEPARTMENT OF PUBLIC WORKS		FLAGGER SETUP FOR 2 LANE ROADWAY	
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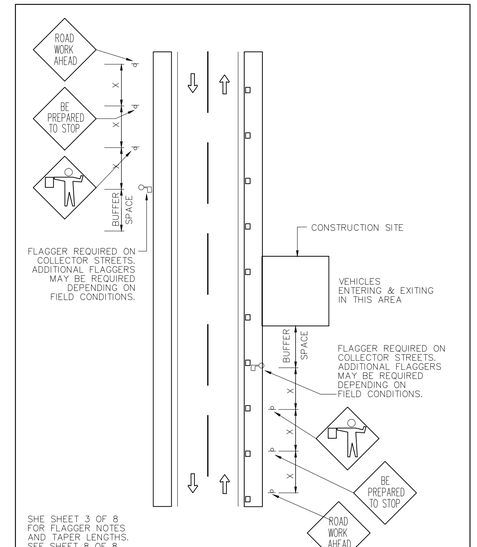
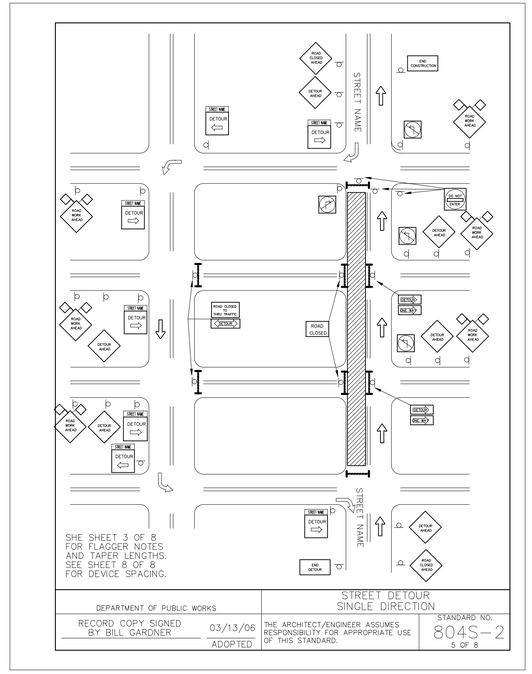
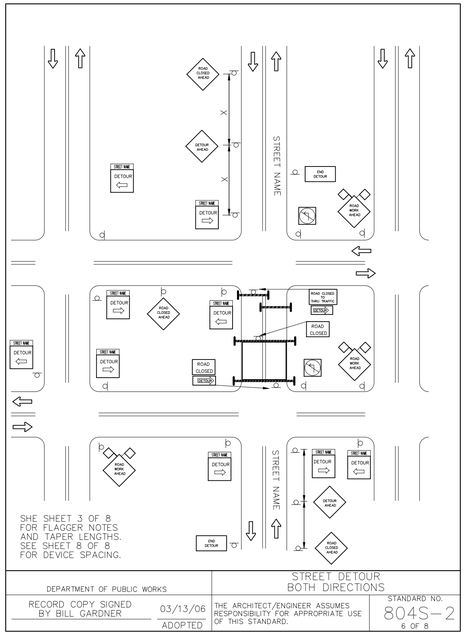
ADOPTED			3 OF 8



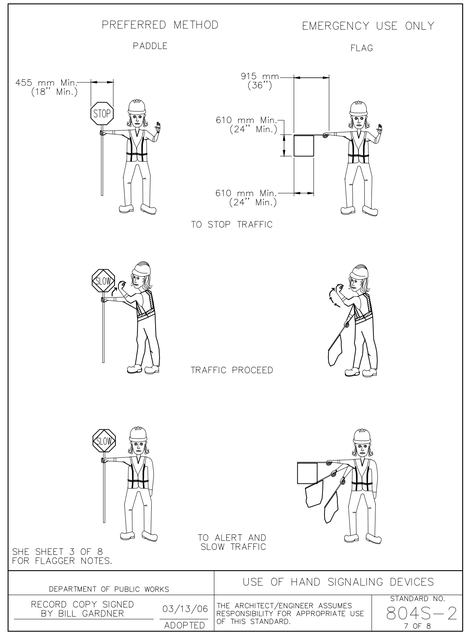
DEPARTMENT OF PUBLIC WORKS		FLAGGER SETUP FOR VEHICLES ENTERING AND EXITING WORK SITE	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–2
ADOPTED			4 OF 8



DEPARTMENT OF PUBLIC WORKS		STREET DETOUR SINGLE DIRECTION	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–2
ADOPTED			5 OF 8



DEPARTMENT OF PUBLIC WORKS		STREET DETOUR BOTH DIRECTIONS	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–2
ADOPTED			6 OF 8



DEPARTMENT OF PUBLIC WORKS		USE OF HAND SIGNALING DEVICES	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–2
ADOPTED			7 OF 8

Typical Transition Lengths and Suggested Maximum Spacing of Devices

Speed KMPH	Posted Speed MPH	Formula	Minimum Desirable Taper Lengths (L) Meters (Feet) 3.0(10) Offset Meters (feet)	3.3(11) Offset Meters (feet)	3.6(12) Offset Meters (feet)	Suggested Max. Device Spacing On a taper Meters (feet)	On a tangent Meters (feet)	Suggested Sign Spacing Meters (Feet) "X" Dimension
50	30	L=WS²/60	45 (150)	50 (165)	55 (180)	9 (30)	15–20 (60–75)	40 (120)
55	35		65 (205)	70 (225)	75 (245)	10 (35)	25–25 (70–90)	50 (160)
65	40		80 (265)	90 (295)	100 (320)	12 (40)	25–30 (80–100)	75 (240)
70	45	L=WS	135 (450)	150 (495)	165 (540)	13 (45)	25–30 (90–110)	100 (320)
80	50		150 (500)	165 (550)	180 (600)	15 (50)	30–35 (100–125)	120 (400)
90	55		165 (550)	185 (605)	200 (660)	16 (55)	35–40 (110–140)	150 (500)
95	60		180 (600)	200 (660)	220 (720)	18 (60)	40–45 (120–150)	180 (600)
105	65		195 (650)	215 (715)	235 (780)	19 (65)	40–50 (130–165)	210 (700)
115	70		215 (700)	235 (770)	255 (840)	21 (70)	45–55 (140–175)	240 (800)

LEGEND
- Channelizing devices
- Trailer mounted flashing arrow board
- Flagger

TRAFFIC DETOUR NOTES:
1. "STREET CLOSED" AND "STREET CLOSED TO THRU TRAFFIC" MAY BE USED IN PLACE OF "ROAD CLOSED" AND "ROAD CLOSED TO THRU TRAFFIC".
2. THE USE OF A STREET SIGN NAME NAME MOUNTED WITH THE M4-9 DETOUR SIGN** IS REQUIRED. THE STREET NAME PLATE SHOULD BE PLACED ABOVE THE DETOUR SIGN. THE PLATE MAY HAVE EITHER A WHITE-ON-GREEN OR A BLACK-ON-ORANGE LEGEND.
3. ADDITIONAL "DO NOT ENTER SIGNS" MAY BE DESIRABLE AT INTERSECTIONS WITH INTERVENING STREETS.
4. A M4-9 DETOUR SIGN** WITH AN ADVANCE TURN ARROW MAY BE USED IN ADVANCE OF A TURN, ON MULTI-LANE STREETS, SUCH SIGNS SHOULD BE USED.
5. M4-9 DETOUR SIGNS** MAY BE LOCATED ON THE FAR SIDE OF INTERSECTIONS.

** TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

DEPARTMENT OF PUBLIC WORKS		TYPICAL LENGTHS & SPACING OF DEVICES, LEGEND and GENERAL NOTES	
RECORD COPY SIGNED BY BILL GARDNER	03/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S–2
ADOPTED			8 OF 8

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WATER & WASTEWATER
PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
CITY OF AUSTIN STANDARD DETAIL 804S-2 (1-8)

CITY OF AUSTIN
AUSTIN WATER

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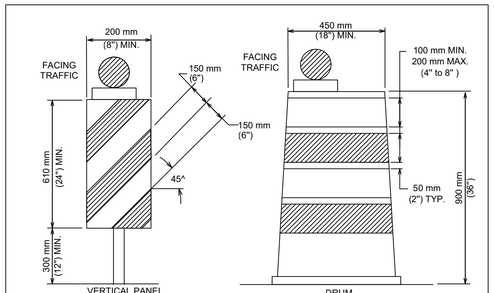
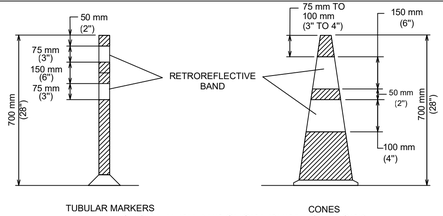


LONG TERM AND INTERMEDIATE TERM STATIONARY WORK



SHORT TERM AND SHORT DURATION WORK

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		CHANNELIZING DEVICES	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 1 OF 13

CHANNELIZING DEVICES

1.ALL CHANNELIZING DEVICES SHALL HAVE WARNING LIGHTS OR LARGE REFLECTORS WHEN USED AT NIGHT. FLASHING WARNING LIGHTS MAY BE PLACED ON CHANNELIZING DEVICES USED SINGULARLY OR IN GROUPS TO MARK A SPOT CONDITION. WARNING LIGHTS ON CHANNELIZING DEVICES USED IN A SERIES SHALL BE STEADY-BURN. CHANNELIZING DEVICES IN TAPERS AT NIGHT SHALL HAVE TYPE C WARNING LIGHTS.
2.THE RETROREFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE.
3.THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR OR SUPPLIER SHALL BE SHOWN ON THE NON-RETROREFLECTIVE SURFACE OF ALL CHANNELIZING DEVICES. THE LETTERS AND NUMBERS SHALL BE A NON-RETROREFLECTIVE COLOR AND NOT OVER 50 mm (2") IN HEIGHT.
4.PARTICULAR ATTENTION SHOULD BE GIVEN TO ASSURE THAT CHANNELIZING DEVICES ARE MAINTAINED AND KEPT CLEAN, VISIBLE AND PROPERLY POSTITIONED AT ALL TIMES. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.

CONES

CONES SHALL PREDOMINANTLY BE ORANGE, FLUORESCENT RED-ORANGE, OR FLUORESCENT YELLOW-ORANGE IN COLOR, NOT LESS THAN 70 mm (28") IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES ON IMPACT. FOR NIGHT TIME USE, CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETROREFLECTION OF CONES SHALL BE PROVIDED BY A WHITE BOND 150 mm (6") WIDE, NO MORE THAN 75 TO 100 mm (3 TO 4") FROM THE TOP OF THE CONE, AND AN ADDITIONAL 100 mm (4") WHITE BAND A MINIMUM OF 50 mm (2") BELOW THE 150 mm (6") BAND. TRAFFIC CONES ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT DURATION WORK. HOWEVER, CONES MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT, IF THE SITE IS CONTINUOUSLY MANNED.

TUBULAR MARKERS

TUBULAR MARKERS SHALL PREDOMINANTLY BE ORANGE IN COLOR, NOT LESS THAN 700 mm (28") IN HEIGHT , A MINIMUM 50 mm (2") WIDE WHEN FACING TRAFFIC AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES. FOR NIGHT TIME USE, TUBULAR MARKERS SHALL BE RETROREFLECTIVE PROVIDED BY TWO (2) 75 mm (3") WIDE WHITE BANDS PLACED A MAXIMUM OF 50 mm (2") FROM THE TOP, WITH A MAXIMUM OF 150 mm (6") BETWEEN BANDS. TUBULAR MARKERS ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT DURATION WORK. HOWEVER, TUBULAR MARKERS MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT, IF THE SITE IS CONTINUOUSLY MANNED.

VERTICAL PANELS

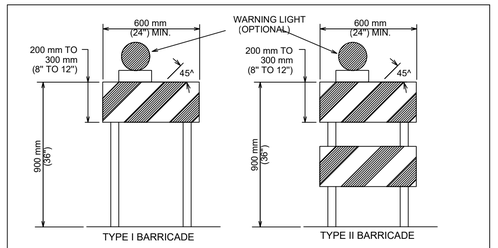
VERTICAL PANELS SHALL BE 200 TO 300 mm (8 TO 12") WIDE AND AT LEAST 600 mm (24") IN HEIGHT. THEY SHALL HAVE ORANGE AND WHITE STRIPES, AND BE RETROREFLECTIVE. PANEL STRIPE WIDTHS SHALL BE 150 mm (6") EXCEPT WHERE PANEL HEIGHTS ARE LESS THAN 900 mm (36"), WHEN 100 mm (4") STRIPES MAY BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

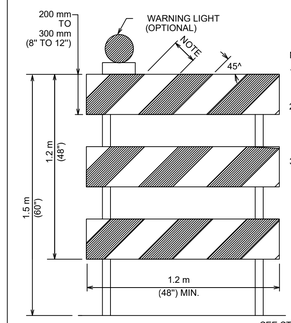
DRUMS

1. DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHT-WEIGHT FLEXIBLE AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 900 mm (36") IN HEIGHT, AND HAVE AT LEAST 450 mm (18") MINIMUM WIDTH, REGARDLESS OF OREINTATION. STEEL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUNFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 100 TO 200 mm (4 TO 8") WIDE. EACH DRUM SHALL HAVE A MINIMUM OF TWO (2) ORANGE AND TWO (2) WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, SHALL NOT EXCEED 50 mm (2") WIDE. DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF ROADWORK OR OTHER DEBRIS.

2. DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER OR ANY MATERIAL TO AN EXTENT THAT WOULD MAKE THE HAZARDOUS TO MOTORISTS, PEDESTRIANS OR WORKERS. WHEN THEY ARE USED IN REGIONS SUSCEPTIBLE TO FREEZING, THEY SHOULD HAVE DRAINAGE HOLES IN THE BOTTOM SO WATER WILL NOT ACCUMULATE AND FREEZE,CAUSING A HAZARD IF STRUCK BY A MOTORIST. BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		CHANNELIZING DEVICES	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 2 OF 13





NOTES:

1. NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY FOR BARRICADE RAIL WIDTH DIMENSIONS.
2. RAIL STRIPE WIDTHS SHALL BE 150 mm (6") EXCEPT WHERE RAIL LEGNTHS ARE LESS THAN 900 mm (36"), THEN 100 mm (4") WIDE STRIPES MAY BE USED.
3. THE SIDE OF BARRICADES FACING TRAFFIC SHALL HAVE RETRO-REFLECTIVE RAIL FACES.

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BARRICADES	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 3 OF 13

BARRICADES

1. BARRICADES SHALL BE OF THREE TYPES: TYPE I, TYPE II OR TYPE III.
2. STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETRO-REFLECTIVE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS). THE STRIPES SHALL BE 150 mm (6") WIDE, EXCEPT WHERE RAIL LENGTHS ARE LESS THAN 900 mm (36"), WHEN 100 mm (4") WIDE STRIPES MAY BE USED.
3. WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, THE SURFACE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWN-WARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.
4. BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE MOTORIST AND PROVIDE A STABLE SUPPORT NOT EASILY BLOWN OVER BY THE WIND OR TRAFFIC. FOR TYPE I BARRICADES, THE SUPPORT MAY INCLUDE OTHER UNSTRIPED HORIZONTAL PANELS NECESSARY TO PROVIDE STABILITY.
5. BARRICADES ARE LOCATED ADJACENT TO TRAFFIC AND ARE THEREFORE SUBJECT TO IMPACT WITH ERRANT VEHICLES. BECAUSE OF THEIR VULNERABLE POSITION AND THE HAZARD THEY COULD CREATE, THEY SHOULD BE CONSTRUCTED OF LIGHTWEIGHT MATERIALS AND HAVE NO RIGID STAY BRACING FOR A-FRAME DESIGNS. ALL BARRICADE SYSTEMS SHOULD BE CRASHWORTHY.
6. ON HIGH-SPEED EXPRESSWAYS OR IN OTHER SITUATION WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		BARRICADES	
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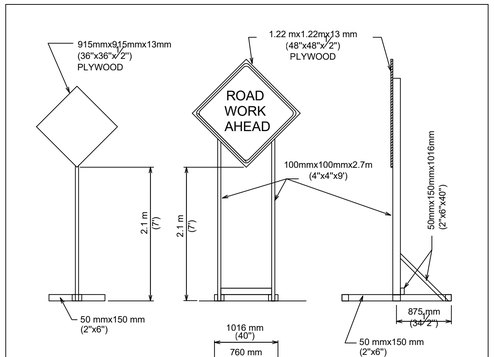

(LONG TERM AND INTERMEDIATE-TERM STATIONARY WORK)

TEMPORARY SIGN SUPPORT

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRAFFIC CONTROL SIGNS	
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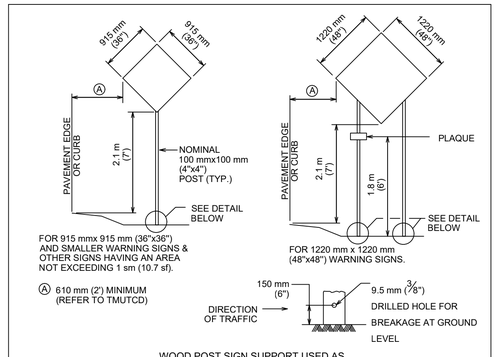
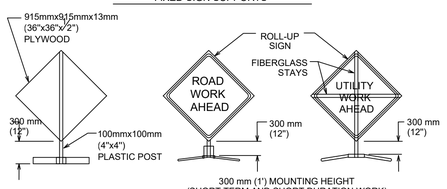


WOOD POST SIGN SUPPORT USED AS FIXED SIGN SUPPORTS



SEE STANDARD 804S-5
SHEET 12 OF 13 AND
SHEET 13 OF 13 FOR
GENERAL NOTES AND DEVICE SPACING.

PORTABLE SIGN SUPPORT

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRAFFIC CONTROL SIGNS	
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100% SUBMITTAL

1. WARNING SIGNS SHALL BE ORANGE, FLUORESCENT RED-ORANGE OR FLUORESCENT YELLOW-ORANGE IN COLOR. THE FLUORESCENT VERSIONS OF ORANGE PROVIDE HIGHER CONSPICUITY THAN STANDARD ORANGE, ESPECIALLY DURING TWILIGHT. ALL SIGNS USED AT NIGHT SHALL BE EITHER RETROREFLECTIVE, WITH A MATERIAL THAT HAS A SMOOTH, SEALED OUTER SURFACE, OR ILLUMINATED TO SHOW SIMILAR SHAPE AND COLOR BOTH DAY AND NIGHT. SIGN ILLUMINATION MAY BE EITHER INTERNAL OR EXTERNAL. ROADWAY LIGHTING DOES NOT MEET THE REQUIREMENTS FOR SIGN ILLUMINATION.
2. TYPE A FLASHING WARNING LIGHTS MAY BE USED IN CONJUNCTION WITH SIGNS AT NIGHT. STANDARD ORANGE FLAGS MAY BE USED FOR DAY TIME OPERATIONS. HOWEVER, NEITHER LIGHTS NOR FLAGS MAY BLOCK THE SIGN LEGEND.
3. SIGNS SHOULD BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY. WHEN SPECIAL EMPHASIS IS NEEDED, SIGNS MAY BE PLACE ON BOTH THE LEFT AND RIGHT SIDES OF ROADWAY. SIGNS SHALL BE PLACED ON BOTH THE LEFT AND RIGHT SIDES OF ONE-WAY OR DIVIDED ROADWAYS. SIGNS USED FOR LONG-TERM STATIONARY AND INTERMEDIATE-TERM STATIONARY WORK SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 2.1 m (7'), MEASURED FROM THE BOTTOM OF THE SIGN. THE HEIGHT TO THE BOTTOM OF A SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 0.3 m (1') LESS THAN THE APPROPRIATE HEIGHT ABOVE.
4. SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, MOBILE CONDITIONS AND EMERGENCIES. SIGNS MOUNTED ON PORTABLE SUPPORTS SHALL BE AT A HEIGHT OF AT LEAST 0.3 m (1'), MEASURED FROM THE BOTTOM OF THE SIGN.
5. ALL SIGN SYSTEMS SHOULD BE CRASHWORTHY. NO SIGN MOUNTS SHALL BLOCK OR IMPEDE SIDEALKS UNLESS NO OTHER OPTION IS AVAILABLE. ONLY SANDBAGS SHOULD BE USED FOR BALLASTING SIGN MOUNTS.

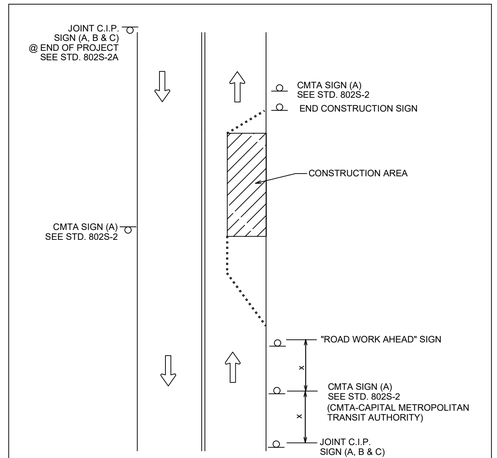
TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

Roadway Classification	Posted Speed	Sign Spacing ★	Long-term Stationary Or Intermediate-term Stationary Approaching Warning Signs CW20 Series And CW22-1 Sign		Short-term Stationary Or Short Duration Approach Warning Signs CW22 Series		Other Warning Signs
			Standard	Minimum[1]	Standard	Minimum[1]	Standard
Conven.	KPH (MPH)	meter (feet)	mm (inches)	mm (inches)	mm (inches)	mm (inches)	mm (inches)
	50 (30)	40 (120)	1220x1220 (48x48)	915x915 (36x36)			
	55 (35)	50 (160)			915x915 (36x36)		915x915 (36x36)
	65 (40)	75 (240)					
	70 (45)	100 (320)		Use Standard Size		Use Standard Size	
	80 (50)	120 (400)					
	90 (55)	150 (500) [2]					
	100 (60)	180 (600) [2]			1220x1220 (48x48)		1220x1220 (48x48)
	105 (65)	210 (700) [2]					
	115 (70)	240 (800) [2]					
Exp. or Fwy	★★	★★ [3]			★★★	★★★	★★★

★ MINIMUM DISTANCE FROM WORK TO 1st ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN EACH ADDITIONAL SIGN.
★★ FOR TYPICAL SIGN SPACINGS ON EXPRESSWAYS AND FREEWAYS, REFER TO THE CURRENT ADDITION OF TMUTCD.
★★★ SMALLER SIGN SIZES MAY BE USED WHERE SIGN DESIGNS HAVE NOT BEEN INCLUDED IN THE "STANDARD HIGHWAY SIGNS DESIGN MANUAL"

1. SPECIAL OR LARGER SIZE SIGNS MAY BE USED AS NECESSARY.
2. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE 450 m (1500') OR MORE ADVANCE WARNING.
3. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE A 0.8 km (½ MILE) OR MORE ADVANCE WARNING.
4. FOR USE ONLY ON SECONDARY ROADS OR CITY STREETS WHERE SPEEDS ARE LOW.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TRAFFIC CONTROL SIGNS	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 7 OF 13

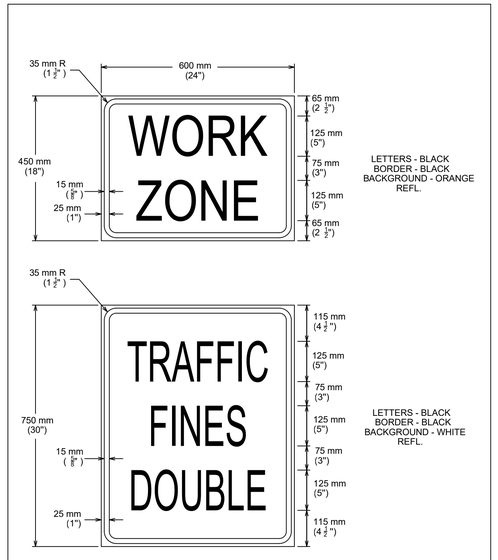


NOTES:

1. OTHER REQUIRED SIGNS NOT SHOWN FOR CLARITY.
2. "X" DISTANCES SAME AS STANDARD TABLE SHOWN ON SHEET 13 OF 13.

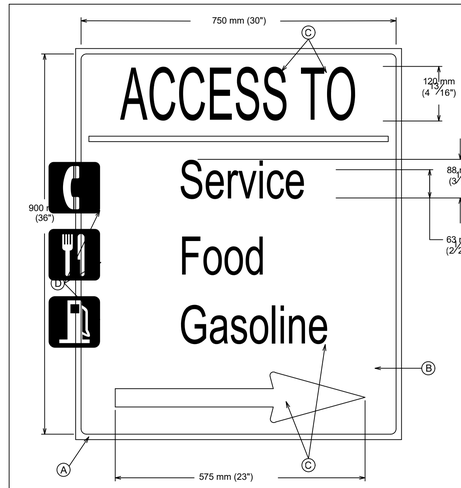
SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL CMTA/C.I.P. SIGN LOCATIONS	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 8 OF 13



SEE STANDARD DETAIL 804S-5
SHEET 5 OF 13 FOR SKID-MOUNTED SIGN SUPPORT.

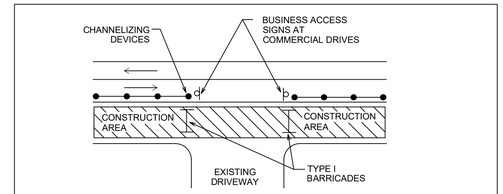
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SPECIAL WORK ZONE SIGNS	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 9 OF 13



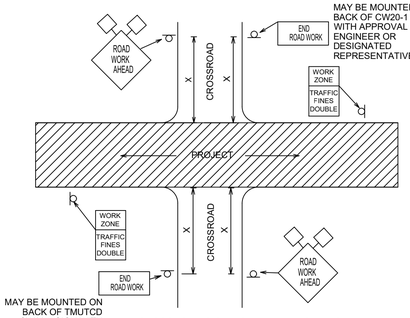
A 50 mm (1/2") WHITE RETROREFLECTIVE BORDER
B BLUE RETROFELECTIVE BACKGROUND
C WHITE RETRORELECTIVE ARROW AND LETTERS
D WHITE RETRORELECTIVE BUSINESS LOGO

NOTES:
1. CONTRACTORS CAN MAKE BUSINESS NAMES REMOVABLE/CHANGEABLE AS AN OPTION.
2. BUSINESS LOGO ARE OPTIONAL. IF USED LETTERING MUST BE MINIMIZED.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SPECIAL WORK ZONE SIGNS	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 10 OF 13



DRIVEWAY ACCESS BARRICADE DETAIL



CROSSROAD SIGNING AND BARRICADING

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIGNING AND BARRICADING CROSSROAD & DRIVEWAY	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 11 OF 13

1. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES AND SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUTCD), THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 800 AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL, OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IF A CONFLICT ARISES THEN THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL SHALL CONTROL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. THE CONTRACTOR SHALL NOTIFY THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024 NO LATER THAN THE MONDAY OF THE WEEK DURING WHICH THE CONTRACTOR INTENDS TO SET UP BARRICADES TO START CONSTRUCTION.
3. PROPOSED CONSTRUCTION TRAFFIC MOVEMENTS MAY REQUIRE EXISTING SIGNAL HEADS TO BE RELOCATED. THE CITY OF AUSTIN WILL REVIEW SIGNAL HEAD LOCATIONS DURING CONSTRUCTION AND PERFORM THE REQUIRED ADJUSTMENTS. THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024, THREE (3) DAYS PRIOR TO PLACMENT ANY TRAFFIC CONTROLS WHICH MAY REQUIRE SIGNAL HEAD ADJUSTMENTS/RELOCATION.
4. THE CONTRACTOR SHALL PROVIDE ONE (1) FULL-TIME OFF-DUTY, UNIFORMED AUSTIN POLICE DEPARTMENT CERTIFIED PEACE OFFICER AND ONE (1) VEHICLE OF THE TYPE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE FOR TEMPORARY LANE CLOSURES WHEN UNDERSEALING, MILLING, PAVING AND WHEN WORKING IN INTERSECTIONS AS PART OF THE TRAFFIC CONTROL OPERATIONS. THE PEACE OFFICER SHALL BE ABLE TO SHOW PROOF OF CERTIFICATION BY THE TEXAS COMMISSION ON LAW ENFORCEMENT OFFICER STANDARDS.
5. THE CONTRACTOR SHALL NOTIFY ALL OTHER GOVERNMENTAL AGENCIES WHOSE RIGHTS-OF-WAY ARE AFFECTED BY HIS WORK ACTIVITIES. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT THEY MAY NEED.
6. THE CONTRACTOR SHALL MAINTAIN ONE (1) DUST-FREE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR APPROVED THE ENGINEER OR DESIGNATED REPRESENTATIVE.
7. THERE SHALL BE A MINIMUM OF THREE (3) METERS (10 FEET) CLEAR WIDTH FOR EACH LANE OF TRAFFIC IN CHANNELIZED AREAS, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
8. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER OR DESIGNATED REPRESENTATIVE SHALL PROVIDE AT LEAST 24 HOUR WRITTEN NOTICE OF LIMITED ACCESS TO AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE BUSINESS ACCESS SIGNS AS NEEDED TO NFORM DRIVERS OF THE LOCATIONS OF ALL DRIVEWAYS.
9. TEMPORARY LANE CLOSURES IN THE CENTRAL BUSINESS DISTRICT (CBD) OR ON ARTERIAL STREETS SHALL NOT BE PERMITTED DURING THE HOURS OF 7 AM TO 9 AM AND 4 PM TO 6PM MONDAY THROUGH FRIDAY UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE TRANSPORTATION DIVISION.
10. TRAFFIC CONTROL SHOWN ON STANDARD DETAILS IS TYPICAL. ADDITIONAL SIGNING AND/OR BARRICADING, AS WELL AS TEMPORARY PAVEMENT MARKINGS AND OBLITERATION/RESTORATION OF EXISTING PAVEMENT MARKINGS, MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS. FIELD ADJUSTMENTS TO TRAFFIC CONTROLS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM NO. 803S "BARRICADES, SIGNS AND TRAFFIC HANDLING".
11. THE CONTRACTOR SHALL DESIGNATE A COMPETENT PERSON FOR TRAFFIC CONTROL. THE COMPETENT PERSON SHALL MAKE INSPECTIONS OF THE TRAFFIC CONTROL DEVICES AT LEAST TWO (2) TIMES A DAY (ONCE AT THE BEGINNING OF THE DAY AND ONCE AT THE END OF THE DAY), INCLUDING NON-WORKING DAYS, ENSURING THAT ALL DEVICES ARE IN THEIR PROPER PLACE AND ARE IN WORKING ORDER.
12. ALL DEVICES SHALL BE MADE USING MATERIALS LISTED ON THE TxDOT APPROVED PRODUCTS LIST.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GENERAL TRAFFIC CONTROL NOTES	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 12 OF 13

13. ALL PERSONS WORKING WITHIN THE RIGHT-OF-WAY SHALL WEAR A BRIGHTLY COLORED SAFETY VEST. FOR NIGHTTIME WORK THE VEST SHALL BE RETROREFLECTIVE.
14. WHEN AN INTERSECTION IS CLOSED FOR CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CONSTRUCTION IN SUCH A MANNER THAT THE CLOSURE TIME IS MINIMIZED.
15. THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO DISPATCHER AT 385-4295 ONE (1) WEEK PRIOR TO LANE CLOSURES ADJACENT TO BUS STOPS.

DURATION OF WORK

WORK DURATION IS A MAJOR FACTOR IN DETERMINING THE NUMBER AND TYPES OF DEVICES USED IN TEMPORARY TRAFFIC ZONES. THE FIVE (5) CATEGORIES OF WORK DURATION AND THEIR TIME AT A LOCATION ARE AS FOLLOWS:

- LONG-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FOR MORE THAN 3 DAYS.
- INTERMEDIATE-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FROM OVERNIGHT TO 3 DAYS.
- SHORT-TERM STATIONARY-DAYTIME WORK THAT OCCUPIES A LOCATION FROM 1 TO 12 HOURS.
- SHORT-DURATION WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.
- MOBILE-WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

Typical Transition Lengths and Suggested Maximum Spacing of Devices

Posted Speed KPH (MPH)	Formula	Minimum Desirable Taper Lengths (L) Meters (Feet) 3.0(10) Offset Meters (feet)	3.3(11) Offset Meters (feet)	3.6(12) Offset Meters (feet)	Suggested Max. Device Spacing On a taper Meters (feet)	On a tangent Meters (feet)	Suggested Sign Spacing Meters (Feet) "X" Dimension
50 (30)	L=WS²/60	45 (150)	50 (165)	55 (180)	9 (30)	15-20 (60-75)	40 (120)
55 (35)		65 (205)	70 (225)	75 (245)	10 (35)	25-25 (70-90)	50 (160)
65 (40)		80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70 (45)	L=WS	135 (450)	(495)	165 (540)	13 (45)	25-30 (90-110)	100 (320)
80 (50)		150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-125)	120 (400)
90 (55)		165 (550)	185 (605)	200 (660)	16 (55)	35-40 (110-140)	150 (500)
100 (60)		180 (600)	200 (660)	220 (720)	18 (60)	40-45 (120-150)	180 (600)
105 (65)		195 (650)	215 (715)	235 (780)	19 (65)	40-50 (130-165)	210 (700)
115 (70)		215 (700)	235 (770)	255 (840)	21 (70)	45-55 (140-175)	240 (800)

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GENERAL TRAFFIC CONTROL NOTES	
RECORD COPY SIGNED BY SAM ANGOORI	*01/04/10* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 13 OF 13

BNG JOB NO. 4766-03
FILE
DATE 2025-10-10
DESIGNED RCJ
DRAWN RCJ
REVISED
CHECKED

NO.	REVISION	BY	DATE

WEST 17TH STREET
WATER & WASTEWATER
PIPELINE REHABILITATION

TRAFFIC CONTROL PLAN
CITY OF AUSTIN STANDARD DETAIL 804S-5 (7-13)

CITY OF AUSTIN
AUSTIN WATER

PREPARED BY:
HVJ ASSOCIATES
1701 DIRECTOR'S BLVD
STE. 910
AUSTIN, TX 78744
(737) 222-5151
TEXAS FIRM NO. F-18091

STATE OF TEXAS
REUBEN C. JAMES
107426
LICENSED PROFESSIONAL ENGINEER
SEPTEMBER 16, 2025

SHEET
88 OF 93
TC11

100% SUBMITTAL

FILE LOCATION: G:\HVJ SHARED COMMON\CIVIL\PROJECTS\2016\AP-16-10159.3.2 W-WW PIPELINE REPLACEMENTS BGE\CAD\17TH_ST_TCP_00.DWG DATE SAVED: 9/16/2025



NOTES:

1. *CONTRACTOR SHALL REPLACE ALL EXISTING PAVEMENT MARKINGS IN KIND.*
2. *OVERLAY WITHIN STREETS SHALL BE 3" THICK.*
3. *DO NOT PAVE OVER AW APPURTENCES*

LEGEND

- FULL TRENCH REPAIR
- FULL WIDTH MILL & OVERLAY WITHIN STREETS
- RIGHT OF WAY (R.O.W.)
- W — WATER LINE
- WW — WASTEWATER LINE
- SS — STORM DRAIN LINE

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
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CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

PAVEMENT PLAN 1

CITY OF AUSTIN
AUSTIN WATER

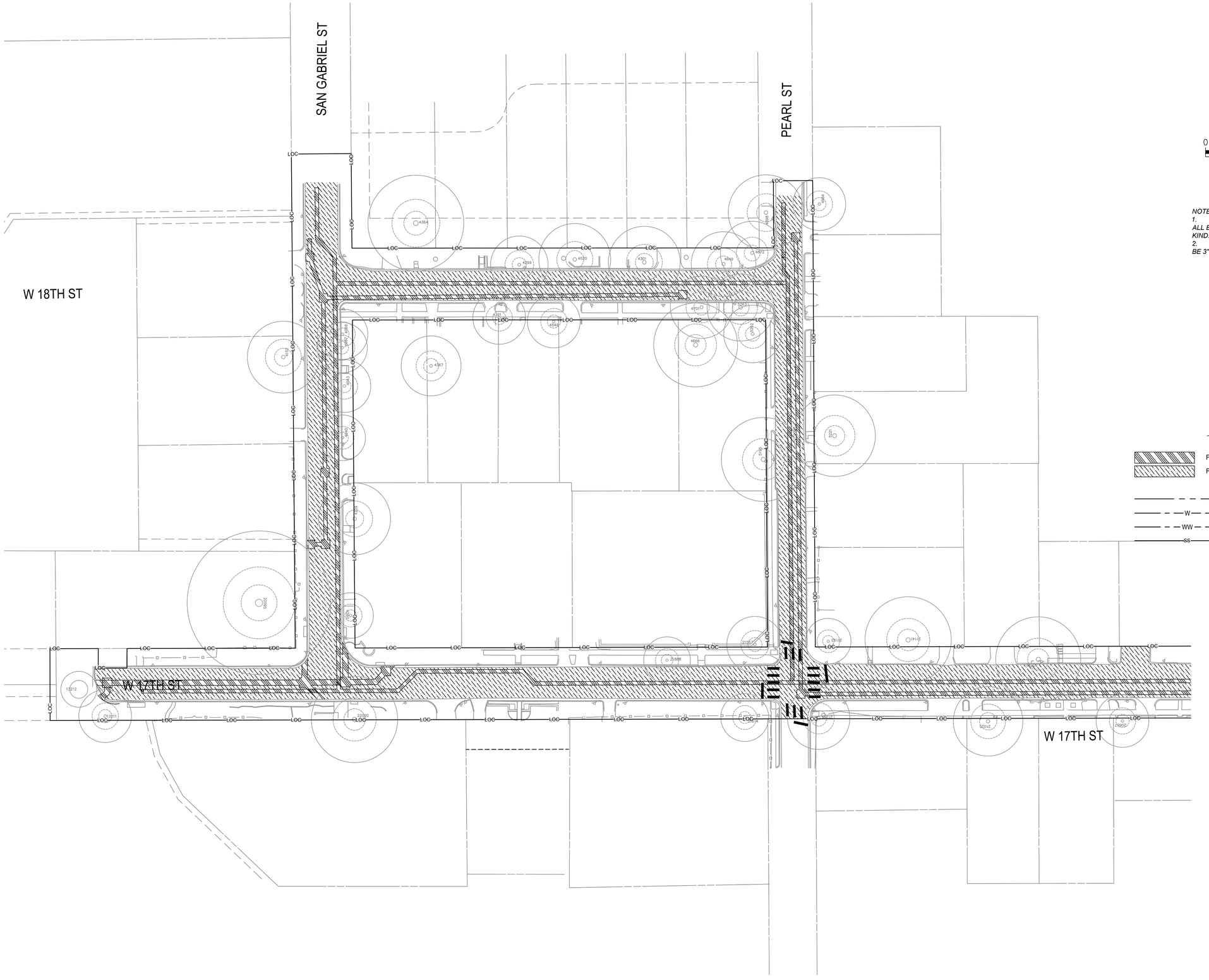
BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED PROFESSIONAL ENGINEER

9/10/2026

SHEET
89 OF 93

100% SUBMITTAL REV



NOTES:

1. *CONTRACTOR SHALL REPLACE ALL EXISTING PAVEMENT MARKINGS IN KIND.*
2. *OVERLAY WITHIN STREETS SHALL BE 3" THICK.*

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03
FILE
DATE
DESIGNED JTM
DRAWN JTM
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CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

PAVEMENT PLAN 2

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117162
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

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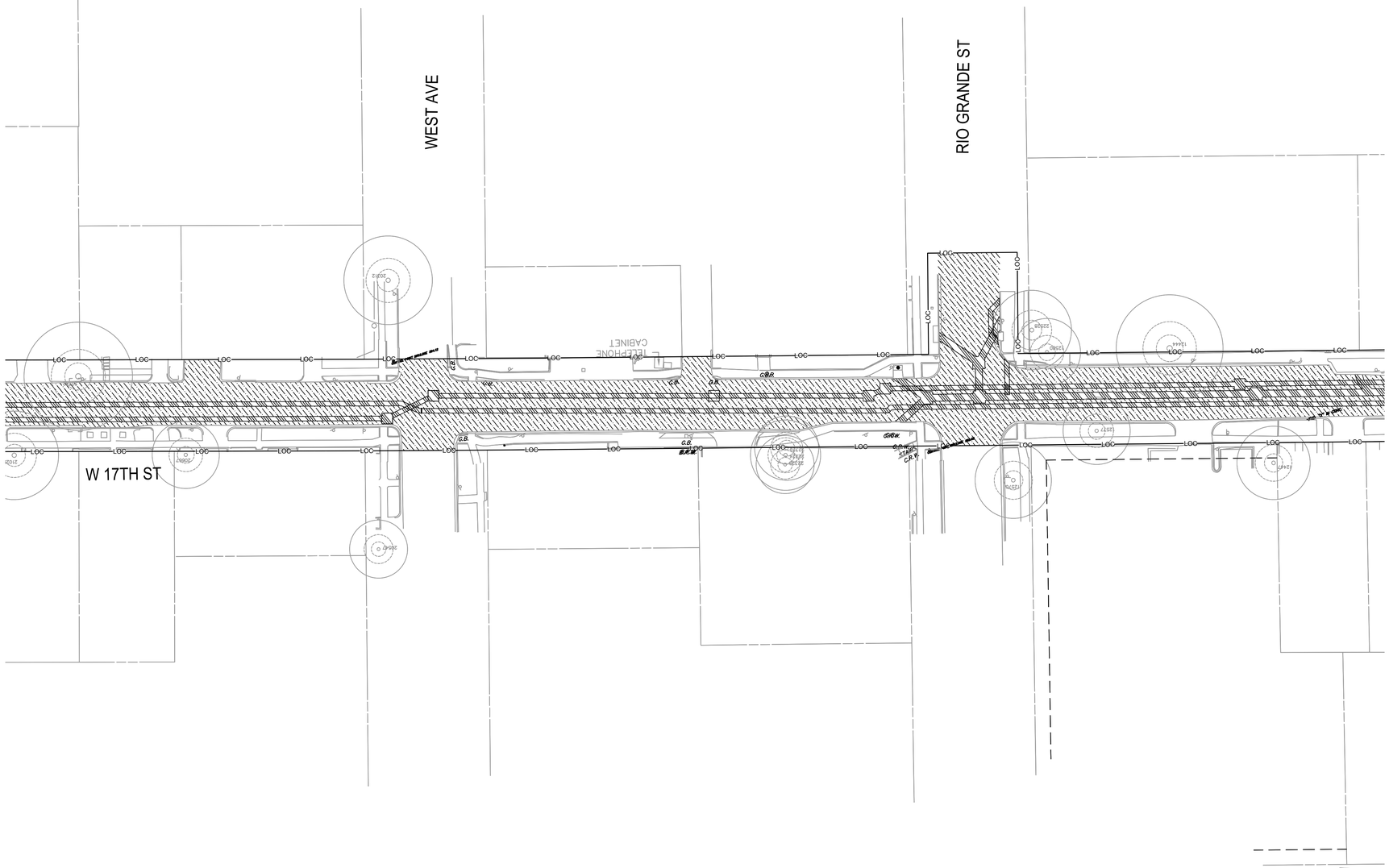
90 OF 93

100% SUBMITTAL REV



N

0 20' 40' 80'

SCALE: 1" = 40'

NOTES:

1. CONTRACTOR SHALL REPLACE ALL EXISTING PAVEMENT MARKINGS IN KIND.

2. OVERLAY WITHIN STREETS SHALL BE 3" THICK.

LEGEND

- FULL TRENCH REPAIR
- FULL WIDTH MILL & OVERLAY WITHIN STREETS
- RIGHT OF WAY (R.O.W.)
- W — WATER LINE
- WW — WASTEWATER LINE
- SS — STORM DRAIN LINE

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03

FILE

DATE

DESIGNED JTM

DRAWN JTM

REVISED

CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

PAVEMENT PLAN 3

CITY OF AUSTIN
AUSTIN WATER

BGE

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
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STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED PROFESSIONAL ENGINEER

9/10/2026

SHEET

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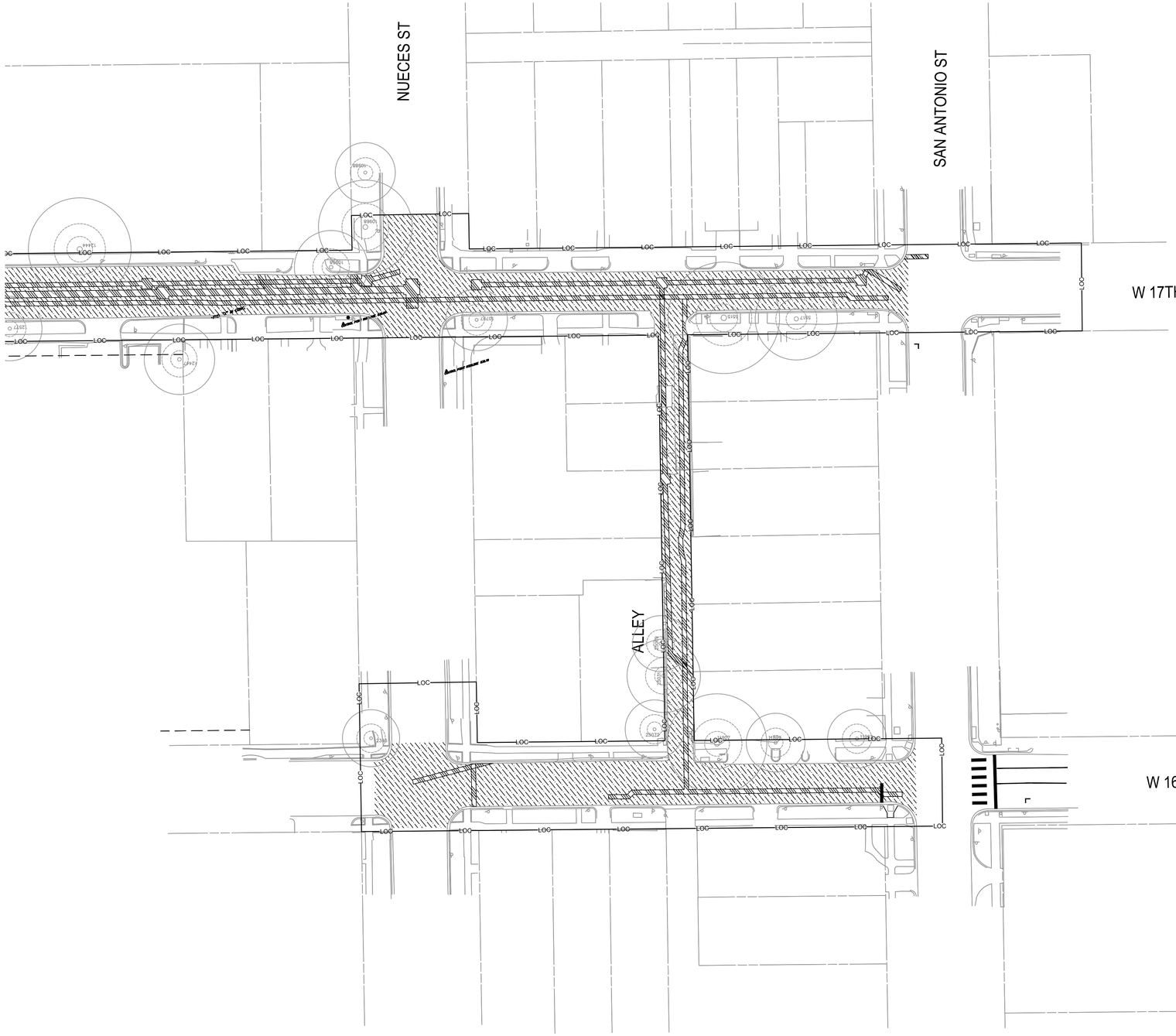
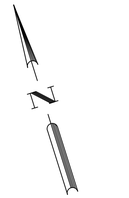
100% SUBMITTAL REV





0 20' 40' 80'

SCALE: 1" = 40'

NOTES:

1. CONTRACTOR SHALL REPLACE ALL EXISTING PAVEMENT MARKINGS IN KIND.

2. OVERLAY WITHIN STREETS SHALL BE 3" THICK.

LEGEND

- FULL TRENCH REPAIR
- FULL WIDTH MILL & OVERLAY WITHIN STREETS
- RIGHT OF WAY (R.O.W.)
- W — WATER LINE
- WW — WASTEWATER LINE
- SS — STORM DRAIN LINE

NO.	REVISION	BY	DATE

BGE JOB NO. 4766-03

FILE

DATE

DESIGNED JTM

DRAWN JTM

REVISED

CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

PAVEMENT PLAN 4

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117362
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET

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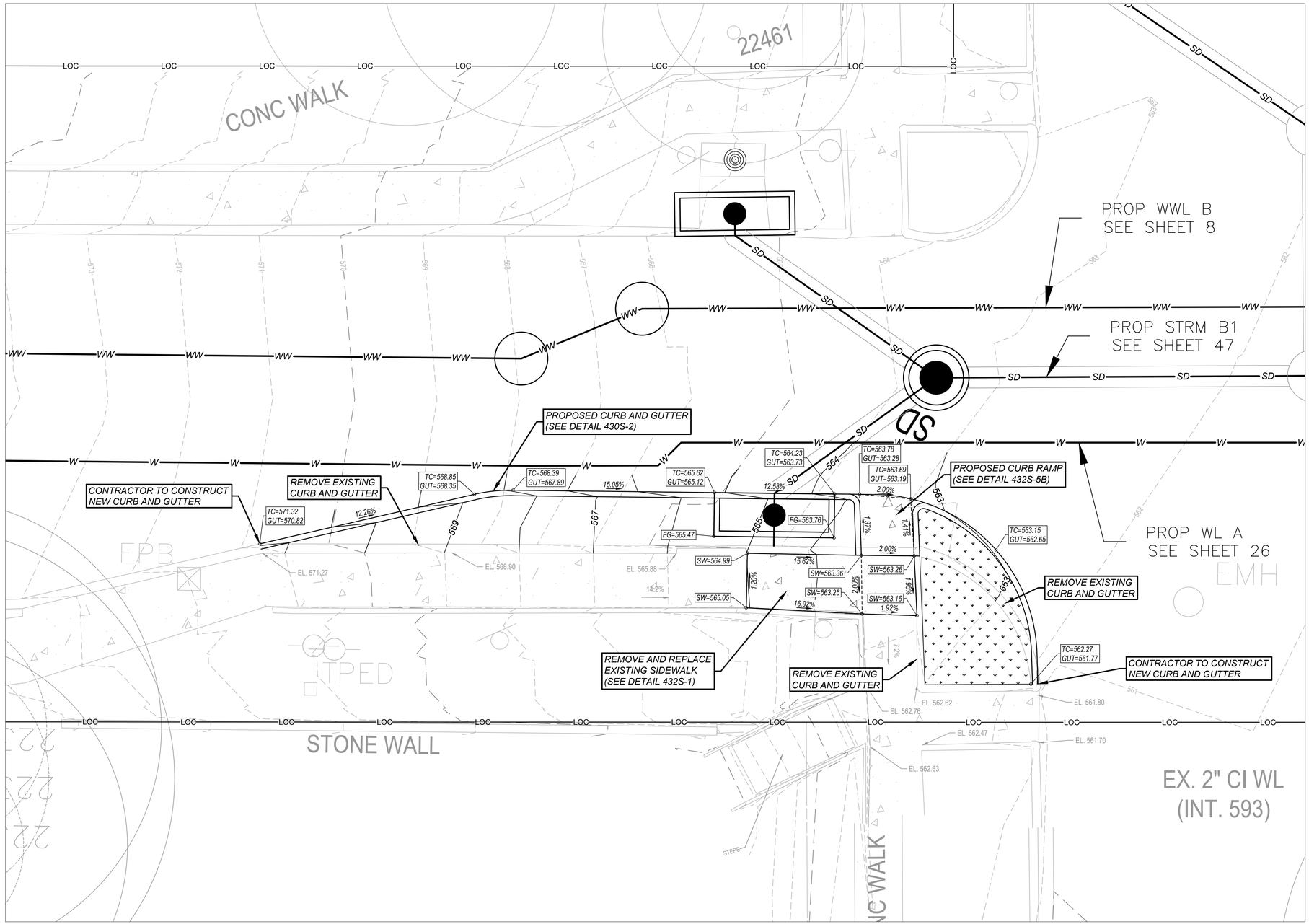
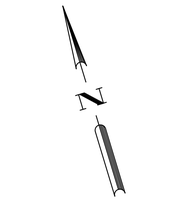
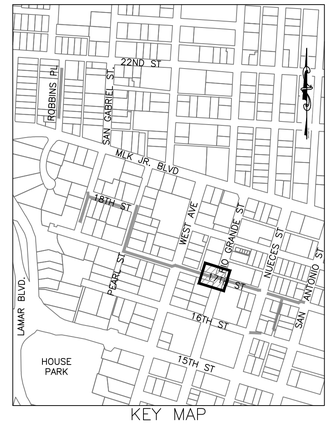
NOTE: CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND DEPTHS PRIOR TO EXCAVATION





NOTES:

1. CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES.



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FILE
DATE
DESIGNED JTM
DRAWN JTM
REVISED
CHECKED

WEST 17TH STREET WATER & WASTEWATER PIPELINE RENEWAL

SIDEWALK GRADING PLAN

CITY OF AUSTIN
AUSTIN WATER

BGE, INC.
1701 DIRECTORS BLVD., STE 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

STATE OF TEXAS
ALEXIS WOFFENDEN
117862
LICENSED
PROFESSIONAL ENGINEER

9/10/2026

SHEET
93 OF 93

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